

ASG-Insight™ Quick Reference Guide

Version 7.0

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Preface

This *ASG-Insight Quick Reference Guide* summarizes the command syntax and usage information for the ASG-Insight (herein called Insight) commands. Insight is a powerful interactive system that helps programmers by automating the process of analyzing COBOL programs.

Allen Systems Group, Inc. (ASG) provides professional support to resolve any questions or concerns regarding the installation or use of any ASG product. Telephone technical support is available around the world, 24 hours a day, 7 days a week.

ASG welcomes your comments, as a preferred or prospective customer, on this publication or on any ASG product.

About this Publication

The *ASG-Insight Quick Reference Guide* contains these chapters:

- [Chapter 1, "Command Language Syntax,"](#) provides a description and command syntax for the Insight commands.
- [Chapter 2, "Operand Definitions,"](#) defines the command operands.
- [Chapter 3, "Tree View Line Commands,"](#) lists the tree view commands valid for Insight.
- [Chapter 4, "Source View Line Commands,"](#) lists the source view commands valid for Insight.
- [Chapter 5, "Analyze Options,"](#) lists the options available to control the output format and to describe COBOL options.
- [Chapter 6, "VIASUB/VIASUBDS Parameters,"](#) lists the VIASUB/VIASUBDS parameters.
- [Chapter 7, "PF Keys,"](#) lists the default and suggested alternate PF key settings.
- [Chapter 8, "Action Bar Command Equivalents,"](#) lists the pull-down and action equivalent to Insight commands.

Related Publications

The documentation library for ASG-Insight consists of these publications (where *nn* represents the product version number):

- *ASG-Center Installation Guide* (CNX0300-*nn*) contains installation and maintenance information for ASG-Center, the common set of libraries shared by the ASG-Existing Systems Workbench (ESW) suite of products.
- *ASG-ESW Enhancement Summary* (ESW1000-*nn*) highlights the new functionality for this release.
- *ASG-Insight Installation Guide* (INX0300-*nn*) provides instruction about the installation and maintenance of ASG-Insight.
- *ASG-Insight Quick Reference Card* (INX0900-*nn*) provides a summary of the commands and functions within ASG-Insight.
- *ASG-Insight Quick Reference Guide* (INX0600-*nn*) summarizes the syntax and use of ASG-Insight commands.
- *ASG-Insight Reference Guide* (INX0400-*nn*) provides detailed information about the pop-ups, screens, and commands used in ASG-Insight, including field descriptions, usage notes, and command syntax.
- *ASG-Insight User's Guide* (INX0200-*nn*) provides user information for ASG-Insight.

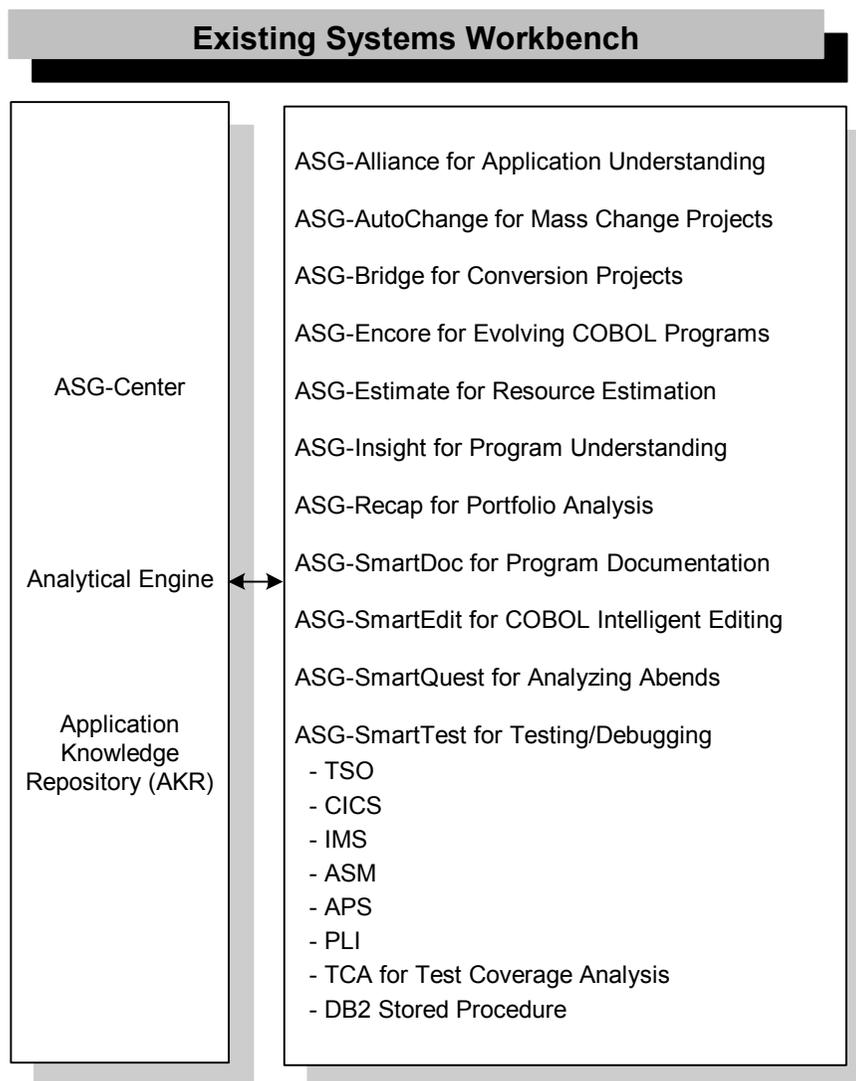
Note: _____

To obtain a specific version of a publication, contact ASG Customer Support.

ASG-Existing Systems Workbench (ASG-ESW)

ASG-ESW (herein called ESW) is an integrated suite of components designed to assist organizations in enhancing, redeveloping, or re-engineering their existing systems. ESW products use the Application Knowledge Repository (AKR) to store source program analysis information generated by the Analytical Engine. [Figure 1](#) represents the components of ESW.

Figure 1 • ASG Existing Systems Workbench



This table contains the name and description of each ESW component:

ESW Product	Herein Called	Description
ASG-Alliance	Alliance	The application understanding component that is used by IT professionals to conduct an analysis of every application in their environment. Alliance supports the analysis and assessment of the impact of change requests upon an entire application. Alliance allows the programmer/analyst to accurately perform application analysis tasks in a fraction of the time it would take to perform these tasks without an automated analysis tool. The impact analysis from Alliance provides application management with additional information for use in determining the resources required for application changes.
ASG-AutoChange	AutoChange	The COBOL code change tool that makes conversion teams more productive by enabling quick and safe changes to be made to large quantities of code. AutoChange is an interactive tool that guides the user through the process of making source code changes.
ASG-Bridge	Bridge	The bridging product that enables field expansion for program source code, without being required to simultaneously expand the fields in files or databases. Because programs are converted in smaller groups, or on a one-by-one basis, and do not require file conversion, testing during the conversion process is simpler and more thorough.
ASG-Center	Center	The common platform for all ESW products. Center provides the common Analytical Engine to analyze the source program and store this information in the AKR. This common platform provides a homogeneous environment for all ESW products to work synergistically.

ESW Product	Herein Called	Description
ASG-Encore	Encore	The program re-engineering component for COBOL programs. Encore includes analysis facilities and allows you to extract code based on the most frequently used re-engineering criteria. The code generation facilities allow you to use the results of the extract to generate a standalone program, a callable module, a complement module, and a CICS server. Prior to code generation, you can view and modify the extracted Logic Segment using the COBOL editor.
ASG-Estimate	Estimate	The resource estimation tool that enables the user to define the scope, determine the impact, and estimate the cost of code conversion for COBOL, Assembler, and PL/I programs. Estimate locates selected data items across an application and determines how they are used (moves, arithmetic operations, and compares). Time and cost factors are applied to these counts, generating cost and personnel resource estimates.
ASG-Insight	Insight	The program understanding component for COBOL programs. Insight allows programmers to expose program structure, identify data flow, find program anomalies, and trace logic paths. It also has automated procedures to assist in debugging program abends, changing a computation, and resolving incorrect program output values.
ASG-Recap	Recap	The portfolio analysis component that evaluates COBOL applications. Recap reports provide function point analysis and metrics information, program quality assessments, intra-application and inter-application comparisons and summaries, and historical reporting of function point and metrics information. The portfolio analysis information can also be viewed interactively or exported to a database, spreadsheet, or graphics package.
ASG-SmartDoc	SmartDoc	The program documentation component for COBOL programs. SmartDoc reports contain control and data flow information, an annotated source listing, structure charts, program summary reports, exception reports for program anomalies, and software metrics.

ESW Product	Herein Called	Description
ASG-SmartEdit	SmartEdit	The COBOL editing component that can be activated automatically when the ISPF/PDF Editor is invoked. SmartEdit provides comprehensive searching, inline copybook display, and syntax checking. SmartEdit allows you to include an additional preprocessor (for example, the APS generator) during syntax checking. SmartEdit supports all versions of IBM COBOL, CICS, SQL, and CA-IDMS.
ASG-SmartQuest	SmartQuest	The diagnostic tool for analyzing batch and CICS transaction abends. SmartQuest has been designed to make the maximum use of simple point-and-shoot techniques to enable fast and easy navigation through any data dump.
ASG-SmartTest	SmartTest	The testing/debugging component for COBOL, PL/I, Assembler, and APS programs in the TSO, MVS Batch, CICS (including file services), and IMS environments. SmartTest features include program analysis commands, execution control, intelligent breakpoints, test coverage, pseudo code with COBOL source update, batch connect, disassembled object code support, and full screen memory display.

Invoking ESW Products

The method you use to invoke an ESW product depends on your system setup. If you need assistance to activate a product, see your systems administrator. If your site starts a product directly, use the ISPF selection or CLIST as indicated by your systems administrator. If your site uses the ESW screen to start a product, initiate the ESW screen using the ISPF selection or CLIST as indicated by your systems administrator and then typing in the product command on the command line.

The product names can also vary depending on whether you access a product directly or through ESW. See "ESW Product Integration" on page xiii for more information about using ESW.

To initialize ESW products from the main ESW screen, select the appropriate option on the action bar pull-downs or type the product shortcut on the command line.

Product Name (ESW Name)	Shortcut	ESW Pull-down Options
Alliance (Application Understanding)	AL	Understand ▶ Application
AutoChange (Conversion Set)	CC	Change ▶ Conversion Set
Bridge	BR	Change ▶ ASG-Bridge
Encore (Program Re-engineering)	EN	Re-engineer ▶ Program
Estimate	ES	Measure ▶ ASG-Estimate
Insight (Program Understanding)	IN	Understand ▶ Program
Recap (Portfolio Analysis)	RC	Measure ▶ Portfolio
SmartDoc (Program Documentation)	DC	Document ▶ Program
SmartEdit	SE	Change ▶ Program Or Change ▶ Program with Options
SmartQuest	SQV	Understand ▶ Abend/Dump
SmartTest (Testing/Debugging)	ST	Test ▶ Module/Transaction

ESW Product Integration

Because ESW is an integrated suite of products, you are able to access individual ESW products directly, or through the main ESW screen. As a result, different fields, values, action bar options, and pull-down options display on a screen or pop-up depending on how you accessed the screen or pop-up.

Certain ESW products also contain functionality that interfaces with other ESW products. Using SmartTest as an example, if Alliance is installed, Insight provides a dynamic link to Alliance that can be used to display program analysis information. If Insight is installed and specified during the analyze, the Insight program analysis functions are automatically available for viewing logic/data relationships and execution path. For example, the Scratchpad option is available on the Options pull-down if you have Insight installed.

[Figure 3](#) shows the Encore Primary screen that displays when you access Encore through ESW by selecting Re-engineer ► Program from the ESW action bar menu. Notice that the Primary screen name changes to ASG-ESW - Program Re-engineering when you enter Encore through ESW. Also, the Logic menu item displays if Insight is installed.

Figure 3 • ESW Encore Primary Screen

```

File View Extract Generate Search Logic List Options Help
-----
ASG-ESW - Program Re-engineering
Command ==> -----

*****
*****
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*****
*****
*****
*****

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Visit the ASG Support Web Site at www.asg.com

```

Example 2

[Figure 4](#) shows the File - Analyze Submit pop-up that displays when you access SmartTest directly. [Figure 5 on page xvi](#) shows the File - Analyze Submit pop-up that displays when you access SmartTest through ESW.

Figure 4 • File - Analyze Submit Screen

```

Command ==> -----
File - Analyze Submit
-----
E - Edit JCL          S - Submit JCL

Compile and link JCL (PDS or sequential):
  Data set name -----

Analyze features (Y/N):
  ASG-SmartTest: Y   Extended Analysis: N

AKR data set name -----
AKR program name  NEWDEMO          (if overriding PROGRAM-ID)

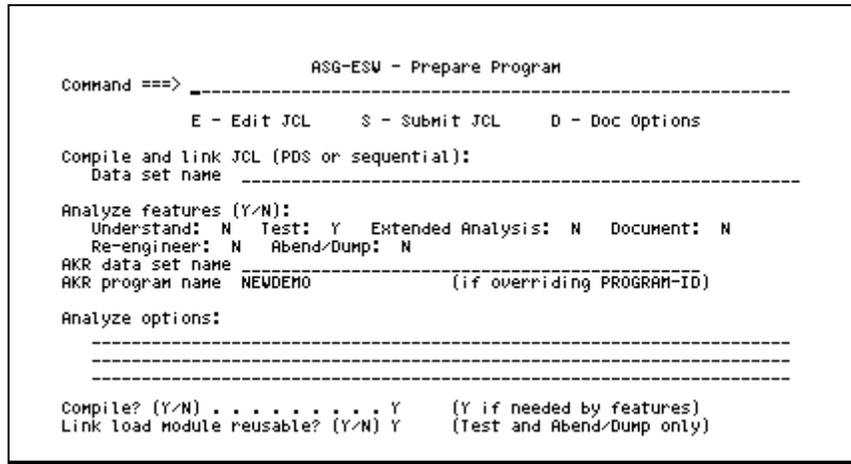
Analyze options:
-----
-----
-----

Compile? (Y/N) . . . . . Y   (Y if needed by features)
Link load module reusable? (Y/N) Y

```

The actions shown on these screens can also vary. For example, the D - Doc Options action is only available on the File Prepare Program screen (or File - Analyze Submit screen) if SmartDoc is installed on your system. In [Figure 4 on page xv](#), the ASG-SmartDoc Options action is not displayed.

Figure 5 • ASG-ESW - Prepare Program Screen (accessed through ESW)



Notice that the Analyze features field in [Figure 5](#) lists additional ESW products than shown on [Figure 4 on page xv](#). This field is automatically customized to contain the ESW products you have installed on your system. These are the names of the analyze types:

Analyze Type	Analyze Type (ESW)
ASG-Encore	Re-engineer
ASG-Insight	Understand
ASG-SmartDoc	Document
ASG-SmartQuest	Abend/Dump
ASG-SmartTest	Test
Extended Analysis (ASG-SmartTest with Insight installed)	Extended Analysis

Publication Conventions

ASG uses these conventions in technical publications:

Convention	Represents
ALL CAPITALS	Directory, path, file, dataset, member, database, program, command, and parameter names.
Initial Capitals on Each Word	Window, field, field group, check box, button, panel (or screen), option names, and names of keys. A plus sign (+) is inserted for key combinations (e.g., Alt+Tab).
<i>lowercase italic monospace</i>	Information that you provide according to your particular situation. For example, you would replace <i>filename</i> with the actual name of the file.
Monospace	Characters you must type exactly as they are shown. Code, JCL, file listings, or command/statement syntax. Also used for denoting brief examples in a paragraph.
Vertical Separator Bar () with underline	Options available with the default value underlined (e.g., Y <u>N</u>).
<u>Underline</u>	Denotes a cursor-selectable field or line.

ASG Customer Support

ASG provides support throughout the world to resolve questions or problems regarding installation, operation, or use of our products. We provide all levels of support during normal business hours and emergency support during non-business hours.

ASG Third-party Support. ASG provides software products that run in a number of third-party vendor environments. Support for all non-ASG products is the responsibility of the respective vendor. In the event a vendor discontinues support for a hardware and/or software product, ASG cannot be held responsible for problems arising from the use of that unsupported version.

Intelligent Support Portal (ISP)

Online product support is available at: <http://www.asg.com/support/support.asp> via the ASG Intelligent Support Portal (ISP). Your logon information for ISP online support is:

Customer ID = *NNNNNNNNNN*

Password = *XXXXXXXXXX*

where:

NNNNNNNNNN is your customer ID supplied by ASG Product Distribution.

XXXXXXXXXX is your unique password supplied by ASG Product Distribution.

The *ASG-Intelligent Support Portal User's Guide* provides instructions on how to use the ISP and is located on the ASG Support web page.

Telephone Support

To expedite response time, please have this information ready:

- Product name, version number, and release number
- List of any fixes currently applied
- Any alphanumeric error codes or messages written precisely as displayed
- A description of the specific steps that immediately preceded the problem
- Verify whether you received an ASG Service Pack or cumulative service tape for this product. It may include information to help you resolve questions regarding installation of this ASG product. The Service Pack instructions are in a text file on the distribution media included with the Service Pack. You can access the latest software corrections and Service Packs via the ISP.
- The severity code (ASG Customer Support uses an escalated severity system to prioritize service to our clients. The severity codes and their meanings are listed below.)

Severity Codes and Expected Support Response Times

Severity	Meaning	Expected Support Response Time
1	Production down, critical situation	Within 30 minutes
2	Major component of product disabled	Within 2 hours
3	Problem with the product, but customer has work-around solution	Within 4 hours
4	"How-to" questions and enhancement requests	Within 4 hours

The Americas

	Phone	Fax	E-mail
United States and Canada	800.354.3578	1.703.464.4901	support@asg.com

Europe, Middle East, and Africa (EMEA)

During normal business hours, we recommend that you call the Central Support number first (except in South Africa).

	Phone	Fax	E-mail
Central Support	00.800.3544.3578	44.1727.812018	support.emea@asg.com
English	44.1727.736305	44.1727.812018	support.uk@asg.com
French	33.141.028590	33.141.028589	support.fr@asg.com
German	49.89.45716.200	49.89.45716.400	support.de@asg.com
Italian	39.0290450025		support.it@asg.com
Dutch	31.30.241.6133		support.nl@asg.com
Spanish	34.913.523.800	34.917.156.961	support.es@asg.com
South Africa	800.201.423		support.sa@asg.com

Asia Pacific (APAC)

	Phone	Fax	E-mail
Central Support	61.3.9645.8500	61.3.9645.8077	support.au@asg.com
Australia	800.637.947	61.3.9645.8077	support.au@asg.com
Hong Kong	800.96.2800		support.hk@asg.com
Japan	81.3.5326.3684	81.3.5326.3001	support.au@asg.com
Singapore	65.224.3080	65.224.8516	support.sg@asg.com

All Other Countries (Also for any non-working numbers)

	Phone	Fax	E-mail
All other countries	1.239.435.2201		support@asg.com

If you receive a voice mail message, follow the instructions to report a production-down or critical problem. Leave a detailed message including your name and phone number. An ASG Customer Support representative will be paged and will return your call as soon as possible. Please have available the information described previously when the ASG Customer Support representative contacts you.

ASG Documentation/Product Enhancements

Submit all product and documentation suggestions to ASG's product management team at <http://www.asg.com/asp/emailproductsuggestions.asp>.

If you do not have access to the web, FAX your suggestions to product management at (239) 263-3692. Please include your name, company, work phone, e-mail ID, and the name of the ASG product you are using. For documentation suggestions include the publication number located on the publication's front cover.

1

Command Language Syntax

This chapter describes the SmartTest commands and contains these sections:

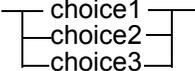
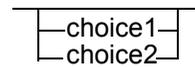
Topic	Page
Command Diagrams	4
& (Retain)	5
ALLOCDEF	5
ANALYZE	6
BRANCH	6
CALL	6
CANCEL	7
COPY	7
CURRENT	7
DELETE	8
END	8
EQUATE	9
EXCLUDE	10
EXECUTE	11
FIND	11
FINDXTND	12
FLOW	13

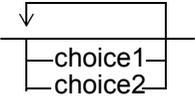
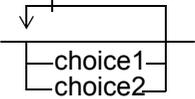
Topic	Page
GOBACK	13
HELP	14
HIGH	15
JUMP	15
KEYS	16
LEVELS	16
LIST	16
LOCATE	17
LPRINT	18
LPUNCH	19
MARK	20
MERGE	20
PARMDEF	21
PREF	21
PRINTLOG	21
PRINTLST	22
PROCESS	22
PRODLVL	22
PROGRAM	23
QUALIFY	23
RECALL	23
REDO	24
REFRESH	24

Topic	Page
RENAME	24
REPEAT	24
RESET	25
RETURN	25
RFIND	25
RHIGH	26
RPREF	26
RSCROLL	26
RSTRUCTURE-VIEW	26
RTRACE	27
RTREEVW	27
SAVE	27
SAVE	28
SELECT	28
SET	29
SOURCEVIEW	29
STRUCTURE VIEW	29
TRACE	30
TREEVIEW	30
VIEW	31
ZOOMIN/ZOOMOUT	31

Command Diagrams

These notational conventions and symbols are used to describe command syntax;

Item	Description
ABBREVIations	Illustrates the command abbreviation, which is shown in uppercase letters. Lowercase letters in the command are optional.
lowercase	Indicates user-supplied variable information.
UPPERCASE	Indicates commands or keywords.
Bold	Indicates operands that are available only if SmartTest is installed and a SmartTest analysis has been run on the COBOL program being tested.
<u>Underline</u>	Specifies the default value of an operand.
	Separates synonymous commands or operands.
—————>	Indicates that the command syntax is continued on the next line.
→—————	Indicates the command syntax is continued from the previous line.
—————✕	Indicates the end of the command syntax.
— required —	Indicates that the operand or keyword appearing on the main command line is required.
	Indicates that one operand is required.
	Indicates that an operand or keyword appearing below the main command line is optional.
	Indicates that operands are optional.

Item	Description
	Indicates that more than one operand can be chosen.
	Indicates that operands can be concatenated by placing a plus sign (+) between them.

SmartTest supports all ISPF/PDF system commands on the appropriate screens (e.g., UP, DOWN, KEYS). Targets are searched in the order listed. Select a particular target by entering the optional target-type prefix (e.g., SUBSET, LABEL, DATA). Data name subordinate operands (e.g., REF, ALIAS) pertain to all datanames in a concatenated series. For COBOL II Release 3 and later programs, qualify a data item, label name, or program name that may either be ambiguous or used multiple times by using OF followed by the program name.

& (Retain)

Executes the specified primary command and keeps it on display in the command input area for repeated use or modification.

&any primary command ▶◀

ALLOCDEF

Displays the Options - Product Allocations pop-up used to specify the DASD volumes for the Log, List, Punch, and Work files; and to specify space for the Work file.

ALLOCDEF | ADEF ▶◀

ANALYZE

Displays the File - Analyze Submit pop-up used to submit a compile/analyze job without actually ending the current SmartTest function. Enter this command on any screen.

Analyze 

BRANCH

Positions the cursor at the specified target. The BRANCH command is helpful when you are tracking branching logic. Use BRANCH to scroll from a statement such as a PERFORM, to the paragraph being performed. You can then use the BACKUP operand to return to the statement where the branch occurred. PREVIOUS is used in conjunction with the current cursor location, to position the cursor at the GO TO, PERFORM, or CALL statement from where a target was reached.

Branch 

	name
PERFRANGE	
PROGRAM	
LABEL	
PARAGRAPH	
BACKUp	
PREVIOUS	

CALL

Starts a Source View session for another program without ending the current session. Use the GOBACK and END commands to return to the original program. The CALL command provides a means of following logic paths across CALLED programs. CALL remembers the location within the CALLING program and displays the CALLED program. If you do not specify a program, the AKR Program Selection pop-up displays and allows you to select the program.

Call 

pgm

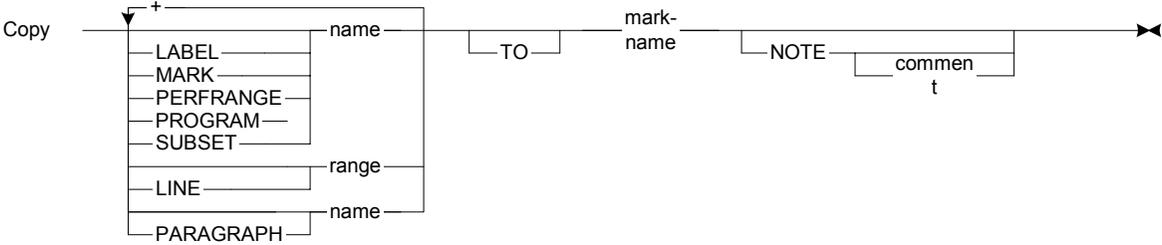
CANCEL

Terminates the current function without saving changes made during the session.



COPY

Copies the contents of a path or a set of lines to a mark. This allows you to save the same information under a different name for additional use. Include a new description, if desired. You can copy the same path or set of lines to different names. The TO mark-name you specify must be unique. If you do not specify an existing mark-name an error message displays and the copy function is not performed.



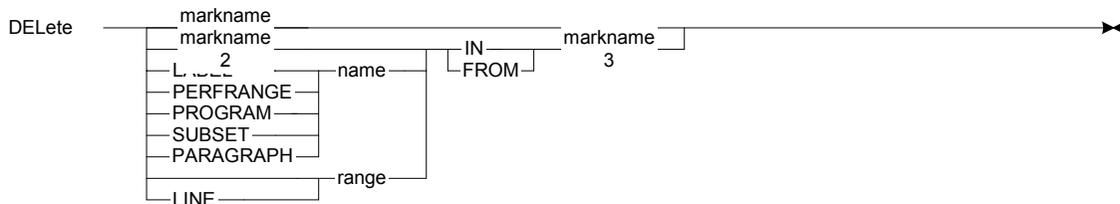
CURRENT

Saves the current location of the cursor for later use with the LOCATE &CURRENT command.



DELETE

Deletes a mark name and its contents. If the mark name does not exist, an error message displays. This command is also used to delete a mark name, path, or set of lines from an existing mark name.



END

Terminates the current function and redisplay the previous function or screen. Enter this command and desired operands in the command input area, or enter just the operands and press PF3/PF15. If you enter the END command with no operands, the values specified on the Options - Product Parameters pop-up are used to determine if Marks and Equates are to be saved.



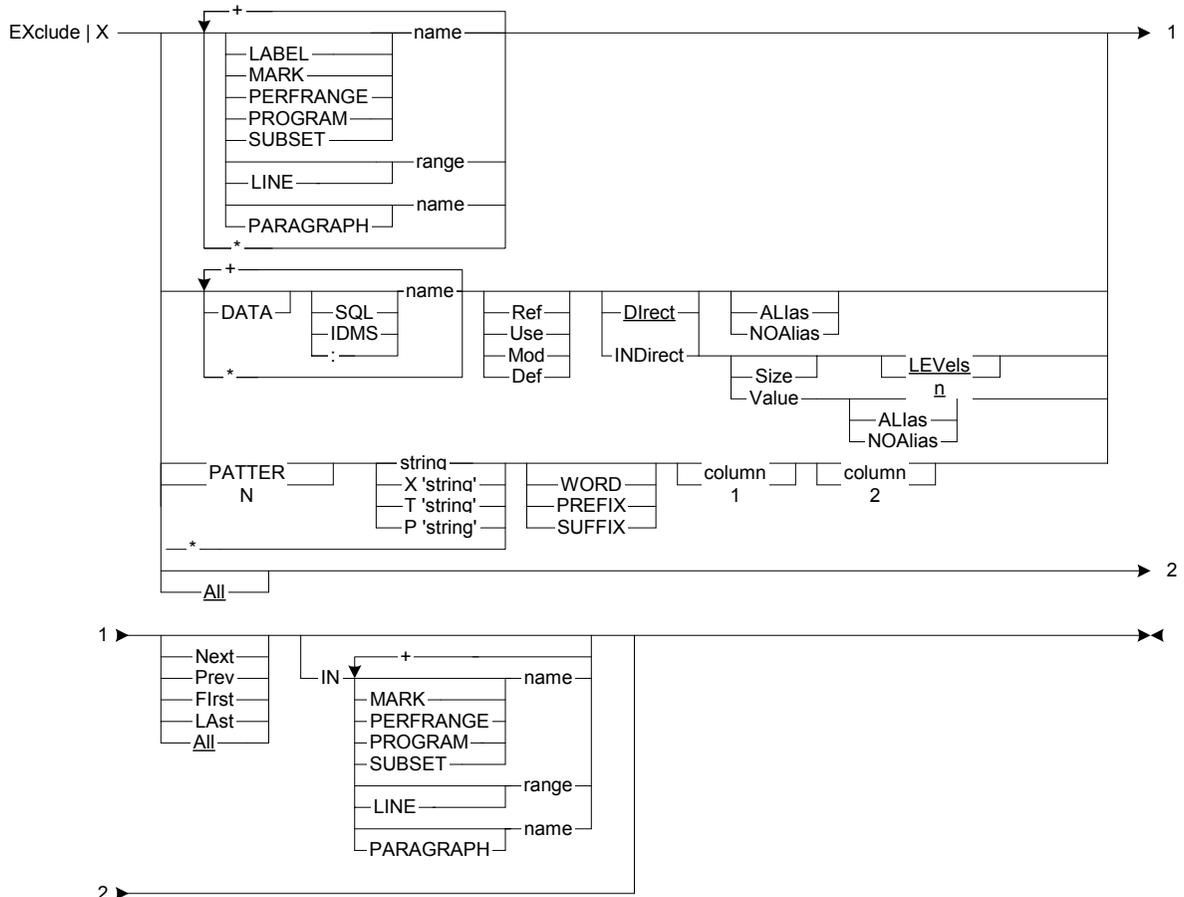
EQUATE

Defines a name for a character string. A character string is a long command, operand set, pattern, dataname, etc. To reduce the number of keystrokes, use the equated names during SmartTest sessions. Use multiple Equate statements, and save them in the AKR (see ["SAVE" on page 27](#)). To delete an equated name, enter the EQUATE command and the name without the string. Change the substitution string on the List - Equates pop-up by typing over it with the new value.

Equate — name — —————>

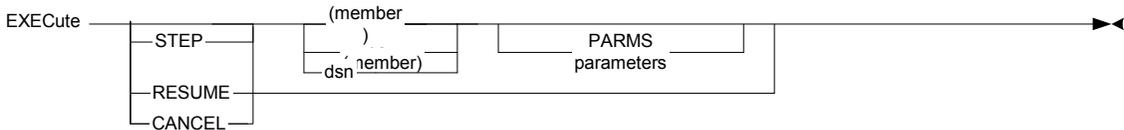
EXCLUDE

Performs a FINDXTND command on a specific target, excluding the resulting lines. Excluded lines are represented by a line of dashes and text stating *n* LINE(S) NOT DISPLAYED. You can also use the X or XX line commands to exclude lines from the screen.



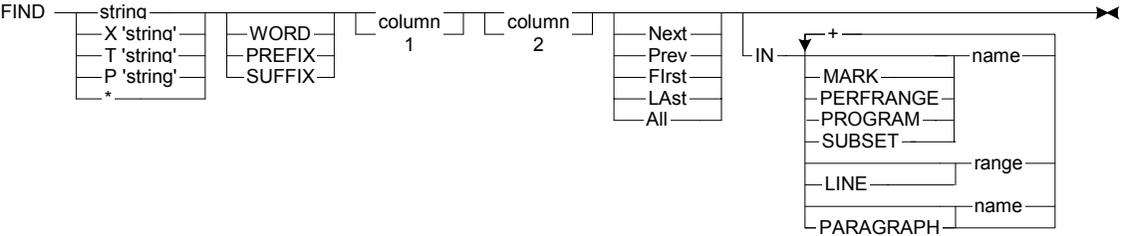
EXECUTE

Reads and executes an SmartTest script file. Script files can contain EXECUTE commands that execute lower level (nested) script files. The STEP operand causes each successive command in the script to be displayed in the command input area. Change the command, if desired. Entering RESUME when in STEP mode executes the remaining script file commands without stepping through each. Entering CANCEL stops without processing the remaining script file commands. Script files that create a loop are recognized and an error message displays.



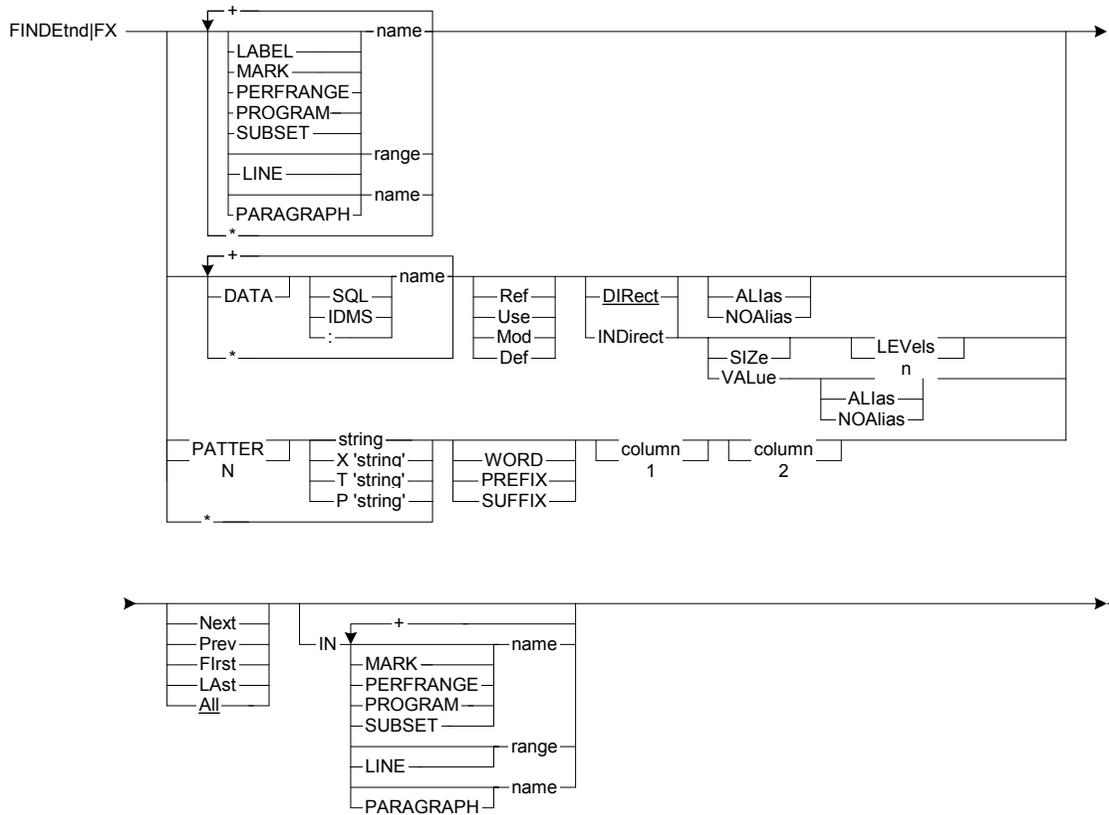
FIND

Searches for one or all occurrences of the specified character string. The search begins from the current line when you specify the NEXT or PREV operands. All lines are searched regardless of the current line or direction when you specify the ALL operand. Any excluded lines containing FIND targets are displayed and highlighted. The IN operand restricts the FIND command to only the targets you specified. To locate DBCS strings specify double byte character sets (DBCS) identifiers or patterns with the FIND command.



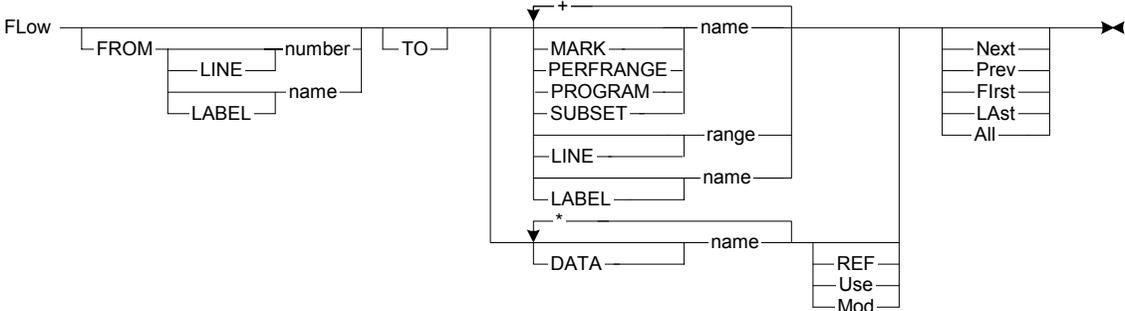
FINDXTND

Performs a COBOL intelligent search of the source code for one or all of the occurrences of the target you specified. If you exclude lines containing results, they redisplay on the screen. Tags indicating the type of target found show in columns 73 through 80 of Source View.



FLOW

Identifies all possible execution paths from a given point in a program searching for the specified target(s). Identified paths are stored with mark names of NETWORK and SUBNET_n. The FLOW command determines the execution flow of a program and indicates whether the targets you specified can be reached from a given point. If you do not specify the FROM operand, the cursor location is used as the starting point.



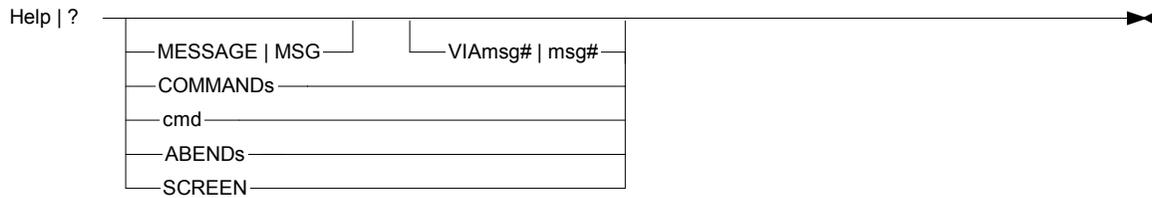
GOBACK

Reverses a CALL or VIEW command and returns to a Source View session. If you do not enter the program operand, the program where the last CALL or VIEW was executed is returned to the Source View screen. If you do not specify the SAVE or NOSAVE operand, the values from the Options - Product Parameters pop-up are used.



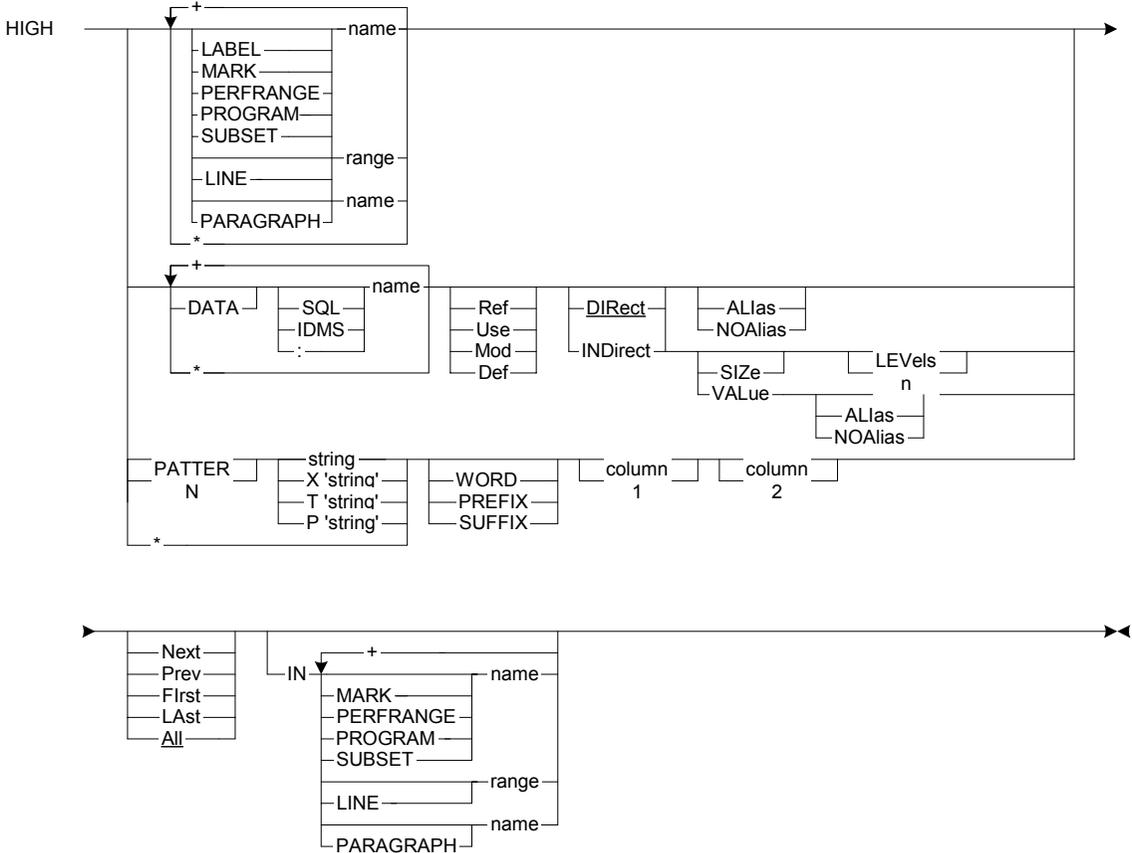
HELP

Displays information about the current SmartTest screen, command or error message. Help is presented as a long message or a tutorial screen. After you access the Help Tutorial, type INDEX and press Enter to display the Index, or type TOC and press Enter to display the Table of Contents.



HIGH

Highlights source code lines containing the specified targets. Lines already highlighted from prior commands are not reset.



JUMP

Returns to the Source View screen at the location corresponding to the cursor position on the Tree View screen.



KEYS

Displays the Options - PF Key Definition pop-up used to display and/or modify the current SmartTest PF key assignments. Enter the KEYS command on any screen. Values assigned to the SmartTest PF keys have no effect on other ISPF applications.



LEVELS

Redisplays the Tree View screen to the nth level. If there are less than n levels displayed, they will be expanded to the requested level. If there are greater than n levels displayed, they are removed.



LIST

Displays the specified pop-up. LIST with no operand displays the List Menu pop-up.



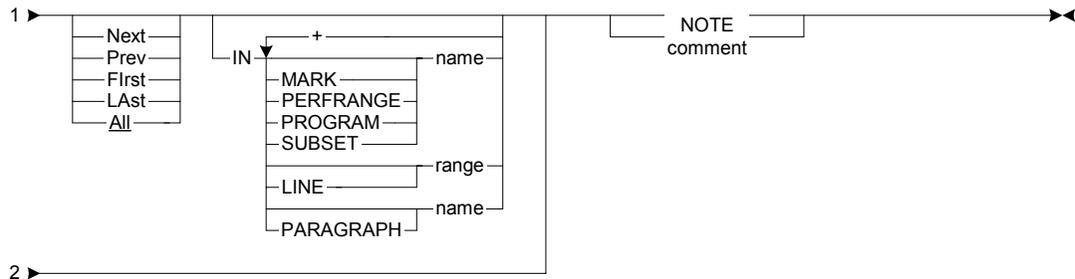
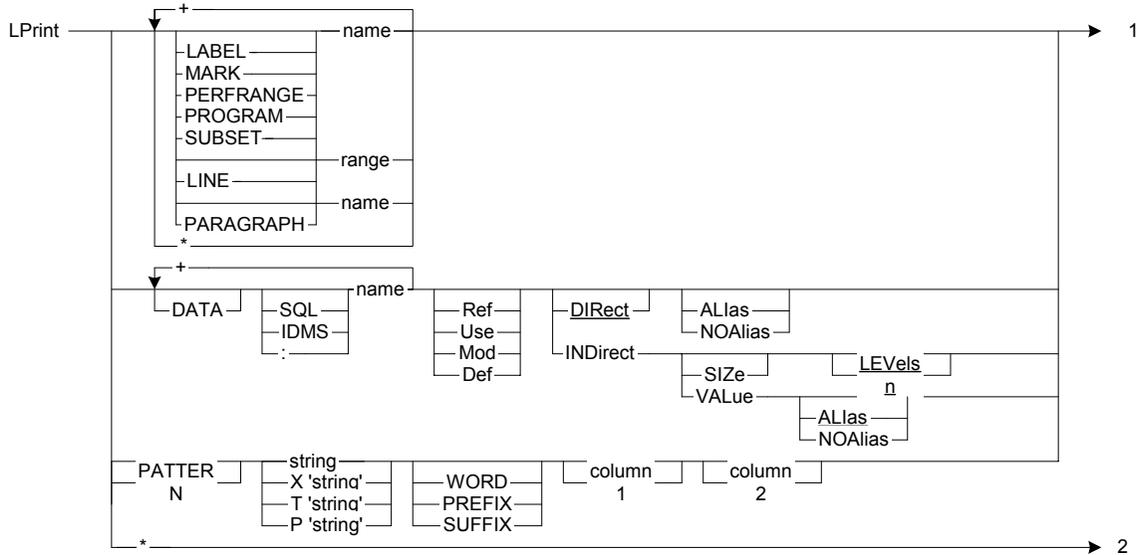
LOCATE

Scrolls to the selectable entry that most closely matches the string or label that you specified. LOCATE is valid on the Source View screen, File - AKR Directory pop-up, File - AKR Program Selection pop-up, all List pop-ups (except the List - Program/Subprogram Names pop-up), and the Trace Decision Options pop-up.



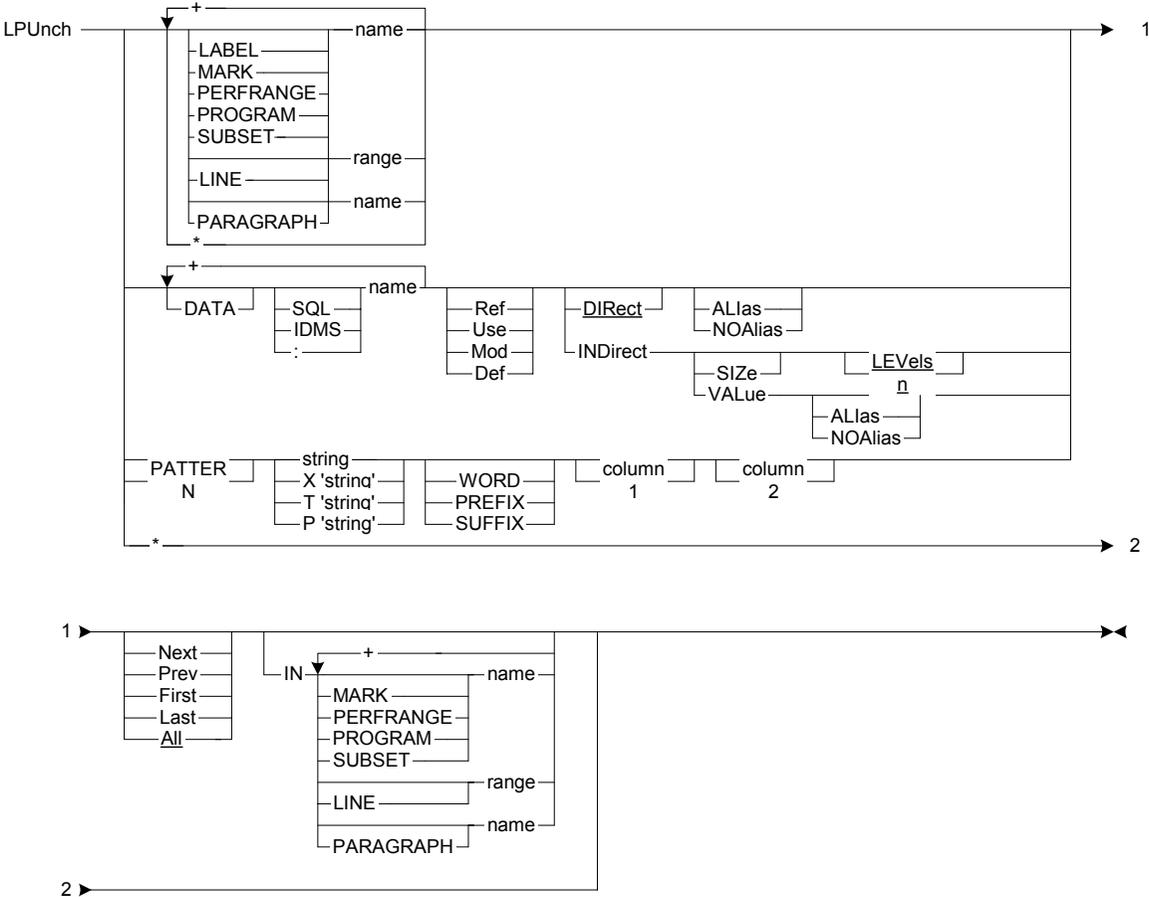
LPRINT

Copies lines containing the requested target to the List file. Enter LPRINT * to copy the entire virtual screen (all data viewed by scrolling forward and backward) to the List file.



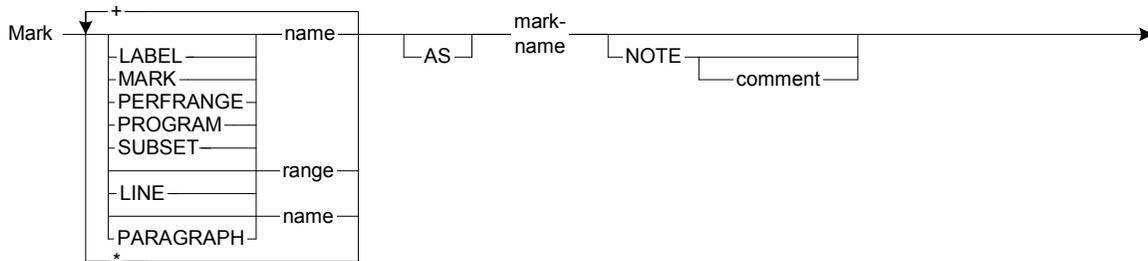
LPUNCH

Copies lines containing the specified target to the Punch file for subsequent processing. Enter LPUNCH * to copy the entire virtual screen (all data viewed by scrolling forward and backward) to the Punch file.



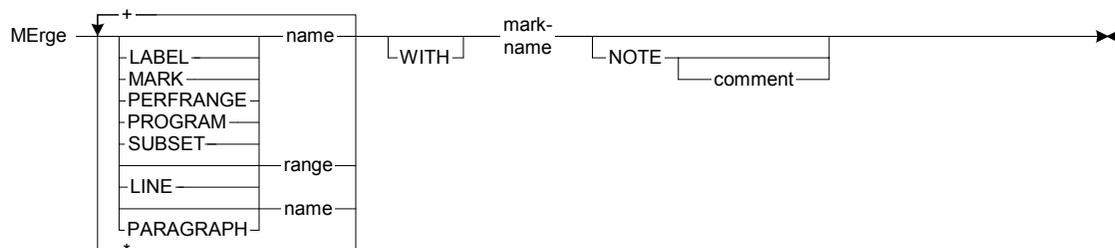
MARK

Saves the requested target as a Mark set or path. You can save the target of a MARK command multiple times under different names.



MERGE

Adds the lines from the specified target to the Mark name you specified. If the specified Mark name does not exist, it is created. Include a comment with the MERGE command to replace an existing one. You can merge a set of lines with another set of lines, or you can merge a path to a set of lines.



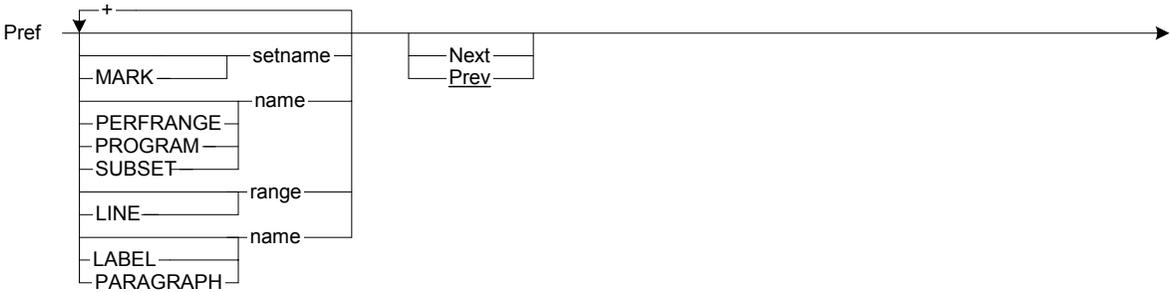
PARMDEF

Displays the Options - Product Parameters pop-up used to set parameters that affect the online operation of SmartTest.

PARMDEF | PDEF ➤

PREF

Displays the View - Paragraph Cross Reference pop-up for the target you requested. The View - Paragraph Cross Reference pop-up shows how control is transferred to or from the target. PREF includes all paragraphs containing the target lines.



PRINTLOG

Displays the Options - Log/List/Punch Definition pop-up used to process the Log, List, and Punch files. Enter the PRINTLOG command on any SmartTest screen.

PRINTLOG | PLOg ➤

PRINTLST

Displays the Options - Log/List/Punch Definition pop-up used to process the Log, List, and Punch files. Enter the PRINTLST command on any SmartTest screen.

PRINTLST | PList 

PROCESS

Defines an action to be performed repetitively on a file of input items. This file may contain the results list from an ASG-ESW product, or the file can be nested by the user. The model command can be any ASG-ESW product command that is valid in a Script file and can be defined using substitution variables.

PROCCess  (member) 
 dsn (member)
 'dsn'
 'dsn (member)'

PRODLVL

Displays the current SmartTest and Center product level on the message line, including the product name, operating system, product release number and level.

PRODLVL 

PROGRAM

Ends the current Source View screen and enters a new session for the program you specified. Using PROGRAM is the easiest way of switching to another program; however, the calling sequence is not saved and you cannot use the GOBACK command to return to a previous program. If you do not specify the new program, the File - AKR Program Selection pop-up displays. If you do not specify the SAVE or NOSAVE operand, the values you entered on the Options - Product Parameters pop-up are used to determine if Marks and Equates are to be saved.



QUALIFY

Displays the program you specified on the Source View screen for investigation. The qualified program becomes the current program, and program understanding commands operate on the qualified program. Qualify additional programs as required.



RECALL

Displays the previous primary command, pop-up, or message. The last 20 commands that have been executed and the last 20 messages that have been displayed are stacked. To redisplay these commands or messages in sequential order, use the RECALL command. The POPUP operand redisplay the most recent pop-up.



REDO

Executes the corresponding repeat command after execution of the FIND, FINDXTND, HIGH, PREF, SCROLL, or TRACE command.



REFRESH

Updates the CALL summaries in the current program for an CALLED program that has been analyzed since opening the current program.



RENAME

Changes the name of a Mark path or set of lines. An error message displays if the Mark name to be renamed does not exist, or if the Mark name you are trying to assign already exists.



REPEAT

Re-executes the last stacked primary command from the cursor position.



RESET

Turns off highlighting, erases tags, redisplay excluded lines, cancels pending line commands, and terminates message line displays. Specify any combination of operands.



RETURN

Terminates the current function and returns to the primary screen. RETURN simulates multiple END commands, returning directly to the primary screen and providing a quick way to end an SmartTest function. If you enter the RETURN command without an operand, the values specified on the Options - Product Parameters pop-up are used to determine if Marks and Equates are to be saved.



RFind

Repeats the last FIND or FINDXTND command from the cursor position. The search is in the direction indicated in the last FIND or FINDXTND command.



RHIGH

Repeats the last HIGH command from the cursor position.

RHigh 

RPREF

When on the Source View screen, use RPREF to redisplay the last View - Paragraph Cross Reference pop-up. If you enter RPREF without entering a PREF command, RPREF functions as a PREF command with the current cursor location as the target and default direction.

RPref 

RSCROLL

Repeats the last SCROLL command from the cursor position.

RSCroll 

RSTRUCTURE-VIEW

Returns to the previous Perform Structure View screen.

RSTRUCTure-view | RSTView 

RTRACE

Continues the last TRACE command from where it stopped. Use BACKUP to return to the last decision point, to follow a different path. Enter RTRACE with no operand to display the Trace Decision Options pop-up.



RTREEVW

Returns to the previous Tree View screen.



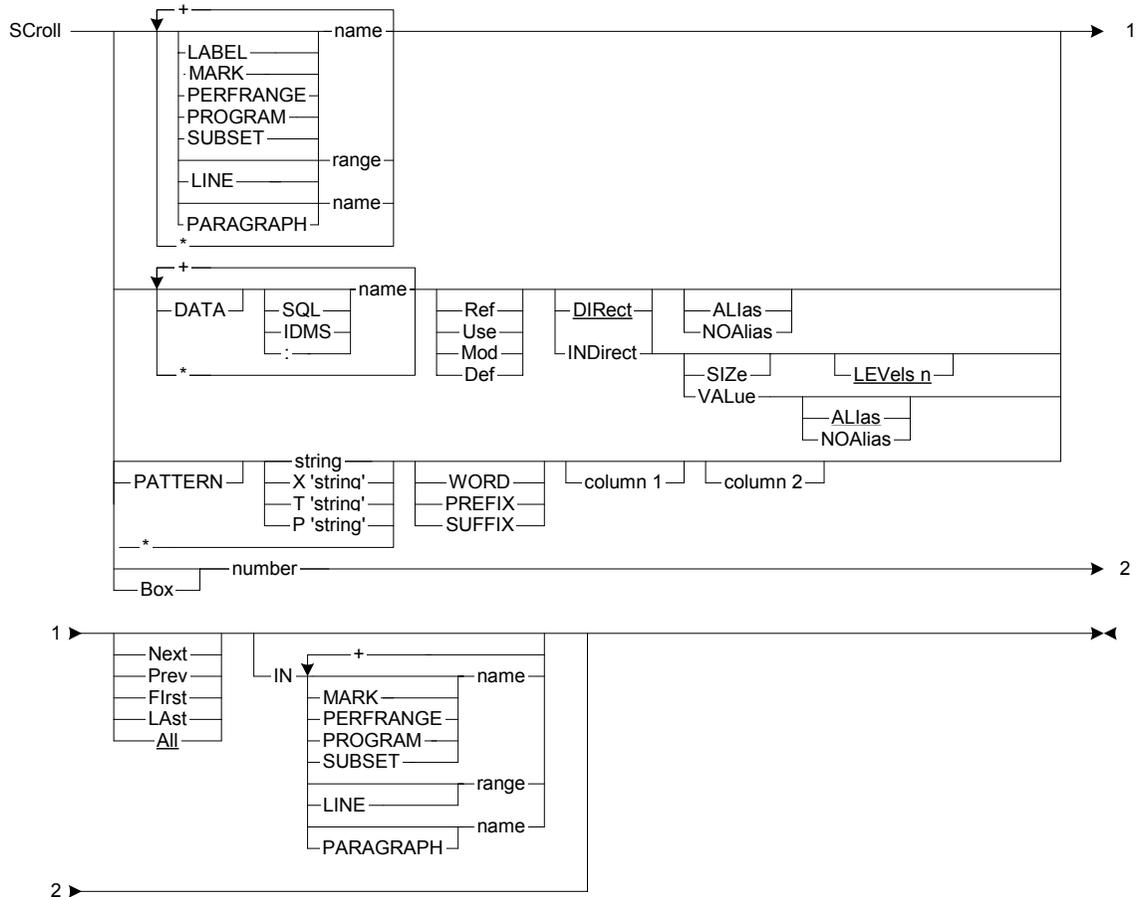
SAVE

Saves Marks, and/or Equates in the AKR. This command overrides the values set on the Options - Product Parameters pop-up.



SCROLL

Scrolls to the first line or box containing the specified target without resetting highlighted lines or boxes.



SELECT

Selects an option on the Trace Decision Options pop-up and the AKR Program Selection pop-up. To select an item on any screen with a selection field, enter an S to the left of the displayed items.



SET

Enables or disables the mode indicated by the specified operand. If entered without any operands, the Options - Processing Modes pop-up displays showing the current setting for each SET command mode. You can also change modes on the Options -Processing Modes pop-up.



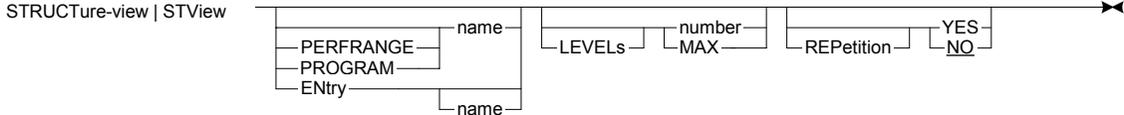
SOURCEVIEW

Displays the Source View screen that shows the program in source code format



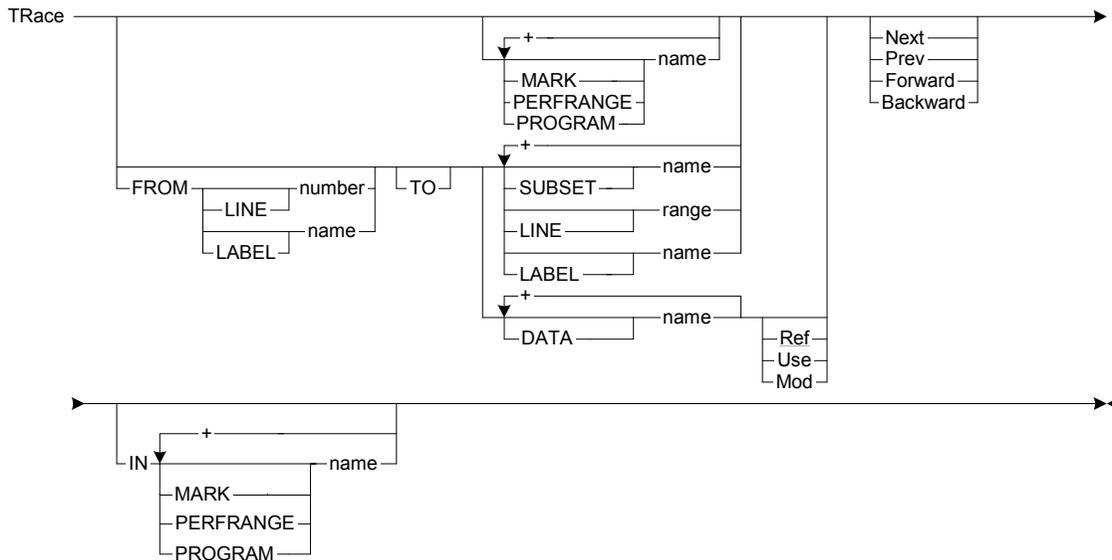
STRUCTURE VIEW

Transfers the display of the program being viewed to the Perform Structure View screen. If you do not specify either a target or a level, the default is the main program at level 2.



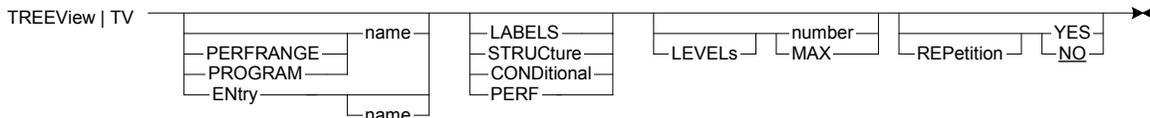
TRACE

Follows the execution of a program, searching for the specified target. When you enter the TRACE command without an operand, the trace begins at the cursor position and continues to the program exits. The MARK and PERFRANGE operands trace the statements represented by the MARK or PERFRANGE name. Tracing to a SUBSET name, LINE range, LABEL name, or DATA name traces from the starting point to the lines represented by these targets.



TREEVIEW

Displays the Tree View screen that shows the structural representation of a COBOL program in logical execution order. If you did not specify either a target or a level, the default is the main program at level 2.



VIEW

Starts a new Source View session for the specified program while retaining the current session. Use the GOBACK or END command to return to the original program. If you do not specify a program, the AKR Program Selection pop-up displays so that you can select the program.

View _____><

ZOOMIN/ZOOMOUT

Displays or excludes source code lines according to the hierarchical levels of the program. Use in conjunction with each other to show the structure of a program and provide a means of stepping through each level or going directly into or out of a particular section of source code.

ZOOMIn | ZI _____><

ZOOMOut | ZO _____><

2

Operand Definitions

Operand	Description
*	Reuses the target of the previous command. The asterisk (*) can be concatenated once with any number of other operands; however, the * cannot be concatenated to itself.
: <i>name</i>	Includes datanames that are COBOL variables only.
<i>cmd</i>	An SmartEdit primary command.
<i>column1</i>	The column number where the search is to begin.
<i>column2</i>	The column number where the search is to end.
<i>comment</i>	Text following the NOTE operand that describes the name.
DATA <i>name</i>	A COBOL dataname or qualified COBOL dataname. DATA name refers to any valid COBOL reference for a data element. The DATA name operand also accepts: Use Occurrences of the dataname where its value is tested or used (including aliases unless using NOALIAS). Mod Occurrences of the dataname where its value is set or modified (including aliases unless using NOALIAS). Def Definitions for the dataname in the DATA DIVISION (including aliases unless using NOALIAS). <u>Ref</u> Use, Mod and Def. <u>ALias</u> Includes aliases of the dataname. NOALias Does not include aliases. <u>DIRect</u> Considers only the specified dataname. INDirect Includes occurrences of any dataname indirectly affected by the specified dataname (and aliases, if specified).

Operand	Description
	<p><u>SIZE</u> Considers datanames indirectly affected by a change in the size of the specified dataname.</p> <p>VALue Considers datanames directly or indirectly affected by a change in the value of the specified dataname.</p> <p>LEVels <i>n</i> Identifies the depth of the indirect references.</p>
ENTRY <i>name</i>	An entry point name. If you specify ENTRY without a name, the main program and all ENTRY points are included.
IDMS <i>name</i>	Includes datanames that are IDMS variables only.
. <i>label</i>	A line label entered in the prefix area (columns 1 through 6) on the Program View screen.
LABEL <i>name</i>	Any paragraph or section name of the PROCEDURE DIVISION, as well as the literals PROCEDURE and PROC. This includes all transfers of control to the label name.
LEVELS <i>number</i>	Lowest to highest hierarchical level of code.
LINE <i>number</i>	A single line number.
LINE <i>range</i>	A single line number or range of lines.
<i>mark-name</i>	A name assigned to a path or set of lines using the COPY, MARK, MERGE or RENAME command, or a system-generated path. Mark-name can be up to 10 alphanumeric characters, or 4 DBCS characters, beginning with an alphabetic character, and can include hyphens.
MARK <i>name</i>	<p>A 1-10 alphanumeric character name given to a set of lines or a path using the COPY, MARK, MERGE or RENAME command, or one of these system-generated paths:</p> <p>TRACK TRK Created by a TRACE command.</p> <p>NETWORK NET Created by a FLOW command.</p> <p>SUBNET_{<i>n</i>} SUB_{<i>n</i>} A path created by the FLOW command that reaches from the beginning of the NETWORK to one of the results.</p> <p>TRACK, NETWORK, and SUBNET can also be created using one of the Logic Order Search pop-ups</p>
MARK <i>setname</i>	A 1-10 character alphanumeric name given to a set of lines using the COPY, MARK, MERGE or RENAME command.

Operand	Description
<i>model command</i>	Any ASG product command that is valid in a Script file and can be defined using substitution variables.
<i>msg#</i>	The number of an error message or information message.
<i>name</i>	A name for a character string. Name can be up to 10 alphanumeric characters, beginning with an alphabetic character, and can include hyphens. Name can also be a PERFRANGE name, LABEL name, DATA name or SUBSET name. See the specific operand for more information.
NOTE <i>comment</i>	A user-supplied description.
<i>number</i>	A single line number.
PARAGRAPH <i>name</i>	Any paragraph or section name of the PROCEDURE DIVISION, as well as the literals PROCEDURE and PROC. PARAGRAPH name includes the entire paragraph or section.
PATTERN <i>string</i>	A string of alphanumeric characters. If the string contains blanks, it must be enclosed in quotes. The PATTERN string operand also accepts: <ul style="list-style-type: none"> X 'string' Hexadecimal string. T 'string' Text string. P 'string' Picture string. WORD Pattern string directly preceded and followed by any non-alphanumeric characters other than hyphens. PREFIX Word that begins with the pattern. SUFFIX Word that ends with the pattern.
PERFRANGE <i>name</i>	The name specified in a PERFORM statement. It includes all the statements that are executed as a result of a PERFORM statement. The name of any section contained in the Declaratives.
<i>pgm</i>	A CSECT contained in a load module.
PROGRAM <i>name</i>	The name of the main program or any nested program representing all the code contained in the program. This includes all the programs physically nested inside the specified program.
<i>setname</i>	A MARK name of type set (i.e., cannot be a path). See the MARK setname operand for more information.
SQL <i>name</i>	Includes datanames that are DB2/SQL variables only.

Operand	Description																																											
<i>string</i>	A character string to be substituted by the EQUATE command. Also, a string of alphanumeric characters. See the PATTERN string operand for more information.																																											
SUBSET <i>name</i>	<p>COBOL verbs of a similar nature that have been grouped together. Predefined COBOL language subsets (Bold subsets are available only if an Extended Analysis has been performed):</p> <table border="0"> <tr> <td>ASSignment</td> <td>DEBUg</td> <td>IO</td> </tr> <tr> <td>CALL</td> <td>DEFinition</td> <td>LABEL</td> </tr> <tr> <td>CIcs</td> <td>DIRective</td> <td>MAINline</td> </tr> <tr> <td>COBOLII</td> <td>DIVision</td> <td>MATH</td> </tr> <tr> <td>COBOL/370</td> <td>DL/I DL/1</td> <td>Output</td> </tr> <tr> <td>COMment</td> <td>DML</td> <td>PARagraph</td> </tr> <tr> <td>CONditional</td> <td>ENtry</td> <td>PERform</td> </tr> <tr> <td>COPY</td> <td>EXIt PGMExit</td> <td>RETurn</td> </tr> <tr> <td>DB2/SQL</td> <td>FALLthrough</td> <td>SECTion</td> </tr> <tr> <td>DDL</td> <td>GOto</td> <td>SORTMerge</td> </tr> <tr> <td>DEAD</td> <td>IDMS</td> <td>STRucture</td> </tr> <tr> <td>DEADCode</td> <td>INClude</td> <td>TAG</td> </tr> <tr> <td>DEADData</td> <td>Input</td> <td>TESTed UNTested</td> </tr> </table> <p>Note: TESTed and UNTested subsets are available only if you have applied TCA results. See the <i>ASG-SmartTest TCA User Guide</i> for more information.</p> <p>Screen subsets:</p> <table border="0"> <tr> <td>Highlighted HI</td> <td>Excluded X</td> </tr> <tr> <td>NONHighlighted NHI</td> <td>NONExcluded NX</td> </tr> </table> <p>A tagged lines subset of tags appearing in columns 73 through 80 of the Program View screen.</p>	ASSignment	DEBUg	IO	CALL	DEFinition	LABEL	CIcs	DIRective	MAINline	COBOLII	DIVision	MATH	COBOL/370	DL/I DL/1	Output	COMment	DML	PARagraph	CONditional	ENtry	PERform	COPY	EXIt PGMExit	RETurn	DB2/SQL	FALLthrough	SECTion	DDL	GOto	SORTMerge	DEAD	IDMS	STRucture	DEADCode	INClude	TAG	DEADData	Input	TESTed UNTested	Highlighted HI	Excluded X	NONHighlighted NHI	NONExcluded NX
ASSignment	DEBUg	IO																																										
CALL	DEFinition	LABEL																																										
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COBOLII	DIVision	MATH																																										
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COPY	EXIt PGMExit	RETurn																																										
DB2/SQL	FALLthrough	SECTion																																										
DDL	GOto	SORTMerge																																										
DEAD	IDMS	STRucture																																										
DEADCode	INClude	TAG																																										
DEADData	Input	TESTed UNTested																																										
Highlighted HI	Excluded X																																											
NONHighlighted NHI	NONExcluded NX																																											
<i>trace-dec-opt</i>	An option as listed on the Program View screen or an option listed on the Trace Decision Options pop-up.																																											

3

Tree View Line Commands

Line Command	Description
<i>F_n</i>	First. Redisplays the specified number of excluded lines, starting with the first line in the block. The default is 1.
<i>J</i>	Jump. Returns to the Source View screen at the location corresponding to the line where this command is issued on the Tree View screen.
<i>L_n</i>	Last. Redisplays the specified number of excluded lines, starting with the last line in the block. The default is 1.
<i>S_n</i>	Show. Redisplays the specified number of excluded lines, starting with the first line in the block. The default is 1.
<i>SS</i>	Show Block. Redisplays a block of lines that were excluded.
<i>X_n</i>	Exclude. Excludes a line or group of lines from being displayed. Excluded lines are replaced with a row of dashes. The default is 1.
<i>XX</i>	Exclude Block. Excludes a block of lines from being displayed.
<i>ZI</i>	Zoom In. Performs the ZOOMIN primary command at the line where it is entered.
<i>ZO</i>	Zoom Out. Performs the ZOOMOUT primary command at the line where it is entered.

4

Source View Line Commands

Line Command	Description
.label	Assigns a symbolic name to a source code line. The name must be a period followed by 1-5 alphabetic characters.
<i>F</i> <i>n</i>	First. Redisplays the specified number of excluded lines, starting with the first line in the block. The default is 1.
<i>H</i> <i>n</i>	Highlight. Highlights a line or group of lines. If the value specified is greater than the number of available lines, all remaining lines are highlighted. The default is 1.
HH	Highlight Block.
<i>L</i> <i>n</i>	Last. Redisplays the specified number of excluded lines, starting with the last line in the block. The default is 1.
<i>S</i> <i>n</i>	Show. Redisplays the specified number of excluded lines, starting with the first line in the block. The default is 1.
SS	Show Block. Redisplays a block of lines that were excluded.
<i>X</i> <i>n</i>	Exclude. Excludes a line or group of lines from being displayed. Excluded lines are replaced with a row of dashes. The default is 1.
XX	Exclude Block. Excludes a block of lines from being displayed.

5

Analyze Options

Options		
BUF(<i>nnnnn</i> K) BUF= <i>nnnnn</i> K	IO(<i>x, x, . . . x</i>) IO= <i>x</i> NOIO	RETurn(<i>x, x, . . . x</i>) RETurn= <i>x</i> NORETurn(<i>x, x, . . . x</i>) NORETurn= <i>x</i>
COBOL370 COBOLII COB2R3 NOCOBOLII	LANGLVL(1 2) lineCNT= <u>60</u>	SEQ NOSEQ
DB2LIB= <i>xxxxxxxx . xxxxxx . x xxxxx</i>	MAIN	SOUrce NOSOUrce
DB2PLAN= <i>xxxxxxxx</i>	MBRERCNT= <i>nnnn</i>	spACE1 2 3
DYNeall NODYNeall	Output(<i>x, x, . . . x</i>) Output= <i>x</i> NOOutput(<i>x, x, . . . x</i>) NOOutput= <i>x</i>	SQLID= <i>nnnnnnnn</i> SQLID(<i>nnnnnnnn, nnnnnnn n, nnnnnnn</i>)
fLAGW fLAGE fLAG(<i>x</i>)	PROgram(<i>xxxxxxxxxxx</i>)	SUBSYS= <i>xxxxx</i>
Input(<i>x, x, . . . x</i>) Input= <i>x</i> NOInput(<i>x, x, . . . x</i>) NOInput= <i>x</i>	RECur NORECur	XLIVE XMEM

6

VIASUB/VIASUBDS Parameters

Parameters		
AKR(XXXXXX)	OUTPUT(XXXXXX)	SD <u>NOSD</u>
AOPT(XXXXXX)	<u>PANEL</u> NOPANEL	SDR <u>NOSDR</u>
<u>CMPL</u> NOCMPL	PGM(XXXXXX) PROCONLY	SDX <u>NOSDX</u>
<u>DSCHK</u> NODSCHK	<u>REUS</u> NOREUS	<u>ST</u> NOST
EDIT	<u>ENS</u> NOENS	<u>STX</u> NOSTX
<u>INS</u> NOINS		

7

PF Keys

Primary Defaults

PF Keys		
PF1/13	PF2/14	PF3/15
HELP	SPLIT	END
PF4/16	PF5/17	PF6/18
RPREF	RFIND	FX
PF7/19	PF8/20	PF9/21
UP	DOWN	SWAP
PF10/22	PF11/23	PF12/24
BRANCH	BRANCH BACKUP	RECALL

Suggested Alternate PF Keys

PF Keys		
PF1/13	PF2/14	PF3/15
HELP COMMANDS	SPLIT	END
PF4/16	PF5/17	PF6/18
RETURN	REDO	SCROLL

PF Keys		
PF7/19	PF8/20	PF9/21
ZOOMIN	ZOOMOUT	SWAP
PF10/22	PF11/23	PF12/24
LEFT	RIGHT	RECALL MSG

8

Action Bar Command Equivalents

Command	Pull-Down	Action; Option
ALLOCDEF	Options	Product Allocations
ANALYZE	File	Compile/Analyze
BRANCH	Search	Branch
CALL	File	Open
CANCEL	File	Close
COPY	Options	Scratchpad; Copy
DELETE	Options	Scratchpad; Delete
EQUATE	Options	Scratchpad; Equate
EXCLUDE	Search	Data, Label, Paragraph, String, Subset, Perform, Program, Mark, Line, or Any
	View	Exclude
EXECUTE	File	Execute Script
FIND	Search	String
FINDXTND	Search	Data, Label, Paragraph, String, Subset, Perform, Program, Mark, Line, or Any
FLOW	Logic	All actions
GOBACK	File	Close
HELP	Help	All actions

Command	Pull-Down	Action; Option
HIGH	Search	Data, Label, Paragraph, String, Subset, Perform, Program, Mark, Line, or Any
KEEP	View	Keep
KEYS	Options	PF Keys
LEVELS	View	Levels
LIST	List	All actions
LOCATE	Search	Line
LPRINT	Search	Data, Label, Paragraph, String, Subset, Perform, Program, Mark, Line, or Any
LPUNCH	Search	Data, Label, Paragraph, String, Subset, Perform, Program, Mark, Line, or Any
MARK	Options	Scratchpad; Mark
MERGE	Options	Scratchpad; Merge
PARMDEF	Options	Product Parameters
PREF	View	Paragraph X-Ref
PRINTLOG	Options	Log/List/Punch
PRINTLST	Options	Log/List/Punch
PRODLVL	Help	About
PROGRAM	File	Open
REFRESH	Options	Refresh
RENAME	Options	Scratchpad; Rename
RESET	View	Reset
SAVE	File	Save

Command	Pull-Down	Action; Option
SCROLL	Search	Data, Label, Paragraph, String, Subset, Perform, Program, Mark, Line, or Any
SET	Options	Modes
SOURCEVIEW	View	Source
STRUCTURE-VIEW	View	Structure
TRACE	Logic	All actions
TREEVIEW	View	Tree
VIEW	File	Open
ZOOMIN	View	Zoom in
ZOOMOUT	View	Zoom out

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