DATAMANAGER

MARK IV INTERFACE 4.0

Technical Documentation from MSP

SOFTWARE PRODUCTS

DATAMANAGER SYNTAX SUMMARY (Release 4.0)

FOR MARK IV INTERFACE

This card contains the formats of MARK IV interface commands and data definitions implemented in DATAMANAGER Release 4.0.

For the full specifications of any command or data definition statement, reference should be made to the appropriate DATAMANAGER interface manual, together with current User Notices.

SYNTAX NOTATION

variable	shown in lower case	{clause-1 | clause-2}	choice of one from many
KEYWORD	shown in upper case with underscored truncation limit	[clause]	optional clause
		...	optional repetition
element	newly released syntax shown in colour	member-name	may be coded in quotes

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MARK IV Data Definitions

FILE

```
FILE {MARK-IV} [{ENTERED-AS  }] [{ALIGNED    }]
     {MARKIV }  {HELD-AS     }   {UNALIGNED  }
                {REPORTED-AS }   {NOT-ALIGNED}
                {DEFAULTED-AS}

    [CONTAINS {segment-name} [, {segment-name}
              {group-name  }    {group-name  }
              {item-name   }    {item-name   }

        PARENT segment-name-p [{OCCURS integer       }]] ...]
                              {COUNT-FIELD item-name}

    [{SEQUENTIAL }] [{NO-LABELS                }]
      {INDEXED   }   {STANDARD-LABELS          }
      {DIRECT    }   {USER-LABELS module-name}
      {KEYED     }
      {VSAM      }
      {PARTITIONED}

    [{FIXED [block-size [record-size]]                    }]
      {VARIABLE [maximum-block-size [maximum-record-size]]}
      {UNDEFINED [maximum-block-size]                     }
      {SPANNED [maximum-block-size [maximum-record-size]]}

    [SORT-KEY {item-name } [{ASCENDING }]
              {group-name}  {DESCENDING}

        [, {item-name } [{ASCENDING }]] ...]
           {group-name}  {DESCENDING}

    [GENERATION-CYCLE integer]

    [RETENTION-PERIOD integer [{"string"}]
                              {DAYS    }
                              {MONTHS  }
                              {YEARS   }

    [GROWTH-RATE integer [PERCENT] {"string"}]
                                   {MONTHLY }
                                   {YEARLY  }

    [DEVICE {device [{number }]}]  [DENSITY integer]
            {          {"model"}}
            {                   }
            {number             }
            {"model"            }

    [VOLUME "name"]

    [SIZE size [{KBYTES   }] [,size [{KBYTES   }]
               {TRACKS    }          {TRACKS    }
               {CYLINDERS}          {CYLINDERS}
               {"string"  }          {"string"  }

    [common-clauses]

{;}
{.}
```

SEGMENT

```
{MARKIV-SEGMENT } [{ENTERED-AS  }] [{ALIGNED    }]
{MARK-IV-SEGMENT}  {HELD-AS     }   {UNALIGNED  }
                   {REPORTED-AS }   {NOT-ALIGNED}
                   {DEFAULTED-AS}

    [CONTAINS content [IF clause] [ELSE content [IF clause]] ...

        [, content [IF clause] [ELSE content [IF clause]] ...] ...]

    [KEYS {item-name } [{UNIQUE    }] [{ASCENDING }]
          {group-name}  {DUPLICATED}   {DESCENDING}

        [, {item-name } [{UNIQUE    }]] ...]
           {group-name}  {DUPLICATED}

    [USER-EXIT module-name]

    [common-clauses]

{;}
{.}
```

content is:

```
{ {item-name [version]} [{ALIGNED    }] [KNOWN-AS local-name]
  {group-name           } {UNALIGNED }
                          {NOT-ALIGNED}

  {(integer)                } {item-name [version]} [{ALIGNED    }]}
  {(item-name-a [version])} {group-name           } {UNALIGNED }
                                                    {NOT-ALIGNED}

     [KNOWN-AS local-name] [INDEXED-BY index-name] ...
```

clause is:

```
b {EQ} {c       } [{AND} b {EQ} {c       }] ...
  {=  } {literal} {OR }    {=  } {literal}
  {NE }                    {NE }
  {GT }                    {GT }
  {>  }                    {>  }
  {GE }                    {GE }
  {LT }                    {LT }
  {<  }                    {<  }
  {LE }                    {LE }
```

b is item-name-b [version-b]

c is item-name-c [version-c]

Common Clauses

Common clauses apply to all DATAMANAGER member types, that is to the basic set (SYSTEM through ITEM); to database-specific sets (ADABAS, DL/I, IMS, IDMS, MARK IV, SYSTEM 2000/80, TOTAL); and to User Defined sets (EDPS, SAS, SDS, user). Keyword truncation limits depend on the other keywords available in the data definition in which they appear; the limits shown below are unambiguous in any MARK IV interface member type. Further truncation may be acceptable if the truncated form remains unambiguous for the particular member type.

common-clauses is:

```
ACCESS-AUTHORITY "name" [{READ-ONLY        }]
                         {UPDATE           }
                         {SECURITY-CONTROL}

    [, "name" [{READ-ONLY        }]] ...
               {UPDATE           }
               {SECURITY-CONTROL}

ADMINISTRATIVE-DATA "string"

ALIAS [alias-type] "alias" [, [alias-type] "alias"] ...

CATALOGUE "classification" [, "classification"] ...

COMMENT "string"

DESCRIPTION "string"

EFFECTIVE-DATE date

FREQUENCY {frequency                                    }
          {{ACCESS } frequency [{ACCESS } frequency] ...}
          {{RUN    }           {RUN    }               }
          {{UPDATE }           {UPDATE }               }
          {{BACK-UP}           {BACK-UP}               }

NOTE "string"

OBSOLETE-DATE date

QUERY "string"

SECURITY-CLASSIFICATION "string" [FROM date] [, "string" [FROM date]] ...

SEE member-name [FOR "string"] [, member-name [FOR "string"]] ...
```

frequency is:

```
[{MONTHLY} ] [{number  }]
 {WEEKLY  }  {"string"}
 {DAILY   }
 {HOURLY  }
```

MARK IV Interrogation

MARKIV Member Types

member-type includes:

```
{MARKIV-FILES   }
{MARKIV-SEGMENTS}
```

Interrogation via WHAT/WHICH

for the MARK IV interface the relation clause
of the WHAT/WHICH command becomes:

```
[DIRECTLY]

{{USES        } member-name [form] [VIA {INPUTS      }]}
{{CONSTITUTES}                          {OUTPUTS     }
{                                       {UPDATES     }
{                                       {CONTAINS    }
{                                       {CALLS       }
{                                       {PASSING     }
{                                       {PARAMETERS  }
{                                       {SORT-KEYS   }
{                                       {USER-LABELS }
{                                       {BOUND       }
{                                       {KEYS        }
{                                       {USER-EXIT   }
{                                       {NAME        }
{                                       {IF          }
{                                       {SEE         }
{                                       {COUNT-FIELD }
{                                       {FATHERS     }
{                                       {PARENTS     }
{                                       {            }
{{INPUTS       } member-name [form]                  }
{{OUTPUTS      }                                     }
{{UPDATES      }                                     }
{{CONTAINS     }                                     }
{{CALLS        }                                     }
{{PASSES       }                                     }
{{INPUT-BY     }                                     }
{{OUTPUT-BY    }                                     }
{{UPDATED-BY   }                                     }
{{CONTAINED-BY }                                     }
{{CALLED-BY    }                                     }
{{PASSED-BY    }                                     }
{{FATHERS      }                                     }
{{FATHERED-BY  }                                     }
{                                                    }

[DIRECTLY]
```

MARK IV Generation

PRODUCE MARKIV

```
PRODUCE {MARK-IV} FROM member-name [AS library-name]
        {MARKIV }

        [, member-name [AS library-name]] ...

    [CONTAINED-BY markiv-file-name]

    [{ONTO file-name} [{PARTITIONED                    }]] [{PRINT    }]
     {NOGENERATION  }  {SEQUENTIAL ["control-card"]}      {NOPRINT  }
     {NO-GENERATION }                                     {NO-PRINT }

    [GIVING output-form-1 [, output-form-1]] ...

    [OMITTING output-form-2 [, output-form-2]] ...

    [{WITH-ALIAS} [{number     }]]
     {ALIAS      }  {alias-type}

    [{USE  } {{ENTERED-AS } [VERSION version]}]
     {USING} {{HELD-AS    }                   }
             {{REPORTED-AS}                   }
             {                                }
             {DEFAULTED-AS                    }

    [{REPLACE  } {ALL      } WITH "string" [WHEN condition]] ...
     {REPLACING} {[m] (p)  }
                 {"string"}

    [DROPPING {ALL      } [WHEN condition]] ...
              {[m] (p)  }
              {"string"}

    [INSERTING "string" {BEFORE} {ALL      } [WHEN condition]] ...
                        {AFTER } {n        }
                                 {"string"}

    {;}
    {.}
```

output-form-1 is:

```
    {[s] {NOTES        }      }
    {    {DESCRIPTIONS}      }
    {FD                      }
    {BUFFER-SIZE nnnnn       }
    {FILE-IDENTITY "xxxxxxxx"}
    {END-RECORDS             }
    {GLOSSARY-CODE "x"       }
    {RECORDS-ONLY            }
    {KNOWN-AS                }
```

output-form-2 is:

```
    {NOTES        }
    {DESCRIPTIONS }
    {KNOWN-AS     }
    {ALIAS        }
    {             }
```

condition is:

```
    {ALL     } {EQ} "string"
    {ANY     } {=  }
    {[m] (p)} {NE}
```