File-AID/MVS

Online Reference Manual (SPF and XE)

Release 8.9

COMPUWARE®

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Introduction

This manual documents the online portion of File-AID/MVS which consists of File-AID/XE (Extended Edit) and File-AID/SPF (Extended Utilities). It is intended for users who are familiar with the IBM Interactive System Productivity Facility/Program Development Facility (ISPF/PDF), hereafter referred to as ISPF. The basic components of ISPF are not defined here.

What's In This Manual?

The first two chapters of this manual introduce the general facilities and recurring features of File-AID. The following chapters discuss each product function and are arranged in the order they appear on the File-AID Primary Option Menu. The function's option number appears in parentheses following the chapter title. The final two chapters describe primary and line commands. The following list briefly describes the contents of each chapter:

- **Chapter 1, "Product Overview":** Product feature and function descriptions.
- **Chapter 2, "Product Conventions":** Instructions for accessing File-AID and descriptions of the conventions and procedures that can be used with more than one function, such as tutorials.
- **Chapter 3, "Parameters (0)":** Display and modify a variety of parameter settings at any time during your File-AID session. This chapter describes the Parameters function, options, and screens.
- **Chapter 4, "Browse and Edit (1 and 2)":** Browse and edit data in Character, Formatted, Vertical Formatted, or Unformatted mode. This chapter describes the Browse and Edit function data displays, screens, information displays, audit trail feature, edit procedures, and performance considerations.
- **Chapter 5, "Library Utility (3.1)":** Manage libraries online. This chapter describes the Library utility function, options, and screens.
- **Chapter 6, "Dataset Utility (3.2)":** Allocate, define, delete, rename, and uncatalog datasets, display dataset information, and free unused space. This chapter describes the Dataset utility function, options, and screens.
- **Chapter 7, "Copy Utility (3.3)":** Copy records or members from one dataset to another. This chapter describes the Copy utility function, options, and screens.
- **Chapter 8, "Catalog Utility (3.4)":** Display lists of cataloged datasets. This chapter describes the Catalog utility function, options, and screens.
- **Chapter 9, "VSAM Utility (3.5)":** Allocate VSAM datasets, display dataset information, delete and define clusters, and rename and modify components. This chapter describes the VSAM utility function, options, and screens.
- **Chapter 10, "Search/Update Utility (3.6)":** View and modify files of any standard MVS access method. This chapter describes the Search/Update utility function, options, and screens.
- **Chapter 11, "VTOC Utility (3.7)":** List volume information by volume or dataset. This chapter describes the VTOC utility function, options, and screens.
- **Chapter 12, "Interactive Utility (3.8)":** Process File-AID/Batch commands at a terminal. This chapter describes the Interactive utility function and screens.

- **Chapter 13, "Batch Submit Utility (3.9)":** Use screens to create and submit batch jobs. This chapter describes the Batch Submit utility function and screens.
- **Chapter 14, "XMLGEN (G)":** Use screens to create XML documents from existing files using COBOL or PL/I layout fields as the tag names.
- **Chapter 15, "Print (5)":** Print the contents of a data file, record layout XREF, selection criteria, record layouts, and if created audit trail. This chapter describes the Print function, options, and screens.
- **Chapter 16, "Selection Criteria (6)":** Create and maintain sets of criteria that File-AID uses to select records in a data file for processing. This chapter describes the Selection Criteria function, options, and screens.
- **Chapter 17, "Record Layout Cross Reference (7)":** Create and maintain XREFs (record layout cross references) that File-AID uses to format files containing more than one record type. This chapter describes the Record Layout Cross Reference function, options, and screens.
- **Chapter 18, "View Record Layout (8)":** View COBOL or PL/I record layouts as File-AID interprets them. This chapter describes the View function and screens.
- **Chapter 19, "Reformat (9)":** Reformat an input file as it is being copied. This chapter describes the Reformat function, options, and screens.
- **Chapter 20, "Compare (10)":** Compare two files. This chapter describes the Compare function, options, and screens.
- **Chapter 21, "Primary Commands":** Syntax and usage of the primary commands. This chapter describes each File-AID primary command.
- **Chapter 22, "Line Commands":** Syntax and usage of the line commands for use in character and vertical formatted edit modes. This chapter describes each File-AID line command.

System Environment

File-AID/SPF and File-AID/XE operate in the IBM Time Sharing Option (TSO) environment under Version 3 Release 5 or above of the Interactive System Productivity Facility/Program Development Facility (ISPF/PDF).

Compuware recommends running File-AID in a minimum region size of 4 MB. If File-AID is installed in the LPA, it requires a minimum region size of approximately 2 MB.

Note: Increase the region size to 6MB when running File-AID/Batch or when using the File-AID/Data Solutions call with the File-AID Compare function.

File-AID/Batch requires any version of OS/390 or z/OS operating system.

Running File-AID under ROSCOE requires the installation of Release 5.4 or above of the ROSCOE product with the ETSO option. See the File-AID/MVS ROSCOE Users Installation Addendum on the File-AID documentation CD for instructions on installing File-AID under ROSCOE/ETSO.

If a previous release of File-AID is installed, you must reinstall the entire File-AID product.

Notation Rules

This manual uses the following notation rules:

- Screen displays are printed as shown by the product, in upper and lowercase characters.
- **Boldface** type indicates data that you are to enter on the screen.
- Railroad logic syntax diagrams are used to define primary and line command syntax. See "“Syntax Diagram Notation Rules” on page xvii".
- The names of special function keys are defined as follows:

Enter	The keyboard Enter key. When pressed, information is transmitted to File-AID.
HELP	PF key used to display tutorial information or a longer error message. Usually defined as PF1.
END	PF key used to end the current process. Usually defined as PF3.
RETURN	PF key used to end the current process and return to the primary menu. Usually defined as PF4.
RFIND	PF key used to repeat a find condition already entered. Usually defined as PF5.
UP	PF key used to scroll up the display. Usually defined as PF7.
DOWN	PF key used to scroll down the display. Usually defined as PF8.

Syntax Diagram Notation Rules

The syntax for File-AID commands is described in diagrams that help you visualize parameter use. The following example shows a command and a parameter:

```
▶▶─COMMAND──────parameter──────▶◀
```

A **parameter** is either a keyword or a variable.

- All keywords are shown in UPPERCASE characters and must be spelled exactly as shown. You cannot substitute another value.
- All variables are user-specified values and are printed in *lowercase italics*. For example, *dataset-name* indicates you are to substitute a value.

Read the diagrams from left to right and from top to bottom. These symbols help you follow the path of the syntax:

▶▶─ indicates the beginning of a statement.

─▶ indicates the statement is continued on the next line.

▶─ indicates the statement is continued from the previous line.

─▶◀ indicates the end of a statement.

Required parameters appear on the horizontal line (the main path):

```
▶▶─COMMAND──────REQUIRED-KEYWORD ──────▶◀
```

Optional parameters appear below the main path. Default parameters that appear above the main path are optional; including or excluding them in the command has the same effect on the execution.

```
                                  ┌DEFAULT KEYWORD┐
▶▶─COMMAND──REQUIRED KEYWORD──────┼───────────────┼──────────────────────────▶◀
                                  └               └─optional-var─┘
```

Vertically stacked parameters are mutually exclusive. If you must choose a parameter, one item of the stack appears on the main path. If the parameters are optional, the entire stack appears below the main path. If one of the parameters in a stack is the default, it appears above the main path:

```
                                                          ┌default-var1┐
▶▶─COMMAND──┬KEYWORD1┬──┬──────────────────────────┬──┬──┼────────────┼──────▶◀
            └KEYWORD2┘  ├─optional-var1──────────┤  ├─var1────────┤
                        └─optional-var2──────────┘  └─var2────────┘
```

An arrow returning to the left indicates a repeatable item.

```
                  ┌─,──────────┐
▶▶─COMMAND────────┴─required-var┴──────▶◀
```

Related Publications

- ***File-AID Batch Reference Manual:*** Detailed reference document for users of File-AID/Batch. This manual provides information necessary to fully use the batch features of File-AID.
- ***File-AID Installation Guide:*** Step-by-step description of the process necessary to install File-AID. It is intended for the systems group responsible for File-AID at your installation. The installation guide provides the information you need to tailor the online and batch products. It describes the security, I/O, and audit exits. In addition, it describes the SMF recording function and the Release 8 conversion utility.
- ***File-AID Reference Summary***: Summary of File-AID options and commands. This reference is intended for any user of File-AID.
- ***File-AID User's Guide:*** Step-by-step procedures on how to use File-AID functions.
- ***File-AID SMF Record Mapping Reference JES V4:*** Instructions and reference information for installing and using the File-AID SMF Record Mapping facility.
- ***File-AID Training Guide:*** Overview of File-AID to first-time users. This guide is made available during the File-AID training session conducted by Compuware.
- **IBM Documentation**: File-AID documentation does not document ISPF functions. It is assumed that the File-AID user is familiar with the ISPF environment. For more information on ISPF functions, refer to the current version and release of the following documents:
  - ***ISPF Getting Started***
  - ***ISPF User's Guide***
  - ***ISPF Dialog Developer's Guide and Reference***
  - ***ISPF Services Guide***

  - ***MVS/ESA JCL Reference.***

- **Innovative Data Processing, Inc. Documentation:** File-AID reference manuals assume that Innovation Access Method (IAM) users are familiar with the IAM environment. Refer to the Innovation Access Method User Manual for more information.

FrontLine Support Website

Access online technical support for Compuware products via our FrontLine support website. View or download documentation, frequently asked questions, and product fixes, or directly e-mail Compuware with questions or comments. To access FrontLine, you must first register and obtain a password at **http://frontline.compuware.com**.

Online Documentation

Documentation for this product is provided on CD-ROM in several electronic formats:

- View PDF files with the free Adobe Acrobat Reader, available at **http://www.adobe.com**.
- View HTML files with any standard Web browser.
- View BookManager softcopy files with any version of IBM BookManager READ or the IBM Softcopy Reader. To learn more about BookManager or to download the free Softcopy Reader, go to **http://www.ibm.com**.

World Wide Web

Compuware's site on the World Wide Web provides information about Compuware and its products. The address is **http://www.compuware.com**.

File-AID/MVS Frequently Asked Questions

Check out File-AID/MVS's Frequently Asked Questions now located on Compuware's FrontLine support web site. They provide answers to a wide range of questions including topics related to product functions, installation, compatibility, and transition from prior releases. To access Frontline, you must first register and obtain a password at **http://frontline.compuware.com**.

Getting Help

At Compuware we strive to make our products and documentation the best in the industry. Feedback from our customers helps us to maintain our quality standards.

If problems arise, consult your manual or the File-AID technical representative at your site for assistance. If problems persist, please obtain the following information before calling Compuware. This information helps us to efficiently determine the cause of the problem.

1. If possible, access the File-AID System Parameters screen (option 0.1) to determine your client number, File-AID release number and release date.
2. Identify the operating system being used to help determine operating system dependencies.
3. If an abend occurs, note the displacement and module in which it occurs. If possible, obtain a copy of the system dump.
4. Note the sequence of issued commands that resulted in the problem, and the data type involved.

File-AID/MVS Technical Support

Compuware Corporation
One Campus Martius
Detroit, MI 48226-5099
1-800-538-7822

Outside the USA and Canada, please contact your local Compuware office or agent.

Chapter 1. Product Overview

File-AID is an interactive software product that increases data processing productivity in both program development and daily file and record maintenance. File-AID is designed for system, application, operations, and all other data processing personnel.

Like IBM's ISPF, File-AID is a screen-driven product. It employs fill-in-the-blank processes that make it easy to use. Screen formats and other conventions are retained for familiarity. The entire product is backed by tutorials that provide detailed instructions and descriptions.

File-AID browses, edits, allocates, compares, copies, deletes, and prints files of any standard MVS access method. For a partitioned dataset (PDS), you can browse, edit, and copy an individual member or the entire dataset. Additional PDS support treats JCL records as logical information. Record processing and information retrieval are extremely fast, thus speeding up programmer activities.

File-AID's powerful editor expands your editing capabilities to include the following features:

- A character mode for browsing and editing DASD datasets with any record format and record lengths up to 32,760 bytes (32 kB).
- A formatted mode that allows you to browse and edit one record at a time, field-by-field, using your COBOL or PL/I record layout field names to describe each field.
- A vertical formatted mode that allows you to browse and edit records on a field-by-field basis using the record layout field names as column headers. Record layouts can be either COBOL (FD; 01 Level) or PL/I (Declare).
- An unformatted mode for browsing and editing data one record at a time without using a record layout.
- The Compare function that compares two data files field-by-field using the specified record layouts, and reports the differences between the files.
- The Reformat function for selectively reformatting records using an old and new record layout to guide the process.

This chapter introduces the features and functions of the product.

Product Features

Although File-AID parallels the functions of ISPF, it has many features not found in ISPF. This section outlines some general features of File-AID. The features of each File-AID/MVS function are described in "Product Functions" on page 1-3.

File Access Methods

File-AID can process files created through any standard MVS access method. This eliminates the file type restrictions that exist in ISPF browse, edit, and copy functions. In addition, File-AID accesses IAM files. File-AID has special support for browsing, updating, and comparing CA-Panvalet and CA-Librarian files.

File-AID's HFS file support allows you to Browse, Edit, Copy, and Compare HFS files on the UNIX environment of OS/390. Currently, the File-AID/MVS VSAM utility (option 3.5) only allocates, deletes, and renames VSAM-LINEAR datasets.

Record Lengths and Formats

File-AID allows record lengths of up to a maximum of 32,760 bytes (approximately 32 kB). File-AID processes any record format including fixed and variable length, spanned, and undefined records.

Boolean Operators

All Boolean operators are available in File-AID, enhancing selection processing. This capability allows you to search for specified record conditions in the Browse, Edit, Print, Reformat, and Compare functions and in the Copy and Search/Update utilities. Only the specific records are processed or displayed, eliminating unwanted data display and processing. Multiple selection conditions can be connected with AND/OR elements. Record layouts can be used to specify conditions based on field contents.

PDS Member List Processing

When processing a PDS, File-AID allows you to generate a selective list of members. File-AID can scan a member list on a record and/or a member level for a specific field value or string. The displayed list contains only the members that match the specified condition. File-AID can select members based on member name or mask, creation date, changed date, or user ID of last modification.

Selective Processing

With File-AID, you can specify record selection by indicating a specific starting point in a file, a certain number of records to skip, a specific record key, a selection interval, or a relative byte address. You can also specify record selection by checking for specific record data in a named field or record position.

JCL Processing

You can process JCL records as logical statements or physical records. File-AID recognizes the comma as a continuation. Logical processing is possible for DD, EXEC, JOB, JCLLIB, OUTPUT, PROC, SET, and XMIT statements. JCL updating is supported by the Search/Update utility.

Bidirectional Processing

File-AID reads sequential and VSAM files either forwards or backwards. Records at the end of a file can be processed just as quickly as records at the beginning.

ISPF Convention Conformance

Like ISPF, File-AID provides line-command processing for a displayed list of datasets or members. The number of line commands available depends on the function in use. Depending on the member list generated, the S (Select), X (Exclude), B (Browse), and E (Edit) line commands are accepted.

File-AID allows you to change screens using an equal sign (=). To change screens, enter =, followed by the File-AID option value, and the desired File-AID function and option code in any COMMAND or OPTION field on the current screen, and press <Enter>.

Example

```
SELECT OPTION ===> =F.3.1
```

When you press <Enter>, File-AID displays the File-AID Library Utility screen (option 3.1).

Notes:

1. In each installation, you should determine the correct File-AID option value when it is not F.
2. File-AID allows each user to determine whether the File-AID or ISPF menu is used as the reference point for the jump function. Use the Specify Jump Command Default option on the System Parameters screen (option 0.1) to set the jump function. See "System Parameters" on page 3-3.

Dataset names are entered on the File-AID screens in the same format as ISPF. Single quotes (') are used to distinguish between qualified and unqualified dataset names. The name is unqualified when it is entered without quotes and qualified when entered within quotes. In File-AID, the trailing quote is optional.

File-AID has tutorials that provide detailed information on each function. The tutorials define all field values for each screen and any associated error codes. To access tutorial information, use the HELP command or press the PF key assigned to the HELP command. PF1 is the default.

Security Package Interface

File-AID works with any currently installed security package (RACF, CA-ACF2,CA-TOP SECRET, etc.). It uses standard open and close macros to avoid bypassing your security rules. An additional File-AID security exit provides a way to "shut off" some File-AID features. For more information on the security exit, see the*File-AID Installation Guide*.

Unqualified Dataset Naming for VSAM Clusters

The File-AID System Parameters screen (option 0.1) allows you to enter a default intermediate name to use for constructing VSAM dataset names. When an unqualified dataset name is entered for a VSAM file, the fully-qualified name is created by concatenating the installation defined VSAM high-level name, your VSAM intermediate name, and the unqualified dataset name. This process occurs during a search for a dataset when File-AID prefixes the unqualified dataset name with the TSO prefix and fails to locate the dataset.

Product Functions

This section briefly describes each File-AID function. Detailed descriptions of the functions and screens are provided in Chapter 3, "Parameters (0)" through Chapter 20, "Compare (10)".

Parameters

When File-AID is installed, some processing parameters are preset. The values of these parameters are displayed and can be modified on various function screens. However, modifications made on the function screens are temporary. When the display changes, the original default values are redisplayed.

The Parameters function gives you a menu of File-AID processing parameters which you can display and modify. Since all changes are saved in your user profile, you can modify your default values without affecting other users.

Browse

The character browse mode provides full-screen viewing of data and enables you to invoke either formatted browse or vertical formatted browse modes. The entire dataset or a selected subset may be displayed by using selection criteria. The HEX command lets you toggle the display to show hexadecimal values for each character.

The formatted browse mode provides viewing capability for data using a record layout or XREF to identify each data field in a record. This mode presents data one record at a time and formats each record field by field with the field names describing each field. Record layouts can be either COBOL (FD; 01 level) or PL/I (Declare).

The vertical formatted browse mode also provides full-screen viewing of data using a record layout. This mode presents multiple records at a time. The display is in a vertical format that uses the record layout to organize each record field under its record layout field name. Record layouts can be either COBOL (FD; 01 level) or PL/I (Declare).

Unformatted browse mode displays data one record at a time without using a record layout. 70 characters of data are displayed per line.

Edit

The character edit mode expands the strength of ISPF's full-screen editing to include additional access methods and to accommodate increased record lengths. Most of the ISPF primary and line commands have the same function in File-AID, providing familiarity and continuity. Also, the entire dataset or a selected subset may be edited by using selection criteria.

The formatted edit and vertical formatted edit modes allow you to display and edit records using data fields as they are defined by COBOL or PL/I record layouts. Formatted mode displays the data one record at a time. Vertical formatted mode displays multiple records at a time. Unformatted mode displays data one record at a time without using a record layout. Formatted edit mode supports the use of XREFs to automate the use of multiple record layouts for datasets with varying record types and multiple segments.

Utilities

File-AID utilities are similar to the ISPF utilities, but do not duplicate ISPF capabilities. The utilities either provide dataset information, or support dataset manipulation functions such as allocate, delete, and copy. An overview of each utility is presented in the following paragraphs. Each utility is described in more detail in the following chapters:

- Chapter 5, "Library Utility (3.1)"
- Chapter 6, "Dataset Utility (3.2)"
- Chapter 7, "Copy Utility (3.3)"
- Chapter 8, "Catalog Utility (3.4)"
- Chapter 9, "VSAM Utility (3.5)"
- Chapter 10, "Search/Update Utility (3.6)"
- Chapter 11, "VTOC Utility (3.7)"
- Chapter 12, "Interactive Utility (3.8)"
- Chapter 13, "Batch Submit Utility (3.9)"
- Chapter 14, "XMLGEN (G)".

Library

The Library utility displays directory information for partitioned datasets (PDSs and PDSEs). Members of any library type can be deleted, renamed, or browsed. Data libraries (non-load PDSs) can be edited. A special display format is used for load libraries to show CSECT information such as compile dates and offsets and allow you to modify the load module characteristics such as AMODE or RMODE and APF authorization.

Dataset

The Dataset utility provides processing similar to the ISPF dataset utility. In addition, File-AID can allocate and display information for BDAM, GDG (Generation Data Groups), ISAM, and SMS (Storage Management Subsystem) managed datasets. A free-space option

is provided, along with delete and rename processing for datasets of all MVS access methods.

Copy

The Copy utility provides selective and non-selective record and member copying to and from different access methods. Its capabilities greatly exceed those of the ISPF copy utility. File-AID selection criteria controls the records (or members) being copied. Datasets of all MVS access methods are supported. File-AID's HFS file support allows you to copy HFS files on the UNIX environment of OS/390.

Copy can be processed online or submitted for batch processing. PDS processing options allow members to be copied based on the member name and other PDS statistics.

Catalog

Lists of cataloged datasets are displayed with the Catalog utility. FIND, LOCATE, and P (Print) primary commands and B (Browse), E (Edit), R (Rename), U (Uncatalog), D (Delete), M (Modify), I (Information display), S (Information short), F (Free unused space), 1 (File-AID browse), 2 (File-AID edit), and 6 (File-AID Search/Update) line commands can then be used on the catalog list. Control features allow the list to be selective based on dataset name and limit the information displayed (Quick, Short, Long).

VSAM

An interactive process for allocating VSAM and IAM datasets is provided in the VSAM utility. This utility can also allocate KSDS, ESDS, RRDS, or LINEAR clusters and IAM datasets. The VSAM utility can rename, redefine, modify, and delete clusters, alternate indexes, and paths. A formatted display of dataset information and a build alternate index function is also available.

Batch processing is also available including the generation of IDCAMS DEFINE cluster statements.

All functions can create IDCAMS control cards which can be saved or submitted for batch processing.

Search/Update

The Search/Update utility enables you to view and modify files of any standard MVS access method. It includes selective file scanning and global change preview capabilities. Selection criteria control the records that are displayed or updated. For PDS datasets, FIND and CHANGE commands make it easy to work with member lists. You may request an audit trail when updating.

VTOC

The VTOC utility lists datasets by name or in physical volume sequence. Single or multiple volumes can be processed and optionally printed online. File-AID/Batch also supports the preparation of hardcopy VTOC lists. The File-AID VTOC utility runs considerably faster than the ISPF VTOC utility, and provides more DASD management information.

Interactive

The Interactive utility processes File-AID/Batch commands at a terminal. This utility can help verify the logic of a large batch job before it is submitted. It also provides additional processing that is not possible through the File-AID screens.

Batch Submit

The Batch Submit utility provides a skeletal framework for you to submit any batch job for execution in background. An entry screen is displayed for each type of JCL card. After you enter all required values, the job is created. You can then submit, browse, or edit it.

XMLGEN

The XMLGEN utility creates XML documents from existing files using COBOL or PL/I layout fields as the tag names. To select the XMLGEN utility, type the letter **G** in the OPTION field of the File-AID Extended Utilities menu, or as described in "Selecting Screens" on page 2-7.

Print

The Print function prints:

- Data file contents
- Selection criteria created with File-AID option 6
- Record layout cross references (XREFs) created with File-AID option 7
- Formatted record layouts
- Audit trail datasets that were created while editing a data file in File-AID options 2 (Edit) and 3.6 (Search/Update utility).

Selection Criteria

You use the Selection Criteria function to create and maintain criteria to select only records with specific criteria for use with the Browse, Edit, Print, and Compare functions and the Copy and Search/Update utilities.

XREF

You use the XREF function to create and maintain record layout cross references for use when formatting files with multiple record types in the Browse, Compare, Edit, Print, Reformat, and Selection Criteria functions.

View

The View function displays the contents of COBOL or PL/I layouts as interpreted by File-AID showing the beginning, ending, and length of each field.

Reformat

With the Reformat function, you can reformat some or all of the records of an input file and write them to an output file, based on record layouts defining the input and output files. All records can be copied while reformatting only specific records or record types. Reformat can be processed online or submitted for batch processing.

Compare

File-AID's Compare function enables you to compare two files of any file organization supported by File-AID (VSAM, SEQ, PDS, BDAM, ISAM, IAM, CA-Panvalet, and CA-Librarian) and report the differences between the files. File-AID's HFS file support allows you to compare HFS files on the UNIX environment of OS/390.

Reports can be formatted field by field showing before and after values. You can use selection criteria to indicate specific records in each file to compare and compare criteria to specify fields to include/exclude during the compare. File-AID also gives you a choice of formats (character, formatted, or hexadecimal) in which to report the file differences.

Compare now also features Load Library, Source Code, and JCL compare modes.

Chapter 2.
Product Conventions

This chapter discusses the general procedures and conventions used throughout File-AID functions and utilities. The following topics are discussed:

- Accessing File-AID
- Tutorials
- System messages and codes
- Setting PF keys
- Recursive commands
- Optional CLISTs
- Selecting screens
- Screen types
- Specifying a dataset name
  - Qualified
  - Unqualified
  - Pattern Dataset Names
  - Last Referenced File List
  - Pattern Member Names
- Specifying an HFS Path
  - HFS Directory List
- Specifying a catalog name
- PDS processing options
- Dataset types.

Accessing File-AID/MVS

The File-AID/MVS screens are designed to mimic ISPF. However, File-AID/MVS does not alter ISPF. The only change File-AID/MVS requires in ISPF is the establishment of an entry point; this is done by coding a new option on a menu screen. Usually the entry point is coded as option**F** on the ISPF/PDF Primary Option Menu, as shown in Figure 2-1. However, each installation can specify its own entry point.

In this manual, the File-AID/MVS entry point is shown as option **F** on the ISPF/PDF Primary Option Menu.

Selecting option **F** on the ISPF/PDF Primary Option Menu displays the File-AID/MVS Primary Option Menu shown in Figure 2-2 on page 2-2. This screen lists all of the functions available in File-AID/MVS. Selecting the number or letter of a function on the File-AID/MVS Primary Option Menu displays the screen for that function.

Figure 2-1. ISPF/PDF Primary Option Menu

```
----------------------- ISPF/PDF PRIMARY OPTION MENU   -------------------------
OPTION  ===>
                                                          USERID   -  USERID9
   0  ISPF PARMS  - Specify terminal and user parameters   TIME     -  16:57
   1  BROWSE      - Display source data or output listings TERMINAL -  3278
   2  EDIT        - Create or change source data           PF KEYS  -  24
   3  UTILITIES   - Perform utility functions
   4  FOREGROUND  - Invoke language processors in foreground
   5  BATCH       - Submit job for language processing
   6  COMMAND     - Enter TSO command or CLIST
   7  DIALOG TEST - Perform dialog testing
   A  ABEND-AID   - Abend-AID Output processor
   F  FILE-AID    - Dataset browse, edit, utilities or interactive
   T  TUTORIAL    - Display information about ISPF/PDF
   X  EXIT        - Terminate ISPF using Log and List defaults
Enter END command to terminate ISPF.
```

Figure 2-2. File-AID/MVS Primary Option Menu

```
File-AID 8.9.0 -------------  Primary Option Menu  ----------------------------
OPTION ===>

  0  PARAMETERS  - Specify ISPF and File-AID parameters     USERID   - USERID9
  1  BROWSE      - Display file contents                    PF KEYS  - 24
  2  EDIT        - Create or change file contents           TERMINAL - 3278
  3  UTILITIES   - File-AID/SPF extended utilities          TIME     - 14:21
  5  PRINT       - Print file contents                      JULIAN   - 04.004
  6  SELECTION   - Create or change selection criteria      DATE     - 04/01/04
  7  XREF        - Create or change record layout cross reference
  8  VIEW        - View interpreted record layout
  9  REFORMAT    - Convert file from one format to another
 10  COMPARE     - Compare file contents
  C  CHANGES     - Display summary of File-AID changes
  T  TUTORIAL    - Display information about File-AID
  X  EXIT        - Terminate File-AID and return to ISPF

     Use END to terminate File-AID

     Online Technical Support available at:  frontline.compuware.com

     Copyright (c) 1982 - 2004.  All rights reserved.  Unpublished
     rights reserved under the Copyright Laws of the United States.
     Type LEGAL on the command line for Copyright/Trade Secret Notice.
```

Accessing File-AID/MVS Extended Utilities

To access File-AID/MVS utilities, select File-AID/MVS option number 3 as described in . When you press <Enter>, File-AID/MVS displays the Extended Utilities menu shown in Figure 2-3.

Figure 2-3. File-AID/MVS Extended Utilities Menu

```
File-AID ------------------  Extended Utilities  -----------------------------
OPTION ===>

 1  LIBRARY       - Display and modify directory entries; display load
                    module CSECT maps; browse, delete, rename PDS members
 2  DATASET       - Display dataset information; allocate non-VSAM datasets
                    and GDGs; catalog, uncatalog, delete, or rename datasets
 3  COPY          - Copy entire datasets; copy selected records; copy PDS
                    members based on name, statistics and/or content
 4  CATALOG       - Display generic catalog entries or VSAM datasets on a
                    volume in list form and do dataset list processing
 5  VSAM          - Allocate, display, delete, modify, or rename VSAM clusters,
                    alternate indexes, or paths; manage IAM files
 6  SEARCH/UPDATE - FIND and CHANGE across PDS members.  Search for and/or
                    update data globally in any type of dataset.
 7  VTOC          - Display and process datasets on a volume(s)

 8  INTERACTIVE   - Execute File-AID/Batch

 9  BATCH SUBMIT  - Build batch jobstreams

 G  XMLGEN        - Generate an XML tagged document from data file

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```

The Extended Utilities menu lists and describes each of the File-AID/MVS utilities. Select a utility by entering its option number in the OPTION field of the Extended Utilities menu, or as described in .

An overview of the utilities is presented in “Utilities” on page 1-4.

Tutorials

Tutorials are available for each function and option in File-AID to provide detailed information on the function and explain error conditions. Access tutorials by using the HELP primary command (PF1) from any File-AID screen, or by selecting option T on the File-AID Primary Option Menu.

Access the File-AID Tutorial Table of Contents screen, shown in Figure 2-4, by selecting option T (Tutorial) from the File-AID Primary Option Menu. You can select a specific topic from the Tutorial Table of Contents screen, or read the tutorials sequentially.

Select option 0 (zero) from the Tutorial Table of Contents screen and File-AID displays the General Information Tutorial, as shown in Figure 2-5 on page 2-4. In addition, the File-AID tutorial contains an alphabetic index of topics. To access the index, type the letter **I** on any tutorial and press <Enter>.

Use the END primary command (PF3) to exit the tutorial and return to the File-AID screen from which help was requested. To return to the Tutorial Table of Contents screen, enter the letter **T** on any tutorial screen, and press <Enter>.

Figure 2-4. Tutorial Table of Contents Screen

```
File-AID --------------------- TABLE OF CONTENTS --------------------- TUTORIAL
OPTION  ===>

                    ---------------------------------------
                    | File-AID TUTORIAL TABLE OF CONTENTS |
                    ---------------------------------------

      You may select from the following tutorial topics or press Enter
      to view the first two topics in order.  The remaining topics are
      presented only if explicitly selected:

      0  -  General information about File-AID
      1  -  File-AID Primary Option Menu

      2  -  Change history for File-AID (what's new)
      3  -  Help for using this tutorial
      4  -  Message tutorial (system error codes)
      5  -  Summary of File-AID commands
      I  -  Index of File-AID tutorial topics


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    Unpublished rights reserved under the Copyright Laws of the United States.
```

Figure 2-5. Tutorial General Information Screen

```
File-AID ------------------- GENERAL INFORMATION --------------------- TUTORIAL
OPTION  ===>

                         ---------------------------
                         |   GENERAL INFORMATION   |
                         ---------------------------

   Designed for applications and systems programmers, File-AID is an
   interactive, full-screen system for editing, browsing, defining,
   copying, reformatting, comparing, and printing VSAM, IAM, ISAM,
   PDS, BDAM, and sequential files under TSO/ISPF.

The following topics are presented in sequence, or may be selected by number:

  1 - Key features of File-AID          10 - Split screen mode
  2 - Invoking File-AID                 11 - Terminating File-AID
  3 - Summary of options 0-C            12 - File-AID datasets
  4 - Screen formats                    13 - Abnormal termination
  5 - Command entry                     14 - Dataset security with File-AID
  6 - Command summary                   15 - Audit trail feature
  7 - Program access (PA) keys          16 - Compression/encryption exit
  8 - Program function (PF) keys        17 - Double-byte character support
  9 - Scrolling
```

System Messages and Codes

Whenever File-AID displays a short message in the upper-right corner of a screen, you can use the HELP (PF1) command to display a long message on the same topic. Pressing HELP a second time displays the tutorial.

When File-AID displays a system error code in the message, an accompanying tutorial contains a list of error codes. To obtain information on the displayed system error code, specify the appropriate option value in the OPTION field. File-AID then displays a description screen for that group of system error codes. Figure 2-6 shows an example of an error code list.

Figure 2-6. Example Error Code List Screen

```
File-AID ------------------- CATALOG ERROR RETURN CODES -------------- TUTORIAL
OPTION  ===>

  The following pages contain a listing of possible catalog error return codes.


  You may press <ENTER> to page sequentially through the list, or you may enter
  one of the options listed below to get to the desired section more quickly.

  Please refer to IBM's MVS Message Library: System Messages under message
  IDC3009I for an expanded explanation of the return and reason codes.

  OPTION  GROUP OF RETURN CODES PRESENTED (HEX)
  ------  ---------------------------------------------------
    1     000 - 040 (00-28)
    2     042 - 074 (2A-4A)
    3     076 - 112 (4C-70)
    4     114 - 156 (72-9C)
    5     160 - 204 (A0-CC)
    6     208 - 244 (D0-F4)
    7     246 - 512 (F6-200)
```

Setting PF Keys

To display or change any of your PF keys, use the ISPF standard KEYS primary command at any COMMAND input area or select File-AID menu option 0.0.3 which displays the PF Key Definitions and Labels screen. File-AID maintains a distinct set of PF keys for each user. If set from within File-AID, these PF keys are valid only in File-AID. ISPF/PDF PF key settings are not disturbed. See “Notation Rules” on page xvii" for a list of the default settings for File-AID function keys.

Recursive Commands

Recursive commands are a specific group of File-AID commands which are entered on the COMMAND line and invoke File-AID and ISPF functions. File-AID suspends the current display and immediately presents the requested function panel. File-AID remembers the sequence of recursive commands entered. When exiting the function, the display returns in reverse succession to the previously suspended display.

Recursive commands are listed in Table 2-1. The optional *dataset-name* can be an unqualified dataset name without quotes, or a fully qualified dataset name with single quotes.

Table 2-1. Recursive Commands

Command	Description	Optional Parameter
BR, IB	Browse (ISPF/PDF)	
ED, IE	Edit (ISPF/PDF)	
F0	0 File-AID Parameters	
FB, F1	1 Browse	*dataset-name*
FE, F2	2 Edit	*dataset-name*
F3	3 Extended Utilities Menu	
F31	3.1 Library Utility	*dataset-name*
F32	3.2 Dataset Utility	*dataset-name*
F33	3.3 Copy Utility	*dataset-name*

Table 2-1. Recursive Commands (Continued)

Command	Description	Optional Parameter
F34	3.4 Catalog Utility	
F35	3.5 VSAM Utility	*dataset-name*
F36	3.6 Search/Update Utility	*dataset-name*
F37	3.7 VTOC Utility	
F38	3.8 Interactive Utility	*dataset-name*
F39	3.9 Batch Submit Utility	
F5	5 Print Menu	
F51	5.1 Print Data File	*dataset-name*
F52	5.2 Print Record/Layout XREF	
F53	5.3 Print Selection Criteria	
F54	5.4 Print Record Layout	
F55	5.5 Print Audit Trail	
F6	6 Selection	
F7	7 XREF	
F8	8 View	
F9	9 Reformat	
F10	10 Compare	*dataset-name*
FALISTA	LISTALC ALL Command	

Example

To invoke File-AID Search/Update with the F36 recursive command for a *dataset-name* of TEST.COPYLIB, enter the following in the COMMAND field of any File-AID screen:

```
F36 'TEST.COPYLIB'
```

Optional CLISTs

Optional File-AID CLISTs are another method for invoking File-AID. These CLISTs allow you to access File-AID functions directly from other ISPF dialogs, such as the ISPF 3.4 Data Set List Utility. The File-AID CLIST names correspond to the names of the File-AID recursive commands and they function in a similar manner. To enhance CLIST performance and screen handling, use the optional % (percent sign) before the CLIST name.

Example

To invoke File-AID Browse with the F1 CLIST for a *dataset-name* of SYS123.MY.JCL, enter the following from any ISPF command line:

```
TSO %F1 'SYS123.MY.JCL'
```

The File-AID-provided execution CLISTs and the File-AID functions they invoke are listed in Table 2-2.

Table 2-2. File-AID Execution CLISTs

CLIST	File-AID Function Invoked	Required Parameter
FASTART	Primary Option Menu	
F1	1 Browse	*dataset-name*
F2	2 Edit	*dataset-name*
F31	3.1 Library Utility	*dataset-name*
F32	3.2 Dataset Utility	*dataset-name*
F33	3.3 Copy Utility	*dataset-name*
F34	3.4 Catalog Utility	
F35	3.5 VSAM Utility	*dataset-name*
F36	3.6 Search/Update Utility	*dataset-name*
F37	3.7 VTOC Utility	
F38	3.8 Interactive Utility	*dataset-name*
F39	3.9 Batch Submit Utility	
F51	5.1 Print Data File	*dataset-name*
F52	5.2 Print Record/Layout XREF	
F53	5.3 Print Selection Criteria	
F54	5.4 Print Record Layout	
F55	5.5 Print Audit Trail	
F6	6 Selection Criteria	
F7	7 XREF Cross Reference	
F8	8 View Record Layout	
F9	9 Reformat	
F10	10 Compare	*dataset-name*
FABATCH	File-AID/Batch (EXEC PGM=FILEAID)	
FALISTA	File-AID LISTALC ALL command	

Dataset-Name Parameter : A *dataset-name* parameter is required when invoking many of the CLISTs as specified in Table 2-2. If you do not enter a dataset name, File-AID prompts you for one. Enter the unqualified name without quotes, or a fully qualified dataset name with single quotes. Enter **GO** to use the File-AID default dataset name (last dataset name referenced in File-AID). When the CLIST is invoked as a line command on an ISPF/PDF 3.4 Dataset List screen, notice that the dataset name on the line where the CLIST is specified is automatically passed as a parameter to the CLIST by ISPF.

FABATCH Notes : Instructions are displayed when the CLIST is invoked, and you are prompted for a dataset name when it is needed for execution. This CLIST allows you to access File-AID/Batch facilities that are not available with the **F38** CLIST, such as the FPRINT, USER, and REFORMAT functions. The FABATCH CLIST is equivalent to submitting a File-AID/Batch background JOB, except that JCL coding and an initiator are not required. In addition, you can input control cards and immediately view the results at your terminal.

Selecting Screens

File-AID screens are selected in the same way as those in ISPF. There are standard methods to move from one screen to another:

- Use the END primary command (PF3) to return to the previous level (screen) of operation. In some File-AID options, END is used to continue processing, which is noted on the screen.
- Use the RETURN primary command (PF4) to display the ISPF Primary Option Menu.

- Enter an equal sign (=) and the File-AID option value in any COMMAND or OPTION field on the current screen. For example, to invoke the File-AID System Parameters screen, enter:

  ```
  COMMAND ===>  =F.0.1
  ```

Note: Determine the correct File-AID option value for your site.

File-AID allows each user to determine whether the File-AID or ISPF menu is used as the reference point for the jump function. The Specify Jump Command Default option is set on the System Parameters screen (option 0.1). If the Specify Jump Command Default Enable field is set to YES, then the following applies:

- To return to ISPF Primary Option Menu, enter **=X**.
- To select a File-AID function screen from any File-AID screen, type an equal sign (=) followed by the number of the desired screen option, then use RETURN (PF4) or < Enter > to directly select the screen. For example, enter:

  ```
  COMMAND ===>  =3.1
  ```

  When jumps are enabled, this example invokes the File-AID Library utility. If jumps are not enabled, this example invokes the ISPF utility.

You can recursively invoke any File-AID function with File-AID recursive commands. All commands correspond to the File-AID menu options. For example, F31 invokes the File-AID 3.1 Library utility. See “Recursive Commands” on page 2-5 for more information.

Screen Types

Screen formats are divided into five types:

- **Selection Menus:** See “Selection Menus” on page 2-8.
- **Function Entry Screens:** See “Function Entry Screens” on page 2-9.
- **Member Selection Lists:** See “Member Selection Lists” on page 2-9.
- **Information Displays:** See “Information Displays” on page 4-19.
- **Data Displays:** See “Data Displays” on page 4-7.

On each screen type except selection menus, the first three lines generally contain the same type of information:

Line 1: Function or screen title, file name, and a short message such as a processing indicator or the number of rows in a table.

Line 2: OPTION or COMMAND input field, and SCROLL amount when applicable.

Line 3: Long message or help information when applicable.

The next three sections describe the selection menu, function entry screen, and member selection list screen types and give an example of each. Informational and data displays are described in Chapter 4, “Browse and Edit (1 and 2)”.

Selection Menus

Selection menus are used to select a function or option of the product. An example is the File-AID Primary Option Menu shown in Figure 2-7 on page 2-9. The only valid inputs to these displays are the codes listed on the menu.

Figure 2-7. Example Selection Menu: Primary Option Menu

```
File-AID 8.9.0 -------------  Primary Option Menu  ----------------------------
OPTION ===>

  0  PARAMETERS  - Specify ISPF and File-AID parameters     USERID   - USERID9
  1  BROWSE      - Display file contents                    PF KEYS  - 24
  2  EDIT        - Create or change file contents           TERMINAL - 3278
  3  UTILITIES   - File-AID/SPF extended utilities          TIME     - 14:21
  5  PRINT       - Print file contents                      JULIAN   - 04.004
  6  SELECTION   - Create or change selection criteria      DATE     - 04/01/04
  7  XREF        - Create or change record layout cross reference
  8  VIEW        - View interpreted record layout
  9  REFORMAT    - Convert file from one format to another
 10  COMPARE     - Compare file contents
  C  CHANGES     - Display summary of File-AID changes
  T  TUTORIAL    - Display information about File-AID
  X  EXIT        - Terminate File-AID and return to ISPF

     Use END to terminate File-AID

     Online Technical Support available at:  frontline.compuware.com

     Copyright (c) 1982 - 2004.  All rights reserved.  Unpublished
     rights reserved under the Copyright Laws of the United States.
     Type LEGAL on the command line for Copyright/Trade Secret Notice.
```

Function Entry Screens

Function entry screens are displayed by File-AID after a function is selected from a menu. An example is the File-AID Edit Dataset Specification screen shown in Figure 2-8.

Figure 2-8. Example Function Entry Screen: Edit - Dataset Specification

```
File-AID ---------------- Edit - Dataset Specification ------------------------
COMMAND ===>

Edit Mode                   ===> C          (F=Fmt; C=Char; V=Vfmt; U=Unfmt)

Specify Edit Information:
   Dataset name or HFS path ===> 'USERID9.FASAMP.EMPMAST'
   Member name              ===>          (Blank or pattern for member list)
   Volume serial            ===>          (If dataset is not cataloged)
   Disposition              ===> OLD      (SHR or OLD)
   Create audit trail       ===> N        (Y = Yes; N = No)

Specify Record Layout and XREF Information:
   Record layout usage      ===> N        (S = Single; X = XREF; N = None)
   Record layout dataset    ===>
   Member name              ===>          (Blank or pattern for member list)
   XREF dataset name        ===>
   Member name              ===>          (Blank or pattern for member list)

Specify Selection Criteria Information:     (E = Existing; T = Temporary;
   Selection criteria usage ===> N           M = Modify; Q = Quick; N = None)
   Selection dataset name   ===>
   Member name              ===>            (Blank or pattern for member list)
```

The entry screens contain the fields used to specify the dataset components on which the function is to operate.

Member Selection Lists

File-AID displays member selection lists in the following instances:

- Member S/X list processing is provided as part of the function for Copy, Print, Library utility, and Search/Update options B and U.

- Member Select list processing is provided when the member is a required field on a function entry screen for a partitioned dataset, record layout, selection criteria, XREF, reformat, or compare dataset.
- Member Hits list is the product (end result) of a selection function in the process of selecting members to display for Browse and Edit.

Member S/X List

The Member S/X List screen, shown in Figure 2-9, allows you to select or exclude the displayed members from further processing.

Figure 2-9. Member S/X List Screen

```
 File-AID Member S/X - USERID9.FASAMP.JCL ------------------  ROW 1 TO 17 OF 17
 COMMAND ===>                                                 SCROLL ===> CSR
S/X  NAME             VV.MM  CREATED     CHANGED      SIZE  INIT   MOD   ID
    BATVTOC           01.00 95/02/03 95/02/03 15:44     23    23     0 USERID9
    COPY              01.00 95/02/03 95/02/03 15:44     22    22     0 USERID9
    CVT6XMAP SELECTED 01.00 95/02/03 95/02/03 15:44     37    37     0 USERID9
    CVT7OSEL SELECTED 01.00 95/02/03 95/02/03 15:44     22    22     0 USERID9
    CVT7OXRF SELECTED 01.00 95/02/03 95/02/03 15:44     21    21     0 USERID9
    DROP              01.00 95/02/03 95/02/03 15:44     20    20     0 USERID9
    DUMP              01.00 95/02/03 95/02/03 15:44     18    18     0 USERID9
    JCLCNVRT SELECTED 01.00 95/02/03 95/02/03 15:44     23    23     0 USERID9
    LIST              01.00 95/02/03 95/02/03 15:44     17    17     0 USERID9
    PRINT             01.00 95/02/03 95/02/03 15:44     18    18     0 USERID9
    SAMPLE01          01.00 95/02/03 95/02/03 15:44     14    14     0 USERID9
    SAMPLE02          01.00 95/02/03 95/02/03 15:44     17    17     0 USERID9
    SKELETON          01.00 95/02/03 95/02/03 15:44     23    23     0 USERID9
    SPACE             01.00 95/02/03 95/02/03 15:44     20    20     0 USERID9
    TALLY             01.00 95/02/03 95/02/03 15:44     21    21     0 USERID9
    UPDATE            01.00 95/02/03 95/02/03 15:44     27    27     0 USERID9
    USER              01.00 95/02/03 95/02/03 15:44     31    31     0 USERID9
 ****************************** BOTTOM OF DATA ********************************
```

This member list screen is displayed when you enter a Y in the Display Member List field on the PDS Processing Options screen in Copy (F.3.3) Search/Update (F.3.6) options B and U, or Print (F.5).

Use the S/X field to specify the following line commands:

S	Select this member for processing.
SS	Specify the beginning or end of a block of members to select.
X	Exclude this member from processing.
XX	Specify the beginning or end of a block of members to exclude.

Use the END command (PF3) to continue processing from this screen.

Member Select List

The Member Select list screen displays the members of the dataset specified on the function entry screen. The member is a required field for a partitioned, record layout, selection criteria, XREF, reformat, or compare dataset. The Member Select list screen, as shown in Figure 2-10 on page 2-11, is displayed for a partitioned dataset.

For an XREF or selection criteria dataset, File-AID displays a similar list screen that adds a 30-byte description of the XREF or selection criteria member. The XREF Select member list screen is shown in Figure 17-2 on page 17-3. The SELCRIT Select member list screen is shown in Figure 16-3 on page 16-5.

On any of the select member list screens, you select one member at a time. Enter the **S** (select) line command in the field next to the member name. You can also select members by entering the **SELECT member** (S member) primary command. For example:

```
COMMAND ===> SELECT PRINT
```

Selects the member PRINT for processing.

Scrolling, LOCATE, and SORT commands are also available on member selection lists.

Figure 2-10. Member Select List Screen

```
File-AID Member Select - USERID9.FASAMP.JCL ---------------  ROW 1 TO 17 OF 17
COMMAND ===>                                                  SCROLL ===> CSR
 S  NAME             VV.MM  CREATED     CHANGED      SIZE  INIT   MOD   ID
    BATVTOC          01.00 95/02/03 95/02/03 15:44     23    23     0 USERID9
    COPY             01.00 95/02/03 95/02/03 15:44     22    22     0 USERID9
    CVT6XMAP         01.00 95/02/03 95/02/03 15:44     37    37     0 USERID9
    CVT70SEL         01.00 95/02/03 95/02/03 15:44     22    22     0 USERID9
    CVT70XRF         01.00 95/02/03 95/02/03 15:44     21    21     0 USERID9
    DROP             01.00 95/02/03 95/02/03 15:44     20    20     0 USERID9
    DUMP             01.00 95/02/03 95/02/03 15:44     18    18     0 USERID9
    JCLCNVRT         01.00 95/02/03 95/02/03 15:44     23    23     0 USERID9
    LIST             01.00 95/02/03 95/02/03 15:44     17    17     0 USERID9
    PRINT            01.00 95/02/03 95/02/03 15:44     18    18     0 USERID9
    SAMPLE01         01.00 95/02/03 95/02/03 15:44     14    14     0 USERID9
    SAMPLE02         01.00 95/02/03 95/02/03 15:44     17    17     0 USERID9
    SKELETON         01.00 95/02/03 95/02/03 15:44     23    23     0 USERID9
    SPACE            01.00 95/02/03 95/02/03 15:44     20    20     0 USERID9
    TALLY            01.00 95/02/03 95/02/03 15:44     21    21     0 USERID9
    UPDATE           01.00 95/02/03 95/02/03 15:44     27    27     0 USERID9
    USER             01.00 95/02/03 95/02/03 15:44     31    31     0 USERID9
****************************** BOTTOM OF DATA ******************************
```

Member Hits List

The Member Hits list screen, shown in Figure 2-11, displays the members that match the values specified on the PDS processing options and selection criteria screens. This screen is displayed after member and record selection criteria is applied for Browse (F.1), and Edit (F.2).

The Hits field shows you the number of times within each member that the selection criteria was met. If no members match the criteria, File-AID displays the message: **NO MEMBERS SELECTED** at the top of the originating function screen.

You can scroll up and down the Member Hits List screen, use the LOCATE primary command to scroll the list and find a particular member. Select one or more members at a time.

To select members, enter the **S** (select) line command in the field next to the member name. Optionally, you can select members by entering the **SELECT member** (S member) primary command.

Use the END command (PF3) to exit the member and process the next selected member. When all members have been processed, use the END command (PF3) to return to the original function screen.

Figure 2-11. Member Hits List Screen

```
File-AID Member Hits - USERID9.FASAMP.JCL ----------------  ROW 1 TO 14 OF 14
COMMAND ===>                                                 SCROLL ===> CSR
 S  NAME        HITS VV.MM  CREATED     CHANGED      SIZE  INIT   MOD   ID
   BATVTOC         1 01.00 95/02/03 95/02/03 15:44     23    23     0 USERID9
   COPY            2 01.00 95/02/03 95/02/03 15:44     22    22     0 USERID9
   CVT6XMAP        2 01.00 95/02/03 95/02/03 15:44     37    37     0 USERID9
   CVT70SEL        2 01.00 95/02/03 95/02/03 15:44     22    22     0 USERID9
   CVT70XRF        2 01.00 95/02/03 95/02/03 15:44     21    21     0 USERID9
   DROP            2 01.00 95/02/03 95/02/03 15:44     20    20     0 USERID9
   DUMP            2 01.00 95/02/03 95/02/03 15:44     18    18     0 USERID9
   JCLCNVRT        1 01.00 95/02/03 95/02/03 15:44     23    23     0 USERID9
   LIST            2 01.00 95/02/03 95/02/03 15:44     17    17     0 USERID9
   PRINT           2 01.00 95/02/03 95/02/03 15:44     18    18     0 USERID9
   SPACE           2 01.00 95/02/03 95/02/03 15:44     20    20     0 USERID9
   TALLY           2 01.00 95/02/03 95/02/03 15:44     21    21     0 USERID9
   UPDATE          2 01.00 95/02/03 95/02/03 15:44     27    27     0 USERID9
   USER            2 01.00 95/02/03 95/02/03 15:44     31    31     0 USERID9
******************************** BOTTOM OF DATA ********************************
```

Member List Field Descriptions

Name : Member name, up to eight characters.

VV.MM : Version and modification level.

Created : Date the member was created.

Changed : Date and time member last updated and saved.

Size : Current number of records in member.

Init : Initial number of records in member.

Mod : Number of modifications to member.

ID : Identification of user who made last changes to member.

Member List Primary Commands : Scrolling and the following primary commands are available on member selection lists:

CANCEL

The CANCEL command cancels current member selection and returns to the previous display.

```
►►─CANCEL──►◄
```

LOCATE

The LOCATE command scrolls to the specified string.

```
►►┬─LOCATE─┬─ string ──►◄
  └─L──────┘
```

RESET

The RESET command reconstructs the current display with the entire member list, negating any processing or selection options, condense operations, and exclude line commands that have been specified

```
►►─RESET──►◄
```

SELECT

The SELECT command selects the specified member name for processing.

```
►►─┬─SELECT─┬─member-name──►◄
   └─S──────┘
```

SORT

The SORT command sorts the member list. Any column header on the member list display is a valid keyword parameter for SORT. In the Library utility, the SORT command is valid for non-load libraries.

```
                ┌─NAME─┐
►►─SORT─────────┼──────┼──►◄
                ├─VV───┤
                ├─CRE──┤
                ├─CHA──┤
                ├─SIZE─┤
                ├─INIT─┤
                ├─MOD──┤
                └─ID───┘
```

Specifying a Dataset Name

Enter the dataset name you want to process in the Dataset name field of a screen. A qualified dataset name is enclosed in single quotes; an unqualified dataset name is not enclosed in single quotes. File-AID concatenates the TSO prefix to the front of an unqualified dataset name.

The Search name field in the Catalog utility (3.4) and VTOC utility (3.7) accept only qualified names entered without single quotes (' '). All other dataset name fields accept qualified (quoted) and unqualified (non-quoted) dataset names.

Qualified Dataset Names

A qualified dataset name is enclosed in single quotes (' '). The quotes specify that no other information is to be concatenated to the front of the qualified name. Since the trailing quote is not required, a single leading quote can signify a qualified dataset name.

You must specify both the library name and the member name for a qualified dataset name. The member name must be enclosed in parentheses (( )).

Example 1

```
'MY.TEST.DATA'
```

In Example 1, File-AID searches the catalog for a dataset name containing the three specified levels. Each level is separated by a period (.). The entered name is processed as it is entered.

Example 2

```
'UNIT.TEST.CNTL(PROG1)'
```

Example 2 specifies the member called PROG1 within the library UNIT.TEST.CNTL.

Unqualified Dataset Names

An unqualified dataset name is not enclosed in quotes (' '). The TSO prefix is then concatenated to the beginning of the entered value.

Use the TSO PROFILE command to display the value of your TSO prefix. If the TSO PROFILE NOPREFIX option is set, the TSO prefix is not added to an unqualified dataset name.

Example 1

Add the TSO prefix to the specified dataset name to complete the name.

```
DATASET.NAME
```

The result is:

```
userprefix.DATASET.NAME.
```

Unqualified VSAM dataset names are prefixed with the installation-defined optional VSAM high-level name (see the *File-AID Installation Guide*). Also, a user-defined VSAM intermediate name default can be set in the System Parameters (option 0.1). See "System Parameters" on page 3-3. When a search fails for an unqualified dataset name, the VSAM name is constructed and the catalog is searched again to see if the cluster can be located.

Example 2

In Example 1, if **userprefix.DATASET.NAME** was not found, File-AID constructs the following dataset name for the cluster search:

```
vsam-high-level.vsam-intermediate-name.DATASET.NAME
```

Pattern Dataset Names

You can enter a pattern name in any Dataset name, Search name, Model dataset name, and Base cluster name field to produce a list of dataset names that match the pattern. You can select a dataset from this list with the S line command.

The pattern dataset name is used most often as a dataset name prefix. This means that all datasets whose high-level qualifiers match the pattern dataset name are listed and there are no restrictions on the remaining qualifiers. The exceptions to the prefix rule are the slash (/) and plus (+) pattern characters.

The prefix concept is illustrated in Figure 2-12. **'USERID9.FASAMP.*'** is entered in the Edit dataset name field.

Figure 2-12. Specifying a Pattern Dataset Name

```
File-AID ---------------  Edit - Dataset Specification  -----------------------
COMMAND ===>

Edit Mode                   ===> V          (F=Fmt; C=Char; V=Vfmt; U=Unfmt)

Specify Edit Information:
   Dataset name or HFS path ===> 'USERID9.FASAMP.*'
   Member name              ===>            (Blank or pattern for member list)
   Volume serial            ===>            (If dataset is not cataloged)
   Disposition              ===> OLD        (OLD or SHR)
   Create audit trail       ===> N          (Y = Yes; N = No)

Specify Record Layout and XREF Information:
   Record layout usage      ===> N          (S = Single; X = XREF; N = None)
   Record layout dataset    ===>
   Member name              ===>            (Blank or pattern for member list)
   XREF dataset name        ===>
   Member name              ===>            (Blank or pattern for member list)

Specify Selection Criteria Information:     (E = Existing; T = Temporary;
   Selection criteria usage ===> N           M = Modify; Q = Quick; N = None)
   Selection dataset name   ===>
   Member name              ===>            (Blank or pattern for member list)
```

Figure 2-13 lists all the datasets that have a first-level qualifier of USERID9, a second-level qualifier of FASAMP, and any number of subsequent qualifiers: USERID9.FASAMP.EMPLOYEE, USERID9.FASAMP.NEWJCL.TEST, etc.

Figure 2-13. Displaying Results of Pattern Dataset Name Search

```
File-AID -------------  Catalog Utility Dataset List     Select --- EDIT Input
COMMAND ===>                                                  SCROLL ===> CSR
  ----- D A T A S E T   N A M E  -------------- --Type--   -Volume-  -Status-
  USERID9.FASAMP.COMPARE                         CLUSTER     PRD928
  USERID9.FASAMP.EMPLOYEE                        CLUSTER     PRD928
  USERID9.FASAMP.EMPLOYE2                        NON-VSAM    PRD924
  USERID9.FASAMP.EMPMAST                         NON-VSAM    PRD924
  USERID9.FASAMP.INVFILE                         NON-VSAM    PRD924
  USERID9.FASAMP.INVFILE2                        NON-VSAM    PRD924
  USERID9.FASAMP.JCL                             NON-VSAM    PRD924
  USERID9.FASAMP.LAYOUTS                         NON-VSAM    PRD924
  USERID9.FASAMP.ORDRFILE                        NON-VSAM    PRD924
  USERID9.FASAMP.RFMTDEF                         NON-VSAM    PRD924
  USERID9.FASAMP.SEGFILE                         NON-VSAM    PRD924
  USERID9.FASAMP.SELCRIT                         NON-VSAM    PRD924
  USERID9.FASAMP.XREF                            NON-VSAM    PRD924
****************************** BOTTOM OF DATA ********************************
```

In File-AID's Dataset name field and in the Catalog utility (option 3.4) Search name field, the first-level qualifier of the pattern dataset name must be an explicit qualifier with no pattern characters.

File-AID's VTOC utility (option 3.7) allows pattern characters at any level within the pattern dataset name for the Search name field.

File-AID does not allow a pattern name in the dataset name and member name field at the same time.

Pattern Characters

The valid pattern characters allowed in File-AID pattern datasets names are the asterisk (*), slash (/), plus (+), question mark (?), and percent sign (%):

Asterisk (*) : The asterisk is a qualifier-name wildcard. It represents any single-level qualifier, or partial-level qualifier when preceded by 1 to 7 explicit characters.

Example:

```
Dataset name ==>    USERID9.TEST*
```

Lists all the datasets with a first-level qualifier of USERID9, a second-level qualifier beginning with TEST, and any number (including zero) of remaining qualifiers: USERID9.TEST, USERID9.TEST.DATA, USERID9.TESTAA.DATA, USERID9.TESTAB.NODE.NODE, etc.

Question Mark (?) and Percent Sign (%) : The question mark and the percent sign are both single-character wildcards. Either character represents a single character in the specified position of the qualifier. A single-character wildcard can be used up to 8 times within a qualifier, but a character must exist in that position.

Example:

```
Dataset name ==>    USERID.TEST??

Dataset name ==>    USERID.TEST%%
```

These examples both match datasets with a high-level qualifier of USERID and second-level qualifier of TESTAA and TESTAB, but not TESTOUT or TEST. They also match USERID.TESTAA.NODE and USERID.TESTAB.NODE.NODE.

Slash (/) : The slash specifies the number of levels in the dataset name. Dataset names with more levels than those specified in the Dataset name are not listed. The / must be the last element in the Dataset name. The / and the + cannot both be used in the same Dataset name.

Example:

```
Dataset name ==>    USERID.TEST.*/
```

This example matches USERID.TEST.ALPHA and USERID.TEST.BETA. It does not match USERID.TEST.ALPHA.BETA because there are too many levels or USERID.TEST because there are too few levels.

Plus (+) : The plus tells File-AID to ignore any intermediate-level qualifiers. Use the + after the high-level qualifier and before the lowest-level qualifier to have File-AID ignore any intermediate qualifiers. In effect, it matches zero or more qualifiers in the name. Only one + can be used per name.

The portion of the name before the + represents a pattern for the high-level qualifier(s) of the dataset name; the portion after the + represents a pattern for the low-level qualifier(s). When the + is used, only dataset names that begin and end exactly as the pattern does are displayed.

The / and the + cannot both be used in the same pattern dataset name. The + implies a / at the end of the pattern dataset name.

Example:

```
Dataset name ==>    USERID9.+.TEST
```

This example matches USERID9.BETA.TEST, USERID9.TEST, or USERID9.FILEAID.ALPHA.SEQ.TEST, since they all begin with USERID9 and end with TEST. It does not match USERID9.BETA.TEST.CLUSTER, because the + indicates that TEST must be the last qualifier in the dataset name.

In only the VTOC utility (3.7), the + (plus) may be used as the high-level qualifier in the search name.

Example:

```
Dataset name ==>    +.JCL.CNTL
```

This example locates all datasets starting with anything but ending in.JCL.CNTL.

Pattern Dataset Name Examples

Examples 1 through 5 are valid entries in a Dataset name or Search name field. Examples 6 through 9, in the following section, are only valid in the VTOC utility Search name field.

Example 1

```
Dataset name ==>USERID.*.MISC
```

Matches datasets with a high-level qualifier of USERID, any second-level qualifier, a third-level qualifier of MISC, and any number of qualifiers beyond the third-level. Matches USERID.DATA.MISC and USERID.BETA.MISC.ACCOUNTS. It does not match USERID.BETA.ACCOUNTS.MISC because the third-level qualifier is not MISC.

Example 2

```
Dataset name ==>USERID.*.MISC/
```

Matches datasets with a high-level qualifier of USERID, any second-level qualifier, and a third-level qualifier of MISC, which must be the last qualifier. Matches USERID.DATA.MISC. It does not match USERID.BETA.MISC.ACCOUNTS because there is a qualifier in the name beyond MISC. It does not match USERID.BETA.ACCOUNTS.MISC because there is more than one qualifier between USERID and MISC.

Example 3

```
Dataset name ==>USERID.ACCTID*.*.MISC
```

Matches datasets with a high-level qualifier of USERID, a second-level qualifier that begins with ACCTID, any third-level qualifier, a fourth-level qualifier of MISC, and any number of qualifiers beyond the fourth-level. Matches USERID.ACCTID.DATA.MISC, USERID.ACCTID99.SCRIPT.MISC, and USERID.ACCTIDX.BETA.MISC.ACCOUNTS.NODE.

Example 4

```
Dataset name ==>USERID.+.*.MISC
```

Matches datasets with a high-level qualifier of USERID, any number (including zero) of intervening qualifiers, a second-to-last-level qualifier that can be anything (but must be there), and a last-level qualifier of MISC.

Matches USERID.DATA.MISC and USERID.BETA.EXAMPLES.TEXT.MISC. It does not match USERID.MISC because the ***** requires that there is at least one qualifier between USERID and MISC. It does not match USERID.BETA.MISC.ACCOUNTS because the last-level qualifier must be MISC.

Example 5

```
Dataset name ==>USERID.+.MISC.*
```

Matches datasets with a high-level qualifier of USERID, any number (including zero) of intervening qualifiers, a second-to-last-level qualifier of MISC, and a last-level qualifier that can be anything (but must be there). Matches USERID.MISC.DATA, USERID.NODE.MISC.NODE, and USERID.NODE.NODE.MISC.DATA. It does not match

USERID.MISC because the * requires that the last-level qualifier exist. It does not match USERID.MISC.NODE.NODE because the + implies a / at the end of the pattern dataset mask, which indicates that MISC must be the second-to-the-last qualifier in the dataset name.

VTOC Utility Search Name Mask Examples

In addition to Examples 1 through 5, the following examples are also valid for the VTOC utility Search name field.

Example 6

```
Search name ==>*.TEST.*
```

Searches for datasets with any high-level qualifier, a second-level qualifier of TEST, and a third-level qualifier that can be anything (but must be there), and any number (including zero) of low-level qualifiers. Matches USERID1.TEST.NODE and USERID9.TEST.NODE.NODE.

Example 7

```
Search name ==>+.TEST.*
```

Searches for datasets with any number of high-level qualifiers, a second-to-last-level qualifier of TEST, and a last-level qualifier that can be anything (but must be there). Matches TEST.NODE, USERID1.TEST.NODE, and USERID9.NODE.TEST.NODE.

Example 8

```
Search name ==>+.TEST.**
```

Searches for datasets with any number of high-level qualifiers, a third-to-last-level qualifier of TEST, and two more qualifiers that can be anything (but must be there). Example 8 is functionally equivalent to the pattern: **+.TEST.*.***. Matches TEST.NODE.NODE, USERID1.TEST.NODE.NODE, and USERID9.NODE.TEST.NODE.NODE.

Example 9

```
Search name ==>*.TEST*
```

Searches for datasets with any high-level qualifier, a second-level qualifier that begins with TEST, and any number (including zero) of low-level qualifiers. Example 9 is functionally equivalent to the pattern: ***.TEST+**. Matches USERID.TEST, USERID1.TEST.NODE, USERID.TESTFILE.NODE, and USERID9.TEST.NODE.NODE.

Last Referenced File List

In Browse and Edit, the Last Referenced File List screen displays up to the last 50 files that you Browsed and/or Edited with File-AID. It is displayed when you enter the FILELIST primary command or blank out the “Dataset name or HFS path” field on the Browse or Edit Dataset Specification screen.

Primary commands enable you to sort by filename or referenced date and locate an entry by filename. Line commands allow you to select a file for processing, lock, unlock, and delete entries from the list, display the complete HFS path name, and display related dataset information. The related dataset information includes the Record Layout/XREF and Selection Criteria files that you associated with the referenced files. See “Last Referenced File List” on page 4-4for more information.

Pattern Member Names

You can specify pattern characters in a Member name field to limit the members selected for display. You cannot specify pattern characters in both the dataset name and member name fields at the same time. The asterisk (*), question mark (?), and percent sign (%) are valid pattern characters for the member name field. The member name must be enclosed in parentheses (( )) when entered in the Dataset name field.

The ? (question mark) and the % (percent sign) function as single-character wildcards. An asterisk (*) can be used as a partial or entire member name. It functions as a blank when used to represent the entire member name and produces a complete member list. When the asterisk is entered along with explicit characters, it functions as a single-character wildcard unless it is the last character and then it matches any valid number of remaining characters.

Example

Figure 2-14 and Figure 2-15 show the asterisk used as the last character in the mask to select record layout dataset members.

Figure 2-14. Specifying a Pattern Member Name

```
File-AID --------  Selection Criteria - Dataset Specification  ----------------
COMMAND ===>

Specify Selection Criteria Member to be Created or Edited:
   Selection dataset name   ===> FASAMP.SELECT
   Member name              ===> ORDER    (Blank or pattern for member list)

Specify Record Layout and XREF Information:
   Record layout usage      ===> S        (S = Single; X = XREF; N = None)

   Record layout dataset    ===> FASAMP.LAYOUTS
   Member name              ===> ORDER*   (Blank or pattern for member list)

   XREF dataset name        ===>
   Member name              ===>          (Blank or pattern for member list)

--------------------------------------------------------------------------------
This function creates and maintains existing File-AID selection criteria. You
can then apply these criteria in other functions (BROWSE, EDIT, COPY, COMPARE,
and PRINT).

Specify either a record layout dataset and/or an XREF dataset when creating or
maintaining formatted selection criteria.
```

Figure 2-15. Displaying Results of Pattern Member Name Search

```
File-AID Layout Select - USERID9.FASAMP.LAYOUTS -----------  ROW 1 TO  3 OF  3
COMMAND ===>                                                  SCROLL ===> CSR
 S  NAME            VV.MM  CREATED     CHANGED      SIZE  INIT   MOD   ID
   ORDERPO          01.00 95/02/03 95/02/03 15:45     29    29     0 USERID9
   ORDERSC          01.00 95/02/03 95/02/03 15:45     26    26     0 USERID9
   ORDERWO          01.00 95/02/03 95/02/03 15:45     54    54     0 USERID9
****************************** BOTTOM OF DATA ******************************
```

Specifying an HFS Pathname

Enter the pathname of the file you want to process in the “Dataset name or HFS path” field. Enter the HFS pathname without quotes. When you are uncertain of the complete pathname or it is longer than the field, specify a partial pathname. File-AID displays the HFS Directory List screen which enables you to drill down and select the target file.

Use the following characters to indicate the pathname:

/	Begins with the root directory
./	Begins with the working directory
~	Begins with the home directory as defined on the Hierarchical File System Options screen (option 0.6).

If you specify a pathname for an HFS file that does not exist on the Edit Dataset Specification or Copy Dataset Specification screen (with a disposition of NEW), File-AID creates and opens the new HFS file with the following permissions:

- Read, Write and Search or Execute for the file owner
- Read and Search or Execute for the file group
- Read and Search or Execute for all others.

HFS Directory List

The HFS Directory List screen, shown in Figure 2-12, is a list of the existing entries in the specified directory. You can drill down the hierarchical file system on this screen to reach your target file using the line commands described below or use the PATH primary command to specify the remainder of the name.

Figure 2-16. HFS Directory List Screen

```
File-AID -------------------  HFS Directory List  ---------- Row 1 to 16 of 21
COMMAND ===>                                                  Scroll ===> CSR

 Path:   /u/fa
 Use PATH command to modify Pathname.

   Type  Entry Name         Line Cmds: S or / = Select; E = Expand; C = Close
 - ----  ---------------------------------------------------------------------
 _ Dir   ..   (Previous Directory)
 _ Dir   bfhdjs0
 _ Dir   bfhehk0
 _ Dir   bfhrae0
 _ Dir   bfhrgw0
 _ Dir   bpxycw0
 _ Dir   cfhjad0
 _ Dir   cgi-bin
 _ Dir   dfhgjm0
 _ Dir   ejpyxt0
 _ Dir   fud
 _ Dir   hchvah0
 _ Dir   intranet
 _ Dir   ov
 _ Dir   pfhaxm0
 _ Dir   pfhdmf0
```

Line Commands

The following line commands are valid on the HFS Directory List screen. Multiple line commands are not supported.

S or / : Select the entry. If it is a directory type entry, the HFS Directory List is redisplayed for the specified directory. You can use S with the PATH primary command to include the selected name for the pathname on the Hierarchical File System Specification screen.

E : Expand the directory and display its contents. You cannot use the E line command for the previous directory entry or a file type entry.

C : Close the expanded directory. The C line command is only valid for directories that were previously expanded.

Primary Command

The PATH command displays the Hierarchical File System Specification screen with the current pathname.

Hierarchical File System Specification

The Hierarchical File System Specification screen, as shown in Figure 2-17, displays the current pathname. You can specify the remainder of the pathname or modify the current pathname and re-drive the directory process to drill down.

Figure 2-17. Hierarchical File System Specification Screen

```
File-AID ------------ Hierarchical File System Specification ----------------
COMMAND ===>

Specify Pathname:

  Pathname  ===> /u/fa





Specify Record Length:
Record length ===>       (1 - 32756 for fixed-length records;
                          Blank to process as delimited text file)
```

If a complete pathname is entered, File-AID processes the file for the Edit, Browse, Compare or Copy function. If a partial pathname is entered, File-AID displays the HFS Directory List and you may continue the drill down process at the last directory level entered.

Leave the record length blank to process records delimited by a <newline> character. Specify the record length to process fixed-length records. The range is 1-32756.

Specifying a Catalog Name

A catalog dataset name can be specified on some File-AID screens. The specified value is always considered to be a qualified name, whether or not the name is enclosed within single quotes (' ').

Example

```
'CATALOG.NAME'
CATALOG.NAME
```

In this example, File-AID considers the two names equivalent. Note that this convention is not true for dataset names.

PDS Processing Options

A PDS Processing Options screen, as shown in Figure 2-18 on page 2-23, is displayed when the dataset name or Record layout dataset name on the Browse, Edit, Copy, Search/Update, Print, or View screens refer to a partitioned dataset (PDS). It is used to specify member processing values that control whether to include extra record information, process records as logical JCL, maintain PDS statistics, and list the entire member or only the selected records. In addition, you can specify member selection values to choose members based on a name mask, name range, the userid for last modification, and creation and modification date ranges.

In most cases, the PDS Processing Options screen allows you to display the Member S/X (Select or Exclude) screen before specifying or applying selection criteria by entering a Y (Yes) in the Display Member List field.

Many PDS processing options are preset with default values at installation time. Others have no effect unless a value is entered in the field. The options that are available vary with the type of dataset being processed and according to File-AID function.

To display a nonselective member list, leave all member selection options blank on the PDS Processing Options screen and press Enter.

Figure 2-18. PDS Processing Options Screen

```
File-AID ----------------- PDS Processing Options ------------------------------
COMMAND ===>

Dataset: USERID9.FASAMP.JCL

    Include record information    ===> N        (Y = Yes; N = No)
    Process in JCL format         ===> N        (Y = Yes; N = No)
    Maintain PDS statistics       ===> Y        (Y = Yes; N = No; A = Add)



Specify Member Selection Options (Blank for All Members)
    Member name mask              ===>
    Member name range             ===>          to ===>
    Last modified userid          ===>          to ===>
    Creation date                 ===>          to ===>          (YY/MM/DD)
    Modification date             ===>          to ===>          (YY/MM/DD)

    Display member selection list ===> Y        (Y = Yes; N = No)

Use ENTER to continue, END to return to dataset specification screen
```

Field Descriptions

The following list describes all PDS processing options that File-AID can present.

Copy empty member : Specify Y (Yes) or N (No -- default). This parameters specifies whether File-AID copies FROM members that contain no records to the TO dataset. Specify Y (Yes) and File-AID copies empty members from the input PDS to the output PDS. Use the N (No) value and File-AID does not copy empty members.

Include record information : Specify Y (Yes) or N (No -- default). When set to Y (Yes), the File-AID Search/Update utility (option 3.6) displays an informational line that shows each record number relative to the beginning of the dataset, record length for variable-length records, and readable key for all keyed datasets.

List entire member : Specify Y (Yes -- default) and File-AID browses, edits, or copies the entire member containing selected records. Use the N (No) value to have File-AID process only the records that match the selection criteria.

Maintain PDS statistics : This parameter controls the updating of PDS member statistics when changes are applied in the Search/Update utility option M or U. Specify one of the following values:

Y - (Default) Update PDS statistics for members that have statistics.

N - Do not update PDS statistics.

A - Add statistics for any member that does not currently have PDS statistics and update statistics for any member that does.

Process in JCL format : Specify Y (Yes) or N (No -- default). Process in JCL format enables File-AID to handle JCL statements that span multiple records and must be treated as a single logical record.

This field applies only to PDS datasets that contain fixed block or unblocked records up to 80 bytes long. It allows processing of these records as logical JCL (bytes 1 to 71 only). The Process in JCL format field corresponds to the FORM=JCL parameter in File-AID/Batch. When used, logically connected JCL records (JOB, EXEC, DD, PROC, JCLLIB, OUTPUT, SET, and XMIT) are treated as a single record for count, examination, and display purposes.Specify Y (Yes) to have File-AID treat the data as logical JCL statements. If this field is set to Y for a dataset that does not match the proper format (fixed up to 80 bytes long), it is ignored and no error message is produced.

Use the N (No) value to have File-AID treat the data as physical records.

Rename copied members mask : Specify a mask to apply to each "To" member name and construct a new member name when copying members from one partitioned dataset (PDS) to another.

When constructing the new member name, File-AID interprets each ? (question mark) or & (ampersand) in the mask as a null character which preserves the original character at that location. An * (asterisk) or blank at the end of the mask means retain the balance of the original member name. All other characters are treated as constants and are placed in the new member name.

For example, applying the mask A??P to a copied member name of TEST01 results a new member name of AESP01.

If the old member name is smaller than the mask, unused null characters are ignored. The mask A??P applied to a copied member name of XY would result in a new member name of AYP. The last 2 bytes of 10-byte Panvalet names are dropped.

New member names are checked against the target PDS and are replaced based on the setting of the Replace like-named members parameter.

Replace like-named members : Specify Y (Yes -- default) or N (No). Specify Y (Yes) to have File-AID copy members to the output PDS, even if the member name already exists. Use the N (No) value to prevent copying the member to the output PDS if the name already exists.

Specify Member Selection Options:

Member name mask : Specify a member name mask to select a subset of members based on the mask criteria. A pattern member name or mask consists of explicit characters or a combination of explicit and pattern characters. See "Pattern Dataset Names" on page 2-14 for a complete description.

Member name range : Specify a member name range to select a subset of members based on the characters in the member name. The endpoint member names (FROM and TO) can be complete or partial and are included in the member list when found. Pattern characters are not allowed.

If the FROM member field is blank and a TO member is specified, File-AID selects the members less than or equal to the TO member padded with high values.

If a FROM member field is specified and the TO member is blank, File-AID selects members greater than or equal to the FROM member padded with low values.

Entering the same characters in the FROM and TO fields selects all members beginning with those characters.

Last modified userid : Specify a user identification range to select a subset of members based on the user ID that last updated and saved a member. This information is a PDS statistic that is stored in the directory.

The endpoint userids (FROM and TO) can be complete or partial and are included in the member list when found. Pattern characters are not allowed. As with member name range, the FROM field is padded with low values and the TO field is padded with high values.

Members without PDS statistics, because they were not created (STATS OFF) or the statistics were deleted, are not selected.

Creation date : Specify a creation date range to select a subset of members based on their creation date(s). This is a PDS statistic that is stored in its directory.

The endpoint (FROM and TO) dates can be complete or partial and are included in the member list when found. Leading zeros are required when specifying the year, month, and day.

If the FROM date field is blank and a TO date is specified, File-AID selects all members created on or before the specified TO date.

If a FROM member date is specified and the TO date is blank, File-AID selects all members created on or after the specified FROM date.

Entering the same dates in the FROM and TO fields selects members created only on that date. The two-character year is assumed between 1960 and 2059. Partial creation dates are treated positionally (YY/MM/DD) and are padded with default values.

For example, if you enter blanks the default FROM value becomes 60/01/01 and the TO value becomes 59/12/31. If you enter 85, the defaults are 85/01/01 and 85/12/31. If you enter 85/09, the defaults are 85/09/01 and 85/09/30.

Members without PDS statistics, because they were not created (STATS OFF) or the statistics were deleted, are not selected.

Modification date : Specify a modification date range to select a subset of members based on the last modified date(s). This is a PDS statistic that is stored in its directory. The last modified date is updated with the current date each time a member is updated and saved.

See the description of the Creation date field on page page 2-25 for more information on specifying a modification range. The specifications are identical.

Members without PDS statistics, because they were not created (STATS OFF) or the statistics were deleted, are not selected.

Display member selection list : Specify Y (Yes -- default) or N (No). This field controls the display of the member S/X (select/exclude) list after PDS processing options are applied. If Y is specified, a member S/X list is displayed. See “Member S/X List” on page 2-10. When N is specified, a member list is not displayed after the PDS processing options are applied.

This field is displayed for Copy, Print, and Search/Update options B and U.

Dataset Types

This section provides information on the following types of datasets used by File-AID:

- Data file
- Record layout
- XREF (record layout cross reference)
- Selection criteria
- Reformat definition
- Compare criteria.

All datasets must be cataloged and reside on a direct access storage device or on a mass storage device, with the following exceptions:

- Uncataloged disk data file datasets are allowed in all functions.

- Data files residing on tape are allowed as input and/or output for File-AID batch jobs to perform copy, search/update, print, reformat, and compare functions.

Data File Dataset

A Data File dataset contains the data to browse, edit, copy from/to, search/update, print, reformat from/to, or compare. File-AID can process datasets created through any standard MVS method, including:

- Sequential
- Partitioned
- ISAM
- BDAM
- VSAM (KSDS, ESDS, RRDS)
- VSAM - LINEAR can be allocated only
- IAM.

File-AID allows record lengths up to a maximum of 32,760 bytes (32kB). It processes any record format including fixed, variable length, spanned, and undefined length records.

CA-Panvalet and CA-Librarian Dataset Support

File-AID reads CA-Panvalet and CA-Librarian data file datasets for the Browse, Copy, Search/Update, and Compare functions. Use Search/Update's global preview and update option (U) to update Panvalet or Librarian datasets. Panvalet and Librarian member editing is not supported. However, you can select a member for the Edit function and save it to a PDS or sequential file with the CREATE and REPLACE primary commands. Instructions for installing CA-Panvalet or CA-Librarian support are included in the *File-AID Installation Guide*.

Note: File-AID supports 80-character Panvalet members.

HFS File Support

File-AID's Hierarchical File System support enables you to Browse, Edit, Copy, Delete, Rename, and Compare HFS files on the UNIX environment of OS/390.

Record Layout Dataset

A Record Layout dataset contains the COBOL or PL/I record layouts, which are used in the following File-AID functions:

- Formatted and vertical formatted mode of browse and edit
- Formatted print
- Formatted selection criteria definitions
- XREF definitions
- Formatted compare criteria.

If you specify a record layout dataset on a dataset specification screen without specifying a member, File-AID displays a PDS Processing Options (PPO) screen (see "PDS Processing Options" on page 2-22), and then a list of members as shown in Figure 2-19. You can select a record layout member with the S line command or SELECT primary command.

Note: Specify a member name of * (asterisk) in the Record layout dataset member name field to bypass the PPO screen and directly display the member list.

When more than one record layout exists within the selected member, File-AID displays the List of Available Record Layouts screen, as described in “List of Available Record Layouts” on page 17-8.

When File-AID cannot compile your record layout with the default source options, File-AID displays the Source Statement Selection screen, as described in “Source Statement Selection” on page 17-9.

Figure 2-19. Record Layout Member Select List Screen

```
File-AID Layout Select - USERID9.FASAMP.LAYOUTS -----------  ROW 1 TO 16 OF 16
COMMAND ===>                                                  SCROLL ===> PAGE
 S  NAME            VV.MM  CREATED     CHANGED      SIZE  INIT   MOD   ID
   COBOLPGM         01.00 95/02/03 95/02/03 15:45     87    87     0 USERID9
   EMPLOYEE         01.00 95/02/03 95/02/03 15:45     35    35     0 USERID9
   EMPLOYE2         01.00 95/02/03 95/02/03 15:45     36    36     0 USERID9
   INVFILE
   ORDERPO          01.00 95/02/03 95/02/03 15:45     29    29     0 USERID9
   ORDERSC          01.00 95/02/03 95/02/03 15:45     26    26     0 USERID9
   ORDERWO          01.00 95/02/03 95/02/03 15:45     54    54     0 USERID9
   PLIEMP           01.00 95/02/03 95/02/03 15:45     31    31     0 USERID9
   PLIEMP2          01.00 95/02/03 95/02/03 15:45     36    36     0 USERID9
   PLIINV           01.00 95/02/03 95/02/03 15:45     24    24     0 USERID9
   PLIORDPO         01.00 95/02/03 95/02/03 15:45     29    29     0 USERID9
   PLIORDSC         01.00 95/02/03 95/02/03 15:45     26    26     0 USERID9
   PLIORDWO         01.00 95/02/03 95/02/03 15:45     54    54     0 USERID9
   PLIPGM           01.00 95/02/03 95/02/03 15:45     97    97     0 USERID9
   PLISEGS          01.00 95/02/03 95/02/03 15:45     62    62     0 USERID9
   SEGRECS          01.00 95/02/03 95/02/03 15:45     62    62     0 USERID9
****************************** BOTTOM OF DATA ********************************
```

The source dataset can be sequential, partitioned, CA-Panvalet, or CA-Librarian. The record length can be fixed, fixed-block, variable, variable-blocked (RECFM=F, FB, V, or VB).The record layout can be a separate COPYLIB member or hard-coded in a COBOL or PL/I program. If the layout is in a program, File-AID displays the Source Statement Selection screen.

If a COPYLIB member contains multiple record layouts, you can isolate the specific layout by defining a record layout cross reference (XREF) member. See “Record Layout XREF Dataset” on page 2-27 and Chapter 17, “Record Layout Cross Reference (7)”.

Record Layout XREF Dataset

A record layout cross reference (XREF) dataset contains information created using option 7, XREF. XREF datasets are used in the following File-AID functions:

- Formatted and vertical formatted mode of browse and edit
- Formatted selection criteria definitions
- Formatted print
- Formatted compare criteria.

If you specify an XREF dataset and an X in Record layout usage on a dataset specification screen without specifying a member, File-AID displays a list of members. You can select an XREF member with the S (Select) line or primary command.

For an XREF dataset, the dataset organization must be partitioned (DSORG=PO). The record format must be variable-blocked (RECFM=VB). The logical record length must be 300 (LRECL=300). And the XREF dataset must have a minimum block size of 304 (BLKSIZE=304). XREF and selection criteria members can stored in the same dataset.

You create record layout XREF members to communicate information about the COBOL or PL/I record layout dataset to File-AID in the following situations:

1. The data file you want to process contains more than one type of record, where each type of record requires a different layout to define it. The XREF member contains the location and values in the record type fields and the corresponding record layout members that define the data records with those values.
2. The record layout(s) you want File-AID to use are stored in a source library member containing multiple record layouts.
3. The record layout(s) you want File-AID to use are imbedded in a COBOL or PL/I program.

   In situations 2 and 3, the record layout XREF contains the data-name that starts the record layout you want (referred to as the starting data-name). File-AID reads the layout from the source library member (containing either multiple layouts or a program) starting with the data-name you specify.
4. The data file contains segmented records. A segmented record is a single physical record that is divided into multiple logical records called segments. Each segment can be thought of as a distinct record that is described by a different record layout.
5. The first *n* positions of each record in the data file are not defined by your record layout(s), requiring File-AID to generate a data-name item to act as filler before the layout(s).

   In this case, the XREF contains the length of the filler data-name item File-AID should generate before the record layout(s) that define the data records.

File-AID also supports various combinations of the situations described. For more information, see Chapter 17, “Record Layout Cross Reference (7)”.

In any of the File-AID primary options that use record layouts to define the data, the record layout dataset or XREF dataset information must be specified. Use the fields shown in Figure 2-20 to accomplish this.

Figure 2-20. Record Layout Dataset XREF Dataset Information Sample

```
Specify Record Layout and XREF Information:
   Record layout usage      ===> X        (S = Single; X = XREF; N = None)
   Record layout dataset    ===>'USERID9.FASAMP.LAYOUTS'
   Member name              ===>          (Blank or pattern for member list)
   XREF dataset name        ===>'USERID9.FASAMP.XREF'
   Member name              ===> XREFMEM  (Blank or pattern for member list)
```

Record layout usage indicates whether you intend to use a single record layout (usage S), an XREF (usage X), or no record layouts (usage N) to define the file.

If you specify Record layout usage X (use XREF), you must enter the valid record layout dataset name that contains the source layout members referenced in the XREF dataset member. The Record layout member name field is not used and may be left blank when using an XREF.

Note: With File-AID Release 8.5, XREF layouts are compiled as needed.

CAUTION:

XREF datasets should be maintained with File-AID option 7. Editing an XREF dataset with ISPF 4.1 causes the dataset to be unusable by File-AID.

Selection Criteria Dataset

The Selection Criteria dataset contains information created using option 6 of File-AID. You can use selection criteria in the Browse, Edit, Copy, Search/Update, Print, and Compare functions. See Chapter 16, “Selection Criteria (6)”.

For a selection criteria dataset, the dataset organization must be partitioned (DSORG=PO). The record format must be variable-blocked (RECFM=VB). The logical record length must be 300 (LRECL=300). And a selection criteria dataset must have a minimum block size of 304 (BLKSIZE=304). Selection criteria and XREF members can stored in the same dataset.

CAUTION:
Selection criteria datasets should be maintained with File-AID option 6. Editing a selection criteria dataset with ISPF 4.1 causes the dataset to be unusable by File-AID.

Reformat Definition Dataset

The Reformat Definition dataset contains information created using option 9 of File-AID. Option 9 is the reformat function which uses the reformat definition to reformat files online or in batch. See Chapter 19, “Reformat (9)”.

For a reformat definition dataset, the dataset organization must be partitioned (DSORG=PO). The record format must be variable-blocked (RECFM=VB). The logical record length must be at least 1570 (LRECL=1570). The reformat definition dataset must have a minimum block size of 1574 (BLKSIZE=1574). Reformat definitions cannot be stored in an XREF or selection criteria dataset.

Compare Criteria Dataset

The Compare Criteria dataset contains information created using option 10 of File-AID. Option 10 is the Compare function which uses compare criteria to compare files online or in batch. See Chapter 20, “Compare (10)”. For a compare criteria dataset, the dataset organization must be Sequential (DSORG=PS) or partitioned (DSORG=PO). The record format must be fixed-blocked (RECFM=FB). The logical record length must be 80 (LRECL=80).

Chapter 3. Parameters (0)

The Parameters function allows you to display and modify the settings of a variety of parameters at any time during a File-AID session. These parameters are used throughout File-AID.

Default values are originally set when the product is installed. You can modify the values for your own user ID without affecting the values of other users. To do this you simply overtype the parameter value with a new value. Changes are in effect until you modify the parameter again. Changes are saved from session to session.

The Parameter Selection Menu, shown in Figure 3-1, provides access to the File-AID parameter default settings that you can modify. To access the Parameter Selection Menu, select option **0** from the File-AID Primary Option Menu or enter the appropriate jump command (for example, =0) from any File-AID screen. See "Selecting Screens" on page 2-7 for more information. You can also access the Parameter Selection Menu with the **F0** recursive command. See "Recursive Commands" on page 2-5 for more information.

Figure 3-1. Parameter Selection Menu

```
File-AID -----------------  Parameter Selection Menu  -------------------------
OPTION ===>


 0  ISPF         - ISPF parameters and File-AID PF keys

 1  SYSTEM       - File-AID system parameters

 2  SELECTION    - Selection criteria default parameters

 3  PRINT        - Print default parameters

 4  PROCESSING   - Processing option default parameters

 5  AUDIT        - Audit file allocation parameters

 6  HFS          - Hierarchical File System Options
```

File-AID has divided the parameters into groups as listed on the Parameter Selection Menu. Select the option group by entering its number in the OPTION field:

0 ISPF : View/change settings of ISPF parameter options and File-AID's PF keys.

1 SYSTEM : View/change Browse and Edit function defaults, specify work file allocations, set VSAM intermediate name, and enable the jump function.

2 SELECTION : View/change settings of selection criteria options, processing direction, and unformatted selection defaults.

3 PRINT : View/change settings of print parameter defaults.

4 PROCESSING : View/change record processing options and partitioned dataset processing defaults.

5 AUDIT : View/change audit file allocation parameters.

6 HFS : Set Hierarchical File System (HFS) Home Directory.

ISPF Parameter Options

The ISPF Parameter Options menu, shown in Figure 3-2, gives you access to the ISPF-provided parameter option screens and the File-AID PF keys screen. The ISPF Parameter Options menu and its options are described in the *ISPF/PDF Program Reference Manual*. Option 0.0.3 allows you to modify the File-AID PF Key settings. This does not affect your ISPF/PDF PF key assignments.

To display the ISPF Parameter Options screen, enter a **0** in the OPTION field on the Parameter Selection Menu or as described in "Selecting Screens" on page 2-7.

Figure 3-2. ISPF Parameter Options Menu

```
-------------------------  ISPF PARAMETER OPTIONS  -------------------------
OPTION  ===>

   1  TERMINAL    - Specify terminal characteristics
   2  LOG/LIST    - Specify ISPF log and list defaults
   3  PF KEYS     - Specify PF keys for 3278 terminal with 24 PF keys
   4  DISPLAY     - Specify screen display characteristics
   5  LIST        - Specify list data set characteristics
   6  GRAPHIC     - Specify GDDM graphic print parameters
   7  ENVIRON     - Specify ENVIRON command settings
   8  KEYLIST     - Modify keylist(s)
   9  DIALOG TEST - Specify Dialog Test option
  10  COLOR       - Change ISPF default colors
  11  CUAATTR     - Change values of CUA panel elements
```

System Parameters

The System Parameters screen, shown in Figure 3-3 on page 3-3, allows you to specify defaults for the File-AID Browse and Edit functions, the Search/Update utility's work file allocation, and unqualified VSAM intermediate dataset name. To display the System Parameters screen, enter a **1** in the OPTION field on the Parameter Selection Menu or as described in "Selecting Screens" on page 2-7.

Figure 3-3. System Parameters Screen

```
File-AID -------------------  System Parameters  ------------------------------
COMMAND ===>

Client number: 010000                                Release date:  12/12/2003
Client name  : COMPUWARE CORPORATION TEST SHOP

Specify Function Defaults:
   Display cancel confirmation          ===> Y     (Y = Yes; N = No)
   Display "Records not selected" line  ===> Y     (Y = Yes; N = No)
   Character set                        ===> DFLT  (Code page identifier)
   Enable screen jumps within File-AID  ===> N     (Y = Yes; N = No)
   VSAM intermediate name               ===> USERID0
   Edit method query screen             ===> L     (L = Display only on large files
                                                    A = Always display)

Specify Work File Allocations to be Used by Search/Update:
   Space units                          ===> TRKS  (TRKS, CYLS or BLKS)
   Primary quantity                     ===> 10    (in above units)
   Secondary quantity                   ===> 5     (in above units)
   Number of Volumes                    ===> 0     (1 - 59)
   Compare KSDS Work File VOLSER        ===>       (blank or VOLSER)

   SMS Class Information:
    Storage  ===>            Data  ===>            Management  ===>
```

Field Descriptions

Client Number : Compuware client number for your site.

Client Name : Company name of site as known by Compuware files.

Release Date : Release date of File-AID that is currently installed.

Specify Function Defaults:

Display cancel confirmation : Specify if you want to receive a cancel confirmation screen when you use the CANCEL primary command.

Y - Yes, (default) displays the cancel confirmation screen.

N - No, does not display the cancel confirmation screen.

Display "Records not selected" line : Specify whether to display the "records not selected" message line on the data display when using selection criteria in browse or edit. This line is displayed instead of the data records. It indicates the records that were not selected for the browse or edit session.

Y - Yes, (default) File-AID displays "records not selected" message line.

N - No, File-AID does not display the "records not selected" message line.

Character set : Code page identifier that is used for character data validation, display, and printing. The Character set field is typically used by sites outside of the USA.

Specify one of the following valid four-character code-page identifiers to select an alternate character set:

BELG - Belgian.
CNBL - Canadian Bilingual.
CNFR - Canadian French.
CYRL - Cyrillic.
DFLT - American English.
FREN - French.
GREK - Greek.
HEB - Hebrew.
HEBN - Hebrew new, post Aleph.
HEBO - Hebrew old, post Aleph.
ICLN - Icelandic.
KANA - Japanese.
K930 - Katakana 0930.
K939 - Katakana 0939.
LATN - Roece Latin.
PGSE - Portuguese.
SPAN - Spanish.
SWED - Swedish.
SWFG - Swiss-French and Swiss-German.
THAI - Thai.
TURK - Turkish.
YUGO - Yugoslav.
3277 - Model 3277 display terminals.

File-AID attempts to determine the correct code page by checking the current terminal type setting in ISPF 0.1. File-AID/MVS associates a code page based on terminal type as follows:

3277	3277 - English USA
----C	CNFR - Canadian French
----HN	HEBN - Hebrew New
----H	HEB - Hebrew
----CB	CNBL - Canadian Bilingual
----KN	KANA - Set automatically for JEF terminals
----HO	HEBO - Hebrew Old
None	DFLT - English USA (default)

- (hyphen) indicates a position of the terminal type that is not checked. If File-AID/MVS cannot determine which code page to use, it selects English (USA).

The four-digit code page identifier is stored in your user profile. After a code page is stored, File-AID uses that character set code page until you change it. Enter blanks in the Character set field to have File-AID re-determine the code page value.

Enable screen jumps within File-AID : Controls the jump function (=) which lets you jump the screen display from one function to another without passing through the primary menu. The jump function is the same as that provided in ISPF. Entering =2 displays option 2 of the primary menu (ISPF or File-AID).

N - No, (default) disables the File-AID/MVS jump function and uses the ISPF Menu for reference.

Y - Yes, enables the jump function and uses the File-AID/MVS Primary Option Menu for reference.

VSAM intermediate name : Specify a default name used to build VSAM cluster names. When you enter an unqualified VSAM dataset name, File-AID searches for the standard TSO prefix appended to the unqualified dataset name. If it fails to locate a dataset in the catalog, File-AID creates the fully qualified name by concatenating the installation defined VSAM high-level name, your VSAM intermediate name, and the unqualified dataset name. The VSAM intermediate name may contain any string of up to 19 characters. See “Unqualified Dataset Names” on page 2-14.

Edit method query screen : Hidden option, only visible after panel modification. If you wish to have the option of always being asked to choose the EDIT METHOD for PS type files, set this filed to **A**, always. Default is **L**, only display when editing a large file (see also "Browse/Edit Method Specification Screen" on page 4-32).

Specify Work File Allocations:

The work file is used in the Search/Update utility and when you edit a sequential file with applied selection criteria.

Space units : Specify one of the following storage unit types depending on how the dataset size is expressed:

TRKS - Tracks

CYLS - Cylinders.

BLKS - Number of blocks.

Primary quantity : Specify the primary allocation quantity as specified in the space units field.

Secondary quantity : Specify the secondary allocation quantity as specified in the space units field.

Number of Volumes : Specify the number of volumes. If you leave this field blank, File-AID/MVS uses one volume.

Compare KSDS Work File VOLSER : File-AID Option 10, Compare, may require a VSAM work file. If your site requires a Volume Serial Number when defining a VSAM dataset, enter that Volume Serial Number. If Volume Serial Number is nor required, leave this field blank.

SMS Class Information:

Storage : Specify the SMS storage class to use for the allocation of the dataset. The storage class describes the hardware requirements of the dataset.

Data : Specify the SMS data class to use for the allocation of the dataset. The data class describes the attributes of the dataset such as RECFM, DSORG, LRECL, BLKSIZE, etc.

Management : Specify the SMS management class to use for the allocation of the dataset. The management class describes the migration, backup, and retention for the dataset.

Selection Parameters

The Selection Parameters screen, shown in Figure 3-4, allows you to specify defaults for creating and maintaining selection criteria. To display the Selection Criteria Parameters screen, enter a **2** in the OPTION field on the Parameter Selection Menu or as described in "Selecting Screens" on page 2-7.

Figure 3-4. Selection Criteria Parameters Screen

```
File-AID -------------------  Selection Criteria Parameters -------------------
COMMAND ===>


Specify Selection Criteria Option Defaults:
                                          Record selection will continue until
   Number of records to search   ===> ALL    you have read this many records
   Number of records to select   ===> ALL    or selected this many records

Specify Processing Direction Used by Browse, Edit, Copy, Print, Search/Update:
   Seq/VSAM processing direction ===> F   (F = forward; B = backward)

Specify Unformatted Selection Criteria Defaults:
   Relational Operator           ===> EQ  (Enter any valid relational operator)
   Logical connector             ===> AND (AND or OR)
```

Field Descriptions

Specify Selection Criteria Option Defaults:

Record selection continues until File-AID reaches one of the following limits:

Number of records to search : Specify a limit for the number of records File-AID reads and checks for matches to selection criteria. The default for this parameter is ALL. Possible values are any number from 0 (zero) through 999999. 0 (zero) or ALL searches the entire file.

This parameter can prevent excessive I/O processing when searching large files. If a dataset that is Direct Access or ISAM, or a VSAM KSDS is processed randomly (a KEY, RBA, or RRN have been entered), this count begins with the first record retrieved randomly. This parameter corresponds to the File-AID/Batch "IN" parameter.

Number of records to select : Specify a limit for the total number of records for File-AID/MVS to retrieve from the dataset. Possible values are any number from 0 (zero) through 999999. The default is ALL. Use the 0 (zero) or ALL value to retrieve all selected records.

When record information is requested with Search/Update (option 3.6), the additional record information line(s) are not counted as selected records. If a partitioned dataset containing JCL is processed logically, the value in the Number of records to select option is the number of logical JCL statements that are selected.

Number of records to select corresponds to the File-AID/Batch "OUT" parameter. A value that exceeds the number of records in the file does not cause an error.

Specify Processing Direction Used by Browse, Edit, Copy, Print, Search/Update:

Seq/VSAM processing direction : Specify a processing direction for File-AID to read Sequential or VSAM files. Possible values are F (forward) and B (backward). The default is F (forward).

This field specifies whether File-AID starts reading a Sequential or VSAM file at the beginning or the end. File-AID ignores the B value in this field when used with datasets of other access methods.

Note: For an online Edit (F.2), backwards processing forces the use of the update-in-place edit method and its associated restrictions. See "Update-In-Place Restrictions" on page 4-36.

Specify Unformatted Selection Criteria Defaults:

Relational Operator : Specify a default relational operator to appear on all record selection screens. Possible values are:

Conditional:	
EQ, =	Equal to
NE, ¬ =	Not equal to
GT, >	Greater than
GE, >=	Greater than or equal to
LT, <	Less than
LE, <=	Less than or equal to
CO	Contains
NC	Not contains
BT	Between
NB	Not between
VA	Valid
NV	Not valid

Binary:	
EQ	Bits are all ones
MX	Bits are mixed, ones and zeros
NE	Bits are all zeros
NO	Bits are not ones

File-AID is distributed with a default value of EQ (equal) for relational operator.

Logical connector : Specify a logical connector for selection criteria. AND or OR are valid entries. The default is AND.

Print Parameters

The Print Parameters screen, shown in Figure 3-5, allows you to change the settings of the print parameter defaults. To display the Print Parameters screen, enter a **3** in the OPTION field on the Parameter Selection Menu or as described in "Selecting Screens" on page 2-7. The Print Parameter screen sets the defaults for the following functions and is displayed when you:

- Enter the P (print) primary command from the Library, Catalog, or VTOC utilities
- Request print of a preview from Search/Update option M or U
- Use the FPRINT or VPRINT primary command from the Browse or Edit function.

Figure 3-5. Print parameters Screen

```
File-AID -------------------  Print Parameters  ------------------------------
COMMAND ===>

Number of lines/page       ===> 55       (0 = Suppress page headings)
Sysout class               ===> A
Number of copies           ===> 1

Enter One of the Following Optional Destinations:

   Destination printer     ===>          (Local or remote printer)
   - - - OR - - -
   External JES Node ID    ===>          (Predefined JES Node and symbolic ID
   Target VM/TSO ident     ===>           of intended receiver of output)
   - - - OR - - -
   Sysout writer name      ===>          (Installation assigned output writer)
   - - - OR - - -

                                         (DSORG=PS; RECFM=VBA; LRECL=187)
   Print dataset name      ===>
   Disposition             ===> OLD      (NEW; SHR; MOD; OLD)
   Volume serial           ===>
```

Field Descriptions

Number of lines/page : Controls when headings are printed. Specify the number of lines per page. When 0 (zero) is used, no page headings are printed. The default number of lines per page is 55, including the page headings.

Sysout class : Set the JCL SYSOUT class to any valid system value. This field cannot remain blank.

Number of copies : Specify the number of copies of output to print. Any integer from 1 (one) through 9999 is allowed.

Enter One of the Following Optional Destinations:

Destination Printer : Printing output destination that can be either the name of a remote printer or the system default printer. The default printer is specified by leaving the field blank, or entering either LOCAL or R0.

External JES Node ID and Target VM/TSO Ident : Output can be routed across JES nodes to a symbolic name on other nodes by specifying the node name and the VM or TSO user ID or other symbolic name defined at that node. This facility acts like batch JCL coding of the DEST parameter: DEST=('node','ident'). Specify valid entries in both of the following fields:

External JES Node ID

Defined symbolic name of an installation-dependent JES node.

Target VM/TSO Ident

VM or TSO user ID, or other symbolic name located on the node specified in the External JES Node ID field.

Sysout Writer Name : Specify the name of an installation-dependent external writer.

"TO" Print dataset : Specify a output dataset to which File-AID can write.

Disposition : Specify a disposition for the print dataset. When the disposition is NEW and the Print function is invoked, File-AID displays the Print Dataset Attributes Specification screen:

MOD - Modified, add on to end.

NEW - New.

OLD - Old, exclusive serialization.

SHR - Share -- old, share serialization.

Volume serial : Specify the serial number of a storage device for a non-cataloged or new dataset.

Processing Parameters

The Processing Parameters screen, shown in Figure 3-6, allows you to specify processing options for the Copy and Search/Update utilities. These defaults are primarily used for processing partitioned datasets (PDSs). To display the Processing Parameters screen, enter a **4** in the OPTION field on the Parameter Selection Menu or as described in "Selecting Screens" on page 2-7.

Figure 3-6. Processing Parameters Screen

```
File-AID -------------------  Processing Parameters --------------------------
COMMAND ===>



Specify Record Information Default Used by Search/Update:
   Include record information    ===> NO    (Y = Yes; N = No)

Specify Partitioned Dataset Defaults Used by Copy and Search/Update:
   Replace like-named members    ===> YES   (Y = Yes; N = No)
   Copy/Edit entire member       ===> YES   (Y = Yes; N = No)
   Copy empty members            ===> NO    (Y = Yes; N = No)
   Maintain PDS statistics       ===> YES   (Y = Yes; N = No; A = Add)

   Display member selection list ===> YES   (Y = Yes; N = No)

Specify Panvalet/Librarian Processing Options:
   Expand Panvalet INCLUDEs      ===> YES   (Y = Yes; N = No)
   Expand Librarian INCLUDEs     ===> YES   (Y = Yes; N = No)

Specify Dataset List Format Option Default:
   Format option                 ===> QUICK (Q = Quick; S = Short)
```

Field Descriptions

Specify Record Information Default Used by Search/Update:

Include record information : Specify Y (Yes) or N (No -- default). When set to Y (Yes), the File-AID Search/Update utility (option 3.6) displays an informational line that shows each record number relative to the beginning of the dataset, record length for variable-length records, and readable key for all keyed datasets.

Specify Partitioned Dataset Defaults Used by Copy and Search/Update:

Replace like-named members : Specify Y (Yes -- default) or N (No). Specify Y (Yes) to have File-AID copy members to the output PDS, even if the member name already exists. Use the N (No) value to prevent copying the member to the output PDS if the name already exists.

Copy/Edit entire member : Specify Y (Yes -- default) or N (No). When copying or editing a PDS and using selection criteria, this parameter specifies whether File-AID copies or edits the entire member containing selected records or only the selected records from the member.

Specify Y (Yes) and File-AID copies or edits the entire member. Use the N (No) value and File-AID copies or edits only the records that match the selection criteria.

Copy empty members : Specify Y (Yes) or N (No -- default). This parameters specifies whether File-AID copies FROM members that contain no records to the TO dataset. Specify Y (Yes) and File-AID copies empty members from the input PDS to the output PDS. Use the N (No) value and File-AID does not copy empty members.

Maintain PDS statistics : This parameter controls the updating of PDS member statistics when changes are applied in the Search/Update utility option M or U. Specify one of the following values:

Y - (Default) Update PDS statistics for members that have statistics.

N - Do not update PDS statistics.

A - Add statistics for any member that does not currently have PDS statistics and update statistics for any member that does.

Display member selection list : Specify Y (Yes -- default) or N (No). This field controls the display of the member S/X (select/exclude) list after PDS processing options are applied. If Y is specified, a member S/X list is displayed. See "Member S/X List" on page 2-10. When N is specified, a member list is not displayed after the PDS processing options are applied.

Specify Panvalet/Librarian Processing Options:

Expand Panvalet INCLUDEs : Specifies whether to expand nested Panvalet INCLUDE statements. Valid entries are Y (YES) or N (NO). The default is YES.

Expand Librarian INCLUDEs : Specifies whether to expand nested Librarian INCLUDE statements. Valid entries are Y (YES) or N (NO). The default is YES.

Specify Dataset List Format Option Default:

Format option : Specifies the amount of information to display about each dataset in the dataset list during pattern dataset name processing and sets the default for the Dataset Utility list (option 3.4). Valid values are:

Q (Quick)

Displays only the dataset type and status. This is the default.

S (Short)

Displays dataset type, volume, and status.

Audit File Allocation Parameters

The Audit File Allocation Parameters screen, shown in Figure 3-7, allows you to specify your space allocation for your audit file and, if you are an SMS site, SMS class information. To display the Audit File Allocation Parameters screen, enter a **5** in the OPTION field on the Parameter Selection Menu or as described in "Selecting Screens" on page 2-7.

Figure 3-7. Audit File Allocation Parameters Screen

```
File-AID ------------- Audit File Allocation Parameters -----------------------
COMMAND ===>


Specify Audit Trail File Allocation Information:
   Space units             ===> TRKS  (TRKS; CYLS; BLKS)
   Primary quantity        ===> 15    (In above units)
   Secondary quantity      ===> 75    (In above units)

Specify SMS Class Information:
   Storage                 ===>
   Data                    ===>
   Management              ===>
```

Audit files can be dynamically created during an Edit session or Search Update utility change processing (option U). A before and after image of each changed record is written to the audit file. See "Audit Trail Feature" on page 4-21 for more information.

Field Descriptions

Specify Audit Trail File Allocation Information:

Space units : Specify one ofthe following storage unit types depending on how the dataset size is expressed:

TRKS - Tracks

CYLS - Cylinders

BLKS - Number of blocks.

Primary quantity : Specify the primary allocation quantity in tracks, cylinders, or blocks as specified in the space units field.

Secondary quantity : Specify the secondary allocation quantity in tracks, cylinders, or blocks as specified in the space units field.

Specify SMS Class Information:

Storage : Specify the SMS storage class to use for the allocation of the dataset. The storage class describes the hardware requirements of the dataset.

Data : Specify the SMS data class to use for the allocation of the dataset. The data class describes the attributes of the dataset such as RECFM, DSORG, LRECL, BLKSIZE, etc.

Management : Specify the SMS management class to use for the allocation of the dataset. The management class describes the migration, backup, and retention for the dataset.

Hierarchical File System Options

The Hierarchical File System Options screen, shown in Figure 3-8 , allows you to specify a Home Directory default for HFS directory processing. To display the Hierarchical File System Options screen, enter a **6** in the OPTION field on the Parameter Selection Menu or as described in "Selecting Screens" on page 2-7.

Figure 3-8. Hierarchical File System Options Screen

```
File-AID ------------- Hierarchical File System Options -----------------------
COMMAND ===>

HFS Home Directory      ===>
```

Chapter 4.
Browse and Edit (1 and 2)

File-AID provides browsing and editing capabilities in character, formatted, vertical formatted, and unformatted modes. This chapter discusses the following topics:

- Dataset specification
- Data displays
  - Formatted
  - Character
  - Vertical formatted
  - Unformatted
- Record layout options
- Information displays
- Audit trail feature
- Edit procedures
- Performance considerations.

Complete descriptions of the primary commands available for each browse and edit mode are described in Chapter 21, “Primary Commands”. Line commands available for character and vertical formatted mode edit are described in Chapter 22, “Line Commands”.

Accessing

To access the Edit function, select option **2** from the File-AID Primary Option Menu or enter the appropriate jump command (for example, =F.2) from any File-AID screen. Select option **1** from the File-AID Primary Option Menu or use the appropriate jump command (for example, =F.1) from any File-AID screen to access the Browse function. See “Selecting Screens” on page 2-7. When you press Enter, the File-AID Edit - Dataset Specification screen is displayed as shown Figure 4-1 on page 4-2. Character, formatted, vertical formatted, and unformatted edit modes are accessed through this screen.You can also access the File-AID Edit function by using the line command **2** when viewing a selection list of datasets presented by File-AID Catalog utility (3.4) or the VTOC utility (3.7). For the Browse function, use the line command **1** on a selection list.

In addition, File-AID provides an FEDIT primary command that allows you to recursively invoke the Edit function. See “FEDIT (FE, F2)” on page 21-35 for information on this command. For Browse, the recursive primary command is FBROWSE. See “FBROWSE (FB, F1)” on page 21-34.

Exiting

Use the END (PF3) or CANCEL primary command to exit the Edit function. The END command preserves all editing changes (see “END” on page 21-28). CANCEL cancels editing changes made since the last SAVE command was entered (see “CANCEL (CAN)” on page 21-11). Use the END command (PF3) to exit the Browse function.

Edit - Dataset Specification

The File-AID Edit - Data Specification screen, shown in Figure 4-1, allows you to select the mode to begin your edit session, and specify information about the edit, record layout, XREF, and selection criteria datasets.

Figure 4-1. Edit - Dataset Specification Screen

```
File-AID ---------------  Edit - Dataset Specification  -----------------------
COMMAND ===>

Edit Mode                   ===> U          (F=Fmt; C=Char; V=Vfmt; U=Unfmt)

Specify Edit Information:
   Dataset name or HFS path ===> FASAMP.EMPLOYEE
   Member name              ===>            (Blank or pattern for member list)
   Volume serial            ===>            (If dataset is not cataloged)
   Disposition              ===> OLD        (OLD or SHR)
   Create audit trail       ===> N          (Y = Yes; N = No)

Specify Record Layout and XREF Information:
   Record layout usage      ===> N          (S = Single; X = XREF; N = None)
   Record layout dataset    ===> FASAMP.LAYOUTS
   Member name              ===> EMPLOYEE   (Blank or pattern for member list)
   XREF dataset name        ===> FASAMP.XREF
   Member name              ===>            (Blank or pattern for member list)

Specify Selection Criteria Information:     (E = Existing; T = Temporary;
   Selection criteria usage ===> N           M = Modify; Q = Quick; N = None)
   Selection dataset name   ===>
   Member name              ===>            (Blank or pattern for member list)
```

Field Descriptions

Edit Mode : Select the edit mode for the initial display:

F : Formatted mode displays the data with the record layout (COBOL or PL/I).

C : Character mode (full-screen) displays the data one record per line. (Does not use record layouts.)

V : Vertical formatted mode displays the data one record per line using the record layout fields as column headings.

U : Unformatted mode displays the data one record at a time without using a record layout.

Specify Edit Information:

Dataset name or HFS path : Specify the dataset name. Use the naming conventions described in “Specifying a Dataset Name” on page 2-13.

You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. See “Pattern Dataset Names” on page 2-14 for a complete description.

Specify the HFS path. If the entered path is a complete path, then the file is processed directly for the Edit, Browse, Compare or Copy function. When a partial path is entered, File-AID displays the HFS Directory List enabling you to continue the drill down process at the last directory level entered. For more information on specifying an HFS path, see“Specifying an HFS Pathname” on page 2-20.

Enter the FILELIST primary command or blank out the Dataset Name field to display the Last Referenced File List. See “Last Referenced File List” on page 4-4.

"Data File Dataset" on page 2-26 describes the types of datasets that File-AID can edit.

Member name : Specify the member name. You can leave this field blank or enter a pattern member name to display a list of members from which you can make a selection. A pattern member name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Member Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description. Pattern names cannot be entered in both the Dataset name and Member name fields at the same time.

Volume serial : Specify the volume serial of the direct access device that contains the dataset. This field is required only when the dataset is uncataloged.

Disposition : Specify a disposition of SHR or OLD.

SHR : Other users may access the dataset.

OLD : (Default) Restricts other users from accessing the dataset.

Create audit trail : Specify Y (Yes) or N (No). N is the default. When Y is specified, before and after images of changed, new, and deleted records are written to the audit trail dataset. See "Audit Trail Feature" on page 4-21 for information on this feature.

I/O exit name (Optional) : If the I/O exit option has been installed, this input area is provided. See the *File-AID Installation Guide* or your system programmer for more information. I/O exit install options are:

NO : I/O exit name field is not presented.

YES : I/O exit name field is presented blank for entry of a site written I/O exit program name.

exitname : I/O exit name field is presented prefilled with the name of a site-written I/O exit program.

Specify Record Layout and XREF Information:

Record layout usage : Specify one of the following values:

S : Single record layout. Valid for all Edit modes except unformatted.

X : XREF (record layout cross reference). Specify when more than one record layout is needed for a single dataset. Not valid for Edit mode V.

N : None (default). No record layout. File-AID does not attempt to validate or process the record layout or XREF dataset. Valid for Edit mode C or U.

Record layout dataset : Specify the name of a dataset that contains the COBOL or PL/I record layout. This file is required when the Record layout usage field is S (single) or X (XREF).

You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Dataset Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description.

Member name : Specify the member name. You can leave this field blank or enter a pattern member name to display a list of members from which you can make a selection. A pattern member name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Member Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description. Pattern names cannot be entered in both the Dataset name and Member name fields at the same time.

XREF dataset name : Specify the name of a dataset that contains the record layout cross reference (XREF) members to use with multiple record type datasets. See the section entitled "Record Layout XREF Dataset" in Chapter 2 of the File-AID/MVS *Online Reference Manual*.

You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Dataset Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description.

Member name : Specify the member name. You can leave this field blank or enter a pattern member name to display a list of members from which you can make a selection. A pattern member name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Member Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description. Pattern names cannot be entered in both the Dataset name and Member name fields at the same time.

Specify Selection Criteria Information:

Refer to Chapter 16, "Selection Criteria (6)" for a complete description of selection criteria.

Selection criteria usage : Specify one of the following valid entries:

E : Use existing selection criteria. Enter a dataset name in the Selection dataset name field.

T : Create temporary selection criteria. File-AID displays the Temporary Selection Criteria Menu. Temporary selection criteria is not automatically saved. To retain temporary selection criteria use the SAVE primary command on the Selection Criteria Menu screen.

M : Modify existing selection criteria. Enter a dataset name in the Selection dataset name field.

Q : Quick selection criteria. File-AID displays the Unformatted Selection Criteria screen for you to enter selection criteria. Quick selection criteria is not automatically saved. Use the SAVE primary command to retain quick selection criteria.

N : (Default) None -- Do not use selection criteria.

Selection dataset name : Specify the name of the dataset containing existing selection criteria for options E and M.

You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Dataset Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description.

Member name : Specify the member name. You can leave this field blank or enter a pattern member name to display a list of members from which you can make a selection. A pattern member name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Member Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description. Pattern names cannot be entered in both the Dataset name and Member name fields at the same time.

Last Referenced File List

The Last Referenced File List, shown in Figure 4-2, lists up to the last 50 files that you Browsed and/or Edited with File-AID. It is displayed when you enter the FILELIST primary command or blank out the Dataset name or HFS path field on the Browse or Edit Dataset Specification screen.

Primary commands enable you to sort by filename or referenced date and locate an entry by filename. Line commands allow you to select a file for processing, lock, unlock, and

delete entries from the list, display the complete HFS path name, and display related dataset information.

The related dataset information includes the Record Layout/XREF and Selection Criteria files that you associated with the referenced files. Enter the I line command to the left of the file name to display associated or related file information. File-AID displays this information on the Related File List screen (shown in Figure 4-3 on page 4-6).

Figure 4-2. Last Referenced File List Screen

```
File-AID -------------  Last Referenced File List  ----------- Row 1 to 3 of 3
                                                     SCROLL ===> CSR
 S = Select for processing; M = Modify before processing
 I = Info; L = Lock; U = Unlock; D = Delete; P = HFS Path name display
     File Name                                SETS  RL  SC  LOCK  REFERENCED
  USERID9.FASAMP.ORDRFILE                      1     X            2001/01/03
  USERID9.FASAMP.EMPLOYEE                      2     1            2001/01/03
  USERID9.FASAMP.EMPMAST                       1                  2001/01/03
****************************** Bottom of data ******************************
```

Field Descriptions:

File Name : Name of dataset file or HFS path.

SETS : Number of sets of associated (or related) information you have for this dataset name.

RL : Number of record layouts associated with this file name or an S for a single layout or an X for an XREF dataset.

SC : Number of selection criteria datasets associated with this file name. An E specifies existing selection criteria and an M specifies that you modified this selection criteria the last time you used it.

LOCK : An L in this field identifies the entry as locked from rolling off the Last Referenced File List. This field is blank when the file is unlocked.

You are permitted to lock all 50 file names. However if all 50 file names are locked, File-AID cannot add any new file names to the list.

REFERENCED : Date you last browsed or edited this file name with File-AID/MVS.

Primary Commands:

SORT : Sort Last Referenced File List entries by NAME or DATE. NAME sorts the entries alphabetically by file name. DATE sorts the entries by last referenced date.

LOCATE : Locate an entry in the Last Referenced File List. Enter a file name or partial file name to locate.

Line Commands:

M : Select the set and redisplay the Browse or Edit Dataset Specification screen for modification.

S : Select the set and continue with processing.

I : Display related detail information about the file set on the Related File List screen.

L : Lock the set to prevent it from rolling off the list.

U : Unlock the set to allow it to roll off the list.

D : Delete the set from the list.

P : Display the complete HFS path name.

On the Last Referenced File List, an I, M, or S line command issued against a referenced file with multiple sets automatically displays the related detailed information for that file on the Related File List screen. If you enter an L, U, or D for a file with multiple related file data, File-AID displays the Multiple Set Processing pop-up which enables you to choose how to process the command for the multiple sets of related files.

Related File List

The Related File list, shown in Figure 4-3, shows detailed information for a selected entry on the Last Referenced File List including the Record Layout, XREF, and Selection Criteria file(s) associated with that file. When there are multiple sets of Related File(s) they are all displayed. On the Last Referenced File List, enter the I line command to the left of the file name to display the Related File List screen.

Figure 4-3. Related File List Screen

```
File-AID -------------------  Related File List  ------------- Row 1 to 1 of 1
                                                              SCROLL ===> CSR
 S = Select for processing; M = Modify before processing
 L = Lock; U = Unlock; D = Delete; P = HFS Path name display
                                                            Referenced Date
  USERID9.FASAMP.ORDRFILE                                  2001/01/03  14:51
    Volume Serial:              I/O Exit:
                 Layout: USERID9.FASAMP.LAYOUTS
                   Xref: USERID9.FASAMP.XREF(ORDRFILE)
              Selection:
****************************** Bottom of data ******************************
```

Field Descriptions:

File Name : Name of dataset file or HFS path.

Referenced Date : Date and time you last browsed or edited this file name with File-AID/MVS.

Volume Serial : Volume serial of the direct access device that contains the dataset if it was specified on the Dataset Specification screen.

I/O Exit : I/O Exit name if it was specified on the Data Specification screen.

Layout : Name of record layout file (and member name when applicable) associated with this File Name.

XREF : Name of XREF file (and member name) associated with the File Name.

Selection : Name of Selection Criteria file associated with this file name.

Line Commands:

M : Select the set and redisplay the entry panel for modification.

S : Select the set and continue with processing.

L : Lock the set to prevent it from rolling off the list.

U : Unlock the set to allow it to roll off the list.

D : Delete the set from the list.

P : Display the complete HFS path name.

Multiple Set Processing

The Multiple Set Processing pop-up, shown in Figure 4-4, is displayed when you enter the L(ock), U(nlock), D(elete) line command on the Last Referenced File List screen and the file contains multiple sets of Related Files. This pop-up gives you the option to perform the specified action against all of the related sets or displaying a list of the sets for individual action.

Figure 4-4. Multiple Set Processing Pop-up

```
File-AID -------------  Last Referenced File List  ----------- Row 1 to 2 of 2
C                     Multiple Set Processing                   ===> CSR

    Command ===>                                                y
                                                                EFERENCED
L   You have selected a Referenced File with multiple sets for  001/02/07
       LOCK processing.                                         001/01/03
*                                                               **********
    Press ENTER to process all sets or enter END to display list.
     CANCEL will cancel the process and return to prior display.
```

Commands:

Enter : Press Enter to process all sets with the specified command.

END : Use the End primary command or <PF3> to display the Related File List screen which enables you to specify

CANCEL : Use the CANCEL primary command to cancel this process and return to prior display.

Data Displays

File-AID has four ways of displaying data:

- Formatted mode
- Character mode

- Vertical formatted mode
- Unformatted mode

The display mode in use determines the way in which records are accessed, and the facilities that are available for displaying the dataset.

File-AID supports a maximum COBOL PICTURE clause of 32,767 in Browse and Edit formatted and vertical formatted modes.

Formatted mode provides a formatted data record display that enables viewing and editing on a field-by-field basis. Records may be browsed and edited using their record layouts. Multiple record layouts are defined by an XREF for datasets with varying record types. Data from each record is divided into fields defined by the record layout. Use the CHAR command for entry into character mode, VFMT command for entry into vertical formatted mode, and UNFMT for entry into Unformatted mode.

Character mode provides full-screen browsing and editing of data. In edit, you can make changes to the record contents by overtyping the displayed data or using the CHANGE primary command. You can use line commands, similar to those used in ISPF, to move, copy, insert, delete, repeat, and exclude records. Use the FMT command for entry into formatted mode, VFMT command for entry into vertical formatted mode, and UNFMT command for entry into unformatted mode.

Vertical formatted mode provides a full-screen data display that uses the record layout fields as column headers. Data from each record is divided into columns under the field headings. Multiple record layout datasets (XREFs) are not supported in vertical formatted mode. Use the CHAR command to redisplay the data in character mode, the FMT command to redisplay the data in formatted mode, and the UNFMT command to redisplay the data in unformatted mode.

Unformatted mode provides a full-screen display that enables viewing and editing of data records in a character or three-line hexadecimal format. Data is presented one record at a time with 70 characters displayed per line. Use the CHAR primary command to redisplay the data in character mode, the FMT command to use formatted mode, and the VFMT command to use vertical formatted mode.

The initial display mode is controlled by the Edit Mode field on the Browse or Edit - Dataset Specification screen. Use the CHAR, FMT, VFMT, and UNFMT primary commands to change the display mode to character, formatted, vertical formatted, or unformatted mode at any time during the edit session.

File-AID synchronizes the position of the cursor between the formatted, character, vertical formatted, and unformatted modes. If you enter the FMT command in character or vertical formatted mode, File-AID examines the cursor position, and uses the data byte in the record where the cursor is found to automatically scroll the formatted display. The layout field corresponding to the byte position of the cursor is placed at the top of the display.

If the cursor is:

- In the COMMAND field when the FMT (or MAP) command is entered, the top record on the display is selected.
- Positioned within a record field, that field is initially positioned at the top of the formatted edit display.
- Positioned to the left of a record (in the sequence field) or in the COMMAND field, the field that is displayed at the left edge of the character edit display is placed at the top of the formatted edit display.

When you enter the CHAR, VFMT, or UNFMT command in formatted mode, the cursor position in the layout fields determines the portion of record that is displayed in character, vertical formatted, or unformatted mode. If the cursor is at the COMMAND

field, File-AID positions the cursor to the field at the top of the formatted display. Use the END command (PF3) to exit the Edit or Browse session.

Formatted Mode

Formatted Edit mode provides a formatted data record display that lets you view, search for, and change data on a field-by-field basis. Data from each record is divided into fields defined by the record layout. XREFs are used to define multiple record layouts for datasets with varying record types.

To display data in formatted mode, enter an F in the Edit Mode field, and specify record layout or XREF dataset information on the Edit - Dataset Specification screen. Figure 4-5 shows a sample formatted mode edit display.

The formatted mode display consists of a Header Area and a Data Area. The Header Area contains four fixed heading lines and may contain profile lines that appear immediately below the heading lines. The Data Area is divided into three areas: the Field Name Area, the Field Description Area, and the Field Value Area.

Formatted mode supports the FPRINT primary which creates the Formatted Print Report. See “FPRINT (FP)” on page 21-42.

Figure 4-5. Formatted Mode Edit Display

```
 File-AID - Edit - USERID9.FASAMP.EMPLOYEE ------------------
 COLUMNS 00001 00092
 COMMAND ===>                                                 SCROLL ===> PAGE
 RECORD:     1                EMPLOYEE-MASTER-FILE               LENGTH:   198
 ---- FIELD LEVEL/NAME ------- -FORMAT- ----+----1----+-----2----+----3----+----
4
 5 EMP-NUMBER                    5/AN   00090
 5 EMP-LAST-NAME                15/AN   MARTIN
 5 EMP-FIRST-NAME               10/AN   EDWARD
 5 EMP-MID-INIT                  1/AN   M
 5 FILLER                        2/AN
 5 EMP-TITLE                    30/AN   AIRPLANE MANUFACTURER
 5 EMP-PERSONAL-INFO SYNC       23/GRP
   10 EMP-NATL-ID-NUMBER         9/NUM  427890125
   10 FILLER                     1/AN
   10 EMP-DATE-OF-BIRTH          6/AN   101954
   10 EMP-DOB-REDEF REDEFINES EMP-DATE-OF-BIRTH
   10 EMP-DOB-REDEF SYNC         6/GRP
     15 EMP-DOB-MM               2/NUM  10
     15 EMP-DOB-DD               2/NUM  19
     15 EMP-DOB-YY               2/NUM  54
   10 EMP-HIRE-DATE              6/AN   920101
   10 EMP-MARITAL-STATUS         1/AN   M
 5 EMP-WITHOLD-INFO SYNC        15/GRP
```

An easy way to access formatted mode is to set a PF key for the FMT (or MAP) primary command. Then, on the character, vertical formatted, or unformatted mode display, simply position the cursor on a byte of data within any record and use the FMT (or MAP) PF key to go to the formatted mode. See “FMT” on page 21-41 or “MAP” on page 21-56 for information on these primary commands.

Note: No line commands are available in formatted edit mode.

Header Area

The heading lines occupy the top four lines of the formatted mode display:.

- **Line 1:** Indicates the dataset being accessed and the record columns currently displayed. In Figure 4-5: USERID9.FASAMP.EMPLOYEE. The first 92 bytes of the record are displayed in this example.

- **Line 2:** Contains the COMMAND and SCROLL fields. Primary commands are entered in the COMMAND field. In Figure 4-5, the SCROLL field is set to PAGE. Scrolling up or down the record displays a full page of fields at a time.
- **Line 3**. Contains the record number, record layout name (level 1 data name), and the record length. In Figure 4-5, the record number is 1, the record layout is EMPLOYEE-MASTER-FILE, and the total record length is 198 bytes.

  When a non-dataset record is selected, a special record name is displayed instead of the record number. If a mask line is edited, the word MASK is displayed. See "MASK" on page 22-14 for a description. When inserting new records, the word INPUT is displayed. See "INPUT / INSERT (I)" on page 21-49 for more information.
- **Line 4:** Provides titles for the three columns of the Data Area. In Figure 4-5, the title FIELD LEVEL/NAME indicates that the Field Name Area contains the level number of each data item.
  The title FORMAT indicates that the Field Description area contains the field length and current field format. These heading options are set using the SHOW LEVEL and SHOW FORMAT commands.

Data Area

The Data Area contains the record layout information and record data. It begins with the *** TOP OF DATA *** line that indicates that an attempt was made to scroll UP above the beginning of the record. It also indicates that the selected record layout is aligned with the beginning of the record. Each following data line contains the layout field name, field description, and the data value in that field.

The Data Area is divided into three areas:

- Field Name area
- Field Description area
- Field Data Value area.

Special information lines may also be displayed at the top or bottom of the data area.

Field Name Area

The Field Name Area displays the data item names declared in the record layout. Each line of this area contains one item name and the corresponding data item level number (or field number). One or more subscripts are displayed if the item is one occurrence of an item with multiple occurrences.

If the field name information is longer than the width of the Field Name Area, it is continued across the line. If the field name information extends at all into the Field Description Area, the contents of the Field Description and Field Value area are moved to the following line.

The SHOW command with the LEVEL or NUMBER parameter selects whether File-AID displays level numbers or field numbers in the Field Name Area. When level numbers are displayed, each successive level is indented two character positions to highlight the record structure.

Field Description Area

The Field Description Area displays one of three types of information for each data item: data format, field offset, or source code declaration (picture). The information type is selected with the SHOW command and its FORMAT, OFFSET, or PICTURE parameter. The current information type in the Field Description Area is identified by the FORMAT or PICTURE heading, and in the case of OFFSET the heading can be:

COLUMNS : (default for SHOW OFFSET) and OFFSET COLS.

RELATIVE : SHOW OFFSET, then OFFSET REL.

REL(HEX) : SHOW OFFSET, then OFFSET HEX.

The most recently selected information type is retained between display modes, and is also carried from one session to another in the profile.

Format abbreviations are used in this area to allow all data to be displayed within it. The abbreviations are described in "Data Format Abbreviations" on page 4-11.

Field Data Value Area

The Field Value area contains the value of elementary items and optional information for group items. Values of elementary items are displayed in a form that is appropriate for the item declaration.

File-AID displays numeric items as a decimal value with a leading sign and decimal places if appropriate. Only negative signs are shown. A display item is also displayed in this form if its picture shows it to be numeric.

When a data item is the object of an OCCURS DEPENDING ON (COBOL) or REFER (PL/I) clause, its maximum legal value is displayed at the right side of the Field Value area.

The maximum number of characters displayed on one line is 40 or 92 (Mod 5 terminal). File-AID adjusts the display to take advantage of the terminal capabilities. File-AID displays a ruler at the top of the Field Value area.

File-AID displays nonnumeric items as alphanumeric characters. When the length of the field exceeds the width of the Field Value area, File-AID shows the entire field contents in as many extra Field Value Area lines as needed. The Field Description Area of each extra line contains the offset (from the beginning of the field) of the first byte of data on that line. For example, (POS 41-80).

File-AID displays any field that contains invalid data for the declared data type entirely in highlighted hexadecimal characters. The TOO MANY INTEGER PLACES message indicates that the newly entered numeric value does not fit in the record field.

In formatted mode, the TOP OF DATA and BOTTOM OF DATA information lines indicate the top and bottom of the displayed record.

When the currently selected record layout defines more or fewer bytes of information than the currently selected record, or if the layout is not positioned at the first data byte, additional information lines are displayed as follows:

```
*** START OF DATA - LAYOUT PRECEDES DATA BY nn BYTES ***
*** END OF DATA - LAYOUT EXCEEDS DATA BY nn BYTES ***
*** START OF LAYOUT - DATA PRECEDES LAYOUT BY nn BYTES ***
*** END OF LAYOUT - DATA EXCEEDS LAYOUT BY nn BYTES ***
```

Data Format Abbreviations

In formatted and vertical formatted modes, abbreviations are used for the data format descriptions to enable them to fit in the Field Description area. See Table 4-1 for a list of COBOL abbreviations, and Table 4-2 for a list of PL/I abbreviations.

Table 4-1. COBOL Data Format Abbreviations

Abbrev.	COBOL Data Type
AN	USAGE DISPLAY (PICTURE contains at least one nonnumeric symbol)
BOOL	USAGE DISPLAY (PICTURE contains all 1s)

Table 4-1. COBOL Data Format Abbreviations (Continued)

Abbrev.	COBOL Data Type
BIT	USAGE BIT (PICTURE contains all 1s)
DBCS	USAGE DISPLAY (PICTURE contains all DBCS symbols)
NUM	USAGE DISPLAY (PICTURE contains all numeric symbols, unsigned)
P	USAGE COMPUTATIONAL-3, unsigned
PS	USAGE COMPUTATIONAL-3, signed
BI	USAGE COMPUTATIONAL, signed and unsigned
BIS	USAGE COMPUTATIONAL SYNCHRONIZED, signed and unsigned
SPFP	USAGE COMPUTATIONAL-1 (single precision floating point)
DPFP	USAGE COMPUTATIONAL-2 (double precision floating point)
HEX	Does not correspond to any COBOL data type. This format abbreviation indicates that the data is displayed in hexadecimal format. This occurs when the field format has been explicitly set by a DISPLAY field-number HEX command or when USAGE HEX is specified in the layout.
PTR	POINTER item

Table 4-2. PL/I Data Format Abbreviations

Abbrev.	PL/I Data Type
AREA	AREA item
BFL	BINARY FLOAT item
BFX	BINARY FIXED item
BIT	BIT item
CHAR	CHARACTER item
DBCS	GRAPHIC item
DFL	DECIMAL FLOAT item
DFX	DECIMAL FIXED item
HEX	Does not correspond to any PL/I data type. This format abbreviation indicates that the data is displayed in a hexadecimal format. This occurs when the field format has been explicitly set by a DISPLAY field-number HEX command.
OFST	OFFSET item
PFL	Floating Point numeric PICTURE item (signed)
PFLU	Floating Point numeric PICTURE item (unsigned)
PFX	Fixed Point numeric PICTURE item (signed)
PFXU	Fixed Point numeric PICTURE item (unsigned)
PTR	POINTER item
VBIT	BIT VARYING item
VCHR	CHAR VARYING item

Positioning a Formatted Display

The UP and DOWN primary commands are used to move through a layout when all fields do not fit on the display simultaneously. If the UP command is entered with the first record field already displayed, or the DOWN command is entered with the last layout field already displayed, an information line is displayed. The LEFT and RIGHT commands select and display the previous or next dataset record. BACK and FORWARD function similarly.

If you enter a number in the COMMAND field before the LEFT or RIGHT command is invoked, that number of records is skipped in moving forward or backward through the dataset. No error message is displayed if you attempt to scroll past the beginning or end of the dataset. Enter the letter **M** (for maximum) in the COMMAND field before scrolling

in any direction to move to the opposite end of the layout (UP/DOWN) or dataset (LEFT/RIGHT).

Edit Record Length

You can modify the LRECL of a variable length record by typing over the record length displayed on the screen.

- If the new record length is shorter than the current length, data will be truncated.
- If the new record length is longer than the current length, the extra bytes will be padded with the PAD character in your profile (see also “PAD” on page 21-61).

Character Mode

Character mode data displays are similar to ISPF/PDF displays of a dataset. The command structure and display layout are similar to those of the ISPF/PDF editor. The displayed or edited data can consist of the entire dataset or be restricted to a selected subset of records by applying selection criteria.

Enter a C in the Edit Mode field on the Edit - Dataset Specification screen to display the data in character mode. Figure 4-6 shows a character mode edit display. The number of records and data bytes displayed depends on the terminal type used. If the terminal type supports more than 24 lines by 80 columns, File-AID automatically adjusts the data display to take advantage of the capabilities of the terminal.

Figure 4-6. Character Mode Edit Display

```
File-AID - Edit - USERID9.FASAMP.EMPMAST ------------------ COLUMNS 00001 00072
COMMAND ===>                                                 SCROLL ===> PAGE
****** **************************** TOP OF DATA *******************-CAPS OFF-*
000001 00090MARTIN         EDWARD    M  AIRPLANE MANUFACTURER         427890125
000002 00100MULSTROM       ROBERTA   A  HOLLYWOOD SEAMSTRESS          346573656
000003 00200JACKSON        JOSEPH    C  ORATOR                        275587177
000004 10000ANDREWS        GEORGE       ACTOR                         576312032
000005 15000MURPHY         RONALD    L  PAINTER                       987654321
000006 18034SCHNEIDER      ELLEN     C  NURSE                         341559549
000007 21035JONES          GEORGE    B  COUNTRY SINGER                463813456
000008 25100ROBERTS        WILLIAM   R  POLITICIAN                    879563325
000009 27007ALLEN          JOYCE     M  AUTHOR                        783458334
000010 30001RICHARDS       REX       W  RODEO CLOWN                   632764534
000011 31000SAVAGE         JONATHON  C  ELECTRICIAN                   348567992
000012 34010SMITH          JANET        AIRLINE ATTENDANT             557782984
000013 34011JACOBS         DIANA        DOCTOR                        225368395
000014 36010SIMPSON        ALEX         CARTOONIST                    123456789
000015 39310BARNETT        EDWARD    E  SALESMAN                      543789142
000016 39500WILLIAMS       EDITH     A  DESIGNER                      987654321
000017 41000RICHARDSON     MARJORIE  M  PROGRAMMER ANALYST            346583656
000018 41400MOORE          THOMAS    M  SYSTEMS ADMINISTRATOR         226373646
000019 42017BENNETT        WILLIAM   D  SALES SUPPORT                 146573556
000020 44018WILHELM        HEINRICH  L  DIPLOMAT                      466573356
000021 50021SORENTO        ROBERTA   A  U.N. INTERPRETER              346573656
```

The top line of the display contains the name of the dataset and the columns currently being displayed. The second line includes the COMMAND field for entering commands that direct the Browse or Edit operation. The second line also has the SCROLL field that determines the number of lines (vertically) or columns (horizontally) to move each time a scrolling command (LEFT, RIGHT, UP, or DOWN) is used. Lines 3 and below contain data lines or information lines about the Edit or Browse session.

The character mode Edit display acts as a window into a collection of records. The records are ordered in the sequence in which they exist in the file. File-AID allows reordering of the records; it detects and flags sequence errors in keyed datasets.

The File-AID Edit character mode display provides a six-digit sequence field that can be used to enter line commands. The remainder of the line is record data. The sequence field contains numbers that start at 1 and are incremented by 1. The actual sequence number in storage is not limited to six digits. If there are more than 999,999 records in storage, the sequence number grows as large as necessary. The number displayed in the sequence field represents the last six digits of the actual sequence number.

The File-AID Browse character mode display does not provide line numbers, and thus provides more of the screen display for data presentation.

If a keyed (ISAM or VSAM KSDS) dataset is edited, the record key field is preceded and followed by a blank column and is highlighted and protected. The P (protect) and U (unprotect) line commands allow modification of a record key.

Vertical Formatted Mode

The Vertical Formatted mode Edit display, shown in Figure 4-7, is the same as the character mode edit screen except that it displays column headings with the data arranged in columns under the column headings. Enter a V in the Edit Mode field and specify a record layout dataset on the Edit - Dataset Specification screen to display the data in vertical formatted mode.

File-AID does not allow the use of an XREF in Vertical Formatted mode.

Graphic-defined DBCS data is supported in Vertical Formatted mode of Browse and Edit. File-AID adds dummy shift characters to display the values as DBCS. However, the Graphic-defined data is not displayed as DBCS data if you use the HEX ON command to display HEX mode in Vertical Formatted mode.

Vertical formatted mode supports the VPRINT primary which creates the Vertical Formatted Print Report. See “VPRINT (VP)” on page 21-80.

Figure 4-7. Vertical Formatted Edit Display

```
File-AID - Edit - USERID9.FASAMP.EMPLOYEE ----------------- COLUMNS 00001 00033
COMMAND ===>                                                SCROLL ===> PAGE
       EMP-NUMBER EMP-LAST-NAME   EMP-FIRST-NAME EMP-MID-INIT FILLER
       5/AN       15/AN           10/AN          1/AN         2/AN
       (1-5)      (6-20)          (21-30)        (31-31)      (32-33)
       1--------- 2-------------- 3------------- 4----------- 5-------
****** **************************** TOP OF DATA *****************-CAPS OFF-*
000001 00090      MARTIN          EDWARD         M
000002 00100      MULSTROM        ROBERTA        A
000003 00200      JACKSON         JOSEPH         C
000004 10000      ANDREWS         GEORGE
000005 15000      MURPHY          RONALD         L
000006 18034      SCHNEIDER       ELLEN          C
000007 21035      JONES           GEORGE         B
000008 25100      ROBERTS         WILLIAM        R
000009 27007      ALLEN           JOYCE          M
000010 30001      RICHARDS        REX            W
000011 31000      SAVAGE          JONATHON       C
000012 34010      SMITH           JANET
000013 34011      JACOBS          DIANA
000014 36010      SIMPSON         ALEX
000015 39310      BARNETT         EDWARD         E
000016 39500      WILLIAMS        EDITH          A
Enter FMT for formatted mode, CHAR for character mode,  HEX ON  for Hex
```

Unformatted Mode

The Unformatted mode Edit display, shown in Figure 4-8 on page 4-15, displays the data one record at a time without using a record layout. 70 characters of data are displayed per line until all data for the record is shown or the screen is filled. Enter a U in the Edit Mode field on the Edit - Dataset Specification screen to display the data in unformatted mode.

File-AID does not use a record layout or XREF in unformatted mode.

Note: If your double byte character spans the boundary of the display line, it will not display in Unformatted mode. To view this data, switch to Character mode and scroll the record to the desired position, then return to Unformatted mode to view the character in Unformatted mode.

Use the HEX ON primary command to display the record in a three-line vertical hexadecimal format.

Figure 4-8. Unformatted Edit Display

```
File-AID - Edit - USERID9.FASAMP.EMPLOYEE --------------- COLUMNS 000001 000199
COMMAND ===>                                                SCROLL ===> PAGE
RECORD:     1                                                LENGTH:     198
       ----+----1----+----2----+----3----+----4----+----5----+----6----+----7
     1 00090 MARTIN         EDWARD    M  AIRPLANE MANUFACTURER         427890
       ----------------------------------------------------------------------
    71 25 101954920101M30000}    &  & 859 O'FARREL ST.          SAN FRANCISCO
       ----------------------------------------------------------------------
   141   CA  12121BILL JONES                 40855558974155556981
```

Edit Record Length

You can modify the LRECL of a variable length record by typing over the record length displayed on the screen.

- If the new record length is shorter than the current length, data will be truncated.
- If the new record length is longer than the current length, the extra bytes will be padded with the PAD character in your profile (see also “PAD” on page 21-61).

Record Layout Options

The following subjects related to record layouts are discussed below:

- Record layout dataset
- Source statement selection
- Panvalet library record layout dataset
- XREFs for multiple record layout support
- Segmented records
- Variable length record layouts
- Eliminating unwanted fields.

If you specify formatted or vertical formatted mode and do not specify a record layout dataset, File-AID will prompt you for the record layout dataset name.

Record Layout Dataset

The record layout dataset is a dataset containing source code record layouts. A record layout dataset can be a sequential, partitioned, CA-Panvalet, or CA-Librarian dataset.

A record layout can be a separate dataset or member, or can be imbedded in a source code dataset that also contains program statements, comments, etc. A record layout imbedded in a source code dataset can be extracted by specifying either line number intervals or level 01 data names. See "Source Statement Selection" on page 4-16.

CAUTION:
The record layout must be a valid COBOL or PL/I declaration, or the displayed data may not be valid.

PDS processing options can help you tailor your member list display. If no member is specified, a list of members is displayed. You can select a member with the S line command or the SELECT primary command. If the selected member contains multiple record layouts, the first record layout is used. Then, during the edit or browse session, enter the USE primary command to select other record layouts from the List Of Available Record Layouts.

Source Statement Selection

The Source Statement Selection screen, shown in Figure 4-9, is displayed when a dataset that contains records that are not record layouts is entered in the record layout dataset field.

Figure 4-9. Source Statement Selection Screen

```
File-AID ------------------- SOURCE STATEMENT SELECTION ----- NO RECORD LAYOUT
COMMAND ===>

"CURRENT" source dataset: USERID9.FASAMP.LAYOUTS(COBOLPGM)

    Enter beginning and ending character strings or source statement
    line numbers or blank for entire member.

Record layout selection by Character String:
    Beginning string     ===>
    Ending string        ===>

Record layout selection by Source Statement line number:
    Beginning number     ===>
    Ending number        ===>
    Number type          ===>          (Standard, COBOL, or Relative)

Compiler options:
    Language             ===> COBOL    (COBOL or PL/1)
    Starting level nbr   ===> 01
    Literal delineator   ===> APOST    (Quote or apost; COBOL only)
    Use 48 character set ===> NO       (Yes or No; PL/1 only)
```

Panvalet Library Record Layout Dataset

When a CA-Panvalet library is specified as a record layout dataset and no member name is entered, File-AID displays a Panvalet Processing Options screen, as shown in Figure 4-10. Use this screen to specify the source members to include in the Record Layout Member List.

Note: The CA-Panvalet library support must be installed for File-AID to access Panvalet source libraries.

Figure 4-10. Panvalet Processing Options Screen

```
File-AID ---------------- Panvalet Processing Options -------------------------
COMMAND ===>

 Dataset:





Specify Member Selection Options (Blank for All Members)
    Member name mask              ===>
    Member name range             ===>            to ===>
    Modification date             ===>            to ===>          (YY/MM/DD)
    Members with language type    ===>
    Members with status of        ===>


    Display member selection list ===>          (Y = Yes; N = No)

Use ENTER to continue, END to return to dataset specification screen
```

XREFs for Multiple Record Layout Support

XREFs describe how record layouts are to be associated with individual dataset records or record segments. If a dataset has more than one record type and requires more than a single record layout to describe it, you can create an XREF to automate the record layout selection process.

XREFs are created with the XREF function, option 7, as described in Chapter 17, “Record Layout Cross Reference (7)”. XREF layouts are compiled as needed.

An XREF examines the contents of specific locations in each data record or record segment and loads an appropriate record layout (from the record layout dataset) based on the record contents. When an XREF is in use, the correct record layout is automatically selected each time a new record or segment is selected.

When a record or record segment cannot be matched against any entry in the XREF member, the data is displayed in hexadecimal.

New record layouts may be selected manually with the USE primary command. When a new record layout is selected, display attributes associated with the previously selected record layout are reinstated when that record layout is again selected.

The display position of a data item at the top of the screen is saved, so that the display returns to that position when the record layout is selected again. If the previously displayed data item is part of a variable record in which there are fewer occurrences than in the new selected record, the data item at the top of the screen may not be the same.

Field display and formatting instructions entered with the DISPLAY primary command are associated with the record layout and recalled each time the record layout is selected.

Segmented Records

A segmented record is a single physical record that is divided into multiple logical records called segments. Each segment occupies a different portion (different column position) of the record. There is no overlap of columns between segments.

Each segment can be thought of as a distinct record that is described by a different record layout. The segments do not have a pre-specified location or sequence. In records, segments can occur many times or in any order. Indicators within each record identify which segments are contained in that particular record.

Segmented records are similar to datasets with multiple record types. However, with segmented records, the different record types occur within the same physical record.

Many products use segmented records in their applications. Some applications refer to the segments with a name other than segments, such as headers, trailers, data groups, etc. File-AID calls the first segment in a record the *base segment*; any segments that follow the base are called *subordinate segments*.

When File-AID formats segmented records, it displays one segment at a time. The first segment displayed is the base segment, which is formatted according to its layout. The NEXT primary command formats the next subordinate segment. When formatting a subordinate segment, File-AID displays only that segment formatted according to its layout. Successive NEXT commands format the rest of the subordinate segments. Use the PREV command to view the preceding segment.

Example

This example demonstrates how File-AID edits a segmented record. The dataset is variable-length and contains segmented records. The base segment is 40 bytes long, resides in columns 1-40, and is formatted by BASE-LAYOUT.

Columns 41 through the end of the record contain the subordinate segments. There are three types of subordinate segments, which are identified by an A, B, or C in the first byte of the segment:

- Segment A is 10 bytes long and is formatted by layout REC-A.
- Segment B is 20 bytes long and is formatted by layout REC-B.
- Segment C is 30 bytes long and is formatted by layout REC-C.

Figure 4-11 illustrates the segment sequence for two sample records.

Figure 4-11. Segmented Record Layout Samples

<table>
<tr><th>Base Segment</th><th colspan="5">Subordinate Segments</th></tr>
<tr><td>BASE-LAYOUT</td><td>Type B</td><td>Type A</td><td>Type C</td><td>Type A</td><td>Type B</td></tr>
<tr><td>BASE-LAYOUT</td><td>Type A</td><td>Type C</td><td>Type B</td><td>Type A</td><td>Type A</td></tr>
</table>

The format sequence for the first record, shown in Figure 4-11, is as follows:

1. FMT command displays the base segment.
2. NEXT command displays a type B segment formatted according to layout REC-B.
3. NEXT command displays a type A segment formatted according to layout REC-A.
4. NEXT command displays a type C segment formatted according to layout REC-C.
5. NEXT command displays a type A segment formatted according to layout REC-A.
6. NEXT command displays a type B segment formatted according to layout REC-B.

When formatting the second record, shown in Figure 4-11, the format sequence is as follows:

1. FORWARD or RIGHT command displays the base segment.
2. NEXT command displays a type A segment formatted according to layout REC-A
3. NEXT command displays a type C segment formatted according to layout REC-C
4. NEXT command displays a type B segment formatted according to layout REC-B
5. NEXT command displays a type A segment formatted according to layout REC-A
6. NEXT command displays a type A segment formatted according to layout REC-A.

Record layout cross references (XREFs) are used to identify each segment and tell File-AID which layout to use to format it. See Chapter 17, "Record Layout Cross Reference (7)". Segmented record support is not limited to a single base segment type. Multiple base segment types, and the subordinate segments that pertain to them, can be defined.

Select groups are special XREF entries that define how File-AID identifies a base segment and all the subordinate segments for that record type. Selection of segments can also be accomplished manually with the USE primary command.

Segmented record primary commands are used to edit segmentedrecords. The commands ADD, NEXT, REMOVE, TOP, and USE let you move from segment to segment, while automatically or manually selecting the record layout to use in formatting each segment. You can insert or delete segments while preserving the contents of surrounding segments. See Chapter 21, "Primary Commands" for more information on these commands.

Variable Length Record Layouts

Variable length records can be displayed. The value of the objects for every OCCURS DEPENDING ON (COBOL) or REFER (PL/I) clause in the data description determines the length of a variable length record. Record limitations for each object are displayed at the right of the Field Value area. If an object defines the size of more than one variable item, the most restrictive limitations apply. Layouts with OCCURS DEPENDING ON (COBOL) or REFER (PL/I) with target fields past the end of record are not supported and result in a `PS005 OBJECT NOT IN RECORD` error.

Eliminating Unwanted Fields

The DISPLAY command (see "DISPLAY (DIS)" on page 21-23) can be used to simplify layout viewing by eliminating unwanted fields from the formatted and vertical formatted edit display. Fields can be eliminated from (or restored to) the display by using the field number. Field selections can be changed as needed throughout a Browse or Edit session. These selections are preserved when switching between formatted and vertical formatted modes and different layouts.

Information Displays

File-AID Browse and Edit provide the following partial-screen displays of information about your dataset or the Edit session:

- PROF display
- INFO display
- BNDS display
- COLS display
- MSG display
- ERR display.

In addition, the Edit function provides two more partial screen information displays:

- **MASK:** Default record for I (insert) processing
- **OVLY:** User definition of columns to be overlaid when processing the O (overlay) line command.

These information displays correspond to the MASK and OVLY line commands, which are described in Chapter 22, "Line Commands".

File-AID provides partial-screen displays of information about the current session.

File-AID treats partial-screen information displays like other informational lines (e.g., OVLY or MASK lines). The displayed lines are eliminated either by deleting the lines or with the RESET primary command.

PROF and INFO Displays

File-AID also provides information displays, as shown in Figure 4-12 on page 4-20, displayed below the three header lines of a display. For browse or edit (all modes except unformatted), the PROFILE primary command shows a display of profile information.

In character and vertical formatted Edit mode, the INFO command shows information on the progress of the current session. Figure 4-12 shows sample PROF and INFO lines displayed from character mode Edit.

Note: The INFO primary command is not available in formatted mode.

The PROF lines show the value of each display/edit option. See "Setting the Edit Profile" on page 4-24 for more information.

Figure 4-12. PROF and INFO Display Lines in Character Mode

```
=PROF> ....CAPS OFF....HEX OFF....MESSAGE ON....AUTOSAVE ON....STATS OFF.......
=PROF> ....BOUNDS 1 198....PAD X'00'....UNDO IS ACTIVE........................
=MASK>
=BNDS> <
=COLS> - ---+ ----1----+----2----+----3----+----4----+----5----+----6----+----7
=OVLY>           ********               *************************         *
=INFO> ....DSORG PS..RECFM VB..LRECL 4992..RKP 0...KEYLN 0.....................
=INFO> ....ERRORS 0...SEQ ERRORS 0...DUP KEYS 0...CHANGES 0...................
```

BNDS and COLS Displays

The BNDS and COLS displays are available only in character and vertical formatted mode. A BNDS display shows the left and right boundaries for a displayed record. The BNDS line has a left angle bracket (<) to indicate the left-column boundary and a right angle bracket (>) to indicate the right-column boundary. If the left and right boundaries coincide, the boundary definition line contains a vertical stroke character (|) to indicate the position of both boundaries. Figure 4-13 shows a sample BNDS display.

Use the BNDS line command to show the BNDS display, then overtype the bounds limits (with < or >) to restrict the search range of a FIND, CHANGE, or EXCLUDE command. Data outside this range is ignored by FIND, CHANGE, and EXCLUDE unless an explicit range is specified, either by column bounds or by field name. The BOUNDS primary command can also be used to set the bounds limits.

Figure 4-13. BNDS and COLS Display in Character Mode

```
=BNDS>       <                                                  >
=COLS> ----+----1----+----2----+----3----+----4----+----5----+----6----+----7--
```

Figure 4-13 also shows a sample COLS display. The single-line COLS display in character mode is a rule to help you determine the Data Area's column numbers. The display is a horizontal dashed line consisting of a plus symbol (+) at positions 5, 15, 25, 35,...95 and single digit numbers displayed at intervals of 10. For example, the positions of 10, 20, 30, 40,...100 on the line would be indicated by the numbers 1, 2, 3, 4, ...0. The number 100 is represented on the information line as 0 (zero).

When you scroll the data display to the right beyond column 100, the COLS information line is useful for determining the last two (low-order) digits of the column number. The range of columns displayed is indicated in the upper right corner of the display (except when overwritten by an error message).

The COLS line is displayed by entering the Browse COLS primary command or the Edit COLS line command.

Note: When viewing keyed records in character mode Edit, the COLS line contains a space before and after the key field to account for the blank columns used to offset the key.

MSG and ERR Displays

File-AID automatically generates special single-line messages that are displayed in the sequence number fields. The MSG display is displayed below the three-line header of data displays. It alerts you to default conditions established when the display is invoked, such as when the CAPS or STATS options are set to ON.

The ERR display is shown in the sequence field of a record if the source string of a CHANGE command is found entirely or partially within the key. This display is also shown in the sequence field of a protected overlay destination record (an O line command) if the OVLY mask line includes all or part of the key field.

Audit Trail Feature

File-AID allows you to create an audit trail of your edit session. To activate the audit trail feature, enter a Y in the Create audit trail field on the Edit - Dataset Specification screen, Figure 4-1 on page 4-2.

Before and after images of changed records are written to the audit trail whenever you change the contents of existing records through use of primary commands such as CHANGE and RCHANGE or by typing directly over the records' contents. After images of added records and before images of deleted records are also recorded.

File-AID keeps track of each time you enter the CANCEL primary command:

- If a SAVE command was not entered during the edit session prior to the CANCEL command, the audit trail dataset is automatically deleted.
- If at least one SAVE was entered before CANCEL, File-AID writes records to the audit trail containing all updates entered prior to the SAVE primary command.

Disposition of Audit Trail

The Disposition of Audit Trail screen, shown in Figure 4-14, is displayed when you use the END command (PF3) (or the CANCEL command when editing a data file after having entered at least one SAVE command sometime during the edit session) to terminate your edit session. This screen enables you to decide what to do with the audit trail dataset just created during your edit session.

If you use the RETURN command (PF4) or a jump command to end your edit session, File-AID creates the audit trail dataset but does not display the Disposition of Audit Trail screen. You can use File-AID option 5.5, Print Audit Trail, to print the audit trail dataset.

Figure 4-14. Disposition of Audit Train Screen

```
File-AID ---------------  Disposition of Audit Trail  -------------------------
COMMAND ===>

Audit trail disposition ===>           (PK = Print dataset and keep
                                        PD = Print dataset and delete
                                        D  = Delete dataset without printing)

Audit trail dataset     ===>

Audit trail description ===>
                        ===>

Specify Batch JCL Information:
 Sysout class           ===>

Specify JOB Statement Information:
===>
===>
===>
===>
Use JCL command to edit generated JCL
Use ENTER to submit batch job
Use END to keep audit trail without printing
```

Field Descriptions

Audit trail disposition : Specify one of the following:

PK : Print and keep the audit trail.

PD : Print and delete the audit trail.

D : Delete the audit trail without printing it.

Audit trail dataset : File-AID allocates the audit trail dataset at the beginning of your edit session. If your TSO-PREFIX matches your TSO-ID, the audit trail dataset name is:

```
TSO-ID.FILEAID.AUDT.Dyymmdd.Thhmmss
```

tso-id : Your TSO user ID, up to seven characters.

yymmdd : Gregorian date when the audit trail is created.

hhmmss : Hour, minute, and second the audit trail is created.

If your TSO-PREFIX does not match your TSO-ID, the audit trail dataset name is:

```
tso-prefix.tso-id.FILEAID.AUDT.Dyymmdd.Thhmmss
```

tso-prefix : Your TSO user ID, up to seven characters.

Audit trail description : Enter an optional 96-position description of the edit session you just completed. This description is written to the audit trail dataset and prints on the Audit Trail Report.

Specify Batch JCL Information:

Sysout class : Specify the SYSOUT class for the Audit Trail Report.

Specify JOB Statement Information: : Specify the JOB statement JCL for the batch print job submitted when you specify the PK or PD options.

When you complete this screen, press Enter to process the option or, if you want to keep the audit trail dataset to print later, use the END command (PF3). After processing, the Edit - Dataset Specification screen is displayed.

When the END command (PF3) was used on the Disposition of Audit Trail screen, you can use option 5.5, Print Audit Trail, to print the audit trail. “Print Audit Trail” on page 15-26 describes the Audit Trail Report and the Audit Trail Print feature.

Guidelines

The audit trail dataset that File-AID creates is a sequential, variable-blocked spanned file. Because each audit trail record contains a File-AID control area, you cannot create an audit trail for a non-keyed file whose LRECL is greater than 32,724. For keyed files, the sum of the key length and LRECL must not exceed 32,724.

File-AID writes all audit records after the edit dataset is saved. If the number of updates written to the audit file exceeds the available audit file space, File-AID notifies you and discontinues auditing. The audit records are not written to the audit dataset and cannot be recovered. File-AID still displays the Disposition of Audit Trail screen at the end of your edit session.

The default amount of space allocated to the audit trail dataset by File-AID is (1,5) cylinders. If you make massive changes, it is important to increase the size of the audit trail dataset. You can modify it with File-AID option 0.5.

Your installation can force the creation of an audit trail during your edit session through use of the File-AID audit routine. In this case, even if you enter N in the Create audit trail field on the Edit - Dataset Specification screen, the audit routine overrides your specification. This means the Disposition of Audit Trail screen is displayed unexpectedly at the end of your edit session.

In addition, the audit routine can force the printing of an audit trail at the end of your edit session. This causes an unexpected batch job submittal message at end of your edit session without the display of the Disposition of Audit Trail screen.

The audit routine also has the ability to override the default syntax File-AID uses when constructing the audit trail dataset name. Therefore, when the Disposition of Audit Trail screen is displayed, you may see an audit trail dataset name that does not coincide with the syntax described in this reference manual.

If you require information on how your installation is using the audit routine to force audit trail creation and/or print or to supply the audit trail dataset name, contact the person responsible for File-AID at your installation.

Browse and Edit Procedures

This section discusses some of the editing procedures that File-AID provides, including:

- Setting the edit profile
- Using line labels and line ranges
- Finding, changing, and excluding data
- Editing keyed datasets
- Editing VSAM datasets
- Editing VSAM RRDS and BDAM datasets
- Editing in character and vertical formatted mode
- Editing field data in formatted mode
- Windowed Browse
- Windowed Edit

File-AID provides two types of editing commands:

- Primary commands
- Line commands.

Primary commands are entered in the COMMAND field of the screen. After a primary command is executed, it is normally erased. The contents of the COMMAND field may be retained by preceding the command name by the ampersand (&) character. Primary commands are fully discussed in Chapter 21, “Primary Commands”.

Line commands affect individual lines or specified blocks of lines. Enter line commands by overtyping the sequence field or label located at the left end of each data line. Line commands are fully discussed in Chapter 22, “Line Commands”.

Setting the Edit Profile

The edit session is controlled by a set of options which are called the edit profile. The current value of all profile options applicable to Edit can be displayed with the PROFILE primary command. The resulting PROF information display can be deleted from the screen with either the D (delete) line command or the RESET primary command.

An example of an edit option is CAPS. To have File-AID translate lowercase characters input at the keyboard as uppercase characters, set the CAPS option to ON by entering the CAPS ON primary command. The CAPS OFF command sets the CAPS option to OFF. The CAPS option is shared between the edit modes and its setting may be changed in any mode.

Each option is controlled by a primary command of the same name. Refer to Chapter 21, “Primary Commands” for the syntax of primary commands.

Character and Vertical Formatted Mode Profile Options

Profile options that can be set in character and vertical formatted mode are:

AUTOSAVE : Controls whether a modified dataset is saved upon exit.

BOUNDS : Sets the left and right bounds.

CAPS : Controls translation of keyboard input to uppercase.

HEX : Controls display of data in hexadecimal format.

MESSAGE : Controls the display of the message line at the bottom of the Browse and Edit screens.

PAD : Defines the character to be used for padding records.

SETUNDO : Activates or deactivates the UNDO command.

STATS : Controls the generation of PDS statistics.

Figure 4-15. PROF Display Lines in Character and Vertical Formatted Mode

```
=PROF> ....CAPS OFF....HEX OFF....MESSAGE OFF....AUTOSAVE ON....STATS OFF......
=PROF> ....BOUNDS 1 198....PAD X'00'....UNDO IS ACTIVE.......................
```

Formatted Mode Profile Options

Formatted mode is also controlled by a set of options called the display profile. In formatted mode, the PROFILE primary command displays the current settings of these options and File-AID allows you to modify the profile option settings with the appropriate primary command.

Profile options that pertain to the formatted mode are listed below. Each option is controlled by a primary command of the same name. Refer to Chapter 21, "Primary Commands" for the syntax of these primary commands.

For COBOL, the following profile options are also provided; GROUP, OCCURS, PICTURE, and SYNC are not applicable for vertical formatted mode:

CAPS : Controls translation of keyboard input to uppercase.

FILLER : Controls display of FILLER fields.

GROUP : Controls display of group-level items.

MESSAGE : Controls display of the message line available in all display modes at the bottom of the browse and edit screens.

OCCURS : Controls display of array declaration lines.

OFFSET : Sets format for display of field offset information.

PICTURE : Controls display of PICTURE or DISPLAY line for numeric data fields.

PROTECT : Controls whether the key field can be overtyped.

REDEFINES : Controls display of data item redefinitions.

SHOW : Displays LEVEL, NUMBER, FORMAT, OFFSET or PICTURE information.

SYNC : Controls display of SYNC term for fields of a COBOL layout.

ZERO : Controls display of leading zeros in numeric data fields.

For PL/I, the following profile options are also provided:

ALIGN : Controls display of ALIGN/UNALIGNED term for PL/I data items.

ARRAY : Controls display of ARRAY information for PL/I data items.

COMPLEX : Controls display of COMPLEX term for PL/I data items.

REFLNG : Controls display of field length reference lines for PL/I BIT/CHAR VARYING data items.

Figure 4-16 on page 4-26 shows sample PROF lines displayed from formatted mode for the COBOL language. The OCCURS, REDEF, and SYNC options are unique to the COBOL language.

Figure 4-17 on page 4-26 shows sample PROF lines displayed from formatted mode for the PL/I language. The ALIGN, ARRAY, CMPLX, and REFLNG options are unique to the PL/I language.

Figure 4-16. COBOL PROF Display Lines in Formatted Mode

```
=PROF> ..CAPS OFF....FILLER ON....GROUP ON....OCCURS ON....OFFSET COLUMNS......
=PROF> ..PICT ON....PROT OFF....REDEF ON....SHOW LEVEL....SYNC ON....ZERO OFF..
=PROF> ..MESSAGE ON.............................................................
```

Figure 4-17. PL/I PROF Display Lines in Formatted Mode

```
=PROF> ..ALIGN ON....ARRAY ON....CAPS OFF....CMPLX ON....FILLER ON.............
=PROF> ..GROUP ON....OFFSET COLUMNS....PICT ON....PROT OFF....REFLNG ON........
=PROF> ..SHOW LEVEL....ZERO OFF....MESSAGE ON...................................
```

Using Line Labels and Line Ranges

Labels are used with primary commands to identify a line or a range of lines.

Line Labels

Line labels are a primary method of referencing back to the location of a line in the dataset. For character and vertical formatted mode, a line label is specified as a period followed by a one- to five-digit alphabetic string typed in a sequence number field. For formatted mode, the label is entered in the COMMAND field.

Notes:

1. Once a label is assigned, the label appears in the sequence number field instead of the line number.
2. Do not define a label with a Z as the first alphabetic character; labels starting with Z are reserved.

You can also use the following File-AID-defined labels:

- .ZF -- First line of the file
- .ZFIRST -- First line of the file
- .ZL -- Last line of the file
- .ZLAST -- Last line of the file
- .ZCSR -- Cursor line.

A label cannot be assigned to a nondata line or to a line indicating exclusion from the display. To reassign a label, type it on a new line. To eliminate a label, type blanks over it. Use the RESET command with the LAB keyword to eliminate all labels.

Line Ranges

Pairs of line labels define a line range by specifying the first and last lines, inclusively. To process a single line, either repeat the label as both the first and last line of the range, or enter a single label.

Line ranges are always specified as optional parameters. To specify a line that does not have a defined label, specify the line number preceded by a period (.). For example, type **.123** to refer to line number 123. The first line of a file can be referenced by label **.0**

or **.1** and the last line of the file can be referenced by label **.999999**. In this case, the label may exceed the maximum of six characters.

The following rules apply to line ranges:

- Labels must be assigned to the first and last lines of a range unless the actual line numbers are used.
- Both the starting and ending labels must be specified in the command to identify a range of lines.
- As long as both labels are given, their order is not significant. The line closest to the first line of the dataset is interpreted as the first line of the range. The line closest to the last line of the dataset is interpreted as the last line of the range.
- If a line range is not specified, the entire range of data being edited is processed.
- When browsing a keyed file, line ranges are not supported.

Example 1

Change all occurrences of a six-byte packed decimal field beginning at column 23 with a value of 45 to a six-byte packed decimal field with a value of 47:

```
CHANGE PL6'45' 23 PL6'47' ALL
```

Because no explicit range is specified in Example 1, the CHANGE command starts at the first line of the data being edited, scans all lines up to and including the last line, and changes all occurrences.

Example 2

Change all occurrences of a six-byte packed decimal field beginning at column 23 with a value of 45 to a six-byte packed decimal field with a value of 47:

```
CHANGE PL6'45' 23 PL6'47' ALL .RECA .2544
```

In Example 2, processing starts at the line with label .RECA and ends at the line with sequence number 2544.

Finding, Changing, and Excluding Data

The FIND primary command allows you to find a specified value in the data. The CHANGE primary command changes one data value to another value. The EXCLUDE primary command excludes lines on which a specified data value is found. The X (exclude) line command may also be used to exclude lines. The FIND, CHANGE and EXCLUDE commands may operate on a collection of records rather than a single record's data. In general, these commands conform to ISPF/PDF conventions.

FIND, CHANGE, and EXCLUDE commands are often used together to find a data value, and either change it, exclude it, or unexclude it. These commands allow special forms of values and several optional parameters that control:

- The starting point and direction of a search. File-AID can search in a forward or backward direction, starting at the beginning or end of the dataset (or selected records). ISPF-like standard parameters may be used including: FIRST, NEXT, PREV, LAST, or ALL.
- Optional Boolean operators for the search value including: EQ (default), NE (not equal), GT, LT, LE, GE.
- Special search values for locating numeric data including: VALID, INVALID.
- Line range limitation via line numbers or line labels as described in "Using Line Labels and Line Ranges" on page 4-26.
- Column range specifications including the BOUNDS settings.

- Record layout field limitations to confine a search for a data value to a specific field within a record layout.

The RFIND and RCHANGE commands repeat the execution of a FIND or CHANGE command in its original direction. The UNDO command can be used to remove the last change made to a record.

Editing Keyed Datasets

Each record of a VSAM KSDS dataset contains a record key that will locate a data record. The records in a keyed dataset are arranged in ascending order by record key. Typically, keys are not modified in any way. File-AID automatically protects keys from accidental destruction in the following ways:

- Overtyping: The record key is physically separated on both sides from the rest of the data on the line by a blank column. The key is highlighted and protected.
- CHANGE primary command: The ERR information display is placed in the sequence field of a record if the source value is found entirely or partially within the key.
- O (overlay) line command: The ERR display is placed in the sequence field of a protected destination record if the overlay mask includes all or part of the key field.
-) and ((shift right and shift left) line commands: These commands are rejected when the record key is included in the data to be shifted.

When ISAM or VSAM KSDS datasets are initially read for edit, File-AID automatically applies key protection to every record that is keyed. When applying selection criteria or editing a shared (DISP=SHR) or non-reusable VSAM dataset, File-AID does not allow you to unprotect selected keys. To modify the key in these circumstances, duplicate (repeat) the record, change the key of the duplicate and delete the original.

To allow key modification, File-AID allows the key protection to be suspended on a record-by-record basis with the U (unprotect) line command. Unprotected records can be identified on the screen because the key is no longer highlighted. The key remains separated from the rest of the data by spaces. After modifying unprotected records, key protection can be reinstated with the P (protect) line command. For nonkeyed datasets, the U and P line commands have no effect.

When keyed records exist, File-AID automatically checks the key sequence. File-AID detects two error conditions:

- Sequence errors when the key of one record is lower than the key of the preceding record. File-AID flags these errors with the SEQ message in the sequence number field.
- Duplicate key errors when the key of a uniquely keyed record is equal to the key of the preceding record. File-AID flags these errors with the DUP message in the sequence number field.

If errors exist, File-AID does not allow the dataset to be saved.

In the example shown in Figure 4-18, the record key is located in columns 1 and 2 of each record. Although keys 13 through 17 are out of sequence, only the first line in the range is flagged. Also, even though key 17 is duplicated, the record containing the duplicate key is not flagged because the two records are not next to one another.

Figure 4-18. Key Sequence Error Flagging

```
FILE-AID - VSAM.TEST.FILE ------------------------------- COLS 00001 00067
COMMAND ===>                                               SCROLL ===> PAGE
032765 12       DATA FOR KEY 12       JOHN BAKER          ADDRESS LINE
032766 17       DATA FOR KEY 17       MARK SMITH          ADDRESS LINE
==SEQ> 13       DATA FOR KEY 13       GEORGE BROWN        ADDRESS LINE
032768 15       DATA FOR KEY 15       GERALD WHITE        ADDRESS LINE
=COLS> -- --+----1----+----2----+----3----+----4----+----5----+----6----+--
032769 17       DATA FOR KEY 17       MARK SMITH          ADDRESS LINE
032770 19       DATA FOR KEY 19       JEFF REESE          ADDRESS LINE
==DUP> 19       DATA FOR KEY 19       JEFF RESSE          ADDRESS LINE
****** ************************** BOTTOM OF DATA **************************
```

Editing VSAM Datasets

File-AID takes into consideration whether a VSAM dataset is reusable or non-reusable and if you have specified the use of selection criteria for edit processing. An edit on a VSAM dataset is processed in the following manner:

- For a reusable dataset *without* selection criteria specified, File-AID opens the dataset for load (RESET).
- For a reusable dataset *with* selection criteria specified, File-AID opens the dataset for update.
- If the dataset is non-reusable, File-AID opens the dataset for update whether or not selection criteria is specified.

Precaution: If File-AID opens a dataset for load (reusable without selection criteria specified) and you delete all of the records, the file becomes uninitialized. In a subsequent batch step, this dataset cannot be opened for input because it is empty and uninitialized.

Editing VSAM RRDS and BDAM datasets

File-AID uses the sequence (or line) number area to indicate the RRN (Relative Record Number) for VSAM RRDS datasets and the RBN (Relative Block Number) for BDAM datasets. File-AID allows record insert and delete for VSAM RRDS, but the RRNs must be unique and in ascending sequence. BDAM records can only be updated, no record insert or delete is allowed.

Editing in Character and Vertical Formatted Mode

The following editing procedures apply to character and vertical formatted mode editing:

- Combining datasets
- Overwriting datasets and creating new members
- Modifying record lengths in variable-blocked datasets.

Combining Datasets

Data records from multiple datasets or members can be combined by editing one dataset and using the COPY or MERGE primary command to copy data from another file. The COPY command inserts records from another file at a specified location in the dataset (see “COPY” on page 21-20). The MERGE command copies records from another dataset and inserts them in correct key order in the keyed dataset being edited (see “MERGE” on page 21-56). The records to copy/merge are specified on the File-AID Edit Copy screen (Figure 21-2 on page 21-20).

Overwriting Datasets and Creating New Members

Records from the edit dataset can be used to overwrite an existing dataset or member using the REPLACE command or to create a new member of an existing PDS using the CREATE command. In both cases, the records of the edit dataset to be written are specified with the C (copy) line command.

The attributes of the destination dataset must be compatible with the dataset being edited. A CREATE or REPLACE command is not allowed under the following conditions:

- The record format or LRECL would cause record truncation or require record padding.
- The destination dataset is keyed, and the relative key position (RKP) and key length (KEYLN) are not identical with the edit dataset.
- The destination dataset is keyed and there are currently duplicate records or sequence errors in the edit dataset.

See “CREATE (CRE)” on page 21-21 and “REPLACE” on page 21-68 for more information.

Modifying Record Lengths in Variable-Blocked Datasets

You can modify the length of a record within a variable-blocked dataset by using the BNDS (bounds) line command and the left “(“ or right “)” shift characters. The basic procedure for modifying the record length is as follows:

1. Enter the BNDS command in the sequence number field.
2. Move the left bounds marker “<“ to the byte in the record that corresponds with the modification start point.
3. Enter a shift line command “(“ or ")".

When you are expanding the length of a record the new bytes are initialized to the default pad character as defined in your profile. To lengthen the record, enter the shift right character ")" and the number of bytes to expand. To modify a block of records use the block shift characters "((" and))".

Example 1

Add 15 bytes to the end of the record.

```
Before:

=BNDS>    <                           >
)15 01 ABC
V      CCC
V      123

After:

=BNDS>    <                           >
000001 ABC
V      CCC000000000000000
V      123000000000000000
```

Example 2

Remove 5 bytes from the middle of the record.

```
Before:

=BNDS>               <              >
(5 001 THIS RECORD IS VERY LONG
V      ECCE4DCCDCC4CE4ECDE4DDDC
V      389209536940920559803657
```

```
After:

=BNDS>               <              >
000001 THIS RECORD IS LONG
V      ECCE4DCCDCC4CE4DDDC
V      389209536940920365 7
```

To cause the record length to be shortened when shifting left, the right bound ">" must be at least one byte beyond the current record length. If the right bound is not located beyond the last byte of the record being shifted, then the record length does not change. A record cannot be lengthened (shifted right) beyond the right bound or the maximum record length.

In formatted mode, overtype the LENGTH value on line 3 to change the record length. You can also overtype the value of a field that is the object of an OCCURS DEPENDING ON clause.

Editing Field Data in Formatted Mode

In formatted mode, the selected record is formatted according to the specified record layout and is displayed. The record may be edited by overtyping data, by using the INIT command to erase the contents, or by using an editing primary command such as CHANGE.

Data in fields can be edited using standard editing procedures. A field that is cleared (for example, with the Erase EOF key) is initialized to a null value appropriate to the current field format.

If an invalid value is specified for a field, an error message is displayed that indicates the nature of the violation. No commands can be entered until the invalid entry is corrected. To intentionally specify invalid data, change the field format (for example, to HEX) using the DISPLAY primary command. If the data is compatible with the new format, it is accepted.

Windowed Browse and Edit

File-AID/MVS provides Windowed Browse and Edit for files that may not fit into memory and instead must be loaded in sections or "windows”.

Windowed Browse and Edit is only available for these file types:

- sequential (ORG=PS)
- VSAM KSDS
- VSAM IAM

Note: Windowed Browse and Edit is not supported when using

- I/O exits
- hardware or software compressed files

Browse/Edit Method Specification Screen

File-AID uses the Windowed Browse and Edit Threshold installation options to determine when to offer the windowed option. If a file exceeds this threshold, or if “Edit method query screen” has been set to display always on the “System Parameters Screen” (Figure 3-3 on page 3-3), File-AID displays the Browse or Edit Method Specification screen (Figure 4-19 on page 4-33).

Note: The Method Specification screen is not displayed

1. for ineligible file types
2. when Selection Criteria is specified on the initial Browse/Edit Dataset Specification screen.
3. for VSAM KSDS and IAM files as their mode is always Windowed Edit/Browse

Figure 4-19. Edit Method Specification Screen

```
File-AID ----------------  Edit Method Specification  -------------------------
 Command ===>

   Dataset name:  FR.BIG.UNLOAD

   This sequential file is a candidate for Windowed Edit because it
   exceeds the Windowed Edit Threshold Installation Option.
   Windowed Edit is for files that do not fit into memory and must be edited
   in sections or "windows".  Select the edit method (or return and use
   Selection Criteria):

   Edit method ===> 2    (1 = Standard Edit; 2 = Windowed Edit)

   Standard Edit is for files that you can load into memory.  All File-AID
   edit commands are available.

   Windowed Edit is for SEQUENTIAL files that are too large to load into
   memory. Changes are entered into a window determined by your screen size.
   Records are updated when the window is moved.  The following commands are
   unavailable:   INSERT DELETE REPEAT SORT COPY MOVE EXCLUDE.


  Use ENTER to continue, END to return, or HELP for more information.
```

Field Descriptions

Browse/Edit Method : Select the browse/edit mode:

1 : Standard mode (will load the complete file into memory; results in INSUFFICIENT MEMORY error if file is larger than avaiable memory). All File-AID browse or edit commands are available in standard mode.

2 : Windowed mode (will only load partial file into memory; not all edit/browse commands available). File-AID uses your screen size to determine the window size for windowed mode. Only select browse or edit commands are available in windowed mode.

In addition, you also have the option of returning to the Browse or Edit Dataset Specification screen and use Selection Criteria to limit the number of records you are browsing or editing at a time.

Windowed Browse

File-AID/MVS provides Windowed Browse for sequential (ORG=PS) files and VSAM KSDS and IAM files that may not fit into memory and instead must be browsed in sections or "windows”.

The SORT, EXCLUDE , and SUBMIT commands are unavailable in Windowed Browse.

Note: Physical Sequential Extended (PSE) files, commonly referred to as striped, are not supported by Windowed Browse.

Windowed Edit VSAM files

VSAM KSDS and IAM files are always edited in Windowed Edit mode regardless of their size. Changes are entered into a “window” determined by your screen size. Records are updated when the window is moved. Unsaved changes can be UNDOne or CANCELed. Some File-AID Edit commands are unavailable in Windowed Edit. See Table 21-2 on page 21-4 for a list of primary command availability for each display mode of Windowed Edit.

In Windowed Edit, the changes made to records on a screen are held in memory. When you scroll to a new window or issue a command which requires changes to a record not on the current screen, the changed records from the current window are written to the

file. The original values for the changed records are saved in File-AID temporary memory for possible use by the UNDO or CANCEL command.

These original values are discarded when you enter the SAVE command. In the event that your system fails, File-AID temporary memory is cleared and you lose the ability to UNDO or CANCEL your last set of changes.

The following differences apply to Windowed Edit:

- Dashes are displayed for entering line commands instead of line numbers.
- When you add new records to the file with the (I)NSERT or (R)EPEAT line or primary command, File-AID displays the Specify New Key screen which requests a unique key for each record. You can switch the key display from character to hexadecimal by overtyping the data type (C for Character; X for Hexadecimal). The Iteration field identifies the new record for which you are entering the key.
- Line commands:

  DD : Delete Block command is supported only in the current window.

  RR : Repeat Block command is disabled.

  C (CC), M (MM), and X (XX) : Copy, Move, and Exclude line and block commands are disabled.

  See "Windowed Edit Line Commands" on page 22-3 for a complete list of valid line commands for Windowed Edit.
- Primary commands:

  COPY, CREATE, EXCLUDE, LEVEL, MERGE, PAD, PROTECT, REBUILD SETUNDO, SORT, STATS, and VERSION are disabled.

  DELETE and MESSAGE - Supported only in Formatted Edit mode.

  OVERLAY and REPLACE - Supported only in Vertical Formatted Edit mode.

Note: See Table 21-2 on page 21-4 for a complete list of valid primary commands in each display mode of Windowed Edit.

Windowed Edit for SEQUENTIAL files

Windowed Edit is designed for SEQUENTIAL (ORG=PS) files that are too large to load in the memory. Changes are entered into a "window" determined by your screen size. Records are updated when the window is moved. Some File-AID Edit commands are unavailable in Windowed Edit. See Table 21-3 on page 21-6 for a list of primary command availability for each display mode of Windowed Edit.

In Windowed Edit, the changes made to records on a screen are held in memory. When you scroll to a new window or issue a command that requires changes to a record not on the current screen, the changes are applied immediately to the file. The CANCEL command applies only if a SAVE has not been issued.

The following differences apply to Windowed Edit:

- Dashes are displayed for entering line commands instead of line numbers.
- Records CANNOT be Inserted or Deleted.
- Line Commands:

  D : Delete is disabled.

  DD : Delete Block command is disabled.

  R : Repeat is disabled.

  RR : Repeat Block command is disabled.

I : Insert is disabled.

C (CC), M (MM), and X (XX) : Copy, Move, and Exclude line and block commands are disabled.

See "Windowed Edit Line Commands" on page 22-3 for a complete list of valid line commands for Windowed Edit.

- Primary commands:

  CUT, PASTE, COPY, CREATE, EXCLUDE, LEVEL, MERGE, PAD, PROTECT, REBUILD, SETUNDO, SORT, STATS, DELETE, OVERLAY, REPLACE, and VERSION are disabled.

Note: See Table 21-3 on page 21-6 for a complete list of valid primary commands in each primary mode of Windowed Edit.

Performance Considerations

When you specify edit, File-AID loads the dataset/member (or selected subset of the dataset/member) into virtual storage where the data is updated during edit operations. Use of virtual storage for edit work space results in high performance, but users on MVS/SP systems may need a large user region when editing large datasets. Users on MVS/XA and ESA systems use above-the-16-MB line storage.

If sufficient storage is unavailable, the edit session is terminated with an error display that gives the number of records that were successfully read before storage was exhausted. It may be possible to successfully edit the dataset by specifying selection criteria information on the Edit - Dataset Specification screen which brings a subset of the entire file into virtual storage.

Limitations for Editing Datasets

Table 4-3 on page 4-35 describes edit limitations by dataset type.

Note: Compuware recommends ***not*** using selection criteria to perform large block deletions on key-sequenced datasets. Excessive processing invoked by VSAM may result from this request. As an alternative, use the option 3.3, copy utility, to perform a selective copy to a work file. Then delete the original file and rename the work file.

Table 4-3. Edit Option Limitations for Datasets

Dataset Type	Selection Criteria	Description
Sequential	NO	No limitations.
Sequential (Standard Edit)	YES	The workfile allocation (set on "System Parameters" on page 3-3) must be large enough to create a workfile equal in size to the dataset being edited. The M (Move) line command and SORT primary command are not valid.
Sequential (Windowed Edit)	NO	Records cannot be inserted or deleted. See "Windowed Edit for SEQUENTIAL files" on page 4-34.
Partitioned	N/A	Each member is treated as a sequential dataset.
Keyed	NO	Keyed records can be duplicated. However, a dataset may not be saved while there are duplicate keys or key sequence errors. All record keys are initially protected. A key cannot be altered by a CHANGE command, data shifting, or overtyping unless the record key is unprotected with an unprotect (U) line command.

Table 4-3. Edit Option Limitations for Datasets (Continued)

Dataset Type	Selection Criteria	Description
Keyed (Standard Edit)	YES	Records can be inserted or deleted. Initially, all keys are protected, and all keys are protected after a successful SAVE. Keys on newly created records are unprotected, but they can be protected with the P (protect) line command. Only keys on newly created records can be unprotected (U line command). A key cannot be altered unless unprotected. When a SAVE is issued, File-AID checks for duplicate keys or sequential errors. If errors are found, each is flagged and the SAVE is rejected.
Keyed (Windowed Edit)	NO	Records can be inserted or deleted. When a new record is created, File-AID displays the Specify New Key screen for you to enter a unique key. See "Windowed Edit VSAM files" on page 4-33.
Indexed Sequential	N/A	Same limitations as keyed datasets. If the dataset was allocated with code L, deleted records are logically deleted by placing a hexadecimal byte of 'FF' in the first data position. If the dataset was not allocated with option code L, the records cannot be deleted.
VSAM ESDS	NO	Non-reusable datasets have the same limitations as described in the next table entry (VSAM ESDS with Selection Criteria = Yes). Otherwise, no limitations.
VSAM ESDS	YES	A VSAM ESDS is edited as a sequential file. Records cannot be inserted, deleted, or sorted. Allows changes only to existing records. Windowed Browse/Edit is not supported.
VSAM KSDS	NO	Non-reusable datasets have the same limitations as described in the table entry for Keyed datasets with Selection Criteria = Yes; reusable datasets have the same limitations as described in the table entry for Keyed datasets with Selection Criteria = No.
VSAM KSDS	YES	Same limitations as keyed datasets.
VSAM RRDS		Edit supported for fixed VSAM RRDS; not supported for variable VSAM RRDS. Windowed Browse/Edit is not supported.
BDAM		Edit supported for fixed BDAM; not supported for variable BDAM.

Update-In-Place Restrictions

File-AID employs an update-in-place edit method for datasets that cannot be opened for load. As a result, some line and primary commands are restricted.

The update-in-place is employed for the following dataset types:

- Non-reusable VSAM datasets (ESDS and RRDS) or DISP=SHR (with or without selection criteria)
- Reusable VSAM ESDS or KSDS with selection criteria (DISP=OLD)
- BDAM and RECFM=U (load module) PDS member
- Backwards processing

This causes File-AID to restrict the use of the following line and primary commands:

- I (Insert), D (Delete), C (Copy), M (Move), and R (Repeat) line commands
- COPY, DELETE, SORT, REPEAT, INSERT, and UNPROTECT primary commands.

In addition, the following update-in-place restrictions apply for the following dataset types:

- Non-reusable VSAM KSDS or DISP=SHR (restricts only U (Unprotect))
- ISAM with selection criteria. (Allows D (Delete) and R (Repeat))
- Sequential with selection criteria (restricts only M (Move) and SORT).

Storage Management

File-AID Browse and Edit functions operate on a copy of the data in memory, except when browsing keyed files. When browsing keyed files, File-AID reads a screen of data at a time.

Non-MVS/XA Installations

File-AID attempts to read the entire dataset or member into your user region when no selection criteria is specified. If there is not sufficient storage to hold all records, File-AID redisplays the Browse or Edit Dataset Specification screen and displays an error message for insufficient memory.

If this should occur, use the HELP command (PF1) to find the number of records that File-AID read before memory was exhausted. Then, logon with a larger region size, or use selection criteria to select a portion of the dataset that will fit in available memory.

If modifications to the dataset require more memory and File-AID cannot obtain sufficient memory to hold the changes, File-AID stops processing and displays the Edit screen with an insufficient memory error. Any modifications made since the last SAVE are lost. To avoid this situation, use the INFO command to monitor the amount of memory remaining during a session.

When selection criteria is used, File-AID reads only a portion of the data into memory. On a sequential dataset, File-AID makes a copy of the edit dataset in a work file. This practice allows File-AID to make insertions and deletions.

However, the use of the work file does not reduce the storage requirements; sufficient memory must be available to hold all of your selected records. If the work file is not large enough to hold a copy of the edit dataset, a B37 abend is detected. If this happens, use the File-AID System Parameters screen option (0.1) to increase the size of the work file.

MVS/XA and MVS/ESA Installations

Beginning with release 6.3, File-AID supports large volume datasets for MVS/XA and MVS/ESA installations by moving the storage and management of records above the 16-MB line.

For instructions on how to adjust the amount of storage that File-AID can use, see the heading "Above-The-16MB-Line Storage" in your *File-AID Installation Guide*.

Chapter 5.
Library Utility (3.1)

The Library utility enables applications and systems programmers to manage libraries online. Because this utility also works with load libraries, you can display information such as link-edit attributes, CSECT assembly/compile dates, and applied zaps. This information is useful when diagnosing problems with packaged software.

To select the Library utility, enter the number **1** in the OPTION field of the Extended Utilities Menu, or as described in "Selecting Screens" on page 2-7. When you press Enter, File-AID displays the Library Utility screen as shown in Figure 5-1.

In addition, File-AID provides an F31 primary command to let you recursively invoke the Library Utility. You can enter this command from any File-AID screen with an OPTION or COMMAND field. You have the option of entering a dataset name as a parameter when specifying the F31 command. If no dataset name is supplied, File-AID uses a default of the last dataset accessed. When you invoke the Library Utility recursively, use the END command (PF3) on Library Utility screen, or use the RETURN command (PF4) from anywhere in the function to return to the screen from which you entered the F31 command. After the second session is completed, the original session is continued.

Library Utility Screen

The upper area of the screen displays the Library options; the lower area is used to specify dataset characteristics.

Figure 5-1. Library Utility Screen

```
File-AID -------------------  Library Utility  -------------------------------
OPTION ===>

   A - Map CSECTs in address order            B - Browse member
   N - Map CSECTs in name order               D - Delete member
   I - Display directory entry of member      R - Rename member
   BLANK - Display member list

  Dataset name   ===> 'SYS1.LINKLIB'
  Member name    ===>          (Blank or pattern for member list)

  New name       ===>

  Volume serial  ===>          (If not cataloged)

  Disposition    ===> SHR      (SHR or OLD)

  Process Option ===> O        (O = Online, B = Batch)
```

Field Descriptions

OPTION : Enter one of the following option codes in the OPTION field on the Library Utility screen and a library name.

A : Map CSECTs in address order. Displays a map of load module control sections (CSECTs) in address order.

N : Map CSECTs in name order. Displays a map of load module CSECTs in name order.

I : Display directory entry of member. Displays the directory entry and link-edit attributes of a specified member.

B : Browse member. Used to browse a specified member. This option can be used to browse a member instead of going to the Browse function.

D : Delete member. Used to delete a specified member.

R : Rename member. Used to rename a specified member.

BLANK : Display member list. Displays a list of the specified library members. Use the Library option codes (A, N, S, B, D, R) as line commands on this Member List screen to execute the Library utility options.

The address-sequence and name-sequence mapping options (A and N) show all linked components of a load module along with compiler name, compile dates, and applied zaps. The displayed information is identical except for the sequence of the listing. Option A displays CSECTs in sequence by address. This format indicates any segment overlays that are present in the module.

Option N displays information in sequence by symbol name (the CSECT or entry point name). A particular symbol can be quickly found with this format. The screen format for options A and N is identical.

All Library options except A and N process any type of library. Both options A and N only display information about the linked components of a load module.

Dataset name : Specify the dataset name. Use the naming conventions described in "Specifying a Dataset Name" on page 2-13.

You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. See "Pattern Dataset Names" on page 2-14 for a complete description.

Member name : Specify the member name.

You can leave this field blank to display a member list from which you can make a selection. On the member list, Library options A, B, D, N, R, and S can be entered as line commands.

A pattern member name is not a valid entry in this field.

New name : Specify the member's new name for option R - Rename member.

Volume serial : Specify the volume serial of the direct access device that contains the dataset. Specify a volume if the dataset is not cataloged.

Disposition : Specify a value in this field to update link-edit attributes. Use a disposition value of SHR to have File-AID display the link-edit attributes on the directory entry screen. A value of OLD allows some of the link-edit attribute values to be modified on the directory entry display screen (option S).

Process Option : Specify whether to process your Library utility request O (Online) or B (Batch). Batch processing is valid only for load library processing.

Printing Member Lists

When option blank is used to display a member list, the member lists can be printed by using the P (Print) primary command. The P command calls the File-AID print facility to write the list to SYSOUT. SYSOUT is then released for printing. The print facility displays a prompt screen of print values that can be modified, as shown in Figure 3-5 on page 3-8.

PDS Processing Options

When you specify a PDS without specifying a member name, File-AID displays a PDS Processing Options screen for non-load libraries and a Load Library Processing Options screen for load libraries. See "PDS Processing Options" on page 2-22 and "Load Library Processing Options" in the next section.

Load Library Processing Options

File-AID displays the Load Library Processing Options Screen, shown in Figure 5-2, to enable you to tailor the member list.

Figure 5-2. Load Library Processing Options Screen

```
File-AID ------------ Load Library Processing Options -------------------------
COMMAND ===>

Library Dataset: sample.LOAD




Specify Member Selection Options (Blank for All Members)
  Member name mask   ===>
  Member name range  ===>                  to ===>
  Member Rmode       ===>                                        (24, ANY)
  Member Amode       ===>                                        (24, 31, 64, ANY)

  Member Link Date   ===>                  to ===>             (CCYY/MM/DD)
    (Member Selection List MUST be NO to use Link Date filter)

  Display member selection list ===>       (Y = Yes; N = No)

Use ENTER to continue, END to return to dataset specification screen
```

Field Descriptions

See "PDS Processing Options" on page 2-22 for a description of Member name mask and Member name range.

Member Rmode : Residency mode of the CSECT. Valid entries are 24 or ANY.

Member Amode : Addressing mode of the CSECT. Valid entries are 24, 31, 64 or ANY.

Member Link Date : This field is displayed only for the "B" batch processing option. Specify a link edit date in the format CCYY/MM/DD. The Display member selection list option must be set to N (No) to use this Link Date filter.

Display member selection list : Specify Y (Yes) or N (No). This field controls the display of the member S/X (select/exclude) list after PDS processing options are applied. Specify Y (Yes) to display the list. For non-load libraries, this option is automatically set to Yes and is not displayed.

Map CSECTS in Address Order (A)

The Map CSECTS in address order function (option A) displays the component CSECTs of a load module. The information is displayed in sequence by address within the module. The display also indicates any segment overlays within the module.

On the Library Utility screen, enter an A in the OPTION field, and a valid load library and load module member name. When you press Enter, File-AID displays a Map screen of the load module in address sequence as shown in Figure 5-3.

When File-AID detects long program names in a PDS/E load object, it uses a two-line display per SD (Section Definition) or LD (external Label Definition) entry. For readability, SD entries contain the SD name followed by hyphens.

Figure 5-3. Library Utility Address-Sequence Link Map Screen

```
File-AID ADDRESS List of SYS1.LINKLIB(IEBCOPY) ------------ FUNCTION COMPLETED
COMMAND ===>                                                 SCROLL ===> CSR
IEBCOPY was linked on 2000/03/23 by BINDER
 - Symbol - Type  ADDR  Length  Tname 1    Tdate 1  Tname 2    Tdate 2 A/R mode
----------- ---- ------ ------ ---------- -------- ---------- -------- --------
   IEBCOMCA  SD   00000   1000 HLASM      99/08/18                       24/ 24
                 IDENT   00/03/23 UW62382
    IEBMCA   LD   00000
    PATCHMCA LD   00FB2
   IEBCOMCB  SD   01000   2000 HLASM      99/08/18                       24/ 24
    IND$C    LD   01000
    OUTD$C   LD   01200
    UT3D$C   LD   01400
    UT4D$C   LD   01600
    LOADD$C  LD   01800
    UNLDD$C  LD   01A00
    BPAMD$C  LD   01C00
    PRTAREA  LD   02000
    RDCAREA  LD   02200
    H1AREA   LD   02400
    H2AREA   LD   024A0
    DDNTAB   LD   02620
    STKAREA  LD   026A8
    STKEND   LD   02FF8
```

On the Link Map screen, the utility option and file information are displayed in lines 1 and 3 of the screen. For a PDSE, File-AID identifies the BINDER version. The map information is organized into columns below the file information. If more lines of information are available than will fit on one screen, scroll down to display additional lines.

Segment overlays are indicated with a horizontal line of asterisks (***) in the CSECT information. The asterisks are displayed at the point that a new segment overlays the address area of the previous segment.

When appropriate, two additional lines, IDENT and ZAP, are displayed within the data area under the ADDR column. They are not associated with other columns of information.

For a PDSE, the date is displayed in Julian format with a four-digit year.

Use the FIND command to locate the line containing any string you specify. You can specify the full or partial CSECT name, compile name, or zap ID. Use the RFIND command to repeat a FIND command and scroll to the next occurrence of the string.

As an option, print the link map using the P (Print) command.

Use the END command (PF3) to terminate the link map display.

Field Descriptions

Line 1 : Library utility option and library name. On the right is the number of the first row being displayed and the number of rows in the member.

Line 3 : Member name, the date the member was linked, and the utility that processed the link.

Map Columns

Symbol : Name of the CSECT or entry point.

Type : Indicates either a section or label name with one of two codes:

SD : Section definition (CSECT).

LD : Label definition (external label; entry point).

ADDR : Address of this symbol within the load module.

Length : Total length of the CSECT, displayed as a hexadecimal value. This value is only displayed for CSECTs.

Tname 1 : Name of the compiler or assembler used to create the object code for the CSECT. Not shown for labels.

Tdate 1 : Date that the object module was compiled or assembled.

Tname 2 : Name of the precompiler or translator used before compiling/assembling the object code for this CSECT. Not shown for labels.

Tdate 2 : Date of the precompile or translation.

A/R mode : Addressing and residency modes of this CSECT.

Additional ADDR Column Information

IDENT : Identification record created at link-edit time. If the record is used, it is flagged here as created with the word IDENT, along with a date and identification value.

ZAP : Lists any zaps (module modifications) applied to this CSECT. The word ZAP is displayed as a flag along with the date. If the IDR identification was supplied, it is also displayed.

Map CSECTS in Name Order (N)

The Map CSECTS in name order function (option N) displays the component CSECTs of a load module. The information is displayed in sequence by symbol name within the module. This option can be used to quickly find and analyze any specific CSECT or entry point for age or modifications.

On the Library Utility screen, enter an N in the OPTION field, and a valid library and member name. When you press Enter, File-AID displays the Name-Sequence Map screen as shown in Figure 5-4.

When File-AID detects long program names in a PDS/E load object, it uses a two-line display per SD (Section Definition) or LD (external Label Definition) entry. For readability, SD entries contain the SD name followed by hyphens.

Figure 5-4. Library Utility Name-Sequence Link Map Screen

```
File-AID NAME List of SYS1.LINKLIB(IEBCOPY) --------------- FUNCTION COMPLETED
COMMAND ===>                                                 SCROLL ===> CSR
IEBCOPY was linked on 2000/03/23 by BINDER
 - Symbol - Type  ADDR  Length  Tname 1    Tdate 1  Tname 2    Tdate 2 A/R mode
----------- ---- ------ ------ ---------- -------- ---------- -------- --------
   BPAMD$C   LD   01C00
   CALLFAMS  LD   06A84
   DDNTAB    LD   02620
   DVU$EXIT  LD   0FFD4
   H1AREA    LD   02400
   H2AREA    LD   024A0
   IEBCDUMP  SD   20D38      0 HLASM      00/01/24                        24/ 24
   IEBCFAMS  SD   064C8    8FE HLASM      98/10/18                       ANY/ANY
                 IDENT   98/10/18 RSI82912670
   IEBCFIOX  SD   06DC8   106C HLASM      98/10/18                       ANY/ANY
                 IDENT   98/10/18 RSI82912670
   IEBCFIX   LD   06DE8
   IEBCFIXC  LD   07204
   IEBCFIXO  LD   070CA
   IEBCFOX   LD   072AA
   IEBCFOXC  LD   076E8
   IEBCMSG   SD   17280    A11 HLASM      98/10/18                        31/ANY
                 IDENT   98/10/18 RSI82912672
   IEBCMSGF  LD   17A4C
```

On the Link Map screen, the utility option and file information are displayed in lines 1 and 3 of the screen. For a PDSE, File-AID identifies the BINDER version. The map information is organized into columns below the file information. Data for the linked symbols in the module is listed alphabetically. If more lines of information are available than will fit on one screen, scroll down to display additional lines.

When appropriate, two additional lines, IDENT and ZAP, are displayed within the data area under the ADDR column. They are not associated with other columns of information.

For a PDSE, the date is displayed in Julian format with a four-digit year.

Use the FIND command to locate the line containing any string you specify. You can specify the full or partial CSECT name, compile name, or zap ID. Use the RFIND command to repeat a FIND command and scroll to the next occurrence of the string.

As an option, print the link map using the P (Print) command.

See “Field Descriptions” on page 5-5 for a description of each field.

Use the END command (PF3) to terminate the map display.

Display Member Directory Entry (I)

The Display member directory entry function (option I) displays directory entry and link-edit attribute information about a member.

On the Library Utility screen, enter an S in the OPTION field, and a valid library and member name. When you press Enter, File-AID displays the Directory Information screen as shown in Figure 5-5.

Figure 5-5. Directory Information Screen

```
File-AID -----------------  Directory Information  ----------------------------
COMMAND ===>

Dataset: SYS1.LINKLIB(IEBCOPY)                                        TTR 057B0D
- - - - - - - - - - - Directory entry in HEX format - - - - - - - - - - - - - -
Char IEBCOPY .#...#.......B....H..........P..
Zone CCCCDDE40702071000000C0036C030B000016900
Numr 952367805BDE5BA00000222D8480008040119711
     ....+....1....+....2....+....3....+....4

 SSI:   01116997

 - - - - - - - - - - - - - Link edit attributes - - - - - - - - - - - - - - -
   EP       003000     SIZE (HEX) 020D38   (DEC) 134,456
   RENT     NO              OVLY        NO             SCTR            NO
   REUS     NO              DC          NO             NE              NO
   REFR     NO              EP ZERO     NO             ZERO ORIGIN     YES
   OL       NO              TEST        NO             TEST SYMBOLS    NO
   EXEC     YES             RLD         YES            1 BLOCK/NO RLD  NO
   RMODE    24              PAGE ALIGN  YES            APF CODE        001
   AMODE    24

Use END to return to directory menu
```

The upper half of the Directory Information screen shows the member directory entry in hexadecimal format for any type of library. The fourth line of the screen shows the library and member name along with the relative addressing format (TTR). The directory data is then presented showing the character and hexadecimal (zone/number) forms of the data, and the Segment Status Information (SSI).

The lower half of the screen shows the load module link-edit attributes. The link-edit attributes are shown only for a load module. If the member is not a load module, only the directory is shown; the lower half of the screen is blank.

Directory Update

The attributes can only be changed when the Disposition field on the Library Utility screen is set to OLD. File-AID displays the Directory Update screen and highlights the modifiable fields. Table 5-1 describes the link-edit attribute abbreviations and whether the attribute can be changed by overtyping it on the screen.

Use the END command (PF3) to terminate the display.

Table 5-1. Link-Edit Attributes

Abbreviation	Changeable	Description
EP	Yes	Entry point
RENT	Yes	Reenterable
REUS	Yes	Reusable
REFR (PDS)	Yes	Refreshable
REFR (PDSE)	No	Refreshable

Table 5-1. Link-Edit Attributes (Continued)

Abbreviation	Changeable	Description
OL	Yes	Only loadable
EXEC	Yes	Executable
RMODE	Yes	Residency mode
AMODE	Yes	Addressing mode
SIZE	No	Size of module
OVLY	No	Overlay
DC	No	Downward compatible
EP ZERO	No	Entry point of zero
TEST	No	TSO test
RLD	No	Relocation dictionary
PAGE ALIGN	Yes	Page boundary alignment
SCTR	No	Scatter loadable
NE	No	Not editable
ZERO ORIGIN	No	Origin of first text block is zero
TEST SYMBOLS	No	Testran symbol table
1 BLOCK/ NO RLD	No	One block of data and no RLDs
APF CODE	Yes	Authorization code

Display Member List (BLANK)

The Display member list function (option BLANK) displays a list of members in a specified PDS. For libraries with PDS statistics, the list is in the same format as ISPF member lists. This option is useful when processing a number of members or when you cannot remember the member name.

On the Library Utility screen, leave the option field blank, specify a library name, and leave the member name field blank. When you press Enter, File-AID displays the Member List screen for the specified dataset as shown in Figure 5-6 on page 5-10. "Member List Field Descriptions" on page 2-12 describes the fields on this screen. For load libraries, File-AID displays a member list screen like that shown in Figure 5-7 on page 5-11.

When option BLANK is used, File-AID ignores any name entered in the Member name field.

Member List Commands

Once the member list is displayed, you can scroll down the list or enter a **LOCATE** primary command to locate a member.

The following Library option codes can be entered as line commands at the left side of the member or load library lists.

A - Map CSECTS in address order (load libraries only)

N - Map CSECTS in name order (load libraries only)

I - Display members directory entry

B - Browse member

D - Delete member

E - Edit member (non-load libraries only)

R - Rename member.

Undo (U) line command

When a member is deleted using the D line command or renamed with the R line command, it can be recovered with the U (Undo) line command by entering a **U** next to the member name. File-AID displays the message ***ADDED** next to the member name. However, once you exit the Member List screen, all member deletions and renames become permanent.

Note: The U (Undo) line command is not valid for a PDSE.

When using the R (Rename) line command, specify the new member name in the RENAME column next to the current member name.

Press Enter to execute the specified option.

Use the END command (PF3) to terminate the member selection process.

Member List Screen

Figure 5-6. Library Utility Member List Screen

```
 File-AID Library Utility - USERID9.FASAMP.JCL -------------- Row 1 to 17 of 17
COMMAND ===>                                                  SCROLL ===> CSR
        I = directory Entry; D = Delete; R = Rename; B = Browse; E = Edit
-------------------------------------------------------------------------------
 S  NAME    RENAME   VV.MM  CREATED  LAST MODIFIED   SIZE  INIT   MOD   ID
   BATVTOC           01.00 95/02/03 95/02/03 15:44     23    23     0 USERID9
   COPY              01.00 95/02/03 95/02/03 15:44     22    22     0 USERID9
   CVT6XMAP          01.00 95/02/03 95/02/03 15:44     37    37     0 USERID9
   CVT70SEL          01.00 95/02/03 95/02/03 15:44     22    22     0 USERID9
   CVT70XRF          01.00 95/02/03 95/02/03 15:44     21    21     0 USERID9
   DROP              01.00 95/02/03 95/02/03 15:44     20    20     0 USERID9
   DUMP              01.00 95/02/03 95/02/03 15:44     18    18     0 USERID9
   JCLCNVRT          01.00 95/02/03 95/02/03 15:44     23    23     0 USERID9
   LIST              01.00 95/02/03 95/02/03 15:44     17    17     0 USERID9
   PRINT             01.00 95/02/03 95/02/03 15:44     18    18     0 USERID9
   SAMPLE01          01.00 95/02/03 95/02/03 15:44     14    14     0 USERID9
   SAMPLE02          01.00 95/02/03 95/02/03 15:44     17    17     0 USERID9
   SKELETON          01.00 95/02/03 95/02/03 15:44     23    23     0 USERID9
   SPACE             01.00 95/02/03 95/02/03 15:44     20    20     0 USERID9
   TALLY             01.00 95/02/03 95/02/03 15:44     21    21     0 USERID9
   UPDATE            01.00 95/02/03 95/02/03 15:44     27    27     0 USERID9
   USER              01.00 95/02/03 95/02/03 15:44     31    31     0 USERID9
****************************** Bottom of data ******************************
```

Field Descriptions

Name : Member name.

Rename : New member name.

VV.MM : Version modification level number.

Created : Creation date.

Last Modified : Date and time last modified.

Size : Current size.

Init : Initial size.

Mod : Number of modifications.

ID : User identification responsible for last changes.

Load Library Member List Screen

Figure 5-7. Library Utility Load Library Member List Screen

```
File-AID Library Utility - SYS1.LINKLIB ----------------- Row 1 to 19 of 3,482
COMMAND ===>                                                SCROLL ===> CSR
 A/N = CSECT Map; I = Directory Entry; D = Delete; R = Rename; B = Browse
-------------------------------------------------------------------------------
 S  NAME    RENAME    SIZE   TTR   ALIAS-OF AC   EP   R/M A/M ATTRIBUTES
   ABA               0040C8 010C1B ARCABA   00 0002A0 24  31
   ACCOUNT           0013E0 01BE04 IKJEFA00 00 000000 24  24  RN RU
   AD                038738 070905 IRRENV00 01 021966 24  31  RN RU
   ADDGROUP          038738 070905 IRRENV00 01 02196C 24  31  RN RU
   ADDSD             038738 070905 IRRENV00 01 021966 24  31  RN RU
   ADDUSER           038738 070905 IRRENV00 01 021972 24  31  RN RU
   ADFGLUET          0003C8 01BA0E ADFMDF01 00 0003A4 ANY 31  RN RU
   ADFIDF00          013680 01B71E          00 000048 ANY 31  RN RU
   ADFMCOPY          002CE0 01B90E          00 000000 24  24  RN RU
   ADFMDFLT          001988 01BA05          00 000000 ANY 31  RN RU
   ADFMDF0A          003B18 01B906          00 000000 ANY 31  RN RU
   ADFMDF01          0003C8 01BA0E          00 000000 ANY 31  RN RU
   ADFMDF03          000F88 01BA16          01 000000 ANY 31  RN RU
   ADFMDOLD          001B30 01BA1E          00 000000 ANY 31  RN RU
   ADFMFIND          000BD8 01BA27          00 000000 24  24  RN RU
   ADFMPUT           0007B0 01BB04          00 000000 24  24  RN RU
   ADRDSSU           198E38 064B0D          01 000000 24  31  RN RU
   ADREFRAG          017668 034A06          01 000000 24  31  RN RU
   ADRRELVL          000150 034C04          00 000000 24  31  RN RU
```

Field Descriptions

Name : Member name.

Rename : New member name.

Size : Size of module.

TTR : Relative block record number of the beginning of the member.

Alias-of : Points to another member.

AC : Authorization code.

EP : Entry point.

R/M : Residency mode of the CSECT.

A/M : Addressing mode of the CSECT.

Attributes : Link-edit attributes of the module:

FO	Process only by F level linkage editor.
NX	Not executable.
OL	Only loadable.
OV	In overlay structure.
RF	Refreshable.
RN	Reenterable.
RU	Reusable.
SC	Scatter format.
TS	Module to be tested.

Browse Member (B)

The Browse Member function (option B) displays the contents of a member for browsing. All ISPF browse commands can be used with this option. On the Library Utility screen, enter a B in the OPTION field, and specify a library and member name. When you press Enter, File-AID displays the member for browsing. Use the END command (PF3) to terminate the browse display.

Delete Member (D)

The Delete Member function (option D) deletes a member from any type of library. On the Library Utility screen, enter an D in the OPTION field, and specify a library and member name. Pressing Enter deletes the member. Use the END command (PF3) to terminate the deletion. When the member is deleted, File-AID displays the message: **MEMBER DELETED** in the upper-right corner of the Library Utility screen.

Note: File-AID does not give a Delete Confirmation screen when this option is used. However, File-AID does have a recovery function if the Display member list function (option BLANK) is used instead of option D. When option BLANK is used to display a member list from which the member is deleted, the member can be recovered with the U (Undo) line command.

Rename Member (R)

The Rename Member function (option R) renames a member from any type of library. On the Library Utility screen to rename a member, enter an **R** in the OPTION field and specify a library name, member name, and the member's new name.

If a Member List screen is used to specify a member name (option BLANK) multiple members can be renamed. Enter an **R** next to the member name, and specify the new name in the Rename column.

Pressing Enter renames the member. Use the END command (PF3) to cancel the process. When the member is renamed, File-AID displays the Library Utility screen with the following message in the upper-right corner: **MEMBER RENAMED**.

Chapter 6.
Dataset Utility (3.2)

The File-AID Dataset utility provides processing similar to the ISPF dataset utility and has additional features. It provides a free-space option, the ability to define generation data groups (GDGs), and supports delete and rename processing for datasets of all MVS access methods.

To select the Dataset utility, enter the number **2** in the OPTION field of the File-AID Extended Utilities Menu, or as described in Figure 2-3 on page 2-3. When you press Enter, File-AID displays the Dataset Utility screen shown in Figure 6-1.

File-AID also has a F32 primary command that lets you recursively invoke the Dataset Utility function. You can enter this command from any File-AID screen with a OPTION or COMMAND field. You have the option of entering a dataset name as a parameter when specifying the F32 command. If no dataset name is supplied, File-AID uses a default of the last dataset accessed. When you invoke the Dataset Utility in this way, use the END command (PF3) on the Dataset Utility screen, or use the RETURN command (PF4) anywhere in the function to return to the screen from which you entered the F32 command. After the second session is completed, the original session is continued.

Note: Because the File-AID VSAM utility is designed for VSAM datasets, examples for that access method are shown only in Chapter 9, “VSAM Utility (3.5)”. This section provides examples of the other access methods.

Dataset Utility Screen

The Dataset Utility screen has two areas: the upper area displays the Dataset utility options, and the lower area is used to specify dataset and catalog names.

Note: Option M is displayed only if SMS is installed. Use the VSAM utility (option 3.5) to allocate IAM files.

Figure 6-1. Dataset Utility Screen

```
File-AID --------------------  Dataset Utility  ------------------------------
OPTION ===>

  A - Allocate SEQ/PDS dataset           D - Delete dataset
  B - Allocate BDAM dataset              R - Rename dataset
  C - Catalog dataset                    U - Uncatalog dataset
  I - Allocate ISAM dataset              F - Free unused space
  G - Define generation data group       S - Dataset information (short)
  M - Enhanced dataset allocation (SMS)  BLANK - Display dataset information

Specify Dataset Information:
  Dataset name       ===>
  Volume serial      ===>          (If not cataloged)

Specify Model Dataset Information:
  Dataset name       ===>

Specify Catalog to use if other than Default System Catalog:
  Catalog name       ===>
  Catalog password   ===>          (If catalog is password protected)
-------------------------------------------------------------------------------
      For dataset allocations only, the optional model dataset is used to
      prefill the allocation information on the allocation panel.  This
      dataset is not mandatory for dataset allocations.
```

Field Descriptions

OPTION : Enter one of the following option codes and a valid dataset name in the Dataset name field:

A - Allocate SEQ/PDS dataset

B - Allocate BDAM dataset

C - Catalog dataset

I - Allocate ISAM dataset

G - Define generation data group

M - Enhanced dataset allocation - SMS (only at SMS installations)

D - Delete dataset

R - Rename dataset

U - Uncatalog dataset

F - Free unused space

S - Dataset information - short

BLANK - Display dataset information.

As listed in Table 6-1 on page 6-3, some options can be used with datasets of all access methods; others can be used only with specific datasets.

Specify Dataset Information:

Dataset name : Specify the dataset name. Use the naming conventions described in "Specifying a Dataset Name" on page 2-13.

You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. See "Pattern Dataset Names" on page 2-14 for a complete description.

Pattern characters are valid in the Dataset name field for options D, R, U, F, S, and BLANK.

Volume serial : Specify the volume serial of the direct access device that contains the dataset.

Specify the location with a specific volume serial number or in the Catalog name field with a generic group name.

Note: File-AID displays an error message when both the Volume serial field and the Catalog name fields contain data, except for option C (catalog).

Specify Model Dataset Information:

Model dataset name : Use the Model dataset name field when allocating a new dataset with the same attribute values as an existing dataset. The attributes from the model dataset are displayed on the dataset allocation screen.

When a model dataset is not specified, the allocation screen displays the attributes of the most recently referenced dataset.

Pattern characters are valid in the Model dataset name field for all access methods. See "Pattern Dataset Names" on page 2-14.

Specify Catalog to use if other than Default System Catalog:

Catalog name : Specify the location here with a generic group name or in the Volume serial field with a specific volume serial number.

Catalog password : Specify the password if the catalog is password protected.

Table 6-1. Dataset Utility Option Code Limitations

Code	Option	Limitations
A	Allocate SEQ/PDS	Sequential, PDS
B	Allocate BDAM	BDAM
C	Catalog	All non-VSAM access methods
I	Allocate ISAM	ISAM
G	Define generation data group	Generation data groups
M	Allocate SMS-controlled SEQ, PDS, or PDS/E	Sequential, PDS, and PDS/E
D	Delete	All access methods
R	Rename	All access methods
U	Uncatalog	All non-VSAM access methods
F	Free space	Sequential, PDS, BDAM
S	Information - short	All access methods
BLANK	Information - long	All access methods

Allocate New SEQ/PDS Dataset screen (A)

The Allocate SEQ/PDS dataset function is the same function as the Allocate Data Set option of the ISPF Dataset utility. Enter an A in the OPTION field and a valid dataset name in the Dataset name field of the Dataset Utility screen to display the Allocate New Seq/PDS Dataset screen, shown in Figure 6-2.

Figure 6-2. Allocate New Seq/PDS Dataset Screen

```
File-AID --------------- Allocate New Seq/PDS Dataset ------------------------
COMMAND ===>


 Dataset name: USERID9.FASAMP.NEW

                                        Specify one of the following two fields:
    Volume serial      ===> PRD921      (Blank for authorized default volume)
    Generic unit       ===>             (Generic group name or unit)

    Space units        ===> TRKS        (TRKS; CYLS; BLKS)
    Primary quantity   ===> 1           (In above units)
    Secondary quantity ===> 1           (In above units)
    Directory quantity ===> 0           (Partitioned only)
    Record format      ===> FB
    Record length      ===> 80
    Block size         ===> 3120
    Expiration date    ===>             (YYYY/MM/DD or blank)

 Specify multi-volume ===> N            (N = None; Y = Multiple VOLSERs:
                                         or enter generic volume count)
```

Field Descriptions

The displayed values can be accepted or changed by overtyping them.

Dataset name : Name of new dataset specified on the Dataset Utility screen.

Volume serial : Specify the volume serial of the direct access device that you want to contain the dataset. Specify the location in either the Volume serial or Generic unit field.

Generic unit : Generic unit address for the direct access volume to contain the dataset. Specify the location in either the Volume serial or Generic unit field.

Space units : Specify one ofthe following storage unit types depending on how the dataset size is expressed:

TRKS - Tracks

CYLS - Cylinders

BLKS - Number of blocks.

Primary quantity : Specify the primary allocation quantity as specified in the space units field.

Secondary quantity : Specify the secondary allocation quantity as specified in the space units field.

Directory quantity : For a PDS, specify the number of directory blocks. For a Sequential dataset, specify zero (0).

Record format : Specify a value with a combination of the following codes (F, V, or U is required):

F - Fixed length

V - Variable length

U - Undefined format

B - Blocked

A - ANSI printer control characters

M - Machine code printer control characters

S - For Sequential datasets only: Standard for F or spanned for V.

T - Track-overflow feature.

Record length : Specify a logical record length, in bytes, of the records to be stored in the dataset. File-AID validates this value with the record format and block size.

Block size : Specify the physical record length, in bytes, of the blocks to be stored in the dataset. File-AID validates this value with the record format and record length.

Note: For DFP version 3 and all DFSMS users, if you specify 0 or do not enter a block size, the system determines an optimum block size for the direct access device assigned to the dataset.

Expiration date : (Optional) Specify a date value in the format: **YYYY/MM/DD**. This value specifies the date when the dataset may be deleted. If this field is left blank, the dataset can be deleted immediately.

Specify multi-volume : Specify whether you want to allocate the dataset on multiple volumes. Valid entries are Y (Yes), N (No), or a number from 2 to 59 for the number of generic volumes to allocate. When you specify Y, File-AID/MVS displays the Specify Volume Serial Numbers pop-up window. You may enter up 40 specific volume serial numbers.

Press Enter to allocate the dataset, or use the END command (PF3) to cancel the allocation. When allocation is complete, File-AID displays the message: **DATASET ALLOCATED** in the upper-right corner of the Dataset Utility screen. If an error occurs (such as duplicate dataset name), File-AID displays the appropriate error message. Use the HELP command (PF1) to obtain information on the error.

Allocate BDAM Dataset (B)

Specify the letter **B** in the OPTION field and a valid dataset name in the Dataset name field of the Dataset Utility screen to display the Allocate New Direct Dataset screen, shown in Figure 6-3 on page 6-6. The Allocate New Direct Dataset screen allocates a BDAM dataset.

Figure 6-3. Allocate New Direct Dataset Screen

```
File-AID --------------- Allocate New Direct Dataset ------------------------
COMMAND ===>

Dataset name: USERID9.FASAMP.NEW


                                        Specify one of the following two fields
   Volume serial      ===> PRD906      (Blank for authorized default volume)
   Generic unit       ===>             (Generic group name or unit)

   Space units        ===> TRKS        (TRKS; CYLS; BLKS)
   Primary quantity   ===> 1           (In above units)
   Secondary quantity ===> 1           (In above units)
   Record format      ===> FB
   Option codes       ===>             (A = actual blk;
                                        R = relative search;
                                        E = extended search;
                                        F = feedback;
                                        W = write check option)
   Record length      ===> 80
   Block size         ===> 80
   Key length         ===> 0           (0 - 255)
   Expiration date    ===>             (YYYY/MM/DD or blank)
```

Field Descriptions

The displayed values can be accepted or changed by overtyping them.

Dataset name : Name of new dataset specified on the Dataset Utility screen.

Volume serial : Specify the volume serial of the direct access device that you want to contain the dataset. Specify the location in either the Volume serial or Generic unit field.

Generic unit : Generic unit address for the direct access volume to contain the dataset. Specify the location in either the Volume serial or Generic unit field.

Space units : Specify one ofthe following storage unit types depending on how the dataset size is expressed:

TRKS - Tracks

CYLS - Cylinders

BLKS - Number of blocks.

Primary quantity : Specify the primary allocation quantity as specified in the space units field.

Secondary quantity : Specify the secondary allocation quantity as specified in the space units field.

Record format : Specify a value with a combination of the following codes (F, V, or U is required):

F - Fixed length

V - Variable length

U - Undefined format

B - Blocked

A - ANSI printer control characters

M - Machine code printer control characters

S - For Sequential datasets only: Standard for F or spanned for V.

T - Track-overflow feature.

Option codes : Specify one of the following values:

A - Requires actual device addresses to be used when performing read or write macros (MBBCCHHR).

R - Requires relative block addresses to be used when performing read or write macros.

E - Processes extended search of more than one track for a block of available space if LIMCT is coded as one or greater.

F - Enables feedback requests when using read and write macros.

W - Requests a validity check on DASD or tape when performing a write macro.

Note: The record length and block size are verified to be consistent with the record format as defined in the IBM MVS data management documentation for non-VSAM datasets.

Record length : Specify a logical record length, in bytes, of the records to be stored in the dataset. File-AID validates this value with the record format and block size.

Block size : Specify the physical record length, in bytes, of the blocks to be stored in the dataset. File-AID validates this value with the record format and record length.

Key length : If a key is present, specify a value that is greater than zero.

Expiration date : (Optional) Specify a date value in the format:`YYYY/MM/DD`. This value specifies the date when the dataset may be deleted. If this field is left blank, the dataset can be deleted immediately.

Press Enter to allocate the dataset, or use the END command (PF3) cancel the allocation. When allocation is complete, File-AID displays the message: **DATASET ALLOCATED** in the upper-right corner of the Dataset Utility screen. If an error occurs (such as duplicate dataset name), File-AID displays the appropriate error message. Use the HELP command (PF1) to obtain information on the error.

Catalog Dataset (C)

The Catalog dataset option (C) catalogs a dataset name in either the system catalog, or the catalog specified in the Catalog name field on the Dataset Utility screen (Figure 6-1 on page 6-2). Enter a C in the OPTION field, a valid dataset name in the Dataset name field, and a valid identifier in the Volume serial field of the Dataset Utility screen to catalog a dataset.

Press Enter to catalog the dataset, or use the END command (PF3) to cancel the catalog process. When the process is complete, File-AID displays the message: **DATASET CATALOGED** in the upper-right corner of the Dataset Utility screen.

Allocate New ISAM Dataset Screen (I)

Specify the letter **I** in the OPTION field and a valid dataset name in the Dataset name field of the Dataset Utility screen to display the Allocate New ISAM Dataset screen, shown in Figure 6-4 on page 6-8. The Allocate New ISAM Dataset screen allocates an ISAM dataset.

Note: This option requires the File-AID SVC to be installed on the system. See the *File-AID Installation Guide* for more information.

Figure 6-4. Allocate New ISAM Dataset Screen

```
File-AID ---------------- Allocate New ISAM Dataset -------------------------
COMMAND ===>

Dataset name: FASAMP.ISAM

                                      Specify one of the following two fields:
   Volume serial     ===> TSOI04      (Blank for authorized default volume)
   Generic unit      ===>             (Generic group name or unit)
   Primary quantity  ===> 1           (In cylinders)
   Record format     ===> FB
   Record length     ===> 80
   Block size        ===> 6160
   Key length        ===> 4          (1 - 255)
   Key position      ===> 0          (Relative to zero)
   Expiration date   ===>            (YYYY/MM/DD or blank)
   Option codes      ===> W          L - delete      W - write check
                                     R - reorganization criteria option
   Independent index  ===> 0         (In cylinders)
   Master Index limit ===> 0         (No. of trks which cause a master
                                     index to be created: Option code M)
 Specify One of the Following for Record Overflow Space:
   Cylinder Overflow     ===> 1      (In tracks/cylinder: Option code Y)
   Independent Overflow  ===> 0      (In cylinders: Option code I)
```

Field Descriptions

The displayed values can be accepted or changed by overtyping them.

Dataset name : Name of new dataset specified on the Dataset Utility screen.

Volume serial : Specify the volume serial of the direct access device that you want to contain the dataset. Specify the location in either the Volume serial or Generic unit field.

Generic unit : Generic unit address for the direct access volume to contain the dataset.

Specify the location in either the Volume serial or Generic unit field.

Primary quantity : Specify the number of cylinders.

Record format : Specify a value with a combination of the following codes (F, V, or U is required):

F - Fixed length

V - Variable length

U - Undefined format

B - Blocked

A - ANSI printer control characters

M - Machine code printer control characters

S - For Sequential datasets only: Standard for F or spanned for V.

T - Track-overflow feature.

Record length : Specify a logical record length, in bytes, of the records to be stored in the dataset. File-AID validates this value with the record format and block size.

Block size : Specify the physical record length, in bytes, of the blocks to be stored in the dataset. File-AID validates this value with the record format and record length.

Key length : Specify the length of the key field. Any number from 1 to 255 is valid.

Key position : Specify the relative position of the key field. Key position is the beginning location, relative to zero, of the key in the record. Any number from 0 through the record length is valid.

Expiration date : (Optional) Specify a date value in the format:`YYYY/MM/DD`. This value specifies the date when the dataset may be deleted. If this field is left blank, the dataset can be deleted immediately.

Option codes : Six option codes are available when allocating ISAM datasets. Specify one of the following three values:

L - Delete

W = Write check

R - Reorganization criteria.

The other three option codes:

M - Master index limit

Y - Cylinder overflow area

I - Independent overflow area.

are automatically set when a value is specified in the Master index limit, Track overflow amt, or Independent overflow fields.

Independent index : Specify the number of cylinders required for the index area.

Master index limit : Specify the number of tracks that cause a master index to be created (creates OPTCD M).

Specify One of the Following for Record Overflow Space:

Cylinder overflow : Specify a cylinder overflow area by typing a valid size (to create OPTCD Y) in this field, or specify an independent overflow area. This field is mutually exclusive with the Independent overflow field.

Independent overflow : Enter a valid size (to create OPTCD I), or specify a track overflow amount. This field is mutually exclusive with the Track overflow amt field.

After entering values in the fields of the dataset allocation screen, press Enter to allocate the ISAM dataset, or use the END command (PF3) to cancel the allocation. If the allocation values are correct, the dataset allocation screen is displayed with the message: **DATASET ALLOCATED** in upper-right corner of the screen. If an error occurs (such as duplicate dataset name), the appropriate error message is displayed.

Define Generation Data Group screen (G)

Specify the letter **G** in the OPTION field and a valid dataset name in the Dataset name field of the Dataset Utility screen to display the Define New Generation Data Group screen, shown in Figure 6-5 on page 6-10. This screen defines a new GDG base dataset.

Figure 6-5. Define Generation Data Group Screen

```
File-AID -------------  Define New Generation Data Group  ---------------------
COMMAND ===>

GDG base dataset name: FASAMP.GDG1

GDG dataset limit     ===> 3          (Maximum number of generations, 1-255)

Specify Optional Parameters:

   Owner ID           ===> USERID1    (Defaults to TSO USERID)

   Expiration date    ===>            (Blank, YYYY/MM/DD or
                                       number of days 0 - 1830)

   Uncatalog options  ===> 1          (1 = Uncatalog oldest when limit reached-
                                           NOEMPTY,
                                       2 = Uncatalog all when limit is reached-
                                           EMPTY)
   Scratch options    ===> 2          (1 = Scratch dataset when uncataloged-
                                           SCRATCH,
                                       2 = Do not scratch dataset -
                                           NOSCRATCH)
```

Field Descriptions

GDG base dataset name : Dataset name entered on the Dataset utility screen.

GDG Dataset Limit : Specify a number 1-255 for the maximum number of retained generations for the dataset.

Specify Optional Parameters:

Owner ID : Specify an owner identifier. The default is your TSO user ID.

Expiration date : Specify a date value in the format:

YYYY/MM/DD
0 - 1830 (Number of days).

This value specifies the date when the dataset may be deleted. If this field is left blank, the dataset can be deleted immediately.

Uncatalog options : Specify one of the following:

1 - Uncatalog oldest when limit reached - NOEMPTY

2 - Uncatalog all when limit is reached - EMPTY.

Scratch options : Specify one of the following:

1 - Scratch dataset when uncataloged - SCRATCH

2 - Do not scratch dataset - NOSCRATCH.

Press Enter to allocate the GDG base dataset, or use the END command to cancel the allocation. When allocation is complete, File-AID displays the message: **GDG BASE ALLOCATED** in the upper-right corner of the Dataset Utility screen. If an error occurs (such as duplicate dataset name), File-AID displays the appropriate error message. Use the HELP command (PF1) to obtain information on the error.

Enhanced Dataset Allocation - SMS (M)

The Enhanced dataset allocation - SMS function (option M) allocates SMS-controlled Sequential, PDS, and PDS/E datasets.

Note: This option is displayed only when SMS is installed at your site.

Enter M in the OPTION field and a valid dataset name in the Dataset name field of the Dataset Utility screen. When you press Enter, File-AID displays the Allocate New SMS Dataset screen shown in Figure 6-6.

Figure 6-6. Allocate New SMS Dataset Screen

```
File-AID ----------------- Allocate New SMS Dataset --------------------------
COMMAND ===>



Dataset name: USERID9.TEST.PAC3

   Management Class   ===>            (Blank for default management class)
   Storage Class      ===>            (Blank for default storage class)
   Volume serial      ===> SMS001     (Blank for authorized default volume)
   Data Class         ===>            (Blank for default data class)
   Space units        ===> TRKS       (BLKS, TRKS, CYLS, KB, or MB)
   Primary quantity   ===> 2          (In above units)
   Secondary quantity ===> 2          (In above units)
   Directory quantity ===> 0          (Partitioned only)
   Record format      ===> F
   Record length      ===> 1000
   Block size         ===> 1000
   Expiration date    ===>            (YYYY/MM/DD or blank)
   Dataset Name Type  ===>            (Library (PDS/E); PDS; or blank)
   Number of Volumes  ===>            (No. of VOLS or blank for SMS default)
```

Field Descriptions

Dataset name : Dataset name entered on the Dataset utility screen.

Management Class : Specify the SMS management class to use for the allocation of the dataset. The management class describes the migration, backup, and retention for the dataset.

Storage Class : Specify the SMS storage class to use for the allocation of the dataset. The storage class describes the hardware requirements of the dataset.

Volume serial : Specify the volume serial of the direct access device that contains the dataset.

Data Class : Specify the SMS data class to use for the allocation of the dataset. The data class describes the attributes of the dataset such as RECORG, KEYLEN, KEYOFF, SPACE, etc.

Space units : Specify one of the following storage unit types depending on how the dataset size is expressed:

TRKS - Tracks

CYLS - Cylinders

BLKS - Blocks

KB - Kilobytes

MB - Megabytes.

Primary quantity : Specify the primary allocation quantity as specified in the space units field.

Secondary quantity : Specify the secondary allocation quantity as specified in the space units field.

Directory quantity : For a PDS, specify the number of directory blocks. For a Sequential dataset, specify zero (0).

Record format : Specify a value with a combination of the following codes (F, V, or U is required):

F - Fixed length

V - Variable length

U - Undefined format

B - Blocked

A - ANSI printer control characters

M - Machine code printer control characters

S - For Sequential datasets only: Standard for F or spanned for V.

T - Track-overflow feature.

Record length : Specify a logical record length, in bytes, of the records to be stored in the dataset. File-AID validates this value with the record format and block size.

Block size : Specify the physical record length, in bytes, of the blocks to be stored in the dataset. File-AID validates this value with the record format and record length.

Expiration date : (Optional) Specify a date value in the format:`YYYY/MM/DD`. This value specifies the date when the dataset may be deleted. If this field is left blank, the dataset can be deleted immediately.

Dataset Name Type : Specify the type of SMS Managed Partitioned dataset to allocate. This option is available only on DFP 3.2 or above. Valid entries are:

Library : New type of partitioned dataset; it is also called a PDS/E. It has unlimited directory blocks and reuses its own space. PDS/E libraries do not need to be compressed.

PDS : Standard partitioned dataset.

blank : Dataset is not partitioned.

Number of Volumes : Specify the number of volumes or leave blank and File-AID/MVS uses your SMS site default.

Press Enter to allocate the SMS dataset, or use the END command (PF3) to cancel the allocation. When allocation is complete, File-AID displays the message: **DATASET ALLOCATED** in the upper-right corner of the Dataset Utility screen.

Delete Dataset (D)

The Delete dataset function (option D) deletes a dataset and uncatalogs it from the system catalog. If the dataset is not cataloged, it is deleted.

Enter a D in the OPTION field and specify a valid dataset name in the Dataset name field of the Dataset Utility screen to delete the dataset. Specifying the Dataset name with pattern characters displays a list of datasets from which to choose.

If the dataset is multi-volume, File-AID/MVS displays the **MULTI-VOLUME DATASET** message in the upper-right hand corner and the **+ This is a multi-volume dataset** message and a + (plus) sign following the volume serial number on the Confirm Dataset Delete screen.

When deleting a migrated dataset, File-AID issues an HDELETE command.

Press Enter. File-AID displays either the Confirm Dataset Delete screen shown in Figure 6-7 or the VSAM Confirm Dataset Delete screen (Figure 9-17 on page 9-24), depending on the type of dataset being deleted. The Confirm Dataset Delete screen shows the name of the dataset to be deleted, and whether or not the dataset name is to be uncataloged.

Figure 6-7. Confirm Dataset Delete Screen

```
File-AID ----------------  Confirm Dataset Delete  ------ MULTI-VOLUME DATASET
COMMAND ===>

 Dataset name:  USERID9.FASAMP.MULTI
 Volume:        PRD934 +
 Creation date: 1999/01/03




+ This is a multi-volume dataset



 Use ENTER to confirm delete request
 (the dataset will be deleted, AND UNCATALOGED)
 Use END to cancel delete request
```

Press Enter to process the deletion, or use the END command (PF3) to cancel the deletion. When the deletion is completed, File-AID displays the message: **DATASET DELETED** in the upper-right corner of the Dataset Utility screen.

Rename Dataset (R)

The Rename dataset function (option R) renames a dataset, catalogs the new name, and uncatalogs the old name. Enter a R in the OPTION field and specify a valid dataset name in the Dataset Name field of the Dataset Utility screen. When you press Enter, File-AID displays the Rename Dataset screen shown in Figure 6-8. Specifying the Dataset name with pattern characters displays a list of datasets from which to choose.

File-AID identifies a multi-volume dataset with the **MULTI-VOLUME DATASET** message in the upper-right hand corner, the **+ This is a multi-volume dataset** message, and a + (plus) sign following the volume serial number on the File-AID Rename Dataset screen.

Figure 6-8. Rename Dataset Screen

```
-----------------------  File-AID Rename Dataset  --------- MULTI-VOLUME DATASET
COMMAND ===>


Dataset name: FASAMP.TEST.BDAM
Volume:       TSOI01 +
Catalog:      SYSCTLG.VTS0001

Enter New Name Below:

    Dataset name  ===> FASAMP.TEST.DATA

    Catalog in which Dataset will be Recataloged: (No quotes)
    Catalog       ===>
    Password      ===>

    Blank Catalog name will use default system catalog

    + This is a multi-volume dataset
```

Field Descriptions

Dataset name : Name of the current dataset, entered on the Dataset utility screen.

Volume : Location of the current dataset.

Catalog : Catalog location of the dataset.

Enter New Name Below:

Dataset name : Name of the current dataset, entered on the Dataset utility screen. Overtype this field with the new name.

Catalog in which Dataset will be Recataloged: (Optional)

Catalog : Specify the location here with a generic group name or in the Volume field with a specific volume serial number.

Password : Specify the password if the catalog is password protected.

Press Enter to catalog the new name (if previously cataloged) and uncatalog the old name. Use the END command (PF3) to cancel this process and not rename the old dataset. When the renaming is completed, File-AID displays the message: **DATASET RENAMED** in the upper-right corner of the Dataset Utility screen.

Uncatalog Dataset (U)

The Uncatalog dataset option (U) uncatalogs a dataset from either the system catalog, or a catalog specified in the Catalog name field on the Dataset Utility screen (Figure 6-1 on page 6-2).

Enter a U in the OPTION field and a valid dataset name in the Dataset name field of the Dataset Utility screen to uncatalog the dataset. Specifying the Dataset name with pattern characters displays a list of datasets from which to choose.

Press Enter to uncatalog the dataset, or use the END command (PF3) to cancel the process and keep the dataset cataloged. When the process is completed, File-AID displays the message: **DATASET UNCATALOGED** in the upper-right corner of the Dataset Utility screen.

Free Unused Space (F)

The Free Unused space function (option F) allows unused space currently allocated to a dataset to be released according to standard MVS conventions. This process only works for sequential, partitioned, and BDAM datasets.

Enter an F in the OPTION field and a valid dataset name in the Dataset name field of the Dataset Utility screen. Specifying the Dataset name with pattern characters displays a list of datasets from which to choose.

If no errors are found when you press Enter, File-AID displays the message: **FREE SPACE RELEASED** in the upper-right corner of the Dataset Utility screen, and immediately releases the unused space.

Note: The FREE UNUSED SPACE option has no confirmation screen. If there is a question about releasing unused space for a dataset, do not press Enter.

Short Dataset Information Screen (S)

Specify S in the OPTION field and a valid dataset name in the Dataset name field of the Dataset Utility screen. Press Enter and File-AID displays the Dataset Information screen for the specified dataset type. Specifying the Dataset name with pattern characters displays a list of datasets from which to choose.

The Display dataset information - short display function displays all available dates and allocation data and codes for a dataset. Unlike the Display dataset information (option BLANK), this option does not open the dataset and the last referenced date is not altered. Figure 6-9 on page 6-16 is an example of the Short Display Information screen. “Field Descriptions” on page 6-16 describes each field.

Figure 6-9. Short Display Information Screen

```
File-AID ------------------  Dataset Information  ----------------------------
COMMAND ===>

Catalog name: CATALOG.TSO2.VPRD915
Dataset name: USERID9.FASAMP.SEQLRG

General Data:                                Current Allocation:
   Volume serial:        PRD928                Allocated tracks:         1
   Device type:            3390                Allocated extents:        1
   Organization:     SEQUENTIAL
   Record format:             F
   Option code:            NONE             Current Utilization:
   Key length:                0                Used tracks:              1
   Record length:            80                Used extents:             1
   Block size:               80
   1st extent tracks:         1
   Secondary tracks:         30

                                             SMS Information:
Dataset Date Information:                       Storage class:
   Creation:           1999/01/08               Data class:
   Expiration:                                  Management class:
   Last reference:     1999/01/08               Dataset name type:
```

Dataset Information Screens (BLANK)

Leave the OPTION field blank and specify a valid dataset name in the Dataset name field of the Dataset Utility screen and File-AID displays the appropriate Dataset Information screen based on the dataset type. Specifying the Dataset name with pattern characters displays a list of datasets from which you can make your selection. The Display dataset information function displays all available dates and codes for datasets of all access methods. Unlike the Display dataset information - short option, this option updates the modification date of PDSs (i.e., in the Last referenced field of the Dataset Information screen).

Examples of Display Information screens for datasets of various access methods are shown in Figure 6-10 on page 6-18 through Figure 6-17 on page 6-22.

Field Descriptions

Because many of the fields are common to all the displays, this section describes the fields once for all dataset types except ISAM and IAM. Refer to the IBM and Innovation Data Processing, Inc., documentation listed in “Related Publications” on page xviii for descriptions of ISAM and IAM information, respectively.

File-AID/MVS identifies a multi-volume dataset with the **MULTI-VOLUME DATASET** message in the upper-right hand corner, the **Press ENTER for multiple volumes** message located above the Current Allocation information, and a + (plus) sign following the

volume serial number. When you press Enter, File-AID/MVS displays the Volume Serial Numbers pop-up window identifying the first 40 volumes allocated to this dataset. See Figure 6-16 on page 6-21 and Figure 6-17 on page 6-22.

Catalog name : Catalog location of the dataset.

Dataset name : Fully qualified name of the dataset.

General Data:

Volume serial : Serial number of the storage device. For multi-volume datasets, File-AID displays only the first volume.

Device type : Type of storage device on which the dataset resides.

Organization : Access method of the dataset.

Record format : File-specific code:

F - Fixed length

V - Variable length

U - Undefined format

B - Blocked

A - ANSI printer control characters

M - Machine code printer control characters

S - For Sequential datasets only: Standard for F or spanned for V.

T - Track-overflow feature.

Option code : Access method-dependent processing options.

Key length : Number of bytes in the key.

Record length : Maximum number of bytes per logical record (LRECL).

Block size : Maximum number of bytes per physical record (BLKSIZE).

1ST extent blocks/tracks/cylinders : Size of primary space in specified space units.

Secondary blocks/tracks/cylinders : Size of the secondary space in specified space units.

Dataset Date Information:

Creation : Date on which the dataset was allocated.

Expiration : Date after which deletion or update of dataset is permitted.

Last referenced : Date on which the file was last opened.

Current Allocation:

Allocated blocks/tracks/cylinders : Total size of the allocated dataset.

Allocated extents : Number of primary and secondary extents specified at allocation.

Allocated dir. blocks : Number of directory blocks specified at allocation.

Current Utilization:

Used blocks/tracks/cylinders : Storage currently occupied by dataset.

For datasets allocated in blocks, the space is calculated from all blocks used. This includes any partial "short" blocks.

Used extents : Number of primary and secondary allocations in use.

Used dir. blocks : Number of directory blocks in use.

Number of members : Number of active directory entries for a PDS.

SMS Information:

Storage class : Dataset's hardware requirements.

Data class : Attribute information, such as RECFM, DSORG, LRECL, and BLKSIZE.

Management class : Dataset migration, backup, and retention information.

Dataset name type : Type of SMS Managed Partitioned dataset. This information is available only on DFP 3.2 or above. Valid values are:

Library : New type of partitioned dataset; it is also called a PDS/E. It has unlimited directory blocks and reuses its own space. PDS/E libraries do not need to be compressed.

PDS : Standard partitioned dataset.

blank : Dataset is not partitioned.

Figure 6-10. Dataset Information Screen for Sequential Datasets

```
File-AID ------------------- Dataset Information ----------------------------
COMMAND ===>

Catalog name: SYSCTLG.VTS0001
Dataset name: USERID9.TEST.SEQ

General Data:                                Current Allocation:
   Volume serial:        TSOI03                Allocated tracks:         1
   Device type:           3380                 Allocated extents:        1
   Organization:     SEQUENTIAL
   Record format:            FB
   Option code:            NONE
   Key length:                0
   Record length:           120             Current Utilization:
   Block size:             6000                Used tracks:              1
   1st extent tracks:         1                Used extents:             1
   Secondary tracks:          2


Dataset Date Information:
   Creation:           1999/01/10
   Expiration:
   Last referenced:    1999/01/13
```

Figure 6-11. Dataset Information Screen for Partitioned Datasets

```
File-AID ------------------- Dataset Information -----------------------------
COMMAND ===>

Catalog name: SYSCTLG.VTS0001
Dataset name: USERID9.TEST.PDS

General Data:                                  Current Allocation:
   Volume serial:        TSOI01                  Allocated tracks:          2
   Device type:            3380                 Allocated extents:          1
                                                  Max. dir. blocks:          1
   Organization:    PARTITIONED
   Record format:            FB
   Option code:            NONE                Current Utilization:
   Record length:            80                     Used tracks:
   Block size:             3120                     Used extents:            2
   1st extent tracks:         2                     Used dir. blocks:        1
   Secondary tracks:          5                     Number of members:       1
                                                                             5

Dataset Date Information:
   Creation:           1999/01/10
   Expiration:
   Last referenced:    1999/01/13
```

Figure 6-12. Dataset Information Screen for BDAM Datasets

```
File-AID ------------------- Dataset Information -----------------------------
COMMAND ===>

Catalog name: SYSCTLG.VTS0001
Dataset name: USERID9.TEST.BDAM

General Data:                                  Current Allocation:
   Volume serial:        TSOI01                  Allocated tracks:        1
   Device type:           3380                   Allocated extents:       1
   Organization:         DIRECT
   Record format:             F
   Option code:            NONE
   Key length:               10
   Record length:          5000                Current Utilization:
   Block size:             5000                   Used tracks:             0
   1st extent tracks:         1                   Used extents:            0
   Secondary tracks:          1

Dataset Date Information:
   Creation:           1999/01/08
   Expiration:
   Last referenced:
```

Figure 6-13. Display Generation Data Group Information

```
File-AID -----------  Display Generation Data Group Information  --------------
COMMAND ===>

GDG base dataset name: FASAMP.BACKUP.GDG

GDG dataset limit:     3        (Maximum number of generations, 1-255)

Active generations:    3        (Generations that are currently allocated)

Owner:                 USERID9

Expiration date:

Uncatalog options:     NOEMPTY  (EMPTY     = All generations are uncataloged
                                 NOEMPTY   = Oldest Generation is uncataloged)
Scratch options:       SCRATCH  (NOSCRATCH = Uncatalog only
                                 SCRATCH   = Scratch when uncataloged)
```

Figure 6-14. Dataset Information for IAM Datasets

```
File-AID ----------------- IAM Dataset Information ---------------------------
COMMAND ===>

Catalog name: SYSCTLG.VTS001
Dataset name: USERID9.IAM.OLD

                                      Allocate Specifications:
General Data:                            Blocking factor:              4
   Volume serial:        TS0001          % integrated overflow:        0
   Device type:            3390          Independent ovfl rec:        68
                                         Prime extension blocks:       4
   Key length:                8
   Key location:              4       Current Allocation:
   Record format:             V          Allocated tracks:             3
   Option code:            NONE          Allocated extents:            1
   Record length:           804
   Actual blocksize:      13682
   Primary tracks:            3       Number of records
   Secondary tracks:          1          currently in overflow:        0

Dataset Date Information:             SMS Class Information:
   Creation:           1999/01/08        Storage:
   Expiration:                           Data:
   Last referenced:    1999/01/17        Management:
```

Figure 6-15. Dataset Information Screen for ISAM Datasets

```
File-AID ---------------- ISAM Dataset Information ---------------------------
COMMAND ===>

Catalog name: SYSCTLG.VTS0001
Dataset name: USERID9.TEST.ISAM

                                        Current allocation in tracks:
General data:                              Independent index:            0
   Volume serial:        TSOI04           Primary space:               15
   Device type:            3380           Cylinder overflow:            1
                                          Independent overflow:         0
   Key length:                4
   Key location:              0        Current utilization in tracks:
   Record format:            FB           Primary space:                1
   Option code:              MY           Independent overflow:         1
   Master Index Build Amt:    0           Prime records:                1
   Record length:            80           Deleted records:              0
   Block size:             6160
   Primary cylinders:         1        Current reorganization information:
                                          Full cylinder overflow
Dataset date information:                   areas:                       0
   Creation:           1999/01/09         Records currently in
   Expiration:                              the overflow area:          0
   Last referenced:    1999/01/13         Tracks remaining in
```

Figure 6-16. Dataset Information Screen for Multi-Volume Datasets

```
File-AID ------------------  Dataset Information  ------- MULTI-VOLUME DATASET
COMMAND ===>

Catalog name: CATALOG.TSO1.VPRD900
Dataset name: USERID9.FASAMP.MULTI

General Data:                             +Press ENTER for multiple volumes
   Volume serial:          PRD934 +
   Device type:              3390          Current Allocation:
   Organization:       SEQUENTIAL             Allocated tracks:         2
   Record format:              FB             Allocated extents:        1
   Option code:              NONE
   Key length:                  0
   Record length:              80          Current Utilization:
   Block size:              27920             Used tracks:              0
   1st extent tracks:           2             Used extents:             0
   Secondary tracks:            2

SMS Information:                          Dataset Date Information:
   Storage class:        STDNOCSH             Creation:           1999/01/03
   Data class:                                Expiration:
   Management class:     @NONSTD@             Last reference:     1999/01/08
```

Figure 6-17. Dataset Information Screen for Multi-Volume Datasets

```
File-AID -----------------  Dataset Information  ----------------------------
C                   Volume Serial Numbers
C    Command ===>
D
      1. PRD934  2. *       3. ______  4. ______  5. ______
G     6. ______  7. ______  8. ______  9. ______ 10. ______    tiple volumes
     11. ______ 12. ______ 13. ______ 14. ______ 15. ______
     16. ______ 17. ______ 18. ______ 19. ______ 20. ______
     21. ______ 22. ______ 23. ______ 24. ______ 25. ______    :         2
     26. ______ 27. ______ 28. ______ 29. ______ 30. ______    s:        1
     31. ______ 32. ______ 33. ______ 34. ______ 35. ______
     36. ______ 37. ______ 38. ______ 39. ______ 40. ______
                                                             :
                                                                       0
   1st extent tracks:           2              Used extents:           0
   Secondary tracks:            2
   1st extent tracks:           2              Used extents:
   Secondary tracks:            2

SMS Information:                             Dataset Date Information:
   Storage class:        STDNOCSH              Creation:          1999/01/03
   Data class:                                 Expiration:
   Management class:     @NONSTD@              Last reference:    1999/01/08
```

Chapter 7.
Copy Utility (3.3)

The File-AID Copy utility copies records or members from one dataset to another. It copies data; it does not move the data. File-AID copies datasets of all access methods. The From and To datasets can be different access methods; and the copy can be executed online or in batch.

Records and members can be copied selectively by using selection criteria or non-selectively. Complex sets of selection criteria can be specified. In addition, Copy supports backwards processing, which allows you to copy a subset starting from the end of the file.

Notes:

- File-AID copies load modules from one load library to another along with all directory information. Reblocking is performed automatically as necessary (online only, not supported in batch).
- File-AID supports copy of aliases. If an alias is selected along with the base member to which the alias refers, the base member will be copied and the alias will be stowed as an alias of the base.
- File-AID does not support copy of note-listed, scatter-loaded, or overlay structure programs. Selection Criteria is not supported for load modules.
- File-AID supports copy to a PDSE load library with restrictions. When aliases are to be copied to a PDSE load library, whether from a PDS or PDSE, aliases must be copied via member name mask without a member selection list (`Display member selection list=NO`, see also Figure 7-4 on page 7-7). The mask must include the base and all its aliases. Otherwise the aliases will not be included in the output PDSE dataset. If an alias is copied via member selection list to a PDSE, it will appear as unique copy of the base member and will not appear as an alias.

To select the Copy utility, enter a **3** in the OPTION field of the File-AID Extended Utilities Menu, or as described in "Selecting Screens" on page 2-7. When you press Enter, File-AID displays the Copy Utility screen as shown in Figure 7-1 on page 7-2.

File-AID also has a F33 primary command that lets you recursively invoke the Copy Utility function. You can enter this command from any File-AID screen with a OPTION or COMMAND field. You have the option of entering a dataset name as a parameter when specifying the F33 command. If no dataset name is supplied, File-AID uses a default of the last dataset accessed. When you invoke the Copy Utility in this way, use the END command (PF3) on the Copy Utility screen, or use the RETURN command (PF4) anywhere in the function to return to the screen from which you entered the F33 command. After the second session is completed, the original session is continued.

Copy Utility Screen

The Copy Utility screen, shown in Figure 7-1 on page 7-2, is used to specify the input and output dataset names, whether to process the copy online or in batch, and selection criteria usage information.

Figure 7-1. Copy Utility Screen

```
File-AID ---------------------  Copy Utility  -------------------------------
COMMAND ===>

Specify "FROM" Dataset or HFS Path Information:
   Dataset name   ===> 'USERID9.FASAMP.JCL'
   Volume serial  ===>                      (If not cataloged)

Specify "TO" Dataset or HFS Path Information:
   Dataset name   ===> 'USERID9.FASAMP.LAYOUTS'
   Volume serial  ===>                      (If not cataloged)
   Disposition    ===> OLD                  (OLD, MOD, NEW)


Specify Execution Information:
   Process online or batch    ===> O        (O = Online; B = Batch)

Specify Selection Criteria Information:     (E = Existing; T = Temporary;
   Selection criteria usage   ===> M         M = Modify; Q = Quick; N = None)
   Selection dataset name     ===> 'USERID9.FASAMP.SELCRIT'
   Member name                ===> ORDRFILC (Blank or pattern for member list)
```

Field Descriptions

Specify "FROM" Dataset or HFS Path Information:

Dataset name : Specify the name of the source dataset.

You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled “Pattern Dataset Names” in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description.

Specify the HFS path. If the entered path is a complete path, then the file is processed directly for the Edit, Browse, Compare or Copy function. When a partial path is entered, File-AID displays the HFS Directory List enabling you to continue the drill down process at the last directory level entered. For more information on specifying an HFS path, see“Specifying an HFS Pathname” on page 2-20.

Volume serial : Specify the volume serial of the direct access device that contains the dataset.

This field is required only when the dataset name is not cataloged.

Specify "TO" Dataset or HFS Path Information:

Dataset name : Specify the name of the destination dataset.

You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled “Pattern Dataset Names” in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description.

For information on specifying an HFS path, see“Specifying an HFS Pathname” on page 2-20.

Volume serial : Specify the volume serial of the direct access device that contains the dataset.

This field is required only when the dataset name is not cataloged.

Disposition : Specify **OLD**, **MOD** or **NEW**.

The File-AID Copy utility lets you choose whether to overwrite the TO file (DISP=OLD), to append data to the end of an existing file (DISP=MOD), or to allocate online a new file modeled after the FROM dataset (DISP=NEW).

The following rules apply to DISP=MOD:

- MOD is ignored for Partitioned datasets and BDAM.
- If appending to a keyed file (KSDS, ISAM, IAM), the first record copied must have a key higher than the last record currently on file.
- If copying one or more members of a PDS to a sequential file all members are copied one after another to the output file. The disposition only determines where to start writing the output (beginning (OLD) or end (MOD) of dataset).

The following rules apply to DISP=NEW:

- NEW is allowed for Sequential, Partitioned, BDAM, ISAM and VSAM (KSDS, ESDS, RRDS) datasets.
- The NEW dataset will be allocated online using the FROM dataset as a model. This is true even if the batch job option is chosen.

Note: Panvalet and Librarian files are supported as FROM datasets only. They may not be specified as TO datasets.

A Disposition of SHR is not allowed because of potentially disastrous results to data integrity.

Specify Execution Information:

Process online or batch : Specify a processing value: O (Online) or B (Batch). See "Online Processing" on page 7-4 and "Batch Processing" on page 7-4.

Specify Selection Criteria Information:

See Chapter 16, "Selection Criteria (6)" for a complete description of selection criteria.

Selection criteria usage : Specify one of the following valid entries:

E : Use existing selection criteria. Enter a dataset name in the Selection criteria dataset field.

T : Create temporary selection criteria. File-AID displays the Temporary Selection Criteria Menu. Temporary selection criteria is not automatically saved. Use the SAVE primary command to retain temporary selection criteria.

M : Modify existing selection criteria. Enter a dataset name in the Selection criteria dataset field.

Q : Quick selection criteria. File-AID displays the Unformatted Selection Criteria screen for you to enter temporary selection criteria. Quick selection criteria is not automatically saved. Use the SAVE primary command to retain quick selection criteria.

N : (Default) None -- Do not use selection criteria.

Selection dataset name : Specify the name of the dataset containing existing selection criteria for options E and M.

You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit

characters or a combination of explicit and pattern characters. See the section entitled "Pattern Dataset Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description.

Member name : Specify the member name. You can leave this field blank or enter a pattern member name to display a list of members from which you can make a selection. A pattern member name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Member Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description. Pattern names cannot be entered in both the Dataset name and Member name fields at the same time.

I/O Exit Name (Optional) : If the I/O exit install option is set to YES or exitname, you may specify I/O handling for both input (FROM) and output (TO) datasets. See the *File-AID Installation Guide* or your system programmer for more information. I/O exit install options are:

NO : I/O Exit Name field does not appear.

YES : I/O Exit Name field is presented blank for entry of a site-written I/O exit program name.

exitname : I/O Exit Name field is presented prefilled with the name of a site-written I/O exit program name.

Output dataset I/O options let you specify: NONE to bypass the I/O exit, blank to use the input I/O exit, or an exitname to use a specific I/O exit for output processing.

Online Processing

When processing the Copy utility online and the appropriate field values are entered, File-AID redisplays the Copy utility screen with the message: **xxxx RECORDS COPIED** or **xxxx MEMBERS COPIED** in the upper-right corner of the screen, where xxxx indicates the number of records copied. If no records are found that meet the selection criteria, File-AID displays the message: **0 RECORDS COPIED** or **0 MEMBERS COPIED**.

Batch Processing

When batch processing is specified and you have completed all appropriate field entries, press Enter and File-AID displays the JCL Specification Screen, as shown in Figure 7-2.

Figure 7-2. JCL Specification Screen

```
File-AID ---------------- COPY - JCL Specification  ---------------------------
COMMAND ===>

JCL Information for Batch Processing:

 Sysout class    ===> *

JOB Statement Information:
 ===> //USERID9 JOB ('OFAQC8.0.0',81),'AUDIT',
 ===> //   CLASS=P,NOTIFY=USERID9,MSGCLASS=R
 ===>
 ===>



Use JCL command to edit generated JCL
Use SUBMIT command to submit batch job
Use END to return to main COPY panel without submitting job
```

On the JCL Specification screen you can enter the following commands:

JCL : File-AID generates the JCL to process the job and displays it on an edit screen, as shown in Figure 7-3 on page 7-5.

SUBMIT : Submits the batch job.

CANCEL : Terminates the function.

Figure 7-3. Generated JCL Edit Screen

```
EDIT ---- SYS95103.T150445.RA000.USERID9.R0123097 ------------ COLUMNS 001 072
COMMAND ===>                                                  SCROLL ===> PAGE
****** **************************** TOP OF DATA ******************************
000001 //USERID9X JOB ('OFABAS8.ODOC',81),'NAME',
000002 //   CLASS=P,NOTIFY=USERID9,MSGCLASS=R
000003 //*  YOU ARE VIEWING JCL THAT FILE-AID 8.0 HAS GENERATED TO
000004 //*  COPY DATASETS.
000005 //*
000006 //*  YOU CAN CHANGE THIS JCL IF DESIRED AND USE THE SUBMIT PRIMARY
000007 //*  COMMAND TO SUBMIT THE JOB. THE CREATE OR REPLACE PRIMARY COMMAND
000008 //*  CAN BE USED TO KEEP THIS JOBSTREAM FOR FUTURE USE.
000009 //*
000010 //*  USE THE END COMMAND TO EXIT WITHOUT SUBMITTING THE JOB.
000011 //*
000012 //FASTEP   EXEC PGM=FILEAID
000013 //STEPLIB  DD  DISP=SHR,DSN=FA.V8R6M0.LOAD
000015 //SYSPRINT DD  SYSOUT=*
000016 //SYSLIST  DD  SYSOUT=*
000017 //DD01     DD  DSN=USERID9.FASAMP.XREF,
000018 //              DISP=SHR
000019 //DD010    DD  DSN=USERID9.FASAMP.LAYOUTS,
000020 //              DISP=OLD
000021 //DD01XR   DD  DSN=USERID9.FASAMP.XREF(ORDRFILE),
000022 //              DISP=SHR
000023 //DD01RL   DD  DSN=USERID9.FASAMP.LAYOUTS,
000024 //              DISP=SHR
000025 //DD01SC   DD  DSN=USERID9.FASAMP.SELCRIT(ORDRFILC),
000026 //              DISP=SHR
000027 //SYSIN    DD  *
000028 $$DD01 COPYMEM NEWMEM=WRONG2,CEM=NO,RLM=YES,
000029   MEMBER=(NEWONE)
000030 /*
```

The generated JCL can be edited, submitted with the SUBMIT primary command, and saved by using the CREATE or REPLACE primary commands. Saving your generated Copy function JCL gives you the ability to postpone execution or rerun the same job at another time.

Copy Selected Members Using PDS Processing Options

The Copy utility can copy members of a partitioned dataset based on member selection options, record selection, or both. File-AID member selection is provided by the PDS Processing Options which uses member name masks, member name ranges, and directory information such as last modified userid, and creation and modification dates to select members.

PDS Processing Options

When the FROM Dataset name field contains a partitioned dataset (PDS) name with a member name mask or the member name is not specified, File-AID displays the PDS Processing Options screen.

When you enter a partitioned dataset name and specify an * (asterisk) for member name, File-AID bypasses the PDS Processing Options screen and uses the default values as specified on the Processing Parameters screen, option 0.4, Figure 3-6 on page 3-10.

The PDS Processing Options screen is used to override the processing options defaults and specify additional member selection options. The processing options determine whether to copy the entire member, copy empty members, replace like-named members, process in JCL format, and rename members based on a mask. The additional member selection options include a member name mask and the ability to specify selection ranges for member name, last modified userid, creation date, and modification date, and the option to display a member selection list.

File-AID tailors the options that are displayed on the PDS Processing Options screen based on what you specified on the Copy Utility screen. Table 7-1 shows which options to expect.

If record selection criteria was specified on the Copy Utility screen, the selection criteria is applied after the members are selected from the Enhanced Member Selection screen.

Table 7-1. Copy Utility PDS Processing Options

	PDS Processing Option Fields										
Copy Utility Screen Information	**Copy entire member**	**Copy empty member**	**Process in JCL format**	**Replace like-named members**	**Rename copied members mask**	**Member name mask**	**Member name range**	**Last modified userid**	**Creation date**	**Modification date**	**Display Member Selection**
Copying from PDS to PDS No member name specified No selection criteria usage		X		X	X	X	X	X	X	X	X
Copying from PDS to PDS No member name specified Using selection criteria	X	X	X	X	X	X	X	X	X	X	X
Copying from PDS to PDS Member name specified No selection criteria usage		X		X							
Copying from PDS to PDS Member name is specified Using selection criteria	X	X	X	X							
Copying from PDS to Non-PDS No selection criteria specified						X	X	X	X	X	X

Table 7-1. Copy Utility PDS Processing Options (Continued)

PDS Processing Option Fields											
Copy Utility Screen Information	**Copy entire member**	**Copy empty member**	**Process in JCL format**	**Replace like-named members**	**Rename copied members mask**	**Member name mask**	**Member name range**	**Last modified userid**	**Creation date**	**Modification date**	**Display Member Selection**
Copying from PDS to Non-PDS Selection criteria is specified	X		X			X	X	X	X	X	X
Copying from Loadlib to Loadlib No member name specified Selection Criteria not allowed				X		X	X				X
Copying from Loadlib to Loadlib Member name specified Selection Criteria not allowed				X							
Copying Loadlib to PDSE Loadlib No member name specified Selection Criteria not allowed				X		X	X				X
Copying Loadlib to Loadlib PDSE w/alias No member name specified Selection Criteria not allowed Display member selection list=NO				X		X					X[a]

a.The Display member selection list prompt must be set to **NO** for alias to be copied.

Figure 7-4 is an inclusive example of all possible PDS processing options that can be displayed for a copy function. See “Field Descriptions” on page 2-23 for a description of each field on this screen.

Figure 7-4. PDS Processing Options Screen

```
File-AID ---------------- PDS Processing Options ----------------------------
COMMAND ===>

FROM Dataset: USERID9.FASAMP.XREF
    Copy entire member            ===> Y        (Y = Yes;
                                                 N = No, selected records only)
    Copy empty members            ===> N        (Y = Yes; N = No)
    Process in JCL format         ===> N        (Y = Yes; N = No)

TO Dataset:   USERID9.FASAMP.LAYOUTS
    Replace like-named members    ===> Y        (Y = Yes; N = No)

    Rename copied members mask    ===>

Specify Member Selection Options (Blank for All Members)
    Member name mask              ===>
    Member name range             ===>          to ===>
    Last modified userid          ===>          to ===>
    Creation date                 ===>          to ===>            (YY/MM/DD)
    Modification date             ===>          to ===>            (YY/MM/DD)

    Display member selection list ===> Y        (Y = Yes; N = No)

Use ENTER to continue, END to return to copy utility screen
```

Member Selection List

The Member S/X List screen, shown in Figure 7-5, allows you to select or exclude the displayed members from further processing. Enter a Y in the Display member selection list field on the PDS Processing Options screen to display this screen.

See “Member List Field Descriptions” on page 2-12 for a description of each field on this screen. See “Member List Primary Commands” on page 2-12 for a list of valid primary commands.

Figure 7-5. Member S/X List Screen

```
 File-AID Member S/X - USERID9.FASAMP.JCL ------------------  ROW 1 TO 17 OF 17
 COMMAND ===>                                                 SCROLL ===> CSR
S/X  NAME            VV.MM  CREATED     CHANGED      SIZE  INIT   MOD   ID
    BATVTOC          01.00 95/02/03 95/02/03 15:44     23    23     0 USERID9
    COPY             01.00 95/02/03 95/02/03 15:44     22    22     0 USERID9
    CVT6XMAP         01.00 95/02/03 95/02/03 15:44     37    37     0 USERID9
    CVT7OSEL         01.00 95/02/03 95/02/03 15:44     22    22     0 USERID9
    CVT7OXRF         01.00 95/02/03 95/02/03 15:44     21    21     0 USERID9
    DROP             01.00 95/02/03 95/02/03 15:44     20    20     0 USERID9
    DUMP             01.00 95/02/03 95/02/03 15:44     18    18     0 USERID9
    JCLCNVRT         01.00 95/02/03 95/02/03 15:44     23    23     0 USERID9
    LIST             01.00 95/02/03 95/02/03 15:44     17    17     0 USERID9
    PRINT            01.00 95/02/03 95/02/03 15:44     18    18     0 USERID9
    SAMPLE01         01.00 95/02/03 95/02/03 15:44     14    14     0 USERID9
    SAMPLE02         01.00 95/02/03 95/02/03 15:44     17    17     0 USERID9
    SKELETON         01.00 95/02/03 95/02/03 15:44     23    23     0 USERID9
    SPACE            01.00 95/02/03 95/02/03 15:44     20    20     0 USERID9
    TALLY            01.00 95/02/03 95/02/03 15:44     21    21     0 USERID1
    UPDATE           01.00 95/02/03 95/02/03 15:44     27    27     0 USERID1
    USER             01.00 95/02/03 95/02/03 15:44     31    31     0 USERID1
 ****************************** BOTTOM OF DATA ******************************
```

Copy Using Selection Criteria

Records and members can be copied selectively based on selection criteria. Selection criteria is supported for all copy types except load library copy. File-AID permits you to specify three different types of record selection criteria:

Options : Selection criteria options allow you to specify:

- Starting key or relative byte address (RBA) to begin record selection
- An initial number of records to skip
- Selection intervals for selecting and skipping records
- Number of records to search or select
- Forward or backward processing direction.

See “Selection Criteria Options” on page 16-8.

Formatted : Formatted criteria uses record layouts or XREFs (record layout cross references) to search for a specific field value. See “Formatted Selection Criteria” on page 16-11.

Unformatted : Unformatted criteria uses AND/OR logic to search for specific data values at specific positions in the records. See “Unformatted Selection Criteria” on page 16-20.

Confirm Copy Screen

Once all copy information is entered and File-AID begins to execute the copy process, File-AID displays the Confirm Copy screen, *only when* discrepancies exist between the FROM and TO datasets. The Confirm Copy screen is displayed when records will be truncated or padded, and when inconsistencies occur with key descriptions. Figure 7-6 shows a sample Confirm Copy screen.

Figure 7-6. Confirm Copy Screen

```
File-AID ---------------------  CONFIRM COPY  -------------------------------
COMMAND ===>

Dataset attributes are inconsistent. TRUNCATION may result in the
right-most positions of some records if COPY is performed.

 "FROM" dataset attributes:
   Dataset name  ===> USERID9.FASAMP.XREF
   Record format ===> VB
   Record length ===> 300

 "TO" dataset attributes:
   Dataset name  ===> USERID9.FASAMP.LAYOUTS
   Record format ===> FB
   Record length ===> 80

   Pad characters ===> NULLS  (Blanks or nulls)

   Pad VSAM       ===> N      (Y or N) (Pad VSAM to average recordsize
                                       using pad char specified above)

Use ENTER to continue with COPY, END to cancel
```

When the Confirm Copy screen is displayed, you can choose to cancel or continue the copy process. In addition, you can modify the pad character by moving the cursor to the field and overtyping the value. For VSAM datasets, padding does not occur unless the average and maximum record size of the TO file is equal and the PAD VSAM field is set to **Y**. Press Enter to continue the copy, or use the END command (PF3) to cancel the copy.

Field Descriptions

"FROM" Dataset Attributes:

Dataset name : Name of the source dataset specified on Copy Utility screen.

Record format : Record format of the source dataset:

F - Fixed length

V - Variable length

U - Undefined format

B - Blocked

A - ASA printer control characters

M - Machine code printer control characters

S - For Sequential datasets only: Standard for F or spanned for V.

T - Track-overflow feature.

Record length : Logical record length, in bytes, of the source dataset records.

"TO" Dataset Attributes:

Dataset name : Name of the destination dataset specified on Copy Utility screen.

Record format : Record format of the destination dataset:

F - Fixed length

V - Variable length

U - Undefined format

B - Blocked

A - ASA printer control characters

M - Machine code printer control characters

S - For Sequential datasets only: Standard for F or spanned for V.

T - Track-overflow feature.

Record length : Logical record length, in bytes, of the destination dataset records.

Pad character : Specify blanks or nulls.

Pad VSAM : Specify Y (Yes) or N (No) whether to pad VSAM records to average record size using the pad character specified in the preceding field.

Chapter 8.
Catalog Utility (3.4)

The File-AID Catalog utility displays lists of cataloged datasets. These lists can either be from a generic catalog search or a volume search of VSAM datasets in VSAM data space. A set of line commands can be used on any displayed list.

To select the Catalog utility, type the number **4** in the OPTION field of the Extended Utilities Menu, or as described in "Selecting Screens" on page 2-7. When you press Enter, the Catalog Utility screen is displayed as shown in Figure 8-1.

In addition, File-AID provides an F34 primary command that lets you recursively invoke the Catalog utility function. Enter the F34 command from any File-AID screen with an OPTION or COMMAND field. When you invoke the Catalog Utility in this way, use the END command (PF3) on the Catalog Utility screen, or the RETURN command (PF4) anywhere in the function, to return to the screen from which you entered the F34 command. After the second session is completed, the original session is continued.

Catalog Utility Screen

The Catalog Utility screen has two options. The Generic catalog search function (option BLANK) allows you to specify a search name that File-AID uses to generate a list of datasets that match your criteria. When Generic catalog search function fields are left blank, all datasets associated with your userid are listed. When using option V, values must be entered in the Volume dataset list function fields to produce a VSAM dataset list.

Use the Catalog to search if other than default system catalog fields to specify alternate catalogs. The Display confirm delete field is used to specify the display of a confirmation screen when datasets are deleted.

Figure 8-1. Catalog Utility Screen

```
File-AID --------------------- Catalog Utility -------------------------------
OPTION ===>

   V - produce volume list of VSAM datasets (non-ICF catalogs only)
   BLANK - generic catalog search

Generic catalog search function:
   Search name   ===>
   Format option ===> QUICK  (Quick, Short, Long)
   Clusters only ===> Y      (Y or N)

Volume dataset list function:
   Volume serial ===>        (required for option "V")
   Translate DSN ===> N      (Y OR N)

Catalog to search if other than default system catalog:
   Catalog name     ===>
   Catalog password ===>          (if catalog is password protected)

   Display confirm screen: ===> Y (Y=yes, N=no)
```

Field Descriptions

OPTION : To select a Catalog option, enter one of the following option codes:

V : Produce Volume List of VSAM Datasets (Non-ICF Catalogs only). This option generates a list of VSAM components based on the specified volume serial number.

When option V is selected, specify the fields at the Volume dataset list function prompt. The Volume serial field is required and causes File-AID to list the VSAM clusters suballocated on the specified volume. The Translate DSN field is also required. It controls the type of VSAM names displayed on the volume list.

Note: The Produce Volume List of VSAM Datasets option (option V) can be used only on VSAM catalogs. When IBM ICF catalogs are run, use the Chapter 11, "VTOC Utility (3.7)" to display the volume list.

BLANK : Generic Catalog Search. When option BLANK is selected, specify the Generic catalog search function fields.

The value in the Search name field specifies the criteria used to select datasets from the catalog. File-AID displays only datasets that match the Search name value.

Generic catalog search function (all catalogs):

Search dataset name : Specify the Search name with explicit characters or a pattern dataset mask (fully qualified, no quotes) to define the dataset names to include in the list. A pattern dataset mask or name consists of explicit characters or a combination of explicit and pattern characters. The rules used for specifying a Search Name are similar to those used in ISPF/PDF's Dataset List Utility. See "Pattern Dataset Names" on page 2-14.

Format option : Specifies the amount of information to display about each dataset. The default value for this parameter is set by the Format option field on the Parameters screen (option 0.4). There are three possible values:

Q (Quick) : Displays only the dataset type and status.

S (Short) : Displays dataset type, volume, and status.

L (Long) : Displays the dataset organization, volume, record format, tracks allocated, percentage used of tracks allocated, and the number of extents allocated.

Multi-volume datasets are identified by the + (plus sign) following the Volume field with the Short and Long formats.

Clusters only : Specifies whether or not VSAM data and index components are included in the dataset lists. Specify Y (Yes) to show only VSAM cluster names (along with non-VSAM dataset names) in the dataset list. Specify N (No) to show data and index components as well as VSAM cluster names (along with non-VSAM dataset names) in the dataset list.

Volume dataset list function (VSAM catalogs only):

Volume serial : Specify the volume serial of the direct access device to define the VSAM clusters to include in the list.

Translate DSN : Translate dataset name has two possible values: Y (Yes) and N (No). Y specifies that listed dataset names are to be translated from the catalog names into the cluster name. N specifies that the listed names are the catalog names.

Catalog to search if other than default system catalog:

The CATALOG NAME and CATALOG PASSWORD fields are only used when generating a list for a private catalog.

Catalog name : Optionally, specify a catalog for File-AID to search. When a catalog name is not specified in this field for a generic catalog search (option BLANK), File-AID searches the default system catalog.

When a catalog name is not specified for an option V search, File-AID checks all currently open catalogs for ownership of the value in the Volume serial field. The owning catalog contains the entries associated with the value in the Volume serial field.

Catalog password : Specify the password if the catalog is password protected.

Display confirm screen : Specify whether File-AID displays a Confirm Delete screen, as shown in Figure 6-7 on page 6-13 when the D (Delete) line command is used on Catalog utility list screens. Valid entries are Y (Yes) and N (No).

Commands

File-AID permits the use of line commands on a list of dataset names displayed by the Catalog utility. Table 8-1 lists the available line commands.

Note: Use of the D and R line commands is not supported for multi-volume datasets.

Table 8-1. Catalog Utility Line Commands

Command	Description	Limitations
B	ISPF/PDF Browse	Sequential, PDS
E	ISPF/PDF Edit	Sequential, PDS
R	Rename	All access methods
U	Uncatalog	All non-VSAM access methods
D	Delete	All access methods
M	Modify	VSAM
I	Display information	All access methods
S	Display information--short	All access methods
F	Free unused space	Sequential, PDS, BDAM
1	File-AID Browse	All access methods
2	File-AID Edit	All access methods
6	File-AID Search/Update utility	All access methods

The FIND, LOCATE, and P (Print) primary commands can be used on Catalog utility lists.

Printing Catalog Lists

Catalog lists are printed by using the P command. The P (Print) command calls the File-AID print facility to write the list to SYSOUT. SYSOUT is then released for printing. The print facility uses the values set in the print parameter default options discussed in “Print Parameters” on page 3-8 and displays a print values prompt screen that can be modified (Figure 3-5 on page 3-8).

Note: When printing catalog lists, the print command is **P** (not **PRINT**). If the PRINT command is entered, ISPF intercepts the command and copies the physical screen image to your ISPF/PDF list dataset.

VSAM Dataset List Screen (V)

File-AID displays the VSAM Dataset List screen, as shown in Figure 8-2, when option V is selected on the Catalog Utility screen. Line 1 of the VSAM Dataset List screen shows the volume from which the list was taken and the number of selected datasets. Line three lists the catalog in which the dataset names are located.

Figure 8-2. VSAM Dataset List Screen

```
File-AID - VSAM Dataset List/ Volume TSOI01 ------------ 157 DATASETS SELECTED
COMMAND ===>                                                 SCROLL ===>  CSR
CATALOG: CATALOG.VTSOI01                          Dataset   Allocatn   Status
  --------- D a t a s e t   N a m e ----------  Type Comp    Type
  CATALOG.VTSOI01                               CTLG        SUB-AL
  VS.TSOID01.ESDS.DATA                          CLST DATA   UNIQUE
  VSV.CCCC.EEE.REPTFILX.DATA                    CLST DATA   UNIQUE
  VSV.CCCC.JJJ.REPTFILE.DATA                    CLST DATA   SUB-AL
  VSV.CCCC.JJJ.REPTFILX.DATA                    CLST DATA   UNIQUE
  VSV.CCCC.NNN.REPTFILX.DATA                    CLST DATA   UNIQUE
  VSV.CCCC.PPP.REPTFILX.DATA                    CLST DATA   UNIQUE
  VSV.CCCC.RRR.REPTFILX.DATA                    CLST DATA   UNIQUE
  VSV.CCCC.TTT.REPTFILX.DATA                    CLST DATA   UNIQUE
  VSV.CCCC.TUU.DUMPFILE.DATA                    CLST DATA   UNIQUE
  VSV.CCCCG.REPTFILX.DATA                       CLST DATA   UNIQUE
  VSV.CCCCG.TEMP.STORAGE.DATA                   CLST DATA   UNIQUE
  VSV.CCCCG.TRANS.DATA.DATA                     CLST DATA   UNIQUE
  VSV.CCCCJ.DATA01.DATA                         CLST DATA   UNIQUE
  VSV.CCCCJ.DATA01.INDEX                        CLST INDX   UNIQUE
  VSV.CCCCJ.DATA03.DATA                         CLST DATA   UNIQUE
  VSV.CCCCJ.DATA03.INDEX                        CLST INDX   UNIQUE
  VSV.CCCCJ.DATA04.DATA                         CLST DATA   UNIQUE
  VSV.CCCCJ.DATA04.INDEX                        CLST INDX   UNIQUE
  VSV.CCCCJ.REPTFILX.DATA                       CLST DATA   UNIQUE
```

Field Descriptions

Dataset Name : If the TRANSLATE DSN field is set to Y (Yes), the displayed names use the cluster name. If the TRANSLATE DSN field is set to N (No), the system-generated name is shown.

Dataset Type Comp : Identifies the dataset type and components of the displayed names:

Type - Either CLST (cluster) or AIX (alternate index).

Comp - Either DATA or INDX (index).

Allocatn Type : The allocation type is either UNIQUE or SUB-AL (suballocated).

Status : Indicates if line commands were processed on the dataset name (e.g., this column can indicate: DELETED, OLDNAME, NEWNAME). However, browse, edit, and information display are not indicated.

Use the END command (PF3) to terminate the dataset list display.

Dataset List Screens (BLANK)

The generic catalog search (option BLANK) displays a list of catalog dataset names based on the search name. File-AID displays the appropriate Catalog Utility Dataset List screen for the specified Format option. Examples of this screen for the QUICK, SHORT, and LONG Format options are shown in Figure 8-3, Figure 8-4 on page 8-6, and Figure 8-5 on page 8-6.

The names on the Catalog Utility Dataset List screen match the value in the Search Name field. If Search Name is left blank, File-AID displays all dataset names that match the user's TSO profile prefix. The top line on the screen states the number of dataset names that were found.

If a value is not specified in the Catalog Utility screen Search name field, File-AID performs two searches. One search is based on the TSO prefix; the other is based on the value in the VSAM Intermediate name field on the System Parameters screen (see "System Parameters" on page 3-3).

The VSAM Intermediate name sets the second-level qualifier when the VSAM high-level name is used as the high-level qualifier. When File-AID is used to generate the catalog list, any VSAM datasets with the VSAM intermediate name as the second-level qualifier are selected.

Figure 8-3. Catalog Utility Dataset List Screen in QUICK Format

```
File-AID - Catalog Utility Dataset List ----------------- 27 DATASETS SELECTED
COMMAND ===>                                                 SCROLL ===> CSR
  ----- D A T A S E T   N A M E  --------------      --Type--        -Status-
  TSOID01.BATCH.OUTPUT                               NON-VSAM
  TSOID01.BBDEV.TEXT                                 NON-VSAM
  TSOID01.BBDOC1.LIST                                NON-VSAM
  TSOID01.BBLETTER.SALES                             NON-VSAM
  TSOID01.BBLETTER.TEXT                              NON-VSAM
  TSOID01.BBPRES.TEXT                                NON-VSAM
  TSOID01.BBPROBS.TEXT                               NON-VSAM
  TSOID01.BBSTAT.TEXT                                NON-VSAM
  TSOID01.BB77.PRES                                  NON-VSAM
  TSOID01.BB77.PRESNT                                NON-VSAM
  TSOID01.III.TEXT                                   NON-VSAM
  TSOID01.ISPPROF                                    NON-VSAM
  TSOID01.ISR0001.BACKUP                             NON-VSAM
  TSOID01.JJJ.TEST                                   NON-VSAM
  TSOID01.MACLIB                                     NON-VSAM
  TSOID01.PPDEMO.DEV                                 NON-VSAM
  TSOID01.PPDEMO.DEV2                                NON-VSAM
  TSOID01.PVJOB.TEXT                                 NON-VSAM
  TSOID01.SAAAAAAA.TEXT                              NON-VSAM
  TSOID01.SEEEEEE.CONTENT                            NON-VSAM
  TSOID01.SEEEEEE.MATTER                             NON-VSAM
```

Figure 8-4. Catalog Utility Dataset List Screen in SHORT Format

```
File-AID - Catalog Utility Dataset List ----------------- 27 DATASETS SELECTED
COMMAND ===>                                                 SCROLL ===> CSR
  ----- D A T A S E T   N A M E  -------------- --Type--   -Volume-  -Status-
  TSOID01.BATCH.OUTPUT                           NON-VSAM    TSOD08
  TSOID01.BBDEV.TEXT                             NON-VSAM    TSO001
  TSOID01.BBDOC1.LIST                            NON-VSAM    ARCV01
  TSOID01.BBLETTER.SALES                         NON-VSAM    TSOD02
  TSOID01.BBLETTER.TEXT                          NON-VSAM    ARCV02
  TSOID01.BBPRES.TEXT                            NON-VSAM    TSO002
  TSOID01.BBPROBS.TEXT                           NON-VSAM    ARCV03
  TSOID01.BBSTAT.TEXT                            NON-VSAM    ARCV03
  TSOID01.BB77.PRES                              NON-VSAM    TSO001
  TSOID01.BB77.PRESNT                            NON-VSAM    TSOD03
  TSOID01.III.TEXT                               NON-VSAM    ARCV02
  TSOID01.ISPPROF                                NON-VSAM    TSO002
  TSOID01.ISR0001.BACKUP                         NON-VSAM    TSO002
  TSOID01.JCL.TEST                               NON-VSAM    TSOD03
  TSOID01.MACLIB                                 NON-VSAM    TSOD02
  TSOID01.PPDEMO.DEV                             NON-VSAM    TSOD10
  TSOID01.PPDEMO.DEV2                            NON-VSAM    TSOD10
  TSOID01.PVJOB.TEXT                             NON-VSAM    TSO001
  TSOID01.SAAAAAAA.TEXT                          NON-VSAM    TSO001
  TSOID01.SEEEEEE.CONTENT                        NON-VSAM    TSOD03
  TSOID01.SEEEEEE.MATTER                         NON-VSAM    TSOD02
```

Figure 8-5. Catalog Utility Dataset List Screen in LONG Format

```
File-AID - Catalog Utility Dataset List ----------------- 27 DATASETS SELECTED
COMMAND ===>                                                 SCROLL ===> CSR
  ----- D A T A S E T   N A M E  -------------- Org Volume Fmt  Trks  %Us  Xt
  TSOID01.BATCH.OUTPUT                           PO  TSOD08 FB  750    6   1
  TSOID01.BBDEV.TEXT                             PO  TSO001 FB   36   44   1
  TSOID01.BBDOC1.LIST                                ARCV01
  TSOID01.BBLETTER.SALES                         PO  TSOD02 FB   15   13   1
  TSOID01.BBLETTER.TEXT                              ARCV02
  TSOID01.BBPRES.TEXT                            PO  TSO002 FB    5   40   1
  TSOID01.BBPROBS.TEXT                               ARCV03
  TSOID01.BBSTAT.TEXT                                ARCV03
  TSOID01.BB77.PRES                              PO  TSO001 FBA  45    2   1
  TSOID01.BB77.PRESNT                            PO  TSOD03 FB   45   87   1
  TSOID01.III.TEXT                                   ARCV02
  TSOID01.ISPPROF                                PO  TSO002 FB    4   25   1
  TSOID01.ISR0001.BACKUP                         PS  TSO002 U     1  100   1
  TSOID01.JCL.TEST                               PO  TSOD03 FB   15    7   1
  TSOID01.MACLIB                                 PO  TSOD02 FB    4   50   1
  TSOID01.PPDEMO.DEV                             PO  TSOD10 FB   60   82   2
  TSOID01.PPDEMO.DEV2                            PO  TSOD10 FB  120   98   6
  TSOID01.PVJOB.TEXT                             PO  TSO001 FB    7   57   1
  TSOID01.SAAAAAAA.TEXT                          PO  TSO001 FB   48   33   1
  TSOID01.SEEEEEE.CONTENT                        PO  TSOD03 FB    7  100   6
  TSOID01.SEEEEEE.MATTER                         PO  TSOD02 VB    2   50   1
```

Field Descriptions

Dataset Name : Dataset names that match the Search name.

Type : (Quick and Short formats) Catalog entry type. Types that may be displayed include: CLUSTER, DATA, INDEX, ALT INDEX, PATH, NON-VSAM, GDG BASE, USER CTLG, ALIAS, and PAGESPACE.

Org : Organization of the dataset using the following codes:

DA - BDAM

IS - ISAM

PO - Partitioned

POE - Partitioned Extended (PDS/E)

PS - Physical sequential

PSC - Physical sequential Extended Compressed

PSE - Physical sequential Extended

VS - VSAM

VSC - VSAM Extended Compressed

VSE - VSAM Extended

Volume : (Short and Long formats) Volume on which the dataset is stored.

Multi-volume datasets are identified by the + (plus sign) following the Volume field with the Short and Long formats.

STATUS : Indicates if line commands were processed on the dataset name. For example, this column can indicate: DELETED, OLDNAME, NEWNAME, and UPDATED.

% US : (Long format) Percent of allocated tracks currently in use.

XT : (Long format) Number of extents contained in the dataset.

FMT : (Long format) Record format (RECFM) of the dataset.

TRKS : (Long format) Number of tracks allocated for the dataset.

Use the END command (PF3) to terminate the dataset list display.

Chapter 9.
VSAM Utility (3.5)

The File-AID VSAM utility provides allocation of VSAM (ESDS, KSDS, RRDS, and LINEAR) and IAM datasets. In addition, the VSAM utility has functions that display dataset information, delete and define a cluster, and rename and modify components. The VSAM utility functions can be executed online or batch.

File-AID uses its own catalog and allocation routines for most of the VSAM utility IDCAMS online functions, and supports all catalog structures. For batch processing, File-AID generates JCL for execution of the IDCAMS utility including all control statements. Online allocation is an interactive process.

File-AID automatically recognizes Innovation Access Method (IAM) datasets by the presence of $IAM as a node of the dataset name, the owner ID, or the SMS data or storage class. Special information displays are presented for IAM datasets.

To select the VSAM utility, enter the number **5** in the OPTION field of the File-AID Extended Utilities Menu, or as described in "Selecting Screens" on page 2-7. When you press Enter, the VSAM Utility screen is displayed as shown in Figure 9-1 on page 9-2.

In addition, File-AID provides a F35 command, which lets you recursively invoke the VSAM Utility function. Enter F35 from any File-AID screen with an OPTION or COMMAND field. You have the option of entering a dataset name as a parameter when specifying the F35 command. If no dataset name is supplied, File-AID uses the last dataset accessed as a default. When you invoke the VSAM utility in this way, use the END command (PF3) on the VSAM Utility screen, or the RETURN command (PF4) anywhere in the function to return to the screen from which you entered the F35 command. After the second session is complete, the original session continues.

VSAM Utility Screen

The upper half of the VSAM Utility screen lists the utility options and the lower half lets you specify dataset and catalog information.

Figure 9-1. VSAM Utility Screen

```
File-AID ----------------------- VSAM Utility -------------------------------
OPTION ===>

   A     - Allocate cluster                  D  - Delete
   S     - Allocate dataspace                DR - Delete/Define
   X     - Allocate alternate index          T  - Delete dataspace
   B     - Build alternate index             P  - Allocate path
   BLANK - Display dataset information       R  - Rename component
                                            M  - Modify component
Specify Dataset Information:
   Dataset name           ===> 'TSO1128.DEMO.VSAM'
   Volume serial          ===>             (Required for option S & T)

Process Online or Batch   ===>  O          (O = Online: B = Batch)

Specify Model Dataset Information:
   Dataset name           ===>

Specify Catalog to use if other than Default System Catalog:
   Catalog name           ===>
   Catalog password       ===>             (if catalog is password protected)
--------------------------------------------------------------------------------
   For dataset allocations only, the optional model dataset is used to
   prefill the allocation information on the allocation panel.
```

Field Descriptions

OPTION : To select a VSAM option, enter one of the following option codes in this field:

A : Allocate VSAM cluster. Specify a cluster name or IAM dataset name in the Dataset name field and, optionally, the name of an existing dataset in the Model dataset name field.

When using the Allocate VSAM cluster option, follow your installation's VSAM dataset rules.

S : Allocate VSAM dataspace. Specify a value in the Volume serial field.

X : Allocate alternate index. Specify a cluster name in the Dataset name field and, optionally, the name of an existing dataset in the Model dataset name field.

B : Build alternate index. Specify an alternate index name in the Dataset name field.

BLANK : Display dataset information. Specify a dataset name in the Dataset name field.

D : Delete dataset. Specify a dataset name in the Dataset name field.

DR : Delete/Define dataset. Specify a dataset name in the Dataset name field.

T : Delete VSAM dataspace. Specify a value in the Volume serial field and the name of the owning catalog in the Catalog name field.

P : Allocate path. Specify a path name in the Dataset name field.

R : Rename component. Specify a dataset name in the Dataset name field.

M : Modify component. Specify a cluster name in the Dataset name field.

The Display dataset information, Rename component, and Delete Dataset options can be used online on datasets of all access methods. All other online options can be used only on VSAM datasets. Only VSAM, GDG Base, and IAM datasets can be processed in batch from the VSAM utility.

Specify Dataset Information:

Dataset name : Specify the cluster name. In the case of allocate (cluster, alternate index, or path), specify the new cluster name. See "VSAM Dataset Naming Conventions" on page 9-3.

Pattern dataset names are supported for options B, BLANK, D, DR, R, and M. You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Dataset Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description.

Volume serial : Specify the volume serial of the direct access device that contains the dataset. File-AID displays an error message when the Volume serial field and the Catalog name fields both contain data.

Process Online or Batch : Specify a processing value: O (Online) or B (Batch). See "Online Processing" on page 9-4 and "Batch Processing" on page 9-5.

Specify Model Dataset Information:

Dataset name : (Optional) Specify the name of an existing dataset in this field to have File-AID copy the allocation attributes from the model dataset. The model dataset must be cataloged and must be accessible through a normal catalog search. You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Dataset Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description.

When a model dataset name is specified, the attributes of the model dataset are displayed on the dataset allocation screen. As in the File-AID Dataset utility, the model dataset can be of any access method; it need not be a VSAM dataset.

Specify Catalog to use if other than Default System Catalog:

Catalog name : Specify a catalog name to override the default system catalog. This catalogs the dataset in a catalog not connected to the master catalog through the high-level index name.

File-AID displays an error message when the Volume serial field and the Catalog name fields both contain data.

Catalog password : Specify the password if the catalog is password protected.

VSAM Dataset Naming Conventions

Like ISPF, when a dataset name is typed within single quotes (' '), File-AID uses the name exactly as entered. When a dataset name is entered without single quotes, the TSO prefix is concatenated to the beginning of the entered name. File-AID carries this convention further when VSAM clusters are allocated.

File-AID creates VSAM dataset names from both user-defined values and from values set at product installation time. File-AID creates the levels of qualifiers of a VSAM dataset as follows:

- The high-level qualifier is generated from the system value set when File-AID is installed.
- The second-level qualifier is generated from the value specified in the VSAM Intermediate Name field on the System Parameters screen. See "System Parameters" on page 3-3. When an unqualified dataset name is entered in this field, the fully qualified value is created by concatenating the VSAM high-level name, VSAM intermediate name, and unqualified name. Any value of up to 19 characters is allowed for the VSAM intermediate name.

- The lower-level qualifiers are generated from the value entered in the Dataset name field of the VSAM Utility screen. For example, if you enter:

  ```
  Dataset name ===> NEW.VSAM
  ```

  in the Dataset name field, and the VSAM Intermediate Name field contains a value of **TSOID01**, and the system VSAM high-level qualifier is **ABC**, File-AID creates a VSAM cluster name of: ABC.TSOID01.NEW.VSAM.

Online Processing

When processing the VSAM utility online and the appropriate field values are entered, File-AID redisplays the VSAM Utility screen with a message confirming task completion. If the function fails, File-AID displays an error message in the upper-right corner of the IDCAMS Functions Display screen, as shown in Figure 9-2.

Figure 9-2. IDCAMS Function Display Screen

```
File-AID ---------------  IDCAMS Functions Display  --- INVALID RELATED OBJECT
COMMAND ===>




Use VIEW command to browse the IDCAMS control cards and messages

Use END to return to utility menu
```

Use the VIEW primary command to browse the IDCAMS control cards and error messages, as shown in Figure 9-3 on page 9-4.

Figure 9-3. IDCAMS Error Message Display Screen

```
File-AID -----------------  IDCAMS Message Display  -------  ROW 1 TO 22 OF 24
COMMAND ===>                                                  SCROLL ===>
IDCAMS  SYSTEM SERVICES                                           TIME: 15:06:0
3        09/06/95     PAGE      1
MARGINS(1 2000)
IDC0001I FUNCTION COMPLETED, HIGHEST CONDITION CODE WAS 0
DEFINE ALTERNATEINDEX (NAME(USERID9.FRED.SAMPLE) RELATE(USERID9.FASAMP.EMPLOYEE
) VOLUMES(PRD925) BUFFERSPACE(6144) OWNER
(USERID9) RECORDSIZE(80 3120) REUSE SHAREOPTIONS(3 3) SPEED STAGE UNIQUEKEY) DA
TA(NAME(USERID9.FRED.SAMPLE.DATA) TRACKS(
1 1) CONTROLINTERVALSIZE(2048)) INDEX(NAME(USERID9.FRED.SAMPLE.INDEX))
IGD17103I CATALOG ERROR WHILE DEFINING VSAM DATA SET USERID9.FRED.SAMPLE
RETURN CODE IS 80 REASON CODE IS 0 IGGOCLET
IGD306I UNEXPECTED ERROR DURING IGGOCLET PROCESSING
RETURN CODE 80 REASON CODE 0
THE MODULE THAT DETECTED THE ERROR IS IGDVTSCU
SMS MODULE TRACE BACK - VTSCU VTSCT VTSCH VTSCG VTSCD VTSCC VTSCR VTSUC
SSIP4
SYMPTOM RECORD CREATED, PROBLEM ID IS IGD00151
IGD17219I UNABLE TO CONTINUE DEFINE OF DATA SET USERID9.FRED.SAMPLE
IDCAMS  SYSTEM SERVICES                                           TIME: 15:06:0
3        09/06/95     PAGE      2
IDC3022I INVALID RELATED OBJECT
IDC3009I ** VSAM CATALOG RETURN CODE IS 80 - REASON CODE IS IGGOCLET-0
```

Batch Processing

When batch processing is specified and you have completed all appropriate field entries, press Enter and File-AID displays the JCL Specification Screen, as shown in Figure 9-4.

Figure 9-4. JCL Specification Screen

```
File-AID ----------------  - JCL Specification  ------------------------------
COMMAND ===>

JCL Information for Batch Processing:

 Sysout class    ===> *

JOB Statement Information:
 ===> //USERID9 JOB ('OFAQC8.0.0',81),'AUDIT',
 ===> //   CLASS=P,NOTIFY=USERID9,MSGCLASS=R
 ===>
 ===>



Use JCL command to edit generated JCL
Use SUBMIT command to submit batch job
Use END to return to main panel without submitting job
```

On the JCL Specification screen you can enter the following commands:

JCL : File-AID generates the JCL to process the job and displays the Generated JCL screen, as shown in Figure 9-5 on page 9-5.

SUBMIT : SUBMIT primary command to submit the batch job.

END : Use the END command (PF3) to terminate the current request.

Figure 9-5. Generated JCL Edit Screen

```
EDIT ---- SYS95027.T160304.RA000.USERID9.R0162917 ------------ COLUMNS 001 072
COMMAND ===>                                                  SCROLL ===> PAGE
****** **************************** TOP OF DATA ******************************
000001 //USERID9 JOB ('OFAQC8.0.0',81),'AUDIT',
000002 //   CLASS=P,NOTIFY=USERID9,MSGCLASS=R
000003 //*  YOU ARE VIEWING JCL THAT FILE-AID 8.0 HAS GENERATED TO
000004 //*  PERFORM THE REQUIRED FUNCTION.
000005 //*
000006 //*  YOU CAN CHANGE THIS JCL IF DESIRED AND USE THE SUBMIT PRIMARY
000007 //*  COMMAND TO SUBMIT THE JOB. THE CREATE OR REPLACE PRIMARY COMMAND
000008 //*  CAN BE USED TO KEEP THIS JOBSTREAM FOR FUTURE USE.
000009 //*
000010 //*  USE THE END COMMAND TO EXIT WITHOUT SUBMITTING THE JOB.
000011 //*
//JS10     EXEC PGM=IDCAMS
//SYSPRINT DD  SYSOUT=*
//SYSIN    DD  *
    DEFINE CLUSTER -
    (NAME(USERID9.FASAMP.EMPLOYEE) -
    VOLUMES(PRD921) -
    BUFFERSPACE(6144) -
    NONINDEXED -
    OWNER(USERID9) -
    RECORDSIZE(80 3120) -
```

The generated JCL can be edited, submitted, and saved for later execution or re-execution.

Allocate Cluster (A)

The Allocate cluster function (option A) is used to allocate online or in batch new VSAM clusters and IAM datasets. See "Allocate IAM (A)" on page 9-31 for information on allocating IAM datasets.

Note: File-AID supports SMS-managed datasets. All four VSAM dataset types (KSDS, ESDS RRDS, and LINEAR) are supported.

The VSAM utility displays one or two allocation screens, depending on the setting of the Extended allocate field on the first allocation screen. If Extended Allocate is set to Y (Yes), a second allocation screen is displayed when you press Enter.

When allocating VSAM datasets for use in test where performance is not critical, the standard allocation options may be selected. When allocating production datasets, or where performance is an important consideration, the Extended Allocate screen provides access to additional attributes for VSAM cluster definition.

On the VSAM Utility screen, enter an A in the OPTION field, specify a new cluster name and, optionally, a model dataset name to allocate a new VSAM cluster. When you press Enter, File-AID displays the first Allocate New VSAM Cluster screen as shown in Figure 9-6 on page 9-6. If a value was specified in the Model dataset name field, the displayed attributes are those of the model dataset. If a Model dataset name was not specified, the attributes are those of the last referenced dataset. You can accept the displayed values or change them by overtyping.

Figure 9-6. Allocate New VSAM Cluster Screen 1

```
File-AID ---------------  Allocate New VSAM Cluster  --------------------------
COMMAND ===>
Component names:
Cluster:                 'USERID9.TEST.VSAMALL'
Data component      ===> 'USERID9.TEST.VSAMALL.DATA'
Index component     ===> 'USERID9.TEST.VSAMALL.INDEX'
Dataset type        ===> KSDS       (KSDS; ESDS; RRDS; LINEAR)
Owner ID            ===> USERID9
Specify SMS Class Information:
Storage    ===>          Data ===>          Management ===>

Space Allocation:   DATA Component  KSDS INDEX Component (Blank for default)
Volume serial       ===> PRD921     ===>
Units               ===> TRKS       ===>           (TRKs; CYLs; RECs; K; M)
Primary             ===> 1          ===> 0         (Amount in above units)
Secondary           ===> 1          ===> 0         (Amount in above units)
Reuseable           ===> YES        (Y = Yes; N = No)
Key length          ===> 0          (1 - 255 - Required for KSDS only)
Key position        ===> 0          (0 - maximum record - KSDS only)
Average Recordsize  ===> 80         (Not allowed for LINEAR)
Maximum Recordsize  ===> 3120       (Not allowed for LINEAR)
Expiration date     ===>            (YYYY/MM/DD or blank)
Extended allocate   ===> YES        (Y = Yes; N = No)
```

Field Descriptions

Component names:

File-AID uses user-defined variables to append the data or index last-level qualifier to the cluster name to create the dataset names of the data and index components, respectively. See "VSAM Dataset Naming Conventions" on page 9-3. Thus, File-AID generates three names when a cluster is allocated, such as the following names for the previous example:

- ABC.USERID9.NEW.VSAM (Cluster name)
- ABC.USERID9.NEW.VSAM.DATA (Data component dataset name)
- ABC.USERID9.NEW.VSAM.INDEX (Index component dataset name).

Note: If the dataset-naming format described here is not compatible with standards currently in use at your site, the user-defined variables must be modified on the IFAMU01 panel. See the *File-AID Installation Guide* or your system programmer for information.

Cluster: : Fully qualified name of the new VSAM cluster is displayed for verification. If you entered an unqualified name on the VSAM utility screen, a File-AID VSAM cluster name is constructed.

Data component : Data component dataset name generated by File-AID. This field is modifiable.

Index component : Index component dataset name generated by File-AID. This field is modifiable.

Dataset type : Specify the dataset type as one of the following values:

KSDS - Key sequence

ESDS - Entry sequence

RRDS - Relative record

LINEAR - Linear dataset.

Owner ID : The default is your TSO user ID. You may overtype this field.

Specify SMS Class Information:

(These fields are displayed for SMS sites only.) If you are allocating an SMS dataset, specify or verify the following SMS allocation class information:

Storage : Specify the SMS storage class to use for the allocation of the dataset. The storage class describes the hardware requirements of the dataset.

Data : Specify the SMS data class to use for the allocation of the dataset. The data class describes the attributes of the dataset such as RECORG, KEYLEN, KEYOFF, SPACE, etc.

Management : Specify the SMS management class to use for the allocation of the dataset. The management class describes the migration, backup, and retention for the dataset.

Note: Any SMS dataset allocation problems are indicated with an IDCAMS Error Message Display screen.

Space Allocation: DATA Component KSDS INDEX Component

Specify the required storage space for the dataset components in both the DATA Component and INDEX Component columns. The default values are used when you leave these fields blank. The INDEX component can be specified on a generic unit or volume that is different from the DATA component.

Generic unit : Generic unit address for the direct access volume to contain the dataset.

This field is displayed on a non-SMS system.

Specify a dataset location in either a Volume serial or Generic unit field. File-AID uses the authorized default volume if both fields are left blank.

Volume serial : Specify the volume serial of the direct access device that contains the dataset.

When using SMS and allocating a non-SMS managed dataset, a Volume serial is required.

Units : Specify one of the following storage unit types depending on how the dataset size is expressed:

TRKS - Tracks

CYLS - Cylinders

RECS - Records.

K - Kilobytes

M - Megabytes.

If the RECS value is specified, File-AID uses the value specified in the Average recordsize field for the unit quantity.

Primary: Specify the primary allocation quantity as specified in the space units field.

INDEX Component space is only allowed for KSDS.

Secondary : Specify the secondary allocation quantity as specified in the space units field.

Reuseable : Specify whether the cluster is to be reusable with a value of Y (Yes) or N (No).

Key length : For keyed datasets, specify a value. For KSDS clusters, this value value must be between 1 and 255.

Key position : For keyed datasets, specify a value.

Enter a Key position value of 0 (zero) to specify the key as the first data position in the record.

Average recordsize : Specify a value, in bytes, for the average record length to be stored in the cluster. If the records are fixed length, the average and maximum should be the same.

Maximum recordsize : Specify a value for variable length records, the length of the longest record expected in the cluster.

Expiration date : (Optional) Specify a date after which deletion or update of dataset is permitted in the format: **YYYY/MM/DD**.

Type : (This field is displayed for non-SMS sites only.) Specify the location type:

U - Unique, required when cataloged in an ICF catalog.

S - Suballocate, allowed only when cataloged in a VSAM catalog.

Extended allocate : Specify either a Y (Yes) or N (No) value. When this field is set to Y, File-AID displays a second Allocate VSAM Cluster screen, as shown in Figure 9-7. If you want to allocate a multi-volume dataset, specify a Y to display the second allocation screen.

Entering an N does not display the second screen of allocation attributes. All other attributes are initialized to either the default values or those of the model dataset. These values are not displayed when a value of N is specified.

Figure 9-7. Allocate New VSAM Cluster Screen 2

```
File-AID ------------  Allocate VSAM Cluster (continued)  ---------------------
COMMAND ===>

Allocate on Multiple Volumes    ===> NO      (Y = Yes; N = No)

Control Interval - percent free ===> 0       Data C/I size  ===> 2048
Control Area     - percent free ===> 0       Index C/I size ===> 2048
                                             Buffer space   ===> 6144
Specify Allocation Options:
   Region share option          ===> 3       (1; 2; 3; 4)
   System share option          ===> 3       (3; 4)
   Write check                  ===> NO      (Y = Yes; N = No)
   Erase on delete              ===> NO      (Y = Yes; N = No)
   Imbedded index               ===> NO      (Y = Yes; N = No)
   Replicated index             ===> NO      (Y = Yes; N = No)
   Load option                  ===> SPEED   (S = Speed; R = Recovery)
   Spanned records              ===> NO      (Y = Yes; N = No)

Specify Mass Storage Options:
   Stage option                 ===> STAGE   (S = Stage; B = Bind;
                                              C = Cylinder Fault)
   Destage wait                 ===>  NO      (Y = Yes; N = No)
```

Field Descriptions

Allocate on Multiple Volumes : Specify whether you want to allocate the dataset on multiple volumes. Valid entries are Y (Yes) or N (No). When you specify Y, File-AID displays the Allocate VSAM Cluster (continued) screen, as shown in Figure 9-8 on page 9-10, for you to enter the volume information for your DATA and INDEX component.

Specify control interval characteristics.

Note: If any control interval field is left blank or has a value of 0 (zero), VSAM supplies a value based on the record attributes.

Control Interval : Specify a number representing a percentage.

Control Area : Specify a number representing a percentage.

Data C/I size : Specify a control interval size for the DATA component of the cluster.

Index C/I size : Specify a control interval size for the INDEX component of the cluster.

Buffer space : Specify the buffer space for the cluster.

Allocation options:

Region share option : Specify one of the following values:

1 - Multi-user: read only; single user: read/write

2 - Multi-user: read; single user: write

3 - Multi-user: read/write

4 - Multi-user: read/write, requires ENQ and DEQ.

System share option : Specify one of the following values:

3 - Fully-shared system

4 - User is responsible for system integrity.

Write check : Specify a value of Y (Yes) or N (No).

Erase on delete : Specify a value of Y (Yes) or N (No).

Imbedded index : Specify a value of Y (Yes) or N (No).

Replicated index : Specify a value of Y (Yes) or N (No).

Load option : Specify a S (Speed) or R (Recovery).

Spanned records : Specify a Y (Yes) or N (No) value.

Mass storage options:

Specify mass storage options in the following fields:

Stage option : Specify one of the following values:

S - Stage

B - Bind

C - Cylinder fault.

Destage wait : Specify a value of Y (Yes) or N (No).

Passwords:

(These fields are displayed for non-SMS sites only.) If the owning catalog has passwords, specify password characteristics. Passwords are ignored if the owning catalog has no passwords.

Master : Specify the master password.

Update : Specify the update password.

Code : Specify a code name for password prompts for this cluster.

Control : Specify the control password.

Read : Specify the read password.

Attempts : Specify the number of allowed attempts for password entry.

Figure 9-8. Allocate New VSAM Cluster Screen 3

```
File-AID ------------  Allocate VSAM Cluster (continued)  ---------------------
COMMAND ===>

 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
DATA COMPONENT: 'USERID9.MULTI.DATA'

Enter number of volumes here ===>     or specific VOLSERs below:

   1. ______  2. ______  3. ______  4. ______  5. ______
   6. ______  7. ______  8. ______  9. ______ 10. ______
  11. ______ 12. ______ 13. ______ 14. ______ 15. ______
  16. ______ 17. ______ 18. ______ 19. ______ 20. ______
  21. ______ 22. ______ 23. ______ 24. ______ 25. ______
  26. ______ 27. ______ 28. ______ 29. ______ 30. ______
  31. ______ 32. ______ 33. ______ 34. ______ 35. ______
  36. ______ 37. ______ 38. ______ 39. ______ 40. ______

 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
INDEX COMPONENT: 'DFHLLMO.MULTI.INDEX'

Enter number of volumes here ===>     or specific VOLSERs below:

   1. ______  2. ______  3. ______  4. ______  5. ______
```

Field Descriptions

DATA COMPONENT:

Enter number of volumes here or specific VOLSERs below: : Specify either the number of generic volumes or specific volume serial numbers for the data component.

INDEX COMPONENT:

Enter number of volumes here or specific VOLSERs below: : For a KSDS dataset, specify either the number of generic volumes or specific volume serial numbers for the index component.

Use the END command (PF3) to cancel the allocation. Press Enter to process the allocation after entering values in the fields on the allocation screens. If File-AID detects an error in field entry, it displays an error message in the upper-right corner of the Allocate New VSAM Cluster screen. If the allocation values are correct, the message: **DATASET ALLOCATED** is displayed in upper-right corner of the VSAM Utility screen.

Allocate Dataspace (S)

The Allocate dataspace function (option S) allocates VSAM space on a direct-access storage device (DASD). This option is valid only for VSAM catalogs.

Enter an S in the OPTION field and specify a valid volume serial name on the VSAM Utility screen. When you press Enter, File-AID displays the Allocate New VSAM Space screen, as shown in Figure 9-9.

Figure 9-9. Allocate New Data Space Screen

```
File-AID ----------------  Allocate New VSAM Space  ---------------------------
COMMAND ===>



Volume serial        ===> TSOI01

Space allocation for space component:
   Units             ===> TRKS    (TRKS; CYLS; RECS)
   Primary           ===> 1       (Amount in above units)
   Secondary         ===> 1       (Amount in above units)
   Record size       ===> 80      (If allocation by records)


To catalog in other than the system catalog:
   Catalog name      ===> CATALOG.VTSOI01
   Catalog password  ===>
```

Field Descriptions

Volume serial : Volume serial that was specified on the VSAM Utility screen.

Space allocation for space component:

Units : Specify one of following storage unit type values:

TRKS - Tracks

CYLS - Cylinders

RECS - Records.

Primary : Specify a value in the specified units.

Secondary : Specify a value in the specified units.

Record size : If the value in the Units field is RECS, specify a value in this field.

To catalog in other than the system catalog:

Catalog name : If the default system catalog is not used, a name must be specified in this field.

Catalog password : Specify a password if applicable.

Press Enter to allocate the space, or use END to cancel the allocation. When the allocation is complete, File-AID displays the message: **SPACE ALLOCATED** in the upper-right corner of the VSAM Utility screen.

Allocate Alternate Index (X)

The Allocate Alternate Index function (option X) allocates an alternate index cluster. The alternate-index allocation process is similar to the VSAM cluster allocation process described in "Allocate Cluster (A)" on page 9-6. Two screens are available to define the allocation attributes.

Enter an X in the OPTION field and specify a valid new cluster name on the VSAM Utility screen. Optionally, you can specify an existing dataset name in the Model dataset name field to have File-AID copy the allocation attributes from the model dataset.

When you press Enter, File-AID displays the first Allocate VSAM Alternate Index screen as shown in Figure 9-10. If a model dataset was specified, the displayed attributes are those of the model dataset. If a model dataset was not specified, the attributes are those of the last allocated dataset.

At the top of the first Allocate Alternate VSAM Index screen, File-AID displays the component names of the alternate index cluster name specified on the VSAM Utility screen. The names are generated based on the user-defined variables discussed in "VSAM Dataset Naming Conventions" on page 9-3. You can modify Data and Index names.

Figure 9-10. Allocate Alternate VSAM Index Screen 1

```
File-AID -------------  Allocate VSAM Alternate Index  ------------------------
COMMAND ===>
Component Names:
 AIX:   'USERID9.FASAMP.V'                            Owner ID ===>
 Data               ===> 'USERID9.FASAMP.V.DATA'
 Index              ===> 'USERID9.FASAMP.V.INDEX'
 Volume serial      ===> PRD906   (Blank for authorized default volume)
 Upgrade            ===> Y        (Y = Yes; N = No)
 Unique keys        ===> Y        (Y = Yes; N = No)
 Base cluster name  ===>

Specify Space Allocation for Data Component:
 Units              ===> TRKS     (TRKS; CYLS; RECS; K; M)
 Primary            ===> 1        (Amount in above units)
 Secondary          ===> 1        (Amount in above units)
 Reuseable          ===> YES      (Y = Yes;  N = No)

Specify Data Component Record/Alternate Key Information:
 Average            ===> 80
 Maximum            ===> 3120
 Key length         ===> 0        (1 - 255 in base cluster)
 Key position       ===> 0        (Relative to zero in base cluster)
 Data class         ===>
Extended allocate   ===> YES      (Y = Yes; N = No)
```

Field Descriptions

Specify the new cluster's attributes by verifying or changing the values on the Allocate Alternate VSAM Index screens.

Component names:

AIX : Fully qualified name of the new VSAM alternate index cluster is displayed for confirmation. If an unqualified name was entered on the VSAM utility screen, File-AID constructs a VSAM cluster name.

Owner ID : The default is your TSO user ID. You may overtype this field.

Data : Data component name. You may overtype this field.

Index : Index name. You may overtype this field.

Volume serial : Specify an alternate index location. File-AID uses the authorized default volume if the field is left blank.

Upgrade : Specify whether VSAM updates the alternate index when the base cluster is updated. Valid entries are Y (Yes) or N (No).

Unique keys : Specify whether VSAM can create duplicate keys for the alternate index. Valid entries are Y (Yes) or N (No).

Base cluster : Specify the name of the cluster to be indexed. VSAM requires that the base cluster of an alternate index be defined as non-reusable.

You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Dataset Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description.

Space allocation for data component:

Specify the required storage space of the cluster.

Units : Specify one of the following storage unit types depending on how the dataset size is expressed:

TRKS - Tracks

CYLS - Cylinders

RECS - Records.

K - Kilobytes

M - Megabytes.

If the RECS value is specified, File-AID uses the value specified in the Average recordsize field for the unit quantity.

Primary : Specify the unit quantity.

Secondary : Specify the unit quantity.

Reuseable : Specify whether the cluster is to be reusable:

Y - Yes

N - No.

Type : (This field is displayed for non-SMS sites only.) Specify the location type:

U - Unique, required when cataloged in an ICF catalog.

S - Suballocate, allowed only when cataloged in a VSAM catalog.

Data component record/alternate key information:

Average : Specify value for the Data component.

Maximum : Specify value for the Data component.

Key length : Specify a value for the key length between 1 and 255.

Key position : Specify a value relative to zero in the base cluster. To specify the key as the first data position in the record, enter a key position value of 0 (zero).

Data Class : (This field is displayed for SMS sites only.) Specify the SMS data class to use for the allocation of the dataset. The data class describes the attributes of the dataset such as RECORG, KEYLEN, KEYOFF, SPACE, etc.

Extended allocate : Specify either the letter Y (Yes) or N (No). A value of Y displays the second Allocate Alternate Index screen, which is shown in Figure 9-11. A value on N in this field and File-AID does not display the second allocation specification screen. All other attributes are initialized to the default values or those of the model dataset. However, these values are not displayed.

Note: If the model dataset is defined for extended allocation, the new dataset should be defined with similar allocation attributes.

Figure 9-11. Allocate Alternate Index Screen 2

```
File-AID ---------  Allocate Alternate Index (continued) ----------------------
COMMAND ===>

Control interval - percent free ===> 0       Data C/I size  ===> 1024
Control area     - percent free ===> 0       Index C/I size ===> 512
                                             Buffer space   ===> 2560
Allocation options for AIX: VSV.USERID9.ALTNATE
    Region share option ===> 1      (1; 2; 3; 4)
    System share option ===> 3      (3; 4)
    Write check         ===> NO     (Y = Yes; N = No)
    Erase on delete     ===> NO     (Y = Yes; N = No)
    Imbedded index      ===> NO     (Y = Yes; N = No)
    Replicated index    ===> NO     (Y = Yes; N = No)
    Load option         ===> SPEED  (S = Speed; R = Recov)

Mass storage options:
    Stage option ===> STAGE  (S=stage, B=bind, C=cylinder fault)
    Destage wait ===> NO     (Y=yes, N=no)
```

Field Descriptions

Specify control interval characteristics.

Note: If any control interval field is left blank or has a value of 0 (zero), VSAM supplies a value based on the record attributes.

Control interval : Specify a number that represents a percentage.

Control area : Specify a number that represents a percentage.

Data C/I size : Specify a control interval size for the Data component of the alternate index.

Index C/I size : Specify a control interval size for the Index component of the alternate index.

Buffer space : Specify the buffer space for the alternate index.

Allocation options for AIX:

Region share option : Specify one of the following four values:

1 - Multi-user: read only; single user: read/write

2 - Multi-user: read; single user: write

3 - Multi-user: read/write

4 - Multi-user: read/write, requires ENQ and DEQ.

System share option : Specify one of two values:

3 - Fully shared system

4- User is responsible for system integrity.

Write check : Specify a value of Y (Yes) or N (No).

Erase on delete : Specify a value of Y (Yes) or N (No).

Imbedded index : Specify a value of Y (Yes) or N (No).

Replicated index : Specify a value of Y (Yes) or N (No).

Load option : Specify a S (Speed) or R (Recovery).

Mass storage options:

Specify mass storage options in the following fields:

Stage option : Specify one of the following values:

S - Stage

B - Bind

C - Cylinder fault.

Destage wait : Specify a value of Y (Yes) or N (No).

Passwords:

(These fields are displayed for non-SMS sites only.) If the owning catalog has passwords, specify password characteristics. Passwords are ignored if the owning catalog has no passwords.

Master : Specify the master password.

Update : Specify the update password.

Code : Specify a code name for password prompts for this cluster.

Control : Specify the control password.

Read : Specify the read password.

Attempts : Specify the number of allowed attempts for password entry.

Press Enter to allocate the dataset, or use the END command (PF3) to cancel the allocation. When the allocation is complete, File-AID displays the message: **DATASET ALLOCATED** in the upper-right corner of the VSAM Utility screen. If File-AID finds an error in a field entry, it displays the IDCAMS Functions Display screen with the error message. Use the HELP command (PF1) to display the more information on the error message.

Note: An alternate index must be initialized before it can be updated. New alternate indexes created for an existing base cluster must be initialized, or built, through File-AID option B - BUILD ALTERNATE INDEX option or IDCAMS. To access the base cluster through the alternate index, a VSAM PATH must be created.

Build Alternate Index (B)

The Build Alternate Index function (option B) loads a VSAM alternate index from a base VSAM KSDS cluster using the IDCAMS BLDAIX command. File-AID invokes IDCAMS to build the alternate index.

Enter a B in the OPTION field and specify a valid alternate index name in the Dataset name field on the VSAM Utility screen. When you press Enter, File-AID displays the Build Alternate Index screen as shown in Figure 9-12.

Figure 9-12. VSAM Build Alternate Index Screen

```
File-AID -----------------  Build Alternate Index  ----------------------------
COMMAND ===>
Alternate Index Dataset Name:  VSV.USERID9.ALTNATE

Base Cluster Dataset Name:
   Dataset name  ===> 'VSV.USERID9.TEST.KSDS'

   Note: This process will be passed to IDCAMS to perform the
         BLDINDEX Command.  An internal sort will be performed in
         Virtual Memory.  If the alternate index to be built is very
         large, IDCAMS may not have enough virtual memory.
         An error will be generated.  In this situation a batch
         job with an external sort by IDCAMS must be used.


Press ENTER to Build Alternate Index or END Command to Cancel
```

Field Descriptions

Alternate Index Dataset Name : Dataset name that was entered on the VSAM Utility screen.

Base Cluster Dataset Name:

Dataset name : Specify the base cluster name.

You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled “Pattern Dataset Names” in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description.

When you press Enter, processing starts and an IDCAMS results message screen displays. Review the results screen and use the END command (PF3) to return to the VSAM Utility screen.

Display VSAM Information (BLANK)

Although option BLANK displays dataset information for datasets of any access method, this section discusses the VSAM information display. The information is retrieved from the catalog, formatted on two to four screens, and arranged in sections.

Leave the OPTION field blank and specify a valid dataset name on the VSAM Utility screen. When you press Enter, File-AID displays the first VSAM Information screen as shown in Figure 9-13. The first VSAM Information screen contains general information about the cluster.

If the dataset is multi-volume, File-AID/MVS displays the **MULTI-VOLUME DATASET** message in the upper-right hand corner and the **+ multi-volume dataset** message and a + (plus) sign following the Data Volume and Index Volume fields.

Figure 9-13. VSAM Information Screen 1

```
File-AID ------  VSAM Information - (Page 1 of 3 ) ------ MULTI-VOLUME DATASET
COMMAND ===>
Catalog:  CATALOG.TSO1.VPRD900
Cluster:  'USERID9.MULTI'                                + multi-volume
Data:     'USERID9.MULTI.DATA'                           Data Volume:  PRD904 +
Index:    'USERID9.MULTI.INDEX'                          Index Volume: PRD904 +
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
Data Component Information:                       Current Allocation Options:
 Device type:             3390                      Load option:          SPEED
 Organization:            KSDS                      Write check:             NO
 KSDS key length:            3                      Buffer space:         37376
 KSDS key location:          3                      Erase on delete:         NO
 Average record size:       80                      Imbedded index:          NO
 Maximum record size:       80                      Replicated index:        NO
Allocated Space:    Unit    Primary  Secondary      Reuse option:            NO
 Data:            TRACKS          2          2     Share option:           1-3
 Index:           TRACKS          1          1     Spanned records:         NO
Dataset Date Information:                           Key ranges present:      NO
 Creation date:         1998/12/03                  AIX-unique keys:
 Expiration date:                                   AIX-upgrade:
 Modification date:
 Modification time:               GMT

Use ENTER to access additional pages, END to return to utility menu
```

Field Descriptions

Catalog : Catalog name.

Cluster : Fully qualified name of the VSAM cluster.

Data : Data component name.

Index : Index name.

Data Volume : Name of the device on which data is stored.

Index volume : Name of the device on which index is stored.

Data component information:

Device type : Type of device on which data is stored (for example: 3380, 3390, etc.).

Organization : Type of VSAM cluster organization: KSDS, KSDS EXTENDED, KSDS EXTENDED COMP (Compressed), ESDS, RRDS, LINEAR, or AIX for alternate indexes which is always KSDS.

KSDS key length : Length of field within each record that contains key information. This is the length of the prime key for base clusters and length of the alternate key for alternate indexes.

KSDS key location : Location relative to zero of key field. This is the relative position of the prime record key for base clusters and the relative position of the alternate key in the base cluster for alternate indexes.

Average record size : Estimated average size of data record specified at allocation.

Maximum record size : Largest possible data or index record that dataset can contain.

Primary tracks : Number of tracks specified in the primary allocation quantity.

Secondary tracks : Number of tracks specified in the secondary allocation quantity.

Dataset date information:

Creation date : Date on which dataset was allocated.

Expiration date : Date after which deletion or update of dataset is permitted.

Modification date : Date on which dataset was last modified.

Modification time : Time at which dataset was last modified, GMT (Greenwich Mean Time).

Current Allocation Options:

Load option : Specifies whether the data control intervals are preformatted before data records are inserted. When this option is set to SPEED, the data control intervals are not preformatted. When set to RECOVERY, the data control intervals are preformatted.

Write check : YES/NO Indicates whether write operations are checked for data checks.

Buffer space : Minimum amount of space required for buffers.

Erase on delete : Specifies whether records are erased when deleted.

Imbedded index : Specifies whether the sequence-set index record is stored along with associated data control area.

Replicated index : Specifies whether index records are duplicated around a track of the index's direct-access device.

Reuse option : Specifies whether the cluster is reusable (can be reloaded).

Share option : Specifies the amount of sharing among regions-systems. The first number displayed is the region share option:

1 - The dataset can be shared by any number of users for read processing. VSAM ensures data integrity.

2 - The dataset can be shared by any number of users for read processing and can be accessed by one user for processing. ENQ/DEQ required for read integrity.

3 - The dataset can be shared by any number of users. Each user is responsible for integrity.

4 - The dataset can be shared by any number of users and the buffers used for direct processing are refreshed for each request.

The second number shown is the system share options:

1 - Reserved.

2 - Reserved.

3 - The data set can be fully shared. Each user is responsible for read and write integrity.

4 - The data set can be fully shared. Buffers used for direct processing are refreshed for each request. Reserve/release macros are required.

Spanned records : Data records can be longer than the control interval length and can cross or span control intervals.

Key ranges present : Specifies whether portions of key-sequenced clusters are placed on different volumes.

AIX-unique keys : For alternate indexes only, specifies whether more than one base cluster record can contain the same alternate key.

AIX-upgrade : For alternate indexes only, specifies whether the alternate index is updated to reflect changes made to the base cluster.

MSS binding : Specifies the current value of the mass storage staging option that defines how the cluster or component is staged. The following values may be displayed:

STAGED : Stage only specifies the data is loaded to disk at open time, but when unable to stage due to contention, it is loaded as needed.

BIND : Stage and Bind, specifies that the data is loaded to disk at open time and retained there until the component is closed. If unable to stage due to contention, it is loaded as needed.

CYLINDER : Specifies that the data is loaded to disk only as the program needs it.

FAULT : Specifies that the data is loaded to disk only as the program needs it.

MSS-destate wait : Specifies whether destaging is completed before VSAM returns control to the program that issued the close.

Press Enter again to display the second VSAM Information screen shown in Figure 9-14 on page 9-21.

VSAM Information Screen 2 of 3

The second VSAM Information screen, shown in Figure 9-14, lists the first three related datasets to the displayed information. It displays information on allocated and used space of the cluster, and current reorganization information.

Depending on the dataset characters, this screen may be "Page 2 of 2" or "Page 2 of 4".

Figure 9-14. VSAM Information Screen 2

```
 File-AID -----------  VSAM Information - (Page 2 of 3)  --- MULTI-VOLUME DATASET
 COMMAND ===>
+Related Datasets - 'USERID9.FASAMP.EMPLOYEE'
 CLUSTER   - USERID9.FASAMP.EMPLOYEE                      Storage Class BASE
 ALT INDEX - USERID9.FASAMP.EMPLOYEE.AIX                  Data Class:   KEYED
 ALT INDEX - USERID9.FASAMP.EMPLOYEE.AIX2                 Management Cl STANDARD
                                                        Owner ID:
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 Current Allocations in Tracks:            Current Utilization in Tracks:
  Allocated space:                1         Used data space:        1 ( 100 %)
  Allocated extents:              1         Used extents:           1 ( 100 %)
  Allocation type:           UNIQUE         Prime records:                 50
 KSDS Index Allocation in Tracks:           Deleted records:                0
  Allocated space:                1         Inserted records:               0
  Number of records:              1         Updated records:                0
 - - - - - - - - - - - Current Reorganization Information - - - - - - - - - - -
  Data - Control Area Information:          Control Interval Information:
  Physical record size:        2048         Size-data:     2048 Index:   2048
  Records per track:             21         Number CIs:                    21
  Tracks per CA:                  1         Number free CIs/CA:             0
  Retrieved records:              0         Percent free CIs/CA:            0
  Max record number               0         Percent free bytes/CI:          0
  Number CA splits:               0         Number CI splits:               0
 Use ENTER to access additional pages, END to return to utility menu
```

Field Descriptions

Related Datasets : Fully qualified name of the VSAM dataset.

CLUSTER : Fully qualified name of the VSAM cluster.

ALT INDEX : Fully qualified name of any related alternate indexes.

The following fields are displayed for SMS sites only. If you are allocating an SMS dataset, specify or verify the following SMS allocation class information:

Storage Class : SMS storage class assigned at allocation time. The storage class describes the hardware requirements of the dataset.

Data Class : SMS data class assigned at allocation time. The data class describes the attributes of the dataset such as RECORG, KEYLEN, KEYOFF, SPACE, etc..

Management Cl : SMS management class assigned at allocation time. The management class describes the migration, backup, and retention for the dataset.

Current Allocations in Tracks:

Allocated space : Total space in tracks allocated to data component.

Allocated extents : Number of extents allocated to data component.

Allocation type : (This field is displayed for non-SMS sites only.) Specifies how the VSAM file was allocated: UNIQUE or SUB (sub-allocation).

KSDS Allocation in Tracks:

Allocated space : Total space in specified units allocated to index component.

Number of records : Number of index-component records.

Current Utilization in Tracks:

Used data space : Number of tracks and percent of data space used.

Used extents : Number of extents currently in use for data component and percent of extents used.

Prime records : Number of records in the prime data area.

Deleted records : Number of data records deleted since file was defined or modified.

Inserted records : Number of data records inserted since file was defined or modified.

Updated records : Number of data records updated since file was defined or modified.

Current Reorganization Information — ***Data - Control Area Information:***

Physical record size : Number of bytes in a physical record. Size of each block written in a control area.

Records per track : Number of physical records in one track.

Tracks per CA : Number of tracks in a control area.

Retrieved records : Number of records retrieved from the dataset since the last reorganization.

Max record number : Highest number of data records that file contained since it was defined or modified.

Number CA splits : Number of times a control area was split to make room to insert new data.

Current Reorganization Information — ***Control Interval Information:***

Size-data and index : Control interval size for data and index components.

Number CIs : Number of control intervals in a control area.

Number free CIs/CA : Number of free control intervals in each control area.

Percent free CIs/CA : Percent of space kept free in a control interval for subsequent processing.

Percent free bytes/CI : Percent of bytes that are free space as related to the total amount of space allocated to the data component.

Number CI splits : Number of times control intervals were split to make room for new data.

If there are more related datasets than can be displayed on the second VSAM Information screen, press Enter to display a third screen (shown in Figure 9-15).

VSAM Information Screen 3 of 3

The third VSAM Information screen lists the dataset names related to the current cluster, as well as the dataset type (cluster, path, or alternate index). This screen is displayed only when the dataset has an alternate index or path.

When there are multiple volumes, this screen is "Page 3 of 4".

Press Enter to redisplay the first VSAM Information screen, or use the END command (PF3) to return to the VSAM Utility screen.

Figure 9-15. VSAM Information Screen 3

```
File-AID ------------ VSAM Information - (Page 3 of 3)  -----------------------
COMMAND ===>
Datasets related to entry - 'USERID9.FASAMP.EMPLOYEE'
          --type--   --------- d a t a s e t   n a m e ----------
          CLUSTER   - USERID9.FASAMP.EMPLOYEE
          ALT INDEX - USERID9.FASAMP.EMPLOYEE.AIX
          ALT INDEX - USERID9.FASAMP.EMPLOYEE.AIX2
          PATH      - USERID9.FASAMP.EMPLOYEE.PATH
          PATH      - USERID9.FASAMP.EMPLOYEE.PATH2
```

VSAM Information Screen 4 of 4

The third or fourth VSAM Information screen lists the volumes that are allocated to the DATA and INDEX components of the dataset, as shown in Figure 9-16.

When there is not any related dataset information, this screen is "Page 3 of 3".

Press Enter to redisplay the first VSAM Information screen, or use the END command (PF3) to return to the VSAM Utility screen.

Figure 9-16. VSAM Information Screen 4

```
File-AID ------------ VSAM Information - (Page 3 of 3     MULTI-VOLUME DATASET
COMMAND ===>
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -*
DATA COMPONENT: 'USERID9.MULTI.DATA'

  Volume Allocations:

   1. PRD904  2. *       3. *       4. *       5. *
   6. *       7. ______  8. ______  9. ______ 10. ______
  11. ______ 12. ______ 13. ______ 14. ______ 15. ______
  16. ______ 17. ______ 18. ______ 19. ______ 20. ______
  21. ______ 22. ______ 23. ______ 24. ______ 25. ______
  26. ______ 27. ______ 28. ______ 29. ______ 30. ______
  31. ______ 32. ______ 33. ______ 34. ______ 35. ______
  36. ______ 37. ______ 38. ______ 39. ______ 40. ______
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -*


INDEX COMPONENT: 'USERID9.MULTI.INDEX'

  Volume Allocations:

   1. PRD904  2. *       3. ______  4. ______  5. ______

Use ENTER to access additional pages, END to return to utility menu
```

Delete Dataset (D)

The Delete dataset function (option D) can delete datasets of any access method. However, this section discusses only VSAM dataset deletion.

To delete a dataset, enter a D in the OPTION field and specify a dataset name on the VSAM Utility screen. When you press Enter, File-AID displays the VSAM Confirm Dataset Delete screen shown in Figure 9-17. The VSAM Confirm Dataset Delete screen shows the names of all objects related to the dataset to be deleted.

If the dataset is multi-volume, File-AID/MVS displays the **MULTI-VOLUME DATASET** message in the upper-right hand corner of the screen.

When deleting a migrated dataset, File-AID issues an HDELETE command.

Figure 9-17. VSAM Confirm Dataset Delete Screen

```
File-AID ----------------- Confirm Dataset Delete ----------------------------
COMMAND ===>                                                  SCROLL ===> CSR

Dataset name:  TSO.TSOID01.TEST.KSDS
Creation date: 1998/12/04

 R => ---------------------------------------------------
 E => CLUSTER   - TSO.TSOID01.TEST.KSDS
 L =>
 A =>
 T =>
 E =>
 D =>
   =>
 O =>
 B =>
 J =>
 C =>
 T =>
 S =>

  All related objects below the line will be deleted and uncataloged
  Use ENTER to confirm delete, END to cancel the delete function
```

Field Descriptions

Dataset name : Dataset name specified on the VSAM Utility screen.

Creation date : System creation date for the specified dataset.

RELATED OBJECTS : List of any alternate indexes or paths related to the dataset selected for deletion.

Press Enter to delete all datasets below the dashed line. Use the END command (PF3) to cancel the deletion. When the deletion is completed, File-AID displays the message: **generic-type DELETED** where *generic-type* is the dataset type that was deleted.

Delete/Define (DR)

The Delete/Define function (option DR) deletes and enables you to reallocate the VSAM cluster and all its related objects. To delete and redefine a dataset, enter a DR in the OPTION field and specify a cluster dataset name on the VSAM Utility screen. When you press Enter, File-AID displays the VSAM Confirm Dataset Delete screen shown in Figure 9-17. The VSAM Confirm Dataset Delete screen shows the names of all objects related to the dataset to be deleted.

When you press Enter again, File-AID displays the Confirm Dataset Define screen, as shown in Figure 9-18. All clusters related to the entered dataset are displayed. The only modifiable field is Volume. It can be modified to allow reallocation to a new device (except for multi-volume datasets).

If the dataset is multi-volume, File-AID again displays the **MULTI-VOLUME DATASET** message in the upper-right hand corner of the screen and the Volume field cannot be modified.

Figure 9-18. Confirm Dataset Define Screen

```
File-AID ----------------  Confirm Dataset Define  ----------------------------
COMMAND ===>
The VSAM dataset and all related objects have been deleted
Dataset name:  USERID9.FASAMP.NEWONE

The following objects will be re-allocated                            Key
                                                                      Offset/
  Object Type                    Object Name                  Volume Length
--------------- ---------------------------------------------- ------ -------
KSDS Cluster    USERID9.FASAMP.NEWONE                                 0  5
  Data          USERID9.FASAMP.NEWONE.DATA                   PRD928
  Index         USERID9.FASAMP.NEWONE.INDEX                  PRD928
Objects related to the above cluster follow









Use ENTER to confirm define, END to cancel define
```

For online processing, the message **CLUSTER DELETED/DEFINED** is displayed on the VSAM Utility screen when processing is complete.

For batch processing, JCL is generated to delete the specified dataset and all its related objects. The define process is limited to KSDS, ESDS, RRDS, and LINEAR datasets and alternate indices and paths.

CAUTION:
All data is lost.

Delete Dataspace (T)

The Delete dataspace function (option T) releases VSAM space on a volume to the system. Space not occupied by datasets is immediately released. This option is valid only for VSAM catalogs. It is not valid for ICP catalogs.

Enter a T in the OPTION field and specify values in the Volume serial and Catalog name fields. When you press Enter, File-AID deletes the space.

CAUTION:

No confirmation screen is displayed and the results are immediate.

After the space is released, File-AID displays the message: **ALL FREE SPACE DELETED** in the upper-right corner of the VSAM Utility screen.

Allocate Path (P)

The Allocate path function (option P) allocates a VSAM path for an alternate index or as an alias to a base cluster. Enter a P in the OPTION field and specify a new path name in the Dataset name field on the VSAM Utility screen. When you press Enter, File-AID displays the Allocate VSAM Path screen shown in Figure 9-19.

Figure 9-19. Allocate VSAM Path Screen

```
File-AID ------------------  Allocate VSAM Path  ------------------------------
COMMAND ===>

Path name: VSV.XX.YYY.TRANSID1.INDEX
Owner ID         ===>

Related Alternate Index or Cluster:
Name             ===>

Update           ===> N            (Y = Yes; N = No)

Catalog to use if other than default system catalog:
Catalog name     ===>
Catalog password ===>              (if catalog is password protected)
```

Field Descriptions

Path name : Path name that was specified on the VSAM utility screen.

Owner ID : The default is your TSO user ID. You may overtype this field.

Related Alternate Index or Cluster:

Name : Specify the name of the alternate index or cluster to which the path is related. A pattern dataset name can be entered to display a list of datasets from which you can make a selection.

Update : (Optional) Specify either **Y** (Yes) or **N** (No) in this field to allow or prevent the update of the alternate index specified when the changes to the dataset effect key order. If the alternate index was not allocated with the UPGRADE option, then this field has no effect.

Catalog to use if other than default system catalog:

Catalog name : (Optional) Specify a name in this field to use a catalog other than the default system catalog.

Catalog password : Enter the password if the catalog is password protected.

Press Enter to allocate the path, or use the END command (PF3) to cancel the allocation. When allocation is complete, File-AID displays the message: **PATH ALLOCATED** in the upper-right corner of the VSAM Utility screen.

Rename Component (R)

The Rename component function (option R) can rename datasets of any access method when used online. This section, however, discusses only the renaming of VSAM datasets. When using this option for batch processing only VSAM components can be renamed.

Enter an R in the OPTION field and specify the dataset name on the VSAM Utility screen. When you press Enter, File-AID displays the Rename VSAM Dataset screen shown in Figure 9-20.

Figure 9-20. Rename VSAM Dataset Screen

```
File-AID ------------------- Rename VSAM Dataset ----------------------------
COMMAND ===>

Catalog name: CATALOG.VTSOI01
Cluster name: VSV.XX.YYY.TRANSID1                              Type -
Data name:    VSV.XX.YYY.TRANSID1.DATA                           CLUSTER
Index name:   VSV.XX.YYY.TRANSID1.INDEX

Enter new cluster name below:

 Cluster name  ===> 'VSV.XX.YYY.TRANSID1.SINDX'

 Do you wish to individually specify the Data and Index
 component names?  ===> N      (Y = Yes, N = No)
```

Field Descriptions

The Rename VSAM Dataset screen lists the catalog name, current cluster name, and the components.

Catalog name : Catalog name where cluster is cataloged.

Cluster name : Fully qualified name of the VSAM cluster.

Type : Type of dataset being renamed.

Data name : Fully qualified data name.

Index name : Fully qualified index name.

Enter new cluster name below:

Cluster name : Specify the new name of the VSAM cluster.

Do you wish to individually specify the Data and Index component names? : Specify Y (Yes) or N (No). When Y (yes) is specified in this field, File-AID displays a second Rename Dataset screen which allows you to enter the new component names.

Press Enter to rename the dataset, or use the END command (PF3) to cancel the rename process. When the rename is complete, File-AID displays the message: **DATASET RENAMED** in the upper-right corner of the VSAM Utility screen.

Modify Component (M)

The Modify Component function (option M) changes attribute values for a cluster. This function allows incorrect values to be modified without deleting and reallocating the cluster.

Enter an M in the OPTION field and specify a valid cluster name in the Dataset name field on the VSAM Utility screen. When you press Enter, File-AID displays the VSAM Modify screen as shown in Figure 9-21.

Figure 9-21. VSAM Modify Screen

```
File-AID ----------------------  VSAM Modify  ---------------------------------
COMMAND ===>
Cluster:                     VSV.TSOID01.TEST.KSDS
Owner ID                ===> USERID9
Specify Current Options:
   Buffer size          ===> 6144
   Region share option  ===> 3          (1; 2; 3; 4)
   System share option  ===> 3          (3; 4)
   % free bytes/CI      ===> 0          (0 - 100)
   % free CI/CA         ===> 0          (0 - 100)
   Inhibit update       ===> NO         (Y = Yes; N = No)
   Write check          ===> NO         (Y = Yes; N = No)
   Erase on delete      ===> NO         (Y = Yes; N = No)
   MSS-destage wait     ===> NO         (Y = Yes; N = no)
   MSS binding          ===> STAGE      (S = Stage B = Bind C = Cylinder fault)
   Expiration Date      ===>            (YYYY/MM/DD or blank)

Specify SMS Class Information:
   Storage    ===>           Management ===>



Use ENTER to modify data, END to cancel request
```

Field Descriptions

Attributes of the cluster that are not displayed on this screen cannot be changed. In such case, reallocate the cluster. Use the END command (PF3) to cancel the cluster modification process.

Cluster : Name of the cluster specified on the VSAM Utility screen.

Owner ID : Specify the owning user ID.

Specify Current Options:

Specify the cluster's new attributes by verifying or changing the values on the screen.

Buffer size : Specify a value.

Region share option : Specify one of four values:

1 - Multi-user: read only; single user: read/write

2 - Multi-user: read; single user: write

3 - Multi-user: read/write

4 - Multi-user: read/write, requires ENQ and DEQ.

System share option : Specify one of two values:

3 - Fully shared system

4 - User is responsible for system integrity.

% free bytes/CI : Specify a percentage of free bytes in the control interval. The value is applied to the control interval size.

% free CI/CA : Specify a number that represents a percentage of free control intervals in the control area.

Inhibit update : Specify a value of **Y** (Yes) or **N** (No).

Write check : Specify a value of **Y** (Yes) or **N** (No).

Erase on delete : Specify a value of **Y** (Yes) or **N** (No).

MSS-destage wait : Mass storage staging destage wait. Specify a value of **Y** (Yes) or **N** (No).

MSS binding : Specify one of three values:

S - Stage

B - Bind

C - Cylinder fault.

Expiration Date : (Optional) Specify a date after which deletion or update of dataset is permitted in the format: **YYYY/MM/DD**. To remove the expiration date, change it to today's date.

Specify SMS Class Information:

(These fields are displayed for SMS sites only.)

Storage : SMS storage class. The storage class describes the hardware requirements of the dataset.

Management : SMS management class. The management class describes the migration, backup, and retention for the dataset.

Passwords (Cluster level only):

(These fields are displayed for non-SMS sites only.) The passwords listed in this area must have been entered on the VSAM Utility screen in order to be modified. If a password does not exist, the appropriate field displays the message: **-<null>-**.

If you have the appropriate authority, enter a valid password. If the following message is displayed: **-<sprs->-** the passwords are suppressed. No information can be modified. Passwords are ignored if the owning catalog has no passwords.

Master : Specify the master password.

Control : Specify the control password.

Update : Specify the update password.

Read : Specify the read password.

Attempts : Specify the number of allowed attempts for password entry.

Code : Specify a code name for password prompts for this cluster.

When you press Enter, File-AID modifies the cluster's attributes and redisplays the VSAM Utility screen with the message: **MODIFIED** in the upper-right corner of the screen. Use the END command (PF3) to terminate the modification process.

Allocate IAM (A)

The Allocate cluster function (option A) also allocates IAM datasets. There are three ways to show File-AID that the file is IAM on the Allocate New VSAM Cluster screen. Specify $IAM as at least one of the following:

- Part of the dataset name
- The Owner ID
- SMS Data class or Storage class.

Chapter 10. Search/Update Utility (3.6)

The Search/Update utility enables you to view and modify files of any standard MVS access method. It processes records up to 32,760 bytes (32 kB) long and datasets of unlimited size. Three Search/Update options give you powerful methods for searching or updating datasets:

- PDS Find/Change and member list processing (option M) lists selected members, finds data stored in PDS, Panvalet, and Librarian datasets, and changes data stored in a PDS. Its features include:
  - File-AID's PDS processing options to filter members based on member name masks, name ranges, creation date, modification date, and user ID of last modification.
  - File-AID's selection criteria which can isolate specific members based on data content.
  - Easy-to-use FIND and CHANGE commands that enable you to perform repetitive scans and updates across selected members. Options that let you preview and print your results and condense the list of members based on data found.
  - Line commands for individual member browsing (B) and editing (E) using ISPF or File-AID depending on the format of the dataset
  - Optional batch processing.
- Browse globally (option B) finds and reports on data in any file regardless of access method. File-AID copies found records to a temporary work file which is displayed with ISPF browse.

  When searching a PDS, File-AID treats the entire dataset as one file and inserts member identification lines in the report. Optional record information displays show record number and other information about each record found.
- Preview and Update globally (option U) lets you preview and confirm changes to any file. Enter your update request on the Change criteria screens. Option U allows you to specify several changes to apply in one pass. Changes can be applied using the in-place update for any type of dataset including Sequential, PDS, VSAM, IAM, ISAM, BDAM, CA-Panvalet, and CA-Librarian. Other features of option U include:
  - Option to print preview of changes
  - Option to limit the number of changes to preview or perform
  - Optional audit trail report of changes applied online
  - Option to perform the change in batch
  - Standardized update processing that works with existing security packages.

Panvalet and Librarian Datasets

For CA-Panvalet and CA-Librarian datasets, option U updates are performed in batch only. When you specify Batch processing, File-AID displays the Search JCL Specification screen, as shown in Figure 10-2 on page 10-6. When you specify Online processing, File-AID provides a special preview of the control cards and displays the Search JCL Specification screen when you confirm the update.

The FIND command is valid for option M on the PDS FIND/CHANGE screen. The CHANGE command is not available and displays an invalid command message. The S (Select) and E (Edit) line commands for option M use File-AID to display the member but changes cannot be saved.

PDS processing options unique for Panvalet include LANG and STATUS.

Search/Update Utility Screen

The Search/Update Utility screen, shown in Figure 10-1, is displayed when you select option 6 from the File-AID Extended Utilities menu or enter the appropriate jump command (for example, =3.6) from any File-AID screen.

The File-AID Search/Update utility can also be accessed with the line command **6** when viewing a list of datasets presented by File-AID's Catalog utility (3.4) or VTOC utility (3.7).

In addition, File-AID provides an F36 primary command to let you recursively invoke the Search/Update Utility function. You can enter the F36 command from any File-AID screen with an OPTION or COMMAND field. You can enter a dataset name parameter when specifying the F36 command. If a dataset name is not supplied, File-AID uses the last dataset accessed as the default. When you invoke the Search/Update utility recursively, use the END command (PF3) on the Search/Update Utility screen or the RETURN command (PF4) from anywhere in the function to display the original screen from which you entered the F36 command. After the second session is completed, the original session is continued.

Figure 10-1. Search/Update Utility Screen

```
File-AID ------------------  Search/Update Utility  ---------------------------
OPTION ===>

 M  Member - PDS Find/Change and Member list processing
 B  Browse - Browse globally
 U  Update - Preview and Update globally

 Specify Search/Update Dataset Information:
    Dataset name   ===>  FASAMP.EMPMAST
    Disposition    ===>  SHR                 (OLD or SHR)
    Volume serial  ===>                      (If not cataloged)
    I/O exit name  ===>
 Process online or batch       ===>  O       (O = Online; B = Batch)

 Specify Execution Information:             (Option U online)
    Create audit trail         ===>  N       (Y = Yes; N = No)
    Preview and confirm update ===>  Y       (Y = Yes; N = No)
    Maximum changes            ===>  ALL     (All or number of changes)

 Specify Selection Criteria Information:    (Options M and B)
    Selection criteria usage   ===>  N       (Existing; Temp; Mod; Quick; None)
    Selection dataset name     ===>  FASAMP.SELCRIT
    Member name                ===>          (Blank or pattern for member list)
```

Field Descriptions

OPTION : Specify one of the following options:

M : Generates a member list based on the PDS processing options and optional selection criteria that you may specify. Option M provides a one-step FIND or CHANGE (PDS only) command that processes all members of the PDS. Option M's member list allows you to use line commands to exclude members from the list and browse or edit members on the list using ISPF Browse or Edit.

Enter an M in the OPTION field and the name of the PDS in the Dataset name field (without specifying a member name). When you press Enter, File-AID displays the PDS Processing Options screen, as shown in Figure 10-4 on page 10-7.

After any selection criteria information is entered and processed, File-AID displays the PDS Find/Change screen, as shown in Figure 10-5 on page 10-8. On this screen, you may use the FIND or CHANGE primary commands to process the listed members, or use the B (browse), E (edit), S (edit), or X (exclude) line commands to select one or more members to browse or edit with ISPF Browse or Edit or to exclude from further processing.

B : When processing online, option B allows you to browse any type file. If you specify selection criteria information, File-AID performs standard selection processing. It processes an entire PDS globally, as one file, inserting member identification into its display. For partitioned datasets, File-AID displays the PDS Processing Options screen, as shown in Figure 10-4 on page 10-7. PDS Processing Options enable selection of members based on member name and PDS statistics.

Process option B in batch to print records matching the selection criteria of a dataset regardless of access method. When processing a PDS in batch, the List entire member field on the PDS Processing Options screen controls whether the entire member or only the records that meet the selection criteria are printed.

U : Processes global changes to a file based on the change criteria that you specify. When the Preview and confirm update field is set to Y (Yes), File-AID gives you a preview of the changes you have specified before applying them to the dataset.

Enter a U in the OPTION field and a valid dataset name in the Dataset name field. When the dataset is a PDS (or Panvalet or Librarian dataset), File-AID displays the PDS Processing Options screen, as shown in Figure 10-4 on page 10-7. For other dataset types, File-AID displays the Selection Criteria Options screen, as shown in Figure 10-14 on page 10-21.

For option U, File-AID ignores anything entered in the Specify Selection Criteria Information fields. After it completes any member or record selection entered on the PDS Processing Options or Selection Criteria Options screen, File-AID displays the Search/Update Change Criteria screen, as shown in Figure 10-15 on page 10-22.

Recommendation:

Changes should be verified (previewed) before updates are processed.

Specify Search/Update Dataset Information:

Dataset name : Specify the dataset name. Use the naming conventions described in "Specifying a Dataset Name" on page 2-13.

You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. See "Pattern Dataset Names" on page 2-14 for a complete description.

For PDSs, a member name is not required.

Note: To bypass the PDS Processing Options screen specify a member name of * (asterisk). For example, FASAMP.JCL(*). For options B and U, File-AID can process the entire PDS as if it were one file.

Disposition : Specify a disposition of SHR or OLD. You are responsible for data integrity when performing an update:

SHR - (Default) Other users may access the dataset.

OLD - Restricts other users from accessing the dataset.

Volume serial : If the dataset is not cataloged, specify the volume serial of the direct access volume that contains the dataset.

I/O Exit Name (Optional) : If the I/O exit option has been installed, this input field is provided. See the *File-AID Installation Guide* or your system programmer for more information. I/O exit install options are:

NO - I/O exit name field does not appear.

YES - I/O exit name field is presented blank for entry of a site-written I/O exit program name.

exitname - I/O exit name field is presented prefilled with the name of a site-written I/O exit program name.

Specify Execution Information:

Process online or batch : Specify a processing value: O (Online) or B (Batch). The default is O (Online). See "Online Processing" and "Batch Processing" on page 10-5.

Specify Execution Information (option U online):

Create audit trail : Specify Y (Yes) or N (No -- default). When Y is specified, before and after images of changed records are written to the audit trail dataset. "Disposition of Audit Trail" on page 10-28 describes the Disposition of Audit Trail screen that is displayed when File-AID has completed an online update. For more information on the audit trail feature, see "Audit Trail Feature" on page 4-21 and "Print Audit Trail" on page 15-26.

Preview and confirm update : Specify Y (Yes -- default) to display the Preview Changes with ISPF Browse screen. When this field is set to N (No), File-AID does the update without displaying the preview screen.

Maximum changes : Specify a number to control the number of changes that File-AID makes or provides for preview. The ALL (default) or 0 value enables all changes to be previewed or made.

When preview and confirm update is set to Y (Yes), the Maximum changes value limits the number of changes shown in the preview. The Search/Update Confirm Update screen does allow you to modify the Maximum changes value for the actual update.

Note: This option controls the actual number of changes not the number of records changed.

Specify Selection Criteria Information (Options M and B):

Refer to Chapter 16, "Selection Criteria (6)" for a complete description of selection criteria.

Selection criteria usage : Specify one of the following valid entries:

E : Use existing selection criteria. Enter a dataset name in the Selection criteria dataset field.

T : Create temporary selection criteria. File-AID displays the Temporary Selection Criteria Menu. Temporary selection criteria is not automatically saved. Use the SAVE primary command to retain temporary selection criteria.

M : Modify existing selection criteria. Enter a dataset name in the Selection criteria dataset field.

Q : Quick selection criteria. File-AID displays the Unformatted Selection Criteria screen for you to enter temporary selection criteria. You cannot save quick selection criteria.

N : (Default) None -- Do not use selection criteria.

Selection dataset name : Specify the name of the dataset containing existing selection criteria for options E and M.

You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Dataset Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description.

Member name : Specify the member name. You can leave this field blank or enter a pattern member name to display a list of members from which you can make a selection. A pattern member name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Member Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description. Pattern names cannot be entered in both the Dataset name and Member name fields at the same time.

Online Processing

When online processing is complete, File-AID redisplays the Search/Update utility screen with a message confirming task completion. If the function fails, File-AID displays an error message in the upper-right corner of the screen.

Batch Processing

When you request batch processing and you have completed your specifications, press Enter and File-AID displays the Search JCL Specification screen, as shown in Figure 10-2.

Note: When processing option M in batch, selection criteria usage must be N (None).

Figure 10-2. Search JCL Specification Screen

```
File-AID ---------------- - SEARCH - JCL Specification  -----------------------
COMMAND ===>

JCL Information for Batch Processing:

 Sysout class    ===> *

JOB Statement Information:
 ===> //USERID9 JOB ('OFAQC8.0.0',81),'AUDIT',
 ===> //   CLASS=P,NOTIFY=USERID9,MSGCLASS=R
 ===>
 ===>




 Use JCL command to edit generated JCL
 Use SUBMIT command to submit batch job
 Use END to return to main - SEARCH panel without submitting job
```

The following commands can be entered on the the Search JCL Specification screen:

JCL : File-AID generates the JCL to process the job and displays the Generated JCL Edit screen as shown in Figure 10-3.

SUBMIT : SUBMIT submits the batch job.

END : END cancels the function and returns to Search/Update Utility screen.

The Generated JCL Edit screen, shown in Figure 10-3, is displayed by entering the JCL primary command on the Search - JCL Specification screen.

Figure 10-3. Generated JCL Edit Screen

```
EDIT ---- SYS95011.T154710.RA000.USERID9.R0072937 ------------ COLUMNS 001 072
COMMAND ===>                                                  SCROLL ===> PAGE
****** ***************************** TOP OF DATA ******************************
000001 //USERID9 JOB ('OFAQC8.0.0',81),'AUDIT',
000002 //   CLASS=P,NOTIFY=USERID9,MSGCLASS=R
 . . .
000006 //*  YOU CAN CHANGE THIS JCL IF DESIRED AND USE THE SUBMIT PRIMARY
000007 //*  COMMAND TO SUBMIT THE JOB. THE CREATE OR REPLACE PRIMARY COMMAND
000008 //*  CAN BE USED TO KEEP THIS JOBSTREAM FOR FUTURE USE.
000009 //*
000010 //*  USE THE END COMMAND TO EXIT WITHOUT SUBMITTING THE JOB.
000011 //*
000012 //FASTEP   EXEC PGM=FILEAID
000013 //STEPLIB  DD  DISP=SHR,DSN=CW.COMMON.FA.ALPHA.LOADLIB
000015 //SYSPRINT DD  SYSOUT=*
000016 //SYSLIST  DD  SYSOUT=*
000017 //DD01     DD  DSN=USERID9.FASAMP.JCL,
000018 //              DISP=SHR
000019 //DD01SC   DD  DSN=USERID9.FILEAID.SC.D950111.T155818(SELECT),
000020 //              DISP=(OLD,DELETE)
000021 //SYSIN    DD  *
000022 $$DD01 UPDATEALL PDSSTAT=YES,FORM=JCL,
000023   MEMBER=(CVT6XMAP,CVT70SEL,CVT70XRF)
000024 /*
```

You can edit the generated JCL, submit it with the SUBMIT primary command, and save it by using the CREATE or REPLACE primary commands.

Note: Member SELECT in the DD01SC DD statement stores the Search/Update change criteria for option U and the Find/Change criteria for option M. With a batch job this dataset is deleted (DISP=(OLD,DELETE)). If you want the ability to re-run the job, change the DISP to OLD,KEEP before submitting the job.

PDS Processing Options

The Search/Update PDS Processing Options screen, shown in Figure 10-4 on page 10-7, is displayed when the dataset name specified on the Search/Update Utility screen refers to a partitioned dataset (PDS). It is used to specify member processing values that control whether to include extra record information, process records as logical JCL, maintain PDS statistics, and list the entire member or only the selected records. In addition, you can specify member selection values to choose members based on a name mask, name range, the userid for last modification, and creation and modification date ranges.

When option B or U is specified, the PDS Processing Options screen allows you to display the Member S/X (Select or Exclude) screen before specifying or applying selection criteria by entering a Y (Yes) in the Display Member List field.

Some PDS processing options are preset with default values at installation time. Others have no effect unless a value is entered in the field. The options that are available vary with the Search/Update option specified and the type of dataset being processed.

To include all members in the list, leave all member selection options blank on the PDS Processing Options screen. If option M was specified, File-AID displays the PDS Find/Change screen displaying all members. If options B or U are specified and the Display member selection list field is set to Y, File-AID displays the Member S/X (Select or Exclude) screen.

Figure 10-4. PDS Processing Option Screen

```
File-AID --------------- PDS Processing Options -------------------------------
COMMAND ===>

Dataset: USERID9.FASAMP.JCL

Specify PDS Processing Options:
    Include record information    ===> N      (Y = Yes; N = No)
    Process in JCL format         ===> N      (Y = Yes; N = No)
    Maintain PDS statistics       ===> Y      (Y = Yes; N = No; A = Add)
    List entire member            ===> Y      (Y = Yes; N = No)

Specify Member Selection Options (Blank for All Members):
    Member name mask              ===>
    Member name range             ===>          to ===>
    Last modified userid          ===>          to ===>
    Creation date                 ===>          to ===>          (YY/MM/DD)
    Modification date             ===>          to ===>          (YY/MM/DD)
    Display member selection list ===> N      (Y = Yes; N = No)

Use ENTER to continue, END to return to dataset specification screen
```

The fields on this screen are described in “Field Descriptions” on page 2-23.

PDS Find/Change Member List

The PDS Find/Change Member List screen, shown in Figure 10-5, allows you to perform a one-step FIND or CHANGE operation to all the listed members. In addition, you may use line commands to edit, browse, or exclude members. If you entered any member selection options on the PDS Processing Options screen or specified selection criteria, the PDS Find/Change Member List may contain only a subset of the total members in the PDS.

Figure 10-5. PDS Find/Change Member List Screen

```
 File-AID - PDS Find/Change - USERID9.FASAMP.JCL -----------  ROW 1 TO 16 OF 19
 COMMAND ===>                                                 SCROLL ===> CSR
  Use FIND or CHANGE command to process across the following members.
  (Omit FIND/CHANGE operands for a prompt panel.)
  Use RESET command to get a full member list.
  Use E, S, B or X line commands to Edit, Browse or eXclude members.
--------------------------------------------------------------------------------
  S  NAME             VV.MM  CREATED     CHANGED      SIZE  INIT   MOD   ID
    BATVTOC           01.01 94/05/04 94/05/04 14:04     23    23     0 USERID3
    COPY              01.00 94/05/14 94/05/14 17:05     22    22     0 USERID3
    CVT6XMAP          01.00 94/08/22 94/08/22 11:27     37    37     0 USERID3
    CVT6XSEL          01.00 94/08/22 94/08/22 11:27     37    37     0 USERID3
    CVT7OSEL          01.00 94/08/22 94/08/22 11:27     22    22     0 USERID3
    CVT7OXRF          01.00 94/08/22 94/08/22 11:26     21    21     0 USERID3
    DROP              01.00 94/05/14 94/05/14 17:20     20    20     0 USERID3
    DUMP
    JCLCNVRT          01.02 94/05/14 94/05/14 16:21     23    23     0 USERID3
    KEY               01.00 94/11/30 94/11/30 16:05     12    12     0 USERID9
    LIST              01.02 94/05/14 94/05/14 16:21     17    17     0 USERID3
    PRINT
    SAMPLE01
    SAMPLE02
    SKELETON          01.01 94/05/24 94/05/24 15:52     20    20     0 USERID3
    SPACE
```

Field Descriptions

S : The S field is a command entry field for the following line commands. If you enter multiple line commands, they are processed sequentially.

- **B :** Browse this member.
- **E :** Edit this member.
- **S :** Select this member for processing.
- **X :** Exclude this member from the member list.

NAME : Member name, up to eight characters.

VV.MM : Current version and modification level.

CREATED : Date the member was created.

CHANGED : Date and time member was last updated and saved.

SIZE : Current number of records in the member.

INIT : Initial number of records in member when it was first saved.

MOD : Number of modifications to member.

ID : User identification that made last changes to member.

Note: If a member does not have ISPF statistics, the last seven columns are blank.

Primary Commands

Scrolling and the following primary commands are available on the PDS Find/Change member list screen.

CANCEL (CAN)

Cancels current member selection and returns to the previous display.

```
▶▶─CANCEL──▶◀
```

CHANGE (C)

The CHANGE command searches for the specified value, string1, and changes the found value to a new value, string2. The PDS Change Command screen is displayed when you enter the CHANGE primary command without parameters. See "PDS Change Command" on page 10-16 for a description of the Change command parameters.

Note: When processing a CA-Panvalet or CA-Librarian dataset, the CHANGE command is not allowed.

```
                                   ┌CONFIRM──┐
▶▶─┬CHANGE─┬─string1──string2──┤                ├──────────────────────────▶
   ├CHG────┤                   └NOCONFIRM──┘
   └C──────┘

   ┌CONDENSE──┐
▶──┤                ├──┬col1──┬──┬col2──┬──┬MAX(n)──┬──────────────────────▶◀
   ├NOCONDENSE──┤  └──────┘  └──────┘  ├M(n)───┤
   └NOCOND──────┘                                  └────────────────────┘
```

FIND (F)

The FIND command searches for the specified string and displays the found value. The PDS Find Command screen is displayed when you enter the FIND primary command without parameters. See "PDS Find Command Screen" on page 10-10 for a description of the Find command parameters.

```
                                  ┌VIEW───┐   ┌CONDENSE──┐
▶▶─┬FIND─┬─string──┤                ├──┤                ├──┬col1──┬──────────▶
   └F────┘                  └NOVIEW─┘   ├NOCONDENSE──┤  └──────┘
                                          └NOCOND──────┘

▶──┬col2──┬──┬MAX(n)──┬──────────────────────────────────────────────────▶◀
   └──────┘  ├M(n)───┤
             └────────┘
```

LOCATE (L)

Locates the specified string.

```
▶▶─┬LOCATE─┬─string──▶◀
   └L──────┘
```

RESET (RES)

The RESET command reconstructs the current display with the entire member list, negating any processing or selection options, condense operations, and exclude line commands that have been specified.

```
►►─┬─RESET──┬──►◄
   └─RES────┘
```

SELECT (S)

Selects the specified member name.

```
►►─┬─SELECT─┬──member-name──►◄
   └─S──────┘
```

SORT

Sorts the member list. Any column header on the member list display is a valid keyword parameter for SORT.

```
                ┌─NAME─┐
►►──SORT────────┼──────┼──►◄
                ├─VV───┤
                ├─CRE──┤
                ├─CHA──┤
                ├─SIZE─┤
                ├─INIT─┤
                ├─MOD──┤
                └─ID───┘
```

NAME : (Default) Sort by member name.

VV : Sort by current version and modification level number.

CRE : Sort by member creation date.

CHA : Sort by date and time member was last updated and saved.

SIZE : Sort by number of records in the member.

INIT : Sort initial number of records in member.

MOD : Sort by number of modifications to member.

ID : Sort by user identification that made last changes to member.

PDS Find Command Screen

The PDS Find Command screen, shown in Figure 10-6 on page 10-11, provides a summary of the PDS FIND command parameters in a fill-in-the-blank format. This screen is invoked by entering the FIND (F) command on the PDS Find/Change screen without any parameters. The FIND command and its parameters can also be entered and processed directly on the PDS Find/Change screen.

Note: The Process in JCL format field on the PDS Processing Options screen (Figure 10-4 on page 10-7) must be set to Y (Yes) for File-AID to process the PDS containing JCL as logical statements.

Figure 10-6. PDS Find Command Screen

```
File-AID --------------------  PDS Find Command  -----------------------------
COMMAND ===>

 Find string          ===>

 Start column         ===>        End column ===>

 Relational operator  ===> CO     (CO, NC, EQ, NE, LT, LE, GE, GT, BT, NB)

 View report          ===> Y      (Y = Yes; N = No)

 Condense member list ===> Y      (Y = Yes; N = No)

 Maximum finds        ===>        (ALL or number of finds)

You may bypass this screen by entering the FIND command with operands:

F(IND) string ((NO)VIEW) ((NO)CONDense) (col-1 (col-2)) Max(n)

EXAMPLES:  f t'abc'          find abc (uppercase or lowercase)
           f c'Abc'          find Abc (exactly as entered)
           f a,b,c           find a or b or c (uppercase or lowercase)
           f "a,b,c"         find a,b,c (uppercase or lowercase)
```

Field Descriptions

Find string : Specify a value to be matched using the comparison specified by the Relational operator parameter. The find string value may be any one of the following data types:

Simple string : An alphanumeric character string that does not contain any single quotes ('), double quotes ("), imbedded blanks, or commas. A simple string is not case-sensitive. File-AID finds any combination of upper and lowercase characters matching the search string, regardless of the combination of upper and lowercase characters entered.

Delimited string : A simple string enclosed in single (') or double (") quotation marks.

Delimited strings are not case sensitive. Specify any combination of upper and lowercase characters for the search string and, regardless of the case, any combination of the specified characters is found.

Character string : A delimited string of characters preceded by the letter C. A character string does not translate alphabetic characters to uppercase, and matches only an exact duplicate (including case) of the input string. For example: **FIND C'Unit'** only finds the string Unit. It does not find unit, UNIT, or uNIT.

Text string : A delimited string of characters preceded by the letter T. A text string is identical to a delimited string and is supported in order to maintain consistency with ISPF/PDF.

Hexadecimal string : A delimited string containing an even number of hexadecimal digits (0-9, A-F), preceded by the character X.

Packed string : A delimited string of decimal digits preceded by the character P.

When a packed string is used, the Start column value must be specified to indicate the location of the packed data.

When the End column is specified, File-AID matches only a packed data item beginning in the Start column and ending in the End column. If the End column field is left blank, File-AID determines the length of the packed field by scanning from the Start column field until it finds a valid sign (F, C, or D).

Numeric string : A delimited string preceded by the character N. A numeric string consists of the digits 0-9 and optionally, a sign (+,-). For example, **Find string ===> N'47'**.

When a numeric string is specified, a Start column value must be specified. The End column value is optional.

Binary string : A delimited string preceded by the character B. A binary string consists of digits 0-9 and optionally, a sign (+,-). For example, **Find string ===> B'47'**.

When a binary string is specified, a Start column value must be specified. If the End column value is left blank, File-AID uses four bytes (fullword) for the length of the compare. To compare a halfword, specify the End column value as one byte greater than the Start column value.

Mask string : A delimited string of eight bits (M'00001111') or two hexadecimal digits (M'0F') that indicate which bits to examine. This FIND string data type is used with relational operators (RO) of EQ, NE, NO, and MX only. See discussion of bit relational operators under "Guidelines" on page 10-25.

Multiple Find Strings: : To specify multiple strings separate the strings with a comma. File-AID interprets the comma as an OR. For example, **Find string ===> smith,jones** causes File-AID to search for a value of smith or jones.

The syntax of the Find string value is critical because File-AID interprets the comma as an OR. To search for the comma as data, enclose the data in double quotes (" ").

When The Process in JCL format parameter is set to Y (Yes) on the PDS Processing Options screen, File-AID processes a FIND command as follows:

- JOB, EXEC, DD, and PROC statements are processed as one logical record. The Find Report screen shows all JCL lines that make up the logical JCL statement.
- File-AID does not search columns 72 through 80 for the search string, it skips what it assumes is the comments area. Compuware recommends not specifying column boundaries when processing in JCL format.

Start column, **End Column :** Specify a starting and ending column value for File-AID to search. You may restrict the find operation to a single column by specifying only the Start column value or give File-AID a search range by specifying the Start column and End column values. Data specified for a single column must begin at the Start column position. Data specified for a column range must be contained within the column range.

The End column must be greater than or equal to the Start column. You can enter a Start column without specifying an End column; but you *cannot* specify an End column without specifying a Start column.

Specifying a Start column and no End column changes the default relational operator to EQ.

If you leave both the Start and End columns blank, File-AID searches the entire length of each record in the member.

Relational operator : Specify one of the following valid relational operators:

CO - Contains (default).

NC - Does not contain.

EQ - Equal.

NE - Not equal.

LT - Less than.

LE - Less than or equal.

GE - Greater than or equal.

GT - Greater than.

BT - Between.

NB - Not between.

View report : Specify whether you want to view the Find report:

Y - Yes (default). Displays the report when the Find processing is complete.

N - No. Redisplays the PDS Find/Change member list when Find processing is complete.

File-AID saves the View report setting in your profile from session to session.

Condense member list : Specify whether you want the current member list condensed as a result of the Find processing. File-AID saves the Condense member listing setting in your profile from session to session:

Y - Yes (default). Redisplays the member list with only those members that contain a match to the Find string value. The number of matches per member are reported in the HITS column.

N - No. Redisplays the member list, without condensing it, with a HITS column reporting the number of Find string matches.

Maximum finds : Specify a value to set a limit for the Find operation. 0 through 999,999 are valid values. The default value is 0 (zero) or ALL which finds all occurrences of the Find string value.

Note: Only numeric values are allowed for the MAX(n) parameter on the FIND primary command. Entering the 0 default value has the same effect as not entering the parameter; no limits are placed on the search.

For example, if you enter 10, File-AID stops searching for the Find string after it finds the tenth occurrence.

File-AID saves the Maximum finds setting in your profile from session to session.

Find Report

The Find Report screen, shown in Figure 10-7 on page 10-14, is displayed at the conclusion of the Find operation when the View report field is set to Y (Yes -- default) on the PDS FIND Command screen or the VIEW parameter (default) is used with the FIND primary command. File-AID uses ISPF Browse to display the records that contain matched Find strings within each member. When processed in JCL format, File-AID displays the entire logical JCL statement.

Figure 10-7. Find Report Screen

```
 BROWSE -- USERID9.D94341.T164650.FILEAID ----------- LINE 00000000 COL 001 080
 COMMAND ===>                                              SCROLL ===> PAGE
 FA223- Records read = 373, selected = 3, error records skipped = 0
==>USERID9.FASAMP.JCL OPENED AS PO,RECFM=FB,LRECL=80,BLKSIZE=3120,VOL=PRD920
********************************MEMBER  SAMPLE01*******************************
//* THIS IS A SAMPLE JCL MEMBER USED TO DEMONSTRATE JCL PROCESSING.
********************************MEMBER  SAMPLE02*******************************
//* THIS IS A SAMPLE JCL MEMBER USED TO DEMONSTRATE JCL PROCESSING.
********************************MEMBER  USER    *******************************
//*   VARIABLE LENGTH RECORD DESCRIPTOR IS PROCESSED (RDW=1)
******************************** BOTTOM OF DATA ********************************
```

Search/Update Print Report

The Search/Update Print Report screen, shown in Figure 10-8, is displayed upon exit from the Find Report screen. Specify Y (Yes) in the Print Report field and press Enter to print a copy of the Find Report and return to the Search/Update utility screen. Use the END command (PF3) to exit the display without printing the Find Report and display the PDS Find/Change Hits screen, shown in Figure 10-9 on page 10-16.

Figure 10-8. Search/Update Print Report Screen

```
File-AID --------------------  Search/Update Print Report    ------------------
COMMAND ===>
FA223- Records read = 186, selected = 3, error records skipped = 0


 Print report  ===> N   (Y = Yes; N = No)

 Instructions:

 Use ENTER to perform above action and return to the initial screen
 Use END to exit without PRINT
```

Field Descriptions

Print report : Specify whether to print the Search/Update Find Report:

Y - Yes displays the Print Parameters screen.

N - No (default) does not print report and displays PDS Find/Change member list with the HITS column.

PDS Find/Change Hits Screen With Find Results

The PDS Find/Change screen, shown in Figure 10-9, is redisplayed with a HITS column reporting the number of Find string matches that File-AID has found at the conclusion of a Find operation. This screen is displayed at the conclusion of the FIND command operation.

See "PDS Find/Change Member List" on page 10-8 for descriptions of each field on this screen. The HITS column reports the number of times that the Find criteria was matched.

Figure 10-9. PDS Member List Screen. Shows HITS by Member

```
 File-AID - PDS Find/Change - USERID9.FASAMP.JCL ---------- NO RECORDS SELECTED
 COMMAND ===>                                                 SCROLL ===> CSR
  Use FIND or CHANGE command to process across the following members.
  (Omit FIND/CHANGE operands for a prompt panel.)
  Use RESET command to get a full member list.
  Use E, S, B or X line commands to Edit, Browse or eXclude members.
-------------------------------------------------------------------------------
  S  NAME        HITS VV.MM  CREATED     CHANGED      SIZE  INIT   MOD   ID
    BATVTOC         3 01.01 94/05/04 94/05/04 14:04     23    23     0 USERID3
    COPY            1 01.00 94/05/14 94/05/14 17:05     22    22     0 USERID3
    CVT6XMAP        1 01.00 94/08/22 94/08/22 11:27     37    37     0 USERID3
    CVT6XSEL        1 01.00 94/08/22 94/08/22 11:27     37    37     0 USERID3
    CVT70SEL        1 01.00 94/08/22 94/08/22 11:27     22    22     0 USERID3
    CVT70XRF        1 01.00 94/08/22 94/08/22 11:26     21    21     0 USERID3
    DROP            2                                   20
    SAMPLE01        2                                   14
    SAMPLE02        2                                   17
    USER            3 01.00 94/05/14 94/05/14 17:44     31    31     0 USERID3
 ****************************** BOTTOM OF DATA ******************************
```

PDS Change Command

The PDS Change Command screen, shown in Figure 10-10, provides a summary of the PDS CHANGE command parameters in a fill-in-the-blank format. This screen is invoked by entering the CHANGE (C) command on the PDS Find/Change screen without any parameters. The CHANGE command and its parameters can also be entered and processed directly on the PDS Find/Change screen.

Note: When processing a CA-Panvalet or CA-Librarian dataset, File-AID does not allow the CHANGE command.

Figure 10-10. PDS Change Command Screen

```
File-AID -------------------  PDS Change Command  ----------------------------
COMMAND ===>

 From string          ===>
 To string            ===>

 Start column         ===>        End column ===>

 Relational operator  ===> CO     (CO, EQ, NE, LT, LE, GE, GT)

 Confirm changes      ===> Y      (Y = Yes; N = No)
 Condense member list ===> Y      (Y = Yes; N = No)
 PDS statistics       ===> Y      (Y = Yes; N = No; A = Add)

 Maximum changes      ===> 3      (ALL or number of changes)

You may bypass this screen by entering the CHANGE command with operands:

C(HANGE) string-1 string-2 ((NO)CONFirm) ((NO)CONDense) (col-1 (col-2)) Max(n)

EXAMPLES:  c abc xyz         change abc (upper or lower case) to XYZ
           c c'Abc' c'xyz'   change Abc (exactly as entered) to xyz
           c a,b,c xyz       change a or b or c (upper or lower case) to XYZ
           c "a,b,c" xyz     change a,b,c (upper or lower case) to XYZ
```

Field Descriptions

From string, To string : Specify the character string that you want to change in the From string field. Specify the new string of characters to replace the From string value in the To string field. The supported data types are described in "Find string" on page 10-11.

When the from and to strings are equal length, the character replacement does not affect any other data in the record.

When the replacement string is shorter than the original string, File-AID left-shifts the remaining data to fill in the gap and inserts extra blanks at the first blank found or the end of the record. When the replacement string is longer than the original string, File-AID right-shifts the remaining data. When there is not a sufficient number of contiguous blanks to the right of the original string, truncation occurs.

The Change Report displays the number of records in error in the upper-right corner of the report. The long message displays the number of records listed, changed, truncated, and skipped.

When The Process in JCL format parameter is set to Y (Yes) on the PDS Processing Options screen, File-AID processes a Change as follows:

- JOB, EXEC, DD, and PROC statements are processed as one logical record. The Change Report shows all JCL lines that make up the logical JCL statement. When the replacement data is longer than the original data, File-AID shifts the complete JCL phrase from one line to the next. However, the JCL statement is truncated if all the physical lines are used.
- File-AID does not search columns 72 through 80 for the original string, it skips what it assumes is the comments area. Data in columns 72 through 80 is never modified or shifted due to data of unequal lengths. Compuware recommends not specifying column boundaries when processing in JCL format.

Start column, End Column : Specify a starting and ending column value for File-AID to search. You may restrict the find operation to a single column by specifying only the Start column value or give File-AID a search range by specifying the Start column and End column values. Data specified for a single column must begin at the Start column position. Data specified for a column range must be contained within the column range.

The End column must be greater than or equal to the Start column. You can enter a Start column without specifying an End column; but you*cannot* specify an End column without specifying a Start column.

Specifying a Start column and no End column changes the default relational operator to EQ.

If you leave both the Start and End columns blank, File-AID searches the entire length of each record in the member.

Relational operator : Specify one of the following valid relational operators:

CO - Contains (default).

NC - Does not contain.

EQ - Equal.

NE - Not equal.

LT - Less than.

LE - Less than or equal.

GE - Greater than or equal.

GT - Greater than.

Confirm changes : Specify whether you want to preview the intended changes to the PDS member before the actual updating is performed. File-AID saves the Confirm changes setting in your profile from session to session:

Y : Yes (default). File-AID displays the PDS Change Report listing all the changes for your review. See Figure 10-11 on page 10-19. After checking the report, you specify whether you want the changes completed, the preview changes report printed, and the number of changes you want File-AID to perform.

N : No. File-AID makes the changes without a confirmation screen and redisplays the member list.

Condense member list : Specify whether you want the current member list condensed as a result of the Change processing. File-AID saves the Condense member list setting in your profile from session to session:

Y : Yes (default. Redisplays the member list with only those members that contain a match to the Change string value. The number of changes per member are reported in the HITS column.

N : No. Redisplays the member list, without condensing it, with a HITS column reporting the number of Change string matches.

PDS statistics : This parameter controls the updating of PDS member statistics when changes are applied in the Search/Update utility option M or U. Specify one of the following values:

Y - (Default) Update PDS statistics for members that have statistics.

N - Do not update PDS statistics.

A - Add statistics for any member that does not currently have PDS statistics and update statistics for any member that does.

Maximum changes : Specify a value to set a limit for the Change operation. 0 through 999,999 are valid values. The default value is 0 or ALL. 0 (zero) or ALL changes all occurrences of the Change string value.

Note: Only numeric values are allowed for the MAX(n) parameter on the CHANGE primary command. Entering the 0 default value has the same effect as not entering the parameter; no limits are placed on the number of changes.

For example, if you enter 10, File-AID stops searching for the Find string after it finds the tenth occurrence.

File-AID saves the Maximum changes setting in your profile from session to session.

Change Report

The Change Report screen, shown in Figure 10-11 on page 10-19, is displayed at the conclusion of the Change operation when the Confirm changes field is set to Y (Yes -- default) on the PDS CHANGE Command screen or the CONFIRM parameter (default) is used with the CHANGE primary command. File-AID uses ISPF Browse to display the preview of changed records within each member. When processed in JCL format, File-AID displays the entire logical JCL statement.

Figure 10-11. Change Report Screen

```
 BROWSE -- USERID9.D94350.T180931.FILEAID ----------- LINE 00000000 COL 001 080
 COMMAND ===>                                              SCROLL ===> PAGE
 ER041-Records-read=373 listed=5 with 5 changes
==>USERID9.FASAMP.JCL OPENED AS PO,RECFM=FB,LRECL=80,BLKSIZE=3120,VOL=PRD929
*******************************MEMBER  CVT6XMAP*******************************
//*     RECORD LAYOUT DATASET  => SHR-R6-MAPLIB    (DD01 BELOW)        <<< CHNGD
*******************************MEMBER  JCLCNVRT*******************************
//DD01     DD  DSN=XXXXXXX.FASAMP.JCL,DISP=SHR                        <<< CHNGD
//OUTA     DD  DSN=XXXXXXX.FASAMP.JCL,DISP=SHR                        <<< CHNGD
*******************************MEMBER  SAMPLE02*******************************
//DATASET3 DD  DSN=??????.DATASET3,DISP=(SHR,DELETE,DELETE)            <<< CHNGD
//DATASET4 DD  DSN=??????.DATASET4,DISP=(SHR,DELETE,DELETE)            <<< CHNGD
******************************* BOTTOM OF DATA ********************************
```

Search/Update Confirm Update

The Search/Update Confirm Update screen, shown in Figure 10-12, is displayed upon exit from the Change Report screen. It summarizes the changes that File-AID is about to make and gives you the option to overtype the displayed default values. Press Enter to proceed with the changes. Use the END command (PF3) to cancel the change(s) and redisplay the PDS Find/Change Hits screen, shown in Figure 10-9 on page 10-16.

Note: This function updates records. Data integrity is your responsibility when DISP=SHR is specified.

Figure 10-12. Search/Update Confirm Update Screen

```
File-AID --------------  Search/Update Confirm Update  ------------------------
COMMAND ===>
ER041-Records-read=373 listed=5 with 5 changes


 Ready to perform update

 Perform update           ===> Y       (Y = Yes; N = No)
 Print previewed changes  ===> N       (Y = Yes; N = No)
 Maximum changes          ===> 12      (All or number of changes to perform)

 Instructions:

 Use ENTER to perform above actions and return to the initial screen
 Use END to exit without UPDATE or PRINT


 CAUTION:  DISP=SHR was specified.  Other users may be editing this
           file and some of your changes may be lost.
```

PDS Find/Change Hits Screen With Change Results

The PDS Find/Change screen, shown in Figure 10-13 on page 10-20, is redisplayed with a HITS column reporting the number of Change string matches that File-AID has found in each member and a message summarizing the performed updates. For example: **ER042-Records-read=77 updated=5 with 5 changes**. This screen is displayed at the conclusion of the CHANGE command operation.

Note: The PDS statistics shown on the member list are not refreshed until you exit this display screen.

See "PDS Find/Change Member List" on page 10-8 for descriptions of each field on this screen. The HITS column reports the number of times that the Change criteria was matched.

Figure 10-13. PDS Find/Change Screen with Change Results - Number of Hits Per Member

```
File-AID - PDS Find/Change - USERID9.FASAMP.JCL -------------  ROW 1 TO 3 OF 3
COMMAND ===>                                                  SCROLL ===> CSR
 ER042-Records-read=77 updated=5 with 5 changes
 Use FIND or CHANGE command to process across the following members.
 (Omit FIND/CHANGE operands for a prompt panel.)
 Use RESET command to get a full member list.
 Use E, S, B or X line commands to Edit, Browse or eXclude members.
--------------------------------------------------------------------------------
 S  NAME        HITS VV.MM  CREATED     CHANGED      SIZE  INIT   MOD   ID
   CVT6XMAP        1                                  37
   JCLCNVRT        2                                  23
   SAMPLE02        2                                  17
****************************** BOTTOM OF DATA ********************************
```

Selection Criteria Options

The Search/Update Selection Criteria Options screen, shown in Figure 10-14, is displayed when you use Search/Update option U with a non-PDS dataset. It is not displayed for a PDS, Panvalet or Librarian dataset. This screen enables you to specify a particular starting point in the dataset or set limits on the number of records processed.

Figure 10-14. Selection Criteria Options Screen

```
File-AID --------------  Selection Criteria Options  --------------------------
COMMAND ===>

Specify Selection Criteria Options:
                                          Start at the following record key
                                          (both blank for start of dataset)
  Starting record key         ===>
     - OR -                               OR at the following RBA or RRN
  Starting RBA or RRN         ===>

  Initial records to skip     ===> 0      then skip this many records
  Subsequent Selection Interval:          then repeat the following
    Records to select         ===> 1      - select this many records
    Records to skip           ===> 0      - then skip this many records
                                          until
  Number of records to search ===> ALL    you have read this many records
  Number of records to select ===> 250    or selected this many records

SEQ/VSAM processing direction ===> F      (F = Forward; B = Backward)


  Use END key to continue to unformatted selection criteria
```

See “Selection Criteria Options” on page 16-8 for Selection Criteria Options screen field descriptions.

Search/Update Change Criteria Screen

The Search/Update Change Criteria screen, shown in Figure 10-15 on page 10-22, allows you to specify the data to search for and display or change when processing an update.

Column headings identify the selection criteria parameters. Each line of blank fields allows you to enter a set of selection criteria. The selection criteria sets are connected by AND/OR elements.

You can scroll the Search/Update Change Criteria screen down to enter additional criteria. Scrolling up displays previously entered criteria.

Figure 10-15. Search/Update Change Criteria Screen

```
File-AID -------------  Search/Update Change Criteria  ----  ROW 1 TO 12 OF 25
COMMAND ===>                                                  SCROLL ===> CSR

Use END command to continue, use CANCEL command to return to main screen.

Relational Operator R (Replace) overlays existing data.  E (Edit) shifts
existing data.  When preceded by CO (Contains), R or E changes first occurrence
of search value in each record, RA or EA changes all occurrences.

    AND
Cmd /OR Position Length RO             Search Value / Update Value
--- --- -------- ------ -- ----------------------------------------------------
___      _____   _____  CO ____________________________________________________
___      _____   _____  EA ____________________________________________________
___ AND  _____   _____  __ ____________________________________________________
___ AND  _____   _____  __ ____________________________________________________
___ AND  _____   _____  __ ____________________________________________________
___ AND  _____   _____  __ ____________________________________________________
___ AND  _____   _____  __ ____________________________________________________
___ AND  _____   _____  __ ____________________________________________________
___ AND  _____   _____  __ ____________________________________________________
___ AND  _____   _____  __ ____________________________________________________
___ AND  _____   _____  __ ____________________________________________________
```

Field Descriptions

Cmd : Specify one of the following valid line commands to edit your selections:

A - Marks the destination after which a line is placed.

B - Marks the destination before which a line is placed.

C - Copy the line to a marked destination.

D - Delete the line. D*nn* deletes the specified number of lines.

I - Insert a line. I*nn* inserts the specified number of lines.

M - Move the line to a marked destination.

R - Repeat the line. R*nn* repeats the line the specified number of times.

AND/OR : Specify the AND/OR parameter to define multiple condition testing. It defines the logic to use to connect multiple conditions.

File-AID considers the OR connector the beginning of a new logical set of change specifications. AND continues a logical set of change criteria.

When evaluating ANDed conditions, all the conditions must be true. When evaluating ORed conditions, only one of the conditions must be true.

For example, if you specify: **Selection 1 AND Selection 2 OR Selection 3**, File-AID evaluates it as: **(Selection 1 AND Selection 2) OR Selection 3**.

Use File-AID option 0.2 System Parameters to set the default for the AND/OR field. Each selection can have multiple OR conditions as described in “Multiple Data Entries” on page 10-25.

Position : Specify the location within a record where File-AID is to begin the data comparison. The position value can be either actual or relative. An actual position is indicated by an unsigned number. A signed number (+ or -) indicates a relative position.

An actual position can be any number from 1 (one) to the maximum record length of the input file.

A relative position can be specified when scanning a record with the CO (contains) relational operator. It is a signed (+ or -) number that indicates an offset from the beginning of the matched data. Relative position (+0) points to the first byte of data

of the matched scan. If no scan is defined, relative position (+0) points to the first byte of data in the record. A relative location cannot point to a position outside the record.

Variable-length records begin with a four-byte Record Descriptor Word (RDW). Position one points to the first byte of the data portion of the record. If you want to reference the RDW, use a relative position of -4.

Length : Specify the field length. Length is an *optional* field for most relational operators. VA and NV relational operators are the exception and this field is required unless you specify packed data.

The length value plus the position value cannot exceed the record length. The value you specify in the Length field must be equal or greater than the length of the data value in bytes.

For the CO (contains) and NC (not contains) relational operators, the Length field specifies the number of positions in the record that File-AID scans for the specified data value. The length value can be from 1 to the maximum record length. If the Length field is left blank, each record is searched from the location specified in the Position field to the end of the record.

For the remainder of the relational operators, length defines the number of positions in the record that File-AID compares. The length value can be from 1 to 256.

If the Length field value exceeds the actual length of the data specified in the data value field, File-AID pads the data value with blanks to the right. When the Length field is left blank, File-AID determines the length of the field based on the actual data value length.

RO : Specify a relational operator. File-AID is distributed with a default value of EQ (equal) for relational operator. Valid values are:

Conditional operators:

EQ, =	Equal to
NE, ¬=, !=	Not equal to
GT, >	Greater than
GE, >=	Greater than or equal to
LT, <	Less than
LE, <=	Less than or equal to
CO	Contains; scans a range of record positions for the presence of the data value. CO works on an equal condition. It reads from the Position value until the data string is matched, the Length value is exceeded, or the end of the record is reached.
NC	Not contains; scans a range of record positions for the absence of the data value. NC works on a not equal condition. It reads from the Position value until the Length value is exceeded or the end of the record is reached.
BT	Between; the value is greater than or equal to the first endpoint and less than or equal to the last endpoint.
NB	Not between; the value is less than the first endpoint or greater than the last endpoint.
VA	Valid numeric or packed data based on the specified data type. For a numeric data type, you must specify a length.
NV	Not valid numeric or packed data based on the specified data type. For a numeric data type, you must specify a length.

Bit relational operators used with the M (mask) data type:

EQ	Bits are all ones
MX	Bits are mixed, ones and zeros

Bit relational operators used with the M (mask) data type:

NE Bits are all zeros

NO Bits are not all ones.

Replacement operators

E Edit. Replaces data in the record with data of a different length. Data is shifted to adjust for the change. The edit operator changes only the first occurrence of matched compare data in the record.

EA Edit all. Replaces data in the record with data of a different length. Data is shifted to adjust for the change. The edit all operator changes all occurrences of matched compare data in the record.

R Replace. Replaces data in the record at the specified location with new data. Existing data at the replace location is overlaid with the full length of the new data. The replace operator replaces only the first occurrence of matched compare data in the record.

RA Replace all. Replaces data in the record at the specified location with new data. Existing data at the replace location is overlaid with the full length of the new data. The replace all operator replaces all occurrences of matched compare data in the record.

Bit replacement operators to use with the M (mask) data type code

XI Exclusive OR means flip bit.

OI Turn bit on.

NI Turn bit off.

Search value / Update value : Specify the data string for which File-AID is to search and the required update value to use in modifications. All data types are supported. If a data type code is specified, the data string must be enclosed in single (' ') or double (" ") quotes. When a data-type code is not specified, alphanumeric text is assumed.

The update value can have the same or a different length or data-type code as the search value. The update value is changed to uppercase unless it is specified as "C" character data which is case-sensitive.

Japanese Data:

DBCS and single byte Katakana data is accepted as data values for C (Character) and T (Text) data types. File-AID removes any leading or trailing shift characters from DBCS data unless the value is enclosed in double quotes.

When KANA is specified for the Character Set option on the System Parameters screen (option 0.1), C (Character) and T (Text) identifiers are both treated as case-sensitive C (Character) data.

Table 10-1 describes valid data-types codes for this field:

Table 10-1. Data Types

Data Type	Type Description	Example	Description of Data
B	Binary	B'+147,-25,+1117'	Binary equivalent of decimal number specified in quotes. In this example using the default of fullword, File-AID searches for 00000093, FFFFFFE7, or 0000045D. File-AID assumes the length of 4 or you can specify 1, 2, 4, or 8. **Note:** If the binary data in the record contains a sign, all data values must also contain a sign (+/-).
C	Character	C'Smith'	Case-sensitive character value of uppercase S and lowercase mith.
X	Hexadecimal	X'0001FF'	Hexadecimal value 0001FF.
M	Mask (Use with bit relational operators)	M'11000000' or M'C0'	The mask can be specified in binary or hexadecimal to indicate which bits File-AID should examine. This example tests the first two bits of the specified byte.
N	Numeric	N'25'	Positive or unsigned numeric value +25 or 25.
P	Packed	P'12345'	Positive or unsigned packed value.
T	Text	T'smith'	Alphanumeric text, not case-sensitive. Value smith, SMITH, or any combination of upper and lowercase characters. T (text) is the default data type.

Guidelines

Use the T data-type code to have File-AID search for the string regardless of case (upper or lowercase). Use the C code to search for case-specific character data, that is, to search for both upper and lowercase data exactly as it is specified.

When specifying packed data, specify only significant digits. File-AID scans for the sign to determine the length of the packed field.

Hexadecimal data must be specified in multiples of two alphanumeric characters.

Use a mask data-type for testing individual bits in a single byte. Specify the mask data as either eight bits or two hexadecimal symbols with a bit relational operator. The bit replacement operators, XI, OI, and NI are used when changing individual bits in a single byte.

Multiple Data Entries

When you specify multiple data entries in one field, separate each entry with a comma. The comma is interpreted as OR. This gives File-AID the ability to search for multiple data values at a specified position. For example: **smith**,**jones**.

In this case, File-AID searches for the non-case-specific values of **smith** or **jones** at the specified location.

Note: Multiple data entries are not permitted with replacement operators E, EA, R, and RA.

Comma Character as Data

Since File-AID interprets a comma as OR, the syntax of the search data is important. To search for a comma as data, enclose the data in double quotes (" "). Using no quotes or

single quotes around a comma causes it to be treated as OR. For example: ",**DSN=**". In this case, File-AID searches for a comma that is part of the ,**DSN=** data string.

Duplication Factor

File-AID allows you to specify a a duplication factor, which eliminates the need to code repetitive data. The duplication factor is a number from 1 through 255 that specifies the number of times that File-AID contiguously scans for the specified data value.

A duplication factor is not allowed with the NE (not equal), CO (contains), and NC (not contains) relational operators.

Invalid and Valid Data Checking

Use the NV (not valid) or VA (valid) relational operator and specify a data-type code for the data value to check a record for invalid or valid data at a specified position. Invalid and valid data can be checked only for packed, numeric, and alphanumeric data-types.

Packed data is specified by the data-type code P and must be signed with C, F, or D. Length does not need to be specified because File-AID determines the length of packed data.

Numeric data is specified by the data-type code N and must be in zoned decimal format (F0 - F9). The last byte can be signed positive (C0 - C9), signed negative (D0 - D9), or unsigned (F0 - F9).

Alphanumeric data is specified with a data-type code of C or T and must match the specified character set. For numeric and alphanumeric data, the Length field must be specified.

When searching for repetitive numbers of invalid or valid fields, specify a duplication factor with the data-type in the data value field.

Preview Changes With ISPF Browse

The ISPF Browse screen, shown in Figure 10-16, allows you to preview the changes you have requested with the Search/Update utility before the actual changes are made to your dataset. The number of displayed changes is determined by the Maximum changes field on the Search/Update Utility screen.

Figure 10-16. Preview Changes with ISPF Browse Screen

```
Browse -------- CWX0110.D93027.T110248.FILEAID ----- LINE 00000000 COL 001 080
COMMAND ===>                                              SCROLL ===> CSR
Records/read=17054 listed=54 with 54 changes
==>CWX0110.FA.JCL opened as PO,RECFM=FB,LRECL=80,BLKSIZE=3120,VOL=PRD903
********************************MEMBER  ASMCOM  ********************************
//        CLASS=D,TIME=(,2),MSGCLASS=X,NOTIFY=CWX0110                  00020034
********************************MEMBER  ASMTEMP ********************************
//        CLASS=D,TIME=(,10),MSGCLASS=X,NOTIFY=CWX0110                 00020001
********************************MEMBER  ASM641  ********************************
//            CLASS=D,MSGCLASS=X,TIME=(,2),NOTIFY=CWX0110
********************************MEMBER  ASM70   ********************************
//        CLASS=D,TIME=(2),MSGCLASS=X,NOTIFY=CWX0110                   00020053
********************************MEMBER  CCALL   ********************************
//        CLASS=D,TIME=5,MSGCLASS=X,NOTIFY=CWX0110                     00002014
********************************MEMBER  CCALLI  ********************************
//        CLASS=D,TIME=5,MSGCLASS=X,NOTIFY=CWX0110                     00002014
********************************MEMBER  CC70    ********************************
//        CLASS=D,TIME=5,MSGCLASS=X,NOTIFY=CWX0110                     00002014
********************************MEMBER  COPYLOAD********************************
//            CLASS=D,MSGCLASS=X,TIME=(,2),NOTIFY=CWX0110
********************************MEMBER  CWCOPY  ********************************
//            CLASS=D,MSGCLASS=X,TIME=(,2),NOTIFY=CWX0110
********************************MEMBER  CWCOPY2 ********************************
//            CLASS=D,MSGCLASS=X,TIME=(,2),NOTIFY=CWX0110
```

Search/Update Confirm Update

The Search/Update Confirm screen, shown in Figure 10-17, is displayed upon exit from the Preview Changes screen. It summarizes the changes that File-AID is about to make and gives you the option to overtype the displayed default values. Press Enter to proceed with the changes. Use the END command (PF3) to quit the procedure and redisplay the initial Search/Update Utility screen.

Figure 10-17. Search/Update Confirm Update Screen

```
File-AID --------------------  Search/Update Confirm Update  ------------------
COMMAND ===>
ER041-Records/read=50 listed=50 with 50 changes


 Ready to perform update

 Perform update           ===> Y       (Y = Yes; N = No)
 Print previewed changes  ===> N       (Y = Yes; N = No)
 Maximum changes          ===> ALL     (All or number of changes to perform)

 Instructions:

 Use ENTER to perform above actions and return to the initial screen
 Use END to exit without UPDATE or PRINT


 CAUTION:  DISP=SHR was specified.  Other users may be editing this
           file and some of your changes may be lost.
```

Disposition of Audit Trail

File-AID allows you to create an audit trail of your Search/Update session. To activate the audit trail feature, enter a Y in the Create audit trail field on the Search/Update Utility screen, shown in Figure 10-1 on page 10-2.

The Disposition of Audit Trail screen, shown in Figure 10-18, is displayed when you make a change with Search/Update option U (Update). This screen allows you to specify what to do with the audit trail dataset just created during your session.

If you use the RETURN command (PF4) or a jump command to exit the Search/Update function after a dataset change is made, File-AID creates the audit trail dataset but does not display the Disposition of Audit Trail screen. You can use File-AID option 5.5, Print Audit Trail, to print the audit trail dataset.

Figure 10-18. Disposition of Audit Trail Screen

```
File-AID ---------------  Disposition of Audit Trail -------------------------
COMMAND ===>

Audit trail disposition ===>           (PK = Print dataset and keep
                                        PD = Print dataset and delete
                                        D  = Delete dataset without printing)

Audit trail dataset     ===> 'USERID9.FILEAID.AUDT.D940423.T184403'

Audit trail description ===>
                        ===>

Specify Batch JCL Information:
 Sysout class           ===> *

Specify JOB Statement Information:
===> //USERID9 JOB ('OFAQC8.0.0',2037),'AUDIT'
===> //   CLASS=P,NOTIFY=USERID9
===>
===>
Use JCL command to edit generated JCL
Use ENTER to submit batch job
Use END to keep audit trail without printing
```

Field Descriptions

Audit trail disposition : Specify one of the following:

PK - Print and keep the audit trail.

PD - Print and delete the audit trail.

D - Delete the audit trail without printing it.

Audit trail dataset : File-AID allocates the audit trail dataset at the beginning of your edit session. If your TSO-PREFIX matches your TSO-ID, the audit trail dataset name is:

```
tso-id.FILEAID.AUDT.Dyymmdd.Thhmmss
```

tso-id : Your TSO user ID, up to seven characters.

yymmdd : Gregorian date when the audit trail is created.

hhmmss : Hour, minute, and second the audit trail is created.

If your TSO-PREFIX does not match your TSO-ID, the audit trail dataset name is:

```
tso-prefix.tso-id.FILEAID.AUDT.Dyymmdd.Thhmmss
```

tso-prefix : Your TSO prefix, up to seven characters.

Audit trail description : Enter an optional 96-position description of the session you just completed. This description is written to the audit trail dataset and prints on the Audit Trail Report.

Specify Batch JCL Information:

Sysout class : Specify the SYSOUT class for the Audit Trail Report.

Specify JOB Statement Information: : Specify JOB statement JCL for the batch print job submitted when you specify the PK or PD options.

When you complete this screen, press Enterto process the option entered or, if you want to keep the audit trail dataset for later printing, enter the END command. After processing, the Search/Update Utility screen is displayed.

If you enter END from the Disposition of Audit Trail screen, the audit trail can be printed at a later time by using option 5.5, Print Audit Trail. This feature and the Audit Trail Report are described in “Print Audit Trail” on page 15-26.

Chapter 11.
VTOC Utility (3.7)

The VTOC utility lists volume information by volume or dataset. In addition, dataset lists can be displayed in dataset name sequence or in location sequence of the volume. You can create a selective VTOC list by specifying a generic search name. Volume lists can be for single or multiple volumes.

Note: Use the File-AID/Batch functions VTOCDSN, VTOCINFO, and VTOCMAP to create a batch job that generates VTOC hardcopy reports.

To select the VTOC utility, enter the number **7** in the OPTION field of the File-AID Extended Utilities Menu, or as described in "Selecting Screens" on page 2-7. When you press Enter, File-AID displays the VTOC Utility screen shown in Figure 11-1.

File-AID provides an F37 primary command that lets you recursively invoke the VTOC Utility function. Enter the F37 command from any File-AID screen with an OPTION or COMMAND field. When you recursively invoke the VTOC Utility, use the END command (PF3) on the VTOC Utility screen, or the RETURN command (PF4) anywhere in the function, to return to the screen from which you entered the F37 command. After the second session is completed, the original session is continued.

VTOC Utility Screen

The VTOC Utility screen has five areas. The top area lists the utility options. The area below the options displays volume selection parameters for the VTOC list. The Generic search function area is used to specify naming criteria that File-AID uses when generating the list. The Catalog to use if other than default system catalog area is used to specify alternate catalogs. The Display confirm delete area permits the display of a confirmation screen when deleting list items.

Figure 11-1. VTOC Utility Screen

```
File-AID ----------------------- VTOC Utility --------------------------------
OPTION ===>

   I - List volume information
   M - Map VTOC entries in pack location sequence (CCCCC-HH)
   BLANK - List VTOC entries in dataset name sequence

Volume Selection Information:
   Volume serial  ===>
   Unit name      ===>
   Volume status  ===>                (PUB=Public; PRV=Private; STG=Storage)

Generic Search Function:
   Search dataset name   ===>
   Max number of names   ===> 1000    (For multi-volume operations)

Catalog to use if other than Default System Catalog:
   Catalog name     ===>
   Catalog password ===>              (If catalog is password protected)

Display confirm delete   ===> Y       (Y=yes, N=no)
```

Field Descriptions

OPTION : To select a VTOC option, enter one of the following option codes:

I : Lists volume information. Corresponds to the File-AID/Batch VTOCINFO function.

M : Maps VTOC entries in pack location sequence. This option displays the physical structure of a volume and corresponds to the File-AID/Batch VTOCMAP function.

BLANK : Lists VTOC entries in dataset name sequence. This option displays a list of dataset names and corresponds to the File-AID/Batch VTOCDSN function.

Each option requires you to specify the volume or unit to be processed.

Volume Selection Information:

Specify a Volume serial or a Unit name. The three volume-selection parameters can be used singly or in combination to specify a specific volume or a range of volumes. Multi-volume processing is specified with combinations of values in the Volume serial, Unit name, or Volume status fields.

Volume serial : Specify a volume ID or pattern volume ID to restrict the search to one or more volumes.

The value in this field can have either a unique six-character name or a mask value. You can enter up to six volume serial numbers; separate each by a blank or a comma. A mask of less than six characters that ends in either an asterisk (*) or a blank is also valid. Up to 42 characters of masks can be entered in the Volume serial field.

Unit name : Specify a generic volume to restrict the search to one or more unit types.

Up to ten values can be specified in this field; separate each value by either a blank or a comma. Mask values are not allowed.

The File-AID VTOC utility processes unit names as defined in the Eligible Device Table (EDT). File-AID does not find unit names that are not defined in the EDT.

Volume status : Specify one of the following values to restrict the search to volumes having the specified attributes:

PUB - Public

PRV - Private

STG - Storage

BLANK - Allow any one of the three values.

Generic Search Function:

The generic search function limits processing to dataset names that match the specified mask value. The value specified in the Search name field controls the criteria used to select datasets from the VTOCs. File-AID displays only datasets that match the search name value.

Search dataset name : Specify the Search dataset name with explicit characters or a pattern dataset mask (fully qualified, no quotes) to define the dataset names to include in the list. A pattern dataset mask or name consists of explicit characters or a combination of explicit and pattern characters. The rules used for specifying a Search dataset name are similar to those used in ISPF/PDF's Dataset List Utility. See "Pattern Dataset Names" on page 2-14.

Max number of names : Specify the maximum number of datasets to select when searching multiple volumes. Values from 1 to 65532 are valid in this field. Your actual maximum is limited by your logon region size.

Catalog to use if other than Default System Catalog:

Catalog name : Specify the name of the catalog that contains entries for the volume being processed. This name must be specified in order to perform additional functions, such as Show, Delete, Rename, etc., on datasets that cannot be found by a catalog search beginning at the master catalog.

Catalog password : Specify the catalog password if the catalog is password protected. If the datasets will be processed through a catalog that can be found with a search beginning at the master catalog and that catalog is password protected, you may specify the password and leave the Catalog name field blank. If the password is omitted, you are prompted for it as required.

Display confirm delete: : Specifies whether the Confirm Delete screen is displayed when deleting datasets. Valid entries are Y (Yes) and N (No).

The value specified in the Display confirm delete field is used in conjunction with the D (delete) line command.

When this field is set to Y (Yes), File-AID displays either the Confirm Dataset Delete screen (Figure 6-7 on page 6-13) or the VSAM Confirm Dataset Delete screen (Figure 9-17 on page 9-24), depending on the type of dataset being deleted.

Commands

File-AID permits the use of line commands on a list of dataset names displayed by the VTOC utility. Table 11-1 lists the available line commands.

Note: C, D, F, and R line command are not supported for multi-volume datasets.

Table 11-1. VTOC Utility Line Commands

Command	Description	Limitations
B	Browse	Sequential, PDS
E	Edit	Sequential, PDS
R	Rename	All access methods
C	Catalog	All non-VSAM access methods
U	Uncatalog	All non-VSAM access methods
D	Delete	All access methods
M	Modify	VSAM
I	Display information	All access methods
S	Display information--short	All access methods
F	Free unused space	Sequential, PDS, BDAM
1	File-AID Browse	All access methods
2	File-AID Edit	All access methods
6	File-AID Search/Update utility	All access methods

The FIND, LOCATE, and P (Print) primary commands can be used on VTOC utility lists.

Printing VTOC Lists

VTOC lists are printed by using the P command. The P (Print) command calls the File-AID print facility to write the list to SYSOUT. SYSOUT is then released for printing. The print facility either uses the values set in the print parameter default options discussed in "Print Parameters" on page 3-8, or displays a print values prompt screen that can be modified (Figure 3-5 on page 3-8).

Note: When printing VTOC lists, the print command is **P** (not **PRINT**) If the PRINT command is entered, ISPF intercepts the command and copies the physical screen image to your ISPF/PDF list dataset.

Volume List Screen (I)

The Volume List screen, shown in Figure 11-2, displays information such as space usage for single or multiple volumes. It does not show lists of datasets; the lists are displayed by entering the S or M line commands as described in "Line Commands" on page 11-4.

The Volume List screen is displayed by selecting option I on the VTOC Utility screen. A search dataset name mask can be specified. However, the volumes are displayed on the list whether or not they contain any datasets that match the mask. Only by selecting the volume for display (line commands S or M) will the datasets be shown and counted.

The top line of the Volume List screen shows the volume selection parameter values that were specified in the VTOC Utility screen, and the number of volumes in the displayed list. The volume information is displayed in columns.

Line Commands

Two line commands are valid on this display screen:

S : Displays a dataset list for the selected volume in dataset name sequence (see Figure 11-3 on page 11-5).

M : Displays a dataset list for the selected volume in volume-location sequence (see Figure 11-4 on page 11-7).

Figure 11-2. Volume List Screen

```
File-AID - Volume list for VOLSER=TSO00--------------------- 10 VOLUMES LISTED
COMMAND ===>                                                  SCROLL ===> CSR
  --- V O L U M E ---  %   --- V T O C ---    ------------ F R E E ------------
  Serial type   stat used  size %used INDX    DSCB'S  Cyls  (Max) Tracks  (Max)
  TSOD01  3380   STG  97    29    32    Y      1042      7     3     346    56
  TSOD02  3380   STG  97    29    37    N       972      3     3     342    48
  TSOD03  3380   STG 100    29    31    N      1059      0     0      31     4
  TSOD04  3380   STG  99    29    29    N      1086      3     2     167    48
  TSOD05  3380   PRV  96    29    22    N      1200     33    32     525   493
  TSOD06  3380   STG 100    29    13    N      1340      0     0      33     3
  TSOD07  3350   PRV  86    29     7    N      1270     73    49    2352  1482
  TSOD08  3350   PRV  58    29     7    N      1269    227   164    7073  4924
  TSOD09  3380   STG  59    29     8    N      1419    356   355    5422  5325
  TSOD10  3380   STG  76    29    14    N      1325    209    70    3227  1050
****************************** BOTTOM OF DATA  ********************************
```

Field Descriptions

Volume Information:

Serial : Volume serial number.

Type : Volume device type.

Stat : Status of the volume: PUB (public), PRV (private), or STG (storage).

% Used : Percent of volume currently in use.

VTOC Information:

Size : VTOC size in tracks.

% Used : Percent of VTOC currently in use.

INDX : Indicates whether VTOC is indexed (Y) or not (N).

Free Space Information:

DSCB'S : Free dataset control blocks.

Cyls : Free cylinders.

(Max) : Maximum contiguous free cylinders.

Tracks : Free tracks.

(Max) : Maximum contiguous free tracks.

Utility VTOC List Screen — Dataset Name Sequence

The Utility VTOC List screen, shown in Figure 11-3, lists the volumes in dataset name sequence. The screen is scrollable. If no dataset name matches the specified name, File-AID displays the message: **NO DATASET FOUND** in the upper-right corner of the Utility VTOC List screen.

The Utility VTOC List screen — dataset name Sequence is displayed by entering the **S** line command to the left of a volume on the Volume List screen. Entering the **M** line command on the Volume List screen displays the VTOC List screen — volume-location sequence.

Note: The sequence of the list does not appear in the title of Utility VTOC List screen.

Figure 11-3. Utility VTOC List Screen - Dataset Name Sequence

```
File-AID - Utility VTOC list for TSOI03 (3380) ---------- 442 DATASETS LISTED
COMMAND ===>                                               SCROLL ===> PAGE
VTOC:     29 Tracks  (  29 % used)   1088 Free DSCB'S           442 Datasets
VOL:   13290 Tracks  (  98 % used)     15 Tracks/cylinder         15 ALT Tracks
FREE:      7 Cylinders (MAX= 7)       234 Tracks (MAX= 105)       13 Free Xtnts
 --------- D A T A S E T   N A M E ---------- ORG   Trks %Used XTS=  Status
 CSDDATA                                      VS      15    ?     1
 CSDINDEX                                     VS       1    ?     1
 XX.YY.ATTENDS.APROD                          PO      90   90     2
 XX.YY.ATTENDS.JCL                            PO       5   20     1
 XX.YY.ATTENDS.OBJECT                         PO     102   45     1
 XX.YY.JCL                                    PO      13   38     1
 XX.YY.PROD.ISPMLIB                           PO       2   50     1
 XX.YY.PROD.STTDDDD                           PO      45   84     1
 XX.YY.R501.PROD.LOAD                         PO       3   67     1
 XX.YY.R501.PROD.SOURCE                       PO      10   80     1
 XX.YY.R502.PRODPDS                           PS      60   90     1
 XX.YY.R502.TREPORT                           PO      15   60     1
 XX.YY.R503.MXA.STTDDDD                       PO      42   19     1
 XX.YY.R513.PRODPDS                           PS      60   98     1
 XX.YY.R520.PRODOBJ                           PS     135   97     1
 XX.YY.SAMPLES                                PO      58   40     1
 XX.YY.TELEX                                  PO      15   20     1
 XX.YY.TEST.VAL                               PO      20   40     1
```

The top line of the Utility VTOC List screen displays the disk pack name with the type (in parentheses), and the number of datasets in the list. Volume information is displayed in the next three lines, which begin with the headings: VTOC, VOL, and FREE. A fourth volume information line is displayed if a generic search is specified. The fourth line displays the message:

```
Selected Datasets: xxxx Tracks, using yy % of volume
```

where xxxx is the number of tracks used, and yy is the percentage of the volume used.

Dataset information is organized in columns below the volume information.

If required, scroll down the dataset list to the desired dataset. Table 11-1 on page 11-3 lists the line commands that you can enter on a list of dataset names.

Press END (PF3) to return to the VTOC Utility screen.

Field Descriptions

The following list describes the fields on the Utility VTOC List screens (Figure 11-3 on page 11-5 through Figure 11-7 on page 11-10):

Disk Pack Information:

VTOC : VTOC data in the following categories:

Tracks - Size of the VTOC in tracks

%Used - Percent of VTOC space used

Free DSCBs - Number of unused DSCBs remaining in VTOC

Datasets - Number of datasets on disk pack.

VOL : Volume data in the following categories:

Tracks - Size of the volume in tracks

%Used - Percent of the volume space used

Tracks/Cylinder - Number of tracks per cylinder for disk pack

Alt Tracks - Number of unused alternate tracks on disk pack.

FREE : Free space data in the following categories:

Cylinders - Number of free cylinders remaining on disk pack

Max - Maximum contiguous free cylinders

Tracks - Number of free tracks remaining on disk pack

Max - Maximum contiguous free tracks

Free Xtnts - Number of free extents remaining on disk pack.

Dataset List Information:

CCCC-HH : Starting cylinder and head number **(option M only)**

DATASET NAME : Name of the dataset

ORG : Organization of the data set using the following codes:

DA - BDAM

FS - Free space

IS - ISAM

LS - Lost space

PO - Partitioned

POE - Partitioned Extended (PDS/E)

PS - Physical sequential

PSC - Physical sequential Extended Compressed

PSE - Physical sequential Extended

VS - VSAM

VSC - VSAM Extended Compressed

VSE - VSAM Extended

VP - VTOC pointer

VT - VTOC

TRKS : Size of this extent in tracks

% USED : Percent of space used, rounded up **(option I only)**

XTS= : Number of extents used **(option I only)**

Volume : Volume of multivolume lists **(option BLANK only)**

XofY : Extent number and the total number of extents

Status : Dataset action messages (cataloged, renamed, deleted, etc.)

Map VTOC Entries in Pack Location Sequence (M)

The Map VTOC entries in pack location sequence function (option M) shows a physical display list of all contents on the volume. In addition to the datasets and their extents, option M also displays the VTOC, its pointer, and lost or free space.

Because this option displays information by its physical sequence on a volume, it can only display entries of a single disk pack.

Enter an M in the OPTION field and specify a single volume number in the Volume serial field on the VTOC Utility screen. When you press Enter, File-AID displays the physical structure of the disk pack on the Utility VTOC List screen as shown in Figure 11-4.

To process a generic search and display the physical structure of a disk pack, specify a search name on the VTOC Utility screen. Then, only the datasets matching the search mask (pattern dataset name) are listed on the Utility VTOC List screen.

Figure 11-4. Utility VTOC List Screen - Volume-Location Sequence

```
File-AID - Utility VTOC list for TSOI01 (3380) ---------- 568 DATASETS LISTED
COMMAND ===>                                                SCROLL ===> CSR
VTOC:     29 Tracks   (  31 % USED)   1053 Free DSCB'S          471 Datasets
VOL:   13290 Tracks   (  98 % USED)     15 Tracks/cylinder        15 ALT Tracks
FREE:      6 Cylinders (MAX= 2)        219 Tracks (MAX= 36)       26 Free Xtnts
 CCCC-HH -------- D A T A S E T   N A M E --------- Org  Trks   XofY  Status
 0000 00 VTOC POINTER                                VP     1   1   1
 0000 00 TSOID01.RENAME                              PS     0   0   0
 0000 01 VTOC                                        VT    29   1   1
 0002 00 Z9999994.VSAMDSPC.T9B7E547.T0AC0772         VS   225   1   1
 0017 00 Z9999992.VSAMDSPC.T9B7E57B.TE2F842E         VS   450   1   1
 0047 00 VSAMDSET.T8B9C6D0.DFD84065.T96FEE05.T8B9C6 VS    15   1   1
 0048 00 VSAMDSET.TFA4FB80.DFD83339.T968C33E.TFA4FB VS    15   1   1
 0049 00 VS.TSOID01.ESDS.DATA                        VS    15   1   1
 0050 00 VSV.CICS.EOF.REPTFILX.DATA                  VS    15   1   1
 0051 00 VS.CICS.TEST.MACLIB                         PO    15   1   1
 0052 00 VSV.CICS.PRN.REPTFILX.DATA                  VS    15   1   1
 0053 00 VSV.CICSJ.REPTFILX.DATA                     VS    15   1   1
 0054 00 VSV.CT.VSAM.TEMPKHM.DATA                    VS    15   1   1
 0055 00 VSAMDSET.TD3EC070.DFD84080.T97115D5.TD3EC0 VS    15   1   1
 0056 00 VS.AA.R503.TREPORT                          PO    15   1   1
 0057 00 TSOID01.OFILPARM                            PS     1   1   1
 0057 01 VSV.CICSJ.R161.RSD.INDEX                    VS     1   1   1
 0057 02 TSOID01.OFILPARM                            PS     1   1   1
```

The top line of the Utility VTOC List screen displays the disk pack name and type (in parentheses), and the number of datasets in the list. Information about the disk pack contents is shown in the next three lines, entitled VTOC, VOL, and FREE. The dataset list area of the screen shows the datasets in the volume.

If the Search dataset name field was specified, the displayed list matches the specified name. The dataset list area is organized in columns. “Field Descriptions” on page 11-6

describes the information displayed on the screen. If no dataset name matched the specified name, File-AID displays the message: **NO DATASET FOUND** in the upper-right corner of the VTOC Utility screen.

Overlapping Extents and Lost Space

The File-AID VTOC utility allows you to map a DASD device online showing the datasets and free space extents in ascending CCC-HH order. Look at this information as a snapshot of the device's VTOC; that is, a picture of the VTOC at the time File-AID processes it. File-AID processes the VTOC without issuing enques while collecting the extent information.

After collating the extents into ascending order, File-AID formats the display table and checks for LOST SPACE. The next dataset/free space extent location is checked against the last dataset/free space ending location and File-AID notes any extent overlaps (OVERLAPPING EXTENTS) or gaps (LOST SPACE).

An area on a disk pack is considered "lost" when it is unaccounted for in the VTOC. This area physically exists, but is not recognized by the VTOC as belonging to a file or free space. The File-AID VTOC Utility recognizes this condition and flags it as lost space with the message: *** * * L O S T S P A C E * * *** in the DATASET NAME area of the Utility VTOC List screen. When this message is displayed, specify **FIND L O S T** in the COMMAND field and press Enter. File-AID positions the display to the first lost space area. Figure 11-5 shows you this display.

Figure 11-5. Utility VTOC List Screen for Lost Space and Free Space

```
File-AID - Utility VTOC list for TSOI01 (3380) -------------- ROW 271 OF 568
COMMAND ===>                                                  SCROLL ===> CSR
VTOC:     29 Tracks   (  31 % USED)   1053 Free DSCB'S          471 Datasets
VOL:   13290 Tracks   (  98 % USED)     15 Tracks/cylinder       15 ALT Tracks
FREE:      6 Cylinders (MAX= 2)        219 Tracks (MAX= 36)      26 Free Xtnts
 CCCC-HH -------- D A T A S E T   N A M E --------- Org  Trks   XofY  Status
 0696 01 * * * L O S T   S P A C E * * *            ??     4   ?   ?  >UNACT
 0696 05 VS.TEST.MAPLIB                             PO    10   1   1
 0697 00 VSV.CICSS.REPTFILX.DATA                    VS    15   1   1
 0698 00 CVSCOB2.COB2LIB                            PO    50   1   1
 0701 05 VS.AA.R502.MXA.SORCMAC                     PO    38   1   1
 0703 13 TSOID01.X.IBMDFILE                         PS    20   9  16
 0705 03 TSOID03.X.IBMDFILE                         PS    16  13  16
 0706 04 TSOID01.RRC.SOURCE                         PO    36   1   1
 0708 01 * * * F R E E   S P A C E * * *            FS    30   1   1
 0708 10 VS.SNUB.PROD.MACLIB                        PO    34   1   1
 0710 14 XX.YY.LOAD.TEST                            PO    16   1   1
 0712 00 VSV.CICSR.ERL.REPTFILX.DATA              VS    15   1   1
 0713 00 TSOID01.TEST.JANEPDS                       PO    33   1   1
 0715 03 TSOID03.CALL.BKLOG                         PS    11   1   1
 0715 14 TSOID01.FIND.MACROS                        PO     1   1   1
 0716 00 VSV.XX.TEST.TEMPRCB.DATA                   VS    15   1   1
 0717 00 TSOID01.YYY.TREPORT                        PO    26   1   1
```

When a lost space area is displayed on the Utility VTOC List screen, the STATUS column displays the message: **>UNACT** to indicate that this area on the disk pack is currently unaccounted for.

You can find free space entries by entering: **FIND F R E E** in the COMMAND field of the Utility VTOC List screen.

Enter the RFIND command to scroll the display to the next free space area.

If required, scroll down the dataset list to the desired dataset. Table 11-1 on page 11-3 lists the line commands that you can enter on a list of dataset names.

Press END (PF3) to return to the VTOC Utility screen.

Example

Search volume TSOI01 for the location and extents of all datasets on the volume with names ending with SOURCE. Only datasets that match the search dataset name mask value are shown.

Enter M in the OPTION field, TSOI01 in the Volume serial field, and +.SOURCE in the Search dataset name field on the VTOC Utility screen.

When you press Enter, File-AID scans the indicated disk pack VTOC and lists only the dataset names with SOURCE as a suffix on the Utility VTOC List screen as shown in Figure 11-6.

Figure 11-6. Utility VTOC List Screenfor Source Datasets - Volume-Location Sequence

```
File-AID - Utility VTOC list for TSOI01 (3380) ----------- 41 DATASETS LISTED
COMMAND ===>                                                SCROLL ===> CSR
VTOC:     29 Tracks   (  31 % used)   1053 Free DSCB'S           19 Datasets
VOL:   13290 Tracks   (  98 % used)     15 Tracks/cylinder       15 ALT Tracks
FREE:      6 Cylinders (MAX= 2)        219 Tracks (MAX= 36)      26 Free Xtnts
Selected Datasets:  2380 Tracks, using  18 % of volume
 CCCC-HH -------- D A T A S E T   N A M E --------- Org  Trks   XofY  Status
 0152 00 TSOID01.TEST.SOURCE                         PO   390   1   2
 0234 00 TSOID01.CMS.SOURCE                          PO   270   1   3
 0286 00 TSOID01.MAVEN.SOURCE                        PO    45   1   1
 0299 00 XX.CP.R321.SOURCE                           PO   345   1   1
 0338 00 TSOID02.X.SOURCE                            PO   150   1   1
 0348 00 XX.RCB.R40.SOURCE                           PO    75   1   5
 0354 00 XX.TEST.PROD.SOURCE                         PO   135   1   1
 0416 00 XX.DKS.SOURCE                               PO    60   1   1
 0428 00 XX.YYY.SOURCE                               PO    60   1   1
 0442 00 TSOID01.JNW.SOURCE                          PO    10  14  16
 0442 10 TSOID01.XXX.SOURCE                          PO    10   8  16
 0443 05 TSOID01.JNW.SOURCE                          PO    10   9  16
 0500 10 TSOID03.MSD.SOURCE                          PO    61   1   1
 0548 12 TSOID07.JNW.SOURCE                          PO   162   1  16
 0594 14 XX.TEST.BKUP.SOURCE                         PO   115   1   1
 0622 03 TSOID01.JNW.SOURCE                          PO    10  15  16
 0623 06 TSOID03.TEST.SOURCE                         PO    78   1   1
```

The format of the display is the same as that of a nongeneric search. However, the list now shown is a partial list of the disk pack. Notice that the DATASET NAME field is shown and the list does not indicate free space. Press END (PF3) to return to the VTOC Utility screen.

List VTOC Entries in Dataset Name Sequence (BLANK)

The List VTOC entries in dataset name sequence function (option BLANK) displays a list of dataset names from single or multiple disk packs. The pack information at the top of the screen does not scroll away, and line commands are allowed.

Leave the OPTION field blank, and specify a volume or multiple volumes in the Volume serial, Unit name, and/or Volume status fields on the VTOC Utility screen. Optionally, specify a Search Dataset name. When you press Enter, File-AID displays the Utility VTOC List screen as shown in Figure 11-7 on page 11-10.

To process a generic search and display all matching datasets in dataset name order, specify a search name on the VTOC Utility screen. When a search name is specified, only the datasets matching the mask are listed on the Utility VTOC List screen. The VTOC list can be generated from a single or multiple disk packs.

Figure 11-7. Utility VTOC List Screen - Dataset Name Sequence

```
File-AID - Utility VTOC list for TSOI01 (3380) ---------- 471 DATASETS LISTED
COMMAND ===>                                               SCROLL ===> CSR
VTOC:     29 Tracks  (  31 % used)   1053 Free DSCB'S          471 Datasets
VOL:   13290 Tracks  (  98 % used)     15 Tracks/cylinder        15 ALT Tracks
FREE:      6 Cylinders (MAX= 2)       219 Tracks (MAX= 36)       26 Free Xtnts
Selected Datasets:     50 Tracks, using  0 % of volume
 --------- D A T A S E T   N A M E ---------- ORG   Trks %Used XTS=  Status
 ACFSO.OFILPRMF                                PS       1    0     1
 XX.AMODGEN                                    PO     199   92     1
 XX.CALLS                                      PS       6  100     2
 XX.TEST.BKUP.SOURCE                           PO     115   93     1
 XX.TEST.DOS.BKUP.INSTALL                      PO      24   50     1
 XX.YY.D1267.DUMP                              PS     315   97     1
 XX.YY.FIX                                     PO      20  100     1
 XX.YY.INSTALL                                 PO      86   97     1
 XX.YY.LOG                                     PS      30   87     1
 XX.YY.PROD.ISPPLIB                            PO       5  100     1
 XX.YY.R502.MXA.LOAD                           PO      75   92     1
 XX.YY.R502.MXA.SORCMAC                        PO      38   97     1
 XX.YY.R503.TREPORT                            PO      15   60     1
 XX.YY.R520.MXA.ISPPLIB                        PO       6   67     1
 XX.YY.R520.MXA.OBJECT                         PO     129   99     1
 XX.YY.R520.MXA.TEST.FILE1                     PS      41  100     1
 XX.YY.SALES.DUMPFILE                          DA      60  100     1
 XX.YY.TEST.DUMPFILE                           DA      90  100     1
```

The top line of the Utility VTOC List screen displays the disk pack name and type (in parentheses), and the number of datasets in the list. Information about the disk pack contents is shown in the next three lines, entitled VTOC, VOL, and FREE.

The dataset list area of the screen shows the datasets in the volume. If the Search dataset name field was specified, the displayed list matches the specified name.

If no dataset name matched the specified name, File-AID displays the message: **NO DATASET FOUND** in the upper-right corner of the VTOC Utility screen.

"Field Descriptions" on page 11-6 describes the information displayed on the screen. The screen is scrollable. Enter line commands to the left of the dataset name. See "Commands" on page 11-3 for a table of commands. Use the END command (PF3) to return to the VTOC Utility screen.

Example

Display datasets that end in CNTL and reside on any storage class volume beginning with volume name TSO.

Leave the OPTION field blank and specify TSO in the Volume serial field and **STG** in the Volume status field on the VTOC Utility screen. In this case, TSO represents the first three characters of the volume IDs to be searched.

Conversely, you can enter the generic unit name of the volumes you wish to search in the unit name field (SYSDA, for example) rather than a VOL mask. Specify +.CNTL in the Search dataset name field and 33 in the Max number of names field. When you press Enter, File-AID displays the VTOC Dataset List screen as shown in Figure 11-8 on page 11-11.

Figure 11-8. VTOC Dataset List Screen - Multi-Volume Dataset Search

```
File-AID - Dataset list for VOLSER=TSO STATUS=STG ---------33 DATASETS LISTED
COMMAND ===>                                                 SCROLL ===> CSR
Datasets selected:    33 , using      960 Tracks
  --------- D A T A S E T   N A M E ---------- Org   Trks %used Volume  Status
  AA.YY.R51.CNTL                                PO       2   50  TSOI04
  AA.YY.R52.CNTL                                PO      15  100  TSOI02
  BB.DLE.CNTL                                   PO      19   95  TSOI02
  BB.JAM.CNTL                                   PO      45   58  TSOI04
  BB.JAM.TEST.CNTL                              PO      30   33  TSOI02
  TSOID01.JOB.CNTL                              PO       2   50  TSOI02
  TSOID03.CNTL                                  PS       1  100  TSOI03
  TSOID07.DLP.CNTL                              PO       4   50  TSOI04
  TSOID08.LDG.CNTL                              PO       4   50  TSOI02
  TSOID01.X.CNTL                                PO      90   58  TSOI03
  TSOID01.TEST.CNTL                             PO      15   13  TSOI02
  TSOID01.TRW.CNTL                              PO      18   61  TSOI02
  TSOID01.X.CNTL                                PO      58   55  TSOI03
  TSOID03.X.CNTL                                PO       4   50  TSOI04
  TSOID03.JHM.CNTL                              PO      20   55  TSOI02
  TSOID01.JHM.R520.CNTL                         PO      16   50  TSOI02
  TSOID01.GDG.CNTL                              PO      60   82  TSOI02
  TSOID01.JNW.CNTL                              PO      50   54  TSOI02
  TSOID01.TIME.CNTL                             PS       1  100  TSOI05
  TSOI050.X.CNTL                                PO      16   50  TSOI05
```

The datasets on the VTOC Dataset List screen are listed in alphabetical sequence, all have a suffix of CNTL. The VOLUME column on the right side of the display indicates the disk pack on which the dataset resides. For multi-volume searches, the length of the list is controlled by the value in the MAX NUMBER OF NAMES field.

The DATASETS SELECTED field provides the number of datasets matching the selection criteria and the total amount of space allocated for these datasets.

Chapter 12. Interactive Utility (3.8)

The Interactive utility function processes many of the File-AID/Batch commands at a terminal. This function can be used to verify the logic of a batch job before it is submitted. It also provides processing that is not available through the File-AID/SPF extended utilities screens.

Note: The Interactive Utility function is available only at installations with File-AID/Batch.

Interactive Utility supports the COPY, DROP, DUMP, LIST, PRINT, SPACE, TALLY, and UPDATE functions and parameters of File-AID Batch and adds a BROWSE function. It does not support the APRINT, COMPARE, CONVERT, FPRINT, REFORMAT, RLPRINT, SCPRINT, USER, VPRINT, VTOCDSN, VTOCINFO, VTOCMAP, and XRPRINT functions and parameters.

Unlike File-AID/Batch, the Interactive utility does not support output dataset creation. If used, output datasets must exist before the Interactive Execution function is selected.

Because this function executes the File-AID/Batch product, processing is specified by control statements, which are also called control cards. Control statements are either entered on a screen or stored in a dataset. With either method, the format is identical to a batch job except that the dataset identifier ($$DDnn) is optional.

During execution, File-AID displays a message when a control statement error is found and identifies the exact location of the error. You can then take corrective action or use the END command (PF3) to cancel the function in error. Refer to the *File-AID/Batch Reference Manual* for specific control card coding rules and error messages.

To access the Interactive Utility function, select option number **8** on the File-AID Extended Utilities Menu, or as described in "Selecting Screens" on page 2-7. The Interactive Utility screen is displayed as shown in Figure 12-1 on page 12-2.

In addition, File-AID has an F38 recursive command that lets you recursively invoke the Interactive Utility function. You can enter this command from any File-AID screen with an OPTION or COMMAND field. You have the option of entering a dataset name as a parameter when specifying the F38 command. If no dataset name is supplied, File-AID uses a default of the last dataset accessed. When you invoke Interactive Utility in this way, use the END command (PF3) on the Interactive Utility screen, or the RETURN command (PF4) anywhere in the function to return to the screen from which you entered the F38 command. After the second session is completed, the original session is continued.

Interactive Utility Screen

The Interactive Utility screen contains four areas. Specify the input dataset in the Input Dataset Information area and the output dataset in the "TO" Dataset Information area. The Optional Control Dataset Information area is used to specify a dataset in which control statements are stored. The File-AID Run Options area lists processing option parameters.

Figure 12-1. File-AID Interactive Utility Screen

```
File-AID ------------------  Interactive Utility  ----------------------------
COMMAND ===>

Input Dataset Information:
   Dataset name               ===> FASAMP.EMPMAST
   Volume serial              ===>          (If not cataloged)


"TO" Dataset Information for Copy Functions:
   Dataset name               ===>
   Volume serial              ===>          (If not cataloged)
   Disposition                ===> OLD      (MOD or OLD)


Optional Control Dataset Information:
   Dataset name               ===>
   Volume serial              ===>          (If not cataloged)

File-AID Run Options:
   Allow File-AID prompting   ===> Y        (Y = Yes; N = No)
   Include record information ===> N        (Y = Yes; N = No)
   Replace like named members ===> Y        (Y = Yes, N = No)
Use ENTER to begin interactive mode; END to cancel function
```

Field Descriptions

Input Dataset Information:

Dataset name : Specify the dataset name. Use the naming conventions described in “Specifying a Dataset Name” on page 2-13.

You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. See “Pattern Dataset Names” on page 2-14 for a complete description.

Volume serial : If the dataset is not cataloged, specify the ID of the volume on which the dataset resides.

"TO" Dataset Information for Copy Functions:

If a COPY or DROP function is specified in the control statements, specify an output dataset.

Dataset name : Specify a valid name. The "TO" dataset must already exist.

Volume serial : If the dataset is not cataloged, specify the ID of the volume on which the dataset resides.

Disposition : Specify a value of **OLD** if the dataset is to be replaced. Specify a value of **MOD** if the dataset is to be extended.

Optional Control Dataset Information:

If the control statements are stored in a dataset, specify the control dataset name.

Note: Depending on your site's install options, a control dataset may be required if an output dataset is specified, or if the Update function is used.

Dataset name : Specify a valid name. The control dataset must have the following format:

- Sequential or PDS file
- Record length of 80
- Fixed block or unblocked

Volume serial : If the dataset is not cataloged, specify the volume ID in which the dataset resides.

File-AID Run Options:

Specify processing option values.

Allow File-AID prompting : Specifies whether File-AID pauses processing when an internal prompt point is reached. Specify a value of **Y** (Yes) to turn on prompting. When a prompt message is displayed, a response of GO must be made to continue. Specify a value of **N** (No) to not have processing pause at the prompt points.

Include record information : This parameter is used only with the Browse function. It allows information about each record to be shown with the data. Specify a value of **Y** (Yes) to show the information. Specify a value of **N** (No) to not show the information. See "Processing Parameters" on page 3-10 for more information on this parameter.

Replace like named members : This is used only when copying a PDS. If a member already exists in the output PDS, it can either be overlaid or not. Specify a value of **Y** (Yes) to overlay the member with new data. Specify a value of **N** (No) to not overlay the member. See "Processing Parameters" on page 3-10 for more information on this parameter.

Note: You may specify the RLM control parameter and override this option.

When you press Enter, File-AID displays the Control Statement screen, which is shown in Figure 12-2 on page 12-4. If a control dataset was specified in the Enter optional control dataset area, the results of the execution are immediately shown on the Control Statement screen. If a control dataset was not specified, File-AID waits for control statements to be entered on the Control Statements screen (shown in Figure 12-2).

Control Statements Screen

Specify the control statements on the screen either in a string or in sections. When all control statements are entered, enter the word **GO**.

Figure 12-2. File-AID Interactive Execution Control Statements Screen

```
                    FILE-AID    VL-8.8.0          RELEASE DATE: 04/06/01
  . . . .ENTER NEXT FUNCTION OR END
```

Note: Because this is an interactive process, no tutorial information is available for the Control Statement screen. ISPF facilities such as PF keys and scrolling are disabled.

The input dataset remains open during the execution of any non-update process. This feature allows processing of multiple actions on a specified dataset before ending execution.

If a function does not read through the end of the file, the file is not closed. Instead, the next function begins after the last processed record. This feature aids in skipping over records to a certain point in the file. Any further processing to a dataset that has reached the end causes the dataset to be closed and reopened. Once reopened, the entire file can be processed again.

Messages on the screen prompt you for the next action, and indicate errors and completed actions. As in ISPF, three asterisks (***) indicate additional information awaiting display. Press Enter to display this information.

When execution of the current function is completed, enter the next one. When all processing is completed, enter **END** to stop interactive execution.

Stopping Processing

To stop processing during entry of control statements:

1. Press the Attn or PA1 key. File-AID then displays the message:

   ```
   REENTER LAST LINE OR CANCEL
   ```

2. Enter **CANCEL** to stop the function.

To stop an executing function before it completes processing:

1. Press the Attn or PA1 key. File-AID displays the message:

   ```
   ABOVE FUNCTION ENDED ON ATTENTION KEY
   ```

2. Either enter another function, or enter **END** to close all datasets and stop execution.

Continuing Processing

By default, File-AID prompts for the next input line after parameter entry by displaying the message:

```
ENTER CONTINUATION DATA OR GO
```

This message is displayed whether or not a comma followed the last entered parameter. Execution can then be started by entering **GO**.

To bypass the message, enter **,GO** (including the comma) after the last parameter on the control statement as follows:

```
DUMP IF=(10,EQ,C'16,14,37'),GO
```

In this example, File-AID executes the DUMP function immediately after you press Enter.

Chapter 13.
Batch Submit Utility (3.9)

The Batch Submit utility is a screen-driven process for creating and submitting batch jobs. Execute, input, output and control statements can be generated in a fill-in-the-blank format. This function is designed to operate with any batch product.

To select the Batch Submit utility, type the number **9** in the OPTION field of the File-AID Extended Utilities menu, or as described in "Selecting Screens" on page 2-7. When you press Enter, the Batch Submit Utility Job Statement screen is displayed as shown in Figure 13-1 on page 13-2.

In addition, File-AID provides an F39 primary command that lets you recursively invoke the Batch Submit utility function. Enter the F39 command from any File-AID screen with an OPTION or COMMAND field. When you invoke the Batch Submit Job Statement screen in this way, use the END command (PF3) on the Job Statement screen, or use the RETURN command (PF4) anywhere in the Batch Submit function, to return to the screen from which you entered the F39 command. After the second session is completed, the original session is continued.

Jobcard Screen

The Batch Submit Utility Jobcard screen is the entry point for batch JCL creation. It is the first of a series of screens that File-AID displays as you complete the information required to submit a background job. This chapter describes the fields to be completed on each screen, beginning with the Batch Submit Utility jobcard screen.

Figure 13-1. Batch Submit Utility jobcard Screen

```
File-AID ------------------- Batch Submit Utility ---------------------------
COMMAND ===>

JCL for Background Execution:

    JOBCAT DSN              ===>
    JOBLIB DSN              ===>


JOB Statement Information:

  ===> //USERID9R JOB (9999,ABCD,1,5),"NAME 1",CLASS=A,TIME=1,
  ===> //         MSGCLASS=A,NOTIFY=USERID9
  ===>
  ===>

Use ENTER to continue
```

Field Descriptions

JOBCAT DSN : Optional: Specify a valid dataset name to specify a catalog other than the system default catalog. Use the naming conventions described in "Pattern Dataset Names" on page 2-14 for all background submission dataset specifications.

JOBLIB DSN : Optional: Specify a valid dataset name to specify a load library which contains the batch program to execute.

JOB Statement Information : Specify jobcard information below the prompt while following all of the standard JCL jobcard rules plus any installation requirements. Once entered, the jobcard is saved from session to session. ISPF assumes that the first // card contains the jobname.

When you press Enter, File-AID displays the Batch Submit Utility EXEC Statement Screen shown in Figure 13-2.

EXEC Statement Screen

Figure 13-2. Batch Submit Utility EXEC Statement Screen

```
File-AID ------------------- Batch Submit Utility ---------------------------
COMMAND ===>

EXEC JCL statement:

   User control cards       ===> N           (Y = Yes; N = No)
   Program name             ===> FILEAID
   EXEC parms               ===>
   Step name                ===> STEP01
   STEPCAT                  ===>
   STEPLIB                  ===>
   SYSOUT class             ===> *
```

Field Descriptions

User control cards : Specify a value of **Y** (Yes) if the control statements are to be typed on the Batch Submit Utility Control Statement Entry screen (see Figure 13-5 on page 13-7). Specify a value of **N** (No) if the control statements are stored in a dataset to be specified on the Batch Submit Utility Control Statement screen (see Figure 13-6 on page 13-8).

The value in the User control cards field cannot be changed after you leave the Batch Submit Utility EXEC Statement screen. Verify the correct value in this field for all File-AID/Batch jobs.

Program name : Specify the name of the program to execute.

EXEC parms : Specify any parameters to be used by the program.

Step name : Specify the job step name.

STEPCAT : Specify the name of the catalog to use during execution of this step if other than the system default.

STEPLIB : Specify the name of the load library to use during execution of this step if other than the system default.

SYSOUT class : Specify the output destination.

When you press Enter, File-AID displays the Batch Submit Utility Input screen as shown in Figure 13-3.

Input Screen

Note: At least one input dataset must be specified on the Batch Submit Utility Input screen, or File-AID displays an error message and freezes this screen.

Figure 13-3. Batch Submit Utility Input Screen

```
File-AID --------------- Batch Submit Utility - Input -----------------------
COMMAND ===>

Input DD JCL statement:

    Verify dataset existence      ===> Y      (Y = Yes; N = No)
    Multiple input DD statements  ===> N      (Y = Yes; N = No)
    Concatenated input            ===> N      (Y = Yes; N = No)

      DDNAME        ===> DD01
      DSN           ===>
      DISP          ===> SHR
      VOL SER       ===>
      UNIT          ===>
      LABEL         ===>
```

Field Descriptions

Verify dataset existence : Specify a value of **Y** (Yes) to have File-AID verify that the input dataset name exists in the system. Specify of value of **N** (No) to have no verification of the dataset name.

Multiple input DD statements : Specify a value of **Y** (Yes) when more than one input dataset must be specified. When **Y** is specified, File-AID redisplays the Batch Submit Utility Input screen for each dataset. Specify a value of **N** (No) to not redisplay this screen.

Concatenated input : Specify a value of **Y** (Yes) when multiple input datasets are to be concatenated with the same DD name. When **Y** is specified, File-AID redisplays the Batch Submit Utility Input screen with the same DD name. Specify a value of **N** (No) when concatenation is not required.

DDNAME : Specify the input DD statement name.

DSN : Specify the input dataset name.

DISP : Specify a valid disposition value. The default value is SHR.

VOL SER : Specify the volume ID in which the input dataset resides if the dataset is not cataloged.

UNIT : Specify a valid device type.

LABEL : If required, specify a valid label clause.

When you press Enter, File-AID displays the Batch Submit Utility Output screen as shown in Figure 13-4.

Output Screen

The Batch Submit Utility Output screen is coded in the same way as an output file in JCL.

Figure 13-4. Batch Submit Utility Output Screen

```
File-AID -------------  Batch Submit Utility - Output  ------------------
COMMAND ===>

Output DD JCL Statement:

    Verify dataset existence      ===> Y      (Y = Yes; N = No)
    Multiple output DD statements ===> N      (Y = Yes; N = No)

      DDNAME        ===> DD010
      DSN           ===>
      DISP          ===> OLD
      VOL SER       ===>
      UNIT          ===>
      LABEL         ===>
    Space Information:
      UNITS         ===>            PRIMARY   ===>
      SECONDARY     ===>            DIRECTORY ===>
      OPTIONS       ===>
    DCB Information:
      RECFM         ===>            LRECL     ===>
      BLKSIZE       ===>            OPTCD     ===>
      DSORG         ===>            DEN       ===>
      RKP           ===>            KEYLEN    ===>
      BUFNO         ===>            TRTCH     ===>
```

Field Descriptions

Verify dataset existence : Specify a value of **Y** (Yes) to have File-AID verify that the output dataset name exists in the system. Specify of value of **N** (No) to have no verification of the dataset name.

Multiple output DD statements : Specify a value of **Y** (Yes) when more than one output dataset must be specified. When **Y** is specified, File-AID redisplays the Batch Submit Utility Output screen for each dataset. Specify a value of **N** (No) to not redisplay this screen.

DDNAME : Specify the output DD statement name.

DSN : Specify the output dataset name.

DISP : Specify the disposition value for the dataset to be processed.

VOL SER : Specify the volume ID in which the output dataset resides if the dataset is not cataloged.

UNIT : Specify a valid device type.

LABEL : If required, specify a valid label clause.

Specify values for the size of the output dataset below the SPACE Information prompt as follows:

UNITS : Specify a value of **TRKS** or **CYLS** to specify space units of tracks or cylinders, respectively. Enter a numeric value to specify the number of blocks.

PRIMARY : If required, specify numeric values in either tracks or cylinders.

SECONDARY : If required, specify numeric values in either tracks or cylinders.

DIRECTORY : For a PDS, specify a numeric value in blocks.

OPTIONS : Specify a valid JCL space option code.

Below the DCB Information prompt, specify values in the following data control block (DCB) fields according to standard JCL conventions:

RECFM : Specify the record format.

LRECL : Specify the logical record length.

BLKSIZE : Specify the block size.

OPTCD : Specify the option code.

DSORG : Specify the dataset organization.

DEN : Specify the tape density.

RKP : Specify the relative location of the key within the record.

KEYLEN : Specify the key length.

BUFNO : Specify the number of buffers.

TRTCH : Specify the 7-track tape recording technique.

If the User control cards field on the Batch Submit Utility EXEC Statement screen was set to **Y** and you press Enter, File-AID displays the Control Statement Entry screen as shown in Figure 13-5.

If the User control cards field was set to **N** and you press Enter, File-AID displays the Control Statement screen as shown in Figure 13-6 on page 13-8.

Control Statement Entry Screen

Figure 13-5. Batch Submit Utility Control Statement Entry Screen

```
File-AID ------------  Batch Submit Utility - Control  ------------------------
COMMAND ===>

Control Statements:

  1==>
  2==>
  3==>
  4==>
  5==>
  6==>
  7==>
  8==>
  9==>
 10==>
 11==>
 12==>
 13==>
 14==>
 15==>
 16==>
 17==>
 18==>
```

Field Descriptions

Control Statements : Below the prompt, type control statements in the syntax of the batch program being submitted. File-AID/Batch control statement syntax is discussed in the File-AID tutorials and the *File-AID/Batch Reference Manual*.

Press Enter when all control statements are typed. File-AID displays the Batch Submit Utility Submit Menu as shown in Figure 13-7 on page 13-9.

Control Statement Screen

The Batch Submit Utility Control Statement screen has the same format as the Batch Submit Utility Input screen. This screen allows you to specify a dataset containing existing File-AID/Batch control statements.

Figure 13-6. Batch Submit Utility Control Statement Screen

```
File-AID ------------  Batch Submit Utility - Control  ----------------------
COMMAND ===>

Control Input DD Statement:

    Verify dataset existence     ===> Y      (Y = Yes; N = No)
    Concatenated input           ===> N      (Y = Yes; N = No)

      DDNAME        ===> SYSIN
      DSN           ===>
      DISP          ===> SHR
      VOL SER       ===>
      UNIT          ===>
      LABEL         ===>
```

Field Descriptions

Verify dataset existence : Specify a value of **Y** (Yes) to have File-AID verify that the control dataset name exists in the system. Specify a value of **N** (No) to have no verification of the dataset name.

Concatenated input : Specify a value of **Y** (Yes) when multiple control datasets are to be concatenated with the same DD name. When **Y** is specified, File-AID redisplays the Batch Submit Utility Control screen with the same DD name. Specify a value of **N** (No) when no concatenation is required.

DDNAME : Specify the control DD statement name. The default is SYSIN.

DSN : Specify the control dataset name.

DISP : Verify a value of SHR or OLD.

VOL SER : Specify the volume ID in which the control dataset resides if the dataset is not cataloged.

UNIT : Specify a valid device type.

LABEL : If required, specify a valid label clause.

When you press Enter, File-AID displays the Batch Submit Utility Submit Menu as shown in Figure 13-7 on page 13-9.

Submit Menu Screen

Figure 13-7. Batch Submit Utility Submit Menu

```
File-AID ------------------- Batch Submit Utility ---------------------------
OPTION ===>

   JCL FOR JOB  TSOID01R  HAS BEEN CREATED.

        S - Submit generated JCL statements
        E - Edit generated JCL statements, using ISPF edit
        B - Browse generated JCL statements
        G - Generate JCL for a new job
        N - Generate another step within job stream
        X - Exit Background submission


JOB Statement information:

  ===>//USERID9R JOB (9999,ABCD,1,5),"NAME 1",CLASS=A,TIME=1,
  ===>//         MSGCLASS=A,NOTIFY=USERID9
  ===>//
  ===>/*
```

Field Descriptions

OPTION : To process the JCL, enter one of the following options. Selecting the **X** (Exit) option deletes the displayed JCL. To save the JCL, enter the **E** (Edit) option to create a new PDS member and store the JCL in it.

S - Submit the generated JCL

E - Edit the generated JCL

B - Browse the generated JCL

G - Generate JCL for a new job (repeat the submission process)

N - Add another step to this JCL (repeat the submission process)

X - Exit this process (delete the JCL).

Job Statement Information : The JCL displayed on the Batch Submit Utility submit menu contains the information entered on the Batch Submit Utility Jobcard screen, shown in Figure 13-1 on page 13-2.

Press Enter to process the selected option. When the option is executed, File-AID displays the message: **JCL FOR JOB xxxxxxxx HAS BEEN SUBMITTED** below the OPTION field of the Batch Submit Utility submit menu, where xxxxxxxx is the job number. Press END to exit the Batch Submit utility. You can save your JCL by entering the CREATE or REPLACE primary command when using option E (ISPF edit).

Chapter 14. XMLGEN (G)

The XMLGEN utility creates XML documents from existing files using COBOL or PL/I layout fields as the tag names. To select the XMLGEN utility, type the number **G** in the OPTION field of the File-AID Extended Utilities menu, or as described in "Selecting Screens" on page 2-7. When you press Enter, the XMLGEN Data File screen is displayed as shown in Figure 14-1.

XML Data File Specification

The XMLGEN Data File screen, shown in Figure 14-1, allows you to identify the data file information for File-AID to use to create the XML output.

Figure 14-1. XMLGEN Data File Specification Screen

```
File-AID --------------- XMLGEN Data File Specification -----------------------
COMMAND ===>


Specify Input Dataset:
  Dataset name    ===>
  Member name     ===>                     (Blank or pattern for member list)
  Volume serial   ===>

Specify Record Layout and XREF Information:
  Record layout usage      ===> S          (S = Single; X = XREF)
  Record layout dataset    ===> FASAMP.LAYOUTS
  Member name              ===> EMPLOYEE   (Blank or pattern for member list)
  XREF dataset name        ===> 'USERID9.FASAMP.XREF'
  Member name              ===>            (Blank or pattern for member list)

Specify Selection Criteria Information:    (E = Existing; T = Temporary;
  Selection criteria usage ===> N           M = Modify; Q = Quick; N = None)
  Selection dataset name   ===> FASAMP.SELECT
  Member name              ===>            (Blank or pattern for member list)
```

Field Descriptions

Specify Input Dataset:

Dataset name : Specify the dataset name. Use the naming conventions described in "Specifying a Dataset Name" on page 2-13. You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. See "Pattern Dataset Names" on page 2-14 for a complete description.

Member name : Specify the member name. You can leave this field blank or enter a pattern member name to display a list of members from which you can make a selection. A pattern member name or mask consists of explicit characters or a combination of explicit and pattern characters. See "Pattern Member Names" on page 2-19 for a complete description. Pattern names cannot be entered in both the Input dataset name and Member name fields at the same time.

Volume serial : Specify the volume serial of the direct access device that contains the dataset. This field is required only when the dataset is uncataloged.

Specify Record Layout and XREF Information:

Record layout usage : Specify one of the following values:

S - Single record layout.

X - XREF (record layout cross reference). Specify when more than one record layout is needed for a single dataset.

Record layout dataset : Specify the name of a dataset that contains the COBOL or PL/I record layout. This file is required when the Record layout usage field is S (single) or X (XREF).

You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Dataset Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description.

Member name : Specify the member name. You can leave this field blank or enter a pattern member name to display a list of members from which you can make a selection. A pattern member name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Member Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description. Pattern names cannot be entered in both the Dataset name and Member name fields at the same time.

XREF dataset name : Specify the name of a dataset that contains the record layout cross reference (XREF) members to use with multiple record type datasets. See the section entitled "Record Layout XREF Dataset" in Chapter 2 of the File-AID/MVS *Online Reference Manual*.

You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Dataset Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description.

Member name : Specify the member name. You can leave this field blank or enter a pattern member name to display a list of members from which you can make a selection. A pattern member name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Member Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description. Pattern names cannot be entered in both the Dataset name and Member name fields at the same time.

Specify Selection Criteria Information:

Refer to Chapter 16, "Selection Criteria (6)" for a complete description of selection criteria.

Selection criteria usage : Specify one of the following valid entries:

E - Use existing selection criteria. Enter a dataset name in the Selection dataset name field.

T - Create temporary selection criteria. File-AID displays the Temporary Selection Criteria Menu. Temporary selection criteria is not automatically saved. To retain temporary selection criteria use the SAVE primary command on the Selection Criteria Menu screen.

M - Modify existing selection criteria. Enter a dataset name in the Selection dataset name field.

Q - Quick selection criteria. File-AID displays the Unformatted Selection Criteria screen for you to enter selection criteria. Quick selection criteria is not automatically saved. Use the SAVE primary command to retain quick selection criteria.

N - (Default) None -- Do not use selection criteria.

Selection dataset name : Specify the name of the dataset containing existing selection criteria for options E and M.

You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Dataset Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description.

Member name : Specify the member name. You can leave this field blank or enter a pattern member name to display a list of members from which you can make a selection. A pattern member name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Member Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description. Pattern names cannot be entered in both the Dataset name and Member name fields at the same time.

After you have completed the fields on the XMLGEN Data File Specification screen, press Enter to continue. Use the END (PF3) to return to the File-AID Extended Utilities Menu.

XMLGEN Processing Options

The XMLGEN Processing Options screen, shown in, allows you to define processing and output options for your XML document.

Figure 14-2. XMLGEN Processing Options Screen

```
File-AID ------------  XMLGEN - Processing Options ----------------------------
COMMAND ===>

Specify Execution Options:
 Records to process       ===> ALL      (ALL or maximum number)
 Invalid field action     ===> H        (H = Hex; D = Data; S = Skip)


Specify XML Output Information:
 Dataset or path ===>
 Member name     ===>          (Blank or pattern for member list)
 Disposition     ===> NEW      (NEW; SHR; MOD; OLD)
 Volume Serial   ===>          (If dataset is not cataloged)


 Use ENTER to continue, END to cancel
```

Field Descriptions

Specify Execution Options

Records to Process : Specify the number of records from the input file to use when generating the XML document. Valid entries are ALL, or the numbers 0 - 99999. 0 is treated as "ALL".

Invalid field action : Specify how you want the XML document generator to process data fields that are invalid as defined by the record layout. Valid entries are:

- **H** Hex. Data is displayed in a hex dump format.
- **D** Data. Data is displayed exactly as it is in the file with no formatting.
- **S** Skip. Data portion of the field is omitted.

Specify XML Output Information

Use this section of the screen to identify the dataset into which you want to generate this XML document.

Dataset or path : Specify the dataset name or HFS pathname for the XML output.

Member name : If the dataset is partitioned you may specify a member name. If the dataset is partitioned and you do not specify a member, the PDS Processing Options (PPO) are displayed to enable you to generate a member list based on member names, ISPF statistics, and (optionally) selection criteria.

Disposition : The XML document dataset disposition may be NEW, SHR, MOD, or OLD. Specify a a valid disposition:

NEW - Allocate online a new file.

SHR - Other users may access the dataset.

MOD - Append data to the end of an existing file.

OLD - Overwrite an OLD file.

Volume serial : If the dataset is not cataloged, enter the Volume serial number.

After you have completed the fields on the XMLGEN Processing Options screen, press Enter to continue. Use the END (PF3) to return to the XMLGEN Data File Specification screen.

XMLGEN JCL Specification

The XMLGEN JCL Specification screen, shown in Figure 14-3, allows you to specify your JCL information and submit the job for processing.

Figure 14-3. XMLGEN JCL Specification Screen

```
File-AID ---------------- XMLGEN - JCL Specification  -------------------------
COMMAND ===>

JCL Information for Batch Processing:

 Sysout class    ===> R

JOB Statement Information:
 ===> //USERID9C JOB ('OFABAS8.8.ODEV',81,),'MACHLAY',
 ===> //        CLASS=U,MSGCLASS=R,NOTIFY=USERID9
 ===>
 ===>




Use JCL command to edit generated JCL
Use SUBMIT command to submit batch job
Use END to return to main XMLGEN panel without submitting job
```

Field Descriptions

On the JCL Specification screen you can enter the following commands:

JCL : File-AID generates the JCL to process the job and displays it on an edit screen, as shown in Figure 14-4.

SUBMIT : Submits the batch job.

CANCEL : Terminates the function.

The Generated JCL Edit screen, shown in Figure 14-4, is displayed by entering the JCL primary command on the XMLGEN - JCL Specification screen.

Figure 14-4. Generated JCL Edit Screen

```
File  Edit  Confirm  Menu  Utilities  Compilers  Test  Help
--------------------------------------------------------------------------------
EDIT       SYS01039.T132506.RA000.USERID9.R0121547         Columns 00001 00072
Command ===>                                                 Scroll ===> PAGE
****** ***************************** Top of Data ******************************
000001 //USERID9C JOB ('OFABAS8.9.ODEV',81,),'USER',
000002 //        CLASS=U,MSGCLASS=R,NOTIFY=USERID9
000003 //*  YOU ARE VIEWING JCL THAT FILE-AID 8.9 HAS GENERATED TO
000004 //*  PERFORM THE REQUIRED FUNCTION.
000005 //*
000006 //*  YOU CAN CHANGE THIS JCL IF DESIRED AND USE THE SUBMIT PRIMARY
000007 //*  COMMAND TO SUBMIT THE JOB. THE CREATE OR REPLACE PRIMARY COMMAND
000008 //*  CAN BE USED TO KEEP THIS JOBSTREAM FOR FUTURE USE.
000009 //*
000010 //*  USE THE END COMMAND TO EXIT WITHOUT SUBMITTING THE JOB.
000011 //*
000012 //JS10     EXEC PGM=FILEAID,REGION=6M
000013 //STEPLIB  DD  DISP=SHR,DSN=XXXXXXX.FA.V8R8M0.LOAD
000014 //SYSPRINT DD  SYSOUT=R
000015 //SYSLIST  DD  SYSOUT=R
000016 //DD01     DD  DSN=FASAMP.EMPLOYEE,
000017 //              DISP=SHR
000018 //DD010    DD  DSN=USERID9.FASAMP.NEWXML,
000019 //              DISP=OLD
000019 //DD01RL   DD  DSN=USERID9.FASAMP.LAYOUTS,
000019 //              DISP=SHR
000019 //SYSIN    DD  *
000019 $$DD01 XMLGEN  INVALID=HEX,OUT=O,LAYOUT=EMPLOYEE
000019 /*
000019 //
```

You can edit the generated JCL, submit it with the SUBMIT primary command, and save it by using the CREATE or REPLACE primary commands.

Chapter 15. Print (5)

The Print function enables you to print the following:

- Contents of a data file
- Record layout XREFs created with option 7
- Selection criteria created with option 6
- Record layouts
- Audit trails created when a file is edited in options 2 and 3.6.

The Print function initiates batch print jobs that are executed by File-AID/Batch. The format of the output is controlled by the Batch Installation Options described in "Tailoring File-AID/Batch" in the *File-AID Installation Guide*.

The Print Selection Menu, shown in Figure 15-1, provides access to the File-AID print functions. To access the Print Menu, select option **5** from the File-AID Primary Option Menu or enter the appropriate jump command (for example, =5) from any File-AID screen. See “Selecting Screens” on page 2-7.

This menu can be bypassed if you select a suboption (for example, 5.1) or enter a jump command (for example, =5.1). The Print Selection Menu can also be accessed with the **F5** recursive command. See “Recursive Commands” on page 2-5.

Figure 15-1. Print Selection Menu

```
File-AID ------------------  Print Selection Menu  ----------------------------
OPTION ===>

   1  Data File          - Print the contents of a data file:
                              in formatted mode using record layout
                              in vertical formatted mode using record layout
                              in three-line hexadecimal mode
                              in single-line character mode

   2  Record Layout XREF - Print the contents of a record layout XREF:
                              Print a record layout XREF
                              Print XREF with referenced record layouts

   3  Selection Criteria - Print the contents of selection criteria

   4  Record Layout      - Print a record layout in formatted mode

   5  Audit Trail        - Print the contents of an audit trail
```

To select a print option, type the selection number in the OPTION field and press Enter. Use the END (PF3), RETURN (PF4), or a jump command to exit the Print function.

Print Data File

The Print Data File screen shown in Figure 15-2 is displayed when you select option 1 from the Print Selection Menu. The contents of a data file can be printed in one of four modes: formatted (using a record layout), vertical formatted (using a record layout), character, or hexadecimal.

Figure 15-2. Print Data File Screen

```
File-AID  --------------------  Print Data File  ------------------------------
COMMAND ===>

Specify Print Information:
  Print format    ===>                      (F = Fmt;V = Vfmt;C = Char;H = Hex)
  Show            ===> F                    (Format; Number; Offset; or Picture)


Specify Print Dataset:
  Print dataset   ===> FASAMP.EMPLOYEE
  Member name     ===>                      (Blank or pattern for member list)
  Volume serial   ===>
  I/O exit name   ===>

Specify Record Layout and XREF Information:
  Record layout usage      ===> N          (S = Single; X = XREF; N = None)
  Record layout dataset    ===> FASAMP.LAYOUTS
  Member name              ===>            (Blank or pattern for member list)
  XREF dataset name        ===> FASAMP.XREF
  Member name              ===>            (Blank or pattern for member list)

Specify Selection Criteria Information:    (E = Existing; T = Temporary;
  Selection criteria usage ===> N           M = Modify; Q = Quick; N = None)
  Selection dataset name   ===>
  Member name              ===>            (Blank or pattern for member list)
```

Field Descriptions

Specify Print Information:

Print format : Specify the print format of the report.

F - Formatted mode using record layouts; similar to Edit formatted mode.

V - Vertical formatted mode using a record layout; similar to Edit vertical formatted mode.

C - Single-line character display format; similar to Edit character mode.

H - Three-line hexadecimal format; similar to Edit character mode, HEX on.

If you specify formatted (F), you must specify an S or an X in the Record layout usage field. If you specify vertical formatted (V), you must specify an S in the Record layout usage field.

Show : If you entered an F (Formatted) or V (Vertical Formatted) in the Print format field, enter one of the following:

F - Format displays the field length and current field format of the specified record layouts.

N - Number displays the system-assigned field numbers of the specified record layouts.

O - Offset displays the offset of each field from the beginning of record for the specified record layouts.

P - Picture displays a representation of the original data declaration for each elementary item in the specified record layouts.

Specify Print Dataset:

Print dataset : Specify the dataset name. Use the naming conventions described in "Specifying a Dataset Name" on page 2-13.

You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. See "Pattern Dataset Names" on page 2-14 for a complete description.

Member name : Specify the member name. You can leave this field blank or enter a pattern member name to display a list of members from which you can make a selection. A pattern member name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Member Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description. Pattern names cannot be entered in both the Dataset name and Member name fields at the same time.

Volume serial : If the dataset is not cataloged, enter the volume serial number of the disk or tape that contains it.

I/O exit name (optional) : If the I/O exit option has been installed, this input area is provided. See the *File-AID Installation Guide* or your system programmer for more information. I/O exit install options are:

NO : I/O exit name field is not presented.

YES : I/O exit name field is presented blank for entry of a site written I/O exit program name.

exitname : I/O exit name field is presented prefilled with the name of a site-written I/O exit program.

Specify Record Layout and XREF Information:

You must complete the Record Layout and XREF Information fields only if you specified an F (Formatted) in the Print Format field.

Record layout usage : Specify one of the following values:

S : Single record layout.

X : XREF (record layout cross reference). Specify when more than one record layout is needed for a single dataset.

N : None (default). No record layout.

Record layout dataset : Specify the name of a dataset that contains the COBOL or PL/I record layout. This file is required when the Record layout usage field is S (single) or X (XREF).

You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Dataset Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description.

Member name : Specify the member name. You can leave this field blank or enter a pattern member name to display a list of members from which you can make a selection. A pattern member name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Member Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description. Pattern names cannot be entered in both the Dataset name and Member name fields at the same time.

XREF dataset name : Specify the name of a dataset that contains the record layout cross reference (XREF) members to use with multiple record type datasets. See the section entitled "Record Layout XREF Dataset" in Chapter 2 of the File-AID/MVS *Online Reference Manual*.

Member name : Specify the member name. You can leave this field blank or enter a pattern member name to display a list of members from which you can make a selection. A pattern member name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Member Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description. Pattern names cannot be entered in both the Dataset name and Member name fields at the same time.

Specify Selection Criteria Information:

Refer to Chapter 16, "Selection Criteria (6)" for a complete description of selection criteria.

Selection criteria usage : Specify one of the following valid entries:

E : Use existing selection criteria. Enter a dataset name in the Selection dataset name field.

T : Create temporary selection criteria. File-AID displays the Temporary Selection Criteria Menu. Temporary selection criteria is not automatically saved. Use the SAVE primary command to retain temporary selection criteria.

M : Modify existing selection criteria. Enter a dataset name in the Selection dataset name field.

Q : Quick selection criteria. File-AID displays the Unformatted Selection Criteria screen for you to enter temporary selection criteria. You cannot save quick selection criteria.

N : (Default) None -- Do not use selection criteria.

Selection dataset name : Specify the name of the dataset containing existing selection criteria for options E and M.

You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Dataset Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description.

Member name : Specify the member name. You can leave this field blank or enter a pattern member name to display a list of members from which you can make a selection. A pattern member name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Member Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description. Pattern names cannot be entered in both the Dataset name and Member name fields at the same time.

After you complete the information on the screen, press Enter.

- If you specified an M or a T in the Selection criteria usage field, File-AID displays the Selection Criteria Menu screen (described in "Selection Criteria Menu" on page 16-6). After you modify existing selection criteria or create temporary selection criteria, the PRINT - JCL Specification screen is displayed, where you can enter JCL information for batch processing.
- If a Q was specified in the Selection criteria usage field, File-AID displays the Unformatted Selection Criteria screen before displaying the PRINT - JCL Specification screen.
- Otherwise when Selection criteria usage is E or N, File-AID immediately displays the PRINT - JCL Specification screen.

Print JCL Specification

The Print JCL Specification screen, shown in Figure 15-3, enables you to specify JOB Statement Information for the File Contents Report and the following primary commands:

JCL : Use the JCL command to display a PDF Edit screen where you can edit the generated JCL before you submit it.

SUBMIT : Use the SUBMIT command to submit the batch job.

END : Use the END command to return to the Print Data File screen without submitting the print job.

Figure 15-3. PRINT - JCL Specification Screen

```
File-AID ---------------- PRINT - JCL Specification  ---------------------------
COMMAND ===>

JCL Information for Batch Processing:

 Sysout class    ===> *

JOB Statement Information:
 ===> //USERID9X JOB ('OFABAS8.6DOC',81),'NAME',
 ===> //   CLASS=P,NOTIFY=USERID9,MSGCLASS=R
 ===>
 ===>




Use JCL command to edit generated JCL
Use SUBMIT command to submit batch job
Use END to return to main PRINT panel without submitting job
```

Field Descriptions

JCL Information for Batch Processing:

Sysout class : Enter the sysout class for the File Contents Report. Refer to "File Contents Report" on page 15-6 for a description of the report.

JOB Statement Information: : Specify your job statement information.

You can also execute the Print Data File function as a separate step in a batch job by coding the appropriate JCL. This process is described in "Executing Print Data File Independently in Batch" on page 15-13.

Generated JCL

When you enter the JCL command on the Print JCL Specification screen, File-AID invokes the PDF editor. An edit screen, as shown in Figure 15-4 on page 15-6, is displayed.

Figure 15-4. Generated JCL for Print Data File

```
EDIT ---- SYS95088.T122848.RA000.USERID9.R0118571 ------------ COLUMNS 001 072
COMMAND ===>                                                  SCROLL ===> PAGE
****** ***************************** TOP OF DATA ******************************
000001 //USERID9X JOB ('OFABAS8.6DOC',81),'NAME',
000002 //   CLASS=P,NOTIFY=USERID9,MSGCLASS=R
000003 //*  YOU ARE VIEWING JCL THAT FILE-AID 8.6 HAS GENERATED TO
000004 //*  PRINT THE CONTENTS OF THE DATASET IN CHARACTER FORMAT.
000005 //*
000006 //*  YOU CAN CHANGE THIS JCL IF DESIRED AND USE THE SUBMIT PRIMARY
000007 //*  COMMAND TO SUBMIT THE JOB. THE CREATE OR REPLACE PRIMARY COMMAND
000008 //*  CAN BE USED TO KEEP THIS JOBSTREAM FOR FUTURE USE.
000009 //*
000010 //*  USE THE END COMMAND TO EXIT WITHOUT SUBMITTING THE JOB.
000011 //*
000012 //JS10     EXEC PGM=FILEAID,REGION=4M
000013 //STEPLIB  DD  DISP=SHR,DSN=FA.V8R6M0.LOAD
000014 //SYSPRINT DD  SYSOUT=*
000015 //SYSLIST  DD  SYSOUT=*
000016 //DD01     DD  DSN=USERID9.FASAMP.EMPLOYEE,
000017 //              DISP=SHR
000018 //SYSIN    DD  *
000019 $$DD01 PRINT   FORM=LONG,OUT=O
000020 /*
000021 //
```

All ISPF edit commands are available for use. For example, to insert additional JCL statements, use the I (Insert) line command. To change the JCL, type over the data. To delete a line, use the D (Delete) line command. You can use the CREATE and REPLACE primary commands to save the generated JCL into a partitioned (PDS) or sequential dataset. This enables you to submit the JCL without using the online conversation screens.

As you view or edit the JCL, you can:

- Use the SUBMIT command to submit the print job for execution. Once the job is submitted, File redisplays the edit screen.
- Use the END command (PF3) to return to the Print Data File screen.

File Contents Report

The File Contents Report is printed by a batch job submitted from the Print - JCL Specification screen. The File Contents Report can be printed in formatted, vertical formatted, character, or hexadecimal format. Examples of each format are shown in figures Figure 15-5 on page 15-7 through Figure 15-10 on page 15-12.

In each of the four reports (Formatted, Vertical Formatted, Character, and Hex) the record sequence number for each record is displayed in the RECORD field. This number is the sequence number of the record in the file, not merely a sequential number assigned to each record printed. That is why when you apply selection criteria, there are gaps in the record sequence numbers.

In Character and Hex formats, the length of each record is printed next to the record number and preceding the data. Hex format also shows record information including the RBA for a VSAM cluster, or the disk location (CCCC-HH-RRR) and blocksize for other DASD files.

For a VSAM-RRDS file, the RECORD field displays the relative record number for each record. For a BDAM file, it shows the relative block number for each block.

Formatted Print

Formatted print displays the level number/data-name, format, and field value in the current record for each field in the record layout. The format is similar to Edit formatted

mode. See “Formatted Mode” on page 4-9 for FORMAT and FIELD VALUE field descriptions. The center field column can be tailored by specifying one of the valid SHOW options (Format, Offset, Picture, Number).

The formatted File Contents report is similar to the FPRINT report produced from the formatted display of browse or edit.

If you entered an S in the Record layout usage field on the Print Data File screen, File-AID uses the single record layout specified to print the file contents. If you entered an X, the specified XREF dataset is used to determine the appropriate record layout for each record.

For segmented records, File-AID automatically invokes the NEXT command whenever more record data exists beyond the currently printed segment layout. This results in the printing of all record segments.

If File-AID is unable to retrieve the record layout for a particular record, the record is printed in hexadecimal format. Some common problems that cause the record to print in hexadecimal format are:

- Current record’s record type was not found in the XREF member.
- Record layout member name for the current record, specified in the XREF member, was not found in the record layout library.
- Record layout for the current record has syntax errors.

Figure 15-5. File Contents Report — Formatted — Page 1 of 2

```
08 JAN 2004               File-AID 8.9 PRINT FACILITY    15:47:32  PAGE     1

                              FILE CONTENTS REPORT
File Printed                  USERID9.FASAMP.EMPLOYEE
Type                          VSAM KSDS


RECORD:     1                                            EMPLOYEE-MASTER-FILE
---- FIELD LEVEL/NAME ------- -FORMAT- ----+----1----+----2----+----3----+----4

5 EMP-NUMBER                    5/AN   00090
5 EMP-LAST-NAME                15/AN   MARTIN
5 EMP-FIRST-NAME               10/AN   EDWARD
5 EMP-MID-INIT                  1/AN   M
5 FILLER                        2/AN
5 EMP-TITLE                    30/AN   AIRPLANE MANUFACTURER
5 EMP-PERSONAL-INFO SYNC       23/GRP
  10 EMP-NATL-ID-NUMBER         9/NUM  427890125
  10 FILLER                     1/AN
  10 EMP-DATE-OF-BIRTH          6/AN   101954
  10 EMP-HIRE-DATE              6/AN   920101
  10 EMP-MARITAL-STATUS         1/AN   M
5 EMP-WITHOLD-INFO SYNC        15/GRP
  10 EMP-LIFE-INS-WITHOLD-AMT  DISPLAY 30000}
                                6/SNUM -3000.00
  10 EMP-NATL-TAX-WITHOLD-PCT   3/PS   -74.00
  10 EMP-REGION-TAX-WITHOLD-PCT
                                3/PS   25.00
  10 EMP-LOCAL-TAX-WITHOLD-PCT
                                3/PS   5.00
5 EMP-HOME-ADDRESS SYNC        50/GRP
  10 EMP-STREET-ADDRESS        25/AN   859 O’FARREL ST.
  10 FILLER                     1/AN
  10 EMP-CITY                  15/AN   SAN FRANCISCO
  10 EMP-STATE-PROV-CNTY SYNC   4/GRP
    15 EMP-STATE                2/AN   CA
    15 FILLER                   2/AN
  10 EMP-POSTAL-CODE            5/NUM  12121
5 EMP-EMERGENCY-CONTACT SYNC   47/GRP
  10 EMP-CONTACT-NAME          25/AN   BILL JONES
  10 FILLER                     2/AN
  10 EMP-CON-WORK-PHONE        10/AN   4085555897
  10 EMP-CON-HOME-PHONE        10/AN   4155556981
```

Figure 15-6. File Contents Report — Formatted — Page 2of 2

```
08 JAN 2004               File-AID 8.9 PRINT FACILITY    15:47:32  PAGE     1

                              FILE CONTENTS REPORT
File Printed                  USERID9.FASAMP.EMPLOYEE
Type                          VSAM KSDS


RECORD:     2                                            EMPLOYEE-MASTER-FILE
---- FIELD LEVEL/NAME ------- -FORMAT- ----+----1----+----2----+----3----+----4

5 EMP-NUMBER                    5/AN   00100
5 EMP-LAST-NAME                15/AN   MULSTROM
5 EMP-FIRST-NAME               10/AN   ROBERTA
5 EMP-MID-INIT                  1/AN   A
5 FILLER                        2/AN
5 EMP-TITLE                    30/AN   HOLLYWOOD SEAMSTRESS
5 EMP-PERSONAL-INFO SYNC       23/GRP
  10 EMP-NATL-ID-NUMBER         9/NUM  346573656
  10 FILLER                     1/AN
  10 EMP-DATE-OF-BIRTH          6/AN   090859
  10 EMP-HIRE-DATE              6/AN   920111
  10 EMP-MARITAL-STATUS         1/AN   S
5 EMP-WITHOLD-INFO SYNC        15/GRP
  10 EMP-LIFE-INS-WITHOLD-AMT  DISPLAY 80000{
                                6/SNUM 8000.00
  10 EMP-NATL-TAX-WITHOLD-PCT   3/PS   55.00
  10 EMP-REGION-TAX-WITHOLD-PCT
                                3/PS   5.00
  10 EMP-LOCAL-TAX-WITHOLD-PCT
                                3/PS   17.00
5 EMP-HOME-ADDRESS SYNC        50/GRP
  10 EMP-STREET-ADDRESS        25/AN   4701 N. BASCOM AVE. #430
  10 FILLER                     1/AN
  10 EMP-CITY                  15/AN   ANAHEIM
  10 EMP-STATE-PROV-CNTY SYNC   4/GRP
    15 EMP-STATE                2/AN   CA
    15 FILLER                   2/AN
  10 EMP-POSTAL-CODE            5/NUM  95126
5 EMP-EMERGENCY-CONTACT SYNC   47/GRP
  10 EMP-CONTACT-NAME          25/AN   GEORGE
  10 FILLER                     2/AN
  10 EMP-CON-WORK-PHONE        10/AN   2155552010
  10 EMP-CON-HOME-PHONE        10/AN   2155559021
```

Vertical Formatted Print

Vertical formatted print displays the level number/data-name, format, and field value in the current record for each field in the record layout. The format is similar to Edit vertical formatted mode. See “Vertical Formatted Mode” on page 4-14. The middle field column headings can be tailored by specifying one of the valid SHOW options (Format, Offset, Picture, Number).

The vertical formatted File Contents report is similar to the VPRINT report produced from the vertical formatted display of browse or edit.

You must use an S for a single layout in the Record layout usage field on the Print Data File screen. XREFs are not supported for vertical formatted print. If File-AID is unable to retrieve the record layout for a particular record, the record is printed in hexadecimal format.

Figure 15-7. File Contents Report — Vertical Formatted (SHOW FORMAT)

```
VP001-DATA TRUNCATION OCCURRED WHILE PROCESSING YOUR VPRINT REQUEST

08 JAN 2004             File-AID 8.9.0 PRINT FACILITY    14:58:22  PAGE     1

                              FILE CONTENTS REPORT
FILE PRINTED                  USERID9.FASAMP.EMPLOYEE
TYPE                          VSAM KSDS

EMP-NUMBER EMP-LAST-NAME   EMP-FIRST-NAME EMP-MID-INIT FILLER   EMP-TITLE                      EMP-PERSONAL-INFO
5/AN       15/AN           10/AN         1/AN         2/AN     30/AN                          23/GRP
(1-5)      (6-20)          (21-30)       (31-31)      (32-33)  (34-63)                        (64-86)
1--------- 2-------------- 3------------- 4----------- 5------- 6------------------------------ 7----------------------
00090      MARTIN          EDWARD        M                     AIRPLANE MANUFACTURER          427890125 101954920101M
00100      MULSTROM        ROBERTA       A                     HOLLYWOOD SEAMSTRESS           346573656 090859920111S
00200      JACKSON         JOSEPH        C                     ORATOR                         275587177 020462920121S
10000      ANDREWS         GEORGE                              ACTOR                          576312032 042248920131S
15000      MURPHY          RONALD        L                     PAINTER                        987654321 120255920201S
18034      SCHNEIDER       ELLEN         C                     NURSE                          341559549 032960920211S
21035      JONES           GEORGE        B                     COUNTRY SINGER                 463813456 090944920221S
25100      ROBERTS         WILLIAM       R                     POLITICIAN                     879563325 050865920301S
27007      ALLEN           JOYCE         M                     AUTHOR                         783458334 012132920311S
30001      RICHARDS        REX           W                     RODEO CLOWN                    632764534 040140920321S
31000      SAVAGE          JONATHON      C                     ELECTRICIAN                    348567992 06225092
34010      SMITH           JANET                               AIRLINE ATTENDANT              557782984 11235992
34011      JACOBS          DIANA                               DOCTOR                         225368395 02175792
36010      SIMPSON         ALEX                                CARTOONIST                     123456789 070864920501S
39310      BARNETT         EDWARD        E                     SALESMAN                       543789142 080954920511S
39500      WILLIAMS        EDITH         A                     DESIGNER                       987654321 091860920521S
41000      RICHARDSON      MARJORIE      M                     PROGRAMMER ANALYST             346583656 021355920601S
41400      MOORE           THOMAS        M                     SYSTEMS ADMINISTRATOR          226373646 111139920611S
42017      BENNETT         WILLIAM       D                     SALES SUPPORT                  146573556 123048920621S
44018      WILHELM         HEINRICH      L                     DIPLOMAT                       466573356 091360920701S
50021      SORENTO         ROBERTA       A                     U.N. INTERPRETER               346573656 081461920711S
51019      MCDONALD        EDNA                                FARM MANAGER                   567843656 071562920721S
54120      HENDERSON       JERRY         S                     OUTDOORSMAN                    473995305 012057920801S
57503      RUSSEL          PETE          L                     GARDENER                       873256305 021752920811S
60000      MCGEORGE        ELIZABETH                           BARONNESS                      346063046 070452920821M
63660      ELLIOT          ARNOLD        F                     SONGWRITER                     271233356 030354920901S
65111      BARNETT         JUDITH        C                     AUTHOR                         873283455 041544920911S
68973      NIELSON         ALLAN         H                     TV SPOKESPERSON                304788155 062734920921S
72814      RUSK            JOHNATHON     M                     ELECTRICAL ENGINEER            873256305 111264921001S
78781      GOLDMAN         ALBERT        J                     BROKER                         678898906 070350921011M
78782      JOHNSON         ALLAN         R                     ACTOR                          678898906 071359921021M
80000      STRANDEL        HARRY                               LYRICIST                       346573656 102464921101S
81032      MORAGA          BETTY JO                            BASEBALL ANNOUNCER             704722155 091443921111S
 ...
```

Figure 15-8. File Contents Report — Vertical Formatted (SHOW PICTURE)

```
VP001-DATA TRUNCATION OCCURRED WHILE PROCESSING YOUR VPRINT REQUEST

08 JAN 2004             File-AID 8.9.0 PRINT FACILITY    16:01:27  PAGE     1

                                FILE CONTENTS REPORT
FILE PRINTED                    USERID9.FASAMP.EMPLOYEE
TYPE                            VSAM KSDS

EMP-NUMBER EMP-LAST-NAME   EMP-FIRST-NAME EMP-MID-INIT FILLER   EMP-TITLE                      EMP-PERSONAL-INFO
X(5)       X(15)           X(10)         X            XX       X(30)                          GROUP
(1-5)      (6-20)          (21-30)       (31-31)      (32-33)  (34-63)                        (64-86)
1--------- 2-------------- 3------------- 4----------- 5------- 6------------------------------ 7----------------------
00090      MARTIN          EDWARD        M                     AIRPLANE MANUFACTURER          427890125 101954920101M
00100      MULSTROM        ROBERTA       A                     HOLLYWOOD SEAMSTRESS           346573656 090859920111S
00200      JACKSON         JOSEPH        C                     ORATOR                         275587177 020462920121S
10000      ANDREWS         GEORGE                              ACTOR                          576312032 042248920131S
15000      MURPHY          RONALD        L                     PAINTER                        987654321 120255920201S
18034      SCHNEIDER       ELLEN         C                     NURSE                          341559549 032960920211S
21035      JONES           GEORGE        B                     COUNTRY SINGER                 463813456 090944920221S
25100      ROBERTS         WILLIAM       R                     POLITICIAN                     879563325 050865920301S
27007      ALLEN           JOYCE         M                     AUTHOR                         783458334 012132920311S
30001      RICHARDS        REX           W                     RODEO CLOWN                    632764534 040140920321S
31000      SAVAGE          JONATHON      C                     ELECTRICIAN                    348567992 06225092
34010      SMITH           JANET                               AIRLINE ATTENDANT              557782984 11235992
34011      JACOBS          DIANA                               DOCTOR                         225368395 02175792
36010      SIMPSON         ALEX                                CARTOONIST                     123456789 070864920501S
39310      BARNETT         EDWARD        E                     SALESMAN                       543789142 080954920511S
39500      WILLIAMS        EDITH         A                     DESIGNER                       987654321 091860920521S
41000      RICHARDSON      MARJORIE      M                     PROGRAMMER ANALYST             346583656 021355920601S
41400      MOORE           THOMAS        M                     SYSTEMS ADMINISTRATOR          226373646 111139920611S
42017      BENNETT         WILLIAM       D                     SALES SUPPORT                  146573556 123048920621S
44018      WILHELM         HEINRICH      L                     DIPLOMAT                       466573356 091360920701S
50021      SORENTO         ROBERTA       A                     U.N. INTERPRETER               346573656 081461920711S
51019      MCDONALD        EDNA                                FARM MANAGER                   567843656 071562920721S
54120      HENDERSON       JERRY         S                     OUTDOORSMAN                    473995305 012057920801S
57503      RUSSEL          PETE          L                     GARDENER                       873256305 021752920811S
60000      MCGEORGE        ELIZABETH                           BARONNESS                      346063046 070452920821M
63660      ELLIOT          ARNOLD        F                     SONGWRITER                     271233356 030354920901S
65111      BARNETT         JUDITH        C                     AUTHOR                         873283455 041544920911S
68973      NIELSON         ALLAN         H                     TV SPOKESPERSON                304788155 062734920921S
72814      RUSK            JOHNATHON     M                     ELECTRICAL ENGINEER            873256305 111264921001S
78781      GOLDMAN         ALBERT        J                     BROKER                         678898906 070350921011M
78782      JOHNSON         ALLAN         R                     ACTOR                          678898906 071359921021M
80000      STRANDEL        HARRY                               LYRICIST                       346573656 102464921101S
81032      MORAGA          BETTY JO                            BASEBALL ANNOUNCER             704722155 091443921111S
 ...
```

Character Print

Character print shows character data in lines up to 100 characters. Unprintable characters are represented by blanks. It is a single-line format that is similar to Edit character mode.

Figure 15-9. File Contents Report — Character

```
F I L E - A I D  V8.9.0  0 8 - JAN - 0 4   15.23.11  DD01=USERID9.FASAMP.EMPLOYEE   PAGE 1

RECRD      1 DATA  198 CHAR 00090MARTIN         EDWARD    M  AIRPLANE MANUFACT
RBA                  0      1...5...10...15...20...25...30...35...40...45...50

                        CHAR URER         427890125 101954920101M30000}    &  &
                            51..55...60...65...70...75...80...85...90...95.....

                        CHAR  859 O'FARREL ST.          SAN FRANCISCO  CA  1212
                           101...5...10...15...20...25...30...35...40...45...50

                        CHAR 1BILL JONES                 40855558974155556981
                           151..55...60...65...70...75...80...85...90...95...

RECRD      2 DATA  198 CHAR 00100MULSTROM       ROBERTA   A  HOLLYWOOD SEAMSTR
RBA                198      1...5...10...15...20...25...30...35...40...45...50

                        CHAR ESS          346573656 090859920111S80000{ &  &
                            51..55...60...65...70...75...80...85...90...95.....

                        CHAR  4701 N. BASCOM AVE. #430  ANAHEIM        CA  9512
                           101...5...10...15...20...25...30...35...40...45...50

                        CHAR 6GEORGE                     21555520102155559021
                           151..55...60...65...70...75...80...85...90...95...

RECRD      3 DATA  198 CHAR 00200JACKSON        JOSEPH    C  ORATOR
RBA                396      1...5...10...15...20...25...30...35...40...45...50

                        CHAR              275587177 020462920121S00000{ &
                            51..55...60...65...70...75...80...85...90...95.....

                        CHAR  1401 S. BASCOM AVE.       CANOGA PARK    CA  9410
                           101...5...10...15...20...25...30...35...40...45...50

                        CHAR 6ANGELA                     21255520102125559021
                           151..55...60...65...70...75...80...85...90...95...

RECRD      4 DATA  198 CHAR 10000ANDREWS        GEORGE       ACTOR
RBA                594      1...5...10...15...20...25...30...35...40...45...50

                        CHAR              576312032 042248920131S00000{    &  &
                            51..55...60...65...70...75...80...85...90...95.....

                        CHAR  375 MERRIVALE W. SQ.      SUNNYVALE      CA  9413
                           101...5...10...15...20...25...30...35...40...45...50

                        CHAR 4DICK                       40455520104045559021
                           151..55...60...65...70...75...80...85...90...95...
```

Hexadecimal Print

Hexadecimal print displays each record in a three-line format similar to Edit character mode with HEX ON. The top line (CHAR) contains the character representation of the record, the middle line (ZONE) contains the upper half-byte of each character in hexadecimal, and the third line (NUMR) contains the lower half-byte of each character in hexadecimal. The fourth line is a columns rule that assists with locating data.

Figure 15-10. File Contents Report — Hexadecimal

```
F I L E - A I D  V8.9.0  0 8 - JAN - 0 4   10.55.46  DD01=USERID9.FASAMP.EMPLOYEE   PAGE 1

RECRD      1 DATA  198 CHAR 00090MARTIN         EDWARD    M  AIRPLANE MANUFACT
RBA                  0 ZONE FFFFFDCDECD444444444CCECDC4444D44CCDDDCDC4DCDECCCE
                       NUMR 000904193950000000005461940000400199731550415461 33
                            1...5...10...15...20...25...30...35...40...45...50

                       CHAR URER         427890125 101954920101M30000}    &  &
                       ZONE EDCD444444444FFFFFFFFF4FFFFFFFFFFFFDFFFFFD04005005
                       NUMR 4959000000000427890125010195492010143000007 0D20C00
                           51..55...60...65...70...75...80...85...90...95.....

                       CHAR  859 O'FARREL ST.          SAN FRANCISCO  CA  1212
                       ZONE 0FFF4D7CCDDCD4EE44444444444ECD4CDCDCCECD44CC44FFFF
                       NUMR C85906D619953023B00000000000215069153923600310012 12
                          101...5...10...15...20...25...30...35...40...45...50

                       CHAR 1BILL JONES                 40855558974155556981
                       ZONE FCCDD4DDDCE44444444444444444FFFFFFFFFFFFFFFFFFFF
                       NUMR 12933016552000000000000000004085555897415555698 1
                          151..55...60...65...70...75...80...85...90...95...

RECRD      2 DATA  198 CHAR 00100MULSTROM       ROBERTA   A  HOLLYWOOD SEAMSTR
RBA                198 ZONE FFFFFDEDEEDDD4444444DDCCDEC444C44CDDDEEDDC4ECCDEED
                       NUMR 0010044323964000000096259310001008633866402514239
                            1...5...10...15...20...25...30...35...40...45...50

                       CHAR ESS          346573656 090859920111S80000{ &  &
                       ZONE CEE444444444FFFFFFFFF4FFFFFFFFFFFFEFFFFFC05005007
                       NUMR 5220000000000346573656009085992011128000005 0C00C10
                           51..55...60...65...70...75...80...85...90...95.....

                       CHAR  4701 N. BASCOM AVE. #430  ANAHEIM        CA  9512
                       ZONE 0FFFF4D44CCECDD4CEC447FFF44CDCCCCD44444444CC44FFFF
                       NUMR C470105B02123640155B0B43000151859400000000310095 12
                          101...5...10...15...20...25...30...35...40...45...50

                       CHAR 6GEORGE                     21555520102155559021
                       ZONE FCCDDCC44444444444444444444FFFFFFFFFFFFFFFFFFFF
                       NUMR 67569750000000000000000000002155552010215555902 1
                          151..55...60...65...70...75...80...85...90...95...

RECRD      3 DATA  198 CHAR 00200JACKSON        JOSEPH    C  ORATOR
RBA                396 ZONE FFFFFDCCDEDD44444444DDECDC4444C44DDCEDD44444444444
                       NUMR 0020011322650000000016257800003006913690000000000
                            1...5...10...15...20...25...30...35...40...45...50

                       CHAR              275587177 020462920121S00000{ &
                       ZONE 4444444444444FFFFFFFFF4FFFFFFFFFFFFEFFFFFC05000000
                       NUMR 0000000000000275587177002046292012120000005 0C20C00
                           51..55...60...65...70...75...80...85...90...95.....

                       CHAR  1401 S. BASCOM AVE.       CANOGA PARK    CA  9410
                       ZONE 0FFFF4E44CCECDD4CEC44444444CCDDCC4DCDD4444CC44FFFF
                       NUMR C140102B02123640155B0000000315671071920000310094 10
                          101...5...10...15...20...25...30...35...40...45...50

                       CHAR 6ANGELA                     21255520102125559021
                       ZONE FCDCCDC44444444444444444444FFFFFFFFFFFFFFFFFFFF
                       NUMR 61575310000000000000000000021255520102125559021
                          151..55...60...65...70...75...80...85...90...95...
```

Executing Print Data File Independently in Batch

The Print Data File function can be executed also as a separate step in a batch job by coding the JCL shown in Figure 15-11, Figure 15-12, Figure 15-13, or Figure 15-14. Choose the appropriate JCL based on the format in which you want to print the report. For an explanation of the different format options, see the description of the Print format field in "Field Descriptions" on page 15-2.

Figure 15-11. Batch JCL for Print Data File in a Formatted Print Format

```
//JS10     EXEC PGM=FILEAID,REGION=4M
//STEPLIB  DD  DISP=SHR,DSN=FA.V8R9M0.LOAD
//SYSPRINT DD  SYSOUT=*
//SYSLIST  DD  SYSOUT=*
//DD01     DD  DSN=USERID9.FASAMP.EMPLOYEE,
//             DISP=SHR
//DD01RL   DD  DSN=USERID9.FASAMP.LAYOUTS,
//             DISP=SHR
//SYSIN    DD  *
$$DD01 FPRINT  SHOW=F,LAYOUT=EMPLOYEE,OUT=O
/*
//
```

Figure 15-12. Batch JCL for Print Data File in a Vertical Formatted Print Format

```
//JS10     EXEC PGM=FILEAID,REGION=4M
//STEPLIB  DD  DISP=SHR,DSN=FA.V8R9M0.LOAD
//SYSPRINT DD  SYSOUT=*
//SYSLIST  DD  SYSOUT=*
//DD01     DD  DSN=USERID9.FASAMP.EMPLOYEE,
//             DISP=SHR
//DD01RL   DD  DSN=USERID9.FASAMP.LAYOUTS,
//             DISP=SHR
//SYSIN    DD  *
$$DD01 VPRINT  SHOW=F,LAYOUT=EMPLOYEE,OUT=O
/*
//
```

Figure 15-13. Batch JCL for Print Data File in a Character Print Format

```
//JS10     EXEC PGM=FILEAID,REGION=4M
//STEPLIB  DD  DISP=SHR,DSN=FA.V8R9M0.LOAD
//SYSPRINT DD  SYSOUT=*
//SYSLIST  DD  SYSOUT=*
//DD01     DD  DSN=USERID9.FASAMP.EMPLOYEE,
//             DISP=SHR
//SYSIN    DD  *
$$DD01 PRINT   FORM=LONG,OUT=O
/*
//
```

Figure 15-14. Batch JCL for Print Data File in a Hexadecimal Print Format

```
//JS10     EXEC PGM=FILEAID,REGION=4M
//STEPLIB   DD DISP=SHR,DSN=FA.V8R9M0.LOAD
//SYSPRINT DD  SYSOUT=*
//SYSLIST  DD  SYSOUT=*
//DD01     DD  DSN=USERID9.FASAMP.EMPLOYEE,
//             DISP=SHR
//SYSIN    DD  *
$$DD01 DUMP    FORM=LONG,OUT=O
/*
//
```

Data File Print Execution Return Codes

A data file print execution return code (RC) appears in the job output listing. For return codes 4, 8, 12, and 16, an error code and message that indicates the specific problem also appears in the listing. Table 15-1 summarizes the return codes.

Table 15-1. Print Execution Return Codes

RC	Explanation	Error Description
0	Job ran to completion	None.
4	Job ran to completion	Warnings issued.
8	Job may have ended prematurely	Dataset related error.
12	Job may have ended prematurely	I/O related error.
16	Severe error occurred	System error.

Print Record Layout XREF

The Print Record Layout XREF screen, shown in Figure 15-15, is displayed when you select option 2 from the Print Selection Menu. This screen enables you to print the contents of record layout XREFs created with option 7, and, optionally, the associated record layouts.

Figure 15-15. Print Record Layout XREF Screen

```
 File-AID  -------------------  Print Record Layout XREF  ----------------------
 COMMAND ===>

Specify Print Information:
  Print option  ===> PL       (P = Print record layout XREF;
                               PL = Print XREF with referenced record layouts)

Specify XREF and Record Layout Information:
  XREF dataset name     ===> FASAMP.XREF
  Member name           ===> ORDRFILE (Blank = member list; * = all members)

  Record layout dataset ===> FASAMP.LAYOUTS

Specify Batch JCL Information:
  Sysout class          ===> *

 Specify JOB Statement Information:
 ===> //USERID9 JOB ('OFAQC8.9',81),'AUDIT',
 ===> //   CLASS=P,NOTIFY=USERID9,MSGCLASS=R
 ===>
 ===>
 Use JCL command to edit generated JCL
 Use SUBMIT command to submit batch job
 Use END to return to main print panel without submitting job
```

Field Descriptions

Specify Print Information:

Print option : Enter one of the following print options:

P : Print the record layout XREF without its associated layouts.

PL : (Default) Print the record layout XREF with its associated layouts.

Specify XREF and Record Layout Information:

XREF layouts are compiled as needed.

XREF dataset name : Specify the name of a dataset that contains the record layout cross reference (XREF) members to use with multiple record type datasets. See the section

entitled "Record Layout XREF Dataset" in Chapter 2 of the File-AID/MVS *Online Reference Manual*.

You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Dataset Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description.

Member name : Specify the member name. You can leave this field blank or enter a pattern member name to display a list of members from which you can make a selection. A pattern member name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Member Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description. Pattern names cannot be entered in both the Dataset name and Member name fields at the same time.

Enter an asterisk (*) in the Member field to print all members of an XREF dataset.

Record layout dataset : Specify the dataset that contains the layouts associated with the XREF you specified in the XREF dataset field. You can use a pattern character to specify a dataset.

You must enter a value in the Record layout dataset field when you specify a PL in the Print option field. If you enter a P in the Print option field and a dataset name in the Record layout dataset field, File-AID ignores the Record layout dataset you specified.

Specify Batch JCL Information:

Sysout class : Enter the sysout class for the Record Layout XREF Contents Report. See "Record Layout XREF Report" on page 15-15 for a description of the report.

Specify JOB Statement Information: : Enter the JOB statement JCL for the batch job.

After you complete the information on the screen, do one of the following:

- Edit the JCL. Use the JCL command to display an Edit screen and you can edit the generated JCL before submitting it. See "Generated JCL" on page 15-5.
- Use the SUBMIT command to submit the batch job.
- Use the END (PF3), RETURN (PF4), or a jump command to exit the Print Record Layout XREF screen.

You can also execute the Print Record Layout XREF function as a separate step in a batch job by coding the appropriate JCL. This process is described in "Executing Print Record Layout XREF Independently in Batch" on page 15-17.

Record Layout XREF Report

The Record Layout XREF Report is printed by a batch job submitted from the Print Record Layout XREF screen. This report consists of the Record Layout XREF contents and, optionally, the associated record layouts.

Figure 15-16 on page 15-16 shows the Record Layout XREF Report that is printed using option P. Figure 15-16 and Figure 15-17 show the Record Layout XREF Report and the associated record layouts that are printed using option PL.

Heading information printed at the top of each page includes the record layout XREF dataset and member name, a description, followed by the record layout dataset name.

The associated layout report displays the level number and data-name, format, starting and ending positions, and length for each item in each record layout. The level number and data-name are displayed in a format similar to Edit formatted mode.

Figure 15-16. Record Layout XREF Report — XREF Contents

```
08 JAN 2004               File-AID 8.9 PRINT FACILITY    13:04:42  PAGE     1
                           RECORD LAYOUT/XREF REPORT

XREF Dataset:          USERID9.FASAMP.XREF
Member:                ORDRFILE
Description:           XREF FOR ORDRFILE____________
                       RECORD TYPE FIELD IS ORDER-TYPE. FOR ORDERWO THE FIELD________
                       CONTRACT INDICATOR IS USED TO SELECT FROM TWO TYPES OF LAYOUT_

Record Layout Dataset: USERID9.FASAMP.LAYOUTS

                                                                                   Format/
 Member        Starting Data-name/Line number Position Length RO       Field Values        Description          Status
--------       ------------------------------ -------- ------ --  ----------------------  ---------------      ----------
ORDERPO        ORDER-LINE-DATA-PO                                                         PO LINE DATA         BASE

          IF     ORDER-TYPE                          11      2  =  PO                     CHAR
ORDERSC        ORDER-LINE-DATA-SC                                                         SC LINE DATA___      BASE

          IF     ORDER-TYPE                          11      2  =  SC                     CHAR
ORDERWO        OUTSIDE-VENDOR-WORK-ORDER                                                  WORK ORDER - OV      BASE

          IF     ORDER-TYPE                          11      2  =  WO                     CHAR
          AND    CONTRACT-INDICATOR                  56      2  =  OV                     CHAR

ORDERWO        INTERNAL-WORK-ORDER                                                        WORK ORDER - IN      DEFAULT


              *** END OF REPORT ***
```

Figure 15-17. Record Layout XREF Report — Associated Layouts

```
08 JAN 2004               File-AID 8.9 PRINT FACILITY    13:03:16  PAGE     2
                            ASSOCIATED LAYOUT REPORT

 RECORD LAYOUT DATASET : USERID9.FASAMP.LAYOUTS
 MEMBER                : ORDERPO

------- FIELD LEVEL/NAME ---------- --PICTURE--    FLD  START     END  LENGTH
ORDER-LINE-DATA-PO                                        1     184     184
5 RECORD-LENGTH                      S9(4)          1      1       2       2
5 ORDER-NO                           X(6)           2      3       8       6
5 ORDER-LINE-KEY                     GROUP          3      9      10       2
  7 LINE-NUMBER                      XX             4      9      10       2
5 ORDER-TYPE                         XX             5     11      12       2
5 LINE-STATUS                        X(7)           6     13      19       7
5 PART-NO                            X(6)           7     20      25       6
5 DESCRIPTION                        X(30)          8     26      55      30
5 UNIT-OF-MEASURE                    XX             9     56      57       2
5 PURCHASE-ORDER-INFO                GROUP         10     58     113      56
  7 PO-CODE                          X(4)          11     58      61       4
  7 PO-NUMBER                        X(12)         12     62      73      12
  7 PO-COMPANY                       X(30)         13     74     103      30
  7 PO-VENDOR-NUMBER                 X(5)          14    104     108       5
  7 PO-VENDOR-CODE                   X(5)          15    109     113       5
5 FILLER                             X(30)         16    114     143      30
5 ORDER-QUANTITIES                   GROUP         17    144     152       9
  7 QTY-ORDERED                      S9(5)         18    144     146       3
  7 QTY-BACKORDERED                  S9(5)         19    147     149       3
  7 QTY-SHIPPED                      S9(5)         20    150     152       3
5 PURCHASE-ORDER-PRICE-INFO          GROUP         21    153     164      12
  7 LIST-PRICE                       S9(5)V99      22    153     156       4
  7 DISCOUNT-AMOUNT                  S9(5)V99      23    157     160       4
  7 NET-PRICE                        S9(5)V99      24    161     164       4
5 PROCUREMENT-CODE                   XX            25    165     166       2
5 BUYER-CODE                         XX            26    167     168       2
5 FIRST-ACTIVITY-DATE                X(8)          27    169     176       8
5 LAST-ACTIVITY-DATE                 X(8)          28    177     184       8
```

Executing Print Record Layout XREF Independently in Batch

The Print Record Layout XREF function can be executed as a separate step in a batch job by coding the JCL shown in either Figure 15-18 or Figure 15-19.

Figure 15-18. Batch Print Record Layout XREF JCL (Option P)

```
//JS10      EXEC  PGM=FILEAID,REGION=4M
//STEPLIB   DD DISP=SHR,DSN=FA.V8R9M0.LOAD
//SYSPRINT  DD SYSOUT=*
//SYSLIST   DD SYSOUT=*
//DD01      DD DSN=USERID9.FASAMP.XREF,
//             DISP=SHR
//SYSIN    DD  *
$$DD01 XRPRINT MEMBER=ORDRXREF
/*
//
```

Figure 15-19. Batch Print Record Layout XREF JCL (Option PL)

```
//JS10      EXEC  PGM=FILEAID,REGION=4M
//STEPLIB   DD DISP=SHR,DSN=FA.V8R9M0.LOAD
//SYSPRINT  DD SYSOUT=*
//SYSLIST   DD SYSOUT=*
//DD01     DD  DSN=USERID9.FASAMP.XREF,
//             DISP=SHR
//DD01RL   DD  DSN=USERID9.FASAMP.LAYOUTS,
//             DISP=SHR
//SYSIN    DD  *
$$DD01 XRPRINT RLPRINT=YES,MEMBER=(ORDRFILE)
/*
//
```

Record Layout XREF Print Execution Return Codes

The Record Layout XREF print execution return codes are the same as the data file print execution return codes with the exception of return code 4, which can mean that File-AID was unable to print some of the associated layouts. Refer to Table 15-1 on page 15-14 for a summary of the return codes.

Print Selection Criteria

The Print Selection Criteria screen, shown in Figure 15-20, is displayed when you select option 3 from the Print Selection Menu. This screen enables you to print the contents of an existing selection criteria member created in option 6. Temporary selection criteria cannot be printed.

Figure 15-20. Print Selection Criteria Screen

```
File-AID -------------------  Print Selection Criteria  -----------------------
COMMAND ===>

Specify Selection Criteria Information:
  Selection dataset name ===>'USERID9.FASAMP.SELCRIT'
  Member name            ===>          (Blank = member list; * = all members)

Specify Batch JCL Information:
  Sysout class           ===> *

Specify JOB Statement Information:
===> //USERID9 JOB ('OFAQC8.9',81),'AUDIT',
===> //   CLASS=P,NOTIFY=USERID9,MSGCLASS=R
===>
===>



Use JCL command to edit generated JCL
Use SUBMIT command to submit batch job
Use END to return to main print panel without submitting job
```

Field Descriptions

Specify Selection Criteria Information:

Selection dataset name : Enter the selection criteria dataset name to print.

You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Dataset Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description.

Member name : Specify the member name. You can leave this field blank or enter a pattern member name to display a list of members from which you can make a selection. A pattern member name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Member Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description. Pattern names cannot be entered in both the Dataset name and Member name fields at the same time.

Enter an asterisk (*) in the Member field to print all members of a partitioned selection criteria file.

Specify Batch JCL Information:

Sysout class : Enter the sysout class for the Selection Criteria Contents Report. Refer to "Selection Criteria Report" on page 15-19 for more information on the report.

Specify JOB Statement Information: : Enter the JOB statement JCL for the batch job.

After you complete the information on the screen, use the SUBMIT command to submit the batch job. You can edit the generated JCL before you submit it. Use the JCL command to display a PDF Edit screen. See "Generated JCL" on page 15-5.

Use the END command (PF3) to exit the Print Selection Criteria screen.

The Print Selection Criteria function can also be executed as a separate step in a batch job by coding the appropriate JCL. See "Executing Print Selection Criteria Independently in Batch" on page 15-20.

Selection Criteria Report

The Selection Criteria Report displays the record and field selection criteria detail. Selection criteria options are printed first, followed by formatted and unformatted field selection criteria.

The selection criteria options section of the report, as shown in Figure 15-21, lists starting record key, starting RBA, initial records to skip, subsequent selection interval, number of records to search, number of records to select, and SEQ/VSAM processing direction.

Figure 15-21. Selection Criteria Report — Options Section

```
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                            SELECTION CRITERIA REPORT


Selection Criteria Dataset   USERID9.FASAMP.SELCRIT
Member                       EMPSELC
Member Description

Record Layout Dataset        USERID9.FASAMP.LAYOUTS
Member                       EMPLOYEE

Xref Dataset                 NONE
Member

Description                  EMPLOYEE SELECT EXAMPLE
                             SELECT SINGLE EMPLOYEES WITH LOCAL W/H LT 7
                             OR HOME PHONE IN AREA CODE 404 408 OR 415


                     Selection criteria options

                        No starting Key/RBA specified

                        Initial Records to skip             0

                        Subsequent Selection Interval
                        Records to select                   1
                        Records to skip                     0

                        Number of records to search         ALL
                        Number of records to select         ALL

                        SEQ/VSAM processing direction       FORWARD
```

The formatted selection criteria section of the report, shown in Figure 15-22, lists the data-name, format, starting position in the record, length, relational operator, data value, and logical operator (AND or OR) used in the comparison for each field selected in each set of formatted field selection criteria.

Figure 15-22. Selection Criteria Report — Formatted Section

```
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Field Selection Criteria:

        Data-name                      Format     Start  Length   RO              Data Value               AND/OR
-------------------------------      ----------   -----  ------   --    ------------------------------     ------

Selection Set 1
  EMP-MARITAL-STATUS                 CHAR            86       1   =     S                                  AND
  EMP-LOCAL-TAX-WITHOLD-PCT          NUM/PACK        99       3   <     +700
```

The unformatted selection criteria section of the report, shown in Figure 15-23, lists the starting position in the record, length, relational operator value, and logical operator (AND or OR) used in the comparison for each field selected in each set of unformatted field selection criteria.

Figure 15-23. Selection Criteria Report — Unformatted Section

```
Selection Set 2
                                        CHAR           189           =     404,408,415
       *** END OF SELECTION CRITERIA REPORT ***
```

Executing Print Selection Criteria Independently in Batch

The Print Selection Criteria function can be executed as a separate step in a batch job by coding the JCL shown in Figure 15-24.

Figure 15-24. Batch Print Selection Criteria JCL

```
//JS10     EXEC PGM=FILEAID,REGION=4M //STEPLIB  DD  DISP=SHR,DSN=FA.V8R9M0.LOAD
//SYSPRINT DD  SYSOUT=*
//SYSLIST  DD  SYSOUT=*
//DD01     DD  DSN=USERID9.FASAMP.SELCRIT,
//             DISP=SHR
//SYSIN    DD  *
$$DD01 SCPRINT MEMBER=(INVFILEC)
/*
//
```

Selection Criteria Print Execution Return Codes

The selection criteria print execution return codes are the same as the data file print execution return codes with the exception of return code 4. Return code 4 does not apply to the selection criteria print execution. Refer to Table 15-1 on page 15-14 for a summary of the return codes.

Print Record Layout

The Print Record Layout screen shown in Figure 15-25 is displayed when you select option 4 from the Print Selection Menu. This screen enables you to print record layouts stored in a record layout dataset.

Figure 15-25. Print Record Layout Screen

```
File-AID --------------------  Print Record Layout  ----------------------------
COMMAND ===>

Specify Record Layout Information:
   Record layout dataset ===> FASAMP.LAYOUTS
   Member                ===> *          (Blank = member list; * = all members)

Specify Batch JCL Information:
   Sysout class          ===> *

Specify JOB Statement Information:
===> //USERID9 JOB ('OFAQC8.9',81),'AUDIT',
===> //   CLASS=P,NOTIFY=USERID9,MSGCLASS=R
===>
===>



Use JCL command to edit generated JCL
Use SUBMIT command to submit batch job
Use END to return to main print panel without submitting job
```

Field Descriptions

Specify Record Layout Information:

Record layout dataset : Enter the record layout dataset to print.

Member name : Specify the member name. You can leave this field blank or enter a pattern member name to display a list of members from which you can make a selection. A pattern member name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Member Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description. Pattern names cannot be entered in both the Dataset name and Member name fields at the same time.

Enter an asterisk (*) in the Member field to print all members of a partitioned record layout dataset.

Specify Batch JCL information:

Sysout class : Enter the sysout class for the Record Layout Report. See "Record Layout Report" on page 15-22 for a description of the report.

Specify JOB Statement Information: : Enter the job statement for the batch job.

After you complete the information on the screen, use the SUBMIT primary command to submit the job. You can edit the generated JCL before you submit it. Use the JCL command to display a PDF Edit screen. See "Generated JCL" on page 15-5.

Use the END command (PF3) to exit the Print Record Layout screen.

You can also execute the Print Record Layout function as a separate step in a batch job by coding the appropriate JCL. Refer to "Executing Print Record Layout Independently in Batch" on page 15-25 for an illustration of the JCL.

Record Layout Report

The Record Layout report displays the level number and data-name, picture, starting and ending positions, and length for each item in the record layout. The level number and data-name are displayed in a format similar to Edit formatted.

COBOL Sample

The COBOL layout shown in Figure 15-26 generates the File-AID Print report shown in Figure 15-27 on page 15-23.

Figure 15-26. Sample COBOL Record Layout

```
01  EMPLOYEE-MASTER-FILE.            05  EMP-NUMBER                    PIC X(5).
     05  EMP-LAST-NAME                 PIC X(15).
     05  EMP-FIRST-NAME                PIC X(10).
     05  EMP-MID-INIT                  PIC X.
     05  FILLER                        PIC X(2).
     05  EMP-TITLE                     PIC X(30).
     05  EMP-PERSONAL-INFO.
       10  EMP-NATL-ID-NUMBER          PIC 9(9).
       10  FILLER                      PIC X(01).
       10  EMP-DATE-OF-BIRTH           PIC X(6).
       10  EMP-DOB-REDEF REDEFINES EMP-DATE-OF-BIRTH.
         15  EMP-DOB-MM                PIC 99.
         15  EMP-DOB-DD                PIC 99.
         15  EMP-DOB-YY                PIC 99.
       10  EMP-HIRE-DATE               PIC X(6).
       10  EMP-MARITAL-STATUS          PIC X.
     05  EMP-WITHOLD-INFO.
       10  EMP-LIFE-INS-WITHOLD-AMT    PIC S9999V99.
       10  EMP-NATL-TAX-WITHOLD-PCT    PIC S999V99  COMP-3.
       10  EMP-REGION-TAX-WITHOLD-PCT  PIC S999V99  COMP-3.
       10  EMP-LOCAL-TAX-WITHOLD-PCT   PIC S999V99  COMP-3.
     05  EMP-HOME-ADDRESS.
       10  EMP-STREET-ADDRESS          PIC X(25).
       10  FILLER                      PIC X(01).
       10  EMP-CITY                    PIC X(15).
       10  EMP-STATE-PROV-CNTY.
         15  EMP-STATE                 PIC XX.
         15  FILLER                    PIC XX.
       10  EMP-POSTAL-CODE             PIC 9(5).
     05  EMP-EMERGENCY-CONTACT.
       10  EMP-CONTACT-NAME            PIC X(25).
       10  FILLER                      PIC X(02).
       10  EMP-CON-WORK-PHONE          PIC X(10).
       10  EMP-CON-HOME-PHONE          PIC X(10).
```

Figure 15-27. COBOL Layout Report

```
08 JAN 2004               File-AID 8.9 PRINT FACILITY    16:34:10  PAGE     1
                             RECORD LAYOUT REPORT

 RECORD LAYOUT DATASET : USERID9.FASAMP.LAYOUTS
 MEMBER                : EMPLOYEE

------- FIELD LEVEL/NAME ---------- --PICTURE--    FLD  START     END  LENGTH
EMPLOYEE-MASTER-FILE                                          1     198     198
5 EMP-NUMBER                         X(5)           1      1       5       5
5 EMP-LAST-NAME                      X(15)          2      6      20      15
5 EMP-FIRST-NAME                     X(10)          3     21      30      10
5 EMP-MID-INIT                       X              4     31      31       1
5 FILLER                             XX             5     32      33       2
5 EMP-TITLE                          X(30)          6     34      63      30
5 EMP-PERSONAL-INFO                  GROUP          7     64      86      23
  10 EMP-NATL-ID-NUMBER              9(9)           8     64      72       9
  10 FILLER                          X              9     73      73       1
  10 EMP-DATE-OF-BIRTH               X(6)          10     74      79       6
  10 EMP-DOB-REDEF REDEFINES EMP-DATE-OF-BIRTH
  10 EMP-DOB-REDEF                   GROUP         11     74      79       6
    15 EMP-DOB-MM                    99            12     74      75       2
    15 EMP-DOB-DD                    99            13     76      77       2
    15 EMP-DOB-YY                    99            14     78      79       2
  10 EMP-HIRE-DATE                   X(6)          15     80      85       6
  10 EMP-MARITAL-STATUS              X             16     86      86       1
5 EMP-WITHOLD-INFO                   GROUP         17     87     101      15
  10 EMP-LIFE-INS-WITHOLD-AMT        S9(4)V99      18     87      92       6
  10 EMP-NATL-TAX-WITHOLD-PCT        S999V99       19     93      95       3
  10 EMP-REGION-TAX-WITHOLD-PCT
                                     S999V99       20     96      98       3
  10 EMP-LOCAL-TAX-WITHOLD-PCT
                                     S999V99       21     99     101       3
5 EMP-HOME-ADDRESS                   GROUP         22    102     151      50
  10 EMP-STREET-ADDRESS              X(25)         23    102     126      25
  10 FILLER                          X             24    127     127       1
  10 EMP-CITY                        X(15)         25    128     142      15
  10 EMP-STATE-PROV-CNTY             GROUP         26    143     146       4
    15 EMP-STATE                     XX            27    143     144       2
    15 FILLER                        XX            28    145     146       2
  10 EMP-POSTAL-CODE                 9(5)          29    147     151       5
5 EMP-EMERGENCY-CONTACT              GROUP         30    152     198      47
  10 EMP-CONTACT-NAME                X(25)         31    152     176      25
  10 FILLER                          XX            32    177     178       2
  10 EMP-CON-WORK-PHONE              X(10)         33    179     188      10
  10 EMP-CON-HOME-PHONE              X(10)         34    189     198      10

     *** END OF LAYOUT REPORT ***
```

PL/I Sample

The PL/I layout shown in Figure 15-28 on page 15-24 generates the File-AID Print report shown in Figure 15-29 on page 15-24.

Figure 15-28. Sample PL/I Record Layout

```
DCL   1  EMPLOYEE_MASTER_FILE,
         5  EMP_NUMBER                CHAR(05),
         5  EMP_LAST_NAME             CHAR(15),
         5  EMP_FIRST_NAME            CHAR(10),
         5  EMP_MID_INIT              CHAR(01),
         5  FILLER                   CHAR(02),
         5  EMP_TITLE                CHAR(30),
         5  EMP_PERSONAL_INFO,
          10  EMP_NATL_ID_NUMBER     CHAR(09),
          10  FILLER                 CHAR(01),
          10  EMP_DATE_OF_BIRTH      CHAR(06),
          10  EMP_HIRE_DATE          CHAR(06),
          10  EMP_MARITAL_STATUS     CHAR(01),
         5  EMP_WITHOLD_INFO,
          10  EMP_LIFE_INS_WITHOLD_AMT     PIC '9999V99',
          10  EMP_NATL_TAX_WITHOLD_PCT     FIXED DEC (5,2),
          10  EMP_REGION_TAX_WITHOLD_PCT   FIXED DEC (5,2),
          10  EMP_LOCAL_TAX_WITHOLD_PCT    FIXED DEC (5,2),
         5  EMP_HOME_ADDRESS,
          10  EMP_STREET_ADDRESS     CHAR(25),
          10  FILLER                 CHAR(01),
          10  EMP_CITY               CHAR(15),
          10  EMP_STATE_PROV_CNTY,
            15  EMP_STATE            CHAR(02),
            15  FILLER               CHAR(02),
          10  EMP_POSTAL_CODE        CHAR(05),
         5  EMP_EMERGENCY_CONTACT,
          10  EMP_CONTACT_NAME       CHAR(25),
          10  FILLER                 CHAR(02),
          10  EMP_CONT_WORK_PHONE    CHAR(10),
          10  EMP_CONT_HOME_PHONE    CHAR(10);
```

Figure 15-29. PL/I Layout Report

```
08 JAN 2004               File-AID 8.9 PRINT FACILITY    15:38:57  PAGE     1
                             RECORD LAYOUT REPORT

 RECORD LAYOUT DATASET : USERID9.FASAMP.LAYOUTS
 MEMBER                : PLIEMP

------- FIELD LEVEL/NAME ---------- --PICTURE--    FLD  START     END  LENGTH
EMPLOYEE_MASTER_FILE                                         1     198     198
5 EMP_NUMBER                         CHAR(5)        1      1       5       5
5 EMP_LAST_NAME                      CHAR(15)       2      6      20      15
5 EMP_FIRST_NAME                     CHAR(10)       3     21      30      10
5 EMP_MID_INIT                       CHAR(1)        4     31      31       1
5 FILLER                             CHAR(2)        5     32      33       2
5 EMP_TITLE                          CHAR(30)       6     34      63      30
5 EMP_PERSONAL_INFO                  GROUP          7     64      86      23
  10 EMP_NATL_ID_NUMBER              CHAR(9)        8     64      72       9
  10 FILLER                          CHAR(1)        9     73      73       1
  10 EMP_DATE_OF_BIRTH               CHAR(6)       10     74      79       6
  10 EMP_HIRE_DATE                   CHAR(6)       11     80      85       6
  10 EMP_MARITAL_STATUS              CHAR(1)       12     86      86       1
5 EMP_WITHOLD_INFO                   GROUP         13     87     101      15
  10 EMP_LIFE_INS_WITHOLD_AMT        PFXU(6,2)     14     87      92       6
  10 EMP_NATL_TAX_WITHOLD_PCT        DFX(5,2)      15     93      95       3
  10 EMP_REGION_TAX_WITHOLD_PCT
                                     DFX(5,2)      16     96      98       3
  10 EMP_LOCAL_TAX_WITHOLD_PCT
                                     DFX(5,2)      17     99     101       3
5 EMP_HOME_ADDRESS                   GROUP         18    102     151      50
  10 EMP_STREET_ADDRESS              CHAR(25)      19    102     126      25
  10 FILLER                          CHAR(1)       20    127     127       1
  10 EMP_CITY                        CHAR(15)      21    128     142      15
  10 EMP_STATE_PROV_CNTY             GROUP         22    143     146       4
    15 EMP_STATE                     CHAR(2)       23    143     144       2
    15 FILLER                        CHAR(2)       24    145     146       2
  10 EMP_POSTAL_CODE                 CHAR(5)       25    147     151       5
5 EMP_EMERGENCY_CONTACT              GROUP         26    152     198      47
  10 EMP_CONTACT_NAME                CHAR(25)      27    152     176      25
  10 FILLER                          CHAR(2)       28    177     178       2
  10 EMP_CONT_WORK_PHONE             CHAR(10)      29    179     188      10
  10 EMP_CONT_HOME_PHONE             CHAR(10)      30    189     198      10

     *** END OF LAYOUT REPORT ***
```

The starting and ending position, and length are shown for both elementary and group items. Each layout starts at page 1.

The end of the report is indicated by an ***** END OF LAYOUT REPORT ***** message.

Executing Print Record Layout Independently in Batch

The print record layout function can be executed as a separate step in a batch job by coding the JCL shown in Figure 15-30.

Figure 15-30. Batch Print Record Layout JCL

```
//JS10      EXEC  PGM=FILEAID,REGION=4M
//STEPLIB   DD DISP=SHR,DSN=FA.V8R9M0.LOAD
//SYSPRINT  DD SYSOUT=*
//SYSLIST   DD SYSOUT=*
//DD01     DD  DSN=USERID9.FASAMP.LAYOUTS,
//             DISP=SHR
//SYSIN    DD  *
$$DD01 RLPRINT MEMBER=EMPLOYEE
/*
//
```

Record Layout Print Execution Return Codes

The record layout print execution return codes are the same as the data file print execution codes with the exception of return code 4. Return code 4 does not apply to the record layout print execution. Refer to Table 15-1 on page 15-14 for a summary of the return codes.

Print Audit Trail

The Print Audit Trail screen shown in Figure 15-31 is displayed when you select option 5 from the Print Selection Menu. This screen enables you to print the contents of an audit trail dataset that you created with Edit (option 2) or Search/Update (option 3.6) and chose not to print the Audit Report at that time. Refer to "Audit Trail Feature" on page 4-21 and "Disposition of Audit Trail" on page 10-28.

DBCS data is not supported for an unformatted audit print.

Figure 15-31. Print Audit Trail Screen

```
File-AID  ---------------------  Print Audit Trail  ---------------------------
COMMAND ===>

Specify Audit Trail Information:
   Audit trail disposition ===>           (PK = Print dataset and keep;
                                           PD = Print dataset and delete)

   Audit trail dataset     ===> 'USERID9.FILEAID.AUDT.D940708.T104700'


Specify Batch JCL Information:
  Sysout class            ===> *

Specify JOB Statement Information:
===> //USERID9 JOB ('OFAQC8.9',81),'AUDIT',
===> //   CLASS=P,NOTIFY=USERID9,MSGCLASS=R
===>
===>

Use JCL command to edit generated JCL
Use ENTER to submit batch job
Use END to return to main print panel without submitting job
```

Field Descriptions

Specify Audit Trail Information:

Audit trail disposition : Enter one of the following:

PK : Print and keep the audit trail dataset.

PD : Print and delete the audit trail dataset.

Audit trail dataset : This field contains the name of the audit trail dataset to be printed. File-AID automatically completes this field with the name of the most recent audit trail file created in Edit or Search/Update. Type over the existing dataset name to specify a different dataset.

Specify Batch JCL Information:

Sysout class : Enter the sysout class for the Audit Trail Report. See "Audit Trail Report" on page 15-29 for more information on the report.

Specify JOB Statement Information: : Enter the JOB statement for the batch print job.

After you complete the information on the screen, press Enter to submit the batch print job. Use the JCL command to display a PDF Edit screen and edit the generated JCL before you submit it. See "Generated JCL" on page 15-5.

Use the END command (PF3) to exit the Print Audit Trail screen without submitting the print job.

The Print Audit Trail function can be executed also as a separate step in a batch job by coding the appropriate JCL. This process is described in "Executing Print Audit Trail Independently in Batch" on page 15-33.

Printing Multiple Audit Trail Datasets

When you want to concatenate multiple audit trail datasets together and produce a separate Audit Trail Report for each dataset with one batch job execution, edit the generated JCL before submitting the batch job.

If you specified an S or X in the Edit screen Record layout usage field for the Edit session, File-AID produces a formatted audit report. File-AID produces an unformatted report if you specified an N in the Record layout usage field or if the formatted report generation fails. If the unformatted report program receives control, it processes all concatenated audit files. Subsequent concatenated formatted audit files that would have produced a formatted report are printed unformatted.

Concatenating mixed (formatted and unformatted) audit trail files may produce a report with unexpected results. Special attention is required when concatenating audit trail datasets.

To prevent concatenation of formatted and unformatted files, Compuware recommends concatenating the formatted audit trail files in a separate execution from the unformatted audit trail files. "Audit File Sort Example" provides a method for accomplishing this task.

Audit File Sort Example

The JCL shown in Figure 15-32 sorts a list of audit files into a list of formatted audit files and a list of unformatted audit files creating two new files. **USERID9.FMTAUD**, shown in Figure 15-33 on page 15-28 contains the list of formatted record files. **USERID9.UNFMTAUD**, shown in Figure 15-34 on page 15-28, contains the list of unformatted record files.

After the audit files are sorted, you can copy in the list of formatted file names into the JCL shown in Figure 15-35 on page 15-28, and submit the job to concatenate and print the formatted audit record files. Then copy in the list of unformatted files and submit the JCL again to concatenate and print the unformatted audit record files.

Figure 15-32. JCL to Sort Audit Files for Printing

```
//USERIDX  JOB  ('ACCT-INFO'),'NAME',MSGCLASS=X,CLASS=X,NOTIFY=USERID
//*
//STEP1    EXEC PGM=FILEAID,REGION=4M
//STEPLIB  DD DSN=FA.V8R9M0.LOAD,DISP=SHR
//SYSPRINT DD SYSOUT=*
//SYSLIST  DD SYSOUT=*
//DD01     DD DSN=USERID9.FILEAID.AUDT.D990108.T181258,DISP=SHR
//         DD DSN=USERID9.FILEAID.AUDT.D990123.T104445,DISP=SHR
//         DD DSN=USERID9.FILEAID.AUDT.D990123.T114013,DISP=SHR
//         DD DSN=USERID9.FILEAID.AUDT.D990114.T180047,DISP=SHR
//         DD DSN=USERID9.FILEAID.AUDT.D990115.T180035,DISP=SHR
//         DD DSN=USERID9.FILEAID.AUDT.D990116.T180120,DISP=SHR
//         DD DSN=USERID9.FILEAID.AUDT.D990122.T093013,DISP=SHR
//         DD DSN=USERID9.FILEAID.AUDT.D990121.T082013,DISP=SHR
//FMT      DD DSN=USERID9.FMTAUD,DISP=(NEW,CATLG),UNIT=SYSDA,
//            SPACE=(CYL,(1,1),RLSE),
//            DCB=(RECFM=FB,LRECL=80,BLKSIZE=8000)
//UNFMT    DD DSN=USERID9.UNFMTAUD,DISP=(NEW,CATLG),UNIT=SYSDA,
//            SPACE=(CYL,(1,1),RLSE),
//            DCB=(RECFM=FB,LRECL=80,BLKSIZE=8000)
//SYSIN    DD *
$$DD01 USER IF=(19,EQ,X'10'),AND=(203,EQ,C'N'),
             MOVE=(1,80C' '),
             MOVE=(1,C"//             DD DISP=SHR,DSN="),
             MOVE=(32,44,92),
             WRITE=UNFMT,
            IF=(19,EQ,X'10'),AND=(203,NE,C'N'),
             MOVE=(1,80C' '),
             MOVE=(1,C"//             DD DISP=SHR,DSN="),
             MOVE=(32,44,92),
             WRITE=FMT
//
```

Figure 15-33. Formatted Record File Created by Sort Audit Files JCL

```
//             DD DISP=SHR,DSN=USERID9.FILEAID.AUDT.D940623.T104445
//             DD DISP=SHR,DSN=USERID9.FILEAID.AUDT.D940623.T114013
//             DD DISP=SHR,DSN=USERID9.FILEAID.AUDT.D940622.T093013
//             DD DISP=SHR,DSN=USERID9.FILEAID.AUDT.D940621.T082013
```

Figure 15-34. Unformatted Record File Created by Sort Audit Files JCL

```
//             DD DISP=SHR,DSN=USERID9.FILEAID.AUDT.D940608.T181258
//             DD DISP=SHR,DSN=USERID9.FILEAID.AUDT.D940814.T180047
//             DD DISP=SHR,DSN=USERID9.FILEAID.AUDT.D940915.T180035
//             DD DISP=SHR,DSN=USERID9.FILEAID.AUDT.D940816.T180120
```

Figure 15-35. Audit Print JCL

```
//USERID9  JOB  ('ACCT-INFO'),'NAME',MSGCLASS=X,CLASS=X,NOTIFY=USERID9 //*
//STEP1    EXEC PGM=FILEAID,REGION=4M
//STEPLIB  DD DSN=FA.V8R9M0.LOAD,DISP=SHR
//SYSPRINT DD SYSOUT=*
//SYSLIST  DD SYSOUT=*
//*   COPY OUTPUT FROM FORMATTED AUDIT TRAIL FILES
//*   (FMT 'DD' FROM PRIOR JOB)
//*   INTO THIS FINAL JOB AND PLACE A 'DD01' ON THE FIRST
//*   DATASET NAME LINE.
//DD01     DD DISP=SHR,DSN=USERID9.FILEAID.AUDT.D990123.T104445
//         DD DISP=SHR,DSN=USERID9.FILEAID.AUDT.D990123.T114013
//         DD DISP=SHR,DSN=USERID9.FILEAID.AUDT.D990122.T093013
//         DD DISP=SHR,DSN=USERID9.FILEAID.AUDT.D990121.T082013
//SYSIN    DD *
$$DD01  APRINT
//
```

Audit Trail Report

The Audit Trail Report is printed by the batch job submitted from the Print Audit Trail screen. The report displays the audit trail contents and is printed in a formatted, character, or hexadecimal format. The report also contains summary information.

The contents of the report depends on the value specified in the Record layout usage field on the Edit. See "Formatted Report Contents" on page 15-29 for a description of the report contents. You can override a formatted report with a character or hexadecimal report by changing the SYSIN control card generated for the batch job submission as follows:

```
//SYSIN DD*
$$DD01 APRINT FORM=HEX

or

$$DD01 APRINT FORM=CHAR
```

Samples of the formatted, character, and hexadecimal formats of the Audit Trail Report are shown in Figure 15-36 on page 15-31 through Figure 15-37 on page 15-32.

Each page of the Audit Trail Report begins with page headings that consist of the edited dataset name, the date and time the report was produced, the File-AID release number, and the page number.

Following the page headings is the date and time when the data file was opened for updating, and the TSO user ID that was used to perform the updates. If the data file organization was VSAM-KSDS, ISAM, or keyed BDAM, File-AID includes the starting position and length of the defined key.

Preceding the image of each data file update on the report are audit trail record headings. The first line contains a sequential number assigned to each data file update, the update action (explained more fully below), and the date and time the update occurred.

For VSAM-RRDS data files, File-AID includes the relative record number of the updated record.

The ACTION field on the first record heading line contains the word INSERT when a data file record was added to the file. When a data file record was deleted via a DELETE primary command or a D (Delete) line command, the ACTION field shows DELETE. CHANGE is shown in the ACTION field when a data file is changed via any primary command or a direct data typeover.

Formatted Report Contents

The format used to print the before and after record images in the Audit Trail Report depends on what was specified for record layout usage during the edit session. If a single record layout or a record layout XREF was used, File-AID prints the audit trail contents in a formatted display.

If record layouts were not used during the edit session, then File-AID prints the audit trail contents in an unformatted, hexadecimal display. The HEX print format is described in "HEX Print Report Contents" on page 15-31.

When printing the audit trail contents in formatted display, File-AID uses the same record layout or XREF dataset that was specified during the edit session in which the audit trail was created to format the inserted, deleted, and changed records' images. The first two columns on the report contain the level number/data-name and format of each field in the record layout that is similar to Edit Formatted mode. See "Formatted Mode" on page 4-9.

The next two columns on the report are BEFORE FIELD VALUE and AFTER FIELD VALUE. The way these columns are formatted depends on the update action, as follows:

- When the update action is INSERT, the AFTER FIELD VALUE column contains the value of each field in the data record that was created. The BEFORE FIELD VALUE column is always empty.
- When the update action is DELETE, the BEFORE FIELD VALUE column contains the value of each field in the data record that was deleted. The AFTER FIELD VALUE column is always empty.
- When the update action is CHANGE, the BEFORE FIELD VALUE column contains the value of each field in the data record as it was before the change. The AFTER FIELD VALUE column shows the new field value only for the fields that were changed. The AFTER FIELD VALUE column is blank for unchanged fields.

Field values are shown in the BEFORE FIELD VALUE and AFTER FIELD VALUE columns similar to Edit formatted mode. See “Formatted Mode” on page 4-9.

The rightmost column on the formatted Audit Trail Report displays informational messages. A message displays in this column to describe the following situations:

- When an alphanumeric field was changed from a non-blank value to blanks (HEX 40’s), the message AFTER BLANK is printed. This message enables you to distinguish between fields that were not changed and those that were blanked out.

If a single record layout was used during the edit session that created the audit trail, the same record layout is used to print the audit trail contents. If a Record Layout XREF was used, the same Record Layout XREF is used to determine the appropriate record layout for each audit trail record. If File-AID is unable to print a particular audit trail record in a formatted format, processing is terminated and it passes control for the generation of the report to the unformatted report program. Following are some of the reasons that File-AID switches from formatted to hexadecimal printing:

- The record layout member name for the before and/or after record image specified in the record layout XREF was not found in the record layout library.
- The record layout for the before and/or after record image has syntax errors.

Figure 15-36. Audit Trail Report — Formatted

```
08 JAN 2004  15:35:56                          File-AID 8.9 AUDIT TRAIL REPORT                          PAGE:          1
DATA FILE: SAMPLE1.EMPLOYEE.FILE                                        OPENED ON: 08 JAN 2004 AT 14:39:01  USER ID:  USERID9

UPDATE NUMBER:         1                                ACTION: CHANGE      RECORDED: 08 JAN 2004 AT 14:40:25
GROUP NAME:     EMPLOYEE-MASTER-FILE              BEFORE RECORD LENGTH:    63              AFTER RECORD LENGTH:    63
---- FIELD LEVEL/NAME ------- -FORMAT- --------- BEFORE FIELD VALUE ----------- ---------- AFTER FIELD VALUE --------- --MESSAGE
5 EMP-NUMBER                    5/AN   00100
5 EMP-LAST-NAME                15/AN   MULSTROM                                 einstein
5 EMP-FIRST-NAME               10/AN   ROBERTA                                  alfred
5 EMP-MID-INIT                  1/AN   A
5 FILLER                        2/AN
5 EMP-TITLE                    30/AN   HOLLYWOOD SEAMSTRESS
------------------------------------------------- E N D   O F   L A Y O U T -------------------------------------------------

UPDATE NUMBER:         2                                ACTION: INSERT      RECORDED: 08 JAN 2004 AT 14:40:25
GROUP NAME:     EMPLOYEE-MASTER-FILE              BEFORE RECORD LENGTH:                    AFTER RECORD LENGTH:    63
---- FIELD LEVEL/NAME ------- -FORMAT- --------- BEFORE FIELD VALUE ----------- ---------- AFTER FIELD VALUE --------- --MESSAGE
5 EMP-NUMBER                    5/AN                                            99999
5 EMP-LAST-NAME                15/AN                                            KOWALSKI
5 EMP-FIRST-NAME               10/AN                                            KENDRA
5 EMP-MID-INIT                  1/AN                                            M
5 FILLER                        2/AN
5 EMP-TITLE                    30/AN                                            DATA ENTRY
------------------------------------------------- E N D   O F   L A Y O U T -------------------------------------------------

UPDATE NUMBER:         3                                ACTION: DELETE      RECORDED: 08 JAN 2004 AT 14:40:25
GROUP NAME:     EMPLOYEE-MASTER-FILE              BEFORE RECORD LENGTH:    63              AFTER RECORD LENGTH:
---- FIELD LEVEL/NAME ------- -FORMAT- --------- BEFORE FIELD VALUE ----------- ---------- AFTER FIELD VALUE --------- --MESSAGE
5 EMP-NUMBER                    5/AN   00090
5 EMP-LAST-NAME                15/AN   MARTIN
5 EMP-FIRST-NAME               10/AN   EDWARD
5 EMP-MID-INIT                  1/AN   M
5 FILLER                        2/AN
5 EMP-TITLE                    30/AN   AIRPLANE MANUFACTURERxxxxxxxxx
------------------------------------------------- E N D   O F   L A Y O U T -------------------------------------------------

************************************************ -> E N D  O F  R E P O R T <- ************************************************
```

HEX Print Report Contents

The Audit Trail Report contents can print in the HEX print format for the following reasons:

- Record layouts were not used during the edit session that created the audit trail (a value of N was specified in the Record layout usage field). As a result, the entire Audit Trail Report is printed in HEX format.
- A single record layout (a value of S was specified in the Record layout usage field) or a record layout XREF (a value of X was specified in the Record layout usage field) was used during the edit session that created the audit trail, but File-AID was unable to print an audit trail record in the formatted manner. File-AID attempts to perform a formatted print of each audit trail record first before switching to hexadecimal printing. Refer to "Formatted Report Contents" on page 15-29 for a description of what happens when File-AID switches print formats.

When printing the audit trail contents in HEX, File-AID displays each record in a three-line format similar to the hexadecimal mode of the Edit unformatted mode. The top line contains the character representation of the record, the middle line contains the upper half-byte of each character in HEX, and the third line contains the lower half-byte of each character in hexadecimal.

Up to l00 positions of the record are printed in each set of three lines. The POSITION column immediately to the left of the record contents indicates the starting position in the record represented by each set of three lines.

When the update action shown is INSERT, the DATA DISPLAYED column to the left of the inserted record's image contains AFTER. When the update action shown is DELETE, the DATA DISPLAYED column contains BEFORE for the deleted record's image. When the update action shown is CHANGE, the before image is printed, followed immediately by the after image, if a change has occurred on that line.

When the before and after images of a changed record are displayed, the Audit Trail Report also indicates the record positions that were changed with an asterisk (*) under each changed position. For each three-line set of print lines that contains changed record

positions, CHANGE ===> is printed to the left and between the print lines, on the same line as the asterisks.

Figure 15-37. Audit Trail Report — Hexadecimal

```
08 JAN 2004  15:49:03                          File-AID 8.9 AUDIT TRAIL REPORT                          PAGE:          1
DATA FILE: USERID9.EMPLOYEE.FILE                                     OPENED ON: 08 JAN 2004 AT 14:39:01  USER ID:  USERID9

==========================================================================================================================
UPDATE NUMBER:              1                                ACTION: CHANGE    RECORDED: 08 JAN 2004 AT 14:40:25
DATA DISPLAYED              ----+----1----+----2----+----3----+----4----+----5----+----6----+----7----+----8----+----9----+----0
 BEFORE      POSITION 1     00100MULSTROM       ROBERTA   A  HOLLYWOOD SEAMSTRESS
              ZONE          FFFFFDEDEEDDD4444444DDCCDEC444C44CDDDEEDDC4ECCDEEDCEE4444444444
              DIGIT         0010044323964000000096259310001008633866640251423952200000000000
  CHANGE--->                     ********       *******
 AFTER       POSITION 1     00100einstein       alfred    A  HOLLYWOOD SEAMSTRESS
              ZONE          FFFFF889AA88944444448989884444C44CDDDEEDDC4ECCDEEDCEE4444444444
              DIGIT         0010059523595000000013695400001008633866640251423952200000000000
==========================================================================================================================
UPDATE NUMBER:              2                                ACTION: INSERT    RECORDED: 08 JAN 2004 AT 14:40:25
DATA DISPLAYED              ----+----1----+----2----+----3----+----4----+----5----+----6----+----7----+----8----+----9----+----0
 AFTER       POSITION 1     99999KOWALSKI       KENDRA    M  DATA ENTRY
              ZONE          FFFFFDDECDEDC4444444DCDCDC4444D44CCEC4CDEDE4444444444444444444
              DIGIT         9999926613229000000025549100004004131055398000000000000000000
==========================================================================================================================
UPDATE NUMBER:              3                                ACTION: DELETE    RECORDED: 08 JAN 2004 AT 14:40:25
DATA DISPLAYED              ----+----1----+----2----+----3----+----4----+----5----+----6----+----7----+----8----+----9----+----0
 BEFORE      POSITION 1     00090MARTIN         EDWARD    M  AIRPLANE MANUFACTURERxxxxxxxxx
              ZONE          FFFFFDCDECD444444444CCECDC4444D44CCDDDCDC4DCDECCCEEDCDAAAAAAAAA
              DIGIT         0009041939500000000054619400004001997315504154613349597777777777
```

Character Report Contents

The character audit trail report is similar to the HEX report except that the two hexadecimal lines are not printed. Unprintable characters are printed as blanks.

Figure 15-38. Audit Trail Report — Character

```
08 JAN 2004  15:51:16                          File-AID 8.9 AUDIT TRAIL REPORT                          PAGE:          1
DATA FILE: USERID9.EMPLOYEE.FILE                                     OPENED ON: 08 JAN 2004 AT 14:39:01  USER ID:  USERID9

==========================================================================================================================
UPDATE NUMBER:              1                                ACTION: CHANGE    RECORDED: 08 JAN 2004 AT 14:40:25
DATA DISPLAYED              ----+----1----+----2----+----3----+----4----+----5----+----6----+----7----+----8----+----9----+----0
 BEFORE      POSITION 1     00100MULSTROM       ROBERTA   A  HOLLYWOOD SEAMSTRESS
  CHANGE--->                     ********       *******
 AFTER       POSITION 1     00100einstein       alfred    A  HOLLYWOOD SEAMSTRESS
==========================================================================================================================
UPDATE NUMBER:              2                                ACTION: INSERT    RECORDED: 08 JAN 2004 AT 14:40:25
DATA DISPLAYED              ----+----1----+----2----+----3----+----4----+----5----+----6----+----7----+----8----+----9----+----0
 AFTER       POSITION 1     99999KOWALSKI       KENDRA    M  DATA ENTRY
==========================================================================================================================
UPDATE NUMBER:              3                                ACTION: DELETE    RECORDED: 08 JAN 2004 AT 14:40:25
DATA DISPLAYED              ----+----1----+----2----+----3----+----4----+----5----+----6----+----7----+----8----+----9----+----0
 BEFORE      POSITION 1     00090MARTIN         EDWARD    M  AIRPLANE MANUFACTURERxxxxxxxxx
```

Summary Information

Summary information is printed on the last page of the Audit Trail Report. See Figure 15-39 on page 15-33. It contains the following information:

- Name of the audit trail dataset that was printed.
- Description of the audit trail entered on the Audit Trail Disposition screen (see Figure 4-14 on page 4-22).
- Number of data file records that were changed, inserted, or deleted.
- The number of members updated if the edit dataset was a PDS.
- Name of the updated data file that created the audit trail.
- Names of the record layout dataset and member specified during the edit session (if a value of S or X was specified in the Record layout usage field) and the record layout dataset type (SEQ for sequential, PDS for partitioned, PAN for CA-Panvalet, LIB for CA-Librarian).

- Names of the record layout XREF dataset and member specified during the edit session (if an X was specified in the Record layout usage field).
- Names of the selection criteria dataset and member, if existing selection criteria was used during the edit session. If temporary selection criteria was used during the edit session, the literal ** TEMPORARY ** is printed.
- Date and time the edited data file was closed.
- The system ID on which the data file was updated.

Figure 15-39. Audit Trail Report — Summary

```
                                                    SUMMARY INFORMATION

   AUDIT TRAIL FILE PRINTED: SAMPLE1.FILEAID.AUDT.D940824.T143859
   AUDIT TRAIL DESCRIPTION:  PRINTING FOR DOCUMENTATION

   TOTAL RECORDS CHANGED:                1
   TOTAL RECORDS INSERTED:               1
   TOTAL RECORDS DELETED:                1

   TOTAL FILE UPDATES:                   3

   SELECTION CRITERIA FILE:   USERID9.FASAMP.SELCRIT
   SELECTION CRITERIA MEMBER: EMPSELC

   RECORD LAYOUT DATASET: SAMPLE1.LAYOUT                                MEMBER: EMPLOYEE                TYPE: PDS

DATA FILE: SAMPLE1.EMPLOYEE.FILE                                          CLOSED ON: 08 JAN 2004 AT 14:41:43    SYSTEM ID: ABCD
********************************************** -> E N D  O F  R E P O R T <- **********************************************
```

Executing Print Audit Trail Independently in Batch

You can execute the Print Audit Trail function as a separate step in a batch job by coding the JCL shown in Figure 15-40. This process can be useful when you want to print multiple audit trail datasets in one batch print job.

Figure 15-40. Batch Print Audit Trail JCL

```
//FAAUDIT  EXEC PGM=FILEAID,REGION=4M
//STEPLIB   DD DISP=SHR,DSN=FA.V8R9M0.LOAD
//SYSPRINT DD  SYSOUT=*
//SYSLIST  DD  SYSOUT=*
//DD01     DD  DISP=(OLD,KEEP,KEEP),
//             DSN='TSOID01.FILEAID.AUDT.D990108.T152349'
//SYSIN    DD  *
$$DD01 APRINT
/*
//
```

Audit Trail Print Execution Return Codes

The audit trail print execution return codes are the same as the data file print execution return codes. Refer to Table 15-1 on page 15-14 for a summary of the return codes. Additional audit trail print return codes are documented in the *File-AID Batch Reference Manual*. See the "Return Codes" heading in the "Message Codes" chapter.

Chapter 16.
Selection Criteria (6)

The Selection Criteria function allows you to create sets of criteria that File-AID uses to select records in a data file for processing. Option 6 consists of:

- Specifying a selection criteria dataset
- Editing existing or creating new selection criteria members.

File-AID provides selection criteria options and two kinds of selection criteria: formatted and unformatted. The selection criteria options allow you to specify:

- Where to begin record selection
- How to continue (selection intervals)
- When to stop
- Processing direction.

The selection criteria options can be combined with formatted and unformatted selection criteria.

Formatted selection criteria allow you to select records based on data within a field as specified by a record layout. Unformatted selection criteria allow you to select records based on freeform data specifications without using record layouts.

Selection criteria can be existing or temporary. Each can consist of options, formatted, unformatted, or any combination of all three. Selection criteria can be applied in the Browse, Edit, Print, and Compare functions and the Copy and Search/Update utilities.

New and existing selection criteria can be created and maintained in the Selection Criteria function of File-AID (option 6) and in the functions that use selection criteria.Existing selection criteria are stored in a cataloged dataset for use in the functions where you can apply them.

CAUTION:
Selection criteria datasets should be maintained with File-AID option 6. Editing a selection criteria dataset with ISPF 4.1 causes the dataset to be unusable by File-AID.

Temporary selection criteria are created from within the Browse, Edit, Copy, Print, Compare, or Search/Update function and are valid only for the duration of the function.Temporary selection criteria are not stored for future use unless you explicitly save them with the SAVE command.

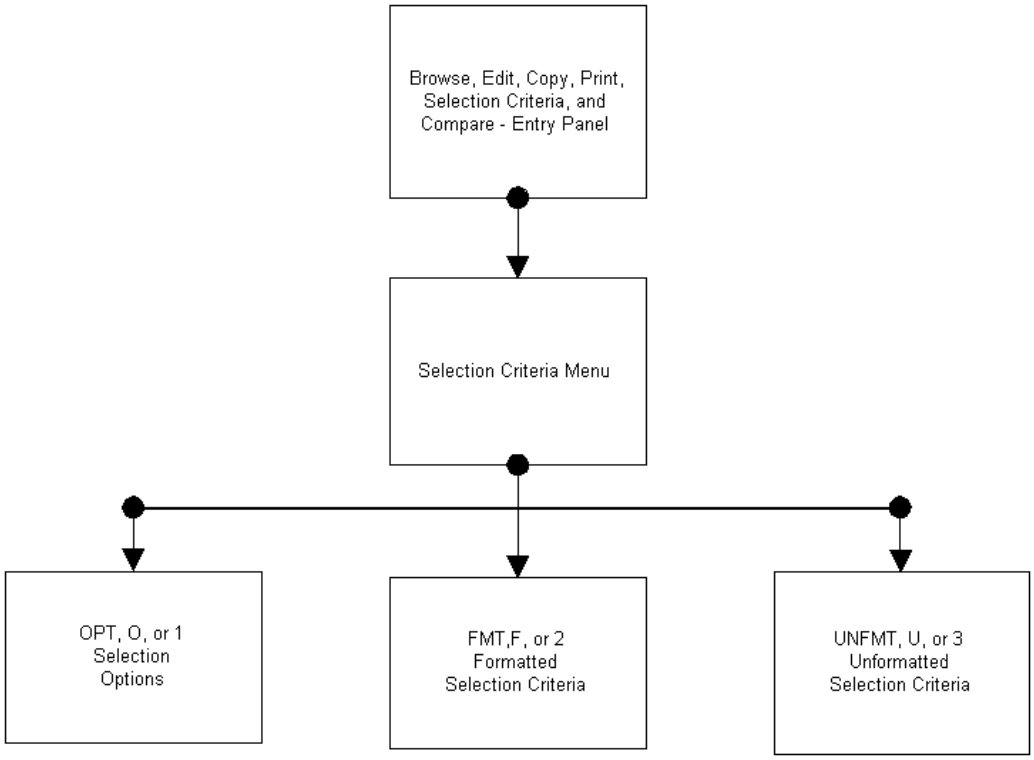
With temporary selection criteria, you do not begin by specifying a selection criteria dataset, but proceed directly to creation of the criteria. When you finish creating the temporary selection criteria, they are applied and you continue with the Browse, Edit, Print, or Compare function or Copy or Search/Update utility.

The next section in this chapter discusses the screen presentation order and navigation commands available for Selection Criteria. The remainder of the chapter describes the screens you use to create new and edit existing selection criteria members.

Selection Criteria Navigation

Selection criteria functions are available in Browse, Edit, Copy, Search/Update, Print, and Compare. The screen flow for selection criteria is similar for these functions and is illustrated in Figure 16-1.

Figure 16-1. Selection Criteria Screen Flow



Navigational Commands

The following primary commands are available throughout the selection criteria screens:

CANCEL (CAN) : Returns to main panel without saving current updates.

END : Continues to next sequential screen.

FMT (F, 2) : Displays the Formatted Selection Criteria screen.

OPT (O, 1) : Displays the Selection Criteria Options screen.

UNFMT (U, 3) : Displays the Unformatted Selection Criteria screen.

VIEW (V) : Displays the View Criteria screen, which displays a keyword summary of the current selection criteria settings for options, formatted, and unformatted. See "View Criteria" on page 16-7.

Selection Criteria — Dataset Specification

The Selection Criteria - Dataset Specification screen, shown in Figure 16-2, is used to create new or edit existing selection criteria members. To access the Selection Criteria function, select option **6** from the File-AID Primary Option Menu or enter the appropriate jump command (for example, =6) from any File-AID screen. See "Selecting Screens" on page 2-7. The Selection Criteria function can also be accessed with the **F6** recursive command. See "Recursive Commands" on page 2-5.

The Selection Criteria Dataset Specification screen is not displayed when you create temporary selection criteria from within the Browse, Edit, Copy, Search/Update, Compare, or Print functions.

Figure 16-2. Selection Criteria — Dataset Specification Screen

```
File-AID --------  Selection Criteria - Dataset Specification  ----------------
COMMAND ===>

Specify Selection Criteria Member to be Created or Edited:
   Selection dataset name   ===> FASAMP.SELECT
   Member name              ===>          (Blank or pattern for member list)

Specify Record Layout and XREF Information:
   Record layout usage      ===> S        (S = Single; X = XREF; N = None)

   Record layout dataset    ===> FASAMP.LAYOUTS
   Member name              ===>          (Blank or pattern for member list)

   XREF dataset name        ===>
   Member name              ===>          (Blank or pattern for member list)

--------------------------------------------------------------------------------
This function creates and maintains existing File-AID selection criteria. You
can then apply these criteria in other functions (BROWSE, EDIT, COPY, COMPARE,
and PRINT).

Specify either a record layout dataset and/or an XREF dataset when creating or
maintaining formatted selection criteria.
```

Field Descriptions

Specify Selection Criteria Member to be Created or Edited:

Selection dataset name : Specify the name of a cataloged partitioned dataset with attributes of RECFM=VB and a minimum LRECL=300. Use the naming conventions described in "Specifying a Dataset Name" on page 2-13.

You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Dataset Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description.

Member name : Specify the member name. You can leave this field blank or enter a pattern member name to display a list of members from which you can make a selection. A pattern member name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Member Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description. Pattern names cannot be entered in both the Dataset name and Member name fields at the same time.

Specify Record Layout and XREF Information:

Record layout usage : Specify one of the following values:

S : Single record layout. Specify for formatted selection criteria.

X : XREF (record layout cross reference). Specify for formatted selection criteria when more than one record layout is needed for a single dataset.

N : None (default). Specify for unformatted selection criteria.

When a formatted selection criteria member is created, it is assigned a single or multiple record status type based on what is specified in the Record layout usage field. If you edit this member at a later time, you must specify the same value in the Record layout usage field as when it was created.

When an unformatted selection criteria member is created, it is not assigned a record status type. This allows you to edit this member regardless of what is specified for the Record layout usage field.

Record layout dataset : Specify the name of a dataset that contains the COBOL or PL/I record layout. This file is required when creating or editing formatted selection criteria and must be specified when the Record layout usage field is S (single) or X (XREF).

See "Record Layout Dataset" on page 2-26.

Member name : You can leave this field blank or enter a pattern member name to display a list of members from which you can make a selection. A pattern member name or mask consists of explicit characters or a combination of explicit and pattern characters. See "Pattern Member Names" in Chapter 2 for a complete description. Pattern names cannot be entered in both the Dataset name and Member name fields at the same time.

Specify the name of an existing COBOL or PL/I record layout member.

XREF dataset name

Specify the name of a dataset that contains the record layout cross reference (XREF) members to use with multiple record type datasets. See the section entitled "Record Layout XREF Dataset" in Chapter 2 of the File-AID/MVS *Online Reference Manual*.

Member name : Specify the member name. You can leave this field blank or enter a pattern member name to display a list of members from which you can make a selection. A pattern member name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Member Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description. Pattern names cannot be entered in both the Dataset name and Member name fields at the same time.

After you complete the fields on the Selection Criteria - Dataset Specification screen, press Enter to proceed to the next screen. Depending on the information that you entered, File-AID may display a dataset or member list. Once all dataset specification is complete, File-AID displays the Selection Criteria Menu.

Use the END (PF3) or RETURN (PF4) primary command, or issue a jump command to exit the Selection Criteria function. If you are modifying existing selection criteria, it is saved.

SELCRIT Select Member List

The SELCRIT Select Member List screen, shown in Figure 16-3, is displayed when the Member name field for the Selection dataset name is left blank or an * (asterisk) or a pattern is entered in it on the Selection Criteria — Dataset Specification screen. The list may be scrolled using LOCATE commands (LOC mem) or scrolling commands (such as UP and DOWN).

See “Member List Field Descriptions” on page 2-12 for a description of each field on this screen. See “Member List Primary Commands” on page 2-12 for a list of valid primary commands.

Figure 16-3. SELCRIT Select Member List Screen

```
File-AID - SELCRIT Select - USERID9.FASAMP.SELCRIT ----------  ROW 1 TO 9 OF 9
COMMAND ===>                                                  SCROLL ===> CSR
 S  NAME      DESCRIPTION                        TYPE       CHANGED       ID
   EMPSELC   EMPLOYEE SELECT EXAMPLE             SELC   94/08/31 20:34  USERID9
   EMPSELP   EMPLOYEE SELECT EXAMPLE - PL/I      SELC   94/08/31 20:34  USERID9
   INVFILEC  INVFILE SELECTION - COBOL____       SELC   94/07/06 20:42  USERID9
   INVFILEP  INVFILE SELECTION - PL/I            SELC   94/07/06 20:42  USERID9
   ORDRFILC  SELECT PO ORDER-LINE__________      SELC   94/12/24 21:19  USERID9
   ORDRFILP  SELECT PO ORDERS - PL/I_______      SELC   94/07/11 11:53  USERID9
****************************** BOTTOM OF DATA ******************************
```

Selection Criteria Menu

The Selection Criteria Menu, shown in Figure 16-4, provides access to the selection criteria options and formatted and unformatted selection criteria specification. It is displayed after the Dataset Specification screen.

Figure 16-4. Selection Criteria Menu

```
File-AID - Selection Criteria Menu - USERID9.FASAMP.SELECT --------------------
OPTION ===>
                                                          - Status -
      1  OPTIONS      - Enter selection criteria options    default
      2  FORMATTED    - Edit formatted selection criteria   0   sets
      3  UNFORMATTED  - Edit unformatted selection criteria 0   sets


Member list description ===> ______________________________

    Long    ===> ____________________________________________________________
Description ===> ____________________________________________________________



Use VIEW to display selection criteria summary
Use SAVE to write selection criteria request
Use END to save selection criteria & return to dataset specification
Use CANCEL to cancel changes & return to dataset specification
```

Field Descriptions

OPTION : Specify one of the following valid options:

1. Selection criteria options allow you to specify a particular starting point in the dataset and set limits on the number of records processed. See “Selection Criteria Options” on page 16-8.
2. Create and edit formatted selection criteria, which allows you to select records based on data within a field specified by a record layout. See “Formatted Selection Criteria” on page 16-11.
3. Create and edit unformatted selection criteria, which allows you to select records based on data conditions without the use of record layouts. See “Unformatted Selection Criteria” on page 16-20.

Status : Specifies the status of the three types of selection criteria associated with the selection criteria dataset and member listed on the top line of this screen:

OPTIONS : Reports whether the default options have been modified. Valid values are DEFAULT or NOT DEFAULT.

FORMATTED and UNFORMATTED : Specifies the number of sets of criteria that are specified.A set of selection criteria is defined as a single expression that can lead to the selection of a record. A set may test for one condition or several conditions. The conditions can be ANDed together and several conditions separated by commas create nested OR conditions within a set.

Member list description : Specify a 30-byte description of the selection criteria. This description is displayed on the member list screen, which allows you to identify the criteria specified in this member.

Long description : Specify a longer selection criteria description, up to 62 characters. This information is stored in the selection criteria member.

Primary Commands

The following primary commands are valid on the Selection Criteria Menu:

CANCEL : Returns to the Selection Criteria Dataset Specification screen and clears all selection fields.

END : Saves the current selection criteria display in the selection criteria dataset and exits the Selection Criteria Menu without clearing the selection fields.

SAVE : Saves the current selection criteria display in the selection criteria dataset. If the current selection criteria display is temporary, you are prompted for a dataset and member name in which to save the criteria.

VIEW : Displays the View Criteria screen, which summarizes the options and selection criteria sets, formatted and unformatted, into a scrollable display. See "View Criteria" on page 16-7.

View Criteria

The View Criteria screen, shown in Figure 16-5, summarizes the current selection criteria member. It displays selection criteria option settings and both formatted and unformatted selection criteria sets on a scrollable display. Use the VIEW primary command on any selection criteria screen to display this screen. Use the END command (PF3) to return to the previous screen.

Figure 16-5. View Criteria Screen

```
 File-AID ------------------------ View Criteria -----------  ROW 1 TO 20 OF 35
 COMMAND ===>                                                  SCROLL ===> CSR
Use END to exit View Display

 ****************************** TOP OF CRITERIA ****************************
 DEFINE BLOCKS=SELECTION,

 DESCRIPTION ="EMPLOYEE SELECT EXAMPLE",
 DESCRIPTION1="SELECT SINGLE EMPLOYEES WITH LOCAL W/H LT 7",
 DESCRIPTION2="OR HOME PHONE IN AREA CODE 404 408 OR 415",

        SELECTION_DSNAME=USERID9.FASAMP.SELCRIT,
        SELECTION_MBRNAME=EMPSELC,

        LAYOUT_DSNAME=USERID9.FASAMP.LAYOUTS,
        LAYOUT_MBRNAME=EMPLOYEE,

        INITIAL_SKIP=0,
        THEN_SELECT=1,
        THEN_SKIP=0,

        MAXIMUM_TO_SEARCH=ALL,
        MAXIMUM_TO_SELECT=ALL
```

Selection Criteria Options

The Selection Criteria Options screen, shown in Figure 16-6, enables you to control record selection based on starting record key, RBA, or RRN or record counts which determine how selection processing is executed and when it stops. File-AID determines whether an individual parameter is valid based on the access method of the processed dataset. For instance, File-AID allows you to specify the processing direction when selecting records from a sequential or VSAM file.

Enter option 1 on the Selection Criteria Menu to display the Selection Criteria Options screen. Selection criteria options can be combined with both formatted and unformatted selection criteria. If any formatted or unformatted selection criteria exist, they are applied after a record passes the selection criteria options selection process.

Figure 16-6. Selection Criteria Options Screen

```
File-AID --------------  Selection Criteria Options  --------------------------
COMMAND ===>

Specify Selection Criteria Options:

                                            Start at the following record key
                                            (both blank for start of dataset)
  Starting record key         ===>
     - OR -                                 OR at the following RBA or RRN
  Starting RBA or RRN         ===>

  Initial records to skip     ===> 0        then skip this many records

  Subsequent Selection Interval:            then repeat the following
    Records to select         ===> 1        - select this many records
    Records to skip           ===> 0        - then skip this many records
                                            until
  Number of records to search ===> ALL      you have read this many records
  Number of records to select ===> ALL      or selected this many records

SEQ/VSAM processing direction ===> F        (F = Forward; B = Backward)

  Use END key to return to selection criteria menu
```

Field Descriptions

Specify Selection Criteria Options:

The Starting record key field and Starting RBA or RNN field are exclusive of each other.

Starting record key : Specify a generic or specific record key in a character or hexadecimal data format. This field allows you to specify a random starting point for record selection in a VSAM KSDS, keyed BDAM, or ISAM file. Records before the starting record key are not selected, regardless of matching formatted or unformatted selection criteria.

To specify a hexadecimal record key, enter the value enclosed in single quotation marks (') and precede the quoted value with the letter X. For example, `X'03E2'`.

Starting RBA or RRN : Specify a generic or specific relative byte address (RBA) or relative record number (RRN).

This field allows you to specify a random starting point for record selection in a VSAM or BDAM dataset. Records before the specified starting RBA or RRN are not selected, regardless of matching formatted or unformatted selection criteria.

For VSAM KSDS and VSAM ESDS datasets, enter a specific relative byte address. RBAs must be on a record boundary. To specify a hexadecimal RBA, enter the value enclosed in single quotation marks (') and precede the quoted value with the letter X.

For VSAM RRDS or BDAM datasets, a relative record number (RRN) can be specified.

Initial records to skip : Specify a number of records for File-AID to skip before processing the dataset. Possible values are any number from 0 (zero) through 999999. Use the 0 (zero) value to process all records.

Subsequent Selection Interval:

The values in the Records to select and Records to skip fields determine the record selection pattern that File-AID uses to select records from a dataset until the value in the Number of records to search or the Number of records to select field is reached.

Records to select : Specify the number of records for File-AID to retrieve from the dataset at a time. Possible values are any number from 1 (one) through 999999. Selection criteria is applied after the record has been retrieved. The default is 1 (one).

Records to skip : Specify the number of records for File-AID to skip after fulfilling the Records to select parameter when processing the dataset. Possible values are any number from 0 (zero) through 999999. Use the 0 (zero) value for File-AID to process all remaining records. All skipped records are not selected, regardless of the selection criteria specified.

Number of records to search : Specify a limit for the number of records File-AID reads and checks for matches to selection criteria. The default for this parameter is ALL. Possible values are any number from 0 (zero) through 999999. Use the Number of records to search field on the Selection Criteria Parameters screen to alter the default. See "Selection Parameters" in Chapter 3. Use the 0 (zero) or ALL value to search the entire file.

This parameter can prevent excessive I/O processing when searching large files. If the dataset is processed randomly (a KEY or RBA have been entered), this count begins with the first record retrieved randomly.

Number of records to select : Specify a limit for the total number of records for File-AID to retrieve from the dataset. Possible values are any number from 0 (zero) through 999999. The default is ALL. Use the Number of records to select field on the Selection Criteria Parameters screen to alter the default. See "Selection Parameters" onin Chapter 3. Use the 0 (zero) or ALL value to select the entire file.

When record information is requested, the additional record information line(s) are not counted as selected records. If a partitioned dataset containing JCL is processed logically, the value in the Number of records to select field is the number of logical records that File-AID selects.

SEQ/VSAM processing direction : Specify a processing direction for File-AID to read Sequential or VSAM files. Possible values are F (forward) and B (backward). The default is F (forward).

This field specifies whether File-AID starts reading a Sequential or VSAM file at the beginning or the end. File-AID ignores the B value in this field when used with datasets of other access methods.

Note: For an online Edit (F.2), backwards processing forces the use of the update-in-place edit method and its associated restrictions. See "Update-In-Place Restrictions" on page 4-36.

Figure 16-7 on page 16-10 shows an example of the effect of selection criteria options.

Figure 16-7. Selection Criteria Options Example

```
Initial records to skip     ===> 4       then skip this many records
Subsequent Selection Interval:           then repeat the following
  Records to select         ===> 2       - select this many records
  Records to skip           ===> 3       - then skip this many records
                                         until
Number of records to search ===> ALL     you have read this many records
Number of records to select ===> 10      or selected this many records

   Selected/Not Selected        Records in the file
      NS                     Record      1
      NS                                 2
      NS                                 3
      NS                                 4
      S                      Select 2    5 <=== Starting Record Number
      S                                  6
      NS                     Skip 3      7
      NS                                 8
      NS                                 9
      S                      Select 2    10
      S                                  11
      NS                     Skip 3      12
      NS                                 13
      NS                                 14
      S                      Select 2    15
      S                                  16
      NS                     Skip 3      17
      NS                                 18
      NS                                 19
      S                      Select 2    20
      S                                  21
      NS                     Skip 3      22
      NS                                 23
      NS                                 24
      S                      Select 2    25
      S                                  26 <=== 10th Record Selected
      NS                                 27
      NS                                 28
      NS                                 29
      NS           Not Selected          30
      NS           Because Limit         31
      NS         Has Been Reached        32
      NS                                 33
      NS                                 34
      NS                                 35
```

When the values shown in Figure 16-8 are entered in the selection criteria options fields, all records in the file pass this portion of the selection process and are processed by any specified formatted and unformatted selection criteria.

Figure 16-8. Selection Criteria Options Example. Default — Examines All Records

```
Initial records to skip     ===> 0       then skip this many records

Subsequent Selection Interval            then repeat the following
  Records to select         ===> 1        - select this many records
  Records to skip           ===> 0        - then skip this many records
                                         until
Number of records to search ===> all     you have read this many records
Number of records to select ===> all     or selected this many records
```

Formatted Selection Criteria

The Formatted Selection Criteria screen, shown in Figure 16-9, allows you to specify selection of records based on field values displayed with a record layout. This screen is similar to the Edit formatted mode screen except that the Formatted Selection Criteria screen has an additional column, RO (Relational Operator), located to the right of the FORMAT column which does not display record data.

Select option 2 on the Selection Criteria Menu to display the Formatted Selection Criteria screen. If you did not specify a record layout or XREF dataset prior to selecting option 2, File-AID displays the Record Layout Specification screen, shown in Figure 16-13 on page 16-15, for entry of the required information.

Figure 16-9. Formatted Selection Criteria Screen

```
File-AID --- Formatted Selection Criteria -------------------------------------
COMMAND ===>                                                  SCROLL ===> CSR
CRITERIA NUMBER:  1 OF  1  EMPLOYEE-MASTER-FILE            LAYOUT LENGTH:   198
---- FIELD LEVEL/NAME ------- -FORMAT- RO ----+----1----+----2----+----3----+-
****************************** TOP OF DATA ********************************
5 EMP-NUMBER                    5/AN
5 EMP-LAST-NAME                15/AN
5 EMP-FIRST-NAME               10/AN
5 EMP-MID-INIT                  1/AN
5 FILLER                        2/AN
5 EMP-TITLE                    30/AN
5 EMP-PERSONAL-INFO SYNC       23/GRP
  10 EMP-NATL-ID-NUMBER         9/NUM
  10 FILLER                     1/AN
  10 EMP-DATE-OF-BIRTH          6/AN
  10 EMP-DOB-REDEF REDEFINES EMP-DATE-OF-BIRTH
  10 EMP-DOB-REDEF SYNC         6/GRP
    15 EMP-DOB-MM               2/NUM
    15 EMP-DOB-DD               2/NUM
    15 EMP-DOB-YY               2/NUM
  10 EMP-HIRE-DATE              6/AN
  10 EMP-MARITAL-STATUS         1/AN
5 EMP-WITHOLD-INFO SYNC        15/GRP
  10 EMP-LIFE-INS-WITHOLD-AMT   6/SNUM
```

Field Descriptions

RO : Specify a relational operator. See Table 16-1 for possible values.

Table 16-1. Relational Operators

Relational Operator	Description
EQ, =	**Equal to**
NE, ¬ =, ! =	Not equal to
GT, >	Greater than
GE, > =	Greater than or equal to
LT, <	Less than
LE, < =	Less than or equal to
CO	Contains; scans the specified field for the presence of a data value. CO works on an equal condition.
NC	Not contains; scans the specified field for the absence of a data value. NC works on a not equal condition.
BT	Between; within a range of two values (endpoints inclusive). The value is greater than or equal to the first endpoint and less than or equal to the last endpoint.
NB	Not between; outside a range of two values (endpoints exclusive). The value is less than the first endpoint or greater than the last endpoint.

Table 16-1. Relational Operators (Continued)

Relational Operator	Description
VA	Valid numeric or packed data based on the field format.
NV	Not valid numeric or packed data based on the field format.
FM	Field mask. See "Field Mask" on page 16-13 for more information.

File-AID is distributed with a default value of EQ (equal) for relational operator. The default value can be modified with File-AID option 0.2 Selection Criteria Parameters screen. See "Selection Parameters" on page 3-6.

Notes:

1. The CO and NC relational operators can be specified only for alphanumeric fields (PIC X for COBOL; CHAR or PIC X for PL/I).
2. File-AID does not currently support selection criteria that use bit or numeric fields that specify a leading and/or separate sign.

data value : For fields with relational operators other than BT and NB, you specify the field value to use in the comparison exactly as in Edit formatted mode. For relational operators BT and NB, specify your Data Value as two values separated by a colon (:). The values may be hex strings, character strings, or numeric tests.

To compare an alphanumeric field to blanks (hexadecimal 40s), leave the data value column blank.

Field Mask

The "Field Mask Criteria" screen, shown in Figure 16-10 on page 16-13, is displayed when you enter the Field Mask (FM) relational operator in the relational operator (RO) column on any of the File-AID Selection Criteria screens.

Figure 16-10. Field Mask Criteria

```
File-AID --- Formatted Selection Criteria -------------------------------------
C                              Field Mask Criteria
S
-    Command ===>
*
1    Field Name  :  ORD-TYPE
     Data Type   :  CHARACTER
     Field Length:  00008
     Mask Length :  008

     A field mask allows selected positions of a field to be processed.
     It always operates on the character representation of the field.

     Identify field positions to process:  (Y = include; N = exclude)
     Field Mask:  ----+---




     END to continue
*
```

Note: To ensure accurate Field Mask processing, the Field Mask (FM) relational operator must be entered prior to entering any other relational operators.

Field Descriptions

Field Name : Name of the selected field as defined by the record layout.

Data Type : Data type of selected field as defined by the record layout.

Field Length : Length of data in selected field as defined by the record layout. This field cannot be overtyped, when you are on the Field Mask Criteria screen.

Mask Length : Length of the mask. This field may be overtyped to shorten or lengthen the length of the data to be masked. This is particularly useful when you want to mask all the elements of a group item.

Note: You cannot override Mask Length for binary or packed/comp-3 fields.

Identify field positions to process: (Y = include; N = exclude)

Field Mask

A Field Mask enables processing of selected positions or part of a field. It always operates on character representation of the field. Specify Y or N to include or exclude field positions to be processed for masking.

Field Mask can be applied to both numeric and character fields.

Each mask position corresponds to a digit in the decimal value of the original field, when masking numeric fields. The selected digits are passed as a single unsigned numeric display field for the specified product function.

Note: Signs (+,-) are excluded when masking numeric fields.

When masking character fields, each mask position corresponds to the identical position in the original field. The selected positions are passed as a single contiguous character field.

The original format will be replaced by MASK on the Formatted Criteria and Selection criteria screens, when Field Mask is in effect.

Note: Field masking is not currently supported for bit, floating point, DBCS, or numeric fields that specify a leading and/or separate sign.

Primary Commands

The following primary commands are valid:

END : Saves the entered field mask parameters.

CANCEL : Discards the entries.

Guidelines

To specify a formatted selection criterion, enter the relational operator and data value beside a field on which you want to base the record selection. Leave the relational operator blank for fields not involved in the selection criteria. Use the INPUT, INSERT, or REPEAT primary command to specify multiple sets of formatted selection criteria.

In theory, you can create any number of sets of selection criteria. However, the actual number is limited by available storage. Storage is primarily affected by the number of relational operators used and the size of the fields being referenced.

Multiple *fields* for a single criterion test are logically ANDed together and multiple *sets* of criteria tests are logically ORed together.

Multiple data entries can be specified for one field by separating each entry with a comma. The comma is interpreted as an OR expression. You can specify multiple data values for one field on one selection screen. For example: **RECORD-CODE EQ A,B,C** is interpreted as the RECORD-CODE field must be equal to A or B or C.

The syntax of the search data is important since File-AID interprets a comma as an OR expression. In order to search for a comma as data, enclose the comma in double quotes (",").

For relational operators BT and NB, enter two values separated by a colon (for example, BT -100:+100). In most cases, you will have sufficient space to enter the two values.

You can select records with an invalid field value by entering the NV relational operator. Records with a valid field value can be selected by entering the VA relational operator. The VA and NV operators can be used for packed decimal, and zoned decimal fields.

Relational operators CO and NC can be used to scan a field within each record for the presence or absence of a particular value. The value for which you want to search is entered in the data value column. Trailing blanks in the data value are ignored and not included in the search string. The CAPS primary command controls whether File-AID does a case-sensitive search. When you enter CAPS OFF, only text exactly matching the upper and lowercase characters is found (for example, SMITH and Smith are different values). When you enter CAPS ON, File-AID treats upper, lower, and mixed-case characters the same and matches any case combination of the specified characters.

Japanese Data

DBCS and single byte Katakana data is accepted as selection criteria data values for alphanumeric fields. For the relational operators CO (contains) and NC (not contains),

File-AID removes any leading or trailing shift characters from DBCS data unless the value is enclosed in double quotes.

When KANA is specified for the Character Set option on the System Parameters screen (option 0.1), C (Character) and T (Text) identifiers are both treated as case-sensitive C (Character) data.

Sample Selection Sets

Figure 16-11. Formatted Selection Criteria Example (Page 1)

```
File-AID --- Formatted Selection Criteria -------------------------------------
COMMAND ===>                                                SCROLL ===> CSR
CRITERIA NUMBER:  1 OF  2  EXAMPLE-FILE                    LAYOUT LENGTH:     3
---- FIELD LEVEL/NAME ------- -FORMAT- RO ----+----1----+----2----+----3----+-
****************************** TOP OF DATA ********************************
5 FIELD-ONE                     1/AN   =  A,B,C
5 FIELD-TWO                     1/AN   =  D
5 FIELD-THREE                   1/AN
***************************** BOTTOM OF DATA ******************************
```

Figure 16-12. Formatted Selection Criteria Example (Page 2)

```
File-AID --- Formatted Selection Criteria -------------------------------------
COMMAND ===>                                                SCROLL ===> CSR
CRITERIA NUMBER:  2 OF  2  EXAMPLE-FILE                    LAYOUT LENGTH:     3
---- FIELD LEVEL/NAME ------- -FORMAT- RO ----+----1----+----2----+----3----+-
****************************** TOP OF DATA ********************************
5 FIELD-ONE                     1/AN
5 FIELD-TWO                     1/AN
5 FIELD-THREE                   1/AN   =  E
***************************** BOTTOM OF DATA ******************************
```

Figure 16-13. Unformatted Selection Criteria Exampls

```
File-AID -------------  Unformatted Selection Criteria  ---  ROW 1 TO 16 OF 25
COMMAND ===>                                                 SCROLL ===> CSR

Use END to continue, CANCEL to return to main screen.

    AND
Cmd /OR Position Length RO                      Data Value
--- --- -------- ------ -- ---------------------------------------------------
___       1              EQ T'a,b,c'
___ AND   2              EQ T'd'
___ OR    3              EQ T'e'
___ AND   _____   _____  EQ ______________________________________________
___ AND   _____   _____  EQ ______________________________________________
```

The formatted conditions specified in Figure 16-11 Figure 16-12 and the unformatted conditions specified in Figure 16-13 both translate into the following expression:

If ((A or B or C) and D) or E

which can also be stated as:

If (A and D) or (B and D) or (C and D) or E.

Primary Commands

The following is a list of the primary commands that are valid on the Formatted Selection Criteria screen. Each command is discussed in Chapter 21, “Primary Commands”.

ALIGN (AL) : Controls display of ALIGNED/UNALIGNED term for PL/I data.

ARRAY (AR) : Controls display of array declaration information for PL/I data.

BACK : Positions the display to the previous criteria. Synonym for LEFT.

CANCEL (CAN) : Returns to main panel without saving current updates.

CAPS : Sets caps mode. CAPS ON is not case-sensitive in the search to match the selection criteria. Specify CAPS OFF for a case-sensitive search. This command is valid only on a new criteria display.

COMPLEX (CMPLX) : Controls display of COMPLEX terms for PL/I data.

DELETE (DEL, D) : Delete a selection set.

DISPLAY (DIS) : Specifies a display format.

DOWN : Scrolls down.

END (E) : Terminates display of the Formatted Selection Criteria screen and returns to the Selection Criteria Menu.

FILLER (FILL) : Controls display of FILLER fields.

FORWARD (FWD) : Positions the display to the next criteria. Synonym for RIGHT.

GROUP : Controls the display of occurrences of group-level items.

INPUT/ INSERT (I) : Inputs/inserts a new formatted selection criterion.

LEFT (L) : Positions the display to the previous criteria. Synonym for BACK.

LOCATE (LOC) : Scrolls directly to the specified record layout line.

LR (Locate Record) : Positions the display to the specified criteria number.

MESSAGE (MSG) : Controls the message display.

OCCURS (OCC) : Controls the display of array declaration items.

OFFSET : Displays field offsets.

OPT (O, 1) : Displays the Selection Criteria Options screen.

PROFILE (PROF) : Displays profile information lines.

REDEFINE (REDEF, REF) : Controls the display of data item redefinitions.

REFLNG : Controls the display of BIT/CHAR REFER field length reference lines for PL/I data.

REPEAT (R) : Causes a formatted field selection criterion to be repeated.

RESET (RES) : Causes excluded lines to be redisplayed.

RETURN : Returns to the Primary Option Menu.

RIGHT : Positions the display to the next criteria. Synonym for FORWARD.

SAVE : Saves the displayed selection criteria.

SHOW (SH) : Displays LEVEL, NUMBER, FORMAT, OFFSET, or PICTURE information for the selection fields.

SYNC : Controls the display of the SYNC term for fields in a COBOL record layout.

UNFMT (U, 3) : Displays the Unformatted Selection Criteria screen.

UP : Scrolls up.

USE : Specifies another record layout for the current formatted selection criteria.

VIEW (V) : Displays the View Criteria screen which is a keyword summary of the current settings for options, formatted, and unformatted selection criteria. See Figure 16-5 on page 16-7.

ZERO (Z) : Controls the display of leading zeros in the numeric data fields.

Selection Criteria Record Layout Specification

File-AID displays the Record Layout Specification screen, shown in Figure 16-14, when a record layout or XREF dataset was not specified prior to selecting option 2, formatted selection criteria. Specify record layout or XREF information and press Enter to continue. Use the END primary command (PF3) to return to the Selection Criteria Menu. "Field Descriptions" on page 16-3 describes each field in this screen.

Figure 16-14. Record Layout Specification Screen

```
File-AID --------------  Record Layout Specification  --------------------------
COMMAND ===>

Specify Record Layout and XREF Information:
  Record layout usage    ===> S          (S = Single; X = XREF)

  Record layout dataset  ===> FASAMP.LAYOUTS
  Member name            ===>            (Blank or pattern for member list)

  XREF dataset name      ===> FASAMP.XREF
  Member name            ===>            (Blank or pattern for member list)
```

Selection Criteria for XREFs and Multiple Record Type Files

Specify an X in the Record layout usage field and XREF dataset information on the Selection Criteria - Dataset Specification screen to create new or edit existing formatted selection criteria for multiple record type files. XREFs are used to specify selection criteria for multiple record type files and segmented records. The record layout XREFs allow you to identify the record type(s) for which you want to specify formatted record selection criteria.

The Display XREF screen, shown in Figure 16-15, lists each layout defined in the specified XREF. It is displayed when the data file you are selecting from contains more than one type of record and each record type requires a different record layout (Record layout usage = X). XREF layouts are compiled as needed.

Each data file record is classified into a record type category based on certain field values within the record. In File-AID, these field values and their record layouts are associated when the XREF is defined. See Chapter 17, “Record Layout Cross Reference (7)”.

Figure 16-15. Display XREF Screen

```
File-AID --- Display XREF - SEGFILE -------------------------  ROW 1 TO 6 OF 6
COMMAND ===>                                                  SCROLL ===> CSR
XR113- Selection by Record ID: Enter S or SF for formatted, SU for unformatted
Member list description ===> SEGFILE XREF__________________

    Long    ===> FILE CONTAINS INS-BASE FOLLOWED BY ANY NUMBER OF ADDITIONAL___
Description ===> TRAILER SEGMENTS IN ANY ORDER - BOAT CAR BUSINESS ETC._________


Cmd   Member   Beginning Data-Name              Description         Status
--- ---------- ------------------------------ ---------------- ----------------
__  SEGRECS    INS-BASE-FILE                                    BASE
__  SEGRECS    CLI-BOAT-DATA                                    SEGMENT
__  SEGRECS    CLI-BUSINESS-DATA                                SEGMENT
__  SEGRECS    CLI-CAR-DATA                                     SEGMENT
__  SEGRECS    CLI-HOME-DATA                                    SEGMENT
__  SEGRECS    CLI-LIFE-DATA                                    SEGMENT
************************** END OF SELECTION CRITERIA **************************
```

Field Descriptions

Cmd : Use the S (Select) or SF (Select Formatted) line command to specify the record layout you want to use.

If you select a SEGMENT, the BASE associated with that segment is also implicitly selected. The fields associated with layout selection are automatically set and locked and flagged with a criteria value of RECORD TYPE FIELD.

Note: With segmented records, File-AID selects only the records where the requested segment immediately follows the base segment.

Use the SU (Select Unformatted) line command to display the Unformatted Selection Criteria screen for the selected record type.

Member : Name of the record layout member.

Beginning Data-Name : Displays the starting dataname of the record layout.

Description : Short Description of the record layout entered by user when the XREF is created.

Status : Usage status of the layout (BASE, DEFAULT, or SEGMENT) as defined in the XREF.

After you select a layout on the Display XREF screen, press Enter to display the Formatted Selection Criteria screen (S or SF) or Unformatted Selection Criteria screen (SU).

Use the END command (PF3) to terminate the function and return to the Selection Criteria Menu.

Use the CANCEL command to terminate the function and return to the Selection Criteria - Dataset Specification screen. Use the RETURN command (PF4) to return to the File-AID Primary Option Menu without specifying any criteria.

Primary Commands

The following primary commands are valid on the Display XREF screen:

CANCEL : Terminates the selection criteria specification.

DOWN : Scrolls toward the end of a record layout.

END : Terminates the selection criteria specification.

RETURN : Returns to the File-AID Primary Option Menu.

UP : Scrolls toward the top of a record layout.

On the Formatted Selection screen the record layout fields that contain the record type are protected and the intensified message, **RECORD TYPE FIELD**, is displayed in the data column, as shown in Figure 16-16. The record type field is treated as if you had entered the appropriate relational operator and the corresponding record type value(s).

Figure 16-16. Formatted Selection Criteria Screen. For Multiple Record Type Files

```
File-AID --- Formatted Selection Criteria -------------------------------
COMMAND ===>                                                 SCROLL ===>
CRITERIA NUMBER:  1 OF  1  ORDER-LINE-DATA-PO              LAYOUT LENGTH:
---- FIELD LEVEL/NAME ------- -FORMAT- RO ----+----1----+----2----+----3-
****************************** TOP OF DATA ****************************
5 RECORD-LENGTH                 2/BI      0
5 ORDER-NO                      6/AN
5 ORDER-LINE-KEY SYNC           2/GRP
  7 LINE-NUMBER                 2/AN
5 ORDER-TYPE                    2/AN      ** RECORD TYPE FIELD **
5 LINE-STATUS                   7/AN
5 PART-NO                       6/AN
5 DESCRIPTION                  30/AN
```

Once you select a record type for formatted or unformatted selection criteria, the records matching this record type are selected even if you do not enter any other field criteria. On the Formatted Selection Criteria screen, use the DELETE primary command to unselect a record type. Use File-AID Edit to delete any unwanted unformatted selection criteria sets. Use the VIEW command to check which XREF record types are active.

Unformatted Selection Criteria

The Unformatted Selection Criteria screen, shown in Figure 16-17, allows you to enter freeform data specification criteria to select records without the use of record layouts. You can scroll the screen down to enter additional criteria. Scrolling up displays previously entered criteria. File-AID displays the Unformatted Selection Criteria screen when you enter option 3 on the Selection Criteria Menu.

Figure 16-17. Unformatted Selection Criteria Screen

```
File-AID -------------  Unformatted Selection Criteria  ---  ROW 1 TO 16 OF 25
COMMAND ===>                                                  SCROLL ===> CSR

Use END to continue, CANCEL to return to main screen.

    AND
Cmd /OR Position Length RO                        Data Value
--- --- -------- ------ -- ----------------------------------------------------
___       _____   _____  EQ ____________________________________________________
___ AND   _____   _____  EQ ____________________________________________________
___ AND   _____   _____  EQ ____________________________________________________
___ AND   _____   _____  EQ ____________________________________________________
___ AND   _____   _____  EQ ____________________________________________________
___ AND   _____   _____  EQ ____________________________________________________
___ AND   _____   _____  EQ ____________________________________________________
___ AND   _____   _____  EQ ____________________________________________________
___ AND   _____   _____  EQ ____________________________________________________
___ AND   _____   _____  EQ ____________________________________________________
___ AND   _____   _____  EQ ____________________________________________________
___ AND   _____   _____  EQ ____________________________________________________
___ AND   _____   _____  EQ ____________________________________________________
___ AND   _____   _____  EQ ____________________________________________________
___ AND   _____   _____  EQ ____________________________________________________
___ AND   _____   _____  EQ ____________________________________________________
```

Field Descriptions

Cmd : Specify one of the following valid line commands to edit your selections:

A - Marks the destination after which a line is placed.

B - Marks the destination before which a line is placed.

C - Copy the line to a marked destination.

D - Delete the line. D*nn* deletes the specified number of lines.

I - Insert a line. I*nn* inserts the specified number of lines.

M - Move the line to a marked destination.

R - Repeat the line. R*nn* repeats the line the specified number of times.

AND/OR : Specify the AND/OR parameter to define multiple condition testing. It defines the logic to use to connect multiple conditions.

File-AID considers the OR connector the beginning of a new set of selections. AND continues a logical set of selections.

When evaluating ANDed conditions, all the conditions must be true. When evaluating ORed conditions, only one of the conditions must be true.

For example, if you specify: **Selection 1 AND Selection 2 OR Selection 3**, File-AID evaluates it as: **(Selection 1 AND Selection 2) OR Selection 3**.

Use File-AID option 0.2 System Parameters to set the default for the AND/OR field.

Each selection can have multiple OR conditions as described in “Multiple Data Entries” on page 16-23.

Position : Specify the location within a record where File-AID is to begin the data comparison. The position value can be either actual or relative. An actual position is indicated by an unsigned number. A signed number (+ or -) indicates a relative position.

An actual position can be any number from 1 (one) to the maximum record length of the input file.

A relative position can be specified when scanning a record with the CO (contains) relational operator. It is a signed (+ or -) number that indicates an offset from the beginning of the matched data. Relative position (+0) points to the first byte of data of the matched scan. If no scan is defined, relative position (+0) points to the first byte of data in the record. A relative location cannot point to a position outside the record.

Variable-length records begin with a four-byte Record Descriptor Word (RDW). Position one points to the first byte of the data portion of the record. If you want to reference the RDW, use a relative position of -4.

Length : Specify the field length. Length is an *optional* field for most relational operators. VA and NV relational operators are the exception and this field is required unless you specify packed data.

The length value plus the position value cannot exceed the record length. The value you specify in the Length field must be equal or greater than the length of the data value in bytes.

For the CO (contains) and NC (not contains) relational operators, the Length field specifies the number of positions in the record that File-AID scans for the specified data value. The length value can be from 1 to the maximum record length. If the Length field is left blank, each record is searched from the location specified in the Position field to the end of the record.

For the remainder of the relational operators, length defines the number of positions in the record that File-AID compares. The length value can be from 1 to 256.

If the Length field value exceeds the actual length of the data specified in the data value field, File-AID pads the data value with blanks to the right. When the Length field is left blank, File-AID determines the length of the field based on the actual data value length.

RO : Specify a relational operator. File-AID is distributed with a default value of EQ (equal) for relational operator. Valid values are:

Conditional operators:

EQ, =	Equal to
NE, ¬=, !=	Not equal to
GT, >	Greater than
GE, >=	Greater than or equal to
LT, <	Less than
LE, <=	Less than or equal to
CO	Contains; scans a range of record positions for the presence of the data value. CO works on an equal condition. It reads from the Position value until the data string is matched, the Length value is exceeded, or the end of the record is reached.
NC	Not contains; scans a range of record positions for the absence of the data value. NC works on a not equal condition. It reads from the Position value until the Length value is exceeded or the end of the record is reached.
BT	Between; the value is greater than or equal to the first endpoint and less than or equal to the last endpoint.
NB	Not between; the value is less than the first endpoint or greater than the last endpoint.

Conditional operators:

VA Valid numeric or packed data based on the specified data type. For a numeric data type, you must specify a length.

NV Not valid numeric or packed data based on the specified data type. For a numeric data type, you must specify a length.

Bit relational operators used with the M (mask) data type:

EQ Bits are all ones

MX Bits are mixed, ones and zeros

NE Bits are all zeros

NO Bits are not all ones.

Data Value : Specify the data string, up to 52 bytes, for which File-AID is to search. If a data type is specified, the data string must be enclosed in single (' ') or double (" ") quotes. When a data type is not specified, alphanumeric text (T) is assumed.

Note: For packed (P) data types, File-AID supports a maximum of 31 digits.

Table 16-2 describes valid data types for this field:

Table 16-2. Data Types

Data Type	Type Description	Example	Description of Data
B	Binary	B'+147,-25,+1117'	Binary equivalent of decimal number specified in quotes. In this example using the default of fullword, File-AID searches for 00000093, FFFFFFE7, or 0000045D. File-AID assumes the length of 4 or you can specify 1, 2, 4, or 8. **Note:** If the binary data in the record contains a sign, all data values must also contain a sign (+/-).
C	Character	C'Smith'	Case-sensitive character value of uppercase S and lowercase mith.
X	Hexadecimal	X'0001FF'	Hexadecimal value 0001FF.
M	Mask (Use with bit relational operators)	M'11000000' or M'C0'	The mask can be specified in binary or hexadecimal to indicate which bits File-AID should examine. This example tests the first two bits of the specified byte.
N	Numeric	N'25'	Positive or unsigned numeric value +25 or 25.
P	Packed	P'12345'	Positive or unsigned packed value.
T	Text	T'smith'	Alphanumeric text, not case-sensitive. Value smith, SMITH, or any combination of upper and lowercase characters. T (text) is the default data type.

Guidelines

The T data type specifies a non-case-sensitive search. Since T is the default, File-AID does a non-case-sensitive search if the data type is not specified. Use a data type of C to search for case-sensitive character data (search for upper and lowercase data exactly as specified).

For packed data, you need to specify only the significant digits. When a length is not specified, File-AID scans the data for the sign to determine the length of the packed field. Records that do not contain valid packed data at the specified position are skipped.

Hexadecimal data must be specified in multiples of two digits or letters.

For the EQ, NE, GT, GE, LT, and LE operators, you can compare a field to blanks (hexadecimal 40s) by leaving the Data Value field blank and entering the number of positions to compare in the Length field. The Data Value field is pre-filled with C" ". All other operators require an entry in the Data Value field.

Multiple Data Entries

When you specify multiple data entries in the Data Value field, separate each entry with a comma. The comma is interpreted as an OR. This gives File-AID the ability to search for multiple data values at a specified Position. For example: **smith,jones**.

In this case because T is the default data type, File-AID searches for the non-case-sensitive values of **smith** or **jones** at the specified location.

Comma Character as Data

Since File-AID interprets a comma as an OR, the syntax of the search data is important. To search for a comma as data, enclose the data in double quotes (" "). Using no quotes or single quotes around a comma causes it to be treated as an OR. For example: ",**DSN=**". In this case, File-AID searches for a comma that is part of the **,DSN=** data string.

Duplication Factor

File-AID allows you to specify a duplication factor, which eliminates the need to code repetitive data. The duplication factor is a number from 1 through 255, which specifies the number of contiguous occurrences of the specified data value for which File-AID compares. For example, 10C'ABC'

A duplication factor is allowed with EQ, GE, GT, LE, LT, MX, NO, NV, and VA.

Valid and Invalid Data Checking

Use the VA (valid) or NV (not valid) relational operator and specify a data type for the data value to check a record for valid or invalid data at a specified position. Valid and invalid data can be checked for packed and numeric data types.

Use a P data type to check for packed data. Packed data must be signed with C, F, or D. Length does not need to be specified because File-AID determines the length of packed data.

Numeric data is specified by the data type N. It must be in zoned decimal format. The last byte can be signed positive (C0 - C9), signed negative (D0 - D9), or unsigned (F0 - F9). For numeric data, the Length field must be specified.

When searching for repetitive numbers of valid or invalid fields, specify a duplication factor with the data type in the Data Value field.

Japanese Data

DBCS and single byte Katakana data is accepted as selection criteria data values for data types C (Character) and T (Text). With unformatted selection criteria, File-AID removes any leading or trailing shift characters from DBCS data unless the value is enclosed in double quotes.

When KANA is specified for the Character Set option on the System Parameters screen (option 0.1), C (Character) and T (Text) identifiers are both treated as case-sensitive C (Character) data.

Primary Commands

The following primary commands are valid on the Unformatted Selection Criteria screen. Each command is discussed in Chapter 21, “Primary Commands”.

CANCEL (CAN) : Terminates selection criteria editing without saving member.

END : Terminates unformatted selection criteria editing and returns to the selection criteria menu.

FMT (F, 2) : Displays the Formatted Selection Criteria screen.

OPT (O, 1) : Displays the Selection Criteria Options screen.

SAVE : Saves selection criteria member.

VIEW (V) : Displays the View Criteria screen, which displays the current selection criteria settings for options, formatted, and unformatted. See Figure 16-5 on page 16-7.

Chapter 17.
Record Layout Cross Reference (7)

The record layout cross reference (XREF) function enables you to create and maintain XREFs. File-AID uses an XREF to automatically match record layouts to data records for its functions that use layouts to format data. An XREF is needed when the data being formatted requires more than a single record layout.

With the XREF function, you can create a permanent member of a PDS that contains the *rules* for selecting a record layout. The rules are based on the data conditions found in each record. XREFs are processed by the following File-AID functions:

Browse	Formatted display mode and FPRINT command
Edit	Formatted display mode and FPRINT command
Print	Formatted data record printing
Selection	Formatted selection criteria specification
Reformat	Source layout and record selection
Compare	Formatted field comparison and differences reporting.

XREF layouts are compiled when needed by the function.

CAUTION:
XREF datasets should be maintained with File-AID option 7. Editing an XREF dataset with ISPF 4.1 causes the dataset to be unusable by File-AID.

The XREF is a cross reference between each data file record and the corresponding layout that you want File-AID to use. The following situations require the creation of a record layout cross reference (XREF):

- The data file you want to manipulate contains more than one type of record, where each type of record requires a different record layout to define it.
- The record layout(s) you want File-AID to use are stored in a source library member containing multiple record layouts.
- The record layout(s) you want File-AID to use are imbedded in a COBOL or PL/I program.
- The first n positions of each record in the data file are not defined by your record layout(s), requiring File-AID to generate a data-name item to act as filler before the layout(s).
- The records are segmented; each record in the data file requires multiple record layouts to define each possible segment of the record.

For many of the data files that you work with in File-AID functions, an XREF is not needed. If the following two conditions are both true, you can specify the record layout member name directly within the File-AID function as Record layout usage = S.

- All of the records in the data file are of the same type, requiring only one record layout to define each record.
- This single record layout exists by itself in its own source library member (PDS, CA-Panvalet, or CA-Librarian).

Segmented Records and Selection Criteria

When using record selection criteria with segmented records, File-AID selects only the records where the requested segment immediately follows the base segment.

XREF Dataset Specification

The Record Layout Cross Reference screen, shown in Figure 17-1, is used to create new or maintain existing XREFs. To access the XREF function, select option **7** from the File-AID Primary Option Menu or enter the appropriate jump command (for example, =7) from any File-AID screen. See "Selecting Screens" on page 2-7. The XREF function can also be accessed with the **F7** recursive command. See "Recursive Commands" on page 2-5.

Figure 17-1. Record Layout Cross Reference Screen

```
File-AID ---------------- Record Layout Cross Reference -----------------------
COMMAND ===>

Specify Cross Reference Dataset to be Created or Edited:
   XREF dataset name      ===> FASAMP.XREF
   Member name            ===>            (Blank or pattern for member list)

Specify Record Layout Information:
   Record layout dataset  ===> FASAMP.LAYOUTS





-------------------------------------------------------------------------------
This function creates and maintains existing File-AID Record Layout Cross
References. These XREF's are used to match record layouts to data records in
File-AID functions that use formatting.
```

Specify Cross Reference Dataset to be Created or Edited:

XREF dataset name : Specify the dataset for the record layout XREF you want to create or edit. The dataset must be a cataloged partitioned dataset with attributes of DSORG=PO, RECFM=VB, a minimum LRECL=300, and a BLKSIZE=304 or larger. Use the naming conventions described in "Specifying a Dataset Name" on page 2-13.

You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Dataset Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description.

Member name : Specify the member name. You can leave this field blank or enter a pattern member name to display a list of members from which you can make a selection. A pattern member name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Member Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description. Pattern names cannot be entered in both the Dataset name and Member name fields at the same time.

Specify Record Layout Information:

Record layout dataset : Specify the name of the dataset that contains the layouts associated with the XREF. The dataset can be a PDS, CA-Panvalet, or CA-Librarian. If the record layout is embedded in a program, specify the source library name as the record layout dataset.

See "Record Layout Dataset" on page 2-26.

After you complete the fields on the Record Layout Cross Reference screen, press Enter to display the Define XREF screen.

Use the END (PF3) or RETURN (PF4) command to return to the File-AID Primary Option Menu.

XREF Select Member List

The XREF Select Member List screen, shown in Figure 17-2, is displayed when a blank or a pattern is specified in the Member field for the XREF dataset name on the Record Layout Cross Reference screen. The list may be scrolled using LOCATE commands (LOC mem) or scrolling commands (such as UP and DOWN).

See “Member List Field Descriptions” on page 2-12 for a description of each field on this screen. See “Member List Primary Commands” on page 2-12 for a list of valid primary commands.

Figure 17-2. XREF Select Member List Screen

```
File-AID - XREF Select - USERID9.FASAMP.XREF ----------------  ROW 1 TO 3 OF 3
COMMAND ===>                                                  SCROLL ===> CSR
 S  NAME      DESCRIPTION                        TYPE       CHANGED       ID
   COBOLPGM  SELECT LAYOUT FROM PROGRAM         XREF   94/07/11 11:13  USERID9
   ORDRFILE  XREF FOR ORDRFILE                  XREF   94/07/11 11:13  USERID9
   SEGFILE   SEGFILE XREF                       XREF   94/07/11 11:36  USERID9
****************************** BOTTOM OF DATA ********************************
```

Define XREF

The Define XREF screen, shown in Figure 17-3 on page 17-4, is displayed when you are creating or editing an XREF member. Use it to enter general XREF information, layout member names, and beginning data names.

Source layout member names are specified in the Member field on the Define XREF screen. Use the S and SU line commands in the Cmd field to access the Formatted and Unformatted XREF Definitions screens for each source layout member to establish selection logic. You must specify criteria for all layout members except the last one which File-AID indicates as the default layout with a status of DEFAULT BASE.

Figure 17-3. Define XREF Screen

```
File-AID ----- Define XREF - FASAMP.XREF(ORDERXRF) --------  ROW 1 TO 12 OF 15
COMMAND ===>                                                 SCROLL ===> CSR
XR105-Valid line CMDS: C/M, B/A, I, R, D, EX, S, SF, SU, DEF, BAS, SEG
Member list description ===> ______________________________

    Long    ===> ____________________________________________________________
Description ===> ____________________________________________________________


Generated filler length ===> 0      (0 to suppress filler)

Cmd   Member   Beginning Data Name              Description         Status
--- ---------- ------------------------------ ---------------  ----------------
___ __________ ______________________________ ______________
___ __________ ______________________________ ______________
___ __________ ______________________________ ______________
___ __________ ______________________________ ______________
___ __________ ______________________________ ______________
___ __________ ______________________________ ______________
___ __________ ______________________________ ______________
___ __________ ______________________________ ______________
___ __________ ______________________________ ______________
___ __________ ______________________________ ______________
___ __________ ______________________________ ______________
```

Field Descriptions

Member list description : Specify a 30-byte description of the XREF contents. This description is displayed on the member list screen, which allows you to identify the XREF contents specified in this member.

Long Description : Specify a longer XREF description, up to 62 characters. This information is stored in the XREF member.

Generated filler length : (Optional) Specify a length to have a filler displayed at the start of each record concatenated to each *base* layout.

Cmd : Specify S or SU to access the formatted or unformatted XREF definition. An XREF definition is required for all members except the default member.

S : (alias SF) Displays the Formatted XREF Definition screen, as shown in Figure 17-7 on page 17-11. This allows you to look at the current layout and enter layout selection conditions similar to defining record Selection Criteria using option 6. You may enter field criteria to uniquely identify the layout for selection.

SU : Displays the Unformatted XREF Definition screen, as shown in Figure 17-8 on page 17-14. This allows you to define conditions for selecting the layout without using a record layout to identify the fields. With unformatted criteria, you supply the Position, Operator, and Data Value(s) of the fields to test. With unformatted criteria, the layout is not displayed.

Specify the layout type and usage with the following status commands. File-AID sets each new layout to DEFAULT BASE. When criteria is entered for the layout

via the S (Formatted) or SU (Unformatted) XREF Definition screen, File-AID changes the status to BASE.

BAS : Layout defines the start of each (or the entire) record - multiple BASE layouts are allowed when the file contains multiple record types. After you enter selection criteria the layout status is automatically set to BASE. Whenever you select a new record in formatted Browse/Edit when using an XREF, each BASE is tested to see if it matches the record. The matching BASE is then displayed or the DEFAULT BASE is displayed if no criteria for any BASE matches the record.

SEG : Layout defines a section of the record following the BASE or another SEG. Selection criteria must be present. Each time the NEXT command is issued in Browse or Edit Formatted mode, each SEG in the XREF related to the current BASE is tested to see if the data conditions in the record match any SEG conditions. If a match is found, the SEG layout is selected and displayed overlaying the next byte of data following the current BASE or SEG layout.

A SEG layout is related to the previously specified BASE layout in the XREF. Each BASE starts a new set of SEG layouts. The SEG line command can be entered for a member with a status of BASE.

DEF : Identifies the DEFAULT BASE. No selection conditions are needed. When a data record fails to match all previous BASE criteria, the DEFAULT member is selected as the base layout. A DEFAULT may have SEG layouts attached to it. Only one layout may be the DEFAULT BASE and it must be the last base layout.

If you delete all criteria associated with a given layout, it becomes the default. Entering DEF is not required since File-AID automatically sets a layout without criteria to the default value.

Editing commands:

A : After. Target line for results of C (Copy) or M (Move).

B : Before. Target line for results of C (Copy) or M (Move).

C : Copy. Copy a layout line to a destination (A or B). The associated criteria is not copied.

D : Delete. Delete a layout line.

EX : Extract. Displays the Source Statement Selection screen, as shown in Figure 17-6 on page 17-9, which enables you to extract a layout from source based on starting data names, a line number range, or starting level number. Using this technique enables you to set up reference to multiple layouts with one XREF entry.

When extracting a layout from CA-Panvalet or CA-Librarian source, Compuware recommends using the starting data name; not the line number range.

I : Insert a new blank layout line.

M : Move. Move a layout line to a destination (A or B).

R : Repeat. Repeat a layout line.

Note: This does not duplicate the associated criteria.

Member : Specify a valid member name or a pattern name. If you specify a pattern, File-AID displays a member list from which you select (S) the member to use for this BASE, DEFAULT, or SEGMENT. A pattern name of * (asterisk) displays all members of the Record Layout Dataset that you specified on the Record Layout Cross Reference screen. An example of a pattern is A* which lists all members starting with an A.

If you have specified a pattern, the member list is presented when you use the layout selection condition access codes S (Formatted condition) and SU (Unformatted condition). Use the S (Select) line command on the member list to select your member. Whenever you use the member list, the selection you make is stored in the

member name field of the current line and replaces any pattern you may have specified.

Beginning Data Name : If the member you select contains more than one 01 level data structure, File-AID displays a List of Available Layouts screen to assist you in identifying the beginning data name and which data structure you want to use for this portion of the record. After using the List of Available Layouts screen, File-AID displays your selection in the Beginning Data name field.

If the member you select does not contain any 01 level data structures, the content of the entire member will be used and the beginning data name field will be set to the first data name encountered. If you do not want the entire member selected, use the EX (Extract Layout) line command to specify which lines to select. If there are multiple layouts in the specified member but they start with a level other than 01, change the starting level number on the "Source Statement Selection Screen" on page 17-9 to the desired level number.

An alternate method for extracting a data structure is to use the EX (Extract layout) line command.

Description : Specify up to 15 characters of comment to help you identify this layout.

Status : This field indicates the current member status: DEFAULT BASE, BASE, or SEGMENT.

Use the END command (PF3) to exit and save your XREF definition member. Use the CANCEL command to exit without saving the new XREF member.

The VIEW command displays the View Criteria screen. It shows you the internal format of your XREF, displaying all formatted and unformatted layout selection conditions on a scrollable screen.

Record Layout Member Select

The Record Layout Member Select screen, shown in Figure 17-4, is displayed when an * (asterisk) or a pattern is specified in the Member field of the Define XREF screen. The list may be scrolled using LOCATE commands (LOC mem) or scrolling commands (such as UP and DOWN).

Select a layout by entering S next to the member name or entering SELECT *member* in the COMMAND field. See “Member List Field Descriptions” on page 2-12 and “Member List Primary Commands” on page 2-12 for descriptions of each field on this screen and of the available primary commands.

Figure 17-4. Record Layout Member Select Screen

```
File-AID Layout Select - USERID9.FASAMP.LAYOUTS -----------  ROW 1 TO 16 OF 16
COMMAND ===>                                                  SCROLL ===> CSR
 S  NAME            VV.MM  CREATED     CHANGED      SIZE  INIT   MOD   ID
   COBOLPGM         01.00 95/02/03 95/02/03 15:45     87    87     0 USERID9
   EMPLOYEE         01.00 95/02/03 95/02/03 15:45     35    35     0 USERID9
   EMPLOYE2         01.00 95/02/03 95/02/03 15:45     36    36     0 USERID9
   INVFILE
   ORDERPO          01.00 95/02/03 95/02/03 15:45     29    29     0 USERID9
   ORDERSC          01.00 95/02/03 95/02/03 15:45     26    26     0 USERID9
   ORDERWO          01.00 95/02/03 95/02/03 15:45     54    54     0 USERID9
   PLIEMP           01.00 95/02/03 95/02/03 15:45     31    31     0 USERID9
   PLIEMP2          01.00 95/02/03 95/02/03 15:45     36    36     0 USERID9
   PLIINV           01.00 95/02/03 95/02/03 15:45     24    24     0 USERID9
   PLIORDPO         01.00 95/02/03 95/02/03 15:45     29    29     0 USERID9
   PLIORDSC         01.00 95/02/03 95/02/03 15:45     26    26     0 USERID9
   PLIORDWO         01.00 95/02/03 95/02/03 15:45     54    54     0 USERID9
   PLIPGM           01.00 95/02/03 95/02/03 15:45     97    97     0 USERID9
   PLISEGS          01.00 95/02/03 95/02/03 15:45     62    62     0 USERID9
   SEGRECS          01.00 95/02/03 95/02/03 15:45     62    62     0 USERID9
************************** END OF SELECTION CRITERIA **************************
```

List of Available Record Layouts

The List of Available Record Layouts screen, shown in Figure 17-5, is displayed when the source member contains more than one 01-level data group. Each available 01-level name is shown with a layout number, source library Member name, and Status.

Figure 17-5. List of Available Record Layouts Screen

```
File-AID ---- List of Available Record Layouts --------------  ROW 1 TO 2 OF 2
COMMAND ===>                                                  SCROLL ===> CSR
            Member
  S    Nbr  name       01-level Name                  Status
 ---   --- --------  ------------------------------   ------------------------
         1 ORDERWO   INTERNAL-WORK-ORDER
         2 ORDERWO   OUTSIDE-VENDOR-WORK-ORDER
************************** END OF SELECTION CRITERIA **************************
```

Field Descriptions

S : Use the S (Select) line command in this field to select an 01-level name to use in defining your XREF.

Nbr : Layout number.

Member name : Source library member name.

01-level Name : Level name as defined in record layout.

Status : A status of **CURRENT MAP** shows you which layout is the default and is automatically used if you do not select a different layout.

Use the END command (PF3) to exit this screen.

Source Statement Selection

The Source Statement Selection screen, shown in Figure 17-6, is displayed when you use the EX (EXtract layout) line command to extract a layout from source or File-AID cannot compile your record layout with the default source options. It contains two Record layout selection areas and a Compiler options area.

Record layout extraction is done by Character String or Source Statement line number allowing you to precisely identify your source. In most cases, the starting data-name field provided with each layout member is sufficient information for File-AID to extract a layout from a program or source member containing multiple layouts. In Formatted Browse or Edit, the USE primary command provides access to the multiple layouts defined with the Source Statement Selection screen and referenced by a single XREF. See "USE" on page 21-78.

Note: For CA-Panvalet and Ca-Librarian source layout members, do not use line numbers to extract a layout.

In addition, when File-AID displays this screen because it cannot compile your record layout with the default source options, use the Source Statement Selection screen to specify the correct compiler options.

Figure 17-6. Source Statement Selection Screen

```
File-AID ------------------- Source Statement Selection -----------------------
COMMAND ===>

"CURRENT" source dataset: USERID9.FASAMP.LAYOUTS(ORDERPO)

    Enter beginning and ending character strings or source statement
    line numbers or blank for entire member.

Record layout selection by Character String:
    Beginning string     ===> ORDER-LINE-DATA-PO
    Ending string        ===>

Record layout selection by Source Statement line number:
    Beginning number     ===>
    Ending number        ===>
    Number type          ===> COBOL    (Standard; COBOL; or Relative)

Compiler options:
    Language             ===> COBOL    (COBOL or PL/I)
    Starting level nbr   ===> 01
    Literal delineator   ===> APOST    (Quote or apost; COBOL only)
    Use 48 character set ===> NO       (Yes or No; PL/I only)
```

Field Descriptions

Record layout selection by full dataname or full word character string:

Beginning string : Specify a full dataname or full word character string from the first statement.

Ending string : (Optional) Specify a full dataname or full word character string from the last statement.

Record layout selection by Source Statement line number:

Beginning number : Specify the beginning statement number.

Ending number : Specify the ending statement number.

Number type : Specify a number type of Standard ISPF (73-80), COBOL (1-6), or Relative.

Compiler options:

Language : Specify the COBOL or PL/I language for the compile.

Starting level nbr : Specify the starting level number that indicates the start of a new copybook for the compile. If there are multiple layouts in the specified member but they start with a level other than 01, change the starting level number on the Source Statement Selection Screen to the desired level number.

Literal delineator : (COBOL only) Specify a character to use to delineate literals, QUOTE for (") or APOST for (').

Use 48 character set : (PL/I only) Specify Y (Yes) to indicate to the PL/I compiler that the source is written in the 48-character set.

If File-AID cannot determine the language, or if compilation fails, it displays this screen enabling you to change source or compile options.

Formatted XREF Definition

The Formatted XREF Definition screen, shown in Figure 17-7, enables you to define conditions for selecting a record layout by using the layout to enter test conditions. Enter relational operator (RO) and a data value to specify a condition. Tests are entered in the record type fields of the record layout to define a condition for selection of this layout at the beginning of the record data (BASE), or to define a portion (SEGMENT) of the record data following the BASE or a prior SEGMENT.

As soon as any field criteria ***set*** matches a data record, the associated layout is selected and used to display the record in Formatted mode of Browse or Edit. All other sets are bypassed. When a record fails to match a set, File-AID continues to test that record against any remaining selection sets. When all unformatted or formatted criteria sets for all members fail to match the record, the DEFAULT BASE layout is selected.

Figure 17-7. Formatted XREF Definition Screen

```
File-AID --- Formatted XREF Definition -------------------- COLUMNS 00001 00088
COMMAND ===>                                                  SCROLL ===> CSR
CRITERIA NUMBER:  1 OF  1  INVENTORY-RECORD                LAYOUT LENGTH:   189
---- FIELD LEVEL/NAME ------- -FORMAT- RO ----+----1----+----2----+----3----+-
****************************** TOP OF DATA ********************************
5 INV-PART-NO                  15/AN
5 INV-DESCRIPTION              40/AN
                          (POS 38-40)
5 INV-UNIT-OF-MEASURE           2/AN
5 INV-UNIT-PRICE                4/PS
5 INV-STOCK-INFO(1) OCCURS 2 TIMES  SYNC
                               18/GRP
  10 INV-WAREHOUSE(1)           3/AN
  10 INV-STATUS(1)              6/AN
  10 INV-QTY-DATE(1) SYNC       9/GRP
    15 INV-QTY-ON-HAND(1)       3/PS
    15 INV-LAST-ORDER-DATE(1)   6/AN
  10 INV-BO-QTY-DATE REDEFINES INV-QTY-DATE
  10 INV-BO-QTY-DATE(1) SYNC    9/GRP
    15 INV-QTY-BACKORDERED(1)   3/PS
    15 INV-BACKORDER-DATE(1)    6/AN
5 INV-STOCK-INFO(2)            18/GRP
  10 INV-WAREHOUSE(2)           3/AN
  10 INV-STATUS(2)              6/AN
```

If more than one field is used to establish a condition, the fields are ANDed when testing. You may specify additional *sets* of formatted layout selection conditions by using the INSERT or REPEAT commands. Use the DELETE command to remove a criteria set. Deleting the last set of criteria for a layout makes the layout a DEFAULT BASE. The Formatted XREF Definition screen supports many of the same commands as the formatted (FMT) mode of browse or edit including: SHOW, DISPLAY, USE and PROFILE.

Field Descriptions

RO : Relational Operator. Use the relational operator with a Data Value to set up a conditional test for File-AID to perform when selecting a layout for the formatted display of a data record. The following valid relational operators can be specified:

BT	Between; the value is greater than or equal to the first endpoint and less than or equal to the last endpoint.
EQ, =	Equal to
NE, ¬ =	Not equal to
GT, >	Greater than
LT, <	Less than
GE, > =	Greater than or equal to

BT	Between; the value is greater than or equal to the first endpoint and less than or equal to the last endpoint.
LE, < =	Less than or equal to
MX	Bits are mixed, ones and zeros (Mask data value only).
NB	Not between; the value is less than the first endpoint or greater than the last endpoint.
NO	Bits are not ones (Mask data value only).

Use the END command (PF3) to save your formatted entries and return to the Define XREF screen. The CANCEL command exits the Formatted XREF Definition screen without saving your entries and returns to the Define XREF screen.

Guidelines

The following guidelines need to be observed when specifying formatted layout selection criteria:

- Enter the relational operator (RO) and field value next to the field that you want selection to be based.
- Leave the RO and field value blank for fields that are not involved in the selection criterion.
- Use the INSERT or REPEAT command to specify multiple sets of formatted field selection criteria. The current criteria number and total number of formatted sets is shown near the top of the screen (CRITERIA x OF y).
- Multiple fields on a single criterion are logically ANDed together and multiple sets of criteria are logically ORed together.

Entering Data Values

File-AID expects data you enter to conform to the format of each field in the layout. Numeric fields (Packed, display, binary floating point) are all entered using standard decimal digits (0-9) and decimal points (leading zeroes are not needed).

Character fields are interpreted as any case. Embedded blanks are not allowed in character data. If you need to test for exact case you must issue the CAPS OFF command, then enter your data value. File-AID defaults to CAPS ON and translates any entered lowercase characters to uppercase when you press Enter. During XREF processing, File-AID matches your value in upper, lower, or mixed case (CAPS ON setting) or exact case (CAPS OFF).

If you need to enter a hex value in a character field, first you must change the format of the field with the DISPLAY command. For example: **DISPLAY 5 HEX** displays field number 5 in HEX.

Primary Commands

The following is a list of the primary commands that are valid on the Formatted XREF Definition screen. Each command and its operands are discussed in Chapter 21, “Primary Commands”.

ALIGN (AL) : Controls display of ALIGNED/UNALIGNED term for PL/I data.

ARRAY (AR) : Controls display of array declaration information for PL/I data.

BACK : Positions the display to the previous criteria. Synonym for LEFT.

CANCEL (CAN) : Cancels the formatted XREF Definition without saving current updates and returns to XREF Definition.

CAPS : Sets caps mode for case-sensitive entering of lowercase character data.

COMPLEX (CMPLX) : Controls display of COMPLEX terms for PL/I data.

DELETE (DEL, D) : Delete this criteria set.

DISPLAY (DIS) : Specifies a display format.

DOWN : Scrolls down.

END (E) : Terminates display of the Formatted XREF Definition screen, retains entries, and returns to the Define XREF screen.

FILLER (FILL) : Controls display of FILLER fields.

FORWARD (FWD) : Positions the display to the next criteria. Synonym for RIGHT.

GROUP : Controls the display of occurrences of group-level items.

INPUT/ INSERT (I) : Inputs/inserts a new initialized criteria set.

LEFT (L) : Positions the display to the previous criteria. Synonym for BACK.

LOCATE (LOC) : Scrolls directly to the specified field name.

LR (Locate Record) : Positions the display to the specified criteria number.

MESSAGE (MSG) : Controls the message display.

OCCURS (OCC) : Controls the display of array declaration items.

OFFSET : Controls format of SHOW OFFSET (Columns, Relative, or Hex).

PROFILE : Displays profile information lines.

REDEFINE (REDEF, REF) : Controls the display of data item redefinitions.

REFLNG : Controls the display of BIT/CHAR VARYING field length reference lines for PL/I data.

REPEAT (R) : Inserts a new criteria set containing the current criterion.

RESET (RES) : Causes excluded lines to be redisplayed.

RETURN : Returns to the Primary Option Menu.

RIGHT : Positions the display to the next criteria. Synonym for FORWARD.

SAVE : Saves the displayed XREF definition, updates the XREF dataset, and returns to the Define XREF screen.

SHOW (SH) : Displays LEVEL, NUMBER, FORMAT, OFFSET, or PICTURE information for a record.

SYNC : Controls the display of the SYNC term for fields in a COBOL record layout.

UP : Scrolls up.

USE : Displays List of Available Layouts screen enabling you to switch or assign the use of a record layout.

ZERO (Z) : Controls the display of leading zeros in the numeric data fields.

Unformatted XREF Definition

The Unformatted Selection Criteria screen for XREF, shown in Figure 17-8 on page 17-14, enables you to define conditions for selecting a record layout without using a record layout to define the fields.

Each line lets you specify criteria for record data at a position within the record relative to either the beginning of the record for a BASE layout or relative to the end of the currently displayed layout for a SEGMENT layout. The criteria includes a Relationship (RO) to some specified Data Value.

A record layout member is selected for formatting a record based on the unformatted field criteria on the screen. Criteria is grouped in *sets* based on your usage of the AND/OR connector.

Each OR begins a new criteria set. An AND continues the current set and lets you test for additional conditions in the current record. As soon as any field criteria set matches a record, the layout member displayed in the top area of this screen is selected and used to format the current data record. All other sets are bypassed. When a record fails to match a set, File-AID continues to test the record against any other specified sets. When all unformatted or formatted criteria sets for all members fail to match the record, the DEFAULT BASE layout is selected.

Figure 17-8. Unformatted XREF Definition Screen

```
File-AID --------------  Unformatted XREF Definition  -----  ROW 1 TO 13 OF 2
COMMAND ===>                                                   SCROLL ===> CSR

Use END to continue, CANCEL to return to main screen.

Record Layout Member:
Beginning Data Name:

    AND
Cmd /OR Position Length RO                        Data Value
--- --- -------- ------ -- ---------------------------------------------------
___       _____   _____  EQ _____________________________________________________
___ AND   _____   _____  EQ _____________________________________________________
___ AND   _____   _____  EQ _____________________________________________________
___ AND   _____   _____  EQ _____________________________________________________
___ AND   _____   _____  EQ _____________________________________________________
___ AND   _____   _____  EQ _____________________________________________________
___ AND   _____   _____  EQ _____________________________________________________
___ AND   _____   _____  EQ _____________________________________________________
___ AND   _____   _____  EQ _____________________________________________________
___ AND   _____   _____  EQ _____________________________________________________
___ AND   _____   _____  EQ _____________________________________________________
___ AND   _____   _____  EQ _____________________________________________________
___ AND   _____   _____  EQ _____________________________________________________
```

Field Descriptions

Cmd : Specify one of the following valid line commands to edit your selections:

A - Marks the destination after which a line is placed.

B - Marks the destination before which a line is placed.

C - Copy the line to a marked destination.

D - Delete the line. D*nn* deletes the specified number of lines.

I - Insert a line. I*nn* inserts the specified number of lines.

M - Move the line to a marked destination.

R - Repeat the line. R*nn* repeats the line the specified number of times.

AND/OR : Specify the AND/OR parameter to define multiple condition testing. It defines the logic to use to connect multiple conditions.

File-AID considers the OR connector the beginning of a new set of selections. AND continues a logical set of selections.

When evaluating ANDed conditions, all the conditions must be true. When evaluating ORed conditions, only one of the conditions must be true.

For example, if you specify: **Selection 1** *AND* **Selection 2** *OR* **Selection 3**, File-AID evaluates it as: **(Selection 1 AND Selection 2) OR Selection 3**.

Use File-AID option 0.2 System Parameters to set the default for the AND/OR field.

Position : For BASE layouts, position represents the starting data byte location of the record type field to be examined. A position of 1 represents the first byte of record data.

A value like +n where n is a number of bytes relative to the first byte of data following the currently selected layout is usually not needed since n without the plus indicates a byte location within the next segment. Positions +0 and 1 are the same location in the next segment of record data following the currently selected layout.

If selection of a SEGMENT is based on data values in the BASE, a special Position entry is supported: *n (asterisk "n") - where "n" is the actual position in the data record. *1 represents the first byte of record data.

Also supported is a notation like -n where n is the number of bytes prior to the end of the currently selected layout. This usage is provided when the identification of the next SEGMENT is located within the data area of the current SEGMENT or the BASE. -1 represents the last data byte in the currently selected layout.

Length : (Optional) Specify the field length. The Length field may usually be left blank. File-AID determines the length of your field based on the Data Value entered.

When data type is P (packed), Length is optional because File-AID automatically determines the size of the packed field at the Position specified. Field size may vary from record to record, but there must be a valid packed field at the specified Position IN EVERY RECORD or an error will occur.

If you specify a Length larger than the length of your Data Value, File-AID pads the data value with trailing blanks for data types T (Text), C (Character) and X (Hex). For data types P (packed), N (Numeric) and B (Binary) leading zeroes are assumed when a length is specified.

RO : Specify a relational operator. The relational Operator is used with Position, Length, and Data Value to set up a conditional test for File-AID to perform. File-AID is distributed with a default value of EQ (equal) for relational operator. Use File-AID 0.2 Selection Criteria Parameters screen to set your own default. Valid values are:

BT	Between; the value is greater than or equal to the first endpoint and less than or equal to the last endpoint.
EQ, =	Equal to
GE, > =	Greater than or equal to
GT, >	Greater than
LE, < =	Less than or equal to
LT, <	Less than
MX	Bits are mixed, ones and zeros (Mask data value only).
NB	Not between; the value is less than the first endpoint or greater than the last endpoint.
NE, ¬ =, ! =	Not equal to
NO	Bits are not ones (Mask data value only).
NV	Not valid.
VA	Valid.

Data Value : Specify the data string, up to 52 bytes, for which File-AID is to validate. If a data type is specified, the data string must be enclosed in single (' ') or double (" ") quotes. When a data type is not specified, alphanumeric text (T) is assumed.

Table 17-1 describes valid data types for this field:

Table 17-1. Data Types

Data Type	Type Description	Example	Description of Data
B	Binary	B'+147,-25,+1117'	Binary equivalent of decimal number specified in quotes. In this example using the default of fullword, File-AID searches for 00000093, FFFFFFE7, or 0000045D. File-AID assumes the length of 4 or you can specify 1, 2, 4, or 8. **Note:** If the binary data in the record contains a sign, all data values must also contain a sign (+/-).
C	Character	C'Smith'	Case-sensitive character value of uppercase S and lowercase mith.
X	Hexadecimal	X'0001FF'	Hexadecimal value 0001FF.
M	Mask (Use with bit relational operators)	M'11000000' or M'C0'	The mask can be specified in binary or hexadecimal to indicate which bits File-AID should examine. This example tests the first two bits of the specified byte.
N	Numeric	N'25'	Positive or unsigned numeric value +25 or 25.
P	Packed	P'12345'	Positive or unsigned packed value.
T	Text	T'smith'	Alphanumeric text, not case-sensitive. Value smith, SMITH, or any combination of upper and lowercase characters. T (text) is the default data type.

Use the END command (PF3) to save your unformatted entries and return to the Define XREF screen. The CANCEL command exits the Unformatted XREF Definition screen without saving your entries and returns to the Define XREF screen.

Example

TEST RECORD FOR "Q" IN 1 AND X'00' OR X'40' IN 10

The ORDERWO record layout member, using the data structure beginning with data name INTERNAL-WORK-ORDER, is used to format records containing a character Q in position 1 and either a hex '00' or hex '40' in position 10.

```
Record Layout Member:  ORDERWO
Beginning Data Name:   INTERNAL-WORK-ORDER

    AND
Cmd /OR Position Length RO                        Data Value
--- --- -------- ------ -- ----------------------------------
___       1____   _____  EQ Q__________________________________
AND       10___   _____  EQ X'00,40'___________________________
```

Guidelines

The Data Value area is where you describe the data condition you are looking to find when determining which layout to use to format a record. The data in each record is compared to your Data Value to see if the record meets your criteria for layout selection.

The Position and RO (Relational Operators) define the location of the record data and the comparison condition.

- Entries and line commands specified in the Cmd field are processed before primary commands.
- Any errors detected must be resolved before continuing.
- Scrolling DOWN and UP is supported.
- The number of entries is unlimited.

Pressing Enter causes line command interpretation and validation of your entries. Some fields are changed by File-AID during validation to clarify your selection. This occurs when you enter character Data Values and File-AID marks your value as text (T'anycase'). Use C'x' for explicit case. For example, type ABC in the Data value field and press Enter, File-AID redisplays the screen with T'ABC' in the field. This text string test "abc" matches any combination of upper and lowercase. Changes due to validation and interpretation can also occur when you do not specify Length or Position.

BT (Between) and NB (Not between)

For relational operators BT and NB, you specify your Data Value as two values separated by a colon (:). The values may be hex strings, character strings, or numeric tests.

The BT relational operator includes the endpoints of the range you specify and the NB relational operator does not include the endpoints.

Data types P (Packed), B (binary), and N (Numeric) are also valid but both values must be the same type (Ex. P'-1:+100' or N'10:20' or B'-5:+1000' but not P'1':N'100').

If you want to compare (EQ, NE, LT, GT, LE, GE only) a field to blanks (hex 40s) simply leave the Data Value field blank and enter the desired number of blanks for comparison in the Length field.

For all relational operators the Length must be in the range 1 to 30. Length plus the start Position must not exceed the record length.

For all relational operators, when Length exceeds the actual length of the entered Data Value, blanks are padded to the right of the Data Value. If the Length field is left blank, the default length is the actual length of the specified Data Value.

When defining Formatted XREF criteria the Position and Length values are automatically determined by the COBOL or PL/I data field definition.

Text Data (T)

Any data entered without a data identifier is considered to be text data. Text data is not case sensitive. It matches any case in search data. When a data identifier is used, text data is specified with the data identifier T. The actual text data follows the T and is enclosed in quotes.

```
DATA ===> SMITH
DATA ===> T'SMITH'
DATA ===> SMITH,JONES    (ORed text data)
DATA ===> ",DSN="        (single entry)
```

Text data may be enclosed in either single quotes ('A') or double quotes ("A"). When data is enclosed in single quotes ('A'), File-AID allows multiple data entries to be separated by commas and considers the multiple data entries to be ORed. For those times when you need to scan for commas or other special characters, File-AID accepts all data located between double quotes, including commas, single quotes, etc. as one single data string.

Packed Data (P)

Packed data is specified with the data identifier P. The actual number to be searched for follows this identifier and is enclosed in quotes.

```
DATA ===> P'12345'
DATA ===> P'1,2,3,4,5'     (ORed data entry)
```

File-AID allows multiple packed data entries to be separated by commas and considers the multiple entries to be ORed. Packed data may be entered to a maximum of 31 digits, however, only significant digits need to be entered because File-AID computes the lengths of the packed fields in each record.

Packed data fields signed with F or C are considered numerically equal. Packed data can be signed by using a sign character (+,-) after the first quote.

```
DATA ===> P'+1'         Signed C
DATA ===> P'-1'         Signed D
DATA ===> P'1'          Signed F
```

Example

In this example the layout is selected if the record contains a packed 0 or 50 at Position 15 AND also has a packed 100 at Position 25.

```
    AND       Cmd /OR Position Length RO                      Data Value
--- --- -------- ------ -- ----------------------------------
___       15___   _____  EQ P'0,50'___________________________
___ AND   25___   _____  EQ P'100'__________________________
```

Hexadecimal Data (X)

Hexadecimal data is specified with the data identifier X. The actual hex data to be searched for follows this identifier and is enclosed in quotes. Hexadecimal data must be entered as one or more pairs of hex digits (0-9,A-F).

```
DATA ===> X'0001FF'
DATA ===> X'00,01,FF'     (ORed HEX data entry)
DATA ===> X'789C,789D'    (ORed HEX data entry)
```

File-AID allows multiple hexadecimal data entries to be separated by commas and considers the multiple entries to be ORed.

Character Data (C)

When searching for the exact case of character data, use the C data identifier. Entered lowercase characters are not converted to uppercase when the C data identifier is used to test file data. File data must match the exact case of the specified character string.

```
DATA ===> Smith           (find any case)
DATA ===> T'Smith'        (find any case)
DATA ===> C'Smith,Jones'  (ORed explicit case character entries)
DATA ===> C"Smith,Jones"  (single explicit case character entry)
```

Character data must be enclosed in either single quotes (’ ’) or double quotes (" "). When characters are enclosed in single quotes, File-AID allows multiple strings to be separated by commas and considers the multiple data entries to be ORed. For the times when you need to scan for commas or other special characters, File-AID accepts all data located between double quotes, including commas, or single quotes as one single data string.

Mask (M)

A mask for the data value is specified with the M data identifier. The mask indicates which bits to test in the specified byte. The mask can be entered as either:

- 2 hexadecimal characters
- 8 binary characters (all zeros and ones).

```
DATA ===> M'F1'         (Hexadecimal mask)
DATA ===> M'11110001'   (Binary mask)
```

File-AID does not allow multiple binary data entries.

Specialized relational operators (RO) are provided for use with mask data:

EQ : All bits specified as ones in mask are ones in the data.

MX : Of the bits specified, at least one is on (one) and one is off (zero).

NO : Of the bits specified as ones in mask at least one is off (zero) in the data.

NE : All bits specified as ones in mask are off (zeros) in the data.

Binary Data (B)

Binary data is specified with the data identifier B. The actual binary data to be searched for follows this identifier and is enclosed in quotes. Binary numbers must be specified as a string of decimal digits (0-9) with an optional leading sign (+ or -). File-AID converts your entered decimal number to its binary equivalent and performs the test you have specified. A leading - (minus) implies that the high-order bit is on. A leading + (plus) implies that the high-order bit is off.

RO operators VA (Valid) and NV (Not valid) may NOT be used with type B (Binary) data. BT (Between) and NB (Not between) tests are permitted.

The Length field (1, 2, 4, or 8 only) SHOULD BE SPECIFIED and is used to determine the length of the binary data to test. The default length is 4 if no length is specified.

```
DATA ===> B'64'         hex X'00000040' (length 4)
DATA ===> B'-1,100'     OR'd values -1 or 100
```

Numeric Data (N)

Numeric data is specified with the data identifier N. The actual number to search for follows this identifier and is enclosed in quotes. Numeric data is assumed to be "zoned" numeric (X'F0' through X'F9'). The last digit in the field may contain a plus (C zone) or minus (D zone). You may specify an optional leading sign in your Data Value For example, N'-456' is treated like X'F4F5D6'.

```
DATA ===> N'12345'
DATA ===> N'1,2,3,4,5'     (ORed data entry)
```

File-AID allows multiple numeric data entries to be separated by commas and considers the multiple entries to be ORed. Numeric data may be entered to a maximum of 15 digits. However, only significant digits need to be entered because File-AID uses your specified Length and inserts leading zeroes to test fields in each record. If Length is not specified, the number of digits entered is used as the field length.

When using the RO types VA (Valid) and NV (Not Valid), NO DATA NEEDS TO SPECIFIED. Type N in the Data Value to set up a test for valid (or invalid) numeric data of some Length.

Data Duplication

File-AID allows you to specify a duplication factor, which eliminates the need to code repetitive data. The duplication factor is a number from 1 through 255, which specifies the number of contiguous occurrences of the specified data value for which File-AID compares.

A duplication factor is allowed only with EQ, GE, GT, LE, LT, MX, NO, NV, and VA. It is ignored with the NE, CO, NC, BT, NB, E, and EA relational operators.

```
WITHOUT DUPLICATION      WITH DUPLICATION
C'12121212'                4C'12'
  X'000C000C'                2X’000C’
  X'000C000C'                2P’+0’
```

Chapter 18.
View Record Layout (8)

The View Record Layout function enables you to view COBOL or PL/I record layouts as File-AID has interpreted them. The function consists of specifying the dataset and member name of the record layout to view.

This chapter describes the two screens presented in the View function.

View Record Layout — Dataset Specification

The View Record Layout - Dataset Specification screen, shown in Figure 18-1, allows you to view record layouts as File-AID has interpreted them. To access the View function, select option **8** from the File-AID Primary Option Menu or enter the appropriate jump command (for example, =8) from any File-AID screen. See "Selecting Screens" on page 2-7. The View function can also be accessed with the **F8** recursive command. See "Recursive Commands" on page 2-5.

Figure 18-1. View Record Layout — Dataset Specification Screen

```
File-AID  ------  View Record Layout - Dataset Specification  -----------------
COMMAND ===>



Specify Record Layout Dataset to View:

       Dataset name ===> FASAMP.LAYOUTS
       Member name  ===>             (blank or pattern for member list)
```

Field Descriptions

Dataset name and Member name : Specify the dataset name and member of the record layout you want to view. You can use a pattern character when specifying a dataset name. You can also specify a member name, in parentheses, along with the dataset name in the Dataset name field. For more information on specifying dataset and member names, see "Pattern Dataset Names" on page 2-14.

After entering the record layout dataset information, press Enter to display the next screen. If you did not specify a member name or you entered a pattern character in the Member name field, a Member List is displayed before the next screen. Use the END (PF3), RETURN (PF4), or a jump command to exit the View Record Layout function.

View Layout

After you press Enter from the View Record Layout - Dataset Specification screen, the View Layout screen is displayed. This screen displays the field level and name, picture, starting and ending positions, and length for each item in the record layout. The field level and name are presented in a format similar to Edit Formatted mode.

Figure 18-2 shows the View Layout screen for a COBOL layout. Figure 18-3 shows the same portion of the corresponding record layout.

Figure 18-2. View Layout — COBOL

```
File-AID ---------------------- VIEW LAYOUT ---------------  ROW 1 TO 19 OF 38
COMMAND ===>                                                 SCROLL ===> CSR
Layout: USERID9.FASAMP.LAYOUTS(EMPLOYEE)
                                                   FIELD
--------- FIELD LEVEL/NAME ---------- -PICTURE- -NUMBER START     END  LENGTH
EMPLOYEE-MASTER-FILE                                          1     198     198
5 EMP-NUMBER                          X(5)           1      1       5       5
5 EMP-LAST-NAME                       X(15)          2      6      20      15
5 EMP-FIRST-NAME                      X(10)          3     21      30      10
5 EMP-MID-INIT                        X              4     31      31       1
5 FILLER                              XX             5     32      33       2
5 EMP-TITLE                           X(30)          6     34      63      30
5 EMP-PERSONAL-INFO                   GROUP          7     64      86      23
  10 EMP-NATL-ID-NUMBER               9(9)           8     64      72       9
  10 FILLER                           X              9     73      73       1
  10 EMP-DATE-OF-BIRTH                X(6)          10     74      79       6
  10 EMP-DOB-REDEF REDEFINES EMP-DATE-OF-BIRTH
  10 EMP-DOB-REDEF                    GROUP         11     74      79       6
    15 EMP-DOB-MM                     99            12     74      75       2
    15 EMP-DOB-DD                     99            13     76      77       2
    15 EMP-DOB-YY                     99            14     78      79       2
  10 EMP-HIRE-DATE                    X(6)          15     80      85       6
  10 EMP-MARITAL-STATUS               X             16     86      86       1
5 EMP-WITHOLD-INFO                    GROUP         17     87     101      15
```

Figure 18-3. COBOL Record Layout — FASAMP.LAYOUTS(EMPLOYEE)

```
01  EMPLOYEE-MASTER-FILE.            05  EMP-NUMBER                    PIC X(5).
     05  EMP-LAST-NAME                 PIC X(15).
     05  EMP-FIRST-NAME                PIC X(10).
     05  EMP-MID-INIT                  PIC X.
     05  FILLER                        PIC X(2).
     05  EMP-TITLE                     PIC X(30).
     05  EMP-PERSONAL-INFO.
       10  EMP-NATL-ID-NUMBER          PIC 9(9).
       10  FILLER                      PIC X(01).
       10  EMP-DATE-OF-BIRTH           PIC X(6).
       10  EMP-DOB-REDEF REDEFINES EMP-DATE-OF-BIRTH.
         15  EMP-DOB-MM                PIC 99.
         15  EMP-DOB-DD                PIC 99.
         15  EMP-DOB-YY                PIC 99.
       10  EMP-HIRE-DATE               PIC X(6).
       10  EMP-MARITAL-STATUS          PIC X.
     05  EMP-WITHOLD-INFO.
       10  EMP-LIFE-INS-WITHOLD-AMT    PIC S9999V99.
       10  EMP-NATL-TAX-WITHOLD-PCT    PIC S999V99  COMP-3.
       10  EMP-REGION-TAX-WITHOLD-PCT  PIC S999V99  COMP-3.
       10  EMP-LOCAL-TAX-WITHOLD-PCT   PIC S999V99  COMP-3.
```

Figure 18-4 on page 18-3 shows the View Layout screen for a PL/I layout. Figure 18-5 shows the same portion of the corresponding record layout.

Figure 18-4. View Layout — PL/I

```
File-AID ---------------------- VIEW LAYOUT ---------------  ROW 1 TO 19 OF 33
COMMAND ===>                                                  SCROLL ===> CSR
Layout: USERID9.FASAMP.LAYOUTS(PLIEMP)
                                                   FIELD
--------- FIELD LEVEL/NAME ---------- -PICTURE- -NUMBER START     END  LENGTH
EMPLOYEE_MASTER_FILE                                          1     198     198
5 EMP_NUMBER                          CHAR(5)        1      1       5       5
5 EMP_LAST_NAME                       CHAR(15)       2      6      20      15
5 EMP_FIRST_NAME                      CHAR(10)       3     21      30      10
5 EMP_MID_INIT                        CHAR(1)        4     31      31       1
5 FILLER                              CHAR(2)        5     32      33       2
5 EMP_TITLE                           CHAR(30)       6     34      63      30
5 EMP_PERSONAL_INFO                   GROUP          7     64      86      23
  10 EMP_NATL_ID_NUMBER               CHAR(9)        8     64      72       9
  10 FILLER                           CHAR(1)        9     73      73       1
  10 EMP_DATE_OF_BIRTH                CHAR(6)       10     74      79       6
  10 EMP_HIRE_DATE                    CHAR(6)       11     80      85       6
  10 EMP_MARITAL_STATUS               CHAR(1)       12     86      86       1
5 EMP_WITHOLD_INFO                    GROUP         13     87     101      15
  10 EMP_LIFE_INS_WITHOLD_AMT         PFXU(6,2)     14     87      92       6
  10 EMP_NATL_TAX_WITHOLD_PCT         DFX(5,2)      15     93      95       3
  10 EMP_REGION_TAX_WITHOLD_PCT
                                      DFX(5,2)      16     96      98       3
  10 EMP_LOCAL_TAX_WITHOLD_PCT
```

Figure 18-5. PL/I Record Layout — FASAMP.LAYOUTS(PLIEMP)

```
DCL   1  EMPLOYEE_MASTER_FILE,          5  EMP_NUMBER              CHAR(05),
        5  EMP_LAST_NAME           CHAR(15),
        5  EMP_FIRST_NAME          CHAR(10),
        5  EMP_MID_INIT            CHAR(01),
        5  FILLER                  CHAR(02),
        5  EMP_TITLE               CHAR(30),
        5  EMP_PERSONAL_INFO,
         10  EMP_NATL_ID_NUMBER    CHAR(09),
         10  FILLER                CHAR(01),
         10  EMP_DATE_OF_BIRTH     CHAR(06),
         10  EMP_HIRE_DATE         CHAR(06),
         10  EMP_MARITAL_STATUS    CHAR(01),
        5  EMP_WITHOLD_INFO,
         10  EMP_LIFE_INS_WITHOLD_AMT     PIC '9999V99',
         10  EMP_NATL_TAX_WITHOLD_PCT     FIXED DEC (5,2),
         10  EMP_REGION_TAX_WITHOLD_PCT   FIXED DEC (5,2),
         10  EMP_LOCAL_TAX_WITHOLD_PCT    FIXED DEC (5,2),
```

The starting and ending position, and length are shown for both elementary and group items.

From the record layout screen, you can do the following:

- Use the UP, DOWN, and LOCATE commands to scroll through the record layout. The scroll amount field is on line two of the screen.
- Use the END (PF3), RETURN, or a jump command to exit the View Record Layout screen.

If the member contains multiple 01-level structures, File-AID's View function displays a message line to identify the next layout. For example:
> > >**START OF LAYOUT NUMBER 2** < < <.

Chapter 19. Reformat (9)

The Reformat function extends the capability of the File-AID Copy utility by permitting the input file to be reformatted as it is being copied. The Reformat function uses COBOL or PL/I record layouts to define the input and output files. You can select input file records for processing by specifying source field level selection criteria. Since you can use the same record layout for the input and output files, you can use the Reformat function to perform repetitive selective file copying as well as file reformatting tasks.

Once a reformat definition is created, you can execute the Reformat function in the foreground or submit it to batch. When executing the Reformat function in the foreground, you can choose to automatically transfer control to File-AID Browse or Edit to view the results of the reformat.

Note: Reformat does not support Graphic-defined DBCS data fields.

This chapter discusses Reformat function options and screens, including:

- File and record layout guidelines
- Invoking the Reformat function
- Reformat function options:
  - Create a new or change an existing reformat definition
  - Dynamically create and execute a temporary reformat definition
  - Execute a previously saved reformat definition online or in batch
- Reformat definition editor
- Reformat variable records
- Reformat examples.

The File-AID Reformat function is a copy process with enhanced features over a copy utility such as IEBCOPY. File-AID Reformat function enables you to:

- Copy records that meet conditions that you specify in a reformat definition. File-AID can check fields for data types or values to qualify a record for copying.
- Add a new field to the target file and initialize it during the copy process.
- Reorganize fields in a file by defining a new structure for the target file in the reformat definition.
- Validate fields from the source file. When the source data is copied, records may be included or excluded from the target file based on whether the data contents of one or more fields is valid or invalid.

A reformat definition consists of record selection criteria and field references. File-AID uses the record selection criteria to reformat only those records that meet specific conditions, such as a certain string in a specific field. The field references indicate where the field data from the source record will be copied to the target record. When the reformat definition is executed, the fields in the target record are initialized.

A reformat definition is created using the Reformat Record Layouts screen and the Reformat Definition Editor screen (the reformat editor). The reformat editor is a tool to assist in the creation and maintenance of reformat definitions.

File and Record Layout Requirements

The Reformat function has the following requirements:

File Types

The input (source) and output (target) files can be any of the following types supported by File-AID:

- IAM files
- Physical sequential datasets
- Partitioned datasets (a single member only, not an entire PDS)
- BDAM datasets
- ISAM datasets
- VSAM datasets (including ESDS (entry sequenced datasets), KSDS (key sequenced datasets), and RRDS (relative record datasets)).

Record Layouts

If you define a group with an OCCURS DEPENDING ON clause, it must be the last group in the record. A record layout *cannot* contain COBOL nested OCCURS DEPENDING ON clauses or PL/I REFER statements.

Reformat Definition

The Reformat Definition screen, shown in Figure 19-1, is the initial screen in the reformat process. It allows you to create a new reformat definition, edit an existing one, and execute a new or pre-existing reformat definition.

To access the Reformat function, select option **9** from the File-AID Primary Option Menu or enter the appropriate jump command (for example, =9) from any File-AID screen. See "Selecting Screens" on page 2-7. File-AID also provides the F9 primary command to let you recursively invoke the Reformat function.

Figure 19-1. Reformat Definition Screen

```
File-AID ------------------ Reformat Definition -----------------------------
OPTION ===>

blank - Create a new or change an existing reformat definition
    D - Dynamically create and execute a temporary reformat definition
    E - Execute a previously saved reformat definition

Specify Reformat Definition Dataset:
  Dataset name  ===> 'USERID9.FASAMP.RFMTDEF'
  Member name   ===>
  Volume serial ===>              (If not cataloged)
  Description   ===>

Specify Execution Information:
  Process online or batch ===>    (O = Online; B = Batch)
```

Field Descriptions

Use the Reformat Definition screen to specify the reformat option and the reformat definition dataset. Review "File and Record Layout Requirements" on page 19-2 before selecting an option.

OPTION : Specify one of the following Reformat options:

blank : Create a new or change an existing reformat definition. You must specify the name of a dataset in the Dataset name field.

D : Dynamically create and execute a temporary reformat definition.

E : Execute a previously saved reformat definition. You must specify the name of a dataset in the Dataset name field.

Specify Reformat Definition Dataset:

Dataset name : Specify the dataset name. Use the naming conventions described in "Specifying a Dataset Name" on page 2-13.

You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. See "Pattern Dataset Names" on page 2-14 for a complete description.

The dataset name specifies the name of a dataset containing an existing reformat definition or the name of the dataset to which you want to save a new reformat definition. A reformat dataset must be partitioned, RECFM=VB, and LRECL=1576.

Member name : Specify the member name. You can leave this field blank or enter a pattern member name to display a list of members from which you can make a selection. A pattern member name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Member Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description. Pattern names cannot be entered in both the Dataset name and Member name fields at the same time.

If you left the OPTION field blank, specify a new member name to create a new reformat definition. To change or execute an existing reformat definition, enter the member name of the reformat definition you want to use.

Volume serial : If the dataset is not cataloged, specify the volume serial number of the disk or tape containing the dataset.

Description : Enter a brief description of the contents of the reformat definition.

Specify Execution Information:

Process online or batch : Specify how you want to run the Reformat function:

O : Online

B : Batch

After you have completed the fields on the Reformat Definition screen, press Enter to continue with the Reformat function.

- If you left the OPTION field blank and specified the name of a new member, File-AID displays the Reformat Record Layouts screen. Refer to "Reformat Record Layouts" on page 19-5 for more information on this screen.
- If you left the OPTION field blank and specified the name of an existing member, File-AID displays the Reformat Definition Editor screen. Refer to "Reformat Definition Editor" on page 19-10 for more information on using the editor.
- If you specified a D in the OPTION field, File-AID displays the Reformat Record Layouts screen. The reformat definition you create with this option is temporary. File-AID does not save it unless you explicitly request to save it. Refer to "Reformat Record Layouts" on page 19-5 for more information.
- If you specified an E in the OPTION field and an O in the Process online or batch field, File-AID displays the Reformat Execution - Online screen. See Figure 19-8 on page 19-21 for more information on this screen.
- If you specified an E in the OPTION field and a B in the Process online or batch field, File-AID displays the Reformat Execution - Batch screen. See Figure 19-10 on page 19-24 for more information on this screen.

Use the END command (PF3) to return to the File-AID Primary Option Menu.

RFMT Select Member List

The RFMT Select Member List screen, shown in Figure 19-2, is displayed when the Member name field for the Reformat Definition Dataset is left blank or an * (asterisk) or pattern is specified for it on the Reformat Definition screen. The list may be scrolled using LOCATE commands (LOC mem) or scrolling commands (such as UP and DOWN).

See “Member List Field Descriptions” on page 2-12 for a description of each field on this screen. See “Member List Primary Commands” on page 2-12 for a list of valid primary commands.

Figure 19-2. RFMT Select Member List Screen

```
File-AID - RFMT Select - USERID9.FASAMP.RFMTDEF -------------  ROW 1 TO 1 OF 1
COMMAND ===>                                                  SCROLL ===> CSR
 S  NAME      DESCRIPTION                       TYPE       CHANGED       ID
   EMPLOYE2                                     RFMT   95/03/22 17:22  USERID9
****************************** BOTTOM OF DATA ********************************
```

Reformat Record Layouts

If you entered a D in the OPTION field, or left the OPTION field blank and specified the name of a new member on the Reformat Definition screen, File-AID displays the Reformat Record Layouts screen as shown in Figure 19-3. Use this screen to define the record layouts for a new reformat definition. This screen supports both COBOL and PL/I record layout information.

If you specified new dataset and member names on the Reformat Definition screen, the top line of the screen indicates that you are in create mode. File-AID does not display an informational mode flag when you dynamically create (option D) a reformat definition.

Figure 19-3. Reformat Record Layouts Screen

```
File-AID ----------------  Reformat Record Layouts  ---------------------------
COMMAND ===>

Specify Source Record Layout and XREF Information:
  Record layout usage   ===> S          (S = Single; X = XREF)
  Record layout dataset ===> 'USERID9.FASAMP.LAYOUTS'
  Member name           ===> ORDERPO    (Blank or pattern for member list)
  XREF dataset name     ===>
  Member name           ===>            (Blank or pattern for member list)

Specify Target Record Layout and XREF Information:
  Record layout usage   ===> S          (S = Single; X = XREF)
  Record layout dataset ===> 'USERID9.FASAMP.LAYOUTS'
  Member name           ===> EMPLOYEE   (Blank or pattern for member list)
  XREF dataset name     ===>
  Member name           ===>            (Blank or pattern for member list)

Move corresponding?     ===> YES        (YES or NO)

Ignore prefix           ===>
Ignore suffix           ===>
```

Field Descriptions

Specify Source Record Layout and XREF Information:

Record layout usage : Specify one of the following usage values to define the reformat source record layout files:

S : Single record layout

X : XREF (record layout cross reference).

Record layout dataset : Specify the name of a dataset that contains the COBOL or PL/I source record layout. The dataset can be a sequential file, source PDS, or a CA-Panvalet or CA-Librarian source library. You can use a pattern character in this field. You also can specify a member name, in parentheses, along with the dataset name in this field. See "Specifying a Dataset Name" on page 2-13.

Member name : Specify the member name of the source record layout. If you leave the Member field blank or enter a pattern, a member list is displayed. You can use an asterisk (*) as the last character to identify a pattern.
You can also specify a member name, in parentheses, along with the dataset name in the Record layout dataset field.

If the member you specify contains multiple 01-level structures, File-AID displays the Reformat Multiple Layout Selection screen. Specify the 01-level structure to use for the source layout.

XREF dataset name : Specify the name of the XREF dataset. You can use a pattern character in this field. You also can specify a member name, in parentheses, along with the dataset name in this field. See "Specifying a Dataset Name" on page 2-13.

Member name : Specify the XREF member name. If you leave the Member field blank or enter a pattern, a member list is displayed. You can use an asterisk (*) as the last character to identify a pattern. You can also specify a member name, in parentheses, along with the dataset name in the XREF dataset field.

When you use an XREF member, File-AID displays the Display XREF screen for you to select a layout from the list. See Figure 19-4 on page 19-9.

Specify Target Record Layout and XREF Information:

Record layout usage : Specify one of the following usage values to define the reformat target record layout files:

S : Single layout (default).

X : XREF.

Record layout dataset : Specify the name of a dataset that contains the target record layout. The dataset can be a sequential file, source PDS, CA-Panvalet or CA-Librarian source library, or a File-AID map dataset. You can use a pattern character in this field. You also can specify a member name, in parentheses, along with the dataset name in this field. See "Specifying a Dataset Name" on page 2-13.

Member name : Specify the member name of the target record layout. If you leave the Member field blank or enter a pattern, a member list is displayed. You can use an asterisk (*) as the last character to identify a pattern. You can also specify a member name, in parentheses, along with the dataset name in the Record layout dataset field.

XREF dataset name : Specify the XREF dataset name. Use this field to specify the XREF dataset with a member containing a layout from a program or multiple 01-level layout. Otherwise, specify S for Record layout usage and select the target layout directly from the layout dataset. You can use a pattern character in this field. You also can specify a member name, in parentheses, along with the dataset name in this field. See "Specifying a Dataset Name" on page 2-13.

Member name : Specify the member name for the XREF layout. If you leave the Member field blank or enter a pattern, a member list is displayed. You can use an asterisk (*) as

the last character to identify a pattern. You can also specify a member name, in parentheses, along with the dataset name in the XREF dataset field.

Move corresponding? : When File-AID processes the Move corresponding value, File-AID compares the source record layout fields with the target record layout fields. If they match, File-AID places field references in the Target fields of the Reformat Definition Editor screen (Figure 19-5 on page 19-10).

Specify whether you want File-AID to complete the target record layout fields if they match the source record layout fieldFigure 19-5 on page 19-10s:

YES : Yes (default), complete the target record layout fields. File-AID does not automatically match COBOL FILLER fields.

NO : No, do not complete the target record layout fields.

Note: See "Using Field References and Literals" on page 19-18 for more information about using field references for the reformat definition.

Ignore prefix : If you specify a prefix, File-AID ignores it in the target field name. During the matching process, File-AID checks each target entry for the prefix. If the target entry has the prefix, File-AID ignores the length of the prefix in the source field name. If File-AID does not match the prefix, it checks the field for an exact field name match.

You can use an asterisk (*) or string of asterisks as a wild card in the prefix. If you specify asterisks, File-AID does not compare the prefix in the target entry and ignores the length of the prefix in the source field name.

Example 1

```
Ignore Prefix ===> BF

Target Field Name   Source Field Name  Action

BF-FIRST-NAME       AB-FIRST-NAME      Selected, prefix
                                       matched
AA-FIRST-NAME       AB-FIRST-NAME      Not Selected,
                                       prefix not matched
BB-FIRST-NAME       BB-FIRST-NAME      Selected, prefix
                                       not matched, field
                                       name exact match
```

Example 2

```
Ignore Prefix ===> **

Target Field Name   Source Field Name  Action

BF-FIRST-NAME       AB-FIRST-NAME      Selected, prefix
                                       ignored
```

Ignore suffix : If you specify a suffix, File-AID ignores it in the target field name. During the matching process, File-AID checks each target entry for the suffix. If the target entry has the suffix, File-AID ignores the length of the suffix in the source field name. If File-AID does not match the suffix, it checks the field for an exact field name match.

You can use an asterisk (*) or string of asterisks as a wild card in the suffix. If you specify asterisks, File-AID does not compare the suffix in the target entry and ignores the length of the suffix in the source field name.

Example 1

```
Ignore Suffix ===> BF

Target Field Name   Source Field Name  Action

FIRST-NAME-BF       FIRST-NAME-AB      Selected, suffix
                                       matched
FIRST-NAME-AA       FIRST-NAME-AB      Not selected,
                                       suffix not matched
FIRST-NAME-BB       FIRST-NAME-BB      Selected, suffix not
                                       matched, field name
                                       exact match
```

Example 2

```
Ignore Suffix ===> **

Target Field Name   Source Field Name  Action

FIRST-NAME-BF       FIRST-NAME-AB      Selected, suffix ignored
```

Example 3

```
Ignore Prefix ===> **  Ignore Suffix ===> BF

Target Field Name   Source Field Name   Action

BF-FIRST-NAME-BF    AB-FIRST-NAME-AB    Selected, both matched
BF-FIRST-NAME-AA    AB-FIRST-NAME-AA    Selected, suffix not
                                        matched; prefix
                                        matched, rest name match
BB-FIRST-NAME-BF    BB-FIRST-NAME-AA    Selected, prefix not
                                        matched, suffix matched,
                                        rest name match
```

After you complete the fields on the Reformat Record Layouts screen, press Enter to continue.

- File-AID displays the Reformat Definition Editor.

  If you specified YES in the Move corresponding field, File-AID creates field references for the Target fields on the Reformat Definition Editor screen. When the Reformat Definition Editor screen is displayed, the field references are in the Target fields. No data is moved in this process; only field references are created. These field references take effect only when the reformat definition is executed. You can change a field reference any time using the reformat editor. See “Reformat Definition Editor” on page 19-10.

  Note: When using the same layout for Source Layout and Target Layout, specify *NO* to Move corresponding. Then, use a field reference of /0 in target field 0 (zero). This greatly speeds processing when executing your reformat definition to perform a selective copy.

Use the END command (PF3) to return to the Reformat Definition screen.

Reformatting Datasets with Multiple Record Types

The Display XREF screen, shown in Figure 19-4, lists each layout defined in the specified XREF. It is displayed when the data file you are reformatting contains more than one type of record and each record type requires a different record layout (Record layout usage = X). XREF layouts are compiled as needed.

Use this screen to specify which record type to reformat. All other record types are not selected for reformatting. Use the Copy unselected records field on the Reformat Execution - Online screen (Figure 19-8 on page 19-21) to specify whether to copy unselected records.

Each data file record is classified into a record type category based on certain field values within the record. In File-AID, these field or data values and their record layouts are associated when the XREF is defined. See Chapter 17, “Record Layout Cross Reference (7)”.

You must select a record layout with a status of BASE. File-AID does not allow you to select a record type with a status of DEFAULT and does not support the reformatting of segmented records.

Figure 19-4. Display XREF Screen

```
File-AID --- Display XREF - ORDRFILE ------------------------  ROW 1 TO 4 OF 4
COMMAND ===>                                                  SCROLL ===> CSR
Member list description ===> XREF FOR ORDRFILE

    Long    ===> RECORD TYPE FIELD IS ORDER-TYPE. FOR ORDERWO THE FIELD________
Description ===> CONTRACT INDICATOR IS USED TO SELECT FROM TWO TYPES OF LAYOUT_


Cmd   Member   Beginning Data-Name              Description         Status
--- ---------- ------------------------------ --------------- ----------------
_   ORDERPO    ORDER-LINE-DATA-PO             PO LINE DATA     BASE
_   ORDERSC    ORDER-LINE-DATA-SC             SC LINE DATA     BASE
_   ORDERWO    OUTSIDE-VENDOR-WORK-ORDER      WORK ORDER - OV  BASE
_   ORDERWO    INTERNAL-WORK-ORDER            WORK ORDER - IN  DEFAULT
************************* END OF SELECTION CRITERIA *************************
```

Field Descriptions

Cmd : Use the S (Select) line command to specify the record layout you want to use. You must select a record layout with a status of BASE.

The fields associated with layout selection are automatically set and locked and flagged with a criteria value of RECORD TYPE FIELD.

Member : Name of the record layout member.

Beginning Data-Name : Displays the starting dataname of the record layout.

Description : Short Description of the record layout entered by user when the XREF is created.

Status : Usage status of the layout (BASE, DEFAULT, or SEGMENT) as defined in the XREF.

After you select a layout on the Display XREF screen, press Enter to continue with the Reformat function.

Use the END (PF3) or CANCEL command to terminate the function and return to the Reformat Record Layouts screen.

Use the RETURN command (PF4) to return to the File-AID Primary Option Menu.

Primary Commands

The following primary commands are valid on the Display XREF screen:

CANCEL : Terminates the reformat processing.

DOWN : Scrolls toward the end of a record layout.

END : Terminates the reformat processing.

RETURN : Returns to the File-AID Primary Option Menu.

UP : Scrolls toward the top of a record layout.

Reformat Definition Editor

The Reformat Definition Editor screen, shown in Figure 19-5, enables you to create reformat definitions or change existing definitions. File-AID displays the Reformat Definition Editor screen when you:

- Leave the OPTION field blank and specify the name of an existing dataset and member on the Reformat Definition screen
- Complete the fields on the Reformat Record Layouts screen and press Enter.

The editor allows you to use field references and field overlays to create a reformat definition. You can define the following on the Reformat Definition Editor screen:

- Records from the source dataset to copy to the target dataset
- Source fields for each target field
- Initial values for new target fields.

Figure 19-5. Reformat Definition Editor Screen

```
File-AID    - Reformat Definition Editor - - - - - - - - - - - - - - - - - - - -
COMMAND ===>                                                  SCROLL ===> PAGE
Source COBOL - EMPLOYEE-MASTER-FILE ---- USERID9.FASAMP.LAYOUTS(EMPLOYEE) ------
Num Field Name                      Format  Pic   OP Data      Row    1 of   35
  0 EMPLOYEE-MASTER-FILE             GRP/198
  1  EMP-NUMBER                       AN/5
  2  EMP-LAST-NAME                    AN/15
  3  EMP-FIRST-NAME                   AN/10
  4  EMP-MID-INIT                     AN/1
  5  FILLER                           AN/2
  6  EMP-TITLE                        AN/30
  7  EMP-PERSONAL-INFO               GRP/23
Target COBOL - EMPLOYEE-MASTER-FILE ---- USERID9.FASAMP.LAYOUTS(EMPLOYE2) ------
Num Field Name                      Format  Pic   Data         Row    1 of   36
  0 EMPLOYEE-MASTER-FILE             GRP/211
  1  EMP-NUMBER                       AN/5        /1
  2  EMP-FIRST-NAME                   AN/15       /3
  3  EMP-MID-INIT                     AN/1        /4
  4  EMP-LAST-NAME                    AN/20       /2
  5  EMP-TITLE                        AN/30       /6
  6  EMP-PERSONAL-INFO               GRP/24
  7   EMP-NATL-ID-NUMBER             NUM/9   9v00 /8
Use END Command to Save then End, CANCEL to Cancel, or EX to Execute Reformat
```

Scrolling

You can scroll the entries in both the Source window and Target window of the Reformat Definition Editor screen.

A single entry may have multiple lines. File-AID scrolls by entry so that an entry is never split at the top of a screen. The following scroll amounts are supported:

CSR : Cursor scrolling. If up, move line to bottom. If down, move line to top.

PAGE : Scroll one page.

HALF : Scroll one half of a page.

DATA : Scroll one page minus one.

1 - 9999 : Scroll number of entries specified.

MAX : Scroll maximum number of entries.

The scrolling amount is saved in the profile and is used for all scrollable screens in the Reformat function.

You can scroll the windows separately or in unison. This is called the scrolling mode. The scrolling mode is determined by the cursor position. When a scrolling command is entered, File-AID finds the cursor on the screen. If the cursor is in a window, then that window is scrolled. If the cursor is not in a window, then both windows are scrolled.

Note: The LEFT and RIGHT scroll commands are not valid.

Editor Screen Windows

The Source window and the Target window of the Reformat Definition Editor screen are shown in Figure 19-6. The areas in the windows that contain information about the source record and target record layouts are identified by numbers in parentheses.

Figure 19-6. Reformat Definition Editor Screen Areas

```
File-AID ---- Reformat Definition Editor - DS TSOD001.FAXE.MAPS(GENERIC)  - - -
COMMAND ===>                               (1)                 SCROLL ===> CSR



         (2)             (3)                      (4)
Source COBOL   BT-TEST-FIELD-1 --------- DGPBFM.FA.LAYOUT(COBMEM) -------------
Num Field Name                     Format  Pic   OP Data      Row   1 of 20 (8)
1 AAA  (5)
2 BBB                                   (6)      (7)



. . .

         (9)            (10)                     (11)
Target PL/I     BT_TEST_FIELD_1 -------- DGPBFM.FA.LAYOUT(PLIMEM)  ------------
Num Field Name                     Format  Pic   Data         Row   1 of 20 (12
)
1 AAA  (5)
                                        (6)       (13)

. . .
```

Number	Description
(1)	Dataset and member in which the reformat definition is saved.
(2)	Language of the source record layout.
(3)	Name of the 01 level field for the source record layout.
(4)	Dataset and member from which the source record layout was read.
(5)	Detail names of the fields in the record layout. In this sample screen, the first field is shown as AAA. The second field is BBB.
(6)	Format and picture (PIC) of the detail fields.
(7)	Operator (OP) and data area for the source record layout. Specify the reformat record selection criteria here.
(8)	Current row and total number of rows in the source window.
(9)	Language of the target record layout.
(10)	Name of the 01 level field for the target record layout.
(11)	Dataset and member from which the target record layout was read.
(12)	Current row and total number of rows in the target window.
(13)	Data area for the target record layout. Contains field references for the source fields to be copied, or the values to be used to initialize the field.

Source Window Field Descriptions

The Source window displays information about the source record layout and provides fields for you to specify record selection criteria.

Num : Number of the field displayed under Field Name as described in the source record layout.

Field Name : Name of the field as described in the source record layout.

Format : Specifies the field format, which along with the PIC field, describes each field. This information is created from the COBOL or PL/I record layout using File-AID conventions. Table 19-1 lists supported COBOL formats. Table 19-2 lists supported PL/I formats.

Table 19-1. Supported COBOL Reformat Field Formats

Format	COBOL Data Type
GRP	Group item
AN	Usage display (alphanumeric)
ANR	Usage display (alphanumeric, justified right)
PTR	Usage pointer
INDX	Usage index
NUM	Usage display (numeric)
NUMS	Usage display (numeric, signed)
P	Usage COMP-3
PS	Usage COMP-3 (signed)
BI	Usage COMP
BIS	Usage COMP (signed)
UNSP	Unsupported data type

Table 19-2. Supported PL/I Reformat Field Formats

Format	PL/I Data Type
BIT	Bit
VBIT	Bit varying
CHAR	Character
VCHR	Character varying
OFST	Offset
PTR	Pointer
BFX	Binary fixed
DFX	Decimal fixed
UNSP	Unsupported PL/I data item

Length : Length of the field in bytes or bits, depending on the type of field. On variable length fields, the length is the maximum length of the field.

Pic : Picture created for numeric fields only from the information in the record layout. It is not created for character fields with PIC. PIC examples include:

```
Layout Data              Format  Pic      Description

COBOL: 9(5)              NUM/5   5v0      Zoned decimal
       S9(5) Comp-3      PS/3    5v0      Packed decimal
                                          (signed)
       9(5)V99 Comp-3    P/4     5v2      Packed decimal
                                          (unsigned)
       x(5)              AN/5             Character data
       x(32000)          AN/32000         Character data
PL/I:  CHAR(1)           CHAR/1           Character data

       BIT(10)           BIT/10           Bit data
       BIT(99) Varying   VBIT/99          Varying bit data
```

OP : Used to specify a selection operator. Along with the Data field, this operator forms a reformat record selection criterion. You must specify a value in the Data field if you specify an operator. Each field of the record layout can have an operator for selecting a record.

You can specify the field operators in two ways: as a mnemonic (EQ) or as a character (=). Table 19-3 lists supported field operators.

Table 19-3. Supported Reformat Field Operators

Operator	Character	Description
EQ	=	Field equal to data item
NE	¬ =	Field not equal to data item
GT	>	Field greater than data item
GE	> =	Field greater than or equal to data item
NG	¬ >	Field not greater than data item
LT	<	Field less than data item
LE	< =	Field less than or equal to data item
NL	¬ <	Field not less than data item

Data : The source Data field, along with the OP field, create the reformat record selection criterion. You can specify keywords, data-checking keywords, and literals in the Data field. You must specify an operator in the OP field if you specify a keyword or literal in the Data field.

For example, to reformat records that have contents equal to all zeroes in a particular field, specify an operator of **EQ** in the OP field and a keyword of **ZE** (for zeroes) in the Data field.

Keywords : Keywords are a previously established set of values. You can use these values for comparisons and to initialize fields. You need to specify only enough of the keyword to uniquely identify it; it expands to the whole name when you press Enter.

Keywords have a certain data type associated with them. The data type can be numeric, alphanumeric, or both. Some keywords are valid only with certain field types. Keywords are not supported in bit fields.

Table 19-4 lists and describes valid keywords for the Data field. The capitalized letters in the keyword represent the unique portion.

Table 19-4. Keywords for Reformat Data Field

Keyword	Description
ZEroes	Alphanumeric and numeric. Based on data type.
	Display - X'F0…F0'
	Packed - X'0…F'
	Binary - X'0…0'
SPaces	Alphanumeric. Blanks. X'40'
BLanks	Alphanumeric. Blanks. X'40'
LOw-values	Alphanumeric. COBOL low-values. X'00'
NULls	Alphanumeric. Null value. X'00'
HIgh-values	Alphanumeric. COBOL high-values. X'FF'

Data-Checking Keywords : Data checking is the process of determining the class of data in a field. This is similar to COBOL class tests. You need to specify only the first few letters of the keyword. Table 19-5 lists data-checking keywords.

Table 19-5. Data-Checking Keywords

Keyword	Description
ALphabetic	Determine if field contains alphanumeric characters. To be considered alphabetic, it must consist of the characters A-Z and blanks only.
NUMeric	Determine if field contains numeric digits. Display and decimal numeric fields are supported. To be considered numeric, it must consist of digits 0-9 only.

Literals : In the source Data field, you can specify literals to work with the operator in the OP field to specify a reformat record selection criterion. For example, if you specify an operator of **EQ** and a Data field literal value of **'ABC'**, File-AID reformats only those records that have an ABC in that field. The literal type must match the field type, and the length of the literal must not exceed the length of the field. Otherwise, an error message is displayed.

Character-type literals can contain embedded quotes and apostrophes and are processed similar to the ISPF/PDF FIND command. If a string starts with a quote, it must end with a quote. If a string starts with an apostrophe, it must end with an apostrophe. File-AID does not require that you enclose a quote in apostrophes or an apostrophe in quotes.

Supported literals include character, text, bit, hex, and numeric as described below:

- *Character:* Character literals consist of a string of display characters. The string may be enclosed in apostrophes or quotes. Character literals may be specified on any character or group type field. If the length of the literal is less than the length of the source field, the literal is padded with spaces (X'40').

  Character data is case insensitive. You can compare mixed-case fields. Lowercase data is converted to uppercase. Character data used to initialize fields is saved as uppercase. Examples of character data are:

```
Data        Result    Description

'ab'        AB        Lowercase converted
"ab"        AB        Double quotes
'o'neal'    O'NEAL    Single quote retained
"""         "         Double quote retained
"abc'       ERROR     Quotes do not match
'abc        ERROR     No ending quote
```

- *Text:* Text literals consist of the letter **T** followed by a quoted character string enclosed in single or double quotes. Text literals may be specified on any character or group type field. If the length of the literal is less than the length of the source field, the literal is padded with spaces (X'40').

  Text data is case sensitive. Lowercase data is not converted to uppercase. Thus, you can compare a field with an exact string of upper and lowercase characters. File-AID saves the data used to initialize fields in the target fields exactly as specified. Examples of text literals are:

```
Data        Result    Description

t'ab'       ab        Lowercase
T'aBc'      aBc       Mixed case
t"ABC"      ABC       Double quotes
T"A'B"      A'B       Enclosed quotes
T'ab"       ERROR     Mismatched quotes
T'ab        ERROR     No ending quote
```

- *Bit:* Bit literals consist of a string of binary digits. The string may be enclosed in apostrophes or quotes. You can specify bit literals only on PL/I bit fields. If the length of the literal is less than the length of the field, the literal is padded with zeroes. Examples of bit literals are:

```
Data        Result    Description

'01'        01        Single quotes
"11001"     11001     Double quotes
"10'        ERROR     Mismatched quotes
01          ERROR     No quotes
'01         ERROR     No ending quotes
'12'        ERROR     Invalid digits
'AF'        ERROR     Invalid digits
```

- *Hex:* Hexadecimal literals consist of the letter **X** followed by a quoted string of an even number of hex digits 0-9 and A-F. The string may be enclosed in apostrophes or quotes. You can specify hex literals in any type field except a bit field. If the length of the literal is less than the length of the source field, the literal is padded with zeroes. You can use hexadecimal literals to represent unsupported data type fields by expressing it as a hex value. Examples of hexadecimal literals are:

```
Data        Result    Description

X'C1'       C1        Hex byte
X"C1"       C1        Double quotes
X'C1C2C3C4' C1C2C3C4  Hex data
X"0001"     0001      Binary one
X'0'        ERROR     Uneven number of digits
```

- *Numeric:* Numeric literals consist of a string of decimal digits 0-9. Numbers are not enclosed in quotes. You can specify numeric literals only on numeric fields. If the length of the literal is less than the length of the source field, the literal is padded with leading zeroes.

  If the field has a signed attribute, you can specify a sign. The sign may be a prefix or suffix. If the field has decimal positions, you can specify a decimal point. The numeric literal specified must match the picture of the numeric field. Examples of numeric literals are:

```
Data       Result    Description

1          1         Positive one
-1         -1        Negative one
1-         -1        Negative one
123        123
12.3       12.3      Decimal positions
1.2-       -1.2      Negative decimal
·1         ·1        Less than one
-1-        ERROR     Two signs
```

Row x of x : The number of the current row (as determined by cursor position) and the total number of rows.

Source Window Entry Examples

Examples 1 and 2 illustrate Source window entries.

Example 1

You want to reformat records from the source dataset that have the name **smith** in the Num 2 field, called ASM05-NAME. To specify the records, use an operator of **EQ** in the OP field and **smith** in the Data field. Field 2 in the Source window is specified as:

```
Num Field Name                  Format  Pic   OP Data
  2 ASM05-NAME                  AN/5          EQ "smith"
```

The combination of the operator and a literal in the Source window only defines reformat record selection. To copy input fields to the output records, you must add a field reference in the target window.

Example 2

Using the same record layout as Example 1, reformat all those records that have **smith** in field 2 and have a birth date of 110560, as described in field 3, ASMO5-DATE. To specify these records, use the "equal to smith" criterion as described in Example 1, but also use "equal to 110560" in field 3. Fields 2 and 3 in the source window are specified as:

```
Num Field Name                  Format  Pic   OP Data
  2 ASM05-NAME                  AN/5          EQ "smith"
  3 ASM05-DATE                  N/6     6v00  EQ 110560
```

You do not have to specify the AND condition; that is, equal to "smith" AND equal to 110560. File-AID assumes an AND condition for all the operator/data combinations specified in the source window.

Target Window Field Descriptions

In the Target window, specify the fields you want copied from the source record and the destination in the target record to which you want them copied.

Num : Number of the field displayed under Field Name as described in the target record layout.

Field Name : Name of the field as described in the target record layout.

Format : Field format description is the same as for the Source window. See “Source Window Field Descriptions” on page 19-12 for a complete description.

Pic : The picture description is the same as for the Source window. See “Source Window Field Descriptions” on page 19-12 for a complete description.

Data : The Target Data field is for field initializations of the target record, or for field references that indicate where data from the source record is to be placed. See “Using Field References and Literals” on page 19-18 for information on using field references.

You can specify keywords, literals, field reference numbers, and field reference labels in this field.

Keywords : Keywords are used to initialize the target field with specific data. The keyword descriptions are the same as for the Source window. See the keyword description on page 19-14for more information.

Literals : You specify data literals in the Data field for field initialization in the target area. The literal type must match the field type. Also, the length of the literal must not exceed the length of the field. For a list of supported literals, see Table 19-4 on page 19-14.

Character-type literals can contain embedded quotes and apostrophes and are processed similar to the ISPF/PDF FIND command. If a string starts with a quote, it must end with a quote. If a string starts with an apostrophe, it must end with an apostrophe.

Field References : Field references are markers that indicate which fields File-AID is to copy from the source record and where it is to put them in the target record. A field reference can be a number or a label. For more information, see "Using Field References and Literals" on page 19-18 and "Using Field Overlays" on page 19-20.

Row x of x : The number of the current row (as determined by cursor position) and the total number of rows.

After you complete the fields on the Reformat Definition Editor screen, press Enter to validate your reformat definition.

Use the END command (PF3) to save the reformat definition and return to the Reformat Definition screen.

Enter the SAVE command to save the reformat definition. If you invoked the Reformat Definition Editor screen from the dynamic mode (Option D), File-AID displays the Reformat Save screen where you can specify the name of the dataset to which you want to save the reformat definition. See "Reformat Save" on page 19-20 for a description of this screen and its fields.

Use the EXECUTE (EX) command to end the reformat definition session and save the reformat definition. File-AID then displays either the Execute Reformat - Online or the Execute Reformat - Batch screen, depending on the value you specified in the Process online or batch field on the Reformat Definition screen. See Figure 19-8 on page 19-21 and Figure 19-10 on page 19-24 for more information on these screens. If you accessed the Reformat Definition Editor screen from the dynamic mode (Option D), File-AID executes the reformat definition, but does not save it.

Using Field References and Literals

Field references and literals can be specified in the Target window Data fields of the Reformat Definition Editor screen. Field references are markers that indicate which fields File-AID is to copy from the source record and where it is to put them in the target record. Literals initialize a field.

You can create a field reference by specifying:

- A slash (/) followed by the name or number of the field you want to copy from the source record layout
- A literal to initialize the field.

Note: If you are creating a new reformat definition (create mode) and you specified **Move corresponding? ===>YES** (see Figure 19-3 on page 19-5), File-AID displays field references in the Data field of the Reformat Definition Editor screen if any source field names matched the target field names.

The following are guidelines for using field references:

- A record must meet all the selection criteria in the Source window to be reformatted for the target dataset.
- You can copy Source field data to the same field in the target record or to a different field.
- You can copy data from one field to another of the same type. For example, you can copy a character field to a group item. You can copy numeric items to another numeric field. See Table 19-6 for information on copying various types of data.

  To copy data to unsupported data types, you can use a field overlay. See "Using Field Overlays" on page 19-20.

- The referenced name can be the exact name or a substring. You need to specify only enough of the name to make it unique. File-AID searches for an exact match before looking for a substring. The search is terminated if an exact match is found.
- You can copy data from a COBOL record layout to a PL/I record layout or vice versa.
- If the fields are different lengths, the target field determines the length. Table 19-6 provides information on copying fields with different lengths based on data type.

Table 19-6. Reformat Field Referencing by Data Type and Field Length

Types of Data	Referencing Limitations	If Target Field is Longer than Source Field	If Target Field is Shorter than Source Field
Character, character justified right, character varying, and group	Referencing among these types only.	Data is padded with spaces on the right for left justified and the left for right justified.	Data is truncated on the right for left justified and the left for right justified.
Bit and bit varying	Referencing among these types only.	Data is padded with binary zeroes on the right.	Data is truncated on the right.
Unsupported data types	Referencing among these types only.	Source and target fields must have the same length.	Source and target fields must have the same length.
Numeric zoned (display) or numeric packed fields	Referencing among these types only. If the source field is signed but the target field is unsigned, the data is stripped of its sign. If the source field is unsigned but the target field is signed, the data is set to a positive sign. If the field pictures are not the same, the fields are aligned to decimal points.	Zeroes are added on the right or left as needed.	Data is truncated on the right or left.
Numeric binary, pointer, index, or offset fields	Referencing among these types only. If the source field is signed but the target field is unsigned, the data is stripped of its sign. If the source field is unsigned but the target field is signed, the data is set to a positive sign. The length and picture of the fields must match.	No truncation or padding; length and picture of the fields must match.	No truncation or padding; length and picture of the fields must match.

Field Reference Example

To copy field 2 from the source record to field 4 in the target record, type a slash (/) in the target Data field followed by the field name. In the Source window below, three fields are displayed:

```
Num Field Name                      Format  Pic   OP Data
  2 ASM05-NAME                      AN/5
  3 ASM05-DATE                      N/6
  4 ASM05-DATA                      AN/5
```

In the Target window below, /ASM05-NAME is the field reference that will copy field 2 from the source record to field 4 in the target record:

```
Num Field Name                      Format  Pic   Data
  2 ASM05-TRAILER-05                GRP/36
  3 ASM05-CONTRO                    AN/4
  4 ASM05-DATA                      AN/5          /ASM05-NAME
```

The field reference could also be made by field number instead of field name. In this case, the Target window is specified as:

```
  4 ASM05-DATA                      AN/5          /2
```

Using Field Overlays

Field overlays are a type of field reference that requests the copying of multiple fields from the source record layout to the target record layout. Field overlays reference one, or potentially, many source fields. The first field reference in the overlay is the starting position in the source layout. The reference is specified by field numbers separated by a hyphen (-). The cumulative length of the referenced fields is the length of the data to be moved. This length includes slack bytes inserted between fields. The data is moved from the starting position for the length into the target record layout starting at the field specified.

Since no validation is performed, you can create invalid data in the target fields. This may be desirable in some cases. You can use a field overlay to request the copying of data between different field types. For example, an unsupported data field can be moved to another field type.

Reformat Save

If you dynamically created a reformat definition using option D from the Reformat Definition screen, File-AID displays the Reformat Save screen, shown in Figure 19-7, when you enter the SAVE command on the Reformat Definition Editor screen.

Figure 19-7. Reformat Save Screen

```
File-AID - Reformat Save -------------------------------------------------------
COMMAND ===>

Specify Reformat Definition Dataset for SAVE:
  Dataset Name   ===> FASAMP.RFMTDEF
  Member Name    ===>
  Volume Serial  ===>          (If not cataloged)
  Description    ===>









Use END to CANCEL or ENTER to process REFORMAT SAVE
```

Field Descriptions

Specify Reformat Definition Dataset for SAVE:

Dataset Name : Enter the name of the dataset to which you want to save the reformat definition. See “Specifying a Dataset Name” on page 2-13.

Member Name : Specify the member name.

Volume Serial : If the dataset is not cataloged, enter the volume serial number of the disk or tape containing the dataset.

Description : Enter a description of up to 30 characters of the contents of the reformat definition.

After completing the fields on the Reformat Save screen, press Enter to save the dynamically created reformat definition. Use the END command (PF3) to terminate the save process and return to the Reformat Definition Editor screen.

Reformat Execution - Online

File-AID displays the Reformat Execution - Online screen, shown in Figure 19-8, when you specify an E in the OPTION field and an O in the Process online or batch field on the Reformat Definition screen

- Use the EXECUTE command on the Reformat Definition Editor screen.

Figure 19-8. Reformat Execution - Online Screen

```
File-AID --------------  Reformat Execution - Online  ------------------------
OPTION  ===>

 Display file after reformat ===> N  (N=No; B=File-AID Browse; E=File-AID Edit)


Specify Input Dataset:
  Dataset Name   ===>
  Member Name    ===>
  Volume Serial  ===>                  (If not cataloged)
  Disposition    ===>                  (OLD or SHR)

Specify Output Dataset:
  Dataset Name   ===>
  Member Name    ===>
  Volume Serial  ===>                  (If not cataloged)
  Disposition    ===>                  (OLD, SHR or MOD)


Copy unselected records      ===> N    (Y = Yes; N = No, drop unselectedd)
Number of records to process ===> 0    (1-9999; 0 = all)
```

Field Descriptions

Display file after reformat : Specify whether or not you want the file displayed when Reformat is complete:

N : Do not display the data file

B : Data file is redisplayed under the Browse function

E : Data file is redisplayed under the Edit function.

Specify Input Dataset:

Dataset Name : Specify the dataset name of the input file. You can use a pattern character in this field. You also can specify a member name, in parentheses, along with the dataset name in this field. See "Specifying a Dataset Name" on page 2-13.

Member Name : Specify the member name of the input file. If you leave the Member Name field blank or enter a pattern, a member list is displayed. You can use an asterisk (*) as the last character to identify a pattern. You can also specify a member name, in parentheses, along with the dataset name in the Dataset Name field.

Volume Serial : If the dataset is not cataloged, specify the volume serial number of the disk containing the input dataset.

Disposition : Specify the status of the dataset:

SHR : Allocates dataset for shared access.

OLD : Allocates dataset for exclusive access.

Specify Output Dataset:

Dataset Name : Specify the dataset name of the output file. You can use a pattern character in this field. You also can specify a member name, in parentheses, along with the dataset name in this field. See "Specifying a Dataset Name" on page 2-13.

Member Name : Specify the new or existing member name of the output file. If you leave the Member Name field blank or enter a pattern, a member list is displayed. You can use an asterisk (*) as the last character to identify a pattern. You can also specify a member name, in parentheses, along with the dataset name in the Dataset Name field.

Volume Serial : If the dataset is not cataloged, specify the volume serial number of the disk containing the output dataset.

Disposition : Specify the status of the dataset:

SHR : Allocates dataset for shared access.

OLD : Allocates dataset for exclusive access.

MOD : Allocates dataset for exclusive access and extends it.

Copy unselected records : Specify if you want all input records or only those records that meet the reformat selection criteria copied to the output dataset:

Y : Yes, copy all records. Records that do not match the reformat selection criteria are copied unchanged.

N : Copy only those records that meet the reformat selection criteria.

Number of records to process : Specify the number of records to be written to the output dataset:

1-9999 : Write the specified number of records to the output dataset.

0 : Write all records to the output dataset.

This is useful for testing the reformat definition with large files. It is recommended that you process a small number of records to verify the reformat definition before processing the entire file.

After you complete the fields on the Reformat Execution - Online screen, press Enter and File-AID executes the reformat definition under your TSO address space. If online processing is delayed, File-AID displays an informational screen that indicates foreground processing is in progress.

When executing an existing reformat definition (saved) and you specified a B or an E in the Display file after reformat field, File-AID displays the Record Layout Specification screen when the processing is complete.

To stop the reformat definition processing, press the ATTN key. If you terminate the processing, the dataset is only partially processed and the results are unpredictable. Use the END command (PF3) to return to the Reformat Definition Editor screen.

Record Layout Specification

File-AID displays the Record Layout Specification screen, as shown in Figure 19-9, to allow you to confirm or change the record layout or XREF dataset that File-AID uses to display the file after the reformat. This screen is displayed if a B or an E was specified in the Display file after reformat field on the Reformat Execution - Online screen.

This screen is usually prefilled with information describing the reformat definition. However, in some cases you may need to specify the location of the target record layout.

Note: If you execute the reformat definition again without returning to the Reformat Definition screen, the Record Layout Specification screen is not redisplayed.

Figure 19-9. Record Layout Dataset Specification Screen

```
File-AID ---------------- Record Layout Specification -------------------------
COMMAND ===>

Specify Record layout and XREF Information:
   Record layout usage      ===> S          (S = Single; X = XREF)

   Record layout dataset    ===>
   Member name              ===>            (Blank or pattern for member list)


   XREF dataset name        ===>
   Member name              ===>            (Blank or pattern for member list)
```

Field Descriptions

Specify Record Layout and XREF Information:

Record layout usage : Specify one of the following values to define the reformat record layout files:

S : Single layout

X : XREF.

Record layout dataset : Specify the dataset name of the source record layout. The dataset can be a sequential file, a source PDS, or a CA-Panvalet or CA-Librarian source library. You can use a pattern character in this field. You also can specify a member name, in parentheses, along with the dataset name in this field. See "Specifying a Dataset Name" on page 2-13.

Member name : Specify the member name of the source record layout. If you leave the Member field blank or enter a pattern, a member list is displayed. You can use an asterisk (*) as the last character to identify a pattern. You can also specify a member name, in parentheses, along with the dataset name in the Record layout dataset field.

When using an XREF, leave this field blank.

XREF dataset name : Specify the dataset name containing the XREF member. You can use a pattern character in this field. You also can specify a member name, in parentheses, along with the dataset name in this field. See "Specifying a Dataset Name" on page 2-13.

Member name : Specify the member name of the XREF. If you leave the Member field blank or enter a pattern, an XREF member list is displayed. You can use an asterisk (*) as the last character to identify a pattern. You can also specify a member name, in parentheses, along with the dataset name in the XREF dataset field.

After you confirm or change the fields on the Record Layout Specification screen, press Enter. Depending on the value you specified in the Display file after reformat field, File-AID displays the file in either Browse or Edit. Use the END command (PF3) to return to the Reformat function after you have finished in Browse or Edit.

Use the END command (PF3) to return to the Reformat Execution - Online screen.

Reformat Execution - Batch

The Reformat Execution - Batch screen, shown in Figure 19-10 on page 19-24, creates the JCL needed to submit a batch job to execute the record reformat. The batch job consists of one job step that invokes File-AID/Batch. The step includes a DD name of DD01RF. The DD01RF DD statement contains the name of the saved reformat definition. Since File-AID uses the reformat definition dataset for the batch process, it cannot execute in batch a reformat definition that was dynamically created.

The only File-AID/Batch control card statement included in the JCL specifies the REFORMAT function. The statement also includes a REFOUT parameter with a default value the same as that specified in the Copy unselected records field on the Reformat Execution - Batch screen.

Figure 19-10. Reformat Execution - Batch Screen

```
File-AID --------------------- Reformat Execution - Batch ---------------------
OPTION  ===>

Validate datasets before JCL generation ===> Y     (Y = Yes; N = No)

Specify Input Dataset:
  Dataset name   ===> 'USERID9.FASAMP.EMPLOYEE'
  Member name    ===>
  Volume serial  ===>                   (If not cataloged)
  Disposition    ===> SHR               (OLD or SHR)

Specify Output Dataset:
  Dataset name   ===> 'USERID9.FASAMP.EMPLOYE2'
  Member name    ===>
  Volume serial  ===>                   (If not cataloged)
  Disposition    ===> OLD               (OLD; SHR; MOD)

Copy unselected records      ===> N     (Y = Yes; N = No; drop unselected)
Number of records to process ===> 0     (1-9999; 0 = all)

Use END to END or ENTER to continue REFORMAT MODE
```

Field Descriptions

Validate datasets before JCL generation : Specify whether or not you want File-AID to validate the datasets before it generates the JCL:

Y : Yes. Automatically validate the datasets.

N : No. Do not automatically validate the datasets. If you select NO, you can allocate the files at a later time or another job or job steps can create the files. For tape files, use N (No).

Specify Input Dataset:

Dataset name : Specify the dataset name of the input file. You can use a pattern character in this field. You also can specify a member name, in parentheses, along with the dataset name in this field. See “Specifying a Dataset Name” on page 2-13.

Member name : Specify the member name of the input file. If you leave the Member Name field blank or enter a pattern, a member list is displayed. You can use an asterisk (*) as the last character to identify a pattern. You can also specify a member name, in parentheses, along with the dataset name in the Dataset Name field.

Volume serial : If the dataset is not cataloged, specify the volume serial number of the disk or tape containing the input dataset.

Disposition : Specify the status of the dataset:

SHR : Allocates dataset for shared access.

OLD : Allocates dataset for exclusive access.

Specify Output Dataset:

Dataset name : Specify the dataset name of the output file. You can use a pattern character in this field. You also can specify a member name, in parentheses, along with the dataset name in this field. See "Specifying a Dataset Name" on page 2-13.

Member name : Specify the new or existing member name of the output file. If you leave the Member Name field blank or enter a pattern, a member list is displayed. You can use an asterisk (*) as the last character to identify a pattern. You can also specify a member name, in parentheses, along with the dataset name in the Dataset Name field.

Volume serial : If the dataset is not cataloged, specify the volume serial number of the disk or tape containing the input dataset.

Disposition : Specify the status of the dataset:

SHR : Allocates dataset for shared access.

OLD : Allocates dataset for exclusive access.

MOD : Allocates dataset for exclusive access and extends it.

Copy unselected records : Specify if you want all input records or only those records that meet the reformat selection criteria copied to the output dataset:

Y : Yes, copy all records. Records that do not match the reformat selection criteria are copied unchanged (REFOUT=ALL).

N : Copy only those records that meet the reformat selection criteria (REFOUT=SEL).

Number of records to process : Specify the number of records to be written to the output dataset:

1-9999 : Write the specified number of records to the output dataset.

0 : Write all records to the output dataset.

This is useful for testing the reformat definition with large files. It is recommended that you process a small number of records to verify the reformat definition before processing the entire file.

After you complete the fields on the Reformat Execution - Batch screen, press Enter to continue. File-AID displays the Reformat JCL Specification screen. Use the END (PF3) command to display the Reformat Definition Editor screen.

Reformat JCL Specification

File-AID displays the Reformat JCL Specification screen as shown in Figure 19-11 on page 19-26 when you complete the fields on the Reformat Execution - Batch screen and press Enter.

Figure 19-11. Reformat JCL Specification Screen

```
File-AID ---------------- REFORMAT - JCL Specification  ----------------------
COMMAND ===>

JCL Information for Batch Processing:

 Sysout class    ===> *

JOB Statement Information:
 ===> //USERID9A JOB (ACCOUNT),NAME
 ===>
 ===>
 ===>




Use JCL command to edit generated JCL
Use SUBMIT command to submit batch job
Use END to return to main REFORMAT panel without submitting job
```

Field Descriptions

JCL Information for Batch Processing:

Sysout class : Enter the sysout class for the reformat batch job.

JOB Statement Information: : Enter the JOB statement for the batch job.

After you complete the fields on the Reformat JCL Specification screen, use the SUBMIT primary command to submit the job. Use the JCL primary command to display and edit the JCL on a ISPF Edit screen before you submit the job.

Use the END command (PF3) to return to the Reformat Execution - Batch screen without submitting the batch job.

Reformatting Variable Records

Field overlays for reformatting variable records are described using the OCCURS DEPENDING ON (ODO) syntax of the COBOL language and the REFER syntax of the PL/I language. However, PL/I REFER is not currently supported. PL/I VARYING character may also describe a variable record if the VARYING field is not contained in a structure.

ODOs are specified with the maximum number of occurrences. During entry and edit of the reformat definition, variable layouts are displayed with the maximum number of occurrences. You can enter selections and copies in any part of the record. File-AID cannot check whether these references fall within the length of an actual record until execution time.

At the beginning of reformat execution, File-AID scans the source and target layouts for ODO syntax to determine if logic for variable layouts should be executed. Reformat logic for processing variable layouts is executed regardless of whether the actual dataset is variable or not.

Selection Logic for Variable Layouts

When processing with a source layout that is variable, File-AID checks that each field is within the bounds of the current record length. If a reference is off the end of the current record, the actual comparison is not made. At this point, a comparison with an NE (not equal) selection operator is considered true and execution proceeds with the next selection. With any other operator, the comparison is considered false and the record will not be selected for reformatting.

Copy Logic for Variable Layouts

When the source layout is variable, File-AID checks each input field reference to see if it is within the bounds of the current input record length. If the reference is off the end of the record, the copy does not take place and the target record field is initialized to zeroes or blanks depending on its type. Execution continues with the next move.

The target record is built at its maximum length. After all target moves are completed, File-AID checks the ODO object field to make sure it does not exceed the maximum value. If it does, the record length is set to the maximum and a warning message is issued. Otherwise, the LRECL is set based on the number of occurrences specified in the ODO object field.

Reformatting Examples

Example 1

Figure 19-12 is an example of a reformat definition that reformats records from the source dataset based on two selection criteria.

When this reformat definition is executed, File-AID reformats all records from the source dataset that have the alphanumeric value of 11 in field 3 and an alphanumeric value of 03 in field 7. It copies the entire record from the source to the target dataset as indicated by the /0 in the Target Data field.

Note: The value of the Move corresponding field is *NO* in this example.

Figure 19-12. Reformat Definition Example 1

```
File-AID - REFORMAT Definition Editor - DS:USERID9.FASAMP.RFMTDEF(NEW) - - - -
COMMAND ===>                                                SCROLL ===> CSR
Source COBOL - ASM05-TRAILER-05 -------- TS00121.SEGMAP(ASM05) ----------------
Num Field Name                      Format  Pic   OP Data      Row    1 of   10
  0 ASM05-TRAILER-05                 GRP/36
  1  ASM05-CONTROL                   GRP/4
  2   ASM05-TRAILER-LENGTH            BI/2   4v00
  3   ASM05-TRAILER-TYPE              AN/2        =  '11'
  4  ASM05-DATA                      GRP/26
  5   ASM05-LICENSE-SSN               AN/20
  6   ASM05-INS-BIRTH                 GRP/6
  7    ASM05-BIRTH-MO                 AN/2        EQ '03'
Target COBOL - ASM05-TRAILER-05 -------- TS00121.SEGMAP(ASM05) ----------------
Num Field Name                      Format  Pic   Data         Row    1 of   10
  0 ASM05-TRAILER-05                 GRP/36       /0
  1  ASM05-CONTROL                   GRP/4
  2   ASM05-TRAILER-LENGTH            BI/2   4v00
  3   ASM05-TRAILER-TYPE              AN/2
  4  ASM05-DATA                      GRP/26
  5   ASM05-LICENSE-SSN               AN/20
  6   ASM05-INS-BIRTH                 GRP/6
  7    ASM05-BIRTH-MO                 AN/2
Use END Command to Save then End, CANCEL to Cancel, or EX to Execute Reformat
```

Example 2

This example uses the same reformat record selection criteria as Example 1, but specifies a different location to copy some of the source fields to the target dataset.

When this reformat definition is executed, File-AID reformats all records from the source dataset that have an alphanumeric value of 07 in field 3 and an alphanumeric value of 11 in field 7. First, it copies the entire record from the source to the target dataset as indicated by the /0 in the Target Data field. Then, it copies field 7 of the source dataset to field 3 of the target dataset, and copies field 3 of the source dataset to field 7 of the target dataset.

Figure 19-13. Reformat Definition Example 2

```
File-AID - REFORMAT Definition Editor - DS:USERID9.FASAMP.RFMTDEF(NEW) - - - -
COMMAND ===>                                                SCROLL ===> CSR
Source COBOL - ASM05-TRAILER-05 -------- TS00121.SEGMAP(ASM05) ----------------
Num Field Name                      Format  Pic   OP Data      Row    1 of   10
  0 ASM05-TRAILER-05                 GRP/36
  1  ASM05-CONTROL                   GRP/4
  2   ASM05-TRAILER-LENGTH            BI/2   4v00
  3   ASM05-TRAILER-TYPE              AN/2        =  '07'
  4  ASM05-DATA                      GRP/26
  5   ASM05-LICENSE-SSN               AN/20
  6   ASM05-INS-BIRTH                 GRP/6
  7    ASM05-BIRTH-MO                 AN/2        EQ '11'
Target COBOL - ASM05-TRAILER-05 -------- TS00121.SEGMAP(ASM05) ----------------
Num Field Name                      Format  Pic   Data         Row    1 of   10
  0 ASM05-TRAILER-05                 GRP/36       /0
  1  ASM05-CONTROL                   GRP/4
  2   ASM05-TRAILER-LENGTH            BI/2   4v00
  3   ASM05-TRAILER-TYPE              AN/2        /7
  4  ASM05-DATA                      GRP/26
  5   ASM05-LICENSE-SSN               AN/20
  6   ASM05-INS-BIRTH                 GRP/6
  7    ASM05-BIRTH-MO                 AN/2        /3
Use END Command to Save then End, CANCEL to Cancel, or EX to Execute Reformat
```

Chapter 20. Compare (10)

File-AID's Compare function is a data compare utility that enables you to do the following:

- Compare a dataset of any file organization supported by File-AID to any other file organization (VSAM, SEQ, PDS, PDSE, BDAM, ISAM, IAM, CA-Panvalet, and CA-Librarian).
- Compare load libraries including CSECT information.
- Compare COBOL or PL/I source code files intelligently. The selected language determines the coding convention and structure to be used during the compare. Source code is assumed to be 80 positions.
- Compare JCL jobstreams on a keyword basis or a line basis. When JCL is compared on a keyword basis, statements are considered equal as long as the values provided for each keyword are the same. Keyword compare also compares correctly when the statement sequence has been altered. DD statements can occur in any sequence within a step.
- Use selection criteria to indicate the specific records in the OLD and NEW file that are eligible for the compare.
- Use COMPARE OLD and NEW files that have different layouts in Formatted or Unformatted Compare mode.
- Create compare criteria online with Compare (option 10) or you may create the criteria yourself by coding it per the specifications in the File-AID*/MVS Batch Reference Manual*.
- Specify compare criteria to indicate which fields to include/exclude during the compare. You can use a COBOL or PL/I layout in the compare criteria generation process.
- Automatically synchronize records on key fields. Use the defined key for a keyed file or specify key fields for sorted or non-sorted sequential files. You can use a COBOL or PL/I layout in the key specification process.
- Specify unique compare criteria for each record type to support multiple record type files.
- Specify a number of records to read-ahead to synchronize non-keyed or non-sorted files containing inserted and deleted records.
- Specify flexible compare reporting options.
- Specify COBOL or PL/I layouts to print a Formatted compare report or specify Hexadecimal, Character, or Mixed format for an unformatted report.
- Automatically associate like or similarly-named fields between files with different layouts.
- The Compare function now has a feature that enables you to call File-AID/Data Solutions from the Compare function to create and process Change Criteria and compare the changed data in the OLD file with the NEW file.

Compare OLD Dataset Specification

The "Compare OLD Dataset Specification" screen, shown in Figure 20-1, allows you specify Compare mode, the dataset, record layout and XREF, and selection criteria information for the OLD dataset you want to compare.

To access the Compare function, select option **10** from the File-AID Primary Option Menu or enter the appropriate jump command (for example, =10) from any File-AID screen. See "Selecting Screens" on page 2-7. The Compare function can also be accessed with the **F10** recursive command. See "Recursive Commands" on page 2-5.

Figure 20-1. Compare OLD Dataset Specification

```
File-AID ---------- Compare - OLD Dataset Specification -----------------------
COMMAND ===>

Compare Mode                ===> F  (F = Formatted; U = Unformatted
                                     L = Load Library; S = Source code; J = JCL)
Specify OLD Dataset Information:
  Dataset name or HFS path  ===> 'USERID9.FASAMP.EMPLOYEE'
  Member name               ===>             (Blank or pattern for member list)
  Volume serial             ===>             (If dataset is not catalogued)
  I/O exit name             ===>             (User written I/O program)

Specify Record Layout and XREF Information:
  Record layout usage       ===> S           (S = Single; X = XREF; N = None)
  Record layout dataset     ===> 'USERID9.FASAMP.LAYOUTS'
  Member name               ===> EMPLOYEE    (Blank or pattern for member list)
  XREF dataset name         ===> 'USERID9.FASAMP.XREF'
  Member name               ===> ORDRFILE    (Blank or pattern for member list)

Specify Selection Criteria Information:      (E = Existing; T = Temporary;
  Selection criteria usage  ===> N            M = Modify; Q = Quick; N = None)
  Selection dataset name    ===>
  Member name               ===>             (Blank or pattern for member list)
```

Field Descriptions

Compare Mode : Specify one of the following valid compare modes:

F (Formatted) : Formatted criteria uses record formats

L (Load Library) : Compare load libraries

U (Unformatted) : Unformatted criteria uses record position

S (Source Code) : Compare source code libraries;

J (JCL) : Compare JCL.

Source and JCL require Panvalet/Librarian datasets or PDS/PDSE/sequential (RECFM=FB / LRECL=80) datasets.

Specify OLD Dataset Information:

Dataset name or HFS path : Enter the name of the OLD dataset that you want to compare. The dataset must be in a valid format for the chosen compare mode, for example, you must specify a load library when you specified a load library compare.

You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. You can also specify a member name, in parentheses, along with the dataset name in this field. For more information on specifying a dataset name, see "Specifying a Dataset Name" on page 2-13.

Specify the HFS path. If the entered path is a complete path, then the file is processed directly for the Edit, Browse, Compare or Copy function. When a partial path is entered, File-AID displays the HFS Directory List enabling you to continue the drill down process at the last directory level entered. For more information on specifying an HFS path, see“Specifying an HFS Pathname” on page 2-20.

Member name : If the file is a partitioned dataset, enter the member name of the OLD dataset you want to compare.
You can leave this field blank or enter a pattern member name in this field to display a list of members from which you can select one or more members. A pattern member name or mask consists of explicit characters or a combination of explicit and pattern characters. See “Pattern Dataset Names” on page 2-14 for a complete description. You cannot enter a pattern name in both the Dataset name and Member fields at the same time.
If you enter a pattern member name or mask and do not display a list of members (selection list=no), all qualifying members are compared. A mask of "*" compares all members.

Volume serial : If the dataset is not cataloged, enter the volume serial number of the disk or tape containing the dataset.

I/O exit name (Optional) : If the I/O exit option has been installed, this input area is provided. See the File-AID *Installation Guide* or your system programmer for more information.

Enter the name of a site-written I/O exit program to be used only with the OLD dataset. **Blank** the field when no I/O exit program is to be used with the OLD dataset.

I/O exit installation options are:

NO : I/O exit name field is not presented.

YES : I/O exit name field is presented blank for entry of a site-written I/O exit program name.

exitname : I/O exit name field is presented prefilled with the name of a site-written I/O exit program.

Specify Record Layout and XREF Information:

The record layout and XREF information is only required for formatted compare mode.

Record layout usage : Specify one of the following usage values to define the compare files for formatted compare:

S : Single layout member

X : XREF (multiple layouts)

N : None (required for an unformatted, load library, source or JCL compare).

Record layout dataset : Specify the dataset name for the record layout.
You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. You can also specify a member name, in parentheses, along with the dataset name in this field. For more information on specifying a dataset name, see “Pattern Dataset Names” on page 2-14.

Member name : Specify the member name for the record layout.
You can leave this field blank or enter a pattern member name in this field to display a list of members from which you can make a selection. A pattern member name or mask consists of explicit characters or a combination of explicit and pattern characters. See “Pattern Dataset Names” on page 2-14 for a complete description. You cannot enter a pattern name in both the Dataset name and Member fields at the same time.

If the specified layout member contains multiple record layouts, enter the “USE” primary command on this screen without parameters to display a list of available

record layouts. From that list you will be able to select the desired layout. If you don't enter the "USE" command , Compare will default to the first layout in the specified member (see also "USE" on page 21-78).

When using an XREF, this field is ignored.

XREF dataset name : Specify the dataset name for the layout XREF.
You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. You can also specify a member name, in parentheses, along with the dataset name in this field. For more information on specifying a dataset name, see "Pattern Dataset Names" on page 2-14.

Member name : Specify the member name for the XREF.
You can leave this field blank or enter a pattern member name in this field to display a list of members from which you can make a selection. A pattern member name or mask consists of explicit characters or a combination of explicit and pattern characters. See "Pattern Dataset Names" on page 2-14 for a complete description. You cannot enter a pattern name in both the Dataset name and Member fields at the same time.

Specify Selection Criteria Information:

Refer to Chapter 16, "Selection Criteria (6)" for a complete description of selection criteria.

Note: Compare always processes records in a forward direction. Compare ignores SEQ/VSAM Backward Processing Direction if specified in the Selection Criteria.

Selection criteria usage : Specify one of the following valid entries:

E : Use existing selection criteria. Enter a dataset name in the Selection criteria dataset field.

T : Create temporary selection criteria. File-AID displays the Temporary Selection Criteria Menu. Temporary selection criteria is not automatically saved. Use the SAVE primary command to retain temporary selection criteria.

M : Modify existing selection criteria. Enter a dataset name in the Selection criteria dataset field.

Q : Quick selection criteria. File-AID displays the Unformatted Selection Criteria screen for you to enter temporary selection criteria.

N : (Default) None -- Do not use selection criteria.

Selection dataset name : Specify the name of the dataset containing existing selection criteria for options E and M.
You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Dataset Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description.

Member name : Specify the member name. You can leave this field blank or enter a pattern member name to display a list of members from which you can make a selection. A pattern member name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Member Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description. Pattern names cannot be entered in both the Dataset name and Member name fields at the same time.

After you have completed the fields on the Compare OLD Dataset Specification screen, press Enter to continue.
Use the END (PF3) or RETURN (PF4) command to return to the File-AID Primary Option Menu.

Compare NEW Dataset Specification

The "Compare NEW Dataset Specification" screen, shown in Figure 20-2, allows you specify the dataset, record layout and XREF, and selection criteria information for the NEW dataset you want to compare to the OLD.

Figure 20-2. Compare NEW Dataset Specification

```
File-AID ---------- Compare - NEW Dataset Specification -----------------------
COMMAND ===>

Compare Mode: FORMATTED

OLD Dataset Name: USERID9.FASAMP.EMPLOYEE
Specify NEW Dataset Information:
  Dataset name or HFS path  ===> 'USERID9.FASAMP.EMPMAST'
  Member name               ===>             (Blank or pattern for member list)
  Volume serial             ===>             (If dataset is not catalogued)
  I/O exit name             ===>             (Exit name; blank=OLD exit; NONE)

OLD Record Layout Usage: SINGLE
Specify Record Layout and XREF Information:
  Record layout dataset     ===> 'USERID9.FASAMP.LAYOUTS'
  Member name               ===> EMPLOYEE    (Blank or pattern for member list)
  XREF dataset name         ===> 'USERID9.FASAMP.XREF'
  Member name               ===> ORDRFILE    (Blank or pattern for member list)

Specify Selection Criteria Information:      (E = Existing; T = Temporary;
  Selection criteria usage  ===> N            M = Modify; Q = Quick; N = None)
  Selection dataset name    ===>
  Member name               ===>             (Blank or pattern for member list)
```

Field Descriptions

Compare Mode : This informational field indicates the Compare Mode selected on the Compare OLD Dataset Specification screen: FORMATTED, UNFORMATTED, LOAD LIBRARY, SOURCE, or JCL. Formatted criteria uses record formats; unformatted criteria uses record position.

OLD Dataset Name : This informational field indicates the OLD dataset name or HFS path.

Specify NEW Dataset Information:

Dataset name or HFS path : Enter the name of the NEW dataset that you want to compare. The dataset must be in a valid format for the chosen compare mode, for example, you must specify a load library when you specified a load library compare.

You can enter a pattern dataset name in this field to display a list of datasets from which you can select one member. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. You can also specify a member name, in parentheses, along with the dataset name in this field. For more information on specifying a dataset name, see "Pattern Dataset Names" on page 2-14.

Specify the HFS path. If the entered path is a complete path, then the file is processed directly for the Edit, Browse, Compare or Copy function. When a partial path is entered, File-AID displays the HFS Directory List enabling you to continue the drill down process at the last directory level entered. For more information on specifying an HFS path, see"Specifying an HFS Pathname" on page 2-20.

Member name : If the file is a partitioned dataset, enter the member name of the NEW dataset you want to compare.

You can leave this field blank or enter a pattern member name in this field to display a list of members from which you can make a selection. A pattern member name or

mask consists of explicit characters or a combination of explicit and pattern characters. See "Pattern Dataset Names" on page 2-14 for a complete description. You cannot enter a pattern name in both the Dataset name and Member fields at the same time.

If multiple members were selected for the OLD dataset, leave this field blank.

Volume serial : If the dataset is not cataloged, enter the volume serial number of the disk or tape containing the dataset.

I/O exit name (Optional) : If the I/O exit option has been installed at your site, this input area is provided. See the File-AID *Installation Guide* or your system programmer for more information.

Enter the name of a site-written I/O exit program to be used only with the NEW dataset. Leave **blank** to use the same site-written I/O exit program you specified for the OLD dataset. Specify **NONE** when no I/O exit program to be used with the NEW dataset.

I/O exit installation options are:

NO : I/O exit name field is not presented.

YES : I/O exit name field is presented blank for entry of a site-written I/O exit program name.

exitname : I/O exit name field is presented prefilled with the name of a site-written I/O exit program.

OLD Record Layout Usage : This informational field indicates the record layout usage specified on the Compare OLD Dataset Specification Screen: Single, XREF, or NONE.

Specify Record Layout and XREF Information:

Record layout dataset : Specify the dataset name for the record layout.

You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. You can also specify a member name, in parentheses, along with the dataset name in this field. For more information on specifying a dataset name, see "Pattern Dataset Names" on page 2-14.

Member name : Specify the member name for the record layout.

You can leave this field blank or enter a pattern member name in this field to display a list of members from which you can make a selection. A pattern member name or mask consists of explicit characters or a combination of explicit and pattern characters. See "Pattern Dataset Names" on page 2-14 for a complete description. You cannot enter a pattern name in both the Dataset name and Member fields at the same time.

If the specified layout member contains multiple record layouts, enter the "USE" primary command on this screen without parameters to display a list of available record layouts. From that list you will be able to select the desired layout. If you don't enter the "USE" command , Compare will default to the first layout in the specified member (see also "USE" on page 21-78).

When using an XREF, leave this field blank.

XREF dataset : Specify the dataset name for the layout XREF.

You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. You can also specify a member name, in parentheses, along with the dataset name in this field. For more information on specifying a dataset name, see "Pattern Dataset Names" on page 2-14.

Member name : Specify the member name for the XREF.

You can leave this field blank or enter a pattern member name in this field to display a list of members from which you can make a selection. A pattern member name or mask consists of explicit characters or a combination of explicit and pattern characters. See "Pattern Dataset Names" on page 2-14 for a complete description. You cannot enter a pattern name in both the Dataset name and Member fields at the same time.

Specify Selection Criteria Information:

Refer to Chapter 16, "Selection Criteria (6)" for a complete description of selection criteria.

Note: Compare always processes records in a forward direction. Compare ignores SEQ/VSAM Backward Processing Direction if specified in the Selection Criteria.

Selection criteria usage : Specify one of the following valid entries:

E : Use existing selection criteria. Enter a dataset name in the Selection criteria dataset field.

T : Create temporary selection criteria. File-AID displays the Temporary Selection Criteria Menu. Temporary selection criteria is not automatically saved. Use the SAVE primary command to retain temporary selection criteria.

M : Modify existing selection criteria. Enter a dataset name in the Selection criteria dataset field.

Q : Quick selection criteria. File-AID displays the Unformatted Selection Criteria screen for you to enter temporary selection criteria.

N : (Default) None -- Do not use selection criteria.

Selection dataset name : Specify the name of the dataset containing existing selection criteria for options E and M.

You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Dataset Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description.

Member name : Specify the member name. You can leave this field blank or enter a pattern member name to display a list of members from which you can make a selection. A pattern member name or mask consists of explicit characters or a combination of explicit and pattern characters. See the section entitled "Pattern Member Names" in Chapter 2 of the File-AID/MVS *Online Reference Manual* for a complete description. Pattern names cannot be entered in both the Dataset name and Member name fields at the same time.

After you have completed the fields on the Compare New Dataset Specification screen, press Enter to continue.

Compare Execution Options

The "Compare - Execution Options" screen, shown in Figure 20-3, allows you to specify whether you want to process the compare online or batch; and if you want to use existing compare criteria to compare the datasets, and the compare criteria dataset information.

For a Formatted Compare, you may also specify and use File-AID/Data Solutions change criteria to modify OLD file data prior to comparing the data to the NEW file.

For a pre-release 8.7 compare criteria dataset, specify Compare Criteria Usage of M (Modify) and the dataset information. On the Compare - Criteria Build Complete screen, you may save the new-style criteria to the same or a different dataset. These steps convert the old-style criteria to the new-style criteria.

Figure 20-3. Compare - Execution Options

```
File-AID ---------- Compare - Execution Options ------------------------------
COMMAND ===>

Specify Execution Options:
  Process online or batch  ===> O         (O = Online; B = Batch)

Specify Compare Criteria Information:     (E = Existing; T = Temporary/New;
  Compare criteria usage   ===> N          M = Modify; Q = Quick; N = None)
  Compare criteria dataset ===>
  Member name              ===>           (Blank or pattern for member list)

Specify optional File-AID/Data Solutions Change Criteria
  to age dates, convert currencies, translate, generate, encrypt or
  otherwise modify data from OLD file userid0.FASAMP.EMPLOYEE
  Use change criteria      ===> N         (Y = Yes; N = No; M = Modify)
  Change criteria file     ===>
  Member name              ===>           (Blank or pattern for member list)
  Maximum invalid fields   ===> ALL        (ALL or number of invalid fields)
```

Field Descriptions

Specify Execution Information:

Process online or batch : Specify how you want to run the Compare utility:

O : Online (default). Specify O (Online) to perform the comparison online and view results at your terminal.

B : Batch. Specify B (Batch) to generate JCL and a compare criteria file for batch submission of your compare.

Specify Compare Criteria Information:

Compare Criteria Usage : Specify one of the following valid entries:

E : Use existing compare criteria. Enter a dataset name in the Compare criteria dataset field.

T : Create temporary compare criteria. Temporary compare criteria is not automatically saved. Use the SAVE primary command to retain temporary compare criteria.

M : Modify existing compare criteria. Enter a dataset name in the Compare criteria dataset field. This also allows you to modify old style criteria and save the new style criteria to a file.

Q : Quick. File-AID performs an unformatted full-record compare using all the defaults.

N : (Default) None -- is the same as T (Temporary).

Compare criteria dataset : Specify the name of the dataset containing existing criteria for options E and M. This dataset is created online with option 10 (Compare) or you may code yourself per the specifications in the File-AID/*MVS Batch Reference Manual*.

You can enter a pattern dataset name in this field to display a list of datasets from which you can make a selection. A pattern dataset name or mask consists of explicit characters or a combination of explicit and pattern characters. You can also specify a member name, in parentheses, along with the dataset name in this field. For more information on specifying a dataset name, see "Pattern Dataset Names" on page 2-14.

Member name : If the file is a partitioned dataset (PDS or PDS/E), enter the member name.
You can leave this field blank or enter a pattern member name in this field to display a list of members from which you can make a selection. A pattern member name or mask consists of explicit characters or a combination of explicit and pattern characters. See "Pattern Dataset Names" on page 2-14 for a complete description. You cannot enter a pattern name in both the Dataset name and Member fields at the same time.

Specify Optional File-AID/Data Solutions Change Criteria:

You may specify optional Data Solutions changes criteria to age dates, convert currencies, translate, generate, encrypt/decrypt, or otherwise modify data from the Compare "OLD" file. The Compare mode must be Formatted to use this feature.

Use change criteria : Specify one of the following valid entries for File-AID/Data Solutions change criteria usage:

Y : Use existing or create new File-AID/Data Solutions Change criteria. Enter a file name in the File-AID/Data Solutions Change file name field.

M : Modify existing File-AID/Data Solutions Change criteria. Enter a file name in the File-AID/Data Solutions Change file name field.

N : (Default) None.

Change criteria file : Specify the name of the File-AID/Data Solutions Change Criteria file containing existing criteria for options Y and M. You may specify a pattern to display a list.

Member name : You can leave this field blank or enter a pattern member name in this field to display a list of members from which you can make a selection. A pattern member name or mask consists of explicit characters or a combination of explicit and pattern characters. See "Pattern Dataset Names" on page 2-14 for a complete description. You cannot enter a pattern name in both the Dataset name and Member fields at the same time.
If you enter a new member name or indicate Modify, File-AID displays the File-AID/Data Solutions Criteria Menu for you to specify your new criteria.

Maximum invalid fields : Specify ALL to have the Compare continue regardless of the number of fields that Data Solutions finds to be invalid, or specify a number of invalid fields at which Compare should stop.
After you have completed the fields on the this screen, press Enter to continue.

Compare Criteria Options

The Compare Criteria options allow you to specify processing and output options for your compare. The available criteria options are dependent on your selected Compare Mode.

For formatted or unformatted compare, the criteria options start with “Compare Criteria Options”.

For a load library compare, see “Compare Load Library Criteria” on page 20-12, for a source code compare, see “Compare Source Criteria” on page 20-14, and for a JCL compare, see “Compare JCL Criteria” on page 20-17.

Compare Criteria Options

The “Compare - Criteria Options” screen, as shown in Figure 20-4, allows you to specify processing and output options for your formatted or unformatted compare. See “Compare Load Library Criteria” on page 20-12 for load library compares, “Compare Source Criteria” on page 20-14 for source code compares, and “Compare JCL Criteria” on page 20-17 for JCL compares.

Figure 20-4. Compare - Criteria Options

```
File-AID ----------------- Compare - Criteria Options -------------------------
COMMAND ===>

Specify Initial Compare Options:

 Compare type            ===> R   (S = Sorted/Keyed; R = ReadAhead; 1 = 1-to-1)

 Read-ahead record count ===> 100 (If type = R, specify read-ahead count)
 Read-ahead sequence     ===> E   (E= Enforce; I = Ignore)

 Records to compare      ===> ALL (All or maximum number of records)
 Differences to compare  ===> ALL (All or maximum number of differences)

 Modify print defaults   ===> N   (Y = Yes; N = No)
 Specify output criteria ===> N   (Y = Yes; N = No)

 Associate Corresponding ===> Y   (Associate like field names? Y=Yes; N=No)
   Ignore Prefix         OLD file ===>            NEW file ===>
   Ignore Suffix         OLD file ===>            NEW file ===>
```

Field Descriptions

Specify Initial Compare Options:

Compare type : Specify one of the following valid entries:

- **S :** Default for a keyed file. Specify S (Sorted/Keyed) for a keyed or sorted file.
- **R :** Default for a non-keyed file. Specify R (ReadAhead) for a non-keyed or non-sorted file.
- **1 :** 1-to-1. File-AID compares "OLD" record 1 to "NEW" record 1, "OLD" record 2 to "NEW" record 2, etc.

Read-ahead record count : When you specify ReadAhead as the Compare Type, enter a value in this field.

When comparing non-sorted files that are essentially in the same sequence (with a READ-AHEAD SEQUENCE of E), use this field to specify a number to use to resynchronize the records after inserted/deleted records are encountered. This

number should be the estimated number of consecutive inserted/deleted records.

When comparing files not in the same sequence (with a READ-AHEAD SEQUENCE of I), use this field to specify the number of records to search forward or backward for the corresponding record.

Read-ahead sequence : Specify one of the following valid entries:

E : Enforce the statement that the records must occur in the same sequence in order to match.

I : Ignore the statement that the records must occur in the same sequence in order to match.

Records to compare : Specify the maximum number of records to be compared. If you enter "ALL", File-AID compares all records. A numeric value in this field places a limit on the total number of records that File-AID reads from both files.

Differences to compare : Specify the maximum changes, inserts, or deletes that you want to compare. If you enter "ALL", File-AID compares all records. A numeric value in this field helps to avoid a comparison of wrong datasets by placing a limit on the differences allowed before the compare process stops.

Modify print defaults : Specify whether you want to modify the print options. Print option values are saved in your user profile. The default for a Formatted Compare is a Formatted Print. All other default values are the last print option values that you entered.

Y : Modify the print defaults. File-AID displays the “Compare Print Options (Page 1) - Formatted and Unformatted Screen” on page 20-19.

N : (Default) Do not modify the print defaults.

Specify output criteria : Specify whether you want to display the Output Criteria screen (see “Output Criteria” on page 20-34). You may use the Output Criteria screen to copy input records (OLD or NEW) to a maximum of six output files.

Y : Display the Output Criteria screen.

N : (Default) Do not display the Output Criteria screen.

Associate Corresponding : Specify Y (Yes -- default) if you want like or similarly-named fields to be associated automatically. Specify N (No) if you do not want these fields automatically associated.

Ignore Prefix : Specify the prefix(es) you want File-AID to ignore when matching field names to compare in the OLD and/or NEW file.

Ignore Suffix : Specify the suffix(es) you want File-AID to ignore when matching field names to compare in the OLD and/or NEW file.

After you have completed the fields on the this screen, press Enter to continue.

Compare Load Library Criteria

The "Compare Load Library Criteria" Criteria screen, as shown in Figure 20-5, allows you to specify processing and output options for a load library compare.

Figure 20-5. Compare Load Library Criteria

```
File-AID ----------------- Compare - Load Library Criteria --------------------
COMMAND ===>

Use "S" to select member compare criteria:
 S  Module Name
 _  Load Module Size
 _  Entry Point
 _  Link Attributes
 _  Link Date

Use "S" to select CSECT compare criteria:
 _  CSECT Name
 _  CSECT Size
 _  Language
 _  CSECT Date
 _  IDR ZAP Data
 _  Text

 Stop text compare threshold      ===> ALL     (All or maximum number of
                                                differences for a CSECT)
 Specify CSECT selection criteria ===> N       (Y = Yes; N = No)
 Modify print defaults            ===> N       (Y = Yes; N = No)
```

Field Descriptions

Use "S" to select member compare criteria:

Use the following fields to specify the load library member criteria that you want File-AID to use in the comparison.

Module Name : File-AID automatically selects the module (or member) name. It is the minimum member criteria required for compare load libraries to execute.

Load Module Size : Enter an S to compare load module sizes.

Entry Point : Enter an S to compare load module entry point address.

Link Attributes : Enter an S to compare load module link attributes.

Link Date : Enter an S to compare load module link edit dates.

Use "S" to select CSECT compare criteria:

Use the following fields to specify the CSECT compare criteria that you want File-AID to use in the comparison. CSECT Name must be selected to use CSECT information in the criteria.

CSECT Name : Enter an S to compare CSECT names. This field must be selected to compare on any of the following CSECT information.

CSECT Size : Enter an S to compare CSECT lengths.

Language : Enter an S to compare language types in which the CSECT is coded (i.e. Assembler, COBOL, C, PL/I, etc.).

CSECT Date : Enter an S to compare CSECT (compile/assembly) dates.

IDR ZAP Data : Enter an S to compare zap identification information.

Text : Enter an S to compare CSECT content, such as instructions or constants.

Stop text compare threshold : Specify ALL or a number from 0 to 99999 that specifies the maximum number of unlike bytes that File-AID includes on the Compare Detail Report for each CSECT.

The Stop text compare threshold is used to minimize the report print lines when instructions have been added/deleted near the beginning of a a CSECT. ALL or 0 eliminates a threshold.

Specify CSECT selection criteria : Specify Y (Yes) to display the CSECT Selection Criteria screen. The default is N (No) which compares all CSECTs.

E (Existing) is displayed as an option if an M was specified for the Compare criteria usage field on the Compare Executions Options screen and the compare criteria specified contains CSECT selection criteria. Specify an E to simply use the existing criteria. Specify Y to override the existing criteria or an N to compare all CSECTs.

Modify print defaults : Specify whether you want to modify the print options for the Compare Report. Print option values are saved in your user profile. Valid entries are Y (Yes) and N (No). All default print option values are the last print option values that you entered for the load library compare.

Y : Modify the print defaults. File-AID displays the "Compare Load Library Print Options" on page 20-25.

N : (Default) Do not modify the print defaults.

Load Library CSECT Selection List

The "Compare Load Library CSECT Selection" screen, as shown in Figure 20-6, enables you to specify the CESCT selection options for a load library compare. If a CSECT list and dataset information are both provided, File-AID ignores the dataset specification information.

Figure 20-6. Compare Load Library CSECT Selection

```
File-AID ---------- Compare - Load Library CSECT Selection --------------------
COMMAND ===>

  CSECT selection list ===> I           (I = Include; E = Exclude)

Specify CSECT List:
  Dataset name         ===>
  Member name          ===>             (Blank or pattern for member list)
  List                 ===> ____________________________________________
  ____________________________________________________________________________

  If list is provided, dataset specification is not used

  List may be CSECT-prefix*, CSECT range or full CSECT name. EX: IGZ*,CEE*
```

Field Descriptions

CSECT selection list : Specify whether the CSECT selection list indicates the CSECTs that should be compared (included) or not compared (excluded). Valid entries are I (Include -- default) and E (Exclude).

Specify CSECT List:

Enter the dataset and member name for an existing CSECT selection list or enter a list of CSECT names to identify CSECT(s) for inclusion or exclusion in the Compare processing.

Dataset name : (Optional) Enter the dataset name of an existing CSECT selection list file.

Member name : For a PDS/PDSE, specify the member name or you may leave this field blank or enter a pattern to display a member list.

List : Enter a list of CSECT names or prefixes that identify the CSECT(s) you either want to include or exclude from the compare. List may be CSECT-prefix*, CSECT range or full CSECT name. CSECT names should be separated by a comma (no space) or a hyphen (no space) to indicate a range of CSECTs.

A prefix is explicit characters followed by an asterisk (*).

EX: IGZ*,CEE*

Compare Source Criteria

The "Compare Source Criteria" screen, as shown in Figure 20-7, allows you to specify processing and output options for a source code compare.

Figure 20-7. Compare Source Criteria

```
File-AID --------------- Compare - Source Criteria ----------------------------
COMMAND ===>

Compare criteria:
  Source code language           ===> 1   (1 = COBOL; 2 = PLI)

  Line compare synchronization   ===> L   (L = Line content;
                                             C = COBOL sequence number;
                                             S = Standard sequence number)
  Case sensitive                 ===> A   (A = As is; C = Convert to uppercase)
  Columns to compare ----> from  ===>     (1 - 80 column range;
                            to   ===>      blank = use language default)

Exclude Options:
  Exclude comments               ===> Y   (Y = Yes; N = No)
  Exclude blank lines            ===> Y   (Y = Yes; N = No)
  Exclude compiler directives    ===> Y   (Y = Yes; N = No)
  Selection criteria action      ===> I   (I = Include; E = Exclude)

Print Options:
  Modify print defaults          ===> N   (Y = Yes; N = No)
```

Field Descriptions

Compare Criteria:

Use the following fields to specify the source code criteria that you want File-AID to use in the comparison.

Source Code Language : Specify the language of the source code.

1 : Specifies COBOL.

2 : Specifies PL/1.

Line compare Synchronization : Specify how to synchronize the compare. Line synchronization is the process of determining which lines of the OLD source member correspond to which lines of the NEW source member. The source members can be synchronized based on sequence number or line content.

L : Line content. The OLD source and the NEW source will be considered synchronized when a certain number of consecutive lines match. Sequence numbers are not compared when using line content synchronization.

C : Cobol sequence number. COBOL sequence numbers are expected to be located in positions 1-6.

S : Standard sequence number. Standard sequence numbers are expected to be located in positions 73-80.

When sequence number synchronization (C or S) is selected, a line of the OLD source file corresponds to a line of the NEW source file only if the sequence number is the same. A sequence number field must exist within each line of the source code member for that line to be compared. Once the lines are selected for comparison, the individual positions of the line are then compared to determine if the line is matched or changed. If any line is out of sequence or lines are found without a sequence number, the compare for that member will not be performed. When sequence number compare is used, sequence numbers must be present on every line and they must be in ascending sequence.

When a match occurs between a sequence number on the OLD file and a sequence number on the NEW file it is considered a synchronization point; any un-paired lines on the OLD file prior to the synchronization point are considered deleted. Any un-paired lines on the NEW file prior to the synchronization point are considered inserted.

Case Sensitive : Specify if case sensitivity is relevant to the compare.

A : Case must remain as is.

C : Convert to uppercase. File-AID treats all alphabetical characters as uppercase for the compare process only.

Note: The line displayed within the reports will always be the real content of the line, not the converted data.

Columns to compare : Enter the column range (1-80) for the compare. Blank columns to compare will use the language default which is 7-72 for Cobol and 2-72 for PL/1.

The source code language specified normally determines the columns to compare and entry in this field is not necessary. This option is included primarily for PL/1 where coding can start in column one or column two. This combination of from and to fields allows you to override the default positions to compare.

Exclude Options

Use the following fields to specify what you want File-AID to exclude during the comparison.

Exclude comments : Enter Y (Yes, default) to exclude comments or N (No) to include the comments in the compare. When imbedded comments are excluded, File-AID blanks out the comment but compares the rest of the line.

Cobol comments start with an '*' in column 7 OR a '/' in column 7 followed by the comment.
PL/1 comments start with a '/*' and end with an '*/'.

Exclude blank lines : Enter Y (Yes, default) to exclude blank lines or N (No) to include blank lines in the compare.

Exclude compiler directives : Enter Y (Yes, default) to exclude compiler directives or N (No) to include compiler directives in the compare.

Cobol directives include but are not limited to:

- 'D' in column 7
- '/' in column 7 (the rest of the line is blank)
- EJECT
- SKIP1/2/3
- READY TRACE
- *CONTROL

PL/1 directives include but are not limited to:

- %noprint

- %note
- %option
- %page
- %pop
- %print
- %skip
- decl
- declare

Compiler directives are a predefined set of commands that are language specific that do not impact the logic of the program. Only the directives that format the listing or set compiler actions will be affected by the compiler directives option.

Selection criteria action : Specify whether to **I** (Include) or **E** (Exclude) lines meeting the selection criteria in the compare. The default is to include lines that meet the criteria.

Modify print defaults : Specify whether you want to modify the print options for the Compare Report. Print option values are saved in your user profile. Valid entries are Y (Yes) and N (No). All default print option values are the last print option values that you entered for the last source compare.

Y : Modify the print defaults. File-AID displays the "Compare - Source Print Option (Page 1)" on page 20-26.

N : (Default) Do not modify the print defaults.

Compare JCL Criteria

The "Compare JCL Criteria" screen, as shown in Figure 20-8, allows you to specify processing and output options for a JCL compare. See also "Notes on the JCL Compare Criteria" on page 20-18 before selecting a compare type.

Figure 20-8. Compare JCL Criteria

```
File-AID --------------- Compare - JCL Criteria -------------------------------
COMMAND ===>

Compare criteria:
  Compare type                  ===> K   (K = Keyword; L = Line

Exclude Options:
  Exclude comments              ===> Y   (Y = Yes; N = No
  Exclude in-stream data        ===> Y   (Y = Yes; N = No

Print Options:
  Modify print defaults         ===> N   (Y = Yes; N = No
```

Field Descriptions

Compare Criteria:

Use the following fields to specify the JCL criteria that you want File-AID to use in the comparison.

Compare type : Specify the compare type for JCL. File-AID compares jobstreams on a keyword or a line basis. When comparing on a keyword basis, statements are considered equal as long as the values provided for each keyword are the same. Keyword compare also compares correctly when the statement sequence has been altered, which File-AID marks with status ORDER. DD statements can occur in any sequence within a step; as long as they are within the same step of the same job, they are compared correctly.

K : Specifies **K**eyword compare.

Note: When DDs are concatenated, keyword compare syncs up on DSN, resulting in status DELETED and INSERTED when there are differences. Without concatenation, keyword compare syncs up on the keyword and compares the line, resulting in status CHANGED when there are differences.

L : Specifies **L**ine compare.

Exclude Options

Use the following fields to specify what you want File-AID to exclude during the comparison.

Exclude comments : Enter Y (Yes--default) to exclude comments or N (No) to include the comments in the JCL compare. When imbedded comments are excluded, File-AID blanks out the comment but compares the rest of the line.

Exclude in-stream data : Enter Y (Yes--default) to exclude instream data in the JCL compare or N (No) to include instream data in the JCL compare.

Modify print defaults : Specify whether you want to modify the print options for the Compare Report. Print option values are saved in your user profile. Valid entries are Y (Yes) and N (No). All default print option values are the last print option values that you entered for the last JCL compare.

Y : Modify the print defaults. File-AID displays the "Compare - JCL Print Option (Page 1)" on page 20-30.

N : (Default) Do not modify the print defaults.

Notes on the JCL Compare Criteria

JCL compare criteria will include a compare type option to allow either keyword or line compare. Compare type will control how the actual compare process functions. With either compare type the compare always operates by statement.

Synchronization is the process of determining which statements are to be compared. First jobs are synchronized, then steps and then DDs. If there is only one JOB statement within each of the jobstreams, the jobs are compared. If there are multiple JOB statements, the jobs are compared in the order they occur.

Steps are synchronized first by the executable name and then by the step name. Step name is only used if there are multiple steps with the same executable name.

Job and step synchronization will be the same for either compare type. DD statement synchronization will differ. For keyword compare, DD statements can occur in any sequence within the step. For line compare the DD statements must occur within the same sequence to be compared. For line compare, any difference in sequence of the DD statements results in statements being reported as deleted or inserted rather than changed or matched.

Once synchronization has occurred, the actual compare is different for keyword and line compare. Line compare simply compares line one of the old statement to line one of the new statement and reports them as changed if there is any difference. Next, line two of the old is compared to line two of the new statement, etc. If there are differences in the number of lines for a given statement, they are considered deleted if there are more lines on the old file and inserted if there are more on the new file.

Keyword compare is more intelligent. Keywords are matched within the statement and the values compared for matching keywords. The keywords can be in a different sequence and can be on different lines of the statement, but they still compare correctly. Any unmatched keywords will be identified as changes.

Print Options

The Compare Print options provide flexible reporting capabilities for the Compare Report. These screens are displayed if you specified Y in the Modify print defaults field on the Compare Criteria Options screen. The available print options are dependent on your selected Compare Mode.

The Compare report uses the print parameter for number of lines/pages as set in Option 0.3, Print default parameters to format the report. If the number of lines/pages = zero, Compare will default to 55. See also "Number of lines/page" on page 3-8.

For formatted or unformatted compare, the print options start with "Compare Print Options Page 1 - Formatted and Unformatted".

For a load library compare, see "Compare Load Library Print Options" on page 20-25, for a source code compare, see "Compare Source Print Options Page 1" on page 20-26, and for a JCL compare, see "Compare JCL Print Options Page 1" on page 20-30.

Compare Print Options Page 1 - Formatted and Unformatted

The "Compare Print Options (Page 1) - Formatted and Unformatted Screen", shown in Figure 20-9, enables you to specify the print format, the maximum differences to report, and which type of records to print. This screen is displayed when you specify a Y in the Modify print defaults field on the Compare - Criteria Options screen for a formatted or unformatted compare.

Figure 20-9. Compare Print Options (Page 1) - Formatted and Unformatted Screen

```
File-AID ------------ Compare - Print Options (Page 1 ) -----------------------
COMMAND ===>

Specify initial print options:

  Print format                   ===> C    (H = Hex; C = Char; M = Mixed)

  Max differences to report      ===> ALL  (All or maximum number to report)

  Print CHANGED  records         ===> Y    (Y = Yes; N = No)
  Print INSERTED records         ===> Y    (Y = Yes; N = No)
  Print DELETED  records         ===> Y    (Y = Yes; N = No)
  Print MATCHED  records         ===> Y    (Y = Yes; N = No)
              (a Summary Report is ALWAYS generated)

  PDS report options             ===> B    (M = Member name report;
                                            D = Detail report; B = Both)

  MEMBER name report columns     ===> 8    ( 1 - 8 print columns)
```

Field Descriptions

Specify Initial Print Options:

The values specified for the options on this screen are saved in your user profile. Subsequent compare reports use the last values that were entered even if you do ***not*** return to this screen.

Print format : Specify the print format:

- **F :** Formatted (This option is the default for a Formatted compare and not available for an Unformatted compare.)
- **H :** Three-line hexadecimal

C : Single-line character (default for Unformatted Compare).

M : Mixed. Valid character data is printed as characters and unprintable data is printed in hexadecimal.

Max differences to report : Specify a number to limit the maximum number of differences to report. A numeric value in this field guards against excessive output. The default is ALL. A value of zero reports all differences (the same as ALL).

Print CHANGED records : Specify Y (Yes) to print or N (No) to suppress printing the changed records. The default is Y (Yes).

Print INSERTED records : Specify Y (Yes) to print or N (No) to suppress printing the inserted records. The default is Y (Yes).

Print DELETED records : Specify Y (Yes) to print or N (No) to suppress printing the deleted records. The default is Y (Yes).

Print MATCHED records : Specify Y (Yes) to print or N (No) to suppress printing the matched records. The default is N (No).

Note: Even if you specify No for the above four options, a Summary Report is generated.

PDS Compare

For a PDS Compare only, the following Print Options are applied:

PDS report options : Specify one of the following valid entries:

M : Member name report. Prints a member name report that lists the PDS members in column format and flags the compare results by member name.

D : Detail report. Prints the standard Compare Detail report for each member compared.

B : Both (default). Prints both the Member name report and the standard Compare Detail report.

MEMBER name report columns : Specify the number of print columns to use for the format of the Member Name report. Valid entries are 1 to 8. The default is 8.

After you have completed the fields on the Compare Print Options screen, press Enter to continue.

Compare Print Options Page 2 of 2 - Formatted

The Compare Print Options screen, shown in (Figure 20-10), enables you to specify the format of the report. This screen is displayed when you press Enter on the Compare Print Options (Page 1) screen when an F is specified in the Print format field.

Figure 20-10. Compare Print Option (Page 2 of 2) - Formatted Screen

```
File-AID ------------ Compare - Print Options (Page 2 of 2) -------------------
COMMAND ===>




Specify print options for formatted reports:

  Formatted Report Option    ===> C        ( E = Entire Report;
                                             A = All Associated Fields;
                                             C = Compared Fields Only)

  Compared Fields Option     ===> A        ( A = Print All Fields;
                                             C = Print Changed Fields Only)

  Field Statistics Report    ===> N        ( Y = Yes; N = No)
```

Field Descriptions

Specify print options for formatted reports:

Formatted Report Option : Specify the Formatted Report print format:

E : Print the entire report (default).

A : Print all associated fields (compared and "Print Only" fields).

C : Print only the compared fields (includes Sync/Key fields).

Compared Fields Option : Enter A (Print All Fields) to print all fields that are selected for comparison or C (Print Changed Fields Only) to print only the fields that are selected for comparison and are changed.

Field Statistics Report : Enter Y (Yes) to create a list of compared fields and report the number of times changes were found for that field and the percentage that this field's changes represent of the total number of changed records. Use N (No) to suppress this report.

After you have completed the fields on the Compare Print Options screen, press Enter to continue with “Compare - Criteria Build Complete” on page 20-44 for a formatted compare.

Compare Print Options Page 2 of 3 - Unformatted

The Compare Print Options Page 2 of 3 screen, shown in Figure 20-11, enables you to specify report style and sequence options for the HEX, CHAR, or MIXED reports and Condensed report style options. This screen is displayed when you press Enter on the Compare Print Options (Page 1) screen and an H (Hex), C (Character), or M (Mixed) is specified in the Print format field.

Figure 20-11. Compare Print Options (Page 2 of 3) - Unformatted Screen

```
File-AID ------------ Compare - Print Options (Page 2 of 3) -------------------
COMMAND ===>



Specify options for HEX, CHAR, or MIXED reports:

  Unformatted Report Style        ===> C    (U = Ultra-condensed;
                                             C = Condensed; S = Standard)
  OLD/NEW Print Sequence          ===> G    (G = Grouped; A = Alternating)

  Modify C/U Report Style         ===> Y    (Y = Yes; N = No)
```

Field Descriptions

Specify options for HEX, CHAR, or MIXED reports:

Unformatted Report Style : Specify the report style to print:

- **U :** (Default) Ultra-condensed report style produces the minimum number of report print lines. It also enables you to specify additional print report options listed on the Compare - Print Options (Page 3 of 3) screen.
- **S :** Standard report style is the full Compare report.
- **C :** Condensed report style has reduced heading lines and enables you to specify the additional options listed on the Compare - Print Options (Page 3 of 3) screen.

OLD/NEW Print Sequence : Specify the print sequence for OLD and NEW records:

- **G :** Print entire OLD record before printing corresponding NEW record.
- **A :** Alternate print lines between OLD and NEW records for each 100 positions.

Modify C/U Report Style : Enter Y (Yes) to specify additional report options for the ultra-condensed or condensed report styles on Print Options - Page 3. Use N (No) to accept the defaults (or prior settings).

After you have completed the fields on the Compare Print Options screen, press Enter to continue.

Compare Print Options Page 3 of 3 - Unformatted

The Compare Print Options Page 3 of 3 screen, shown in Figure 20-12, enables you to specify report style options for the Condensed and Ultra-condensed report style options. This screen is displayed when you specify a Y in the Modify C/U Report Style field in the Compare Print Options Page 2 of 3 screen and press Enter.

Figure 20-12. Compare - Print Options (Page 3 of 3) - Unformatted Screen

```
File-AID ------------ Compare - Print Options (Page 3 of 3) -------------------
COMMAND ===>

Specify record content to print:
  Changed records         ===> R     (R = Record)
  Inserted records        ===> R
  Deleted records         ===> R
  Matched records         ===> R
  Print "RULER"           ===> T     (T = Top of page; A = Always; N = Never)

Specify data to print for changed records:
  Suppress print lines that do not contain changes  ===> Y  (Y = Yes, N = No)
  Print only changed data for the new record        ===> N  (N = No)

Specify data flag line options:
  Underline changes                      ===> B  (B = Both)
  Underline key or sync field            ===> B
  CHANGED data underline character       ===> _
  Key or sync field underline character  ===> #

The above options are reset to default values if report style is changed
```

Field Descriptions

Specify record content to print:

Specify a valid print option value for CHANGED, INSERTED, DELETED, and MATCHED records. Valid print option values for the next four fields are:

K : Print sync key data.

R : Print entire record.

B : Print both sync key data and entire record.

Changed records : Specify a valid print option value (K, R, or B).

Inserted records : Specify a valid print option value (K, R, or B).

Deleted records

Specify a valid print option value (K, R, or B).

Matched records : Specify a valid print option value (K, R, or B).

PRINT "RULER" (T)op of page, (A)lways or (N)ever : Specify how you want your ruler line to print in your Compare report:

T : Only prints at the top of page.

A : Always prints the ruler for every inserted, deleted, and matched record, and every pair of changed records.

N : Never. Does not print a ruler.

Specify data to print for changed records:

Suppress print lines that do not contain changes : Specify Y (Yes - default) to print only the lines that contain changes and/or key or sync fields. Specify N (No) to print all lines.

Note: This parameter does not recognize key or sync fields with a blank underline character.

Print only changed data for the new record : Specify Y (Yes) to print only the changed data for the new record and blanks for the unchanged data. Specify N (No) to print the entire new record content.

Specify data flag line options:

Specify a data flag valid option value for Underline changes and Underline key or sync field. Valid option values for the next two fields are:

O : (OLD) Underline changes in OLD record.

N : (NEW) Underline changes in NEW record.

B : (Both) Underline changes in both OLD and NEW records.

blank : (Neither) Do not underline changes in either the OLD or NEW record.

Underline changes : Specify an O, N, B, or a blank.

Underline key or sync field : Specify an O, N, B, or a blank.

CHANGED data underline character : Specify a character to underline the changed data. The default is an underscore (_).

Key or sync field underline character : Specify a character to underline the key or sync field(s). The default is the pound sign (#). To suppress the underline character, enter a blank in this field or the Underline key or sync field.

If you decide to change report styles after you have set the print options on this screen, recheck the values for these options since they are set to the defaults. After you have completed the fields on the Compare Print Options screen, press Enter to continue with "Compare - Criteria Build Complete" on page 20-44.

Compare Load Library Print Options

The "Compare Load Library Print Options" screen, shown in Figure 20-13, enables you to specify what you want to include in the reports and which reports to print. This screen is displayed when you specify a Y in the Modify print defaults field on the "Compare Load Library Criteria" screen.

Figure 20-13. Compare Load Library Print Options

```
File-AID ------------ Compare - Load Library Print Options --------------------
COMMAND ===>

Specify Detail Report Print Options:
  Print detail report            ===> Y    (Y = Yes; N = No)
  Print member summary report    ===> Y    (Y = Yes; N = No)

  Print CHANGED  members         ===> Y    (Y = Yes; N = No)
  Print INSERTED members         ===> Y    (Y = Yes; N = No)
  Print DELETED  members         ===> Y    (Y = Yes; N = No)
  Print MATCHED  members         ===> Y    (Y = Yes; N = No)
              (a Summary Report is ALWAYS generated)

Specify Member Name Report Print Options:
  Print member name report       ===> Y    (Y = Yes; N = No)
  Member name report columns     ===> 8    (1 - 8 print columns)
```

Field Descriptions

Specify Detail Report Print Options:

Print detail report : Enter a Y (Yes) to include the details specified on Load Library Criteria screen in the Compare Report. Use N (No) to suppress the Compare Detail Report.

Print member summary report : Enter a Y (Yes) to print a summary of differences by member. Use N (No) to suppress the Load Library Member Summary Report.

Print changed members : Specify Y (Yes -- default) to print or N (No) to suppress printing the changed members.

Print inserted members : Specify Y (Yes -- default) to print or N (No) to suppress printing the inserted member names on the detail report and/or the member summary report.

Print deleted members : Specify Y (Yes -- default) to print or N (No) to suppress printing the deleted member names on the detail report and/or the member summary report.

Print matched members : Specify Y (Yes -- default) to print or N (No) to suppress printing the matched members.

Even if you suppress printing the CHANGED, INSERTED, DELETED, and MATCHED members, Compare always generates a Summary Report.

Specify Member Name Report Print Options:

Print member name report : Enter Y (Yes) to print a list of the members processed and their status (changed, inserted, deleted, or matched). Use N (No) to suppress the Member Name Report.

Member name report columns : Specify the number of columns to use for the Member Name Report. Valid entries are 1-8. Valid only if "Print member name report" is set to YES.

After you have completed the fields on the Compare Load Library Print Options screen, press Enter to continue with "Compare - Criteria Build Complete" on page 20-44.

Compare Source Print Options Page 1

The "Compare - Source Print Option (Page 1)" screen, shown in Figure 20-14, enables you to specify the online report viewing options, detail report print options, and the member name report print options. This screen is displayed when you specify a Y in the Modify print defaults field on the "Compare Source Criteria" screen for a Source compare.

Figure 20-14. Compare - Source Print Option (Page 1)

```
File-AID ------------ Compare - Source Print Options (Page 1) -----------------
COMMAND ===>

Online Report Viewing Options:
  Display interactive member summary screen  ===> N  (Y = Yes; N = No)

Detail Report Print Options:
  Print detail report                        ===> Y  (Y = Yes; N = No)
  Print member summary report                ===> Y  (Y = Yes; N = No)
  Detail report style                        ===> S  (S = Standard; A = Across)
  Modify detail report content               ===> Y  (Y = Yes; N = No)

  Print CHANGED  members                     ===> Y  (Y = Yes; N = No)
  Print INSERTED members                     ===> N  (Y = Yes; N = No)
  Print DELETED  members                     ===> N  (Y = Yes; N = No)
  Print MATCHED  members                     ===> N  (Y = Yes; N = No)
              (a Summary Report is ALWAYS generated)

Member Name Report Print Options:
  Print member name report                   ===> N  (Y = Yes; N = No)
  Member name report columns                 ===> 8  (1 - 8 print columns)
```

Field Descriptions

The values specified for the options on this screen are saved in your user profile. Subsequent compare reports use the last values that were entered even if you do ***not*** return to this screen.

Online Report Viewing Options:

Display interactive member summary screen : Specify whether to display the interactive member summary screen or not.

Y : Specify Y (Yes) to display the interactive screen where you view the member list and select member(s) to B (Browse), E (Edit), or X (Exclude) the compare results.

Note: The separate member name report (if requested) cannot be viewed from this summary screen. However, the interactive member summary screen displays a similar one-line summary of statistics for each member compared.

N : Specify N (No) to skip the member summary screen and directly browse the compare report(s).

Detail Report Print Options:

Print detail report : Specify Y (Yes) to print the detail report or N (No) to not print the detail report.

Print member summary report : Specify Y (Yes) to print the member summary report or N (No) to not print the member summary report. This report prints a one-line summary of statistics for each member compared.

Detail report style : Specify S (Standard) for standard report style or A (Across) for across (side-by-side) report style. Standard is required to access the "Compare - Edit-Helper" function.

Modify detail report content : Specify Y (Yes) if you want to modify the detail report content or N (No) to skip modification.

Print CHANGED members : Specify Y (Yes) to print or N (No) to suppress printing the changed members. The default is Y (Yes).

Print INSERTED members : Specify Y (Yes) to print or N (No) to suppress printing the inserted members. The default is Y (Yes). If "Print member summary report" = Y (Yes) the Inserted member name (with the status) is printed on the Member Summary Report. If "Print member summary report" = N (No) the Inserted member name (with the status) is printed on the Detail Report. Member content is never printed.

Print DELETED members : Specify Y (Yes) to print or N (No) to suppress printing the deleted members. The default is Y (Yes). If "Print member summary report" = Y (Yes) the Deleted member name (with the status) is printed on the Member Summary Report. If "Print member summary report" = N (No) the Deleted member name (with the status) is printed on the Detail Report. Member content is never printed.

Print MATCHED members : Specify Y (Yes) to print or N (No) to suppress printing the matched members. The default is N (No).

Note: Even if you specify No for the above four print member options, a Summary Report is always generated.

Member Name Report Print Options

For a PDS Compare only, the following Print Options are applied:

Print member name report : Enter Y (Yes) to print a list of the members processed and their status (changed, inserted, deleted, or matched). Use N (No) to suppress the Member Name Report.

Member name report columns : Specify the number of print columns to use for the format of the Member Name report. The member names with their status are listed horizontally based on the number entered. Valid entries are 1 to 8. The default is 8. Valid only if "Print member name report" is set to YES.

After you have completed the fields on the Compare Source Print Options screen, press Enter to continue.

Compare Source Print Options Page 2 of 2

The "Compare Source Print Option (Page 2 of 2)" screen, shown in (Figure 20-15), enables you to specify the format of the report. This screen is displayed when you press Enter on the "Compare - Source Print Option (Page 1)" screen.

Figure 20-15. Compare Source Print Option (Page 2 of 2)

```
File-AID ------------ Compare - Source Print Options (Page 2 of 2) ------------
COMMAND ===>

Data Print Options:
  Lines to print                  ===> A    (A = All; C = Changes only)
  Shifted data reporting          ===> C    (M = Matched; C = Changed)
  Print new file excluded lines   ===> Y    (Y = Yes; N = No)
  Print source context ID lines   ===> Y    (Y = Yes; N = No)
  Number of context lines to print ===> 0   (0 - 9 context lines)

Report Format Options:
  Status value for matched lines  ===> M    (B = blank; M = MATCH or <MAT>)
  Print old and new line numbers  ===> Y    (Y = Yes; N = No)

Across Report Style Options:
  Print old file matched lines    ===> N    (Y = Yes; N = No)
  Print old file excluded lines   ===> N    (Y = Yes; N = No)
  Data width to report            ===> W    (N = Normal; W = Wide)

Flag Line Options:                          (O = Old; N = New;
  Underline changes               ===> B     B = Both; blank = neither)
  CHANGED data underline character ===> ~
```

Field Descriptions

Data Print Options:

Lines to print : Specify A (All) for all lines to print or C (Changed) for changed lines only to print. Changed lines include changed, inserted, and deleted lines.

Shifted data reporting : Specify M (Matched) to report shifted data as matched or C (Changed) to report shifted data as changed data.

Print new file excluded lines : Specify Y (Yes) if you want the excluded lines of the New file to print or N (No) to suppress printing of the excluded lines. This option is ignored when Lines To Print is set to C to print changed lines only.

Print source context ID lines : Specify whether you want the source context ID lines to be printed or to suppress printing of source context ID lines. This option is ignored if Lines To Print is set to ALL. Excluded context ID lines will not print on the detail report.
COBOL context ID lines are DIVISION lines, Section lines, 01 layout levels, and Paragraph names. PL/I context ID lines are DCL, DECLARE, and statement prefix labels.

Number of context lines to print : Specify the number (0-9) of context lines you want to be printed on the detail report. This option is ignored if Lines To Print is set to ALL. Context lines are the lines immediately preceding and following the change. Context Lines that are matched and non-excluded will print on the report based on the number entered. These lines will print before and after every change block. Context lines can include context ID lines.

Report Format Options:

Status value for matched lines : Specify the status to be printed for matched lines:

M : (Matched) Prints the status <MAT> for each matched line.

B : (Blank) The status remains blank for each matched line.

Print old and new line numbers : Specify Y (Yes) to print both old and new line numbers or N (No) to suppress printing of both line numbers.

Across Report Style Options:

Print old file matched lines : Specify Y (Yes) if you want old file matched lines to be printed or N (No) to suppress print of old file matched lines.

Print old file excluded lines : Specify Y (Yes) if you want the excluded lines of the old file to print or N (No) to suppress printing of the excluded lines.

Data width to report : Specify one of the following width options to print source compare data for the across report style:

N : (Normal) for a 133 character report. Normal prints 61 characters of data for old and new each. If "Print old and new line numbers" is set to Yes, then 55 characters of data are printed. Source data is truncated equally on the right for both old and new file which means that changed data past position 61 or 55 is not visible, but the line is still marked as changed.

W : (Wide) for a 183 character report. Wide prints 80 characters of data for old and new each.

Flag Line Options:

Underline changes : Specify one of the following:

O : (Old) Underline changes in OLD record.

N : (New) Underline changes in NEW record.

B : (Both) Underline changes in both OLD and NEW record.

blank : (Neither) Do not underline changes in either the OLD or NEW file.

CHANGED data underline character : Specify the character to be used as the one to underline the changed data.

After you have completed the fields on the Compare Source Print Options screen, press Enter to continue with "Compare - Criteria Build Complete" on page 20-44.

Compare JCL Print Options Page 1

The "Compare - JCL Print Option (Page 1)" screen, shown in Figure 20-16, enables you to specify the online report viewing options, detail report print options, and the member name report print options. This screen is displayed when you specify a Y in the Modify print defaults field on the "Compare JCL Criteria" screen for a JCL compare.

Figure 20-16. Compare - JCL Print Option (Page 1)

```
File-AID ------------ Compare - JCL Print Options (Page 1) --------------------
COMMAND ===>

Online Report Viewing Options:
  Display interactive member summary screen  ===> N  (Y = Yes; N = No)

Detail Report Print Options:
  Print detail report                        ===> Y  (Y = Yes; N = No)
  Print member summary report                ===> Y  (Y = Yes; N = No)
  Detail report style                        ===> S  (S = Standard; A = Across)
  Modify detail report content               ===> Y  (Y = Yes; N = No)

  Print CHANGED  members                     ===> Y  (Y = Yes; N = No)
  Print INSERTED members                     ===> N  (Y = Yes; N = No)
  Print DELETED  members                     ===> N  (Y = Yes; N = No)
  Print MATCHED  members                     ===> N  (Y = Yes; N = No)
              (a Summary Report is ALWAYS generated)

Member Name Report Print Options:
  Print member name report                   ===> N  (Y = Yes; N = No)
  Member name report columns                 ===> 8  (1 - 8 print columns)
```

Field Descriptions

The values specified for the options on this screen are saved in your user profile. Subsequent compare reports use the last values that were entered even if you do ***not*** return to this screen.

Online Report Viewing Options:

Display interactive member summary screen : Specify whether to display the interactive member summary screen or not.

Y : Specify Y (Yes) to display the interactive screen where you view the member list and select member(s) to B (Browse), E (Edit), or X (Exclude) the compare results.

Note: The separate member name report (if requested) cannot be viewed from this summary screen. However, the interactive member summary screen displays a similar one-line summary of statistics for each member compared.

N : Specify N (No) to skip the member summary screen and directly browse the compare report(s).

Detail Report Print Options:

Print detail report : Specify Y (Yes) to print the detail report or N (No) to not print the detail report.

Print member summary report : Specify Y (Yes) to print the member summary report or N (No) to not print the member summary report. This report prints a one-line summary of statistics for each member compared.

Detail report style : Specify S (Standard) for standard report style or A (Across) for across (side-by-side) report style. Standard is required to access the "Compare - Edit-Helper" function.

Modify detail report content : Specify Y (Yes) if you want to modify the detail report content or N (No) to skip modification.

Print CHANGED members : Specify Y (Yes) to print or N (No) to suppress printing the changed members. The default is Y (Yes).

Print INSERTED members : Specify Y (Yes) to print or N (No) to suppress printing the inserted members. The default is Y (Yes). If "Print member summary report" = Y (Yes) the Inserted member name (with the status) is printed on the Member Summary Report. If "Print member summary report" = N (No) the Inserted member name (with the status) is printed on the Detail Report. Member content is never printed.

Print DELETED members : Specify Y (Yes) to print or N (No) to suppress printing the deleted members. The default is Y (Yes). If "Print member summary report" = Y (Yes) the Deleted member name (with the status) is printed on the Member Summary Report. If "Print member summary report" = N (No) the Deleted member name (with the status) is printed on the Detail Report. Member content is never printed.

Print MATCHED members : Specify Y (Yes) to print or N (No) to suppress printing the matched members. The default is N (No).

Note: Even if you specify No for the above four print member options, a Summary Report is always generated.

Member Name Report Print Options

For a PDS Compare only, the following Print Options are applied:

Print member name report : Enter Y (Yes) to print a list of the members processed and their status (changed, inserted, deleted, or matched). Use N (No) to suppress the Member Name Report.

Member name report columns : Specify the number of print columns to use for the format of the Member Name report. The member names with their status are listed horizontally based on the number entered. Valid entries are 1 to 8. The default is 8. Valid only if "Print member name report" is set to YES.

After you have completed the fields on the Compare JCL Print Options screen, press Enter to continue.

Compare JCL Print Options Page 2 of 2

The "Compare JCL Print Option (Page 2 of 2)" screen, shown in (Figure 20-17), enables you to specify the format of the report. This screen is displayed when you press Enter on the "Compare - Source Print Option (Page 1)" screen.

Figure 20-17. Compare JCL Print Option (Page 2 of 2)

```
File-AID ------------ Compare - JCL Print Options (Page 2 of 2) ---------------
COMMAND ===>

Data Print Options:
  Statements to print              ===> A    (A = All; C = Changes only)
  Print new file excluded lines    ===> N    (Y = Yes; N = No)
  Print matched in-stream data     ===> N    (Y = Yes; N = No)

Report Format Options:
  Status value for matched lines   ===> B    (B = blank; M = MATCH or <MAT>)
  Print old and new line numbers   ===> Y    (Y = Yes; N = No)
  Print job/step header lines      ===> N    (Y = Yes; N = No)

Across Report Style Options:
  Print old file matched lines     ===> Y    (Y = Yes; N = No)
  Print old file excluded lines    ===> N    (Y = Yes; N = No)
  Data width to report             ===> N    (N = Normal; W = Wide)

Flag Line Options:                           (O = Old; N = New;
  Underline changes                ===>       B = Both; blank = neither)
  CHANGED data underline character ===>
  Keyword underline character      ===>
```

Field Descriptions

Data Print Options:

Statements to print : Specify A (All) for all statements to print or C (Changed) for changed statements only to print.

Print new file excluded lines : Specify Y (Yes) if you want the excluded lines of the New file to print or N (No) to suppress printing of the excluded lines. If set to YES, Statements to Print must be set to ALL to see the New File Excluded lines.

Print matched in-stream data : Specify Y (Yes) if you want matched instream data to be printed or N (No) to suppress printing of matched instream data. If set to YES, Statements to Print must be set to ALL to see the Matched In-Stream Data lines.

Report Format Options:

Status value for matched lines : Specify the status to be printed for matched lines:

M : (Matched) Prints the status <MAT> for each matched line.

B : (Blank) The status remains blank for each matched line.

Print old and new line numbers : Specify Y (Yes) to print both old and new line numbers or N (No) to suppress printing of both line numbers.

Print job/step header lines : Specify Y (Yes) to print the job/step header lines or N (No) to suppress printing of job/step header lines.

Across Report Style Options:

Print old file matched lines : Specify Y (Yes) if you want old file matched lines to be printed or N (No) to suppress print of old file matched lines.

Print old file excluded lines : Specify Y (Yes) if you want the excluded lines of the old file to print or N (No) to suppress printing of the excluded lines.

Data width to report : Specify one of the following width options to print JCL compare data for the across report style:

N : (Normal) for a 133 character report. Normal prints 61 characters of data for old and new each. If "Print old and new line numbers" is set to Yes, then only 55 characters of data are printed. Data is truncated equally on the right for both old and new file which means that changed data past position 61 or 55 is not visible, but the line is still marked as changed.

W : (Wide) for a 183 character report. Prints 80 characters of data for old and new each.

Flag Line Options:

Underline changes : Specify one of the following:

O : (Old) Underline changes in OLD record.

N : (New) Underline changes in NEW record.

B : (Both) Underline changes in both OLD and NEW record.

blank : (Neither) Do not underline changes in either the OLD or NEW file.

CHANGED data underline character : Specify the character to be used as the one to underline the changed data. This character is used in JCL keyword and line compare to indicate the changed data. It is also printed under the word CHANGE as an eye catcher on the line compare report.

Keyword underline character : Specify the character to be used as the one to underline the keyword for the changed data. This character is used in JCL keyword compare to indicate the keyword that has changes associated with it. It is also printed under the word CHANGE as an eye catcher on the keyword compare report. The actual changes have the Changed Data Underline Character as described above.

Note: For Keyword compares only: Character **I** is used to underline inserted keywords and data, Character **D** is used to underline deleted keywords and data.

After you have completed the fields on the Compare JCL Print Options screen, press Enter to continue with "Compare - Criteria Build Complete" on page 20-44.

Output Criteria

The "Compare - Output Options" screen (Figure 20-18) enables you to specify the output file options for your compare. This screen is displayed if you specified Y in the Specify output criteria field on the "Compare - Criteria Options" screen.

Figure 20-18. Compare - Output Options

```
File-AID ---------------- Compare - Output Options ----------------------------
COMMAND ===>


  Specify file number (1-6) and enter dataset names to write records:
  OLD Deleted  ===>                                  NEW Inserted ===>
  OLD Changed  ===>                                  NEW Changed  ===>
  OLD Matched  ===>                                  NEW Matched  ===>



  File 1 Name   ===>
         Member ===>                       Volume ===>        Disp ===> OLD
  File 2 Name   ===>
         Member ===>                       Volume ===>        Disp ===> OLD
  File 3 Name   ===>
         Member ===>                       Volume ===>        Disp ===> OLD
  File 4 Name   ===>
         Member ===>                       Volume ===>        Disp ===> OLD
  File 5 Name   ===>
         Member ===>                       Volume ===>        Disp ===> OLD
  File 6 Name   ===>
         Member ===>                       Volume ===>        Disp ===> OLD
```

Field Descriptions

Specify file number (1-6) and enter dataset names to write records: : OLD Deleted
OLD Changed
OLD Matched
NEW Inserted
NEW Changed
NEW Matched

You may direct any (or all) of the above compare records (or members for a PDS) types to one of the six output files by entering a number 1-6 in the compare type and then entering the corresponding output file information below.

File 1-6

Name : Enter the dataset name of the file.

Member : Enter the member name for the PDS. If this field is left blank for a PDS compare, then each output member name is copied from each input member name.

Volume : Specify a volume serial number for an uncataloged dataset.

Disp : Specify the disposition of the file. Valid entries are:

OLD : (Default) Existing file in which the entire file is replaced.

NEW : When New is specified, you are prompted to allocate the file online. Once the file is allocated, File-AID changes the Disp to OLD.

MOD : Existing file in which the new data is added to the end of the file.

After you have completed the fields on the this screen, press Enter to continue.

Compare Unformatted Criteria

The "Compare - Unformatted Criteria" screen (Figure 20-19) enables you to specify field criteria for your compare. For the OLD and NEW field TYPE, the two field types must be the same or you may mix Binary, Packed, or Zoned data. When the NEW information is left blank, File-AID defaults to the OLD information.

Figure 20-19. Compare - Unformatted Criteria

```
File-AID ----------- Compare - Unformatted Criteria --------------------------
COMMAND ===>                                                 SCROLL ===> PAGE
      OLD                    NEW
 Cmd  Pos.    Length Type    Pos.    Length Type   Status Display

  _   1       80      C      1       80      C     SYNCKEY,UNSORTED
  _   1       80      C      1       80      C     COMPARISON FIELD
  _   _____   _____   __     _____   _____   __
  _   _____   _____   __     _____   _____   __
  _   _____   _____   __     _____   _____   __
  _   _____   _____   __     _____   _____   __
  _   _____   _____   __     _____   _____   __
  _   _____   _____   __     _____   _____   __
  _   _____   _____   __     _____   _____   __
  _   _____   _____   __     _____   _____   __
  _   _____   _____   __     _____   _____   __
  _   _____   _____   __     _____   _____   __
  _   _____   _____   __     _____   _____   __
  _   _____   _____   __     _____   _____   __
  _   _____   _____   __     _____   _____   __
  _   _____   _____   __     _____   _____   __
  _   _____   _____   __     _____   _____   __
  _   _____   _____   __     _____   _____   __
Cmd: S = Sync/Key, T = Tolerance, C = Compare, R = Reset
```

Field Descriptions

Cmd : The following commands are valid in this field:

- **S :** Use these positions as a sync key and display Sorted Sync/Key Specification pop-up if sorted Compare.
- **T :** Display Tolerance Value/Percentage Specification pop-up.
- **C :** Select field for comparison.
- **R :** Clears (resets) the line.

OLD Pos/NEW Pos : Specify the starting position of the field within the record (relative to 1).

Length : Specify the number of bytes in the field.

Type : Specify one of the following valid types for the field:

B :	Unsigned binary.	**P :**	Unsigned Packed.
BS :	Signed binary.	**PS :**	Signed packed.
C :	Character.	**T :**	Bit.
D :	DBCS (graphic).	**Z :**	Unsigned zoned decimal (display numeric).
F :	Floating point.	**ZS :**	Signed zoned decimal (display numeric).

Status Display : Displays the Compare options set for this field.

Sync/Key Pop-up

The “Sorted Sync/Key Specification - Unformatted” pop-up (Figure 20-20) enables you to specify the key order and direction for the selected position (or field). This screen is displayed when you enter "S" in the Cmd field on the Unformatted Criteria screen.

A synchronization key is a key field, which you define within File-AID, to synchronize the input records of either sorted or non-sorted files for comparison. Sorted key screens (formatted and unformatted) are used with files that are keyed or pre-sorted.

Figure 20-20. Sorted Sync/Key Specification - Unformatted

```
File-AID ----------- Compare - Unformatted Criteria -------------------------
C ------------------- Sorted Sync/Key Specification -------------------------

    Command ===>                                      (End, Cancel, Help)

    OLD Position: 1     Length: 5
    NEW Position: 1     Length: 5

    Specify field order number      ===> 1   (1 - 256)
    Specify file sequence direction ===> A   (A=Ascending; D=Descending)

  _   _____   _____   __    _____   _____   __
  _   _____   _____   __    _____   _____   __
  _   _____   _____   __    _____   _____   __
  _   _____   _____   __    _____   _____   __
  _   _____   _____   __    _____   _____   __
  _   _____   _____   __    _____   _____   __
  _   _____   _____   __    _____   _____   __
  _   _____   _____   __    _____   _____   __
  _   _____   _____   __    _____   _____   __
  _   _____   _____   __    _____   _____   __
  _   _____   _____   __    _____   _____   __
Cmd: S = Sync/Key, T = Tolerance, C = Compare, R = Reset
```

Field Descriptions

OLD Position/NEW position : Starting position of the field within the record (relative to 1).

Length (OLD/NEW) : Number of bytes in the field.

Specify field order number : Specify a number from 1 to 256 which indicates this key field’s place in the hierarchy of key fields.

Specify file sequence direction : Specify the field sequence direction for this key field.

A : Ascending

D : Descending

After you have completed the fields on this screen, use END (PF3) to return to the Unformatted Criteria screen. Use CANCEL to return to the Unformatted Criteria screen without specifying the sorted sync/key information.

Tolerance Pop-up

The “Tolerance Value/Percentage Specification - Unformatted” pop-up (Figure 20-21) enables you to specify a tolerance amount or percentage for a numeric field that File-AID uses to determine "close-enough" matches for your compare. When you have completed this window, press PF3 to proceed. Enter CANCEL to return to the Unformatted Criteria screen without entering a tolerance value/percentage.

Figure 20-21. Tolerance Value/Percentage Specification - Unformatted

```
File-AID ----------- Compare - Unformatted Criteria --------------------------
C ---------------- Tolerance Value/Percentage Specification ---------------- GE

  Command ===>                                    (End, Cancel, Help)

  OLD Position: 87          Length: 6     Type: ZONED                       NG
  NEW Position: 87          Length: 6     Type: ZONED

  Specify tolerance value/percent ===>

 _   _____   _____   __    _____   _____   __
 _   _____   _____   __    _____   _____   __
 _   _____   _____   __    _____   _____   __
 _   _____   _____   __    _____   _____   __
 _   _____   _____   __    _____   _____   __
 _   _____   _____   __    _____   _____   __
 _   _____   _____   __    _____   _____   __
 _   _____   _____   __    _____   _____   __
 _   _____   _____   __    _____   _____   __
 _   _____   _____   __    _____   _____   __
 _   _____   _____   __    _____   _____   __
 _   _____   _____   __    _____   _____   __
Cmd: S = Sync/Key, T = Tolerance, C = Compare, R = Reset
```

Field Descriptions

OLD Position/NEW Position : Record position for which you are setting the tolerance amount/percentage (relative to 1).

Length (OLD/NEW) : Number of bytes in the field as specified on the Compare Unformatted Criteria screen.

Type : Data type as specified on the Compare Unformatted Criteria screen.

Specify tolerance value/percentage : Specify a numeric tolerance value or a tolerance percentage for File-AID to use to determine "close-enough" matches for your compare. The tolerance value is limited to the most precise field (the number of integers). To specify a percentage value precede it with a percentage sign (%) or else it is interpreted as a tolerance value. Valid tolerance percentages are %000.001 through %999.999.

Formatted Criteria

The "Compare - Formatted Criteria" screen (Figure 20-22) enables you to specify field criteria for your compare. File-AID displays the Formatted Criteria screen only when the OLD and NEW files use the same record layout.

Figure 20-22. Compare - Formatted Criteria

```
File-AID ----------- Compare - Formatted Criteria ----------------------------
COMMAND ===>                                                  SCROLL ===> PAGE

OLD FILE - USERID9.FASAMP.INVFILE ---------------------------------------------
 Cmd  Field Name                        Format   Status Display
      INVENTORY-RECORD                  GRP  513
  _    INV-PART-NO                      C     15 COMPARISON FIELD
  _    INV-DESCRIPTION                  C     40 COMPARISON FIELD
  _    INV-UNIT-OF-MEASURE              C      2 COMPARISON FIELD
  _    INV-UNIT-PRICE                   PS  5  2 COMPARISON FIELD
       INV-STOCK-INFO                   OCCURS   2 TIMES
       INV-STOCK-INFO(1)                GRP   18
  _     INV-WAREHOUSE(1)                C      3 COMPARISON FIELD
  _     INV-STATUS(1)                   C      6 COMPARISON FIELD
        INV-QTY-DATE(1)                 GRP    9
  _      INV-QTY-ON-HAND(1)             PS  5    COMPARISON FIELD
  _      INV-LAST-ORDER-DATE(1)         C      6 COMPARISON FIELD
        INV-BO-QTY-DATE(1)              REDEFINE INV-QTY-DATE
        INV-BO-QTY-DATE(1)              GRP    9
  _      INV-QTY-BACKORDERED(1)         PS  5    COMPARISON FIELD
  _      INV-BACKORDER-DATE(1)          C      6 COMPARISON FIELD
      INV-STOCK-INFO(2)                 GRP   18
  _     INV-WAREHOUSE(2)                C      3 COMPARISON FIELD
Cmd: S = Sync/Key, T = Tolerance, P = Print, C = Compare, R = Reset
```

Field Descriptions

Cmd : The following commands are valid in this field. T, C, and P are not valid for a Sync/Key field.

- **S :** Use this field as a sync/key and display Sorted Sync/Key Specification pop-up if sorted Compare.
- **T :** Display Tolerance Value/Percentage Specification pop-up.
- **P :** Set field to print only (shows on report but does not compare field).
- **C :** Select field for comparison (default).
- **R :** Resets the Status Display field to blanks.

Field Name : Name of field as specified in the record layout.

Format : Field format as specified in the record layout.

Status Display : Displays the Compare options set for this field.

Associate Field Names

The "Compare - Associate Field Names" screen (Figure 20-23) enables you to associate field names between the old and new files for comparison. File-AID displays this screen only when the OLD and NEW files use different record layouts. The field associations and commands are specified in the lower half of the panel.

Figure 20-23. Compare - Associate Field Names

```
File-AID ----------- Compare - Associate Field Names -------------------------
COMMAND ===>                                                 SCROLL ===> PAGE
Specify field associations and commands in lower half of panel:
OLD FILE - USERID9.FASAMP.COMPARE ------------------------------------------
  Num Field Name                        Format   Status Display
    1 EMPLOYEE-MASTER-FILE              GRP  198
    2  EMP-NUMBER                       C      5 SYNCKEY,ORDER=001,ASCENDING
    3  EMP-LAST-NAME                    C     15 COMPARISON FIELD
    4  EMP-FIRST-NAME                   C     10 COMPARISON FIELD
    5  EMP-MID-INIT                     C      1 COMPARISON FIELD
    6  FILLER                           C      2
    7  EMP-TITLE                        C     30 COMPARISON FIELD
    8  EMP-PERSONAL-INFO                GRP   23
NEW File - 'USERID9.FASAMP.EMPLOYEE' ----------------------------------------
  Num Field Name                        Format   OLD /num or /field-name  |Cmd
    1 EMPLOYEE-MASTER-FILE              GRP  198                          |
    2  EMP-NUMBER                       C      5 /EMP-NUMBER              |  _
    3  EMP-LAST-NAME                    C     15 /EMP-LAST-NAME           |  _
    4  EMP-FIRST-NAME                   C     10 /EMP-FIRST-NAME          |  _
    5  EMP-MID-INIT                     C      1 /EMP-MID-INIT            |  _
    6  FILLER                           C      2 ------------------------|  _
    7  EMP-TITLE                        C     30 /EMP-TITLE               |  _
    8  EMP-PERSONAL-INFO                GRP   23                          |
Cmd: S = Sync/Key, T = Tolerance, P = Print, C = Compare, R = Reset
```

Field Descriptions

OLD FILE/NEW FILE : Displays the file dataset and member name.

Num : Number that corresponds to the OLD FILE or NEW FILE field name.

Field Name : Field name from the record layout.

Format : Field format from the record layout.

Status Display : Displays the Compare options set for this field.

OLD /num or /field-name : Enter a slash followed by the number or field-name to associate the OLD FILE field with the NEW FILE field.

Cmd : Enter one of the following valid commands:

S : Use this field as a sync/key and display Sorted Sync/Key Specification pop-up if sorted compare.

T : Display Tolerance Value/Percentage Specification pop-up.

P : Select field for print only (not comparison).

C : Select field for comparison.

R : Disassociates the two fields and resets the Status Display field to blanks.

Select XREFs

The "Compare - Select XREFs" screen, shown in Figure 20-24, is displayed when the OLD and NEW files use the same XREF and layout. You must select at least one XREF member to proceed. Once you have made your selection and pressed Enter, File-AID displays the Compare - Formatted Criteria screen.

Figure 20-24. Compare - Select XREFs

```
File-AID ----------------- Compare - Select XREFs ----------------------------
COMMAND ===>                                                 SCROLL ===> PAGE

Select XREFs for compare:
                                          Process all: _ (S=select; U=unselect)
XREF - USERID9.FASAMP.XREF(ORDRFILE)

   S Member     Beginning Data-Name            Description     Type    Status
   - ---------- ------------------------------ --------------- ------- --------
     ORDERPO    ORDER-LINE-DATA-PO             PO LINE DATA    BASE    SELECTED
     ORDERSC    ORDER-LINE-DATA-SC             SC LINE DATA___ BASE
     ORDERWO    OUTSIDE-VENDOR-WORK-ORDER      WORK ORDER - OV BASE
     ORDERWO    INTERNAL-WORK-ORDER            WORK ORDER - IN DEFAULT
****************************** BOTTOM OF DATA ********************************
```

Field Descriptions

Process All :

S : Selects all BASE and DEFAULT members for processing.

U : Unselects all members.

S : XREF member Selection field. Valid entries are S (Select) or U (Unselect). You can only select BASE and DEFAULT members.

Member : Record layout member name.

Beginning Data-Name : Starting dataname of the record layout.

Description : Short description of the record layout entered by user when XREF was created.

Type : Type of layout (BASE, DEFAULT, or SEGMENT).

Status : Displays SELECTED when the XREF member is selected for comparison. Blank indicates the layout is not selected.

Note: File-AID only compares BASE or DEFAULT BASE of an XREF.

Associate XREFs

The "Compare - Associate XREFs" screen (Figure 20-25) enables you to associate XREF members between the OLD and NEW files you are comparing. File-AID displays this screen when the OLD and NEW files have different XREFs and/or different record layouts.

Each data file record is classified into a record type category based on certain field values within the record. In File-AID, these field or data values and their record layouts are associated when the XREF is defined. See Chapter 17, "Record Layout Cross Reference (7)".

Figure 20-25. Compare - Associate XREFs

```
File-AID -------------- Compare - Associate XREFs ----------------------------
COMMAND ===>                                                 SCROLL ===> PAGE
Specify NEW XREF number next to the OLD XREF you wish to compare to:
******************************************************************************
     OLD File XREF - USERID9.FASAMP.XREF(ORDRFILE)
Num  Member     Beginning Data-Name            Description     Type    Status
____ ORDERPO    ORDER-LINE-DATA-PO             PO LINE DATA    BASE
____ ORDERSC    ORDER-LINE-DATA-SC             SC LINE DATA___ BASE
____ ORDERWO    OUTSIDE-VENDOR-WORK-ORDER      WORK ORDER - OV BASE
____ ORDERWO    INTERNAL-WORK-ORDER            WORK ORDER - IN DEFAULT
****************************** BOTTOM OF DATA ********************************

******************************************************************************
     NEW File XREF - USERID9.FASAMP.XREF(ORDRFILE)
Num  Member     Beginning Data-Name            Description     Type    Status
   1 ORDERPO    ORDER-LINE-DATA-PO             PO LINE DATA    BASE
   2 ORDERSC    ORDER-LINE-DATA-SC             SC LINE DATA___ BASE
   3 ORDERWO    OUTSIDE-VENDOR-WORK-ORDER      WORK ORDER - OV BASE
   4 ORDERWO    INTERNAL-WORK-ORDER            WORK ORDER - IN DEFAULT
****************************** BOTTOM OF DATA ********************************

******************************************************************************

Specify NEW XREF Number, S to alter/redisplay associated pair or U to Unselect
```

Field Descriptions

OLD File XREF : Specifies the OLD file dataset and member name.

Num : Enter the number to correspond the OLD XREF member and Beginning Data-Name with the NEW XREF member and Beginning Data-Name. You may enter Multiple NUMs at a time. Or, you may specify:

S : Alter or redisplay the associated pair.

U : Unselects the associated pair and clears the fields you set for comparison.

Member : Record layout member name.

Beginning Data-Name : Starting dataname of the record layout.

Description : Short description of the record layout entered by user when XREF was created.

Type : Type of layout (BASE, DEFAULT, or SEGMENT).

Status : Displays NEW=nnnn (where nnnn indicates the corresponding NEW file layout) when the layout is selected for comparison. Blank indicates the layout is not selected.

NEW File XREF : Specifies the NEW file dataset and member name.

Num : Entry number of the NEW XREF member and Beginning Data-Name.

Member : Record layout member name.

Beginning Data-Name : Starting dataname of the record layout.

Description : Short description of the record layout entered by user when XREF was created.

Type : Type of layout (BASE, DEFAULT, or SEGMENT).

Status : Displays OLD=nnnn (where nnnn indicates the corresponding OLD file layout) when the layout is selected for comparison. Blank indicates the layout is not selected.

Note: File-AID only compares BASE or DEFAULT BASE of an XREF.

Sync/Key Pop-up

The "Sorted Sync/Key Specification" pop-up (Figure 20-26) enables you to specify the key order and direction for the selected field (or position). This screen is displayed when you enter "S" in the Cmd field on the Formatted Criteria screen.

A synchronization key is a key field, which you define within File-AID, to synchronize the input records of either sorted or non-sorted files for comparison. Sorted key screens (formatted and unformatted) are used with files that are keyed or pre-sorted.

Figure 20-26. Sorted Sync/Key Specification

```
File-AID ----------- Compare - Associate Field Names ------------------------
C                    Sorted Sync/Key Specification                           E
S
O    Command ===>                                   (End, Cancel, Help)      --

     OLD field name: EMP-NUMBER
     NEW field name: EMP-NUMBER

     Specify field order number      ===> 1   (1 - 256)
     Specify file sequence direction ===> A   (A=Ascending; D=Descending)

    8  EMP-PERSONAL-INFO                 GRP   23
NEW File - 'USERID9.FASAMP.EMPLOYEE'
  Num Field Name                         Format   OLD /num or /field-name  Cmd
    1 EMPLOYEE-MASTER-FILE               GRP  198
    2  EMP-NUMBER                        C      5 /EMP-NUMBER              S
    3  EMP-LAST-NAME                     C     15 /EMP-LAST-NAME           _
    4  EMP-FIRST-NAME                    C     10 /EMP-FIRST-NAME          _
    5  EMP-MID-INIT                      C      1 /EMP-MID-INIT            _
    6  FILLER                            C      2                          _
    7  EMP-TITLE                         C     30 /EMP-TITLE               _
    8  EMP-PERSONAL-INFO                 GRP   23
Cmd: S = Sync/Key, T = Tolerance, P = Print, C = Compare, R = Reset
```

Field Descriptions

OLD field name/NEW field name : Name of field selected for Sync/Key specification.

Specify field order number : Specify a number from 1 to 256 which indicates this key field's place in the hierarchy of key fields.

Specify file sequence direction : Specify the field sequence direction for this key field.

A : Ascending

D : Descending

After you have completed the fields on this screen, use END (PF3) to return to the Formatted Criteria screen. Use CANCEL to return to the Formatted Criteria screen without specifying the sorted sync/key information.

Tolerance Pop-up

The “Tolerance Value/Percentage Specification” pop-up (Figure 20-27) enables you to specify a tolerance or percentage amount for a numeric field that File-AID uses to determine "close-enough" matches for your compare. When you have completed this window, press PF3 to proceed. Enter CANCEL to return to the Associate Field Names screen without entering a tolerance value.

Figure 20-27. Tolerance Value/Percentage Specification

```
File-AID ----------- Compare - Formatted Criteria ----------------------------
C              Tolerance Value/Percentage Specification                  PAGE

O    Command ===>                                   (End, Cancel, Help)   -----

     OLD field name: INV-UNIT-PRICE                 Format: PS  5  2
     NEW field name: INV-UNIT-PRICE                 Format: PS  5  2

     Specify tolerance value/percentage ===>

        INV-STOCK-INFO(1)                 GRP   18
  _      INV-WAREHOUSE(1)                 C      3 COMPARISON FIELD
  _      INV-STATUS(1)                    C      6 COMPARISON FIELD
         INV-QTY-DATE(1)                  GRP    9
  _       INV-QTY-ON-HAND(1)              PS  5    COMPARISON FIELD
  _       INV-LAST-ORDER-DATE(1)          C      6 COMPARISON FIELD
         INV-BO-QTY-DATE(1)               REDEFINE INV-QTY-DATE
         INV-BO-QTY-DATE(1)               GRP    9
  _       INV-QTY-BACKORDERED(1)          PS  5    COMPARISON FIELD
  _       INV-BACKORDER-DATE(1)           C      6 COMPARISON FIELD
        INV-STOCK-INFO(2)                 GRP   18
  _      INV-WAREHOUSE(2)                 C      3 COMPARISON FIELD
Cmd: S = Sync/Key, T = Tolerance, P = Print, C = Compare, R = Reset
```

Field Descriptions

OLD field name/NEW field name : Field name(s) as specified in record layout for which you are specifying a tolerance value/percentage.

Format (OLD/NEW) : Format(s) as specified in record layout(s).

Specify tolerance value/percentage : Specify a numeric tolerance value or a tolerance percentage for File-AID to use to determine "close-enough" matches for your compare. The tolerance value is limited to the most precise field (the number of integers). To specify a percentage value precede it with a percentage sign (%) or else it is interpreted as a tolerance value. Valid tolerance percentages are %000.001 through %999.999.

Criteria Build Complete

The "Compare - Criteria Build Complete" screen (Figure 20-28) is displayed when File-AID has all the information it needs to proceed with the comparison.

Figure 20-28. Compare - Criteria Build Complete

```
File-AID ------------- Compare - Criteria Build Complete  ---------------------
COMMAND ===>



  Your COMPARE Criteria are complete.  You may:


  Use ENTER to execute COMPARE.

  Use END to return to previous panel.

  Use SAVE to save your criteria.

  Use VIEW to inspect your criteria.

  Use CANCEL to exit COMPARE (SAVE will not be issued).
```

- Press Enter to execute an online Compare or view the Batch JCL.
- Press PF3 (END) to return to the previous screen.
- Enter the SAVE primary command to save your Compare criteria before proceeding with the comparison. Criteria is saved in the new style control cards even when existing criteria in the old style is used.
- Enter the VIEW primary command to display and inspect your new style Compare Criteria before proceeding with the comparison.
- Enter the CANCEL primary command to exit the Compare function without saving your Compare Criteria.

View Criteria

The "Compare - View Criteria" screen (Figure 20-29 on page 20-45) displays the current compare criteria in a scrollable display.

Use the VIEW primary command on the Compare - Build Criteria Complete screen to display this screen. Use the END command (PF3) to exit the View Criteria screen.

Figure 20-29. Compare - View Criteria

```
 Menu  Utilities  Compilers  Help
 ------------------------------------------------------------------------------
 BROWSE    USERID9.FILEAID.CC.D00159.T171508          Line 00000000 Col 001 080
 Command ===>                                                  Scroll ===> CSR
******************************** Top of Data ***********************************
*
*   COMPARE OPTIONS
0000 COMPARE_MODE=UNFORMATTED
0000 COMPARE_TYPE=READ_AHEAD
0000 READ_AHEAD_COUNT=100
0000 READ_AHEAD_SEQUENCE=ENFORCE
0000 RECORDS_TO_COMPARE=ALL
0000 DIFFERENCES_TO_COMPARE=ALL
*
*   PRINT OPTIONS
0000 PRINT_FORMAT=CHAR
0000 MAX_DIFFERENCES_TO_REPORT=ALL
0000 RECORD_TYPES_TO_PRINT=CHANGED,DELETED,INSERTED,MATCHED
0000 UNFORMATTED_REPORT_STYLE=STANDARD
0000 UNFORMATTED_PRINT_SEQUENCE=GROUP
*
*   OUTPUT OPTIONS
*   NOT SPECIFIED
*
```

Criteria Dataset Specification

The “Compare - Criteria Dataset Specification” screen (Figure 20-30) enables you to specify a Compare Criteria dataset in which to save your compare criteria. File-AID displays this screen when the SAVE primary command is entered on the Criteria Build Complete screen. The compare criteria file is FB 80 and can be a Sequential file or a member of a PDS/PDSE.

For a pre-release 8.7 compare criteria dataset, specify Compare Criteria usage of M (Modify) and the dataset information on the Compare - Criteria Build Complete screen. You may save the new-style criteria to the same or a different dataset. These steps convert the old-style criteria to the new-style criteria.

Figure 20-30. Compare - Criteria Dataset Specification

```
File-AID -------- Compare - Criteria Dataset Specification --------------------
COMMAND ===>

Specify Compare Criteria Information:
   Criteria dataset name    ===>
   Member name              ===>          (Blank or pattern for member list)









Use ENTER to save into the specified dataset
Use END to stop save and return to Criteria Build Complete Screen
```

Field Descriptions

Specify Compare Criteria Information:

Criteria dataset name : Specify the name of a Compare Criteria dataset.

Member name : If the file is a partitioned dataset, enter the member name or blank for member selection list.

Press Enter to save into the specified dataset. Press End (PF3) to stop the save and return to the Criteria Build Complete screen. If the dataset does not currently exist, File-AID prompts you, online, to allocate the file.

Compare Results - Member Summary

The "Compare Results - Member Summary" screen, shown in Figure 20-31, displays the Member Summary report when you set "Display interactive member summary screen" and "Print member summary report" to Y on the "Compare - Source Print Option (Page 1)" or "Compare - JCL Print Option (Page 1)" screen. Enter the appropriate line command to view the compare results.

Note that for a JCL Compare the headings O-Read and N-Read replace the headings O-Line and N-Line shown in Figure 20-31 for a Source Compare.

Figure 20-31. Compare Results - Member Summary

```
File-AID ------ Compare Results - Member Summary-------------- Row 1 to 4 of 4
COMMAND ===>                                                  SCROLL ===> CSR

Old dataset: USERID9.FASAMP.COBSRC.OLD
New dataset: USERID9.FASAMP.COBSRC.NEW
Line commands: B = Browse report; X = eXclude detail print; E = Edit-helper
--------------------------------- (Shifted) --------------------------------
S Name       Result   O-Line N-Line  Match Change Delete Insert O-excl N-excl
_ CBLPGM1    CHANGED      99     99     68     30      1      .      .      1
_ CBLPGM2    MATCHED      56     56     56      .      .      .      .      .
_ CBLPGM3    DELETED       .      .      .      .      .      .      .      .
_ CBLPGM4    INSERTED      .      .      .      .      .      .      .      .
************************** END OF MEMBER SUMMARY ****************************
```

After you have completed the desired line commands for each member, use END to continue with the "Compare - Report Print" screen on page 20-61.

Field Descriptions

The member summary lists the compared members and identifies the old and new datasets.

S : Enter one of the following line commands in this field:

- **B :** Browse the compare online report for the selected member. Displays the detail report for either a source code or JCL compare. See Figure 20-37 on page 20-51 through Figure 20-41 on page 20-55 for examples.

X : eXclude detail print. File-AID will not print the detail compare report for the excluded member.

E : Edit-helper. Edit the NEW member. If the member contains editable data, the "Compare - Edit-Helper" screen (Figure 20-32 on page 20-48) displays.

Name : Displays the compared member name.

Result : Displays compare result for each compared member:

MATCHED : Both old and new member are the same.

CHANGED : There are differences between the old and new member.

DELETED : This member has been deleted in the new dataset.

INSERTED : This member has been inserted into the new dataset.

ERROR : The compare failed to execute, possibly due to incompatible compare criteria, for example you specified COBOL sequence number for Line compare synchronization when comparing PLI source files.

O-Line : Displays number of compared lines in the OLD member (Source Compare only).

O-Read : Displays number of compared statements in the OLD member (JCL Compare only).

N-Line : Displays number of compared lines in the NEW member (Source Compare only).

N-Read : Displays number of compared statements in the NEW member (JCL Compare only).

Match : Displays number of matching lines.

Change : Displays number of changed lines.

Delete : Displays number of deleted lines.

Insert : Displays number of inserted lines.

O-excl : Displays number of excluded lines in the old member.

N-excl : Displays number of excluded lines in the new member.

Line Commands

To view or edit a specific compared member use the following line commands

B : Browse the report for a specific member. A member that has the status of Deleted or Inserted cannot be browsed because there is no data to view. See "Compare Online Reports" on page 20-49 for more details.

X : Exclude a specific member from the printed detail report. A member that has the status of Deleted or Inserted has no detail data to exclude.

E : Edit a specific member. A member that has the status of Deleted or Inserted cannot be edited because there is no data to edit.
To use EDIT the following print options must be set:

- Detail report style (S) Standard
- Lines to print (A) All
- Print new file excluded lines (Y) Yes

Compare - Edit-Helper

The "Compare - Edit-Helper" screen, shown in Figure 20-32 on page 20-48, displays after you entered the E line command for a member on the "Compare Results - Member Summary" screen. This edit session displays the content of the NEW member with the non-matching lines of the OLD inserted as INFO lines. This allows you to interactively edit the NEW while simultaneously seeing the OLD in one session.

Figure 20-32. Compare - Edit-Helper

```
 File  Edit  Edit_Settings  Menu  Utilities  Compilers  Test  Help
 ------------------------------------------------------------------------------
EDIT       USERID9.FILEAID.CT.D03328.T114352                Columns 00001 00088
 Command ===>                                                  Scroll ===> CSR
 ****** ****************************** Top of Data ******************************
 =NOTE= OLD DSN: USERID9.FASAMP.COBSRC.OLD(CBLPGM1)
 =NOTE= NEW DSN: USERID9.DASAMP.COBSRC.NEW(CBLPGM1)
 =NOTE= STATUS ----+----1----+----2----+----3----+----4----+----5----+----6----+
 000001 MATCH  000100 IDENTIFICATION DIVISION.
 000002 MATCH  000200 PROGRAM-ID.    CBLPGM1.
 000003 X      000300*-------------------------------------------------------
 000004 X      000400* Program CBLPGM1
 000005 X      000500* TRIANGLE Type DETERMINATION
 000006 X      000600*-------------------------------------------------------
 000007 X      000700
 =NOTE= ====================== BEGINNING OF CHANGE BLOCK ========================
 ====== DELETE 000700 ENVIRONMENT DIVISION.
 ====== CHANGE 000800 INPUT-OUTPUT SECTION.
 =NOTE= ~~~~~~        ~ ~~~~~~~~~~~~~~~~
 ====== CHANGE 000900 FILE-CONTROL.
 =NOTE= ~~~~~~        ~~~~~~ ~ ~~~~~~~~~~~~~
 ====== CHANGE 001000     SELECT INFILE    ASSIGN TO INFILE.
 =NOTE= ~~~~~~        ~~~~~~~~~~~~~~~~~~    ~~~~~~ ~~ ~~~~~~~
 ====== CHANGE 001100     SELECT SORT-FILE ASSIGN TO SORTFILE.
```

Editing Tips

Use standard ISPF editing commands, for example you could use the MD (Make Data) line command to convert an OLD INFO line to a data line in the NEW.

Compare - Save Modified Member

The “Compare - Save Modified Member” screen, shown in Figure 20-33, displays after editing a member in the “Compare - Edit-Helper” screen. Enter a dataset name when you decide to save the edited member. Press END to return without saving the member.

Figure 20-33. Compare - Save Modified Member

```
 File-AID -------- Compare - Save Modified Member ------------------------------
 COMMAND ===>

 Destination Dataset Information:
    Dataset name    ===>
    Member name     ===>          (Blank or pattern for member list)









 Use ENTER to save the modified member into the specified dataset
 Use END to not save the modified member
         and return to the Compare Results Member Summary
```

Field Descriptions

Specify a dataset into which to save your edited member. The file can be a sequential file or a member of a PDS/PDSE.

Dataset name : Specify the name of a dataset.

Member name : If the file is a partitioned dataset, enter the member name or blank for member selection list.

Compare Online Reports

The compare online reports show the compare results in the specified format on your screen after you have executed an online compare. Press End (PF3) to exit the display.

Unformatted Report

Figure 20-34 shows a sample report of an unformatted compare. The report displays the OLD compare lines/block ahead of the NEW compare lines/block.

Figure 20-34. Compare Online Report - Unformatted

```
 Menu  Utilities  Compilers  Help
 ------------------------------------------------------------------------------
 BROWSE    USERID9.FILEAID.CR.D03328.T170305          Line 00000000 Col 001 080
 Command ===>                                                Scroll ===> CSR
********************************** Top of Data ***********************************
File-AID 8.9    COMPARE DETAIL REPORT              USERID-USERID9        DATE 20
"OLD" DSN: USERID9.FASAMP.EMPLOYEE                                  "NEW" DSN: USE
==============================================================================
MATCHED OLD REC         1
MATCHED NEW REC         1   ----+----1----+----2----+----3----+----4----+----5--
         POS.     1-  100   00090MARTIN         EDWARD    M  AIRPLANE MANUFACTUR

         POS.   101-  198   .859 O'FARREL ST.          SAN FRANCISCO  CA  12121B

==============================================================================
MATCHED OLD REC         2
MATCHED NEW REC         2
         POS.     1-  100   00100MULSTROM       ROBERTA   A  HOLLYWOOD SEAMSTRES

         POS.   101-  198   .4701 N. BASCOM AVE. #430  ANAHEIM        CA  95126G

==============================================================================
MATCHED OLD REC         3
MATCHED NEW REC         3
```

Formatted Report

Figure 20-35 shows a sample report of a formatted compare. The report displays the OLD compare lines/block ahead of the NEW compare lines/block.

Figure 20-35. Compare Online Report - Formatted

```
 Menu  Utilities  Compilers  Help
 ------------------------------------------------------------------------------
 BROWSE    USERID9.FILEAID.CR.D03328.T171616          Line 00000000 Col 001 080
 Command ===>                                                Scroll ===> CSR
********************************** Top of Data ***********************************
File-AID 8.9    COMPARE DETAIL REPORT              USERID-USERID9        DATE 20
"OLD" DSN: USERID9.FASAMP.EMPLOYEE                                "NEW" DSN: USE
==============================================================================
MATCHED RECORD       "OLD" FILE RECORD:         1                |
 NUM DATA-FIELD-NAME                FORMAT   FIELD VALUES         | NUM DATA-FIEL
---- ---------------------------- -------- --------------------  |---- ---------
   1 EMPLOYEE-MASTER-FILE                                         |   1 EMPLOYEE-
                                                                  |
>>> COMPARED FIELDS -    -    -    -    -    -    -    -    -    |    -    -
                                                                  |
   2 EMP-NUMBER                   C      5 00090                 |
   3 EMP-LAST-NAME                C     15 MARTIN                |
   4 EMP-FIRST-NAME               C     10 EDWARD                |
   5 EMP-MID-INIT                 C      1 M                     |
   6 FILLER                       C      2                       |
   7 EMP-TITLE                    C     30 AIRPLANE MANUFACTURE  |
     (POS 21-30)                            R                    |
   9 EMP-NATL-ID-NUMBER           Z   9    427890125             |
  10 FILLER                       C      1                       |
```

Load Library Compare Report

Figure 20-36 shows a sample report of a formatted compare. The report displays the OLD compare lines/block ahead of the NEW compare lines/block.

Figure 20-36. Compare Online Report - Load Library

```
   Menu  Utilities  Compilers  Help
 ------------------------------------------------------------------------------
 BROWSE    USERID9.FILEAID.CR.D03335.T121441                  Compare completed
 Command ===>                                                 Scroll ===> CSR
********************************** Top of Data ***********************************
File-AID 8.9    COMPARE LOAD LIBRARY DETAIL REPORT     USERID-USERID9       DATE
"OLD" DSN: USERID9.FASAMP.LOADLIB1                                "NEW" DSN: USE
==============================================================================
 MEMBER   FILE      STATUS   SIZE(HEX) SIZE(DEC)  EPA/ADDR  LINK/CSECT  RMODE  A
--------  -------  --------  --------- ---------  --------  ----------  -----  -
AGER0100  OLD      CHANGED         CB8     3,256        0   1997/09/09   ANY
          NEW      CHANGED        D7E8    55,272            1998/07/22   24

 CSECT = AGER0100
          OLD      CHANGED         848     2,120        0   1997/08/24   ANY
          NEW      CHANGED         B11     2,833            1998/07/14   24

          OFFSET   OLD 47F0F070 23C1C7C5 D9F0F1F0 F040C3F2   40F14BF3 4BF140F0 F
             0     NEW                                                      F

          OFFSET   OLD F1F74BF5 F74BF3F1 00000054 60E8640C   00000000 00000109 0
            20     NEW   F3  F2     F5F7              04                80

          OFFSET   OLD 00000400 0000003E 00000036 00000000   40404040 00000000 0
```

The Load Library Compare Report identifies the OLD and NEW load library datasets and lists the compared members. The report displays the following columns:

MEMBER : Displays the member name of the old and new file. It also displays the CSET names indented by one position under the Member name.

FILE : Displays OLD or NEW to identify which file the following compare information belongs.

STATUS : Displays the compare results statusof the old and new file. It also displays the CSET names indented by one position under the Member name.

MATCHED : Both old and new member are the same.

CHANGED : There are differences between the old and new member.

DELETED : This member has been deleted in the new dataset.

INSERTED : This member has been inserted into the new dataset.

SIZE(HEX) : Displays the size as a hexadecimal value.

SIZE(DEC) : Displays the size as a decimal value.

EPA/ADDR : Displays the entry point address or the CSECT hex-offset value.

LINK/CSECT : Displays the link date or CSECT assembly or compile date.

RMODE : Displays the residency mode value.

AMODE : Displays the addressing mode value.

ATTRIBUTES OR LANGUAGE : Displays the load module attribute or CSECT language identifier value.

Source Code Standard Report Format

All source code compare reports can be viewed in the Standard report format. Figure 20-37 shows a sample source code compare report in standard format. This sample report also has the underline changes with the ~ character turned on. Standard displays the OLD compare lines/block ahead of the NEW compare lines/block.

Figure 20-37. Standard Source Code Compare Online Report

```
   Menu  Utilities  Compilers  Help
 ------------------------------------------------------------------------------
 BROWSE    USERID9.FILEAID.CT.D03335.T165101          Line 00000000 Col 001 080
 Command ===>                                                Scroll ===> CSR
******************************** Top of Data ********************************
File-AID 8.9    COMPARE SOURCE DETAIL REPORT           USERID-USERID9       DATE
OLD DSN: USERID9.FASAMP.COBSRC.OLD(CBLPGM1)                       NEW DSN: USERI

      OLD-# NEW-# STATUS ----+----1----+----2----+----3----+----4----+----5----+

      00001 00001 MATCH  000100 IDENTIFICATION DIVISION.
      00002 00002 MATCH  000200 PROGRAM-ID.    CBLPGM1.
            00003 X      000300*-----------------------------------------------
            00004 X      000400* Program CBLPGM1
            00005 X      000500* TRIANGLE Type DETERMINATION
            00006 X      000600*-----------------------------------------------
            00007 X      000700
==============================================================================
OLD | 00007       DELETE 000700 ENVIRONMENT DIVISION.
    | 00008 00008 CHANGE 000800 INPUT-OUTPUT SECTION.
    |             ~~~~~~        ~ ~~~~~~~~~~~~~~~
    | 00009 00009 CHANGE 000900 FILE-CONTROL.
    |             ~~~~~~        ~~~~~~ ~ ~~~~~~~~~~~~~
    | 00010 00010 CHANGE 001000     SELECT INFILE    ASSIGN TO INFILE.
```

The Source Code Compare Report identifies the OLD and NEW datasets and lists the compared members.

Change Block

Source code compare also introduces the concept of a change block. All of the lines between synchronization points are considered part of a change block. Within the change block there can be inserted, deleted and changed lines. A line is considered a changed line if there is a high degree of similarity between the lines on the old and new file.

The concept of a change block allows more lines to be considered changed lines instead of inserted or deleted lines. This logic is different from the normal compare logic where a record can only be considered a change if there is a matching sync-key.

The report displays the following columns:

OLD-# : Displays the line number of the OLD file.

NEW-# : Displays the line number of the NEW file.

STATUS : Displays the compare results status for the compared line.

MATCH : Both old and new line are the same.

CHANGE : There are differences between the old and new lines.

DELETE : This line has been deleted.

INSERT : This line has been inserted.

SHIFT : This line has been shifted. A line is considered a shifted line if the only difference between the lines is the number of blanks.

X : This line has been excluded from the comparison.

Source Code Across Report Format

For Source Code compares, you can also view the report in an across format. Figure 20-38 shows a sample source code compare report in across format and normal data width. This sample report also has the underline changes with the ~ character turned on. Across displays the OLD compare lines/block to the left of the NEW compare lines/block. In addition, the Data width can be normal or wide.

Figure 20-38. Source Code Compare Online Report - Across, Normal

```
 Menu  Utilities  Compilers  Help
 ------------------------------------------------------------------------------------------------------------------------------------
 BROWSE    USERID9.FILEAID.CT.D03338.T150016                                                          Line 00000000 Col 001 132
 Command ===>                                                                                                  Scroll ===> CSR
******************************************************** Top of Data ************************************************************
File-AID 8.9    COMPARE SOURCE DETAIL REPORT           USERID-USERID9       DATE 2003/12/04      TIME 15:00:09         PAGE       1
OLD DSN: USERID9.FASAMP.COBSRC.OLD(CBLPGM1)                       NEW DSN: USERID9.FASAMP.COBSRC.NEW(CBLPGM1)

----+----1----+----2----+----3----+----4----+----5----+  OLD-# STATUS NEW-#  ----+----1----+----2----+----3----+----4----+----5----+

000100 IDENTIFICATION DIVISION.                           00001 <MAT>  00001  000100 IDENTIFICATION DIVISION.
000200 PROGRAM-ID.    CBLPGM1.                            00002 <MAT>  00002  000200 PROGRAM-ID.    CBLPGM1.
000300*---------------------------------------------  00003 X      00003  000300*---------------------------------------------
000400* Program CBLPGM1                                   00004 X      00004  000400* Program CBLPGM1
000500* TRIANGLE TYPE                                     00005 X      00005  000500* TRIANGLE Type DETERMINATION
000600*---------------------------------------------  00006 X      00006  000600*---------------------------------------------
                                                                X      00007  000700
==================================================================================================================================
000700 ENVIRONMENT DIVISION.                              00007 <DEL
000800 INPUT-OUTPUT SECTION.                              00008 <CHG>  00008  000800 ENVIRONMENT DIVISION.
       ~ ~~~~~~~~~~~~~~~                                        ~~~~~                ~ ~~~~~~~~~~~~~~~
000900 FILE-CONTROL.                                      00009 <CHG>  00009  000900 INPUT-OUTPUT SECTION.
       ~~~~~~ ~ ~~~~~~~~~~~~                                    ~~~~~                ~~~~~~ ~ ~~~~~~~~~~~~
001000     SELECT INFILE    ASSIGN TO INFILE.            00010 <CHG>  00010  001000 FILE-CONTROL.
       ~~~~~~~~~~~~~~~~    ~~~~~~ ~~ ~~~~~~~                    ~~~~~                ~~~~~~~~~~~~~~~~~    ~~~~~~ ~~ ~~~~~~~
001100     SELECT SORT-FILE ASSIGN TO SORTFILE.          00011 <CHG>  00011  001100     SELECT INFILE    ASSIGN TO INFILE.
                   ~~~~~~~~~            ~~~~~~~~~                ~~~~~                          ~~~~~~~~~            ~~~~~~~~~
```

The Compare Report identifies the OLD and NEW datasets and lists the compared members. The report displays the following columns:

OLD-# : Displays the line number of the OLD file.

STATUS : Displays the compare results status for the compared line. The left (<) and right (>) arrows point to the applicable OLD (<) and/or NEW (>)

<MAT> : Both old and new line are the same.

<CHG> : There are differences between the old and new lines.

<DEL : This line has been deleted.

INS> : This line has been inserted.

<SHF> : This line has been shifted. A line is considered a shifted line if the only difference between the lines is the number of blanks.

X : This line has been excluded from the comparison.

NEW-# : Displays the line number of the NEW file.

JCL Compare Standard Report Format

All JCL compare reports can be viewed in the Standard report format. Figure 20-39 shows a sample source code compare report in standard format. Standard displays the old compare lines/block ahead of the new compare lines/block.

Figure 20-39. JCL Compare Online Report - Standard

```
 Menu  Utilities  Compilers  Help
 ------------------------------------------------------------------------------
 BROWSE    USERID9.FILEAID.CT.D03343.T103439          Line 00000000 Col 001 080
 Command ===>                                                  Scroll ===> CSR
********************************* Top of Data ***********************************
File-AID 8.9    COMPARE JCL DETAIL REPORT              USERID-USERID9       DATE
OLD DSN: USERID9.FASAMP.JCL.OLD(JCL2)                            NEW DSN: USERI

      OLD-# NEW-# STATUS ----+----1----+----2----+----3----+----4----+----5----+

JOB       NAME = MYJOB      FILE = OLD/NEW   STATUS = CHANGED

      00001 00001 MATCH  //MYJOB    JOB (ACCOUNTING),
      00002 00002        //*            NOTIFY=TSOUSER,              *** TSO USE
      00003 00003        //             CLASS=A,MSGCLASS=A,          *** CHANGE
      00004 00004        //             MSGLEVEL=(1,1),TIME=(,10)             ST
            00005 X      //*
            00006 X      //*

PROC      NAME = TESTPROC   FILE = OLD/NEW   STATUS = CHANGED

      00007 00007 MATCH  //TESTPROC PROC PROG=TRIMAIN,
            00008        //         INPUT=NULLFILE
```

The JCL Compare Report identifies the OLD and NEW datasets and lists the compared members. The standard detail report displays the following columns:

OLD-# : Displays the line number of the OLD file.

NEW-# : Displays the line number of the NEW file.

STATUS : Displays the compare results status for the compared line.

MATCH : Both old and new line are the same.

CHANGE : There are differences between the old and new lines.

DELETE : This line has been deleted.

INSERT : This line has been inserted.

ORDER : Keyword compare only. The line or statement compares, only the ORDER is different.

X : This line has been excluded from the comparison.

JCL Compare Across Report Format

For JCL compares, you can also view the report in an across format. Across displays the old compare lines/block to the left of the new compare lines/block

Figure 20-40 shows a sample JCL compare report in across format and normal data width..

Figure 20-40. JCL Compare Online Report - Across Normal

```
 Menu  Utilities  Compilers  Help
 ------------------------------------------------------------------------------------------------------------------------------
 BROWSE    USERID9.FILEAID.CT.D03338.T150016                                                    Line 00000000 Col 001 132
 Command ===>                                                                                     Scroll ===> CSR
********************************************************** Top of Data ******************************************************
FFile-AID 8.9    COMPARE JCL DETAIL REPORT              USERID-USERID9       DATE 2003/12/09      TIME 10:54:53         PAGE       1
OLD DSN: USERID9.FASAMP.JCL.OLD(JCL2)                            NEW DSN: USERID9.FASAMP.JCL.NEW(JCL2)

----+----1----+----2----+----3----+----4----+----5----+  OLD-# STATUS NEW-#  ----+----1----+----2----+----3----+----4----+----5----+

JOB       NAME = MYJOB      FILE = OLD/NEW   STATUS = CHANGED

                                                          <MAT>  00001  //MYJOB    JOB (ACCOUNTING),
                                                                 00002  //*            NOTIFY=TSOUSER,              *** TSO USE
                                                                 00003  //             CLASS=A,MSGCLASS=A,          *** CHANGE
                                                                 00004  //             MSGLEVEL=(1,1),TIME=(,10)             ST
                                                          X      00005  //*
                                                          X      00006  //*

PROC      NAME = TESTPROC   FILE = OLD/NEW   STATUS = CHANGED

                                                          <MAT>  00007  //TESTPROC PROC PROG=TRIMAIN,
                                                                 00008  //         INPUT=NULLFILE

PSTEP     NAME = RUNPROG    FILE = OLD/NEW   STATUS = CHANGED

                                                          <MAT>  00009  //RUNPROG  EXEC PGM=&PROG
```

The Compare Report identifies the OLD and NEW datasets and lists the compared members. The report displays the following columns:

OLD-# : Displays the line number of the OLD file.

STATUS : Displays the compare results status for the compared line. The left (<) and right (>) arrows point to the applicable OLD (<) and/or NEW (>)

<MAT> : Both OLD and NEW line are the same. File-AID only prints the NEW line.

<CHG> : There are differences between the old and new lines.

<DEL : This line has been deleted.

INS> : This line has been inserted.

<ORD> : Keyword compare only. The line or statement compares, only the ORDER is different.

X : This line has been excluded from the comparison.

NEW-# : Displays the line number of the NEW file.

Figure 20-41 on page 20-55 shows a sample JCL compare report in across format and WIDE data width. Across displays the old compare lines/block to the left of the new compare lines/block.

Figure 20-41. JCL Compare Online Report - Across Wide

```
   Menu  Utilities  Compilers  Help
 ------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------
 BROWSE    USERID9.FILEAID.CT.D03338.T152618                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
 Command ===>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
File-AID 8.9    COMPARE JCL DETAIL REPORT              USERID-USERID9       DATE 2003/12/04      TIME 15:26:03         PAGE       1
OLD DSN: USERID9.FASAMP.JCL.OLD(JCL2)                                 NEW DSN: USERID9.FASAMP.JCL.NEW(JCL2)

----+----1----+----2----+----3----+----4----+----5----+----6----+----7----+----8  OLD-# STATUS NEW-#  ----+----1----+----2----+----3----+----4----+----5----+----6----+----7----+----8

JOB       NAME = MYJOB      FILE = OLD/NEW   STATUS = CHANGED

PROC      NAME = TESTPROC   FILE = OLD/NEW   STATUS = CHANGED

PSTEP     NAME = RUNPROG    FILE = OLD/NEW   STATUS = CHANGED

==========================================================================================================================================================================================================================================================================================
//STEPLIB  DD  DSN=USER.LIB2,                          *** MODIFY                 00009 <ORD>  00010  //STEPLIB  DD  DSN=USER.LOADL1,DISP=SHR                *** MODIFY
//         DD  DSN=USER.LOADL1,                        *** MODIFY                 00011 <ORD>  00011  //         DD  DSN=USER.LIB2,DISP=SHR                  *** MODIFY
==========================================================================================================================================================================================================================================================================================

==========================================================================================================================================================================================================================================================================================
//INFILE   DD  DISP=OLD,DSN=&INPUT                                                00016 <CHG>  00015  //INFILE   DD  DSN=&INPUT,DISP=SHR
               ~~~~~+++                                                                 ~~~~~~                                  ~~~~~+++
==========================================================================================================================================================================================================================================================================================

STEP      NAME = MYTEST     FILE = OLD/NEW   STATUS = CHANGED

==========================================================================================================================================================================================================================================================================================
//MYTEST   EXEC TESTPROC,PROG=TRIMAINA                                            00021 <CHG>  00020  //MYTEST   EXEC TESTPROC,PROG=TRMAINB
                          ~~~~~  ++++++                                                 ~~~~~~                                  ~~~~~  +++++
==========================================================================================================================================================================================================================================================================================

==========================================================================================================================================================================================================================================================================================
//INFILE   DD  *                                                                 00022 <MAT>  00021  //INFILE   DD  *
345                                                                             00023 <MAT>  00022  345
789                                                                             00024 <MAT>  00023  789
563                                                                             00025 <MAT>  00024  563
234                                                                             00026 <DEL
                                                                                       INS>  00025  235
345                                                                             00027 <MAT>  00026  345
445                                                                             00028 <MAT>  00027  445
555                                                                             00029 <MAT>  00028  555
336                                                                             00030 <DEL
                                                                                       INS>  00029  338
555                                                                             00031 <MAT>  00030  555
123                                                                             00032 <MAT>  00031  123
124                                                                             00033 <MAT>  00032  124
==========================================================================================================================================================================================================================================================================================
```

Report Summaries

All compare reports include a report summary at the end of the report. The summary includes your specified Compare Criteria and Format Parameters.

Report Summaries -- Formatted Compare

Figure 20-42 shows a sample compare summary report for a formatted compare.

Figure 20-42. Summary Report -- Formatted Compare

```
File-AID 8.9    COMPARE SUMMARY REPORT             USERID-USERID9        DATE 20
"OLD" DSN: USERID9.FASAMP.EMPLOYEE                                "NEW" DSN: USE
================================================================================
    COMPARE CRITERIA:
            COMPARE MODE:                                FORMATTED
            COBOL LAYOUT USAGE:                          SINGLE
            COBOL DATASET NAME:                          USERID9.FASAMP.LAYOUTS

    REPORT FORMAT PARAMETERS:
            PRINT FORMAT:                                FORMATTED
            MAX NUMBER OF DIFFERENCES TO REPORT:         0  (0 = NO LIMIT)
            PRINT RECORDS SELECTED:                      CHANGED, INSERTED, DELET
            FORMATTED REPORT OPTION:                     ALL ASSOCIATED FIELDS
            COMPARED FIELDS OPTION:                      CHANGED ONLY
            FIELD STATISTICS REPORT:                     YES

    COMPARE STATISTICS:
            "OLD" DATASET RECORDS READ:                 50
            "NEW" DATASET RECORDS READ:                 50
            "OLD" DATASET RECORDS COMPARED:             50
            "NEW" DATASET RECORDS COMPARED:             50
            NUMBER OF RECORDS MATCHED:                  49
            NUMBER OF RECORDS CHANGED:                   1
            NUMBER OF RECORDS INSERTED:                  0
            NUMBER OF RECORDS DELETED:                   0

                        ****  E N D   O F   R E P O R T  ****
```

The Compare Statistics summarize the compare results.

"OLD" DATASET RECORDS READ : Displays the number of records read for the old file.

“NEW" DATASET RECORDS READ : Displays the number of records read for the new file.

"OLD" DATASET RECORDS COMPARED : Displays the number of records compared for the old file.

“NEW" DATASET RECORDS COMPARED : Displays the number of records compared for the new file.

NUMBER OF RECORDS MATCHED : Displays number of matching records for the old and new file.

NUMBER OF RECORDS CHANGED : Displays number of changed records.

NUMBER OF RECORDS INSERTED : Displays the number of inserted records for the old and new file.

NUMBER OF RECORDS DELETED : Displays the number of deleted records for the old and new file.

Report Summaries -- Unformatted Compare

Figure 20-43 shows a sample report summary for a source code compare.

Figure 20-43. Summary Report -- Unformatted Compare

```
File-AID 8.9    COMPARE SUMMARY REPORT            USERID-USERID9        DATE 20
"OLD" DSN: USERID9.FASAMP.EMPLOYEE                                "NEW" DSN: USE
==============================================================================
    COMPARE CRITERIA:
            COMPARE MODE:                                UNFORMATTED

    REPORT FORMAT PARAMETERS:
            PRINT FORMAT:                                CHARACTER
            MAX NUMBER OF DIFFERENCES TO REPORT:         0  (0 = NO LIMIT)
            PRINT RECORDS SELECTED:                      CHANGED, INSERTED, DELET
            UNFORMATTED REPORT STYLE:                    CONDENSED
            OLD/NEW PRINT SEQUENCE:                      GROUPED

            CONDENSED REPORT OPTIONS IN EFFECT:
            PRINT CHANGED RECORD CONTENT:                       RECORD
            PRINT INSERTED RECORD CONTENT:                      RECORD
            PRINT DELETED RECORD CONTENT:                       RECORD
            PRINT MATCHED RECORD CONTENT:                       RECORD
            PRINT "RULER" (T)OP OF PAGE, (A)LWAYS, OR (N)EVER: TOP
            SUPPRESS PRINT LINES THAT DO NOT CONTAIN CHANGES:  YES
            PRINT ONLY CHANGED DATA FOR THE NEW RECORD:        NO
            UNDERLINE CHANGES:                                 BOTH
            UNDERLINE KEY OR SYNC                              BOTH
            CHANGED DATA UNDERLINE CHARACTER:                  _
            KEY OR SYNC FIELD UNDERLINE CHARACTER:


    COMPARE STATISTICS:
            "OLD" DATASET RECORDS READ:                50
            "NEW" DATASET RECORDS READ:                50
            "OLD" DATASET RECORDS COMPARED:            50
            "NEW" DATASET RECORDS COMPARED:            50
            NUMBER OF RECORDS MATCHED:                 49
            NUMBER OF RECORDS CHANGED:                  1
            NUMBER OF RECORDS INSERTED:                 0
            NUMBER OF RECORDS DELETED:                  0

                        ****  E N D   O F   R E P O R T  ****
```

The Compare Statistics summarize the compare results.

"OLD" DATASET RECORDS READ : Displays the number of records read for the old file.

"NEW" DATASET RECORDS READ : Displays the number of records read for the new file.

"OLD" DATASET RECORDS COMPARED : Displays the number of records compared for the old file.

"NEW" DATASET RECORDS COMPARED : Displays the number of records compared for the new file.

NUMBER OF RECORDS MATCHED : Displays number of matching records for the old and new file.

NUMBER OF RECORDS CHANGED : Displays number of changed records.

NUMBER OF RECORDS INSERTED : Displays the number of inserted records for the old and new file.

NUMBER OF RECORDS DELETED : Displays the number of deleted records for the old and new file.

Report Summaries -- Load Library Compare

In addition to the Compare Criteria and Format Parameters, the summary for a Load Library Compare includes dataset characteristics and the CSECT selection criteria you specified. Figure 20-44 shows a sample report summary for a Load Library compare.

Figure 20-44. Summary Report -- Load Library Compare

```
File-AID 8.9    COMPARE LOAD LIBRARY SUMMARY REPORT    USERID-USERID9        DATE
"OLD" DSN: USERID9.FASAMP.LOADLIB1                              "NEW" DSN: USE
================================================================================
     DATASET CHARACTERISTICS:                          OLD DATASET    NEW DATAS
             DATASET TYPE:                             PDS            PDS
             BLOCKSIZE:                                6144           6144

     COMPARE CRITERIA
             COMPARE MODE:                             LOAD LIBRARY
             MEMBER CRITERIA:                          NAME, SIZE, EPA, ATTRIBU
             CSECT CRITERIA:                           NAME, SIZE, LANGUAGE, CS
             TEXT COMPARE THRESHOLD:                   200

     CSECT SELECTION CRITERIA:
             CSECT SELECTION LIST:                     NONE

     REPORT FORMAT PARAMETERS:
             PRINT DETAIL REPORT:                      YES
             PRINT MEMBER SUMMARY REPORT:              YES
             PRINT MEMBERS SELECTED:                   CHANGED, DELETED, INSERT
             PRINT MEMBER NAME REPORT:                 YES
             PDS NAME REPORT COLUMNS:                  8

     COMPARE STATISTICS:
             NUMBER OF MATCHED MEMBERS:                        0
             NUMBER OF CHANGED MEMBERS:                       18
             NUMBER OF INSERTED MEMBERS:                       0
             NUMBER OF DELETED MEMBERS:                        3
             NUMBER OF MEMBERS NOT FOUND:                      0

                        ****  E N D   O F   R E P O R T  ****
```

The Compare Statistics summarize the compare results.

NUMBER OF MATCHED MEMBERS : Displays number of matching members for the old and new datasets.

NUMBER OF CHANGED MEMBERS : Displays number of changed members.

NUMBER OF INSERTED MEMBERS : Displays the number of inserted members for the old and new file.

NUMBER OF DELETED MEMBERS : Displays the number of members records for the old and new file.

NUMBER OF MEMBERS NOT FOUND : Displays the number of members that couldn't be located.

Report Summaries -- Source Code Compare

The displayed compare statistics are similar to the "Compare Results - Member Summary" on page 20-46. Figure 20-45 shows a sample report summary for a source code compare.

Figure 20-45. Summary Report -- Source Code Compare

```
==============================================================================



COMPARE STATISTICS:                OLD FILE  NEW FILE
        LINES READ:                      99        99
        LINES EXCLUDED:                   0         1
        LINES COMPARED:                  99        98

        NUMBER OF MATCHED LINES:         68        68
        NUMBER OF CHANGED LINES:         30        30
        NUMBER OF SHIFTED LINES:          1         1  (INCLUDED IN CHANGED)
        NUMBER OF DELETED LINES:          1
        NUMBER OF INSERTED LINES:                   0


                        ****  E N D   O F   R E P O R T  ****
```

The Compare Statistics summarize the compare results.

LINES READ : Displays the number of lines read for the old and new file.

LINES EXCLUDED : Displays the number of lines excluded from the compare for the old and new file.

LINES COMPARED : Displays the number of lines compared for the old and new file.

NUMBER OF MATCHED LINES : Displays number of matching lines for the old and new file.

NUMBER OF CHANGED LINES : Displays number of changed lines.

NUMBER OF SHIFTED LINES : Displays the number of shifted lines for the old and new file.

NUMBER OF DELETED LINES : Displays the number of deleted lines for the old and new file.

NUMBER OF INSERTED LINES : Displays the number of inserted lines for the old and new file.

Report Summaries -- JCL Compare

Figure 20-46 shows a sample report summary for a JCL compare.

Figure 20-46. Summary Report -- JCL Compare

```
==============================================================================


COMPARE STATISTICS:                    OLD FILE  NEW FILE
        LINES READ:                          26        26
        LINES EXCLUDED:                      11        11
        LINES COMPARED:                      15        15

        STATEMENTS COMPARED:                 14        14
        NUMBER OF MATCHED STATEMENTS:                   1
        NUMBER OF CHANGED STATEMENTS:                   1
        NUMBER OF DELETED STATEMENTS:        12
        NUMBER OF INSERTED STATEMENTS:                  12

        STEPS COMPARED:                       1         1
        NUMBER OF MATCHED STEPS:                        0
        NUMBER OF CHANGED STEPS:                        0
        NUMBER OF DELETED STEPS:              1
        NUMBER OF INSERTED STEPS:                       1


                        ****  E N D   O F   R E P O R T  ****
```

The Compare Statistics summarize the compare results.

LINES READ : Displays the number of lines read for the old and new file.

LINES EXCLUDED : Displays the number of lines excluded from the compare for the old and new file.

LINES COMPARED : Displays the number of lines compared for the old and new file.

NUMBER OF MATCHED STATEMENTS : Displays number of matching statements for the old and new file.

NUMBER OF CHANGED STATEMENTS : Displays number of changed statements.

NUMBER OF DELETED STATEMENTS : Displays the number of deleted statements for the old and new file.

NUMBER OF INSERTED STATEMENTS : Displays the number of inserted statements for the old and new file.

NUMBER OF MATCHED STEPS : Displays number of matching steps for the old and new file.

NUMBER OF CHANGED STEPS : Displays number of changed steps.

NUMBER OF DELETED STEPS : Displays the number of deleted steps for the old and new file.

NUMBER OF INSERTED STEPS : Displays the number of inserted steps for the old and new file.

Report Print

After you have browsed the Compare report, File-AID displays the "Compare - Report Print" screen (Figure 20-47), allowing you to print the report.

- Press Enter to exit without printing the Compare report.
- Change the Print Compare Report field to Y (Yes) and press Enter to exit and print the Compare report.
- If Y (yes) is selected to print the compare report, any change to number of lines/page will NOT reformat the compare report. The report format is determined by the values in effect during report generation.
- Press PF3 (or use the End primary command) to exit without printing the report.

Figure 20-47. Compare - Report Print

```
File-AID ---------- Compare - Report Print ------------------ INVALID COMMAND
COMMAND ===>




 Print Compare Report     ===> N       (Y = Yes; N = No)

 Instructions:

 Use ENTER to perform above action and return to the initial Compare screen
 Use END to exit without PRINT
```

Field Descriptions

Print Compare Report : Specify whether you want to print the Compare report.

Y : Print the Compare report.

N : (Default) Do not print the Compare report.

Print Parameters

For information on Print parameters, refer to "Print Parameters" on page 3-8.

JCL Specification

The “Compare - JCL Specification” screen, shown in Figure 20-48, enables you to enter JCL information for batch processing of the compare function. Enter the Sysout class for the Compare Report, the JOB statement, and other related JCL related statements. Use the JCL command to edit the generated JCL.

File-AID can be used to create compare JCL and incorporate it into test or production job streams that run it independently of the online screens and environment.

Figure 20-48. Compare - JCL Specification

```
File-AID ---------------- COMPARE - JCL Specification  -------------------------
COMMAND ===>

JCL Information for Batch Processing:

 Sysout class    ===> *

JOB Statement Information:
 ===> //USERID9 JOB ('OFAQC8.6.0',81),'AUDIT',
 ===> //   CLASS=P,NOTIFY=USERID9,MSGCLASS=R
 ===>
 ===>




Use JCL command to edit generated JCL
Use SUBMIT command to submit batch job
Use END to return to main COMPARE panel without submitting job
```

Field Descriptions

JCL Information for Batch Processing:

Sysout class : Specify the output category or output device.

JOB Statement Information : Specify job card information for batch jobs.

After you complete the fields on the Compare - JCL Specification screen, enter one of the following commands:

JCL : File-AID generates the JCL to process the job and displays the Generated JCL Edit screen, where you can edit the generated JCL before you submit it.

SUBMIT : Generates the JCL and submits the job for execution. File-AID then displays the Compare Datasets Specification screen.

END : Returns to the Compare Datasets Specification screen without submitting the job.

Chapter 21. Primary Commands

This chapter describes the primary commands available in File-AID. Primary commands are entered in the COMMAND field of a screen or with a PF-key assignment. The entered command is normally erased upon successful execution. To retain the contents of the COMMAND field, enter the command name preceded by an ampersand (&).

The primary commands control search/display/edit options, including: data editing, movement through the dataset, display and elimination of optional information, and PDS statistics generation. The Browse function supports those primary commands used to search for or display data, and move through the dataset. Browse does not allow commands that change data. Other primary commands are used in the Print, Selection Criteria, XREF, Reformat, and Compare functions, and in the Copy, Search/Update, VSAM, and VTOC utilities.

Primary Command Availability

Table 21-1 shows primary command availability for each display mode of the Browse and Edit functions (character, formatted, vertical formatted, and unformatted) and for the formatted display mode of Selection Criteria and XREF functions.

Table 21-1. Primary Command Availability

Command	(1) Character Browse	(1) Formatted Browse	(1) Vertical Formatted Browse	(1) Unformatted Browse	(2) Character Edit	(2) Formatted Edit	(2) Vertical Formatted Edit	(2) Unformatted Edit	(6) Formatted Selection Criteria	(7) Formatted XREFs
ADD						X				
ALIGN		X				X			X	X
ARRAY		X				X			X	X
AUTOSAVE					X	X	X	X		
BACK	X	X	X	X	X	X	X	X	X	X
BOUNDS					X		X			
CANCEL					X	X	X	X	X	X
CAPS					X	X	X	X	X	X
CHANGE					X	X	X	X		
CHAR		X	X	X		X	X	X		
COLS	X				X		X			
COMPILE	X			X	X			X		
COMPLEX		X				X			X	X
COPY					X		X			
CREATE					X		X			
CUT					X		X			
DELETE					X	X	X	X	X	X

Table 21-1. Primary Command Availability (Continued)

Command	(1) Character Browse	(1) Formatted Browse	(1) Vertical Formatted Browse	(1) Unformatted Browse	(2) Character Edit	(2) Formatted Edit	(2) Vertical Formatted Edit	(2) Unformatted Edit	(6) Formatted Selection Criteria	(7) Formatted XREFs
DISPLAY		X	X			X	X		X	X
DISPLAY REDEF		X	X			X	X			
DOWN	X	X	X	X	X	X	X	X	X	X
END	X	X	X	X	X	X	X	X	X	X
EXCLUDE	X	X	X	X	X	X	X	X		
FBROWSE	X	X	X	X	X	X	X	X	X	X
FEDIT	X	X	X	X	X	X	X	X	X	X
FILLER		X	X			X	X		X	X
FIND	X	X	X	X	X	X	X	X		
FLIP	X	X	X	X	X	X	X	X		
FMT	X		X	X	X		X	X		
FORWARD	X	X	X	X	X	X	X	X	X	X
FPRINT		X				X				
GO	X	X	X	X	X	X	X	X		
GROUP		X				X			X	X
HEX	X		X	X	X		X	X		
HIDE		X	X			X	X			
HOLD		X	X			X	X			
INFO	X		X		X		X			
INIT						X				
INPUT						X		X	X	X
INSERT						X		X	X	X
KEY	X	X	X	X	X	X	X	X		
LEFT	X	X	X	X	X	X	X	X	X	X
LEVEL					X					
LISTALC	X	X	X	X	X	X	X	X		
LOCATE	X	X	X	X	X	X	X	X	X	X
LR		X				X			X	X
MAP	X		X	X	X		X	X		
MERGE					X		X			
MESSAGE	X	X	X	X	X	X	X	X	X	X
NEXT		X				X				
OCCURS		X				X			X	X
OFFSET		X	X			X	X		X	X
OPT									X	
OVERLAY					X		X			
PAD					X		X			
PASTE					X		X			
PICTURE		X				X				

Table 21-1. Primary Command Availability (Continued)

Command	(1) Character Browse	(1) Formatted Browse	(1) Vertical Formatted Browse	(1) Unformatted Browse	(2) Character Edit	(2) Formatted Edit	(2) Vertical Formatted Edit	(2) Unformatted Edit	(6) Formatted Selection Criteria	(7) Formatted XREFs
PRESERVE					X	X	X			
PREV		X				X				
PROFILE	X	X	X		X	X	X		X	X
PROTECT		X				X				
RCHANGE					X	X	X	X		
REBUILD						X				
REDEFINES		X	X			X	X		X	X
REFLNG		X				X			X	X
REMOVE						X				
REPEAT						X		X	X	X
REPLACE					X		X			
RESET	X	X	X	X	X	X	X	X	X	X
RETURN	X	X	X	X	X	X	X	X	X	X
RFIND	X	X	X	X	X	X	X	X		
RIGHT	X	X	X	X	X	X	X	X	X	X
RLOC		X	X			X	X			
SAVE					X	X	X	X	X	
SETUNDO					X	X	X	X		
SHOW		X	X			X	X		X	X
SORT	X	X	X		X	X	X	X		
STATS					X					
SUBMIT	X				X					
SYNC		X				X			X	X
TOP		X				X			X	
UNDO					X	X	X	X		
UNFMT	X	X	X		X	X	X		X	
UP	X	X	X	X	X	X	X	X	X	X
USE		X	X			X	X		X	X
VERSION					X					
VFMT	X	X		X	X	X		X		
VIEW									X	X
VPRINT		X				X				
XMLGEN		X				X				
ZERO		X	X			X	X		X	X

Windowed Edit Primary Command Availability - VSAM and IAM Files

Table 21-2 shows primary command availability for each display mode of the Windowed Edit functions (character, formatted, vertical formatted, and unformatted) for VSAM KSDS and IAM Files. For Windowed Browse, all standard Browse commands are available except for EXCLUDE, SORT, and SUBMIT.

Table 21-2. Windowed Edit Primary Command Availability - VSAM and IAM Files

Command	Character	Formatted	Vertical Formatted	Un-formatted
ADD		X		
ALIGN		X		
ARRAY		X		
AUTOSAVE	X	X	X	X
BACK	X	X	X	X
BOUNDS	X		X	
CANCEL	X	X	X	X
CAPS	X	X	X	X
CHANGE	X	X	X	X
CHAR		X	X	X
COMPILE	X			X
COMPLEX		X		
DELETE		X		X
DISPLAY		X	X	
DISPLAY REDEF		X	X	
DOWN	X	X	X	X
END	X	X	X	X
FBROWSE	X	X	X	X
FEDIT	X	X	X	X
FILLER		X	X	
FIND	X	X	X	X
FMT	X		X	X
FORWARD	X	X	X	X
FPRINT		X		
GROUP		X		
HEX	X		X	X
INFO	X		X	
INIT				
INPUT		X		X
INSERT		X		X
KEY	X	X	X	X
LEFT	X	X	X	X
LISTALC	X	X	X	X
LOCATE	X	X	X	X
LR		X		
MAP	X		X	X
MESSAGE		X		X

Table 21-2. Windowed Edit Primary Command Availability - VSAM and IAM Files (Continued)

Command	**Character**	**Formatted**	**Vertical Formatted**	**Un-formatted**
NEXT		X		
OCCURS		X		
OFFSET		X	X	
OVERLAY				
PICTURE		X	X	
PRESERVE	X	X	X	X
PREV		X		
PROFILE	X	X	X	
RCHANGE	X	X	X	X
REDEFINES		X	X	
REFLNG		X		
REMOVE		X		
REPEAT		X		X
REPLACE				
RESET	X	X	X	X
RETURN	X	X	X	X
RFIND	X	X	X	X
RIGHT	X	X	X	X
RLOC		X	X	X
SAVE	X	X	X	X
SHOW		X	X	
SYNC		X		
TOP		X		
UNDO	X	X	X	X
UNFMT	X	X	X	
UP	X	X	X	X
USE		X	X	
VFMT	X	X		X
VPRINT			X	
ZERO		X	X	

Windowed Edit Primary Command Availability - Sequential Files

Table 21-3 shows primary command availability for each display mode of the Windowed Edit functions (character, formatted, vertical formatted, and unformatted) for Sequential Files. For Windowed Browse, all standard Browse commands are available except for EXCLUDE, SORT, and SUBMIT.

Table 21-3. Windowed Edit Primary Command Availability - Sequential Files

Command	Character	Formatted	Vertical Formatted	Un-formatted
ADD				
ALIGN		X		
ARRAY		X		
AUTOSAVE	X	X	X	X
BACK	X	X	X	X
BOUNDS	X		X	
CANCEL	X	X	X	X
CAPS	X	X	X	X
CHANGE	X	X	X	X
CHAR		X	X	X
COMPILE	X			X
COMPLEX		X		
DELETE				
DISPLAY		X	X	
DISPLAY REDEF		X	X	
DOWN	X	X	X	X
END	X	X	X	X
FBROWSE	X	X	X	X
FEDIT	X	X	X	X
FILLER		X	X	
FIND	X	X	X	X
FMT	X		X	X
FORWARD	X	X	X	X
FPRINT		X		
GROUP		X		
HEX	X		X	X
INFO	X		X	
INIT				
INPUT				
INSERT				
KEY				
LEFT	X	X	X	X
LISTALC	X	X	X	X
LOCATE	X	X	X	X
LR		X		
MAP	X		X	X

Table 21-3. Windowed Edit Primary Command Availability - Sequential Files (Continued)

Command	**Character**	**Formatted**	**Vertical Formatted**	**Un-formatted**
MESSAGE		X		X
NEXT		X		
OCCURS		X		
OFFSET		X	X	
OVERLAY				
PICTURE		X	X	
PRESERVE	X	X	X	
PREV		X		
PROFILE	X	X	X	
RCHANGE	X	X	X	X
REDEFINES		X	X	
REFLNG		X		
REMOVE				
REPEAT				
REPLACE				
RESET	X	X	X	X
RETURN	X	X	X	X
RFIND	X	X	X	X
RIGHT	X	X	X	X
RLOC		X	X	
SAVE	X	X	X	X
SHOW		X	X	
SYNC		X		
TOP		X		
UNDO	X	X	X	X
UNFMT	X	X	X	
UP	X	X	X	X
USE		X	X	
VFMT	X	X		X
VPRINT			X	
ZERO		X	X	

Primary Command Descriptions

Primary commands are presented in this chapter in alphabetical order. The following information is provided for each command, as applicable:

- Full name of the command with its abbreviation(s) in parentheses.
- Purpose of the command.
- Functions (Browse, Edit, Print, Selection Criteria, XREF, Reformat, and Compare), utilities (Copy, Search/Update, VSAM, and VTOC), and display modes (character, formatted, vertical formatted, or unformatted) in which you can use the command.
- A syntax diagram that shows the full syntax required to execute the command including all parameters. If a parameter has multiple values, the values are stacked vertically.
- The use of the command without and/or with parameters, as applicable.
- Descriptions of each parameter. Abbreviations for the parameter, if available, are also listed.
- Guidelines for the command not covered under one of the parameters.

For an explanation of the primary command syntax, see "“Syntax Diagram Notation Rules” on page xvii" in the Introduction.

ADD

The ADD command permits a new segment to be inserted into a variable-length record. Use the ADD primary command without parameters to format the new segment according to the currently selected record layout.

The command is available in the Edit function in Formatted mode.

```
►►─ADD──┬──────────────┬──┬─HERE──┬──►◄
        └─record-layout─┘  └─AFTER─┘
```

record-layout : Specifies the record layout used in formatting the new segment.

HERE : Specifies that the new segment is to be inserted prior to the currently displayed segment.

AFTER : Specifies that the new segment is to be inserted after the current segment.

Guidelines

The new (added) segment is displayed upon successful completion. If the selection criteria is on the BASE of the record, the display reverts to the base segment of the current record. Existing segments within the record are maintained when the new segment is inserted. The new segment is initialized to null values.

Use the ADD command only for variable-length datasets permitting length modification. If the insertion results in a record length greater than the logical record length (LRECL), File-AID truncates the record at the end and produces the warning message: **LENGTH SET AT LRECL**. If an accidental truncation occurs, restore the truncated data with the UNDO or REBUILD command.

ALIGN (AL)

The ALIGN command controls whether the words ALIGNED or UNALIGNED are displayed after PL/I data items. This command is equivalent to the SYNC command for COBOL data.

The command is available in the Browse and Edit functions in Formatted mode.

```
►►─┬─ALIGN─┬─┬─ON──┬─►◄
   └─AL────┘ └─OFF─┘
```

ON : Displays the word ALIGNED after PL/I items specified as ALIGNED; displays the word UNALIGNED after all other data items.

OFF : Does not display either ALIGNED or UNALIGNED after PL/I data items.

Guidelines

Use the PROFILE command to display the current ALIGN value.

ARRAY (AR)

The ARRAY command controls whether the array declaration information for PL/I data is displayed.

The command is available in the Browse, Edit, and Selection Criteria functions in Formatted mode.

```
►►─┬─ARRAY─┬─┬─ON──┬─►◄
   └─AR────┘ └─OFF─┘
```

ON : Displays an array definition line for each subscripted item in a record layout.

OFF : Does not display an array definition line.

Guidelines

Use the PROFILE command to display the current ARRAY value.

The array line contains the name of the array followed by the word ARRAY and the subscript bounds in standard PL/I format. If any of the subscripts are defined by a REFER clause, additional lines that follow the ARRAY line describe each REFER variable.

AUTOSAVE

The AUTOSAVE command controls whether a modified edit dataset is automatically saved when you exit from edit.

```
►►─AUTOSAVE─┬─ON──┬─►◄
            └─OFF─┘
```

The command is available in the Edit function in all modes.

ON : Saves the modified edited data when you enter the END or RETURN command. File-AID returns to the File-AID Edit - Dataset Specification screen (see Figure 4-6 on page 4-13).

OFF : Does not automatically save changed data when you enter the END or RETURN command. File-AID displays the message: **DATA CHANGED-SAVE/CANCEL** if the edit dataset has been modified. File-AID remains in edit with the cursor positioned in the COMMAND field.

Guidelines

Use the PROFILE command to display the current AUTOSAVE value.

If the edit dataset has not been modified, the END or RETURN command exits edit without the edit dataset being saved, regardless of the setting of AUTOSAVE.

BACK

The BACK command scrolls the display to the previous record in Formatted or Unformatted mode. The BACK command scrolls the display up in Character or Vertical Formatted mode. Use the BACK command without a parameter to scroll the display by a single record in Formatted or Unformatted mode or the SCROLL amount in Character or Vertical Formatted mode. The BACK command is synonymous with the LEFT command in Formatted or Unformatted mode and the UP command in Character or Vertical Formatted mode.

The command is available in all modes of the Browse and Edit functions and the Formatted mode of the Selection Criteria and XREF functions.

```
►►─BACK──┬──────────────┬──►◄
         ├─scroll-number─┤
         └─M─────────────┘
```

scroll-number : Number of records to scroll back. Attempts to scroll before the first (selected) record are treated as a maximum scroll.

M (maximum) : Scrolls the display to the first (selected) record of the file.

BOUNDS (BNDS, BND)

The BOUNDS command restricts the scope of editing commands to a specified range of columns.

Use the BOUNDS command without parameters to cause the edit bounds to be set to encompass an entire record. This is the default setting of the edit bounds when character edit is invoked. The left bound is set to column 1 and the right bound is set to the last column, defined by the logical record length (LRECL). For variable-length records, the right bound is actually set beyond the last column, to permit records to be expanded and contracted (with the shift line commands) within the full logical record length.

The command is available in the Edit function of Character and Vertical Formatted modes.

```
►►─┬─BOUNDS─┬──┬──────────────────────────┬──►◄
   ├─BNDS───┤  └─left-column right-column─┘
   └─BND────┘
```

left-column, **right-column :** Specifies valid left and right column numbers separated by a blank that sets the left and right bounds (endpoints) of editing. Subsequent editing commands are restricted to the specified range of columns including both bounds.

When you enter a column value, you must enter both a right and a left column value; otherwise, File-AID displays the message: `ENTER RIGHT BOUND`, and the command has no effect. The left-column number must be lower than the right-column number; otherwise, File-AID displays the message: `BOUNDS COMMAND ERROR`.

To limit editing to a single column, enter the same column number for both the *left-column* and the *right-column* parameters.

Guidelines

Use the PROFILE command to display the current BOUNDS values. Since the record length (and thus the distance between edit bounds) can be very large, the current setting of the edit bounds is also displayed as a pair of decimal numbers in the profile information lines.

The edit bounds may also be set on the BNDS information line, which is displayed with the BNDS (bounds) line command.

The edit bounds limit the scope of the CHANGE, EXCLUDE, and FIND primary commands (unless a specific column range is specified with the commands).

A right shift past the right bound causes the shifted data to be lost. A left shift causes the data shifted beyond the left bound to be lost.

A left scroll stops at the left bound, and a right scroll stops at the right bound. A subsequent left or right scroll goes beyond the bound (assuming the bound is not at the leftmost or rightmost position).

Using Edit Bounds with Variable-Length Records

The location of the right edit bound governs the behavior of the (and) (shift left and shift right) line commands with variable-length records. If the right bound "touches" a record being shifted (for example, the right bound has a value less than or equal to the current length of the record), the data between the bounds is shifted and the length of the record is not affected.

If the right bound is located beyond the current end of a record, executing a right shift line command increases the record length by the number of columns shifted, up to the limit defined by the right bound. The length cannot exceed the record length specified when the dataset was allocated. A left shift similarly decreases the record length, to a minimum length defined by the left edit bound.

For information on modifying the length of a variable-blocked record, see “Character Mode” on page 4-13.

CANCEL (CAN)

In the Edit function, the CANCEL command exits from the current mode and discards all changes made to the edit dataset.

The command is available throughout the product.

```
▶▶─CANCEL──▶◀
```

For all modes in the Edit function, the CANCEL command exits from edit and cancels all changes made to the dataset since the last SAVE command. When the SAVE command is issued, the revised copy of the dataset in virtual storage is saved to the actual dataset.

Therefore, changes made prior to issuance of the SAVE command are not eliminated by the CANCEL command.

When issued from the Selection Criteria Menu screen, CANCEL clears the fields on the Selection Criteria Options, Formatted Selection Criteria, and Unformatted Selection Criteria screens.

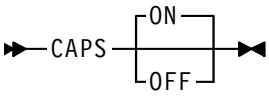
The Display cancel confirmation field on the System Parameters screen (0.1) controls whether File-AID displays a Cancel Confirmation screen when you use the CANCEL command. The default is YES.

CAPS

The CAPS command controls conversion of entered characters to uppercase.

Note: If File-AID's Japanese panels are installed, this command has no effect on the data.

The command is available in the Edit function in Character, Formatted, Unformatted, and Vertical Formatted modes and for specifying formatted selection criteria in the Selection Criteria function.



ON : Converts typed alphabetic characters to uppercase.

OFF : Leaves typed alphabetic characters as typed (upper or lowercase).

Guidelines

Use the PROFILE command to display the current CAPS value. This value is set upon entry to the Edit function based on the data found in the dataset.

File-AID sets CAPS ON for the formatted selection criteria function. Specify **CAPS OFF** to create mixed case data (see "Formatted Selection Criteria" on page 16-11).

Setting CAPS in any mode of browse or edit changes the CAPS value in all modes of browse and edit.

CAUTION:

Use care when setting CAPS to ON.
When setting CAPS to ON, File-AID:

- Converts all entered lowercase characters to uppercase.
- Converts only the portion of the record displayed between nondisplayable characters to uppercase when any character of that portion is modified. File-AID considers a space a displayable character.
- Converts val2 ('*to string*') character strings of a CHANGE command to uppercase, unless a case-sensitive character string (C'val2') is specified (see page 21-14).

The conversion to uppercase can cause problems if the data contains packed decimal or binary data.

CHANGE (CHG, C)

The CHANGE command searches for a specified value or condition, and if found, changes the data to a new value. When you enter the CHANGE command without parameters, File-AID displays the CHANGE Command screen. The screen field names are shown in parentheses next to their corresponding parameter terms.

The command is available in the Edit function in all modes.

```
►►─┬─CHANGE─┬─┬─┬─────┬─val1─┬─val2─┬─────┬─────┬─┬─X──┬──►
   ├─CHG────┤ │ └─rel─┘      │ └─*──┘ └─lrange─┘ │ └─NX─┘
   └─C──────┘ ├─*────────────┤
              ├─VALID───────┤
              ├─INVALID─────┤
              └─ANY─────────┘

   ┌─NEXT─┐
►──┼─PREV─┼─┬─coll─┬──────┬──────────────────────────────────►◄
   ├─FIRST┤ │      └─col2─┘
   ├─LAST─┤ ├─/ field-name──┤
   └─ALL──┘ └─/ field-number┘
```

rel (Operator) : Relational operator that specifies the relationship the edit data must have to the *val1* parameter in order to be changed. Valid entries for this parameter are:

EQ: Matches any string equal to val1 (default)

NE: Matches any string not equal to *val1*

LT: Matches any string less than *val1*

GT: Matches any string greater than *val1*

LE: Matches any string less than or equal to *val1*

GE: Matches any string greater than or equal to *val1*.

The *rel* parameter can be used with a *val1* parameter (or a substitute asterisk), but not with the parameters VALID, INVALID, or ANY. When *val1* is a character string, the comparison is executed according to the EBCDIC collating sequence.

val1 (From string) : Provides a value to be matched using the comparison specified by the *rel* parameter. When used with a */field-name* or */field-number* parameter, *val1* is required to be compatible with the field declaration in the record layout.

File-AIDThe *val1* parameter may be any one of the following data types:

- **Simple string:** An alphanumeric character string that does not contain any single quotes ('), double quotes ("), imbedded blanks, or commas.
- **Delimited string**: A simple string enclosed in single (') or double (") quotation marks. Use delimited strings to search for characters that are not allowed in simple strings and in some instances, to enclose command keywords.
- Simple and delimited strings are not case sensitive. Specify any combination of upper and lowercase characters for the search string and, regardless of the case, any combination of the specified characters is found. For example:

  ```
  CHANGE elm OAK  or  CHANGE ELM OAK
  ```

- changes the next occurrence of the character string 'elm', 'ELM', or 'Elm', for example, to 'OAK'.

  ```
  CHANGE elm OAK all  or  CHANGE ELM OAK ALL
  ```

– changes all occurrences of the character string 'elm', 'ELM', or 'Elm', for example, to 'OAK'.

– To specify a keyword as val1 or val2 in the change string, you must enclose the string in single or double quotes:

```
CHANGE 'ALL' OAK all  or  CHANGE all "ALL" OAK
```

– changes all occurrences of the character string 'ALL' to 'OAK'.

```
CHANGE ''' 'Q'  or  CHANGE "'" "Q"
```

– changes a single quote to a 'Q'.

```
CHANGE '"' 'D'  or  CHANGE """ "D"
```

– changes a double quote to a 'D'.

– **Character string:** A delimited string of characters preceded by the character C. A character string is case-sensitive, and matches or (when used as val2) replaces only an exact duplicate (including case) of the input string. For example:

```
CHANGE  C'Roman Emperors' 'Czar of Russia'
```

– finds and changes 'Roman Emperors' but not 'roman emperors' or 'ROMAN EMPERORS'.

– **Hexadecimal string:** A delimited string containing an even number of hexadecimal digits (0-9, A-F), preceded by the character X. For example:

```
CHANGE X'00' X'F1'
```

– **Decimal string:** A delimited string of decimal digits (0-9) preceded by the character F or H. The F or H may be followed by L and a decimal digit to specify the data length (from 1 to 8) in bytes. If the length is omitted, a value of 4 is assumed for F, and a value 2 is assumed for H. A decimal string matches the data against the binary representation of the decimal string for the specified length.

– **Packed string:** A delimited string of decimal digits (0-9) preceded by the character P. The P may also be followed by L and one or two decimal digits to specify the data length (from 1 to 16) in bytes.

Note: When a packed string is used, the col1 parameter must be specified to indicate the location of the packed data.

– File-AID matches only a packed data item of the specified length, commencing in the specified column, and containing the packed decimal representation of the decimal string. If length is omitted, the data matches a valid packed decimal data item with a length of 1 to 16 (containing the specified value).

– **Packed data test:** The characters PL followed by one or two decimal digits to specify the data length (from 1 to 16) in bytes. The col1 parameter must be used to specify the location of the packed data. A packed data test searches for valid packed data starting in the specified column. If length is specified, the data must be a packed decimal number of the specified length. Use the NE relational operator to search for invalid packed data beginning in a specified column. Only the EQ or NE relational operators may be specified with a packed data test.

– **Text string:** A delimited string preceded by the character T. Text strings are unnecessary because they are treated the same as delimited strings. File-AID supports the use of text strings to maintain consistency with ISPF/PDF.

The *val1* parameter may be any one of the following data type strings:

Data type:	Example:
Simple	ABC

Data type:	Example:
Delimited	'AB CD'
Character	C'Smith'
Hexadecimal	X'F1F2F3'
Decimal	999
Packed	P'59'
Packed data	PL4
Text	T'AnyCASE'

*** (asterisk) :** Enter an asterisk (*) in place of the val1 parameter to reuse the last value specified in a CHANGE, EXCLUDE, or FIND command.

VALID, INVALID : Changes valid or invalid data in a specified field. These values are mutually exclusive with the rel and val1 parameters. Data is considered valid if it conforms to the field declaration in the record layout.

A /field-name or /field-number parameter is required when one of these values is used. If one of these parameters is not specified, the VALID or INVALID keyword is interpreted as a simple string.

A successful search for valid or invalid data produces the message: **EQ VALID CHANGED** or **EQ INVALID CHANGED**. An unsuccessful search produces the message: **NO EQ VALID FOUND** or **NO EQ INVALID FOUND**.

ANY : Changes any value in a range of columns by specifying col-1, and optionally, col-2. Also changes any value in a field by using a specific field name.`CHANGE ANY ABC 10`

changes any value starting in column 10 and ending in column 12 to **ABC**. If you specify both col-1 and col-2, the entire value contained within, and including col-1 and col-2 is changed to string-2, with blank padding to the right, if necessary. For example:

```
CHANGE ANY ABC 10 20
```

changes any value starting in column 10 and ending in column 20 to **ABC**^{aaaaaa}.

val2 (To string) : Specifies the new value to be substituted for data matching the condition specified by the rel and val1 parameters.

Data item length described by val2 and val1 must be the same.

Specifies the new value to be substituted for data matching the condition specified by the rel and val1 parameters. Data item length described by val2 and val1 must be the same. This prevents inadvertent data misalignment in a record resulting from data substitution. Specifying a val2 parameter that differs in length from a val1 parameter produces the message: **STRINGS NOT SAME LENGTH**.

Note: Note: The val2 parameter must follow the val1 parameter.

Any data type used for the val1 parameter can also be used for val2 as long as the two lengths are the same. In most cases, the same data type need not be used for both val1 and val2. The length of a decimal or packed string is not required because it is defined by val1.

*** (asterisk) :** Value for the val2 parameter that specifies File-AID to reuse the last value entered in a CHANGE command.

If the profile option CAPS is set to OFF, the exact value entered for val2 replaces val1, including case, although the search for val1 is conducted regardless of case. If the profile option CAPS is set to ON, val2 is changed to uppercase prior to replacing val1 (unless val2 is a character string specified with “C”).

lrange (Start range, End range) : Confines the CHANGE command to a specified line range (records). For the line range limits, use any combination of user-defined labels, or line numbers prefixed by a period.

If a single line label or line number is specified (or the same line is specified twice), File-AID limits the search to the specified line. Line range limits can be specified in any order. The line that occurs first in the dataset is considered to be the lower limit of the line range.

Additional line labels may be defined by entering (in the sequence field to the left of the line to be labeled) a string starting with a period followed by one of the letters A through Y.

X, NX (Lines to search) : X restricts the CHANGE command to excluded lines; NX restricts the CHANGE command to nonexcluded lines. If the lrange parameter is also specified, File-AID scans only excluded (or nonexcluded) lines within the specified line range.

Use the EXCLUDE primary command or the X (exclude) line command to exclude lines. Excluding lines divides the edit dataset into two subsets, either of which may be processed separately by the CHANGE command with the X or NX parameters.

NEXT, PREV, FIRST, LAST, ALL (Modifier) : Use the NEXT, PREV, FIRST, or LAST values to specify the starting point and search direction. Table 21-4 summarizes the functions of these parameters.

Table 21-4. CHANGE Command Search Values

Parameter	Search Division	Origin of Search
NEXT	Forward	Current cursor position
PREV	Backward	Current cursor position
FIRST	Forward	Start of data or specified line range
LAST	Backward	End of data or specified line range

Use the ALL parameter to process all lines (selected by rel and val1) that contain the specified data (within the lines defined by the lrange, X, and NX parameters). The ALL option is mutually exclusive with the NEXT, PREV, FIRST, and LAST parameters. If none of these values is specified and a line range has been specified, File-AID assumes a value of FIRST. If none of these values is specified and a line range has not been specified, File-AID assumes a value of NEXT.

col1, col2 (Start column, End column) : Specifies a valid single column (col1) or column range (col1 and col2). File-AID defaults to the current bounds settings if col1 and col2 are not specified. Specify a single column or column range to override the default column range. Data specified for a single column must begin at the col1 position. Data specified for a column range must be found within the specified range.

Note: The col2 parameter must follow the col1 parameter.

Specify the col1 and col2 parameters as integers. If the val1 or val2 parameters consist of the numbers 0 (zero) through 9, delimit the value of the val1 and/or val2 parameter to distinguish it from column numbers. Do not use col1 or col2 when the /field-name or /field-number parameter is used.

/field-name, /field-number (Field name, Field number) : The /field-name parameter specifies the data name given to the field in the record layout. The /field-number parameter specifies the number generated by File-AID for each data name in the record layout. If a name was specified in the record layout dataset or XREF dataset name fields on the Edit - Dataset Specification screen, you can use a /field-name or /field-number parameter to confine the search to a specific data field.

The /field-name or /field-number parameter must be prefixed by a slash (/) to distinguish it from val, val2, or column range (col1 and col2) parameters. A field name can be fully qualified, partially qualified, or unqualified, but it must be unique.

Each unique word of the field name may be abbreviated starting with the first letter. If an abbreviated field name is used, it must be unique.

Use a period to delimit levels of qualified names. If several maps are loaded, it may be necessary to include the member name or the 01-level name to uniquely identify a field. If so, precede the field name with the member name and/or 01-level name, also delimited with periods.

Specify either a /field-name or /field-number parameter when a VALID/INVALID parameter is used.

Note: When you use the /field-name or /field-number parameter with the ALL parameter, File-AID changes the first occurrence of the search string in each field. Subsequent occurrences of the same string in the same field can be changed by repeating the CHANGE command.

Example Field-Name Parameters

Search for a value in the FEDERAL field in the following record layout:

```
01 PAYROLL-REC
  02 NAME
  02 WITHHOLDING
    04 FEDERAL
    04 FICA
    04 STATE
```

Any of the following could be used as the */field-name* parameter in the CHANGE command:

```
Fully-Qualified Name:   /PAYROLL-REC.WITHHOLDING.FEDERAL
         Abbreviated:   /PAY.WITH.FED
 Partially-Qualified:   /WITH.FED
         Unqualified:   /FED
```

If the WITHHOLDING item was modified by an OCCURS 12 TIMES clause (COBOL) or an ARRAY(12) clause (PL/I), the fourth instance of FEDERAL could be found by specifying a */field-name* parameter of /FED(4).

A field name value that matches more than one field name in the record produces the message: **AMBIGUOUS FIELD NAME**.A field name value that does not match any record field produces the message: **FIELD NAME NOT FOUND**.

If a record layout was not entered on the Edit screen, specifying a field name or field number produces the message: **FIELD UNDEFINED - NO MAP**.

Note: */field-name*, */field-number* parameter usage is mutually exclusive with *col1*, *col2* parameters.

Guidelines

File-AID performs a search without regard to case (upper/lower) for the CHANGE, EXCLUDE, and FIND primary commands with the following exceptions, in which case File-AID searches for the string exactly as entered:

- If a case-sensitive search is specified by a delimited string of characters preceded by the character C.
- When a Boolean operator other than EQ or NE is specified.
- For a double-byte character string (DBCS) system.

Data to be replaced is defined either with the *rel* and *val1* parameters or with the VALID or INVALID parameters. The new value is defined with the *val2* parameter. The remaining

parameters limit the command to specific lines and/or fields within lines, and specify which occurrence(s) of the specified data are to be replaced. A change is limited to the range of columns within the bounds, except when a column, column range, field name, or field number is specified.

The RCHANGE command executes the search in the same direction as the previous CHANGE command and changes the next instance of matched data. A repeated search using RCHANGE is not confined to the line range specified in a CHANGE command.

After a successful change, File-AID positions the cursor immediately after the last changed byte. An unsuccessful search produces the message: **NO (rel)(val1) FOUND**.

Formatted Mode

Changes are not automatically confined to the currently selected record unless the appropriate CHANGE parameters are specified.

If the cursor is located within the data area of a field when you press Enter, the search is limited to that field. This technique may be used instead of specifying the */field-name* or */field-number* parameter.

CHANGE Command Screen

If you enter the CHANGE command without specifying any parameters, File-AID displays the CHANGE Command screen. Refer to the parameter descriptions beginning "CHANGE (CHG, C)" on page 21-13 for a complete description of the fields on this screen.

Figure 21-1. CHANGE Command Screen

```
File-AID ------------------ CHANGE Command -----------------------------------
COMMAND ===>

Specify CHANGE operands:
   Operator         ===>         (EQ; NE; LT; GT; LE; GE)
   From string      ===>
   To string        ===>
   Modifier         ===>         (NEXT; ALL; FIRST; LAST; PREV)
   Lines to search  ===>         (NX = Nonexcluded; X = Excluded; Blank = all)


Specify the Following Fields to Limit the Range of Search for this CHANGE:
   Field name      ===>
      or
   Field number    ===>
      or
   Start column    ===>         End column ===>          (Column number(s))
   Start range     ===>         End range  ===>          (Label or line number)


NOTE: You may bypass this screen by entering the CHANGE command with operands:
CHANGE  string         string2   (NEXT)   (NX)  (col-1 (col-2))   (range)
CHG     (op) string              (ALL)    (X)   (/field name)
C       VALID                    (FIRST)        (/field number)
        INVALID                  (LAST)
        ANY or *                 (PREV)
```

CHAR

The CHAR command invokes the Character mode from Formatted Mode, Vertical Formatted mode, and Unformatted mode.

The command is available in the Browse and Edit functions in Formatted, Vertical Formatted, and Unformatted modes.

```
►►──CHAR──►◄
```

COLS (COL)

The COLS command displays the COLS information line to column numbers.

The command is available in the Browse and Edit function in Character mode.

```
►►─┬─COLS─┬──►◄
   └─COL──┘
```

The COLS information line is a ruler line, which allows you to identify data in specific columns. If the record key is included in the display, the COLS line contains spaces to separate the key's position, just like the data lines.

The COLS information line is inserted at the top line of the data and the remaining lines are pushed down.

COMPILE (COL)

The COMPILE command displays the Record Layout Specification screen which enables you to reload or switch a record layout or XREF.

The COMPILE command is available in the Browse and Edit functions in Character and Unformatted modes.

```
►►──COMPILE──►◄
```

COMPLEX (CMPLX)

The COMPLEX command controls whether the word COMPLEX is displayed after data items defined as COMPLEX in a PL/I record layout.

The command is available in the Browse and Edit functions in Formatted mode.

```
                  ┌─ON──┐
►►─┬─COMPLEX─┬──┼─────┼──►◄
   └─CMPLX───┘  └─OFF─┘
```

ON : Displays the word COMPLEX after data items defined as COMPLEX in a PL/I record layout.

OFF : Does not display the word COMPLEX after data items defined as COMPLEX.

Guidelines

Use the PROFILE command to display the current COMPLEX value.

COPY

The COPY command inserts records from another file at a specified location in the dataset.

The command is available in the Edit function in Character and Vertical Formatted modes.

```
►►─COPY──┬─dataset──────────┬──┬─AFTER─line-label──┬──►◄
         ├─dataset (member)─┤  └─BEFORE-line-label─┘
         └─(member)─────────┘
```

dataset, member : Specifies the entire dataset or a member to be copied. If a dataset/member name is specified as part of the command, and the destination is specified correctly, the entire dataset/member is copied immediately. If specified, the member name must be in parentheses.

If you omit the *dataset* parameter, the Edit COPY screen is displayed. (Figure 21-2) Complete this screen as described in "Edit COPY Screen" to specify the dataset to copy.

AFTER line-label, BEFORE line-label : Designates the destination. The *line-label* parameter must be specified as a sequence number (prefixed by a period), a system label (such as. ZFIRST, .ZLAST, or .ZCSR), or a user-defined label. Specifying a non-existent label produces the message: **UNDEFINED LABEL**. Illegal labels (for example, those not beginning with periods) produce the message: **INVALID LABEL**.

The A (after), B (before), H (here), or O (overlay) line commands can be used as an alternative to a label to specify the destination. You can specify multiple A (after), B (before), and H (here) line commands. If you do not specify a destination, File-AID displays the message: **COPY IS PENDING**. If there are no records in the edit dataset, you do not need to specify a destination.

Note: When creating a new member of a File-AID Selection Criteria or XREF dataset, do not use the COPY command to copy a similar member. Use the Selection Criteria (6) or XREF (7) function. File-AID Edit creates standard ISPF stats for new PDS members, while Selection Criteria and XREF members have special directory requirements. A member created with File-AID Edit is not valid. Although you may use File-AID Edit to edit existing selection criteria or XREF members, Compuware recommends that you use the Selection Criteria (6) or XREF (7) functions.

Edit COPY Screen

Figure 21-2. Edit COPY Screen

```
File-AID -----------------------  Edit COPY ----------------------------------
COMMAND ===>


Current dataset: USERID9.FASAMP.JCL

Enter "FROM" dataset:
 Dataset name   ===>
 Member         ===>              (Blank/pattern for member list)
 Volume serial  ===>              (If not cataloged)









Use ENTER to perform copy/merge
Use END to cancel
```

Field Descriptions

Current dataset: : Specifies the currently active dataset.

Specify "FROM" dataset:

Dataset name : Name of the dataset from which data is to be copied or merged.

Member : Specifies the member name of the dataset to be copied or merged.

Volume serial : Volume serial number if the dataset is not cataloged.

CREATE (CRE)

The CREATE command creates a new member of a PDS using source records specified in the edit dataset.

The command is available in the Edit function in Character and Vertical Formatted modes.

```
►►─┬─CREATE─┬─┬─dataset (member)─┬─►◄
   └─CRE────┘ └─(member)─────────┘
```

dataset(member) : To create a new member in a different PDS, specify the dataset name followed by the member name enclosed in parentheses. Incorrectly specifying the member name produces the message: **CANNOT CREATE.**

(member) : Specifies the name of a new member to be created in the same PDS as the member currently being edited. Incorrectly specifying the member name produces the message: **CANNOT CREATE.**

Guidelines

Lines to be written to a newly created member must be specified with one of the following line commands:

- **C** (copy)
- **M** (move).

Using the M line command instead of C produces the message: **MOVE CHANGED TO COPY**. The new member is created as if the C line command was used and the specified line range is not deleted from the edit dataset.

Using the CREATE primary command without specifying a source range of lines produces the message: **CREATE/REPLACE PENDING**. Specify the lines to be copied or moved with the appropriate line command.

Attempting to create a member to a non-partitioned dataset produces the message: **MEMBER NAME NOT ALLOWED**. Using the CREATE command without a parameter produces the message: **ENTER DSNAME**.

Successful creation of a new member produces the message: **MEMBER (name) CREATED**.

CUT

The CUT primary command creates a temporary copy of a file (or portion of a file) that you are editing with File-AID/MVS Edit. Use the C or CC (copy) line command to specify the source of the 'cut'. The cut file is VB with an LRECL of 32756.

The temporary CUT file is deleted when you exit File-AID Edit. When in split screen the CUT file is not deleted until you exit the last File-AID Edit session. The Specify Work

File/Cut File Allocations field on the File-AID System Parameters screen (option F.0.1) enables you to adjust the space allocations for the CUT file.

The CUT command is valid in Character and Vertical Formatted modes of Edit.

```
►►─ CUT ──┬──────────────┬──►◄
          └─ APPEND ─────┘
```

A : The APPEND parameter is used to add to the existing cut file.

DELETE (DEL)

In Character mode and Vertical Formatted mode edit, the DELETE command deletes a line, a specified number of consecutive lines, or a block of lines from the edit dataset. In formatted edit, the DELETE command deletes the currently displayed record from the dataset. Use DELETE without parameters to delete the currently displayed record in formatted edit. Using DELETE in character and vertical formatted edit without parameters produces the message: **ENTER DELETE**.

The command is available in the Edit function in all modes and for specifying formatted selection criteria in the Selection Criteria function.

```
►►─┬─ DELETE ─┬──┬──────────┬──┬──────────┬──►◄
   └─ DEL ────┘  └─ lrange ─┘  ├─ ALL X ──┤
                               └─ ALL NX ─┘
```

lrange : Optionally confines the scope of the DELETE command to the specified line range. A line range may be specified with one or two line labels. Use user-defined line labels, system-defined labels (.ZFIRST, .ZLAST, or .ZCSR), or line numbers in any combination preceded by a period (.). When two labels are used, the two labels may be listed in either order. The line range is always considered to begin at the label occurring first in the dataset. To confine the scope of the command to a single line, specify the same label twice, or specify a single line label.

If the ALL X or ALL NX parameter is not specified, the *lrange* parameter is required. All lines in the specified range are unconditionally deleted.

ALL X : Causes all excluded lines within the specified line range to be deleted. If the *lrange* parameter is not used, all excluded lines in the entire dataset are deleted. Lines may be excluded with the EXCLUDE primary command or the X (exclude) line command.

ALL NX : Causes all nonexcluded lines within the specified line range (or the entire dataset) to be deleted.

Guidelines

Omitting the keyword ALL from the X or NX parameter produces the message: **INCOMPLETE DELETE**.

Character and Vertical Formatted Modes

The following character and vertical formatted DELETE example deletes all lines that contain a three-byte packed data field with a value of 17 in column one:

```
RESET  X
EXCLUDE  ALL  PL3'17'  1
DELETE  ALL  X
```

- The RESET command assures that no lines are excluded prior to entry of the EXCLUDE command.

- The EXCLUDE command causes the selected lines to be excluded.
- The DELETE command causes all excluded lines to be deleted from the edit dataset.

Formatted Mode

One record is removed each time the DELETE command is used. Simultaneous deletion of multiple records is not permitted.

After a record is deleted, the record that immediately follows is displayed. When the last record in the dataset is deleted, the preceding record is displayed.

Use the DELETE command after the INPUT command to:

1. Discard data entered in the current INPUT record.
2. Terminate the INPUT command.
3. Display the record following the record from which the INPUT command was invoked.

See "INPUT / INSERT (I)" on page 21-49 for more information on using the INPUT command.

Using the DELETE command while editing a MASK line produces the message: **NOT VALID FOR MASK LINE**.

DISPLAY (DIS)

The DISPLAY command has two purposes:

- Field Selection: Specifies the fields of the record that are displayed.
- Data Format Specification: Specifies the display format for individual layout fields.

The command is available in the Browse and Edit functions in Formatted and Vertical Formatted modes and for specifying formatted selection criteria in the Selection Criteria function.

Field Selection Syntax

```
                  ┌ON───┐
►►─┬DISPLAY─┬──┼─────┼──┬─field-list─┬──►◄
   └DIS─────┘  ├OFF──┤  └ALL───────┘
               └ONLY─┘
```

ON, OFF, ONLY : Controls the display of specified fields as follows:

ON

Displays fields specified by the *field-list* parameter along with the fields that are already displayed.

OFF

Prohibits display of fields specified by the field-list parameter.

ONLY

Displays only the specified fields.

When formatted or vertical formatted modes are invoked, File-AID displays all fields defined in the record layout. To eliminate fields from the display, enter either **DISPLAY OFF** or **DISPLAY ONLY**.

field-list : Specifies any combination of field numbers and/or field number ranges. Field numbers are separated by either blanks or commas.

Field number ranges are specified by two field numbers separated by a dash (-), and represent the two range bounds and all intervening fields. The second field number must be equal to or higher than the first; otherwise, File-AID displays the error message: **INVALID RANGE** and ignores the command. If the two endpoints are equal (for example, 4-4), File-AID treats the range as a single field number.

Up to nine field numbers and/or field number ranges can be specified. Duplicate entries are ignored. Field number ranges and individual field numbers may be listed in any order.

The ON, OFF, or ONLY parameter can be placed before, after, or at any point in the field list. The field-list parameter is mutually exclusive with the ALL parameter.

ALL : Selects every field in the record. Enter **DISPLAY ALL** to display all fields. Enter **DISPLAY OFF ALL** to eliminate all fields from the display. The ALL parameter is mutually exclusive with the field-list parameter.

Field Selection Syntax Guidelines

Record fields are numbered sequentially from the beginning of the record. Use the SHOW NUMBER command to display field numbers of each data name. See "SHOW (S)" on page 21-72 for more information.

In Formatted mode, a set of display fields defined with the DISPLAY command is associated with the defined record layout and reused each time a record is mapped to that layout. You can define a separate set of fields to be displayed for each record layout if a record layout contains multiple layout definitions and/or an XREF is in use.

Display field definitions are retained throughout a session as the display modes are switched. Display definitions are discarded when a session is ended.

The DISPLAY command does not override the effects of any display values. For example, if the FILLER display value is set to OFF, filler fields are not displayed even if listed in a DISPLAY ON command. If FILLER is set ON, filler fields are displayed unless they are excluded from the display using the DISPLAY OFF or DISPLAY ONLY command.

Use the EXCLUDE primary command to specify records (instead of fields) to be ignored while scrolling through the dataset.

The RESET, RESET HIDE, or HOLD primary command displays fields that were hidden by the DISPLAY OFF or DISPLAY ONLY commands.

Example 1

The following command eliminates from the display all fields except fields 1, 2, 3, 4, 6, and 9:

```
DISPLAY ONLY 6 1-4 9
```

Example 2

The following command adds fields 5, 10, and 11 to the set specified above:

```
DISPLAY 3-5,10,11
```

The ON option is assumed since neither OFF nor ONLY are specified. Since fields 3 and 4 are already included in the display set, specification of the range 3-5 results only in the addition of field 5.

Example 3

The following command eliminates fields 6, 9, 10, and 11 from the set of displayed fields:

```
DISPLAY 6-247 OFF
```

Note that specification of an upper range limit higher than the total number of fields in the record affects all fields from the lower range bound to the end of the record.

Example 4

The following command produces the message: **INVALID RANGE**, and does not affect the set of display fields:

```
DISPLAY ON 6-8,12-11
```

Example 5

The following command produces the message: **TOO MANY OPERANDS**:

```
DISPLAY 1 2 3 4 5 6 8 9 10
```

Example 6

The following three commands are equivalent and restore the default condition, which is for all record fields to be displayed:

```
DISPLAY ONLY ALL
DISPLAY ON ALL
DISPLAY ALL
```

Data Format Specification Syntax:

```
►►─┬─DISPLAY─┬─┬─format──┬─┬─field-list─┬─►◄
   └─DIS─────┘ └─RESET───┘ └─ALL────────┘
```

format : Specifies the format of the data to be displayed. Valid values, results, and any field size limitations are listed below. Abbreviations of the values are shown in parentheses.

BINARY or **(BIN):** Causes File-AID to interpret the data field as a binary number and display the integer (base 10) value of the binary number. Limited to 1, 2, 3, or 4 bytes.

BIT: Displays the actual bit pattern.

CHAR or **DISPLAY (AN, DISP):** Displays data as alphanumeric characters. Invalid characters are displayed in hexadecimal format.

DECIMAL (DEC): Interprets data as packed decimal data. Limited to 1-16 bytes.

FLOAT: Interprets the data field as a decimal floating point number. Limited to 4, 8, or 16 bytes.

GRAPHIC: Displays data as DBCS characters. Invalid characters are displayed in hexadecimal format.

HEX (X): Displays data in hexadecimal format.

For any format value other than BIT, data items must be aligned on a byte boundary. If the format value is incompatible with any of the listed fields, any incompatible fields retain their prior formats.

If none of the listed fields are compatible with the specified format, File-AID displays the message: **ITEM NOT MODIFIABLE**. If none of the listed fields are elementary data items, File-AID displays the message: **NOT AN ELEMENTARY DATA ITEM**. If the field-list value is omitted, File-AID displays the message: **MISSING OPERAND**. No error message is displayed if the specified format can be applied to at least one of the listed fields.

During the session, File-AID retains and automatically uses field display formats specified for a particular record layout whenever a record corresponding to the same record layout

is displayed. If multiple record layouts are in use, File-AID maintains a separate set of field display formats for each record layout.

The format parameter is mutually exclusive with the RESET parameter.

RESET (RES) : Restores the display of each listed field to the format specified by the record layout. The RESET parameter is mutually exclusive with the format parameter.

field-list : Specifies any combination of field numbers and/or field number ranges. Field numbers are separated by either blanks or commas.

Field number ranges are specified by two field numbers separated by a dash (-), and represent the two range bounds and all intervening fields. The second field number must be equal to or higher than the first; otherwise, File-AID displays the error message: **INVALID RANGE** and ignores the command. If the two endpoints are equal (for example, 4-4), File-AID treats the range as a single field number.

Up to nine field numbers/field number ranges can be specified. Duplicate entries are ignored. Field number ranges and individual field numbers may be listed in any order.

ALL : Selects every field in the current layout. Enter **DISPLAY format ALL** to set the format of all fields to the specified format.

Data Format Specification Syntax Guidelines

Either one of the listed formats or the RESET value must be specified. Only elementary data items are affected by use of this syntax. This syntax alters the format of the specified data fields on the display. Internal representation is not affected. This syntax allows the display and modification of types of data other than that specified in the current layout.

Note: Since internal representation is not changed, the VALID and INVALID search values for CHANGE, EXCLUDE, and FIND always use the original layout representation.

Example 1

The following command causes the data contained in fields numbered 4, 5, 6, 7, and 12 to be displayed in hexadecimal format (provided that they are elementary data items):

```
DISPLAY HEX 12 4-7
```

Example 2

The following command resets the format of all data fields to correspond to the currently selected record layout:

```
DISPLAY ALL RES
```

Example 3

The following commands result in the message: **OPERANDS NOT VALID** because mutually exclusive values have been specified:

```
DIS HEX RESET 7
DIS HEX 3 CHAR 7
```

DISPLAY REDEF (DIS RED)

The DISPLAY REDEF command selects a COBOL redefinition of a data item to be displayed.

The command is available in the Browse and Edit functions in Formatted and Vertical Formatted modes.

```
►►─┬─DISPLAY REDEF─┬──┬──────────────────┬──►◄
   └─DIS RED───────┘  └─field-number─────┘
```

field-number : Specifies the COBOL data item redefinition to be displayed. Usually refers to a field that contains a REDEFINES clause, or is redefined by another field.

Guidelines

When a new redefinition is selected for display, all other mutually exclusive definitions are eliminated from the display. The REDEFINES ON command restores the display of all redefinitions.

If the formerly displayed definition is a group item, the group item and all subordinate items are eliminated from the display. If the new redefinition is a group item, all subordinate items are displayed.

DOWN

The DOWN command scrolls the display down. Default is the value in the SCROLL field. Scroll values include CSR, DATA, HALF, and PAGE.

The command is available in the Browse and Edit functions in all modes.

```
►►─DOWN──┬──────────────┬──►◄
         ├─scroll-number─┤
         └─M─────────────┘
```

scroll-number : Specifies the number of lines or fields to scroll down. If the specified number exceeds the number of available lines or fields, the display stops at the END OF DATA information line.

M : Scrolls down the maximum amount. The effect of this parameter varies by mode:

- **Character and Vertical Formatted:** Scrolls down to show the last lines of the dataset.
- **Formatted:** Scrolls down to display the last fields of the record layout.

Guidelines

Any valid value in the SCROLL field is also a valid parameter, and produces the same result as if it were the current scroll value. Use the DOWN command without a parameter to scroll down the length indicated in the SCROLL field. The default SCROLL field value is PAGE.

Scrolling down in Character and Vertical Formatted modes scrolls the display down by the specified number of records. Scrolling down in formatted mode scrolls the display down by the specified number of fields.

END

The END command exits the current display mode.

The command is available in all modes of Browse and Edit and all File-AID functions.

```
►►─END──►◄
```

Guidelines

If the dataset has not been modified since edit was invoked or since the last SAVE command, the END command exits edit and the File-AID Edit - Dataset Specification screen or a member list is displayed.

If the AUTOSAVE edit option is set ON and the edit dataset has been modified, the dataset is updated and edit is terminated. If the AUTOSAVE edit option is set OFF and the edit dataset has been modified, the message: **DATA CHANGED-SAVE/CANCEL** is displayed and the cursor is moved to the COMMAND field.

If a condition is present that prevents termination of edit (such as a pending COPY or CREATE command, key sequence error, incomplete block line command), an appropriate message is displayed and File-AID remains in edit.

EXCLUDE (EX, E, X)

The EXCLUDE command searches for and, if found, eliminates from the display any lines that meet specified conditions. When you enter the EXCLUDE command without parameters, File-AID displays the EXCLUDE Command screen. The screen field names are shown in parentheses next to their corresponding parameter terms.

The command is available in the Browse and Edit functions in all modes.

```
                                                                  ┌NEXT──┐
►►─┬EXCLUDE──┬──┬──────────┬──val1──┬──────────┬──┬──┬──┬──────┼PREV──┼──►
   ├EX───────┤  └─rel─────┘        └─lrange───┘  ├X─┤  │      ├FIRST─┤
   ├E────────┤  ├─*──────────────┤               └NX┘  │      ├LAST──┤
   └X────────┘  ├─VALID──────────┤                     │      └ALL───┘
                └─INVALID────────┘

►──┬──────────────────────────────────────────────────────────────────►◄
   ├─col1──┬──────────┬──┤
   │       └─col2─────┘  │
   ├─/ field-name────────┤
   └─/ field-number──────┘
```

rel (Operator) : Relational operator that specifies the relationship the edit data must have to the *val1* parameter in order to qualify a line for exclusion. Valid entries for this parameter are:

EQ : Matches any string equal to *val1* (default)

NE : Matches any string not equal to *val1*

LT : Matches any string less than *val1*

GT : Matches any string greater than *val1*

LE : Matches any string less than or equal to *val1*

GE : Matches any string greater than or equal to *val1*.

The *rel* parameter may be used with a *val1* parameter (or a substitute asterisk), but not with the parameters VALID and INVALID. When *val1* is a character string, the comparison is executed according to the EBCDIC collating sequence.

Example 1

Excludes a line containing an exact occurrence of the string ROMAN:

```
EXCLUDE  ROMAN
```

Example 2

Excludes a line containing a byte that is less than hex 05:

```
EXCLUDE  LT X'05'
```

val1 (Find string) : Provides a value to be matched using the comparison specified by the *rel* parameter. When used with a */field-name* or */field-number* parameter, *val1* is required to be compatible with the field declaration in the record layout.

File-AID does not perform any case conversion for DBCS (double byte character set) data.

The *val1* parameter may be any one of the following data types:

Simple string : An alphanumeric character string that does not contain any single quotes (’), double quotes ("), imbedded blanks, or commas.

Delimited string : A simple string enclosed in single (’) or double (") quotation marks. Use delimited strings to search for characters that are not allowed in simple strings and in some instances, to enclose command keywords.

Simple and delimited strings are not case sensitive. Specify any combination of upper and lowercase characters for the search string and, regardless of the case, any combination of the specified characters is found. For example:

```
EXCLUDE oak
```

excludes the next record where it finds any occurrence of the character string 'oak’, 'Oak’, or 'OAK’, for example, regardless of case.

```
EXCLUDE all  or  EXCLUDE ALL
```

excludes all records.

```
EXCLUDE OAK all  or  EXCLUDE OAK ALL
```

excludes all records containing the character string 'oak’ regardless of case.

To exclude a record containing a string that is also a keyword, you must enclose the string in single or double quotes:

```
EXCLUDE 'ALL' all
```

excludes all records containing the character string 'ALL’, 'All’, or 'all’, for example, regardless of case.

```
EXCLUDE ''  or  EXCLUDE "'"
```

excludes all records containing a single quote.

```
EXCLUDE '"' or EXCLUDE """
```

excludes all records containing a double quote.

Character string : A delimited string of characters preceded by the letter C. A character string does not translate alphabetic characters to uppercase, and matches only an exact duplicate (including case) of the input string.

Hexadecimal string : A delimited string containing an even number of hexadecimal digits (0-9, A-F), preceded by the letter X.

Decimal string: : A delimited string of decimal digits (0-9) preceded by the letter F or H. The F or H can also be followed by the letter L and a number from 1 to 8 to specify the data length in bytes. A decimal string matches the data with the binary representation of the specified string for the specified length. For example:

```
EXCLUDE X'281'
```

Packed string : A delimited string of decimal digits (0-9) preceded by the letter P. The P can also be followed by the letter L and a number from 1 to 16 to specify the data length in bytes.

Note: When a packed string is used, the col1 parameter must be specified to indicate the location of the packed data.

File-AID matches only a packed data item of the specified length, starting in the specified column, and containing the packed decimal representation of the decimal string. If a data length is omitted, the data matches a valid packed decimal data item with a length of 1 to 16 (containing the specified value). For example:

```
EXCLUDE  PL2'100'  131
```

Packed data test : The characters PL followed by one or two decimal digits to specify the data length (from 1 to 16) in bytes. The col1 parameter must be used to specify the location of the packed data. A packed data test searches for valid packed data starting in the specified column. If length is specified, the data must be a packed decimal number of the specified length. Use the NE relational operator to search for invalid data in a specified column. Only the EQ or NE relational operators may be specified with a packed data test. For example:

```
EXCLUDE  NE  PL3  131
```

Text string : A delimited string preceded by the character T. Text strings are unnecessary because they are treated the same as delimited strings. File-AID supports text strings to maintain consistency with ISPF/PDF.

The *val1* parameter may be any one of the following data type strings:

Data type:	Example:
Simple	ABC
Delimited	'AB CD'
Character	C'Smith'
Hexadecimal	X'F1F2F3'
Decimal	999
Packed	P'59'
Packed data	PL4
Text	T'AnyCASE'

*** (asterisk) :** Value for the *val1* parameter that specifies to reuse the last value specified in a CHANGE, EXCLUDE, or FIND command.

VALID, INVALID : Excludes valid or invalid data in a specified field. These values are mutually exclusive with the rel and val1 parameters. Data is considered valid if it conforms to the field declaration in the record layout.

A */field-name* or */field-number* parameter is required when VALID or INVALID is used. If neither is specified, File-AID interprets the VALID or INVALID keyword as a simple string.

A successful search displays the valid or invalid data found, followed by the word EXCLUDED. An unsuccessful search produces the message:

```
NO EQ VALID FOUND or NO EQ INVALID FOUND.
```

lrange (Start range, End range) : Confines the EXCLUDE command to a specified line range (records). For the line range limits, use any combination of user-defined labels or valid line numbers, prefixed by a period.

If a single line label or line number is specified (or the same line is specified twice), File-AID limits the search to the specified line. Line range limits can be specified in any order. The line that occurs first in the dataset is considered to be the lower limit of the line range.

Line ranges are not valid when browsing a keyed file.

Additional line labels can be defined by entering a string starting with a period followed by one of the letters A through Y.

Example 1

Excludes the first line containing the string ROMAN found within lines 2 to 5 (inclusive):

```
EXCLUDE  .2  .5  ROMAN
```

Example 2

Excludes the first line containing a byte having a value less than hex 05 found within the line range beginning at the user-defined label .MARK, and ending at the last line of the file.

```
EXCLUDE  LT X'05'  .MARK  .ZLAST
```

X, NX (Lines to search) : X restricts the EXCLUDE command to excluded lines. NX restricts the EXCLUDE command to nonexcluded lines. If the lrange parameter is also specified, File-AID scans only excluded (or nonexcluded) lines within the specified line range.

NX confines the search to nonexcluded lines. If NX is not specified, File-AID may find the next occurrence of the specified data within excluded lines, so that no new lines may be excluded. Use NX with the ALL value to count all occurrences of the specified data found in newly excluded lines, rather than all occurrences of the specified data throughout the entire dataset.

NEXT, PREV, FIRST, LAST, ALL (Modifier) : Use the NEXT, PREV, FIRST, or LAST values to specify the starting point and search direction. Table 21-5 summarizes the functions of these parameters.

Table 21-5. EXCLUDE Command Search Values

Parameter	Search Division	Origin of Search
NEXT	Forward	Current cursor position
PREV	Backward	Current cursor position
FIRST	Forward	Start of data or specified line range
LAST	Backward	End of data or specified line range

Use the ALL parameter to exclude all lines that contain the specified data (within the lines defined by the *lrange* and X, NX parameters). The ALL parameter is mutually exclusive with the NEXT, PREV, FIRST, and LAST parameters. If none of these values is specified and a line range is specified, File-AID assumes a value of FIRST. If neither a line range nor any of these values is specified, File-AID assumes a value of NEXT.

col1, col2 (Start column, End column) : Specifies a valid single column (*col1*) or column range (*col1* and *col2*). File-AID defaults to the current bounds settings if *col1* and *col2* are not specified. Specify a single column or column range to override the default column range. Data specified for a single column must begin at the *col1* position. Data specified for a column range must be found within the specified range.

Note: The *col2* parameter must follow the *col1* parameter.

Specify the *col1* and *col2* parameters as integers. If the *val1* parameter consists of the numbers 0 (zero) through 9, delimit the value of the *val1* parameter to distinguish it from the column values. Do not use *col1* or *col2* when the */field-name* or */field-number* parameter is used.

/field-name, /field-number (Field name, Field number) : The */field-name* parameter specifies the data name given to the field in the record layout. The */field-number* parameter specifies the number generated by File-AID for each data name in the record layout. If a name was specified in the record layout dataset or XREF dataset name fields on the Edit - Dataset Specification screen, you can use a */field-name* or */field-number* parameter to confine the search to a specific data field.

If a record layout was not entered on the Edit screen, attempting to specify a */field-name* or */field-number* produces the message:

```
FIELD UNDEFINED - NO LAY.
```

The */field-name* or */field-number* parameter must be prefixed by a slash (/) to distinguish it from val1 or column range parameter. A field name may be fully qualified, partially qualified, or unqualified, but it must be unique. Each unique word of the field name may be abbreviated starting with the first letter. If an abbreviated field name is used, it must be unique. Use a period to delimit levels of qualified names. If several maps are loaded, it may be necessary to include the member name or the 01-level name to uniquely identify a field. If so, precede the field name with the member name and/or 01-level name, also delimited with periods. Specify either a */field-name* or */field-number* parameter when the VALID/INVALID parameter is used.

A field name value that matches more than one field name in the record produces the message:

```
AMBIGUOUS FIELD NAME.
```

A field name value that does not match any record field, produces the message:

```
FIELD NAME NOT FOUND.
```

Example

If the field AGE is a two-byte packed data field, the command:

```
EXCLUDE  /AGE  100
```

is equivalent to:

```
EXCLUDE  /AGE  PL2'100'
```

The data cannot be defined in an inconsistent way. Thus, the command:

```
EXCLUDE  /AGE X'100C'
```

results in the error message:

```
INVALID DATA TYPE
```

even though X'100C' is the internal representation of the value 100 in a two-byte packed data field.

Guidelines

File-AID performs a search without regard to case (upper/lower) for the CHANGE, EXCLUDE, and FIND primary commands with the following exceptions, in which case File-AID searches for the string exactly as entered:

- If a case-sensitive search is specified by a delimited string of characters preceded by the character C.
- When a Boolean operator other than EQ or NE is specified.
- For a double-byte character string (DBCS) system.

The RFIND primary command repeats an EXCLUDE command. Using RFIND is equivalent to using EXCLUDE with the inherited parameters in all instances except when a previous search produced the message: **TOP OF DATA REACHED** or **BOTTOM OF DATA REACHED**. In this case, RFIND continues a forward or backward search at the opposite end of the dataset. RFIND continues a search in the same direction beyond the previously specified line range.

When using RFIND, the *lrange* parameter is not inherited from the EXCLUDE command. Therefore, a repeated search using RFIND is not confined to the line range specified in an EXCLUDE command.

Once a CHANGE, EXCLUDE, or FIND command is executed, the REBUILD or CANCEL commands will not discard changes made to the edit dataset or selected records.

After a successful search, File-AID positions the cursor below the excluded line. An unsuccessful search through the dataset or defined line range produces the message: **NO (rel)(val1) FOUND**.

After a global exclude (ALL), the cursor positions below the first set of excluded lines (from the start of the file).

Character and Vertical Formatted Modes

Lines may also be excluded with the X (exclude) line command (Edit only).

The effect of the EXCLUDE command is cumulative, that is, lines that contain the specified data are added to the excluded subset and eliminated from the display. Previously excluded lines remain excluded.

EXCLUDE parameters may be presented in any order except that a *col2* parameter must follow a*col1* parameter. EXCLUDE is confined to the range of columns within the bounds, except when the *col1*, *col1* and *col2*, */field-name*, or */field-number* parameter is specified.

Define the matching criteria (used to select lines to be excluded) either with the *rel* and *val1* parameters or with the VALID or INVALID parameter. Use the remaining parameters to limit exclusions to specific lines and/or fields within lines, and specify which occurrence(s) of the specified data are to be excluded.

An EXCLUDE command divides the dataset into two subsets that can be processed separately. The scope of the CHANGE, DELETE, EXCLUDE, and FIND primary commands can be confined to one or the other of these subsets by specifying the X or NX parameter.

Use the CHANGE, FIND, and RESET primary commands or the F (first), L (last), and S (show) line commands to redisplay lines previously excluded with the EXCLUDE primary command or the X (exclude) line command. Using CHANGE, FIND, or RESET moves the indicated lines from the excluded subset to the nonexcluded subset.

File-AID shows the number of excluded lines at a particular location in the dataset with the message: **N RECORD(S) NOT DISPLAYED**, where N is the number of excluded lines at that location.

Formatted Mode

Excluded records are bypassed when scrolling through the dataset.

An EXCLUDE command entered from the Formatted mode performs the same operation on the dataset as it would if entered in Character or Vertical Formatted modes with the cursor placed on the currently displayed record.

After completing an exclude in Formatted mode, File-AID displays the first record following the first continuous group of excluded records. If the first continuous group of excluded records extends to the end of the dataset, the last nonexcluded data record is displayed.

If the cursor is located within the data area of a field when you press Enter, the search is limited to that field. This technique may be used instead of specifying the */field-name* or */field-number* parameters.

Note: In Formatted mode, the RESET command does not redisplay previously excluded records.

EXCLUDE Command Screen

If you enter the EXCLUDE command without specifying any parameters, File-AID displays the EXCLUDE Command screen. Refer to the parameter descriptions for "EXCLUDE (EX, E, X)" on page 21-28 for a complete description of the fields on this screen.

Figure 21-3. EXCLUDE Command Screen

```
File-AID  -----------------  EXCLUDE Command -----------------------------------
COMMAND ===>

Specify EXCLUDE operands:
   Operator         ===>          (EQ; NE; LT; GT; LE; GE)
   Find string      ===>
   Modifier         ===> NEXT     (NEXT; ALL; FIRST; LAST; PREV)
   Lines to search  ===>          (NX = Nonexcluded; X = Excluded; Blank = all)


Specify the Following Fields to Limit the Range of Search for this EXCLUDE:
    Field name     ===>
       or
    Field number   ===>
       or
    Start column   ===>         End column ===>          (Column number(s))
    Start range    ===>         End range  ===>          (Label or line number)


NOTE: You may bypass this screen by entering the EXCLUDE command with operands:
EXCLUDE  string       (NEXT)    (NX)   (col-1 (col-2))   (range)
EX     (op) string    (ALL)     (X)    (/field name)
       VALID          (FIRST)          (/field number)
       INVALID        (LAST)
       *              (PREV)
```

FBROWSE (FB, F1)

The FBROWSE command recursively invokes the File-AID Browse function. The command is available in all File-AID functions.

```
▶▶─┬─FBROWSE─┬─┬──────────────┬──────────────▶◀
   ├─FB──────┤ └─dataset name─┘
   └─F1──────┘
```

dataset name : Qualified (quoted) or unqualified (no quotes) dataset name to pass to the Browse screen. If no dataset name is specified, the last dataset referenced in File-AID is used as a default.

Guidelines

The FBROWSE command may be used to invoke another File-AID browse session without ending the current session. After the new browse session is completed, the original session is continued.

Use the FB abbreviation, or the F1 alias to invoke FBROWSE. You can enter FBROWSE from any screen with a COMMAND field. Use the END command (PF3) on the Browse screen or the RETURN command (PF4) on a data display to return to the screen from which you entered the FBROWSE command.

FEDIT (FE, F2)

The FEDIT command recursively invokes the File-AID Edit function. The command is available in all File-AID functions.

```
►►─┬─FEDIT──┬──┬──────────────────┬──►◄
   ├─FE─────┤  └─dataset name─────┘
   └─F2─────┘
```

dataset name : Qualified (quoted) or unqualified (no quotes) dataset name to pass to the Edit - Dataset Specification screen. If a dataset name is not specified, File-AID uses the last dataset referenced.

Guidelines

The FEDIT command may be used to invoke another File-AID edit session without ending the current session. After the new edit session is completed, the original session is continued.

Use the FE abbreviation or the F2 alias to invoke FEDIT. You can enter FEDIT from any screen with a COMMAND field. Use the END command (PF3) on the Browse screen or the RETURN command (PF4) on a data display to return to the screen from which you entered the FEDIT command.

FILLER (FILL, FI)

The FILLER command controls whether FILLER fields are displayed.

The command is available in the Browse and Edit functions in Formatted and Vertical Formatted modes.

```
                ┌─ON──┐
►►─┬─FILLER──┬──┤     ├──►◄
   ├─FILL────┤  └─OFF─┘
   └─FI──────┘
```

ON : Displays the FILLER fields.

OFF : Does not display the FILLER fields.

Guidelines

Use the PROFILE command to display the current FILLER value.

Filler fields are defined in the currently selected record layout (unless they are omitted with the DISPLAY primary command).

FIND (F)

The FIND command searches for and displays, if found, lines meeting specified conditions. When you enter the FIND command without parameters, File-AID displays the FIND Command screen. The screen field names are shown in parentheses next to their corresponding parameter terms.

The command is available in the Browse and Edit functions in all modes.

```
                                                          ┌NEXT──┐
▶▶─┬FIND──┬──┬──┬──┬──val1──┬──┬──────┬──┬──┬──┬──┬──┬──┬──┬──┬──▶
   └F─────┘  │  │  │        │  └lrange┘  │X │  │  │  │  │  │  │
             │  └rel┘        │            │  │  │  │  │  │  │  │
             │ *             │            └NX┘  │  │  │  │  │  │
             ├VALID          │                  │  │  │  │  │  │
             └INVALID        │                  │  │  │  │  │  │
                             │                  │  │  │  │  │  │
                             │                  │  │  │  │  │  │
                             
```

finds all occurrences of the character string 'oak' regardless of case.

To find all occurrences of a string that is also a keyword, you must enclose the string in single or double quotes:

```
FIND 'ALL' all
```

finds all occurrences of the character string 'ALL', 'all', or 'All', for example, regardless of case.

```
FIND '''  or  FIND "'"
```

searches for a single quote.

```
FIND '"'  or  FIND """
```

searches for a double quote.

Character string : A delimited string of characters preceded by the letter C. A character string does not translate alphabetic characters to uppercase, and matches only an exact duplicate (including case) of the input string.

Hexadecimal string : A delimited string containing an even number of hexadecimal digits (0-9, A-F), preceded by the character X.

Decimal string : A delimited string of decimal digits (0-9) preceded by the letter F or H. The F or H may also be followed by L and a decimal digit to specify the data length (from 1 to 8) in bytes. If the length is omitted, the default value for F is 4, and 2 for H. A decimal string matches the data with the binary representation of the specified string for the specified length.

Packed string : A delimited string of decimal digits preceded by the character P. The P can also be followed by the letter L and a number from 1 to 16 to specify the data length in bytes.

Note: When a packed string is used, the *col1* parameter must be specified to indicate the location of the packed data.

File-AID matches only a packed data item of the specified length, beginning in the specified column and including the packed decimal representation of the specified string. If length is omitted, the data matches a valid packed decimal data item with a length of 1 to 16 (containing the specified value).

Packed data test : The characters PL followed by one or two decimal digits to specify the data length (from 1 to 16) in bytes. The col1 parameter must be used to specify the location of the packed data. A packed data test searches for valid packed data starting in the specified column. If length is specified, the data must be a packed decimal number of the specified length. Use the NE relational operator to search for invalid data in a specified column. Only the EQ or NE relational operators may be specified with a packed data test.

Text string : A delimited string preceded by the character T. Text strings are unnecessary because they are treated the same as delimited strings. File-AID supports text strings to maintain consistency with ISPF/PDF.

The *val1* parameter may be any one of the following data type strings:

Data type:	Example:
Simple	ABC
Delimited	'AB CD'
Character	C'Smith'
Hexadecimal	X'F1F2F3'
Decimal	999
Packed	P'59'

Data type:	Example:
Packed data	PL4
Text	T'AnyCASE'

*** (asterisk) :** Value for the *val1* parameter that specifies File-AID to reuse the last value specified in a CHANGE, EXCLUDE, or FIND command.

VALID, INVALID : Searches for valid or invalid data in a specified field. These values are mutually exclusive with the rel and val1 parameters. Data is considered valid if it conforms to the field declaration in the record layout.

A */field-name* or */field-number* parameter is required when VALID or INVALID is used. If neither is specified, the VALID or INVALID keyword is interpreted as a simple string.

A successful search for valid or invalid data produces the message:

```
EQ VALID FOUND or EQ INVALID FOUND.
```

An unsuccessful search produces the message:

```
NO EQ VALID FOUND or NO EQ INVALID FOUND.
```

lrange (Start range, End range) : Confines the FIND command to a specified range of lines (records). For the line range limits, use any combination of user-defined labels or line numbers, prefixed by a period.

If a single line label or line number is specified (or the same line is specified twice), the search is confined to the specified line. Line range limits may be specified in any order. The line that occurs first in the dataset is considered to be the lower limit of the line range.

Additional line labels may be defined by entering (in the sequence field to the left of the line to be labeled) a string starting with a period followed by one of the letters A through Y.

Line ranges are not valid when browsing a keyed file.

X, NX (Lines to search) : X restricts the FIND command to excluded lines. NX restricts the FIND command to nonexcluded lines. If the lrange parameter is also specified, only excluded (or nonexcluded) lines within the specified line range are scanned.

Use the RFIND primary command to search for subsequent occurrences.

NEXT, PREV, FIRST, LAST, ALL (Modifier) : Use the NEXT, PREV, FIRST, or LAST values to specify the starting point and search direction. Table 21-6 summarizes the functions of these parameters.

Table 21-6. FIND Command Search Values

Parameter	Search Direction	Origin of Search
NEXT	Forward	Current cursor position
PREV	Backward	Current cursor position
FIRST	Forward	Start of data or specified line range
LAST	Backward	End of data or specified line range

The ALL value searches for all occurrences of the specified data (within the lines defined by the lrange, X, and NX parameters). File-AID displays the total number of occurrences and positions the cursor at the first occurrence (from the beginning of the dataset or specified line range).

The ALL value is mutually exclusive with the NEXT, PREV, FIRST, and LAST values. If none of these values is specified and a line range is specified, File-AID assumes a value of FIRST. If neither a line range nor any of these values is specified, File-AID assumes a value of NEXT.

col1, col2 (Start column, End column) : Specifies a valid single column (*col1*) or column range (*col1* and *col2*). File-AID defaults to the current bounds settings if col1 and col2 are not specified. To override the default, specify either a single column or column range. Data specified for a single column must begin at the *col1* position. Data specified for a column range must be found within the specified range.

Note: The *col2* parameter must follow the *col1* parameter.

Specify the *col1* and *col2* parameters as integers. If the *val1* parameter consists of the numbers 0 (zero) through 9, delimit the value of the *val1* parameter to distinguish it from the column values. Do not use *col1* or *col2* when the */field-name* or */field-number* parameter is used.

/field-name, /field-number (Field name, Field number) : The */field-name* parameter specifies the data name given to the field in the record layout. The */field-number* parameter specifies the number generated by File-AID for each data name in the record layout. If a name was specified in the record layout dataset or XREF dataset name fields on the Edit - Dataset Specification screen, you can use a */field-name* or */field-number* parameter to confine the search to a specific data field.

The */field-name* or */field-number* parameter must be prefixed by a slash (/) to distinguish it from *val1* or column range (*col1* and *col2*) parameters. A field name can be fully qualified, partially qualified, or unqualified, but it must be unique. Each unique word of the field name may be abbreviated starting with the first letter. If an abbreviated field name is used, it must be unique. Use a period to delimit levels of qualified names. If several maps are loaded, it may be necessary to include the member name or the 01-level name to uniquely identify a field. If so, precede the field name with the member name and/or 01-level name, also delimited with periods. Specify either a */field-name* or */field-number* parameter when the VALID/INVALID parameter is used.

A field name value that matches more than one field name in the record produces the message:

```
AMBIGUOUS FIELD NAME.
```

A field name value that does not match any layout field produces the message:

```
FIELD NAME NOT FOUND.
```

If a record layout was not entered on the Edit screen, specifying a */field-name* or */field-number* produces the message:

```
FIELD UNDEFINED - NO MAP.
```

Notes:

1. Use of the */field-name*, */field-number* parameters is mutually exclusive with use of the col1, col2 parameters.
2. When you use the */field-name* or */field-number* parameter with the ALL parameter, File-AID finds the first occurrence of the search string in each field.

All Modes

File-AID performs a search without regard to case (upper/lower) for the CHANGE, FIND, and EXCLUDE primary commands with the following exceptions, in which case File-AID searches for the string exactly as entered:

- If a case-sensitive search is specified by a delimited string of characters preceded by the character C.
- When a Boolean operator other than EQ or NE is specified.
- For a double-byte character string (DBCS) system.

Define data to be searched for either by the *rel* and *val1* parameters or by the VALID or INVALID parameter. If the ALL parameter is used, File-AID displays the total number of occurrences of data that match the specified criteria.

FIND is confined to the range of columns within the edit bounds, except when a column, column range, field name, or field number is specified.

Use the FIND primary command or the F (first), L (last), or S (Show) line commands to redisplay lines previously excluded with the EXCLUDE primary command or the X (exclude) line command. These commands move the indicated lines from the excluded subset to the nonexcluded subset of the dataset.

The RFIND primary command continues a forward or backward search at the opposite end of the dataset. However, the RFIND command is not confined to the line range specified in a previous FIND command.

After a successful search, File-AID positions the cursor at the beginning of the matching data. Use RFIND to reissue the same FIND command and continue the search in the same direction as the original command. An unsuccessful search through the dataset or defined line range produces the message: **NO (rel)(val1) FOUND**.

After a global search, the cursor is positioned at the first occurrence of the specified data (from the start of the file).

Formatted Mode

A FIND command entered in Formatted mode performs the same operation on the dataset as it would if entered in Character or Vertical Formatted mode.

After the search is executed, File-AID positions the display at the field and record where the cursor would appear if the operation had taken place in Character or Vertical Formatted mode, that is, at the first field of the first record where the specified data was found.

Searches are not automatically confined to the currently selected record. Use line range parameters to restrict searches to the currently selected record.

If the cursor is located within the data area of a field when you press Enter, the search is limited to that field. This technique may be used instead of specifying the */field-name* or */field-number* parameters.

Edit FIND Screen

If you enter the FIND command without specifying any parameters, File-AID displays the FIND Command screen. Refer to the parameter descriptions for “FIND (F)” on page 21-36 for a complete description of the fields on this screen.

Figure 21-4. FIND Command Screen

```
File-AID  -----------------  FIND Command  -----------------------------------
COMMAND ===>

Specify FIND operands:
   Operator         ===>          (EQ; NE; LT; GT; LE; GE)
   Find string      ===>
   Modifier         ===> NEXT     (NEXT; ALL; FIRST; LAST; PREV)
   Lines to search  ===>          (NX = Nonexcluded; X = Excluded; Blank = all)


Specify the Following Fields to Limit the Range of Search for this FIND:
    Field name     ===>
       or
    Field number   ===>
       or
    Start column   ===>         End column ===>          (Column number(s))
    Start range    ===>         End range  ===>          (Label or line number)


NOTE: You may bypass this screen by entering the FIND command with operands:
FIND   string         (NEXT)    (NX)   (col-1 (col-2))   (range)
F      (op) string    (ALL)     (X)    (/field name)
       VALID          (FIRST)          (/field number)
       INVALID        (LAST)
       *              (PREV)
```

FLIP

The FLIP command reverses the exclude status of all of the records in the file. This command is valid in all modes of Browse and Edit with the exception of Windowed Browse and Windowed Edit. The FLIP primary command has no parameters.

```
►►──FLIP──►◄
```

FMT

The FMT command invokes the Formatted mode from Character mode, Vertical Formatted mode, or Unformatted mode of Browse or Edit. Since Character and Vertical Formatted modes display more than one record per screen and Formatted mode displays one record at a time, File-AID displays the top record on the screen in Formatted mode. The FMT command is synonymous with the MAP command.

This command is available in the Browse and Edit functions in Character, Vertical Formatted, and Unformatted modes.

```
►►──FMT──►◄
```

FORWARD (FWD)

The FORWARD command scrolls the display to next record in Formatted or Unformatted mode and down in Character or Vertical Formatted mode. Use the FORWARD command without a parameter to scroll the display by a single record in Formatted or Unformatted mode or the SCROLL amount in Character or Vertical Formatted mode. The FORWARD command is synonymous with the RIGHT command in Formatted or Unformatted mode and the DOWN command in Character and Vertical Formatted mode.

The command is available in all modes of the Browse and Edit functions and the Formatted mode of the Selection Criteria and XREF functions.

```
►►─┬─FORWARD──┬──┬──────────────────┬──►◄
   └─FWD──────┘  ├─scroll-number────┤
                 └─M───────────────┘
```

scroll-number : Number of records to scroll forward. Attempts to scroll past the last (selected) record are treated as a maximum scroll.

M (maximum) : Scrolls the display to the last (selected) record of the file.

FPRINT (FP)

The FPRINT command prints the current record and any number of subsequent records formatted according to the current display setting. You can send output to SYSOUT or a dataset.

The FPRINT command is available in the Browse and Edit functions in Formatted mode.

```
►►─┬─FPRINT──┬──┬──────────┬──►◄
   └─FP───────┘  ├─number───┤
                 └─ALL──────┘
```

number : Specifies the number of records to print. The default is 1 (one). 0 (zero) prints the current and all subsequent records in the file.

ALL : Prints the current record and all subsequent records in the file. For example, use the following command sequence to print fields 5, 7, and 8 in all records:

1. SHOW NUMBER (to number each field)
2. DISPLAY 5 7 8 ONLY
3. BACK M
4. FPRINT ALL.

Preallocating a Print Dataset

If a dataset is preallocated with an FAPRINT DD statement in your logon PROC or if you use a TSO command to dynamically allocate one, the output is automatically directed to this dataset. Use the following TSO commands to allocate FAPRINT:

```
TSO ALLOC FI(FAPRINT) DA(dataset-name)
```

To free FAPRINT, use:

```
TSO FREE FI(FAPRINT)
```

The dataset used for FAPRINT must be created and cataloged with the following attributes:

RECFM : VBA

LRECL : 187

BLKSIZE : 1874, or larger to be efficient for the device where the file is created.

Print Parameters Screen

The Print Parameters screen is displayed, as shown in Figure 21-5, when you issue the FPRINT command and File-AID cannot find a preallocated FAPRINT DD. This screen enables you to specify the number of copies and destination of the print. You can direct

the output to a dataset by specifying the name of a dataset in the Print dataset name field. If the dataset does not exist, you can specify a disposition of NEW to allocate one.

Figure 21-5. Print Parameters Screen

```
File-AID -------------------  Print Parameters  -------------------------------
COMMAND ===>

Number of lines/page       ===> 55       (0 = Suppress page headings)
Sysout class               ===> A
Number of copies           ===> 1

Enter One of the Following Optional Destinations:

   Destination printer     ===>          (Local or remote printer)
   - - - OR - - -
   External JES Node ID    ===>          (Predefined JES Node and symbolic ID
   Target VM/TSO ident     ===>           of intended receiver of output)
   - - - OR - - -
   Sysout writer name      ===>          (Installation assigned output writer)
   - - - OR - - -

                                         (DSORG=PS; RECFM=VBA; LRECL=187)
   Print dataset name      ===>
   Disposition             ===> OLD      (NEW; SHR; MOD; OLD)
   Volume serial           ===>
```

Field Descriptions

Number of lines/page : Controls when headings are printed. Specify the number of line per page. If you specify 0 (zero), page headings are not printed. The default number of lines per page is 55, including the page headings.

Sysout class : Specify the output category or output device. You must specify a value.

Number of copies : Specify the number of copies you want printed. A valid value is any integer from 1–9999.

Enter One of the Following Optional Destinations:

Destination printer : Specify either the name of a remote printer or the system default printer. To specify the default printer, you can leave the field blank, or specify a value of LOCAL or R0.

External JES Node ID : To route the output across JES nodes, specify the symbolic name of an installation-dependent JES node. This field is required.

Target VM/TSO ident : To route the output across JES nodes, specify either a VM or TSO user ID or the symbolic name specified in the External JES Node ID field. This field is required.

Sysout writer name : Specify the name of an installation-dependent external writer.

Print dataset name : Specify the name of the dataset to which File-AID can write the print output.

Disposition : Specify a disposition for the print dataset:

MOD : Modified, add on to end.

NEW : New.

OLD : Old, exclusive serialization.

SHR : Share -- old, share serialization.

If you specified the name of a dataset that does not exist, specify the disposition as NEW and File-AID displays the Print Dataset Attributes Specification screen.

Volume serial : Specify the volume serial number of the storage device for a non-cataloged or new dataset.

Print Dataset Attributes Specification Screen

The Print Dataset Attributes Specification screen, shown in Figure 21-6, allows you to specify additional allocation parameters for your print dataset. It is displayed when you specify name of a dataset that does not exist and a disposition of NEW on the Print Parameters screen (Figure 21-5 on page 21-43).

Figure 21-6. Print DataSet Attributes Specification Screen

```
File-AID ------------- Print Dataset Attributes Specification -----------------
COMMAND ===>

Print Dataset Allocation Information:
   Generic unit            ===>
   Space units             ===>             (BLKS; TRKS; CYLS)
   Primary quantity        ===>             (In above units)
   Secondary quantity      ===>             (In above units)









Use ENTER to print, END to cancel
```

Field Descriptions

Print Dataset Allocation Information:

Generic unit : Specify the device type on which the new dataset will reside.

Space units : Specify whether the dataset is allocated in blocks (BLKS), tracks (TRKS), or cylinders (CYLS).

Primary quantity : Specify the initial number of space units.

Secondary quantity : Specify the number of space units to be allocated for each secondary extent.

Go

The GO command switches your session into Browse (from Edit) or Edit (from Browse) while retaining your current record and cursor position. However, when using the GO command in a segmented record while positioned in a segment, the record will be re-positioned to the BASE. The GO command is valid in all modes of Browse and Edit. However, when executing the GO command on a file that is a candidate for Windowed mode, you will not be prompted with a choice of Standard versus Windowed mode. In this case File-AID will automatically load the candidate file in Windowed mode.

```
►►─GO──┬──────────┬──────────────────────────►◄
       ├─BROWSE───┤
       └─EDIT─────┘
```

BROWSE : Switch from File-AID Edit to File-AID Browse.

EDIT : Switch from File-AID Browse to File-AID Edit.

GROUP (G)

The GROUP command controls whether each occurrence of a group-level item is displayed.

The command is available in the Browse and Edit functions in Formatted mode.

```
►►─┬GROUP─┬──┬ON──┬──►◄
   └G─────┘  └OFF─┘
```

ON : Displays each occurrence of a group-level item on a separate line.

OFF : Does not display group-level items.

Guidelines

Use the PROFILE command to display the current GROUP value.

If SHOW PICTURE is ON, each group-level item contains a group name, and the word GROUP in the PICTURE column. If SHOW FORMAT is ON, each group-level item contains a group name, the field length, and the code GRP in the FORMAT column. If SHOW OFFSET is ON, each group-level item contains a group name, and the offset to the group item in either relative or column mode. See "OFFSET (OFST)" on page 21-59.

HEX

The HEX command controls whether record data is displayed in hexadecimal notation.

The command is available in the Browse and Edit functions in Character, Vertical Formatted, and Unformatted modes.

```
►►──HEX──┬ON──┬──►◄
         └OFF─┘
```

ON : Displays record data in hexadecimal notation in a three-line format shown in Figure 21-7 and described below. The three lines are followed by a separator line of dashes.

Line 1: Displays the data in standard character form. Valid Graphic DBCS data is displayed in DBCS form.

Lines 2 and 3: Displays the hexadecimal values of the data in Line 1, arranged vertically. Each of these lines is marked with the letter V in column 1. The high-order hexadecimal digit is displayed above the low-order hexadecimal digit.

Figure 21-7. Sample Hexadecimal Data Display

```
000005  04DD    CHOPIN, FREDERIC              ADDRESS LINE TWO 04           RIV
V      0FFCC4444CCDDCD64CDCCCDCC44444444444444CCCDCEE4DCDC4EED4FF44444444444DCE
V      004440000386795B069545993000000000000001449522039550366004000000000995
--------------------------------------------------------------------------------
```

OFF : Does not display record data in hexadecimal notation.

Guidelines

Use the PROFILE command to display the current HEX value.

When a keyed dataset is being edited, the key is separated from the rest of the record (on the display) by a blank column.

Displayable characters can be modified by overtyping either the character or the hexadecimal representation.

Nondisplayable characters in the record can be changed by overtyping the hexadecimal representation. Data cannot be entered on the character line in positions containing nondisplayable data.

The CHANGE, EXCLUDE, and FIND commands can be used to locate and alter nondisplayable data, regardless of the setting of the HEX option.

HIDE

The HIDE command enables you to exclude fields or a range of fields from your display. It is similar to the "Display OFF field" command. It is valid in Formatted and Vertical Formatted mode of Browse and Edit.

```
►►─HIDE──┬──────────────────────────────┬──►◄
         ├─ field-number ───────────────┤
         ├─ field-number-range        ──┤
         └─ALL──────────────────────────┘
```

field-number : Hides the specified field number.

field-number-range : Hides the specified range of field numbers. For example: HIDE 1-3 displays fields 4,5,6,...

ALL : The HIDE ALL command hides all fields and displays the HIDE and HOLD Settings pop-up listing all the fields in the record. This pop-up indicates the display status of each field and enables you to enter line commands for each field. The line commands enable you to reset a field to display and/or reorder the display of fields with the HOLD line command.

Guidelines

You can redisplay the HIDE and HOLD Settings pop-up at any time by entering HIDE <blank>, HOLD <blank>, or HIDE ALL in the Command field.

The fields which are HIDDEN using the HIDE (or Display OFF) are redisplayed by using RESET (or RESET HIDE), Display ON or HOLD on that field.

Fields are identified by their field numbers. In VFMT mode each field number is always shown at the left of each field's heading "ruler". Reverse range is supported with the HIDE command.

HOLD

The HOLD command specifies the ORDER of data items to HOLD on the screen when scrolling in Formatted and Vertical Formatted mode of Browse and Edit. The fields are kept on the screen in the ORDER specified. You can use reverse field range with the HOLD primary command.

Entering the HOLD primary command without an operand displays the HIDE and HOLD Settings pop-up listing all the fields in the record. This pop-up indicates the display status of each field and enables you to enter line commands for each field. The line commands allow you to reset a field to display and/or reorder the display of fields using the HOLD line command.

```
►►─HOLD──┬──────────────────────────┬──►◄
         ├─ field-number ───────────┤
         └─ field-number-range ─────┘
```

field-number : Holds the specified field number(s).

field-number-range : Holds the specified range of field numbers. Reverse field range is supported. For example: HOLD 3-1 6 displays 3,2,1,6,4,5,7,9...

Guidelines

You can redisplay the HIDE and HOLD Settings pop-up at any time by entering HOLD <blank>, HIDE <blank>, or HIDE ALL in the Command field.

Entering a second HOLD command on a field already HELD moves that field to the end of the HOLD fields displayed. ex. HOLD 3,2,1 displays 3,2,1,4,5... And entering HOLD 2 subsequently displays 3,1,2,4,5...

Any fields which were hidden by Display OFF, Display ONLY or HIDE are redisplayed when the HOLD command or DISPLAY ON is entered with that field number.

All held or hidden fields are released by entering the RESET primary command. All held fields are released by the RESET HOLD primary command.

Fields are identified by their field numbers. In VFMT mode each field number is always shown at the left of each field's heading "ruler".

INFO

The INFO command displays statistical information for a selected dataset. The command is available in the Edit function in Character and Vertical Formatted modes.

```
►►──INFO──►◄
```

Use the INFO command to display two INFO lines immediately below the first data line. If the HEX option is set ON, the INFO lines take the place of the first record separator line. The INFO lines move as the data is scrolled and remain imbedded in the edit dataset until they are removed with the RESET primary command or the D (delete) line command.

Sample INFO Display Screen

Figure 21-8 shows a sample of the INFO lines when a sequential dataset is edited.

Figure 21-8. Sample INFO Display

```
=INFO> ....DSORG PS..RECFM VB..LRECL 4992..RKP 0..KEYLN 0.................
=INFO> ....ERRORS 0..SEQ ERRORS 0..DUP KEYS 0..CHANGES 0.................
```

Line 1:

DSORG : Dataset organization

RECFM : Record format

LRECL : Logical record length

RKP : Relative key position

KEYLN : Key length

Line 2:

ERRORS : Number of lines currently flagged with ERR

SEQ ERRORS : Number of lines currently flagged with SEQ

DUP : Number of lines currently flagged with DUP

CHANGES : Number of lines changed.

INIT

The INIT command initializes (sets to null values) and displays all fields of the current record.

Use the INIT command without a parameter to initialize (set to null values) and display all fields of the current record, according to the currently selected record layout.

The command is available in the Edit function in Formatted mode.

```
►►─INIT──┬──────────────┬──►◄
         └─record-layout─┘
```

record-layout : Specifies the record layout with which you want File-AID to initialize and display the current record.

Do not specify the *record-layout* parameter while a segmented record is being edited, unless the base (first) segment is being displayed. If the base segment is displayed, the record is initialized to contain a single segment of the specified type and any other segments are eliminated from the record.

Specifying the *record-layout* parameter while a segment other than the base segment is displayed produces the error message **CANNOT USE NAME** and prevents initialization.

Guidelines

COBOL data formats are initialized as shown in Table 21-7. PL/I data formats are initialized as shown in Table 21-8.

All data in the record is changed to initial values. Use REBUILD or UNDO to return the original data values to the record. Use INPUT to insert a new record initialized to null values. Use REPEAT to create a new record containing the current data record's values.

Table 21-7. COBOL Data Format Initialization

Format	Initialization
NUM	Character zeros(X'F0')
NUMS	Character zeros with a positive sign byte(X'F0....C0')
AN	Blank characters(X'40')
BI/BIS	Binary zeros(X'00')
SPFP/DPFP	Binary zeros(X'00')
PS	Packed signed zero(X'00...0C')
P	Packed unsigned zero(X'00...0F')
BI/BIS	Binary zeros(X'00')

Table 21-8. PL/I Data Format Initialization

Format	Initialization
AREA	Binary zeros(X'00')
BFL/BFX	Binary zeros(X'00')
BIT	Binary zeros(X'00')
CHAR	Blank characters(X'40')
DFL	Binary zeros(X'00')

Table 21-8. PL/I Data Format Initialization (Continued)

Format	Initialization
DFX	Packed signed zero(X'00...0C')
GRAPHIC	Blank zeros(X'00')
OFST	Binary zeros(X'00')
PFL/PFLU/PFXU	Zero numeric value, valid picture
PTR	Binary zeros(X'00')
VBIT	Zero length, binary zero bits
VCHR	Zero length, character blanks

A record can be self-defining, that is, it can contain one or more OCCURS DEPENDING ON (COBOL) or REFER (PL/I) clauses that refer to data items within the same record layout.

Data formats are initialized to the following values:

- Self-defining records are initialized to the smallest value consistent with record definition.
- All other data items used to define the size of another object are initialized to 1 (one).
- Data items used solely to define a string length are initialized to 0 (zero).

INPUT / INSERT (I)

The INPUT command permits new formatted data records to be created, edited, and added to a dataset. Use the INPUT command without a parameter to format an input record using the currently selected record layout. INSERT is a Synonym for INPUT.

The command is available in the Edit function in Formatted and Unformatted mode.

```
►►─┬─INPUT──────┬──┬──────────────────────┬──►◄
   ├─INSERT─────┤  └─record-layout────────┘
   └─I──────────┘
```

record-layout : Specifies a different record layout to use to format the new record. The specified layout must be included either as part of an XREF entry or as part of a record layout containing several 01 levels. If the specified record layout is not valid, the message **LAYOUT NOT FOUND** is produced. (Use the USE command to see the list of available record layouts.)

Guidelines

COBOL data formats are initialized as shown in Table 21-7 on page 21-48. PL/I data formats are initialized as shown in Table 21-8 on page 21-48.

Each field of the new record is automatically initialized to a null value corresponding to the field format. Unlike records created with the I (insert) line command, input records are not initialized using the MASK record.

Entering an INPUT command displays an initialized record according to the selected format. No record number is assigned at this time; therefore, the word INPUT displays in the header where a record number would normally be displayed.

If performed before the new input record has been modified:

- Scrolling left or right causes File-AID to discard the new record and to show the previously displayed record.

- Using the END primary command causes File-AID to discard the new record and return to the Edit Dataset Specification screen.

Once the input record has been modified:

- The input record is added unless the CANCEL or UNDO primary command is used.
- Scrolling right from an edited input record adds the edited record to the edit dataset and creates a new initialized input record.
- Scrolling left adds the edited input record and causes a return to the previously displayed record.
- Use the END primary command to add the input record and exit the edit screen.

The procedures and options available to edit an existing record are also available to edit an input record. You can use the INIT command to create a new null record. The PROTECT display option is initially set OFF for each new INPUT record.

JCL

In the Compare, Print and Reformat functions, and in the Copy, Search/Update, VSAM, and VTOC utilities, the JCL command invokes ISPF and enables you to edit the Job Control Language generated by File-AID.

```
►►──JCL──►◄
```

KEY

The KEY command scrolls to the record with the specified key (VSAM-KSDS, ISAM only). If you omit the operands, File-AID displays the Key Specification screen from which you can enter the key to retrieve.

The command is available in the Browse and Edit functions in all modes.

```
►►──┬KEY──┬──┬──────────────┬──NEXT──►◄
    └K────┘  ├─key-value────┤
             ├─'key-value'──┤
             ├─"key-value"──┤
             ├─X'key-value'─┤
             ├─C'key-value'─┤
             ├─C"key-value"─┤
             ├─F'key-value'─┤
             └─H'key-value'─┘
```

key value, 'key value', "key value", X'key value', C'key value', C"key value", F'key value', and H'key value' : Scrolls to the record with the specified key.

X - Hex

C - Character (Case-sensitive)

F - Fullword (4 bytes).

H - Halfword (2 bytes).

NEXT : Retrieves the first record with a key greater than or equal to the *key-value* parameter.

KEY Value Specification Screen

When File-AID displays the KEY Value Specification screen, the key field number and name are displayed under the FIELD NUMBER/NAME column, the field format is

displayed under the FORMAT column, and the value of the current record key field is displayed in the data area. Type over the displayed data item to specify the value for which you want to search. When you press Enter, File-AID scrolls to the specified record or displays the message: **RECORD NOT FOUND** in the upper-right corner of the screen.

Figure 21-9. KEY Value Specification Screen

```
File-AID - Edit - USERID9.FASAMP.EMPLOYEE ----------------- COLUMNS 00001 00005
COMMAND ===>                                                 SCROLL ===> CSR
KEY START POS 1    KEY LENGTH 5
KEY VALUE SPECIFICATION
---- FIELD LEVEL/NAME ------- -FORMAT- ----+----1----+----2----+----3----+----4
****************************** TOP OF DATA ********************************
5 EMP-NUMBER                    5/AN   00090
****************************** BOTTOM OF DATA *******************************



Use RIGHT, LEFT commands to browse through keys
Use ENTER when the key value has been fully specified
Use CANCEL command to terminate KEY SPECIFICATION without processing the key
```

LEFT

The LEFT command scrolls the display to the left in Character and Vertical Formatted modes and to the previous record in Formatted mode. Use the LEFT command without a parameter to scroll the display according to the current numeric SCROLL amount or (if non-numeric) by a single record in Formatted mode. In Character and Vertical Formatted modes, the default value is the value in the SCROLL field. Scroll values include CSR, DATA, HALF and PAGE. The LEFT command is synonymous with the BACK command.

The command is available in the Browse and Edit functions in all modes.

```
▶▶──LEFT──┬──────────────────┬──▶◀
          ├─scroll-number────┤
          └─M────────────────┘
```

scroll-number : Specifies the number of characters to scroll to the left in character and vertical formatted modes, or the number of records to scroll back in formatted mode. Attempts to scroll left beyond column 1 or before the first (selected) record are treated as a maximum scroll.

M (maximum) : Scrolls the display to the first column of the file in character and vertical formatted modes, or to the first (selected) record of the file in formatted mode.

LEVEL (LEV)

The LEVEL command sets the PDS modification level for a PDS member.

The command is available in the Edit function in Character mode.

```
►►──┬─LEVEL─┬──── number ────►◄
    └─LEV───┘
```

number : Specifies an integer between 1 and 99. The number parameter is required. Omitting the parameter produces the message: **ENTER LEVEL NUMBER**. Entering an invalid number produces the message: **INVALID LEVEL NUMBER**.

Guidelines

The LEVEL command is invalid for any type of dataset other than a PDS. Entering the LEVEL command while editing a non-partitioned dataset produces the message: **LEVEL IS INVALID**. The command is ignored.

Using the LEVEL command sets the STATS option to ON if it was previously set to OFF. When editing a member with the STATS option set ON, File-AID increments the modification level the first time data is changed during an edit session unless:

- The modification level is set with the LEVEL command before the first change is made, or
- A new PDS member is being edited, which sets the modification level to 0 (zero).

If the modification level is automatically incremented past 99, the version level is incremented and the modification level is reset to 1 (one).

The modification level is saved in the member's statistics when the END command is entered.

LISTALC

The LISTALC command displays the Current DDNAME Allocation List screen, as shown in Figure 21-10 on page 21-52, with a complete list of datasets allocated to you by File-AID.

The command is available in the Browse and Edit functions in all modes.

```
►►──LISTALC──┬──────┬──►◄
             └─ALL──┘
```

ALL : Modifies the Current DDNAME Allocation List to include all datasets allocated to your user ID.

Figure 21-10. Current DDNAME Allocation List Screen

```
File-AID ----- CURRENT DDNAME ALLOCATION LIST (LISTALC) -----  ROW 1 TO 3 OF 3
COMMAND ===>                                                 SCROLL ===> PAGE
LA000-VALID PRIMARY COMMANDS ARE SORTDD OR SORTDSN.

 Valid line commands: B for BROWSE, E for EDIT, F for File-AID, ? for USERS
CMD DDNAME   C# DATASET NAME                                 MEMBER   DISP
--- -------- -- ------------------------------------------- -------- ----
 _  FILEAID0 1  USERID9.FILEAID.WF.D95209.T105258
 _  SYS00031 1  USERID9.FASAMP.LAYOUTS                       EMPLOYEE
 _  SYS00032 1  USERID9.FASAMP.JCL                           CVT6XMAP OLD
****************************** BOTTOM OF DATA ********************************
```

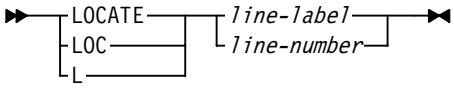
LOCATE (LOC, L)

The LOCATE command searches for and displays one of three types of information:

- Individual Line: Positions a specified individual record to the top of the data display.
- Line Type: Positions a specified type of record to the top of the data display.
- Field: Positions a specified field of the currently displayed record to the top of the data display.

The Individual Line syntax and the Line-Type syntax are available in the Browse and Edit functions in Character, Vertical Formatted, and Unformatted modes. The Field syntax is available in the Browse and Edit functions in Formatted mode.

Individual Line Syntax (Character, Vertical Formatted, and Unformatted Modes):

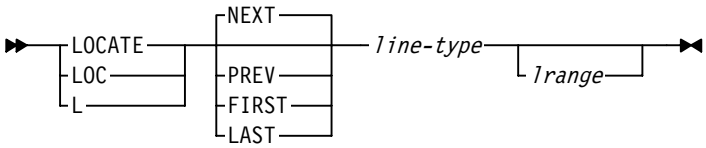


line-label : Searches for a specific line label. If the line label is found, File-AID positions that line at the top of the display. The remainder of the screen is filled, depending on the current display mode. Valid entries are a user-defined label and the File-AID-defined labels SEQ, DUP, ERR, and NEW. Entering an invalid line label produces the message: **UNDEFINED LABEL**.

line-number : Searches for a specific line number. If found, File-AID positions that line at the top of the display. Specify the line number without a preceding period. Valid line-number entries may be as large as eight digits. Leading zeros are not required.

Entering a number that is larger than the largest line number causes File-AID to position the last record at the top of the display.

Line-Type Syntax (Character and Vertical Formatted Modes):



NEXT, PREV, FIRST, LAST : Specifies the starting point and direction of a line search.Table 21-9 summarizes the functions of these values.

Table 21-9. LOCATE Line-Type Syntax Search Values

Parameter	Search Direction	Origin of Search
NEXT	Forward	Current cursor position
PREV	Backward	Current cursor position
FIRST	Forward	Start of data or specified line range
LAST	Backward	End of data or specified line range

line-type : Searches for a specific type of line. If found, positions the line at the top of the display. This parameter is required. Valid entries are listed in Table 21-10. Not entering this parameter produces the message: **INCOMPLETE LOCATE**.

Table 21-10. Valid LOCATE Line-Type Parameter Values

Value	Abbreviation	Definition
CHANGE	CHG	Line marked by the CHG or UNDO flag
COMMAND	COM, CMD	Line with a pending line command

Table 21-10. Valid LOCATE Line-Type Parameter Values (Continued)

Value	Abbreviation	Definition
DUPKEY	DUP	Line with duplicate key error marked by DUP flag
ERROR	ERR	Line marked by ERR flag
EXCLUDED	X	Line excluded from display with EXCLUDE primary command or X (exclude) line command
LABEL	LAB	Line that had a user-defined label
NEW	NEW	Line marked by NEW flag
SEQERR	SEQ	Line with key sequence error marked by the SEQ flag
SPECIAL	SPE	Information display marked by the BNDS, COLS, INFO MASK, MSG, OVLY, or PROF flag.

Valid entries for line-type are: CHANGE (CHG), COMMAND (COM,CMD), DUPKEY (DUP), ERROR (ERR), EXCLUDED (X), LABEL (LAB), NEW, SEQERR (SEQ), and SPECIAL (SPE).

lrange : Confines the search to a specified range of lines (records). For the line range limits, use any combination of user-defined labels or valid line numbers, prefixed by a period.

Example 1

Places the next special information line at the top of the display:

```
LOCATE  SPE
```

Example 2

Places at the top of the display the first line in the dataset that has been assigned a label:

```
L  FIRST  LAB
```

Example 3

Places at the top of the display the next line marked by CHG or UNDO within the range from line 14 to line 20:

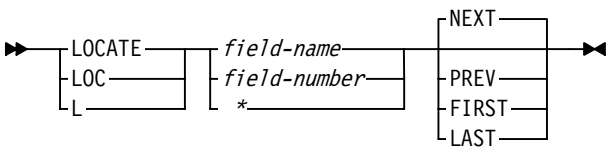
```
L  CHG  .14  .20
```

Example 4

Places at the top of the display the last excluded line within the range delimited by the user-defined labels .LAB1 and .LAB2:

```
L  LAST  X  .LAB1  .LAB2
```

Field Syntax (Formatted and Vertical Formatted Mode):



field-name, field-number : Searches for the specified field name or a field number. If found, File-AID positions the field to the top of the display. A slash (/) preceding the *field-name* or *field-number* parameter is optional.

The field name may be the fully qualified, partially qualified, or unqualified name of a data item. Any group or item designator in the field name may be abbreviated,

starting with the first letter of each designator. If the abbreviated name is ambiguous (not distinct), the next field that matches the specified name is located.

Use the SHOW NUMBER primary command to see the field number assigned to a field.

If there are multiple instances of the data item, a subscript or set of subscripts can be listed at the end of the *field-name* or *field-number* parameter. If no subscript is listed, the next instance of the data item is located.

*** (asterisk) :** Used in place of the *field-name* or *field-number* parameter to reuse the field name or field number supplied from the previous LOCATE command. If a valid LOCATE command was not previously entered, an error message is displayed. If the asterisk parameter is used to repeat a field search, the search is continued in the direction specified in the previous LOCATE command.

Use the LOCATE * syntax to continue a search in the previously specified direction from the beginning of the record (if the **BOTTOM OF RECORD** message was displayed) or from the end of the record (if the **TOP OF RECORD** message was displayed).

NEXT, PREV, FIRST, LAST : Specifies the starting point and direction of a field search. Table 21-11 summarizes the functions of these parameters.

Table 21-11. LOCATE Field Syntax Search Values

Parameter	Search Direction	Origin of Search
NEXT	Forward	Current cursor position
PREV	Backward	Current cursor position
FIRST	Forward	Start of data or specified line range
LAST	Backward	End of data or specified line range

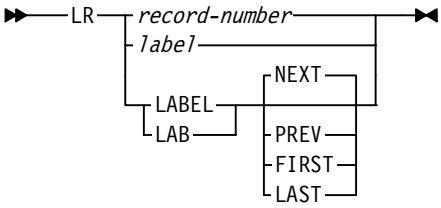
Guidelines

The RLOC command repeats a previous LOCATE command in Formatted mode. An unsuccessful search produces an error message.

LR (Locate Record)

The LR command scrolls forward or backward to a specified record-number, label, or any record with a label classification.

The command is available in the Browse and Edit functions in Formatted mode and for specifying formatted selection criteria in the Selection Criteria function.



record-number : Specifies the record to which you want to scroll. You can enter a record number of up to 10 digits. If you enter a value that exceeds the number of records in the file, File-AID displays the last record in the file.

label : Specifies the label to which you want to scroll. In character and vertical formatted modes, assign a label by scrolling to any line and entering a label in the sequence number field. In formatted mode, assign a label by entering the label on the command line. The label is a period followed by up to five characters. Enter the label in the format **.xxxxx**, where **x** is any alphabetic character, A through Z.

LABEL (LAB) : Locates an occurrence of a record having a user-specified label.

NEXT, PREV, FIRST, LAST : Use the NEXT, PREV, FIRST, or LAST values to locate the next, previous, first, or last occurrence of a labeled record. Table 21-12 summarizes the functions of these parameters.

Table 21-12. LR Field Syntax Search Values

Parameter	Search Direction	Origin of Search
NEXT	Forward	Current cursor position
PREV	Backward	Current cursor position
FIRST	Forward	Start of data or specified line range
LAST	Backward	End of data or specified line range

MAP

The MAP command invokes the Formatted mode. The MAP command is synonymous with the FMT command.

```
►►──MAP──►◄
```

One record is displayed at a time and is formatted according to the record layout. The record to be mapped is determined by the cursor position in the data display. If the cursor is located above the data area, the record at the top of the character or vertical formatted edit display is mapped.

The selected record is displayed as individual formatted data fields if S or X is specified for the Record layout usage field on the Edit - Dataset Specification screen. Otherwise, the record data is displayed in hexadecimal notation.

MERGE

The MERGE command copies records from another dataset and inserts them in correct key order in the keyed dataset being edited. Use the MERGE command only when editing a keyed dataset.

Use the MERGE command without parameters to display the Edit COPY screen, described in “Edit COPY Screen” on page 21-20. Use this screen to specify the source dataset and record selection criteria (based on the record contents) shown in Figure 21-2 on page 21-20.

The command is available in the Edit function in Character and Vertical Formatted modes.

```
►►──MERGE──┬──────────┬──►◄
           └─dataset──┘
```

dataset : Specifies the name of the dataset to use as a source of new records.

Entering the MERGE command while editing a nonkeyed dataset produces the message **COMMAND NOT SUPPORTED**. The command is ignored.

Guidelines

The record key of each merged record is the data in the columns defined as the key field in the edit dataset. Therefore, the definition of a record key in the source dataset is ignored by the MERGE command.

File-AID determines the position of each new record by scanning the edit dataset from the beginning and inserting the new record immediately before the first record with a

higher key value. Merging records may result in duplicate key errors, which are marked with the DUP flag.

The key field of a merged record is initially unprotected, to permit the key to be modified. This feature can be used to distinguish between merged records and records that were present prior to the MERGE command by protecting all records with the P (protect) line command before entering the MERGE command. After the merge is completed, the old records can be identified by the highlighted key field; the key field of each merged record is not highlighted.

Data can be merged from any dataset or PDS member. If the attributes of the source dataset are inconsistent with the attributes of the dataset being edited, the Confirm Copy screen is displayed and lists the attributes for both datasets. You may either proceed or cancel the merge operation.

The MERGE command is not permitted if any key sequence errors, marked by the SEQ flag, are present in the edit dataset. Entering the MERGE command produces the message: **CANNOT MERGE**.

MESSAGE (MSG)

The MESSAGE command controls the display of the message line available at the bottom of the Browse and Edit screens. The display of the message line is one of the terminal characteristics of the user profile dataset.

This command is available in the Browse and Edit functions in all modes.

```
                   ┌ON──┐
►►─┬MESSAGE─┬──┬──┤    ├──►◄
   └MSG─────┘  │  └OFF─┘
```

ON : Turns on the display of the message line available at the bottom of the Browse and Edit screens.

OFF : Turns off the display of the message line available at the bottom of the Browse and Edit screens.

Guidelines

Use the PROFILE command to display the current MESSAGE value.

NEXT

The NEXT command relocates the display to the segment following the currently displayed segment in the same record. Use this command only when editing segmented records. Use the NEXT command without parameters to move to the next segment that matches any record layout (subject to XREF constraints) within the current record.

The command is available in the Browse and Edit functions in Formatted mode.

```
►►──NEXT──┬──┬──┬──────────────┬──►◄
          └n─┘  └record-layout─┘
```

n : Specifies the number of segments to advance the display. The default for the *n* parameter is 1 (advance one segment).

record-layout : Specifies that a segment matching the XREF criteria for the specified record layout is to be displayed. If the specified record layout does not match the name of a currently loaded record layout, the message **RECORD LAYOUT NOT FOUND** is displayed.

Use of NEXT with an XREF

The NEXT command is affected by the XREF for the base segment, which is the first segment in the currently selected record.

- If a select group is defined for the base segment record type, only subordinate record layouts listed in that select group are used to match subsequent record segments. See "Segmented Records" on page 4-17 for more information on base and subordinate segments, XREFs, and select groups.
- If no select group is defined for the base segment record type, File-AID attempts to match subsequent segments using any of the base segment XREFs (that is, those having an absolute location entry).

If a segment is encountered that cannot be matched to an appropriate XREF, further scanning of record segments is interrupted, since the length of the unmatched segment is unknown.

If scanning is interrupted before any segments that match the specified record type have been identified, the display remains at the same segment and produces the error message: **NEXT SEGMENT UNKNOWN**.

Scanning is interrupted when the end of the record is reached. If no matching segments have been identified, the error message: **ALREADY AT LAST SEGMENT** is displayed and the same segment remains displayed.

If either an unmappable segment or the end of the record is reached after at least one but less than *n* segments of the specified type have been identified, the display moves to the last matching segment and produces the error message: **NOW AT LAST SEGMENT**.

Use of NEXT without an XREF

When there is no XREF in use, no criteria are available to determine the following record segments. Therefore, the currently selected record layout is used to process all following segments. You can change the layout by using the record-layouts parameter on the NEXT command or with the USE command. The *n* parameter causes the nth segment to be displayed, using the length of the currently selected record layout to skip the intervening segments.

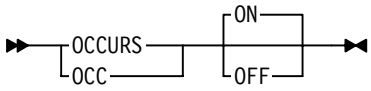
If the end of the record is reached before n segments have been mapped, the error message: **NOW AT LAST SEGMENT** is displayed and the last full or partial segment is displayed.

If the BOTTOM OF DATA line is present prior to use of the NEXT command, the error message: **ALREADY AT LAST SEGMENT** is displayed.

OCCURS (OCC)

The OCCURS command controls whether array declaration information lines are displayed.

The command is available in the Browse and Edit functions in Formatted mode.



ON : Displays array declaration information lines. An array definition line is displayed for each subscripted item in a record layout. The array line contains the array name followed by the phrase OCCURS N TIMES. If the item is the subject of an OCCURS...DEPENDING ON clause, the full definition is listed.

OFF : Does not display array declaration information lines.

Guidelines

Use the PROFILE command to display the current OCCURS value.

OFFSET (OFST)

The OFFSET command sets the format for displaying field offset information in the profile.

Note: The actual display of offset information in the Field Description area is performed with the SHOW OFFSET command.

The command is available in the Browse and Edit functions in Formatted and Vertical Formatted modes.

```
►►─┬─OFFSET─┬──┬──────────────┬──►◄
   └─OFST───┘  ├─COLUMNS──────┤
               ├─HEX──────────┤
               └─RELATIVE─────┘
```

COLUMNS (COL, C) : Lists the column in which each data field begins, starting in record column 1. Changes the field description heading to COLUMNS. The offset of the first field is displayed as 1, and the offsets of all fields that follow are also greater by 1 than the offsets displayed when the OFFSET option is set to REL(HEX).

HEX (H, X) : Displays the offset of each field from the beginning of the record in hexadecimal form. Changes the field description heading to REL(HEX).

RELATIVE (REL, R) : Displays the offset of each field from the beginning of the record. Changes the field description heading to RELATIVE. The offset of the first field is zero.

Guidelines

Use the PROFILE command to display the current OFFSET value.

If a parameter is not entered, File-AID displays the message: **MISSING OPERAND**.

When the Field Description area contains format or picture information, the setting of OFFSET does not affect the appearance of the display. See “SHOW (S)” on page 21-72 for additional information about controlling the contents of the Field Description area.

OPT

The OPT command displays the Selection Criteria Options screen.

The command is available in the Formatted and Unformatted Selection Criteria functions (option 6).

```
►►─┬─OPT─┬──►◄
   ├─0───┤
   └─1───┘
```

OVERLAY (OVLY)

The OVERLAY command displays, sets, or modifies an overlay mask. Use the OVERLAY command without parameters to display the OVLY information display line. In the OVLY display, an asterisk (*) marks each column of the mask.

The command is available in the Edit function in Character and Vertical Formatted modes.

```
►►─┬─OVERLAY─┬─┬─────────┬─┬──────────────────┬──►◄
   └─OVLY────┘ └─CLEAR───┘ └─col1 col2────────┘
```

CLEAR (C) : Resets the overlay mask to all blanks.

col1 col2 : Specifies a column range. Column numbers must be specified in pairs. To set a single column, the same number may be used for both *col1* and *col2*. File-AID displays an asterisk in each column of the overlay mask within the specified range. More than one range may be specified at the same time. Any previously set columns of the overlay mask remain set.

Guidelines

Specifying both the CLEAR parameter and one or more column ranges resets all columns of the overlay mask to blanks except those specified by the column ranges.

Overtyping the OVLY information display line and entering the OVERLAY command in the same interaction gives the OVERLAY command precedence.

Table 21-13 shows the messages produced by incorrect use of the *col1* and *col2* parameters.

Table 21-13. OVLY Messages for Col1 and Col2 Parameters

Message	Reason
RANGES NOT PAIRED	col1 is specified without col2
OVERLAY RANGE ERROR	col2 is less than col1
OVERLAY RANGE ERROR	col1 is greater than the record length

Example 1

Clears the overlay mask. The OVLY line displays only blank characters:

```
OVERLAY  CLEAR
```

Example 2

Sets columns 1 through 5 and 8 through 10 of the overlay mask:

```
OVERLAY  1  5  8  10
```

After Example 2, the OVLY line appears as follows:

```
=OVLY> *****  ***
```

Example 3

The following command sets column 15 of the overlay mask:

```
OVERLAY  15  15
```

After example 3, the OVLY line appears as follows:

```
=OVLY> *****  ***    *
```

Example 4

The following command sets all remaining columns between 1 and 15:

```
OVERLAY  1  15
```

After Example 4, the OVLY line appears as follows:

```
=OVLY> ***************
```

Example 5

The following command resets the overlay mask so that only columns 5, 10, and 15 are set:

```
OVERLAY  CLEAR  5  5  10  10  15  15
```

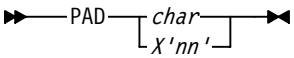
After Example 5, the OVLY line appears as follows:

```
=OVLY>     *    *    *
```

PAD

The PAD command changes the value of the PAD character to fill columns that are vacated as a result of a **(** (shift left) or **)** (shift right) line command.

The command is available in the Edit function in Character and Vertical Formatted modes.



char : Specifies a new value for the pad character. If the new value is a blank or a comma, it must be enclosed in apostrophes (').

X'nn' : Sets the pad character to a nondisplayable value, where *nn* is two hexadecimal digits enclosed in apostrophes (').

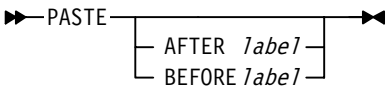
Guidelines

The initial value of the PAD character is set according to the contents of the dataset. If the dataset contents are non-alphanumeric, the PAD character is set to a hexadecimal value of 00. If the dataset contents are alphanumeric, the PAD character is set to the blank character (hex 40).

The PAD setting becomes part of the user's profile and is saved from session to session.

PASTE

The PASTE primary command copies the CUT file sequentially into the current File-AID Edit file. It is valid in Character and Vertical Formatted modes of Edit.



Specify the destination with the A (after), B (before) or H (here) line command or the AFTER <label> or BEFORE <label> operand. When the Edit file is empty, you do not need to enter the destination.

PICTURE (PICT, PIC)

The PICTURE command controls whether File-AID displays a PICTURE line or a DISPLAY line for edited numeric data fields.

The command is available in the Browse and Edit functions in Formatted mode.

```
►►─┬─PICTURE─┬─┬─ON──┬─►◄
   ├─PICT────┤ └─OFF─┘
   └─PIC─────┘
```

ON : Displays a PICTURE or a DISPLAY information line for edited numeric data fields, depending on whether the fields are compatible with the data picture specified in the record layout. If the fields are compatible, File-AID displays a DISPLAY line. If they are incompatible, File-AID displays a PICTURE line.

OFF : Does not display a PICTURE or a DISPLAY information line for edited numeric data fields.

Guidelines

Use the PROFILE command to display the current PICTURE value.

PRESERVE

Specifies whether File-AID should preserve the defined record length when operating on variable length record files.

Valid only for Edit and Copy functions being performed on variable length records.

```
►►─PRESERVE─┬─ON──┬─►◄
            └─OFF─┘
```

ON : Maintains trailing blanks (spaces) in variable length records. With PRESERVE ON (default), File-AID will include all trailing blanks in the record up to the defined record length and the RDW will be adjusted to include the blanks.

OFF : When PRESERVE OFF is set File-AID will not include any trailing blanks in the record, and the RDW for this record will be adjusted to omit the blanks.

PREV

The PREV command displays the previous segment in the current record. This command is used only when browsing or editing segmented records, and after one or more successful NEXT commands.

The command is available in the Browse and Edit functions in Formatted mode.

```
►►─PREV─►◄
```

You can use the PREV command to page backward through previous segments.

Using the PREV command at the first (base) segment produces the message: **ALREADY AT FIRST SEGMENT**.

PROFILE (PROF, PR)

The PROFILE command displays profile information lines. Use the PROFILE command without parameters to show a two-line PROF information display. The displayed lines, which vary by display mode, are shown in "Information Displays" on page 4-19.

The command is available in the Browse and Edit functions in Character, Formatted, and Vertical Formatted modes and for specifying formatted selection criteria in the Selection Criteria function.

```
►►─┬─PROFILE─┬─┬──────────────┬─►◄
   ├─PROF────┤ └─line-count───┘
   └─PR──────┘
```

line-count : Specifies the number of information lines to be displayed.

Up to eight lines are displayed (including the PROF lines) in the order shown in Table 21-14.

Table 21-14. Information Display Contents in Character Mode

Line	Contents
1: PROF	CAPS; HEX; AUTOSAVE; STATS
2: PROF	BOUNDS; PAD
3: MASK	Mask line
4: BNDS	Left (<) and right(>) bound
5: COLS	Numbered column line
6: OVLY	Asterisk (*) in each column that permits data to be overlaid
7: INFO	DSORG; RECFM; LRECL; RKP; KEYLN; CORE
8: INFO	ERRORS; SEQ ERRORS; DUP KEYS; CHANGES

Guidelines

The value of CAPS, FILLER, GROUP, OFFSET, and PICTURE and the currently selected SHOW option defining the contents of the Field Description area are displayed for all languages.

Information display lines can be deleted from the display in one of the following ways:

- Specify PROF 0 to eliminate all information display lines except MSG lines.
- Use the RESET command to remove all information display lines.
- Use the D (delete) line command to remove individual information display lines.

PROTECT (PROT, P)

The PROTECT command controls key field protection for the currently displayed record. Use the PROTECT command to protect or unprotect the currently displayed record, according to whether ON or OFF is specified. If neither option is specified, the currently displayed record is protected. Use the command only when editing an ISAM or VSAM KSDS dataset.

The command is available in the Edit function in Formatted mode.

```
                 ┌─ON──┐
►►─┬─PROTECT─┬──┤     ├──►◄
   ├─PROT────┤  └─OFF─┘
   └─P───────┘
```

ON : Prohibits edit of the key field for the currently displayed segment or record.

OFF : Allows edit of the key field for the currently displayed segment or record.

Guidelines

Use the PROFILE command to display the current PROTECT value.

The protection status of each record is the same whether you are or are not using record layouts (Character and Formatted modes.) Changing the protection status of a record in either mode affects the protection of its key field in both modes.

When you are editing the entire file and are not using selection criteria, use the P (Protect) and U (Unprotect) line commands to protect and unprotect the key field. When you are editing selected records, the U (Unprotect) line command is invalid.

When a protected record is displayed, the key field name is highlighted on the display and the data contained in the key field cannot be modified. When an unprotected record is displayed, the key field is not protected and can be edited.

If the PROTECT ON is invoked when a nonkeyed dataset is being edited, the error message: **NOT A KEYED DATASET** is displayed and the command is ignored.

RCHANGE

The RCHANGE command repeats an execution of a CHANGE command.

The command is available in the Edit function in all modes.

```
▶▶──RCHANGE──▶◀
```

RCHANGE changes a single occurrence of the data specified in the *val1* parameter to the replacement data in the *val2* parameter of the last CHANGE command. See "CHANGE (CHG, C)" on page 21-13. If no CHANGE command has been executed in the current dataset, File-AID displays the message: **ENTER CHANGE COMMAND**.

The following parameters are inherited from the last CHANGE command: *rel* (relational operator); *val1*, *val2*; VALID or INVALID; X or NX; *col1* and *col2* (column range); *lrange* (line ranges), */field-name* or */field-number*; NEXT, PREV, FIRST, LAST, or ALL.

If the previous CHANGE command specified LAST or PREV, the RCHANGE search direction is backward. If NEXT, FIRST, or ALL was specified, the RCHANGE search direction is forward. In all cases, only one change operation is executed if a match with the previous CHANGE command is found.

If a previous search produced the message: **TOP OF DATA REACHED** or **BOTTOM OF DATA REACHED**, RCHANGE continues a forward or backward search at the opposite end of the dataset. If a previous search produced the message: **TOP OF RANGE REACHED** or **BOTTOM OF RANGE REACHED**, RCHANGE continues a search in the same direction beyond the previously specified line range.

REBUILD

The REBUILD command discards any changes made to the currently selected record without exiting Formatted mode.

The command is available in the Edit function in Formatted mode.

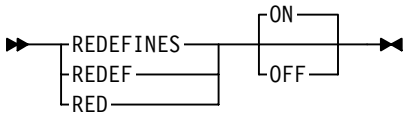
```
▶▶──REBUILD──▶◀
```

The REBUILD command affects changes made only since the current record was selected. Changes to other records or prior changes to the current record (completed before scrolling to another record) are not discarded.

REDEFINES (REDEF, RED)

The REDEFINES command controls whether data item redefinitions are displayed.

The command is available in the Browse and Edit functions in Formatted and Vertical Formatted modes.



ON : Displays data item redefinitions as they occur in the record layout. Each redefinition is preceded with an information line that indicates the name of the redefinition and the name of the data item being redefined. Multiple redefinitions are displayed in sequence, with an information line preceding each redefinition.

OFF : Does not display data item redefinitions. Only one definition of each storage area is displayed. Use the DISPLAY REDEF command to select between multiple definitions when the REDEFINES value is OFF.

Guidelines

Use the PROFILE command to display the current REDEFINES value.

By default, the first definition of an area of storage is displayed and no redefinitions are displayed.

Figure 21-11 on page 21-65 shows a record layout used to show the effect of the REDEF display option. When data formatted according to this record layout is displayed with REDEF set OFF, only the first definition displays, as shown in Figure 21-12 on page 21-66. When the REDEF ON is set, the redefinition displays (preceded by an information line) as shown in Figure 21-13 on page 21-66.

Figure 21-11. Source Layout with REDEFINES Clause

```
01  EMPLOYEE-MASTER-FILE.
     05  EMP-NUMBER                      PIC X(5).
     05  EMP-LAST-NAME                   PIC X(15).
     05  EMP-FIRST-NAME                  PIC X(10).
     05  EMP-MID-INIT                    PIC X.
     05  FILLER                          PIC X(2).
     05  EMP-TITLE                       PIC X(30).
     05  EMP-PERSONAL-INFO.
       10  EMP-NATL-ID-NUMBER            PIC 9(9).
       10  FILLER                        PIC X(01).
       10  EMP-DATE-OF-BIRTH             PIC X(6).
       10  EMP-DOB-REDEF REDEFINES EMP-DATE-OF-BIRTH.
         15  EMP-DOB-MM                  PIC 99.
         15  EMP-DOB-DD                  PIC 99.
         15  EMP-DOB-YY                  PIC 99.
      10  EMP-HIRE-DATE                 PIC X(6).
      10  EMP-MARITAL-STATUS            PIC X.
    05  EMP-WITHOLD-INFO.
      10  EMP-LIFE-INS-WITHOLD-AMT      PIC S9999V99.
      10  EMP-NATL-TAX-WITHOLD-PCT      PIC S999V99  COMP-3.
  10  EMP-REGION-TAX-WITHOLD-PCT   PIC S999V99  COMP-3.
  10  EMP-LOCAL-TAX-WITHOLD-PCT    PIC S999V99  COMP-3.
05  EMP-HOME-ADDRESS.
  10  EMP-STREET-ADDRESS           PIC X(25).
```

Figure 21-12. Display with REDEF OFF Setting

```
File-AID - Edit - USERID9.FASAMP.EMPLOYEE ---------------- COLUMNS 00001 00101
COMMAND ===>                                                SCROLL ===> CSR
RECORD:     1                EMPLOYEE-MASTER-FILE              LENGTH:   198
---- FIELD LEVEL/NAME ------- -FORMAT- ----+----1----+----2----+----3----+----4
5 EMP-NUMBER                   5/AN   00090
5 EMP-LAST-NAME               15/AN   MARTIN
5 EMP-FIRST-NAME              10/AN   EDWARD
5 EMP-MID-INIT                 1/AN   M
5 FILLER                       2/AN
5 EMP-TITLE                   30/AN   AIRPLANE MANUFACTURER
5 EMP-PERSONAL-INFO SYNC      23/GRP
  10 EMP-NATL-ID-NUMBER        9/NUM  427890125
  10 FILLER                    1/AN
  10 EMP-DATE-OF-BIRTH         6/AN   101954
  10 EMP-HIRE-DATE             6/AN   920101
  10 EMP-MARITAL-STATUS        1/AN   M
5 EMP-WITHOLD-INFO SYNC       15/GRP
  10 EMP-LIFE-INS-WITHOLD-AMT DISPLAY 30000}
                               6/SNUM -3000.00
  10 EMP-NATL-TAX-WITHOLD-PCT  3/PS   -74.00     000000E+01
  10 EMP-REGION-TAX-WITHOLD-PCT                   1
                               3/PS   25.00
  10 EMP-LOCAL-TAX-WITHOLD-PCT
                               3/PS   5.00
```

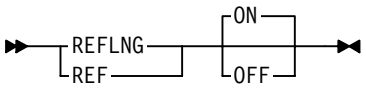
Figure 21-13. Display with REDEF ON Setting

```
File-AID - Edit - USERID9.FASAMP.EMPLOYEE ---------------- COLUMNS 00001 00092
COMMAND ===>                                                SCROLL ===> CSR
RECORD:     1                EMPLOYEE-MASTER-FILE              LENGTH:   198
---- FIELD LEVEL/NAME ------- -FORMAT- ----+----1----+----2----+----3----+----4
5 EMP-NUMBER                   5/AN   00090
5 EMP-LAST-NAME               15/AN   MARTIN
5 EMP-FIRST-NAME              10/AN   EDWARD
5 EMP-MID-INIT                 1/AN   M
5 FILLER                       2/AN
5 EMP-TITLE                   30/AN   AIRPLANE MANUFACTURER
5 EMP-PERSONAL-INFO SYNC      23/GRP
  10 EMP-NATL-ID-NUMBER        9/NUM  427890125
  10 FILLER                    1/AN
  10 EMP-DATE-OF-BIRTH         6/AN   101954
  10 EMP-DOB-REDEF REDEFINES EMP-DATE-OF-BIRTH            <---- Redefinition
  10 EMP-DOB-REDEF SYNC        6/GRP                            Information
    15 EMP-DOB-MM              2/NUM  10                           Line
    15 EMP-DOB-DD              2/NUM  19
    15 EMP-DOB-YY              2/NUM  54
  10 EMP-HIRE-DATE             6/AN   920101
  10 EMP-MARITAL-STATUS        1/AN   M
5 EMP-WITHOLD-INFO SYNC       15/GRP
  10 EMP-LIFE-INS-WITHOLD-AMT DISPLAY 30000}
                               6/SNUM -3000.00
```

REFLNG (REF)

The REFLNG command controls whether length reference lines are displayed for BIT VARYING and CHAR VARYING fields of PL/I data items.

The command is available in the Browse and Edit functions in Formatted mode.



ON : Displays length reference lines for BIT VARYING and CHAR VARYING fields of PL/I data items. The length reference line contains the REFER clause that defines the length of the variable-length item.

OFF : Does not display length reference lines for BIT VARYING and CHAR VARYING fields of PL/I data items.

Guidelines

Use the PROFILE command to display the current REFLNG value.

REMOVE (REM)

The REMOVE command deletes the currently displayed segment from the current record.

The command is available in the Edit function in Formatted mode.

```
►►──┬─REMOVE──┬──►◄
    └─REM─────┘
```

If any additional segments follow the deleted segment, they are moved forward in the record to fill in the gap left by the deleted segment. The contents of the additional segments are preserved.

After entering the REMOVE command, the display reverts to the base segment of the current record. If the base segment is removed, the first subordinate segment is displayed, and it is formatted according to the record layout of the original base segment.

REPEAT (REP, R)

The REPEAT command inserts one or more copies of a record immediately after the record. Use the REPEAT command without parameters to insert one copy of the displayed record immediately after the record.

The command is available in the Edit function in Formatted and Unformatted modes.

```
►►──┬─REPEAT──┬──┬──►◄
    ├─REP─────┤  └─n─┘
    └─R───────┘
```

n : Specifies the number of copies of the displayed record to insert immediately after the current record. This parameter is valid only in Formatted Edit.

Guidelines

If the currently displayed record is a segmented record, the entire record (base segment and all subordinate segments) is duplicated.

Entering the REPEAT command while editing an INPUT record adds the input record to the dataset and inserts *n* copies after the input record. The same input record remains on the display and is available for editing following the REPEAT command. However, no additional INPUT records may be automatically created by use of the RIGHT command. The RIGHT command instead causes the first record created by the REPEAT command to be displayed.

If the MASK record is being edited, the REPEAT command is invalid and produces the message: **NOT VALID FOR MASK LINE**.

REPLACE

The REPLACE command writes over an existing dataset or member with selected records from the edit dataset. A non-partitioned dataset or a PDS member may be replaced.

The command is available in the Edit function in Character and Vertical Formatted modes.

```
►►──REPLACE──┬─dataset──────────────┬──►◄
             ├─dataset (member)─────┤
             └─(member)─────────────┘
```

dataset : Specifies the name of the dataset to which records are to be written.

dataset(member) : Specifies the PDS dataset and member name to which records are to be written.

(member) : To overwrite a member in the same PDS as the member being edited, specify the member name enclosed in parentheses.

Guidelines

Lines to be written to the specified dataset or member must be specified with one of the following commands:

- **C** (copy)
- **M** (move)

Using the M line command instead of the C line command produces the message: **MOVE CHANGED TO COPY.**The overwriting proceeds as if the C line command was used and the specified line range is not deleted from the edit dataset.

Messages that are produced with the REPLACE command are shown in Table 21-15.

Table 21-15. Messages for the REPLACE Command

Message	Reason
ENTER DSNAME	Dataset parameter is omitted
DATASET NOT CATALOGED	Nonexistent dataset is specified
MEMBER (name) CREATED	Nonexistent member is specified and the member is created
ENTER MEMBER NAME	PDS without a member name is specified
MEMBER NAME NOT ALLOWED	Unqualified member name is specified
DATASET REPLACED	Non-partitioned dataset is successfully overwritten
MEMBER (name) REPLACED	PDS member is successfully overwritten
I/O ERROR ON OUTPUT	Key fields are not in ascending order in overwriting a keyed dataset
CREATE/REPLACE PENDING	REPLACE command entered before a source range of lines is specified

RESET (RES)

In character and vertical formatted edit, the RESET command removes from display specified line types, specified information display types in the sequence number fields, and pending line commands. RESET also makes previously excluded lines and fields available for display. In character browse, RESET removes the COLS information line. In Formatted mode, use the RESET command without a parameter to remove all profile information lines.

The command is available in the Browse and Edit functions in all modes.

```
▶▶─RESET──────▶◀
```

lrange : Confines the RESET command to a specified range of lines (records). The line range may be specified using one or two line labels or line numbers. For the line range limits, use any combination of user-defined labels or line numbers (prefixed by a period).

line-type

Specifies types of information flags to be eliminated from the display. Omitting the *line-type* parameter is equivalent to specifying all line types except LABEL. Valid entries for this parameter are listed in Table 21-16.

Table 21-16. Valid Values for RESET Line-Type Parameter

Value	Abbreviation	Definition
CHANGE	CHG	Clears all instances of the CHG or UNDO flag
COMMAND	COM,CMD	Eliminates pending line command
ERROR	ERR	Clears all instances of the ERR flag
EXCLUDED	X	Redisplays line excluded with EXCLUDE primary or X (exclude) line commands
HIDE		Displays all hidden fields.
HOLD		Clears all held fields.
LABEL	LAB	Clears user-defined label
NEW	NEW	Clears all instances of the NEW flag
SPECIAL	SPE	Removes information display marked by the BNDS, COLS, INFO, MASK, OVLY, or PROF flag

Notes:

1. Refer to "Using Line Labels and Line Ranges" on page 4-26 for information on user-defined labels or line numbers to specify the line range limits.
2. The DUP and SEQ information flags are not affected by the RESET command.

RETURN

The RETURN command returns to the Primary Option Menu.

The RETURN command is available in all modes of Browse and Edit and all File-AID functions.

```
▶▶──RETURN──────▶◀
```

RFIND

The RFIND command repeats an EXCLUDE or FIND command execution using search data specified in the previous CHANGE, EXCLUDE, or FIND command.

The command is available in the Browse and Edit functions in all modes.

```
►►──RFIND──►◄
```

Browse Usage

In Character and Vertical Formatted modes, the RFIND command repeats only the previous FIND command. In Formatted mode, the RFIND command repeats either an EXCLUDE or FIND command using the search data specified in the previous EXCLUDE or FIND command.

Edit Usage

Using the search data specified in the previous CHANGE, EXCLUDE, or FIND command, the RFIND command repeats the last EXCLUDE or FIND command entered. If no CHANGE, EXCLUDE, or FIND command was entered for the current dataset during the current session, File-AID displays the message: **ENTER FIND/EX COMMAND**.

The following parameters are inherited from the last CHANGE, EXCLUDE, or FIND command: *rel* (relational operator); *val1*; VALID or INVALID; X or NX; *col1* and *col2* (column range); */field-name* or */field-number*; NEXT, PREV, FIRST, LAST, or ALL.

If the previous CHANGE, EXCLUDE, or FIND command specified LAST or PREV, the RFIND search direction is backward. If NEXT, FIRST, or ALL was specified, the RFIND search direction is forward. In all cases, only one find operation is executed, if a match with the previous FIND command is found.

The *lrange* parameter is not inherited from the previous CHANGE, EXCLUDE, or FIND command. Therefore, RFIND does not restrict its search to a previously specified line range.

If a previous search produced the message: **TOP OF DATA REACHED** or **BOTTOM OF DATA REACHED**, RFIND continues a forward or backward search at the opposite end of the dataset. If a previous search produced the message: **TOP OF RANGE REACHED** or **BOTTOM OF RANGE REACHED**, RFIND continues a search in the same direction beyond the previously specified line range.

RIGHT

The RIGHT command scrolls the display to the right in Character and Vertical Formatted modes and to the next record in Formatted mode. Use the RIGHT command without a parameter to scroll the display according to the current SCROLL amount in Character and Vertical Formatted modes or by a single record in Formatted mode. Scroll values include CSR, DATA, HALF and PAGE. The RIGHT command is synonymous with the FORWARD command.

The command is available in the Browse and Edit functions in all modes.

```
►►──RIGHT──┬──────────────────┬──►◄
           ├─scroll-number────┤
           └─M────────────────┘
```

scroll-number : Specifies the number of characters to scroll to the right in character and vertical formatted modes, or the number of records to scroll forward in formatted

mode. Attempts to scroll right beyond the right-most character or after the last (selected) record are treated as a maximum scroll.

M (maximum) : Scrolls the display to the right-most character in character and vertical formatted modes, or to the last (selected) record of the file in formatted mode.

RLOC

The RLOC command repeats the previous LOCATE command one time.

The command is available in the Browse and Edit functions in Formatted and Vertical Formatted modes.

```
►►──RLOC──►◄
```

The RLOC command uses the *field-name* or *field-number* parameter specified in the last LOCATE command. See “LOCATE (LOC, L)” on page 21-53.

The RLOC command is equivalent to the LOCATE * PREV or the LOCATE * NEXT command (depending on the previous LOCATE search direction), except that RLOC can be used to "wrap" to the opposite end of the dataset when a BOTTOM OF RECORD or a TOP OF RECORD message line is displayed.

Using RLOC without having previously entered a LOCATE command produces the message: **ENTER A LOCATE CMD**.

SAVE

The SAVE command causes the edit buffer to be written to the dataset being edited.

The command is available in the Edit function in all modes and in the Selection Criteria function.

```
►►──SAVE──►◄
```

If the STATS option is set ON when a PDS member is rewritten, the PDS statistics are updated.

If rewriting the dataset fails due to I/O errors or insufficient disk space, an error message is displayed. If necessary, preserve the edit dataset by using the CREATE or REPLACE commands to write to another dataset or PDS member.

SETUNDO (SETU)

The SETUNDO command activates or deactivates the UNDO command. The initial setting is ON.

The command is available in the Edit function in all modes.

```
►►──┬─SETUNDO─┬──┬──┬─ON──┬──►◄
    └─SETU────┘  │  └─OFF─┘
                 │
```

ON : Activates the UNDO command.

OFF : Disables the UNDO command.

Guidelines

Disabling the UNDO command before making massive changes improves the response time and avoid exceeding available memory. The alternative for discarding your unwanted changes is the CANCEL command.

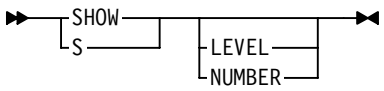
The setting for change recording is saved in your File-AID edit profile from session to session. Use the PROFILE primary command to display its current setting.

SHOW (S)

The SHOW command specifies the display of various types of information for a displayed record.

The command is available in the Browse and Edit functions in Formatted and Vertical Formatted modes.

Field Name Syntax:



LEVEL (L) : Displays the record's hierarchical level number at the left of each data item name, and changes the heading of the Field Name area to FIELD LEVEL/NAME. File-AID indents each successive level two character positions to emphasize the record structure. When this parameter is used, the Field Name area closely resembles the original (source) record layout declaration.

NUMBER (N) : Displays the field numbers assigned by File-AID, and changes the heading of the Field Name area to FIELD NUMBER/NAME. Field numbers are assigned sequentially, beginning at the top of the record layout. Each elementary or group data item name is assigned a unique field number. Each occurrence of a data item that has multiple occurrences is assigned the same field number, since all occurrences share the same data name.

The field numbers that are displayed with the NUMBER parameter can be used to:

- Specify non-default field display formats.
- Move a field to the top of the display when used with the LOCATE command.
- Specify the fields of a given record type to be displayed when used with the DISPLAY command.

A variety of circumstances may produce a discontinuity in the field numbers visible on the display. For example:

- Each instance of a multiple occurring item is assigned the same field number. Therefore, a discontinuity occurs at the boundary between successive occurrences.
- Data items that represent redefinitions of other items are assigned different field numbers. However, redefining items are not displayed when the REDEF display option is set OFF, resulting in a gap in the field numbers.
- The DISPLAY command may be used to eliminate fields from the display, resulting in a field number discontinuity.
- Group items are not displayed when the GROUP display option is set OFF, producing a field number discontinuity.
- A variable-length object whose occurrence count is set to zero is not displayed, resulting in a discontinuity.

Field Description Syntax:

```
                  ┌FORMAT──┐
►►──┬SHOW──┬──────┼────────┼──────►◄
    └S─────┘      ├OFFSET──┤
                  └PICTURE─┘
```

FORMAT (F) : Displays field length and current field format, separated by a slash (/), and changes the heading of the Field Description area to FORMAT. The field length is expressed in bytes. File-AID displays the actual number of bytes occupied by the field, rather than the data item size, which can be determined with the PICTURE parameter.

A special form (length:bits/format) is used for unaligned bit fields where the number of complete bytes and the number of additional bits are listed, separated by a colon. The format abbreviations vary depending on the language in which the record layout is described.

The current field format can be modified with the Data Format Specification Syntax of the DISPLAY command. This reformats the data in the Field Value area and changes the format displayed in the Field Description area to reflect the revised format.

OFFSET (O) : Displays the offset of each field from the beginning of the record. The offset can be expressed in three ways: relative, hexadecimal, or columns. Specify the offset format with the OFFSET command.

When the OFFSET command is set to RELATIVE and the SHOW OFFSET command is executed, File-AID changes the heading of the Field Description area to RELATIVE. The offset of each field is expressed as the number of bytes between the start of the record and the start of the field. Therefore, the offset of the first field in each record is zero.

When the OFFSET command is set to HEXADECIMAL and the SHOW OFFSET command is executed, File-AID changes the heading of the Field Description area to REL/HEX. The offset of each field is computed in the same manner as for the RELATIVE parameter. The offset is displayed as a hexadecimal number.

When the OFFSET command is set to COLUMNS and the SHOW OFFSET command is executed, File-AID changes the heading of the Field Description area to COLUMNS. File-AID displays the column position of the first byte of each field. The offset of the first field of the record is displayed as one (1). Note that with the OFFSET parameter, the offset of each field is one higher than when the RELATIVE parameter is selected.

Note: The column offset cannot be expressed in hexadecimal notation.

The offset expressed with the COLUMNS parameter can be used with the USE command to change record layout alignment.

PICTURE (P) : Displays a representation of the original data declaration for each elementary item, and changes the heading of the Field Description area to PICTURE.

The current field format can be modified with the Data Format Specification Syntax of the DISPLAY command. When this command is issued, the data in the Field Value area is reformatted, and the format displayed in the Field Description area is changed to reflect the revised format.

The information in the Field Description area is intended to accurately represent the data declaration (within the constraints of the column width). Therefore, the information displayed with the PICTURE parameter varies, depending on the language used to define record layouts.

Guidelines

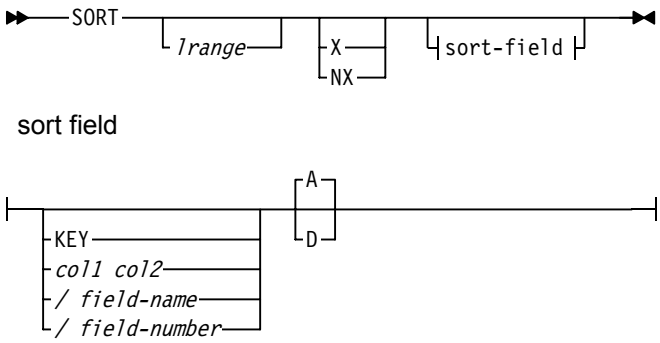
The LEVEL and NUMBER parameters are used to change the type of information displayed in the Field Name area.

The FORMAT, OFFSET, and PICTURE parameters are used to change the type of information displayed in the Field Description area.

SORT

The SORT command sorts specified records of the edit dataset based on the contents of as many as five sort-fields. Use the SORT command without a parameter to sort all records in the edit dataset in ascending sequence according to the data within the edit bounds. Refer to "BOUNDS (BNDS, BND)" on page 21-10 for more information on setting and displaying the edit bounds. SORT is valid for non-load library member lists.

The command is available in the Browse and Edit functions in Character, Formatted, Unformatted, and Vertical Formatted modes.



lrange : Confines the sorting operation to a specified line range (records). The line range is specified with two line labels. Use any combination of user-defined labels, system labels, or line numbers (prefixed by a period). The two labels may be listed in either order. File-AID considers the beginning of the line range to be the label occurring first in the dataset. Specifying only one line label confines the sorting process to the specified line. However, sorting a single line has no effect on the edit dataset.

X, NX : Confines the scope of the SORT command to excluded (X) or nonexcluded (NX) lines. If the *lrange* parameter is also specified, only excluded or nonexcluded lines within the specified line range are sorted.

Lines are excluded using the EXCLUDE primary command or the X (exclude) line command. Excluding lines divides the edit dataset into two subsets, either of which may be processed separately by the SORT command.

sort-field : Specifies from one to five sort fields. If no *sort-field* parameters are specified, the data within the edit bounds is used and the data is sorted in ascending sequence. Table 21-17 lists the messages that apply to the sort-field parameter.

Table 21-17. Messages for the Sort-field Parameter

Message	Reason
N RECORDS SORTED	Successful sort
INVALID SORT FIELD	Col1 is greater than col2
SORT FIELDS INCOMPLETE	Odd number of sort fields is specified
SORT FIELDS INVALID	Column number greater than the logical record length is specified
SORT FIELDS OVERLAP	Multiple sort-fields overlap
SORT FIELDS AMBIGUOUS	A and D parameters are improperly located
KEYS NOT SUPPORTED	Key used when nonkeyed dataset is being edited

KEY : Used as one of the five sort fields when editing a keyed dataset, RRDS or BDAM dataset. Specifying KEY is equivalent to specifying the two-column numbers

delimiting the record key. The letters A or D may not be used to define the sorting sequence with KEY because the sort is always in ascending sequence. RRDS and BDAM records are sorted in RRN (or RBN for BDAM) order.

If other *sort-field* parameters are specified along with KEY, they cannot overlap the key field. The remaining *sort-field* parameters may also be modified by the A or D parameters.

col1, col2 : Specifies column numbers for each *sort-field* parameter. The two column numbers must be listed together; the second column number of each pair must be greater than or equal to the first column number.

If a specified sort field extends beyond the end of a variable-length record, that record is sorted as if the columns beyond the end of the record contained null characters (hex 00). If multiple *sort-field* parameters are specified, they must not overlap.

/field-name, /field-number : The */field-name* parameter specifies the data name given to the field in the record layout. The */field-number* parameter specifies the number generated by File-AID for each data name in the record layout.

The */field-name* or */field-number* parameter must be prefixed by a slash (/) to distinguish it from *val1* or column range (*col1* and *col2*) parameters. A field name can be fully qualified, partially qualified, or unqualified, but it must be unique. Each unique word of the field name may be abbreviated starting with the first letter. If an abbreviated field name is used, it must be unique. Use a period to delimit levels of qualified names. If several maps are loaded, it may be necessary to include the member name or the 01-level name to uniquely identify a field. If so, precede the field name with the member name and/or 01-level name, also delimited with periods. Specify either a */field-name* or */field-number* parameter when the VALID/INVALID parameter is used.

A field name value that matches more than one field name in the record produces the message: **AMBIGUOUS FIELD NAME.** A field name value that does not match any layout field produces the message: **FIELD NAME NOT FOUND.**

File-AID pads the search string with trailing blanks to match the field length of the specified field name or field number. If a record layout was not entered on the Edit screen, specifying a */field-name* or */field-number* produces the message: **FIELD UNDEFINED - NO MAP.**

Use of the */field-name*, */field-number* parameters is mutually exclusive with use of the *col1*, *col2* parameters.

A (default), D : Specifies ascending (A) or descending (D) order for the *sort-field* parameter. If an A or D parameter is specified with any *sort-field* parameter, all other *sort-field* parameters must be accompanied by one of the two letters. List the A or D before or after the corresponding column pair, not between *col1* and *col2*.

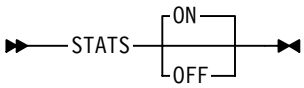
Guidelines

All sorting performed by the SORT command is based on left-to-right (byte-by-byte) data comparisons using the EBCDIC collating sequence.

STATS

The STATS command controls the generation of statistics when a PDS member is being edited.

The command is available in the Edit function in Character mode.



ON : Sets the STATS edit option ON. The STATS edit option is initially set ON whenever an eligible PDS member is selected for editing.

If the STATS edit option is ON when the dataset is written, the PDS statistics are created or updated by File-AID.

OFF : Sets the STATS edit option OFF.

Guidelines

You can use the STATS command only when editing a PDS member that has attributes that allow editing with the ISPF/PDF editor. Using STATS while editing an ineligible dataset produces the message: **STATS INVALID**, and STATS remain off.

The VERSION and LEVEL primary commands can be used to change the version number and modification level that are included in the PDS statistics. When the VERSION or LEVEL command is used and the PDS member is eligible for statistics, STATS is automatically set ON.

SUBMIT

The SUBMIT command submits the file you are browsing or editing as a batch job for background processing.

The command is available in the Browse and Edit functions in Character mode.

```
►►──┬─SUBMIT─┬──►◄
    └─SUB────┘
```

SYNC

The SYNC command controls whether the word SYNC is displayed after fields defined as SYNCHRONIZED in a COBOL record layout. This command is equivalent to the ALIGN command for PL/I data.

The command is available in the Browse and Edit functions in Formatted mode.

```
                ┌─ON──┐
►►──┬─SYNC─┬────┼─────┼──►◄
    └─AL───┘    └─OFF─┘
```

ON : Displays the word SYNC after fields defined as SYNCHRONIZED in a COBOL record layout.

OFF : Does not display the word SYNC after fields defined as SYNCHRONIZED in a COBOL record layout.

Guidelines

Use the PROFILE command to display the current SYNC value.

TOP

The TOP command displays the base segment (offset 0) of the current record.

The command is available in the Browse and Edit functions in Formatted mode.

```
►►──TOP──►◄
```

Guidelines

The TOP command realigns the display with the beginning of the record (the base segment) after the display has been moved to a subordinate segment (or otherwise realigned) with the NEXT or USE primary commands.

To align the display with the beginning of the current segment, use the UP M primary command.

UNDO

The UNDO command restores the dataset to its condition prior to the last accepted change entry.

The command is available in the Edit function in all modes.

```
►►──UNDO──►◄
```

Guidelines

The UNDO command can be used to cancel the following modifications:

- Edit commands such as CHANGE, DELETE, REPEAT, INSERT, etc.
- Text entry followed by pressing Enter
- Text entry followed by scrolling.

Commands that do not alter the contents of the edit dataset (for example, FIND and RESET) are not change entries and are ignored by the UNDO command.

If multiple changes were simultaneously entered, all changes are undone and the message: ***n* CHANGES UNDONE** is displayed.If no previous change was eliminated, the message: **0 CHANGES UNDONE** is displayed.

Unsuccessful use of editing commands are not change entries. For example, if a CHANGE command is unsuccessful because no occurrence was found, it is not a change entry. Using the UNDO command in this case eliminates the last change before entry of the unsuccessful command.

If change recording was disabled by entering the SETUNDO OFF command, the message: **0 CHANGES UNDONE** is displayed.

UNFMT

Note: If your double byte character spans the boundary of the display line, it will not display in Unformatted mode. To view this data, switch to Character mode and scroll the record to the desired position, then return to Unformatted mode to view the character in Unformatted mode.

```
►►──UNFMT──►◄
```

In Selection Criteria, the UNFMT command displays the Unformatted Selection Criteria screen. The command is available in the Formatted Selection Criteria and Selection Criteria Options functions (option 6).

```
►►──┬─UNFMT──┬──►◄
    ├─U──────┤
    └─3──────┘
```

UP

The UP command scrolls the display up.

The command is available in the Browse and Edit functions in all modes.

```
►►──UP──┬──────────────┬──►◄
        ├─scroll-number─┤
        └─M─────────────┘
```

scroll-number : Number of lines to scroll up. If the specified number exceeds the number of available lines, the display stops at the TOP OF DATASET, TOP OF RECORD, or data information line.

M : Scrolls up the maximum amount. The effect of this parameter varies by mode:

- **Character and Vertical Formatted:** Scrolls up to display the first (selected) record in the file.
- **Formatted:** Scrolls up to display the first line of the current layout at the top of the screen.

Guidelines

Use the UP command without a parameter to scroll up the length indicated in the SCROLL field at the upper right corner of the screen. The SCROLL field default is PAGE.

Scrolling up in Character and Vertical Formatted modes scrolls the display up by the specified number of records. Scrolling up in Formatted mode scrolls the display up by the specified number of fields.

USE

The USE command maps a record at a specified position, and/or specifies a different record layout to be used in formatting the current record.

The command is available in the Browse and Edit functions in Formatted and Vertical Formatted modes.

Without parameters, it is also available in the Formatted Compare function (see “Specify Record Layout and XREF Information:” on page 20-3 and page 20-6).

```
►►──USE──┬──────────┬──┬──────────────┬──►◄
         ├─offset───┤  ├─record-layout─┤
         ├─NEXT─────┤  └─*─────────────┘
         └─PREV─────┘
```

offset : Specifies either a column (absolute) offset from the beginning of the record, or an offset relative to the currently displayed position in the record. You must preface a relative offset number with a plus or minus sign (+ or -). If you do not specify an offset, the position of the currently displayed record is used.

NEXT : Directs File-AID to use the offset of the position immediately after the current segment, that is, the end of the currently selected record layout.

PREV : Specifies that File-AID is to display the previous segment. Using this parameter is subject to the same restrictions as those for the PREV command.

record-layout : Specifies a currently loaded record layout. When an XREF is in use, only the 01 levels directly referenced may be specified. Any unique abbreviation of the record layout name can be specified.

*** (asterisk) :** Enter an asterisk (*****) in place of the *record-layout* parameter to retain the currently selected record layout.

Guidelines

If neither a record layout nor an asterisk is specified, a list of loaded record layouts is displayed for selecting a layout. When using an XREF, only the 01 levels directly referenced in the XREF are listed.

VERSION (VERS, VER)

The VERSION command sets the PDS version number for a PDS member.

The command is available in the Edit function in Character mode.

```
►►─┬─VERSION──┬──number──►◄
   ├─VERS─────┤
   └─VER──────┘
```

number : Specifies the PDS version number when a PDS member is edited. The *number* parameter is required. The STATS option is automatically set ON if it was OFF prior to using the command.

The *number* parameter must be an integer between 1 and 99 or the message: **INVALID VERSION NUMBER** is displayed. Using the VERSION command without a parameter produces the message: **ENTER VERSION**.

The PDS version number is automatically incremented by File-AID if the level number reaches 99 and an additional modification is performed.

Guidelines

The VERSION command is only valid for PDSs. If you enter the VERSION command while editing a non-partitioned dataset, the message: **VERSION IS INVALID** is displayed and the command is ignored. See "LEVEL (LEV)" on page 21-51 for more information on entering a value for the PDS modification level.

VFMT

The VFMT command invokes Vertical Formatted mode from Character, Formatted, or Unformatted mode. When you exit Vertical Formatted mode, File-AID displays the Browse or Edit Dataset Specification screen.

The command is available in the Browse and Edit functions in Character, Formatted, and Unformatted modes.

```
►►──VFMT──►◄
```

VIEW

In the Selection Criteria function (Option 6), VIEW displays a screen summarizing the specified options and all the sets of formatted and unformatted selection criteria into a scrollable display. In the XREF function (Option 7), VIEW is valid on the Define XREF screen and displays the entire XREF in a scrollable display. It also displays IDCAMS statements generated by the IDCAMS utility in Option 3.5 (VSAM utility).

The command is available in the Selection Criteria and XREF functions and the VSAM utility.

```
►►──VIEW──►◄
```

VPRINT (VP)

The VPRINT command prints the current record and any number of subsequent records in a vertical formatted report. You can send output to SYSOUT or a dataset.

The VPRINT online report output width is 120 characters. The report format includes spaces separating the fields. When the VPRINT output exceeds the report width, File-AID displays the VPRINT DATA TRUNCATION informational message, **VP001-Data truncation occurred while processing VPRINT request**. Use the FIELDS operand to specify exactly which fields to include in the report.

The VPRINT command is available in the Browse and Edit functions in Vertical Formatted mode.

```
►►─┬─VPRINT─┬──┬─┬─number─┬──┬─FIELDS field-list─┬──►◄
   └─VP─────┘  │ └─ALL────┘  │                   │
                └─────────────┘                   └
```

number : Specifies the number of records to print. The default is 0 or ALL. 0 (zero) prints the current and all subsequent records in the file.

ALL : Prints the current record and all subsequent records in the file.

FIELDS field-list : Specifies any combination of field numbers and/or field number range. Separate each field number specification by a space or a comma. Specify a range with a hyphen between the starting and ending field numbers. You may specify up to nine field number specifications or 60 characters.

Preallocating a Print Dataset

If a dataset is preallocated with an FAPRINT DD statement in your logon PROC or if you use a TSO command to dynamically allocate one, the output is automatically directed to this dataset. Use the following TSO commands to allocate FAPRINT:

```
TSO ALLOC FI(FAPRINT) DA(dataset-name)
```

To free FAPRINT, use:

```
TSO FREE FI(FAPRINT)
```

The dataset used for FAPRINT must be created and cataloged with the following attributes:

RECFM: FB or FBA

LRECL: 133 or 183

Note: Use an LRECL of 183 whenever using a wide data width to report for a source or JCL compare, otherwise, use 133.

BLKSIZE: 1330 (or larger to be efficient for the device where the file is created).

Print Parameters Screen

The Print Parameters screen is displayed, as shown in Figure 21-14, when you issue the VPRINT command and File-AID cannot find a preallocated FAPRINT DD. This screen enables you to specify the number of copies and destination of the print. You can direct the output to a dataset by specifying the name of a dataset in the Print dataset name field. If the dataset does not exist, you can specify a disposition of NEW to allocate one.

Figure 21-14. Print Parameters Screen

```
File-AID -------------------  Print Parameters  ------------------------------
COMMAND ===>

Number of lines/page       ===> 55       (0 = Suppress page headings)
Sysout class               ===> A
Number of copies           ===> 1

Enter One of the Following Optional Destinations:

   Destination printer     ===>          (Local or remote printer)
   - - - OR - - -
   External JES Node ID    ===>          (Predefined JES Node and symbolic ID
   Target VM/TSO ident     ===>           of intended receiver of output)
   - - - OR - - -
   Sysout writer name      ===>          (Installation assigned output writer)
   - - - OR - - -

                                         (DSORG=PS; RECFM=VBA; LRECL=187)
   Print dataset name      ===>
   Disposition             ===> OLD      (NEW; SHR; MOD; OLD)
   Volume serial           ===>
```

Field Descriptions

Number of lines/page : Controls when headings are printed. Specify the number of line per page. If you specify 0 (zero), page headings are not printed. The default number of lines per page is 55, including the page headings.

Sysout class : Specify the output category or output device. You must specify a value.

Number of copies : Specify the number of copies you want printed. A valid value is any integer from 1–9999.

Enter One of the Following Optional Destinations:

Destination printer : Specify either the name of a remote printer or the system default printer. To specify the default printer, you can leave the field blank, or specify a value of LOCAL or R0.

External JES Node ID : To route the output across JES nodes, specify the symbolic name of an installation-dependent JES node. This field is required.

Target VM/TSO ident : To route the output across JES nodes, specify either a VM or TSO user ID or the symbolic name specified in the External JES Node ID field. This field is required.

Sysout writer name : Specify the name of an installation-dependent external writer.

Print dataset name : Specify the name of the dataset to which File-AID can write the print output.

Disposition : Specify a disposition for the print dataset:

MOD - Modified, add on to end.

NEW - New.

OLD - Old, exclusive serialization.

SHR - Share -- old, share serialization.

If you specified the name of a dataset that does not exist, specify the disposition as NEW and File-AID displays the Print Dataset Attributes Specification screen.

Volume serial : Specify the volume serial number of the storage device for a non-cataloged or new dataset.

Print Dataset Attributes Specification Screen

The Print Dataset Attributes Specification screen, shown in Figure 21-15 on page 21-82, allows you to specify additional allocation parameters for your print dataset. It is displayed when you specify name of a dataset that does not exist and a disposition of NEW on the Print Parameters screen (Figure 21-14).

Figure 21-15. Print Dataset Attributes Specification Screen

```
File-AID ------------- Print Dataset Attributes Specification -----------------
COMMAND ===>

Print Dataset Allocation Information:
   Generic unit            ===>
   Space units             ===>             (BLKS; TRKS; CYLS)
   Primary quantity        ===>             (In above units)
   Secondary quantity      ===>             (In above units)









Use ENTER to print, END to cancel
```

Field Descriptions

Print Dataset Allocation Information:

Generic unit : Specify the device type on which the new dataset will reside.

Space units : Specify whether the dataset is allocated in blocks (BLKS), tracks (TRKS), or cylinders (CYLS).

Primary quantity : Specify the initial number of space units.

Secondary quantity : Specify the number of space units to be allocated for each secondary extent.

XMLGEN

The XMLGEN primary command generates an XML formatted document from existing files using COBOL or PL/I layout fields as the tag names, into an existing, or new, dataset using any number of subsequent records. This command is valid in Formatted mode of Browse and Edit.

```
►►─XMLGEN──┬──────────┬──────────────────►◄
           ├─n────────┤
           └─ALL──────┘
```

n : Number of records to use to generate the XML Document, or is the keyword ALL. The XMLGEN command uses the record fields as they are displayed on the screen (see DISPLAY/HIDE commands to change the display formats).

If n (number of records) is omitted, or ALL is specified, the current record and all following records are used to generate the XML Document.

Excluded records and fields are not used when generating an XML document. If the file has segmented records defined with an XREF member, File-AID internally issues NEXT commands to format each segment of each record.

REDEFINES and FILLER fields are not used when generating an XML document. If you display only REDEFINES and/or FILLER fields, or the layout contains only these fields, XMLGEN terminates without generating an XML document.

ZERO (Z)

The ZERO command controls whether to display leading zeros in numeric data fields.

The command is available in the Browse and Edit functions in Formatted and Vertical Formatted modes.

```
                  ┌─ON──┐
►►─┬─ZERO─┬──────┼─────┼──────►◄
   └─Z────┘      └─OFF─┘
```

ON : Sets the ZERO edit option ON. Leading zeros of numeric data fields are displayed.

OFF : Sets the ZERO edit option to OFF.

Guidelines

Use the PROFILE command to display the current ZERO value.

Chapter 22.
Line Commands

This chapter describes the line commands available for use in character and vertical formatted edit modes of File-AID.

Note: Line commands are not available in formatted mode.

You can enter a line command by typing over the characters in the sequence number field. The execution of a line command can encompass:

- Single lines
- Range of lines: Enter the line command immediately followed by a number. The number specifies either the number of lines the command will affect, or the number of times File-AID will perform the command.
- Block of lines: Enter the block syntax of the line command on the first and on the last lines of a block of lines.

File-AID scans and processes line commands starting at the beginning of the dataset. If File-AID detects a conflict, it generates an error message. When the source of the initial error is eliminated, File-AID may detect additional errors.

You can change a line command by typing over it with a new entry. To erase a line command:

- Enter the RESET primary command.
- End the edit session.
- Type over the sequence number field with blanks.

You can enter a line command in any character position (1-6) in the sequence field. It is not necessary to begin in column 1. However, if one or more numbers entered as part of the line command match one or more of the system-generated numeric sequence number characters, File-AID does not recognize the characters that match. You can correct the situation in one of three ways:

- Position the cursor on the sequence line immediately after the number, and press Enter.
- Enter the line command and its number on a line where the command number and the sequence number characters do not match.
- Enter a blank after the command.

You can use line commands on all data lines. You can enter the I (insert), A (after), and H (here) line commands on the TOP OF DATA line by typing over the asterisks in the first six columns. You can use the B (before) and the information display line commands (BNDS, COLS, MASK, and OVLY) on the BOTTOM OF DATA line. The results of entering a line command on an information display line (or enclosing an information line in a block line command) are noted in the individual discussion of each command.

Specifying Multiple Line Commands

You can enter multiple line commands simultaneously. However, if you enter multiple line commands that conflict with one another, File-AID displays an error message. For example, a D (delete) line command cannot be placed within a block to be copied or moved.

You can specify multiple source data statements using single or block C (copy) and M (move) commands. However, each source must have a unique destination. The destination is associated with the closest source. Specify the destination with one or more A (after), B (before), and H (here) line commands. You cannot use the O (overlay) line command to specify a destination when multiple source data statements are moved or copied.

If you specify multiple MM (move block) and/or CC (copy block) commands, you must specify a single destination for each block using the A (after), B (before), or H (here) commands. You cannot place intervening source or use destination line commands between each block and its respective destination. For example, the following commands can be entered simultaneously:

```
CC 001   LINE 1
CC 002   LINE 2
A0 003   LINE 3
00 004   LINE 4
00 005   LINE 5
A0 006   LINE 6
```

After the command is executed, the lines are copied as shown:

```
000001   LINE 1
000002   LINE 2
000003   LINE 3
000004   LINE 1
000005   LINE 2
000006   LINE 4
000007   LINE 5
000008   LINE 6
000009   LINE 1
000010   LINE 2
```

However, the following set of commands is ambiguous and produces the error message: **COMMAND CONFLICT**.

```
CC 001   LINE 1
CC 002   LINE 2
000003   LINE 3
CC 004   LINE 4
CC 005   LINE 5
A  006   LINE 6
A  007   LINE 7
```

Additional rules relating to the use of individual commands are described under each command.
Line commands available in File-AID for character edit are listed in Table 22-1 on page 22-3. In this appendix, line commands are listed in alphabetical order according to the command name, not its description. The following information is presented for each command:

- Command name and description.
- Purpose of the command.
- A syntax diagram that shows the full syntax required to execute the command, including all parameters.
- Use of the command without and/or with parameters, as applicable.
- Guidelines for the command not covered under one of the parameters.

Standard Edit Line Commands

Table 22-1 lists the line commands that are available in character and vertical formatted modes of the Edit function.

Table 22-1. Line Command Summary

Command	Description	Specified Occurrences	Block Commands
(	Shift Left	([n]	([n]
)	Shift Right	)[n]	))[n]
A	After	A[n]	
B	Before	B[n]	
BNDS	Bounds	BNDS	
C	Copy	C[n]	CC
CHAR	Character mode	CHAR	
COLS	Columns	COLS	
D	Delete	D[n]	DD
F	First	F[n]	
FMT	Formatted mode	FMT	
H	Here	H[n]	
I	Insert	I[n]	
L	Last	L[n]	
M	Move	M[n]	MM
MAP	Map	MAP	
MASK	Mask	MASK	
O	Overlay	O[n]	OO
OVLY	Overlay Mask	OVLY	
P	Protect	P[n]	PP
R	Repeat	R[n]	RR[n]
S	Select	S	
S	Show	S	
U	Unprotect	U[n]	UU
VFMT	Vertical Formatted mode	VFMT	
X	Exclude	X[n]	XX

Windowed Edit Line Commands

The following line commands are available in character and vertical formatted modes of the Windowed Edit function:

BNDS : Displays the column boundary information line.

CHAR : Invokes character mode from vertical formatted mode.

COLS : Displays the column number's information line.

D[n], DD : Deletes a line or block. The DD block command is supported only in the current window.

Not available for Sequential files.

FMT : Displays the record in formatted mode.

I[n] : Inserts one or more records.

Not available for Sequential files.

MAP : Displays the record in formatted mode.

MASK : Displays and allows edit of the mask information line.

R[n] : Repeats a line.

Not available for Sequential files.

S : Displays the specified record in formatted mode.

VFMT : Invokes vertical formatted mode from formatted and character modes.

((Shift Left)

The **(** (shift left) line command shifts record data within the edit bounds to the left, and also reduces the length of variable-length records.

The **(** (shift left) line command used without parameters moves all data on the line one character to the left. The **((** (shift left block) line command used without parameters specifies the first and last lines in a block of lines to move all data within the selected block of lines one character to the left.

SHIFT LEFT Line Command Syntax

```
([n]
(([n]
```

n (for ( ) : Specifies the number of characters the data is to be moved to the left. You can specify multiple (and/or (*n* entries on different lines and enter them simultaneously.

You can use the (and/or (*n* entries to shift data on data lines, and on only the BNDS, MASK, and OVLY information display lines; they are ignored on other information display lines.

n (for (( ) : Specifies that the selected block of lines be moved the specified number (*n*) of characters to the left. When shifting a block of lines more than one column, you can specify the number of characters to be shifted (*n*) on the first or last line of the block, or on both lines. If you specify different numbers on the first and last lines, the error message: **NUMBERS ARE DIFFERENT** is displayed and File-AID does not execute the command.

You can enter multiple pairs of ((and/or multiple pairs of ((*n* entries simultaneously if the following conditions are met:

- (and/or (*n* entries are not specified on lines within any block specified by a pair of ((or ((*n* entries.
- Only pairs of ((and/or ((*n* entries are specified.

The error message: **BLOCK COMMAND INCOMPLETE** is displayed if either of these conditions are not met.

The ((or ((*n* entries do not affect data on any BNDS, MASK, and OVLY information display lines within a selected block.

Guidelines

All shifting takes place within the edit bounds. The data within the edit bounds is shifted to the left with the following results:

- The left-most *n* bytes of data within the edit bounds are discarded.
- The right-most *n* columns within the edit bounds are filled with the PAD character. See “PAD” on page 21-61 for more information.

To shorten variable-length records:

- Set the left edit bound within the current record length.

- Set the right edit bound beyond the current record length.
- Use the (line command to shorten the record. The record is then shifted beyond the left edit bound and File-AID truncates the positions that extend beyond the left data bounds.

The PAD character is not used when the record length is shortened.

If both edit bounds are beyond the length of a particular record, the (line command has no effect on that record.

The length of the MASK information line, which determines the initial length of inserted records, can also be decreased with the (line command, subject to the same control by the edit bounds.

When the BNDS information line itself is shifted, the left bound can be shifted left as far as column one. Additional shifting does not affect the left bound after it is in that column. The right bound is shifted left the specified number of columns, provided that it does not exceed the number of columns between the right bound and column one. If the number of columns exceeds the number of columns between the right bound and column one, the right bound is reset to the default, one column beyond the logical record length.

If you specify the (line command on the TOP OF DATA or BOTTOM OF DATA line, the error message: **INVALID ON THIS LINE** is displayed. You can specify the command on any other line.

Multiple (line commands (designating single lines, range of lines, and/or line blocks) can be executed at the same time if the lines specified do not overlap. If you enter(line commands with overlapping specifications, the error message: **BLOCK COMMAND INCOMPLETE** is displayed.

) (Shift Right)

The) (shift right) line command shifts record data within the edit bounds to the right, and also increases the length of variable-length records.

The) (shift right) line command used without parameters moves all data on the line one character to the right. The)) (shift right block) line command used without parameters specifies the first and last lines in a block of lines to move all data within the selected block of lines one character to the right.

SHIFT RIGHT Line Command Syntax

```
)[n]
))[n]
```

n (for)) : Specifies the number of characters the data is to be moved to the right. You can specify multiple) and/or)*n* entries on different lines and enter them simultaneously.

You can use the) and/or)*n* entries to shift data on data lines, and on BNDS, MASK, and OVLY information display lines; they are ignored on other information display lines.

n (for))) : Specifies that the selected block of lines be moved the specified number (*n*) of characters to the right. When shifting a block of lines more than one column, you can place the number of characters to be shifted (*n*) on the first or last line of the block, or on both lines. If you specify different numbers on the first and last lines the error message: **NUMBERS ARE DIFFERENT** is displayed and File-AID does not execute the command.

You can enter multiple pairs of)) and/or multiple pairs of))*n* entries simultaneously if the following conditions are met:

-) and/or)*n* entries are not specified lines within any block specified by a pair of)) or))*n* entries.
- Only pairs of)) and/or))*n* entries are specified.

The error message: **BLOCK COMMAND INCOMPLETE** is displayed if either of these conditions are not met.

The)) (or))*n* entries do not affect data on any BNDS, MASK, and OVLY information display lines within a selected block.

Guidelines

All shifting takes place within the edit bounds. The data within the edit bounds is shifted to the right with the following results:

- The right-most *n* bytes of data within the edit bounds are discarded.
- The left-most *n* columns within the edit bounds are filled with the PAD character. See "PAD" on page 21-61 for more information.

To lengthen variable-length records:

- Set the left edit bound within the current record length.
- Set the right edit bound beyond the current record length.
- Use the) line command to lengthen the record. The record is not lengthened beyond the right edit bound.

If both edit bounds are beyond the length of a particular record, the) line command has no effect on that record.

The length of the MASK information line, which determines the initial length of inserted records, can also be increased with the) line command, subject to the same control by the edit bounds.

When the BNDS information line itself is shifted, the right bound can be shifted right as far as one column beyond the logical record length. Additional shifting does not affect the right bound after it is in that column. The left bound is shifted right the specified number of columns, provided that it does not exceed the number of columns between the left bound and one column beyond the logical record length. If the number of columns exceeds the number of columns between the left bound and one column beyond the logical record length, the left bound is placed in column one.

If you enter the) line command on the TOP OF DATA or BOTTOM OF DATA line, the error message: **INVALID ON THIS LINE** is displayed.You can enter the command on any other line.

Multiple) line commands (designating single lines, range of lines, and/or line blocks) can be executed at the same time if the lines specified do not overlap. If you enter) line commands with overlapping specifications, the error message: **BLOCK COMMAND INCOMPLETE** is displayed.

A (After)

The A (after) line command specifies a destination when data is copied, moved, or overlaid.

The A (after) line command without parameters inserts one copy of source data immediately after the line designated with the A. The source range may be defined by the C (copy), CC (copy block), M (move) line, or MM (move block) commands, or on the Edit COPY screen when using the COPY primary command to copy records from another dataset. You can enter multiple A (after) commands simultaneously. See "Edit COPY Screen" on page 21-20 for information on the Edit COPY screen.

AFTER Line Command Syntax

```
A[n]
```

n : Specifies that *n* copies of the source range are to be inserted. If *n*is not specified, one copy is inserted.

Guidelines

You can enter the A line command on any data line or information line except the BOTTOM OF DATA line. If you enter it on the BOTTOM OF DATA line, the message: **INVALID ON THIS LINE** is displayed and you must blank out the command or remove it with the RESET command.

If you did not specify a source range when you entered the A line command, the message: **MOVE/COPY IS PENDING** is displayed. After you specify the source range, the specified records are inserted at the specified destination.

When using multiple A (after), B (before), and H (here) destination line commands, you should enter all the destination line commands before you enter the C (copy), CC (copy block), M (move), or MM (move block) source data line commands. This enables you to scroll through the dataset to each destination before executing the source commands.

Example

The following line command causes two copies of the source range to be inserted between records 14 and 15:

```
A2 014
000015
```

B (Before)

The B (before) line command specifies a destination when data is copied, moved, or overlaid.

The B (before) line command without parameters inserts one copy of source data immediately before the line designated with the B. The source range may be defined by the C (copy), CC (copy block), M (move), or MM (move block) line commands, or on the Edit COPY screen when using the COPY primary command to copy records from another dataset. You can enter multiple B (before) commands simultaneously. See “Edit COPY Screen” on page 21-20 for more information.

BEFORE Line Command Syntax

```
B[n]
```

n : Specifies that *n* copies of the source range are to be inserted. If *n* is not specified, one copy is inserted.

Guidelines

You can enter the B command on any data line or information line except the TOP OF DATA line. If you enter the command on the TOP OF DATA line, the message: **INVALID ON THIS LINE** is displayed and you must blank out the command or remove it with the RESET command.

If you did not specify a source range when you entered the B line command, the message: **MOVE/COPY IS PENDING** is displayed. After you specify the source range, the specified records are inserted at the specified destination.

When using multiple A (after), B (before), and H (here) destination line commands, you should enter all the destination line commands before you enter the C (copy), CC (copy

block), M (move), or MM (move block) source data line commands. This enables you to scroll through the dataset to each destination before executing the source commands.

Example

The following line command causes two copies of the source range to be inserted between records 14 and 15:

```
000014
B2 015
```

BNDS (BND)

The BNDS (bounds) line command displays the BNDS information line and permits you to edit it.

BNDS (BND) Line Command Syntax

```
BNDS
```

Multiple BNDS line commands can be executed on different lines at the same time. When each BNDS command is executed, the following symbols are shown on the BNDS information display:

Less-than symbol (<): Left bound position.

Greater than symbol (>): Right bound position.

Vertical bar symbol (|): Both bounds are set to the same position.

One or both symbols might not appear on the display if the corresponding column is not currently displayed.

After the BNDS information line is displayed, you can change the left and/or right bound. To change the left or right bound, type over the BNDS line command with the following characters in the desired columns:

< - to set the new left bound.

> - to set the new right bound.

| - to set both bounds at the same character position.

When you enter new bounds settings, it is not necessary to blank out the old settings. If you blank out the old bounds settings and do not enter new ones, the bounds are set as follows:

Fixed length records: : left bound to column 1 and right bound to the defined record length.

Variable length records: : left bound to column 1 and right bound to one column beyond the defined maximum record length.

If you enter the BNDS line command on the TOP OF DATA the error message: **INVALID ON THIS LINE** is displayed.You can enter the command on any other line.

If you enter more than one right or left bounds symbol, File-AID scans the line from left to right and uses the first encountered symbol of each type. If it does not find a left bound symbol to the left of the first right bounds symbol, File-AID sets the left edit bound to column 1.

File-AID ignores any extraneous characters you enter on a BNDS information line. If you enter new bound locations on more than one BNDS information line, the results are unpredictable.

A BNDS display retains its position within the dataset during scrolling. You can remove the display with the D (delete) line command or the RESET primary command.

Use the PROFILE primary command to display the current BOUNDS settings, which are listed as two integers in the PROF information lines.

You can use the BOUNDS primary command to alter the setting of the edit bounds. If the BOUNDS primary command and BNDS line command are entered simultaneously, File-AID uses the setting of the BOUNDS primary command. You can change the bounds settings also by entering **(** (shift left) or **)** (shift right) line commands on the BNDS information line.

The bound settings limit the scope of the CHANGE, EXCLUDE, FIND, and SORT primary commands (unless a specific column range is specified with the commands).

These actions cause data shifted beyond the indicated bound to be lost:

- a right shift ( )) beyond the right bound
- a left shift (( ) beyond the left bound

Refer to "Using Edit Bounds with Variable-Length Records" on page 21-11 for a discussion of special considerations when editing variable-length records using the **(** and **)** line commands.

A left scroll stops at the left bound, and a right scroll stops at the right bound. An additional left or right scroll goes beyond the bound (assuming the bound is not at the leftmost or rightmost position).

C (Copy)

The C (copy) line command copies lines to a specified destination.

The C (copy) command used without parameters copies one line to a specified destination. Specify the destination with an A (after), B (before), H (here), or O (overlay) line command. You can specify more than one destination using multiple A (after), B (before), or H (here) line commands simultaneously. If more than one copy of the specified lines is required at the destination line, specify the number of copies in the destination line command.

Alternatively, a copy destination can be another dataset or a member of a PDS. See "CREATE (CRE)" on page 21-21 and "REPLACE" on page 21-68 for commands for this operation.

COPY Line Command Syntax

```
C[n]
CC
```

n : Specifies the number (*n*) of consecutive lines to be copied. The range of lines to be copied begins with the line on which you enter C*n*. If there are less than *n* lines between the specified line and the end of the dataset, all lines from the specified line through the end of the dataset are copied. No error message is produced.

If you specify a line command within a copy range, the error message: **COMMAND CONFLICT** is displayed.

CC : Specifies the first and last lines in a block of lines to copy.

If you specify a line command within a copy block, the error message: **BLOCK COMMAND INCOMPLETE** is displayed.

Guidelines

You can copy both data lines and information display lines. When you specify a number of lines, both data lines and information display lines are counted.

If you enter the C line command on the TOP OF DATA or BOTTOM OF DATA line, the error message: **INVALID ON THIS LINE** is displayed.

If you enter a source line, but do not enter a destination line, the message: **MOVE/COPY IS PENDING** is displayed. No commands are processed until a destination is specified or the C line commands are cleared.
Multiple source lines and destination lines can be specified at the same time, if the following conditions are met:

- Only one destination line is specified for each source range.
- No source or destination line commands intervene between each source range and its corresponding destination.

When you specify the destination of a C line command using the O (overlay) line command, the source data overlays records in the destination range in the columns specified by the OVLY overlay mask. No new records are inserted in the dataset. For additional information, refer to "O (Overlay)" on page 22-16, "OVLY (Overlay Mask)" on page 22-19, and "OVERLAY (OVLY)" on page 21-60.

CHAR

The CHAR (character) line command invokes the character mode.

CHAR Line Command Syntax

```
CHAR
```

You can specify the CHAR line command in the Edit function from vertical formatted mode.

COLS (COL)

The COLS (columns) line command displays the COLS information line to view column numbers.

COLS Line Command Syntax

```
COLS
```

Multiple COLS line commands can be executed on different lines at the same time.

If you enter the COLS line command on the TOP OF DATA line, the error message: **INVALID ON THIS LINE** is displayed. You can enter the command on any other line.

The displayed COLS information line retains its position within the dataset during scrolling. You can remove the COLS line from the display with the D (delete) line command or the RESET primary command.

For a keyed dataset, if you enter the COLS line command, File-AID displays a COLS information line that has a blank space before and after the record key. These blank spaces correspond to the blank columns inserted in the data display to delimit the key field.

D (Delete)

The D (delete) line command deletes specified records from the edit dataset and information lines from the display.

The D (delete) line command used without parameters deletes a specified line.

DELETE Line Command Syntax

```
D[n]
DD
```

n : Specifies the number of consecutive lines to be deleted. The range of lines to be deleted begins with the line on which you enter D*n*. If there are less than *n* lines between the specified line and the end of the dataset, all lines from the specified line through the end of the dataset are deleted. No error message is produced.

If you specify a line command within a delete range, the error message: **COMMAND CONFLICT** is displayed.

DD : Specifies the first and last lines in a block of lines to delete.

If you specify a line command within a delete block, the error message: **BLOCK COMMAND INCOMPLETE** is displayed.

Guidelines

You can delete both data lines and information display lines. When you specify a number of lines, both data lines and information display lines are counted.

If you enter the D line command on the TOP OF DATA or BOTTOM OF DATA line, the error message: **INVALID ON THIS LINE** is displayed.You can enter the command on any other line. If you enter D line commands with overlapping specifications, the error message: **COMMAND CONFLICT** is displayed.

Multiple D line commands (designating single lines, ranges of lines, and/or line blocks) can be executed at the same time, if the lines specified do not overlap.

If data records are inadvertently deleted, you can restore them by issuing the UNDO command immediately after the deletion. Multiple records or blocks of records deleted simultaneously are restored together. However, information lines removed from the display cannot be redisplayed with the UNDO command.

F (First)

The F (first) line command redisplays excluded lines, starting with the first excluded line and moving forward.

Lines can be excluded from the display with the EXCLUDE primary command or the X (exclude) line command. Each range of excluded lines is represented on the display by a single line that indicates the number of excluded records at that location in the dataset.

The F (first) line command used without parameters redisplays the first of a group of excluded lines.

FIRST Line Command Syntax

```
F[n]
```

n : Specifies the number of excluded lines to be redisplayed starting with the first line in the range and moving forward.

If the number of excluded lines requested to be redisplayed is more than the total number of excluded lines, all excluded lines are redisplayed. No error message is produced. If all excluded lines of a range are redisplayed, the line representing the range disappears.

Guidelines

You must enter the F line command on a line that represents excluded records. If you enter it on any other line, File-AID ignores the command.

If you enter the F line command on the TOP OF DATA or BOTTOM OF DATA line, the error message: **INVALID ON THIS LINE** is displayed.

Other commands that you can use to display excluded records are: the L (last) and S (show) line commands, and the CHANGE, FIND, and RESET primary commands.

FMT

The FMT line command invokes formatted mode and the record marked with the line command is displayed. The cursor position when the command is entered determines which field of the marked record is placed at the top of the display.

FMT Line Command Syntax

```
FMT
```

The record is displayed as individual formatted data fields if you specified an S or X in the Record layout usage field and the name of the record layout dataset on the File-AID Edit - Dataset Specification screen (see Figure 4-1 on page 4-2). Otherwise, the record is displayed as hexadecimal data.

File-AID remains in formatted mode until you either switch modes using the CHAR or VFMT commands or exit use the END (PF3) or CANCEL primary command.

H (Here)

The H (here) line command specifies one or multiple destinations for a copy of source data.

Use the H (here) line command without parameters to specify the destination for one copy of source data.

HERE Line Command Syntax

```
H[n]
```

n : Specifies the number of copies to be inserted after each specified line.

Guidelines

You must specify each individual line to be copied/moved with a C (copy) or an M (move) line command. In addition, you can copy lines from another dataset/member using the COPY primary command.

You must specify each line block to be copied with a CC (copy block) or MM (move block) entry in the sequence field of the first and last lines of the block.

Press Enter to insert the source data after each line specified with the H line command.

The message: **MOVE/COPY IS PENDING** is displayed if you did not specify the source data or if you did not specify the destination lines with the H line command.

Using multiple source ranges or different destination commands such as A (after) or B (before) with an H line command produces the error message: **COMMAND CONFLICT**, and no commands are processed.

If you enter the H line command on the BOTTOM OF DATA line, the error message: **INVALID ON THIS LINE** is displayed.You can enter the command on any other line.

Example

The following line command causes two copies of the source range to be inserted between records 14 and 15, and an additional copy between records 16 and 17:

```
H2 014
000015
H 0016
000017
```

When using multiple H destinations, you should enter all H line commands before entering the C or CC (copy) and M or MM (move) line commands. This enables you to scroll the dataset to the desired destination before the C or M commands execute.

I (Insert)

The I (insert) line command inserts new records into the edit dataset.

The I (insert) line command used without parameters inserts a new record after the specified line. File-AID initializes the inserted record with the contents of the input MASK before insertion.

INSERT Line Command Syntax

```
I[n]
```

n : Specifies the number of new lines to insert.

Guidelines

File-AID considers an inserted record a temporary record and does not assign it a sequence number or add it to the edit dataset unless at least one byte of the record is typed over. If you have not typed over at least one byte by the time the next transaction occurs (for example, you press Enter or enter a command), File-AID eliminates the temporary record from the display.

A temporary insert record may be edited in formatted edit by entering the MAP primary command, MAP line command, the FMT primary command, or FMT line command with the cursor located on the temporary line. The word TEMP is displayed in place of the record number on the formatted edit display when a temporary record is being edited.

The sequence field of a temporary record is filled with apostrophes (’). The new record(s) are initialized with the contents of the input MASK. The record length is determined by the length of the input MASK.

If you type over the bottom-most temporary (inserted) record and the cursor is positioned on that line when you press Enter, another new record is automatically inserted. This allows you to repeatedly insert additional data records without reentering the Insert command.

L (Last)

The L (last) line command redisplays excluded lines, starting with the last excluded line and working backward.

Lines can be eliminated from the display (excluded) with the EXCLUDE primary command or the X (exclude) line command. Each range of excluded lines is represented on the display by a single line that indicates the number of excluded records at that location in the dataset.

The L (last) line command used without parameters redisplays the last line of a range of excluded lines.

LAST Line Command Syntax

```
L[n]
```

n : Specifies the number of excluded lines to be redisplayed. The specified number of excluded lines is redisplayed, starting with the last line in the range and moving backward. If the number of excluded lines requested to be redisplayed is more than the total number of excluded lines, all excluded lines are redisplayed. No error message is produced. If all excluded lines of a range are redisplayed, the line representing the range disappears.

Guidelines

You must enter the L line command on a line that represents excluded records. If you enter it on any other line, File-AID ignores the command.

If you enter the L line command on the TOP OF DATA or BOTTOM OF DATA line, the error message: **INVALID ON THIS LINE** is displayed.

Other commands that you can use to display excluded records are: the F (first) and S (show) line commands, and the CHANGE, FIND, and RESET primary commands.

MAP

The MAP line command invokes formatted mode and the record marked with the line command is displayed. The cursor position when the command is entered determines which field of the marked record is placed at the top of the display.

MAP Line Command Syntax

```
MAP
```

The record is displayed as individual formatted data fields if you specified an S or X in the Record layout usage field and the name of the record layout dataset on the File-AID Edit - Dataset Specification screen (see Figure 4-1 on page 4-2). Otherwise, the record is displayed as hexadecimal data.

File-AID remains in formatted mode until you either switch modes using the CHAR or VFMT commands or exit use the END or CANCEL primary command.

MASK

The MASK line command displays and allows edit of the MASK information display.

MASK Line Command Syntax

```
MASK
```

Enter the MASK line command to display the MASK information line immediately above the line on which the command is entered. The MASK information line shows the input mask used to initialize new records created by the I (insert) line command.

Multiple MASK line commands can be executed on different lines at the same time. However, there is only one input mask. Therefore, changing one input MASK line changes all input MASK lines. The input mask initially consists of blank characters. You can edit the input mask by:

- Typing over on the MASK information line.
- Using the **(** (shift left) and**)** (shift right) line commands to change the input mask length.

You can use the O (overlay) line command on the MASK information line to copy data from an existing record into the input mask. Overlaying the input mask does not affect the length of the mask line.

You can edit the input mask also in formatted mode.

When editing a dataset containing variable-length records, the length of the input mask determines the initial length of records added with the I (insert) line command.

When character or vertical formatted modes are invoked, the length of the input mask is set to the defined record length.

The displayed MASK information line retains its position within the dataset during scrolling. You can remove the MASK line from the display with the D (delete) line command or the RESET primary command.

M (Move)

The M (move) line command moves lines to a specified location.

The M (move) line command used without parameters moves one line to a specified destination.

MOVE Line Command Syntax

```
M[n]
MM
```

n : Specifies the number of consecutive lines to be moved to a specified destination. The range of lines to be moved begins with the line on which you enter M*n*.

If there are less than *n* lines between the specified line and the end of the dataset, all lines from the specified line through the end of the dataset are copied. No error message is produced.

If you specify a line command within a move range, the error message: **COMMAND CONFLICT** is displayed.

MM : Specifies a block of lines to be moved to a specified destination.

Guidelines

Both data lines and information display lines can be moved. When you specify a number of lines, both data lines and information display lines are counted.

If you enter the M line command on the TOP OF DATA or BOTTOM OF DATA line, the error message: **INVALID ON THIS LINE** is displayed. You can enter the command on any other line.

If you specify a line command within an MM block, the error message: **BLOCK COMMAND INCOMPLETE** is displayed.

If you specify a source line but do not specify a destination line, the message: **MOVE/COPY IS PENDING** is displayed. No commands are processed until a destination is specified or the M line commands are cleared.

Multiple source lines and destination lines can be specified at the same time if the following conditions are met:

- Only one destination line is specified for each source range
- No source or destination line commands intervene between each source range and its corresponding destination.

Mark the destination for line(s) to be copied by entering an A (after), B (before), H (here), or O (overlay) line command in the sequence field of the destination line. If you want to move more than one copy of the specified line(s) to the destination line, specify the number of copies immediately following the destination marker.

When you use the O (overlay) line command to specify the destination of an M (move) line command, the source data overlays records in the destination range in the columns specified by the OVLY overlay mask. No new records are inserted in the dataset. See "O (Overlay)" on page 22-16 and "OVLY (Overlay Mask)" on page 22-19 for more information.

Alternatively, the destination of a move can be another dataset or a member of a PDS. See "CREATE (CRE)" on page 21-21 and "REPLACE" on page 21-68 for commands for this operation. However, when using the M line command with REPLACE or CREATE, the lines marked for the move are not deleted from the edit dataset—the M command is automatically changed to a C line command.

O (Overlay)

The O (overlay) line command copies data from specified columns of one or more source records to the corresponding columns of one or more (existing) destination records.

The source range of records to be overlaid onto a destination record is specified with one of the following line commands:

- **C (copy)**
- **M (move)**.

You can use the COPY primary command to copy records from another dataset/member.

The O (overlay) line command used without parameters overlays data from one source record to a destination record. If a single record or MASK information line is being overlaid, the data from the first record in the source range is overlaid on the designated line.

OVERLAY Line Command Syntax

```
O[n]
OO
```

n : Specifies the number of destination lines to be overlaid. If there are fewer destination lines than source records, not all source records are used in the overlay process. If you specify the source range with the C (copy) line command, the message: **NOT ALL DATA COPIED** is displayed. If the M (move) line command specifies the source range, the message: **LINES NOT DELETED** is displayed.

If the number of destination lines is greater than or equal to the number of source records and you used the M (move) line command to specify the source range, the source lines are deleted.

OO : Specifies the block of destination lines to be overlaid.

If a block of lines to be overlaid contains information lines (other than a MASK information line), these lines are assigned a source record, but are not actually overlaid. Thus, you can include information lines in the destination range where you want to skip a source record during an overlay operation. A MASK information line is treated as a data record during the execution of the O (Overlay) line command.

If a block of lines is being overlaid, the destination lines are overlaid with successive source records in sequence. If the number of destination lines exceeds the number of source records, the source records are reused until all destination lines have been overlaid.

Guidelines

The overlay mask defines which columns of the destination record(s) are to be overlaid with data from the source record(s). Columns of the overlay mask that contain an asterisk (*) are overlaid, and the columns that contain a blank character are not overlaid.

The contents of the overlay mask are displayed on the OVLY information line, which is displayed with the OVLY line command. You can alter the contents of the overlay mask using the OVERLAY primary command, or by typing over the OVLY information line.

At least one column of the OVLY information line must contain an asterisk (*) before the overlay operation is requested. Otherwise, an error is detected and the message: **NO EXISTING OVERLAY LINE** is displayed.

Unlike the overlay operation in ISPF/PDF, the overlay operation in File-AID is not confined to columns within the edit bounds.

The source range may consist of a single line or a block of lines. Any information lines in the source range are ignored (in the case of overlay operations only). If the source range consists entirely of information lines, the overlay operation has no effect on the destination record(s).

The destination may be a block of lines, a single data record or a MASK information line. A single O marks a single destination record or MASK information line. To specify a block of lines, enter O in the sequence field of the first line of the block, followed by the number of lines (n). You can specify a block of destination lines also by by marking the first and last lines of the block with OO. An information line (other than a MASK information line) may be marked with OO, but may not be marked with O or On. If you mark an information line with O or On, the message: **INVALID ON THIS LINE** is displayed.

When editing a keyed dataset, the record key of protected records cannot be overlaid. If you attempt to overlay the record key of a protected record, the message: **RECORD(S) NOT OVERLAID** is displayed, the protected record is flagged with the ERR flag, and the original contents of the record key field remains intact. Any specified columns outside the record key field are overlaid. An unsuccessful attempt to overlay a protected key does not inhibit the deletion of a source range specified with the M (move) command.

Example 1

This example demonstrates the overlay operation:

```
=OVLY>      *****     *****
=COLS> ----+----1----+----2----+--
CC 001 AAAAAAAAAAAAAAAAAAAAAAAAAAAA
CC 002 BBBBBBBBBBBBBBBBBBBBBBBBBBBB
OO 003 111111111111111111111111111
000004 2222222222222222222222222222
OO 005 3333333333333333333333333333
```

The first line of this example shows the OVLY information line, which indicates that columns 6 through 10 and 16 through 20 may be overlaid. The source range in this example consists of lines 1 and 2. The overlay destination range consists of lines 3, 4, and 5. Since there are more destination lines than source records, the first source record is used twice.

The result of the overlay operation is shown below:

```
=OVLY>      *****     *****
=COLS> ----+----1----+----2----+--
000001 AAAAAAAAAAAAAAAAAAAAAAAAAAAA
000002 BBBBBBBBBBBBBBBBBBBBBBBBBBBB
000003 11111AAAAA11111AAAAA1111111
000004 22222BBBBB22222BBBBB2222222
000005 33333AAAAA33333AAAAA3333333
```

Example 2

This example demonstrates the result when the source and destination ranges contain information lines.

```
=OVLY>      *****     *****
MM 001 AAAAAAAAAAAAAAAAAAAAAAAAAAAA
000002 BBBBBBBBBBBBBBBBBBBBBBBBBBBB
=BNDS> <          >
MM 003 CCCCCCCCCCCCCCCCCCCCCCCCCCCC
OO 004 111111111111111111111111111
000005 2222222222222222222222222222
000006 3333333333333333333333333333
=MASK>
=COLS> ----+----1----+----2----+--
OO 007 4444444444444444444444444444
```

The BNDS information line is ignored, so the source range effectively consists of records 1, 2, and 3. Therefore, record 4 is overlaid with record 1, record 5 with record 2, and record 6 with record 3. The MASK information line is overlaid as if it were a data record. Since all source range records have been used, it is overlaid with record 1. The COLS information line is assigned record 2, but is not overlaid. Record 7 is overlaid with record 3. Finally, since all source range records were used, the source range (specified with the M (move) command) is deleted, and the sequence numbers are updated. The result is as follows:

```
=OVLY>      *****     *****
=BNDS> <          >
000001 11111AAAAA11111AAAAA1111111
000002 22222BBBBB22222BBBBB2222222
000003 33333CCCCC33333CCCCC3333333
=MASK>      AAAAA     AAAAA
=COLS> ----+----1----+----2----+--
000004 44444CCCCC44444CCCCC4444444
```

OVLY (Overlay Mask)

The OVLY line command displays and allows editing of the overlay mask information line.

OVERLAY MASK Line Command Syntax

```
OVLY
```

The OVLY line command displays the OVLY information line immediately above the line on which the command is entered. The OVLY information line shows the overlay mask, which has an asterisk in each column to be overlaid.

You can specify more than one OVLY information line at the same time. However, there is only one overlay mask. Therefore, changing one overlay mask line changes all overlay mask lines.

If you enter the OVLY line command on the TOP OF DATA line, the error message: **INVALID ON THIS LINE** is displayed. You can enter the command on any other line.

The overlay mask determines which columns of a source data record are to be copied to the corresponding columns of a destination data record when the O (overlay) line command is used.

Each column of the overlay mask contains:

- An asterisk (*) in each column to be overlaid.
- A blank character in each column not to be overlaid.

The overlay mask initially consists of blank characters. You can edit the overlay mask by:

- Typing over on the OVLY information line.
- Entering the ((shift left) and) (shift right) line commands on the OVLY line.
- Entering the OVERLAY primary command.

Any characters other than asterisks that you type on the OVLY information line are converted to blanks.

The length of the overlay mask is the logical record length (LRECL) of the dataset being edited.

The displayed OVLY information line retains its position within the dataset during scrolling. You can remove the OVLY information line from the display using the D (delete) line command or the RESET primary command.

P (Protect)

The P (protect) line command sets protection for the key fields of lines and prevents them from being modified.

The P (protect) line command used without parameters prevents the key fields of the specified line from being modified.

PROTECT Line Command Syntax

```
P[n]
PP
```

n : Specifies the number of consecutive lines (*n*) whose key fields are not to be modified. The range of lines to be protected begins with the line on which you enter P*n*.

If there are less than the specified number of lines between the specified line and the end of the dataset, all lines from the specified line through the end of the dataset are protected. No error message is produced.

If you specify another line command within a protect range, the error message: **COMMAND CONFLICT** is displayed.

PP : Specifies the first and last lines in a block of lines to protect the key fields of that block. If you specify another line command within a protect block, the error message: **BLOCK COMMAND INCOMPLETE** is displayed.

Guidelines

The original set of records in a keyed dataset are protected from key field modification. Protected keys are highlighted on the display; unprotected keys are not highlighted.

You can protect key fields by:

- Entering the P line command; or
- Entering the PROTECT ON primary command while the record is in formatted edit.

You can remove key field protection by:

- Entering the U (unprotect) line command; or
- Entering the PROTECT OFF primary command while the record is in formatted edit.

Additional records added to a edit dataset by merging, copying, inserting, or replicating are initially unprotected.

File-AID ignores the P line command when you enter it on information display lines, previously protected lines, or in a nonkeyed dataset.

When a number of lines is specified, only data lines are counted.

If you enter the P line command on the TOP OF DATA or BOTTOM OF DATA line, the error message: **INVALID ON THIS LINE** is displayed.

Multiple P line commands (specifying single lines, line ranges, or line blocks) can be executed at the same time if the lines specified do not overlap. If you enter the P line commands with overlapping specifications, the error message: **COMMAND CONFLICT** is displayed.

R (Repeat)

The R (repeat) line inserts copies of a line immediately below the specified line.

The R (repeat) line command used without parameters inserts one copy of a line immediately below the specified line.

REPEAT Line Command Syntax

```
R[n]
RR[nn]
```

n (for R) : Specifies the number of copies of a line to be inserted immediately below the specified line.

RR : Specifies the first and last lines in a line block to be inserted immediately below the last line in the block.

n (for RR) : Specifies the number of times that the specified block of lines are to be inserted immediately below the last line of the block. If you specify another line

command within a repeat block, the error message: **BLOCK COMMAND INCOMPLETE** is displayed.

Guidelines

You can insert copies of both data display lines and information display lines. When you specify a number of lines, both data lines and information lines are counted.

If you enter the R line command on the TOP OF DATA or BOTTOM OF DATA line, the error message: **INVALID ON THIS LINE** is displayed.

Multiple R line commands (specifying single lines or line blocks) can be executed at the same time if the lines specified do not overlap. If you enter R line commands with overlapping specifications, the error message: **COMMAND CONFLICT** is displayed.

When replicating a block of lines multiple times, you can place the number *n*on the first or last line of the block, or on both lines. If you specify different numbers on the first and last lines, the message: **NUMBERS ARE DIFFERENT** is displayed and the command is not executed.

S (Show) or S (Select)

The S (show) line command redisplays an entire group of excluded lines. The S (select) line command displays a record in formatted mode when the command is entered on a line that has not been excluded. The S (select) line command also selects:

- a member from a member list;
- a line for comparison in the Compare function (Option 10).

SHOW Line Command Syntax

```
S
```

You can exclude lines from the display with the EXCLUDE primary command or the X (exclude) line command. Each range of excluded lines is represented on the display by a single line, which indicates the number of excluded records at that location in the dataset. When all excluded lines are redisplayed, the line representing the group of excluded lines disappears.

You must enter the S (show) line command on a line that represents excluded records. If you enter it on any other line, File-AID invokes the S (select) line command, which selects the record to display in formatted mode.

If you type a number following the S line command, the error message: **NUMBER IS INVALID** is displayed.

If you enter the S line command on the TOP OF DATA or BOTTOM OF DATA line, the error message: **INVALID ON THIS LINE** is displayed.

Other commands that you can use to display excluded lines are: the F (first) and L (last) line commands, and the CHANGE, FIND, and RESET primary commands.

U (Unprotect)

The U (unprotect) line command removes protection from the key fields of lines and allows them to be modified.

The U (unprotect) line command used without parameters allows the key fields of the specified line to be modified.

UNPROTECT Line Command Syntax

```
U[n]
UU
```

n : Specifies the number of consecutive lines (*n*) whose key fields can be modified to allow editing. The range of lines to be unprotected begins with the line on which you enter U*n*.

If there are less than the specified number of lines between the specified line and the end of the dataset, all lines from the specified line through the end of the dataset are unprotected. No error message is produced.

If you specify a line command within an unprotected range, the error message: **COMMAND CONFLICT** is displayed.

UU : Specifies the first and last lines in a block of lines whose keys are to be unprotected.

If you specify a line command within an unprotected block the error message: **BLOCK COMMAND INCOMPLETE** is displayed.

Guidelines

The original set of records in a keyed dataset are protected from key field modification. Protected keys are highlighted on the display; unprotected keys are not highlighted.

You can remove key field protection by:

- Entering the U line command; or
- Entering the PROTECT OFF primary command while the record is in formatted edit.

You can protect key fields by:

- Entering the P (protect) line command: or
- Entering the PROTECT ON primary command while the record is in formatted edit.

Additional records added to a edit dataset by merging, copying, inserting, or replicating are initially unprotected.

File-AID ignores the U line command when you enter it on information display lines, or previously unprotected lines, and when editing a nonkeyed dataset.

When you specify a number of lines, only data lines are counted.

If you enter the U line command on the TOP OF DATA or BOTTOM OF DATA line, the error message: **INVALID ON THIS LINE** is displayed.

Multiple U line commands (specifying single lines, line ranges, or line blocks) can be executed at the same time if the lines specified do not overlap. If you enter U line commands with overlapping specifications, the error message: **COMMAND CONFLICT** is displayed.

You can unprotect and protect any records added during the edit session as often as desired.

VFMT

The VFMT line command invokes the vertical formatted mode from character and formatted modes.

VFMT Line Command Syntax

```
VFMT
```

Vertical formatted mode and character mode both display multiple records in a horizontal format with each record identified by a line number. In addition, vertical formatted mode displays column headings (which correspond to the record layout) and arranges the data in the appropriate column.

X (Exclude)

The X (exclude) line removes lines from the display.

Groups of excluded lines are represented on the display by a single line, which appears as follows:

Figure 22-1. Excluded Lines Message Example

```
- - - - - - - - - - - - - - - - - - - - - - - - - - - - N RECORD(S) NOT DISPLAYED
```

The eliminated lines are replaced on the display with a single dashed line, which ends with the message: **N RECORD(S) NOT DISPLAYED**. *n* is the total number of lines excluded from display at that location in the dataset.

Both data lines and information display lines can be withheld from display. When you specify a number of lines, File-AID counts both data lines and information display lines.

The X line command used without parameters excludes the specified line from the display.

EXCLUDE Line Command Syntax

```
X[n]
XX
```

n : Specifies the number of consecutive lines to be removed from the display. The range of lines to be removed from display begins with the line on which you enter X*n*.

If there are less than the specified number of lines between the specified line and the end of the dataset, all lines from the specified line through the end of the dataset are removed from display. No error message is produced.

If you specify a line command within an exclude range, the error message: **COMMAND CONFLICT** is displayed.

XX : Specifies the first and last lines of a block to be removed from the display.

If you specify a line command within an exclude block, the error message: **BLOCK COMMAND INCOMPLETE** is displayed.

Guidelines

The X line command divides the dataset into two subsets, which can be processed separately. The scope of the CHANGE, DELETE, EXCLUDE, FIND, and SORT primary commands can be confined to one or the other of these subsets by specifying the X or NX value.

The effect of the X line command is cumulative; lines affected by the X line command are eliminated from the display and added to the previously excluded subset. (Previously excluded lines remain excluded.)

You can use the following commands to redisplay excluded lines:

- CHANGE, FIND, and RESET primary commands
- F (first), L (last), and S (show) line commands

In a range of lines to be moved or copied, all excluded and nonexcluded lines are moved or copied in the same way. The excluded lines remain excluded at the new destination.

If you enter the X line command on the TOP OF DATA or BOTTOM OF DATA line, the error message: **INVALID ON THIS LINE** is displayed.

When records adjacent to a **RECORDS NOT SELECTED** information line are excluded, File-AID displays the *n* **RECORDS NOT DISPLAYED**, *n* **RECORDS NOT SELECTED** combined information line.

Multiple X line commands can be executed on different lines at the same time. You can also exclude lines with the EXCLUDE primary command.

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