DATAMANAGER

SYSTEM 2000/80 INTERFACE 4.1

Technical Documentation from

SOFTWARE PRODUCTS

DATAMANAGER SYNTAX SUMMARY (Release 4.1)

FOR SYSTEM 2000/80 INTERFACE

This card contains the formats of SYSTEM 2000/80 interface commands and member definitions implemented in DATAMANAGER Release 4.1.

For the full specifications of any command or member 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
element	newly released syntax shown in colour	...	optional repetition
		member-name	may be coded in quotes

* Truncation limits may be affected if the User Defined Syntax Facility is installed.

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SYSTEM 2000/80 Processes Definitions

PROCESSES

```
PROCESSES {SYSTEM2000} [ACCESSES database-name
          {S2K       }

        {SUBSCHEMAS subschema-record-name [, subschema-record-name] ...]
        {     [subschema-record-definition] ...
        {subschema-record-definition [subschema-record-definition] ...
        {     [SUBSCHEMAS subschema-record-name
        {          [, subschema-record-name] ...]

        [COMMBLOCK database-name VIA {MACRO                 }
                                     {MEMBER group-name     }

            [OPTIONS
                [{INITIAL-VALUES [FREE-OPTION "option"] [password-clause]
                {PARAMETER
                {DSECT

                [{STATIC  }] [BASED pointer-name] ] ...
                {EXTERNAL}

        [CASCADE LINKn {subschema-record-name} [SOURCE-CONTROL {+}]
                       {schema-record-name   }                 {-}
                       {group-name           }

            LINKS-TO {subschema-record-name} [TARGET-CONTROL {+}]
                     {schema-record-name   }                 {-}
                     {group-name           }

                [, {subschema-record-name} [SOURCE-CONTROL {+}]
                   {schema-record-name   }                 {-}
                   {group-name           }

                LINKS-TO {subschema-record-name}
                         {schema-record-name   }
                         {group-name           }

                    [TARGET-CONTROL {+}] ...] ...
                                    {-}

    [CONTAINS member-name [, member-name] ...]

    [INPUTS data-name [, data-name] ...]

    [OUTPUTS data-name [, data-name] ...]

    [UPDATES data-name [, data-name] ...]

    [{CALLS process-name [, process-name] ...}]
     {calls-clause [calls-clause] ...         }

    [|PARAMETERS data-name [, data-name] ...          |]
     |entry-point-clause [entry-point-clause] ...     |

    [LANGUAGE "string"]

    [common-clauses]

{;}
{:}
```

subschema-record-definition is as defined on page 4

password-clause is:

```
PASSWORD {MASTER                    }
         {USER item-name [version]  }
         {IS "password"             }
```

n of LINKn is an integer in the range 0 to 9

data-name identifies a database, FILE, GROUP or ITEM member

process-name identifies a SYSTEM, PROGRAM or MODULE member

calls-clause is:

```
CALLS process-name [AT "string"] [PASSING data-name [,data-name] ...]
```

entry-point-clause is:

```
ENTRY-POINT "string" [PARAMETERS data-name [, data-name] ...]
```

SYSTEM 2000/80 Data Definitions

DATABASE

```
{SYSTEM2000-DATABASE}
{S2K-DATABASE        }

    [CONTAINS {repeating-group-name}
              {schema-record-name  }
              {group-name          }

        [, {repeating-group-name} [COMPONENT-NUMBER component-number]
           {schema-record-name  }
           {group-name          }

                PARENT {repeating-group-name}] ...]
                       {schema-record-name  }
                       {group-name          }
    [ITEM-COMPONENT-NUMBERS component-number IS {item-name }
                                                {group-name}

        [, component-number IS {item-name }] ...]
                               {group-name}

    [STRING name [COMPONENT-NUMBER component-number] "string"

        [DELIMITER character]

        [ACCESSES {item-name } [, {item-name }] ...]] ...
                  {group-name}     {group-name}

    [FUNCTION name [{DECIMAL}] [COMPONENT-NUMBER component-number]
                    {INTEGER}
                    {DATE   }
                    {MONEY  }

        "string" [DELIMITER character]

                [USES {item-name } [, {item-name }] ...]] ...
                      {group-name}     {group-name}

    [COMPONENT-LIMIT component-limit]

    [COMPONENT-NO component-number IS {MEMBER  } name] ...
                                      {STRING  }
                                      {FUNCTION}

    [MASTER-PASSWORD item-name [version]]

    [USER-PASSWORDS item-name [version] [,item-name [version]] ...]

    [COMMBLOCK-NAME name] [DATASETS dataset [dataset] ...]

    [common clauses]

    {;}
    {.}

dataset is:

    {{UPDATE-LOG  } DEVICE {number}                                  }
    {{ROLLBACK-LOG}        {"type"}                                  }
    {                                                                }
    {{ID-TABLE                  } DEVICE {number} [PAGE-SIZE size]   }
    {{HIERARCHY-TABLE           }        {"type"}                    }
    {{HT                        }                                    }
    {{UNIQUE-VALUES-TABLE       }                                    }
    {{UVT                       }                                    }
    {{MULTIPLE-VALUES-TABLE     }                                    }
    {{MVT                       }                                    }
    {{DATA-TABLE                }                                    }
    {{DT                        }                                    }
    {{OVERFLOW-TABLE            }                                    }
    {{OT                        }                                    }
    {                                                                }
```

SCHEMA-RECORD / REPEATING GROUP

```
{REPEATING-GROUP} [{ENTERED-AS  }] [{ALIGNED    }]
{RG              }  {HELD-AS    }   {UNALIGNED  }
{SCHEMA-RECORD   }  {REPORTED-AS }   {NOT-ALIGNED}
{SR              }  {DEFAULTED-AS}
                    {            }

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

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

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

        [WITH {NO  } [FUTURE] [{ADDITIONS  }]]
              {FEW }           {OCCURRENCES}
              {SOME}
              {MANY}
              {    }

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

            [WITH {NO  } [FUTURE] [{ADDITIONS  }]]] ...
                  {FEW }           {OCCURRENCES}
                  {SOME}
                  {MANY}
                  {    }

    [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]
```

SUBSCHEMA-RECORD

```
{S2K-SUBSCHEMA-RECORD}
{SSR                }

    VIEWS member-name [KNOWN-AS local-name]

    [OPTIONS [{INITIAL-VALUES}] [UPDATE] [RETRIEVAL] [{STATIC  }]
              {PARAMETER     }                        {EXTERNAL}
              {DSECT         }

        [BASED pointer-name]]

    [SELECTING {item-name } [version] [KNOWN-AS local-name  ]
               {group-name}

        [, {item-name } [version] [KNOWN-AS local-name]] ...]
           {group-name}

    [common-clauses]

{;}
{.}
```

Common Clauses

> Common clauses apply to all DATAMANAGER member types, that is to the basic set (SYSTEM through ITEM and COMMAND-STREAM); to the Status facility memeber type OBSOLETE-DEFINITION, 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 member definition in which they appear; the limits shown below are unambiguous in any SYSTEM 2000/80 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 "text"

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

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

COMMENT "text"

DESCRIPTION "text"

EFFECTIVE-DATE date

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

NOTE "text"

OBSOLETE-DATE date

QUERY "text"

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  }
      {        }
```

SYSTEM 2000/80 Interrogation

Database Member Types

database is:

```
{SYSTEM-2000-DATABASES}
{S2K-DATABASES         }
{REPEATING-GROUPS      }
{RGS                   }
{S2K-SUBSCHEMA-RECORD  }
{SSR                   }
```

Interrogation via WHAT/WHICH

for the SYSTEM 2000/80 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               }
{                                      {ACCESSES          }
{                                      {COMPONENT-NUMBER  }
{                                      {FATHERS           }
{                                      {FUNCTION-USES     }
{                                      {MASTER-PASSWORD   }
{                                      {PARENTS           }
{                                      {USER-PASSWORDS    }
{                                      {VIEW              }
{                                      {SELECTING         }
{                                      {SUBSCHEMA         }
{                                      {COMMBLOCK         }
{                                      {COMMBLOCK-MEMBER  }
{                                      {SOURCE-SSR        }
{                                      {TARGET-SSR        }
{{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]
```

SYSTEM 2000/80 Generation

PRODUCE SYSTEM 2000/80

```
PRODUCE {SYSTEM2000}
        {S2K       }

    DEFINE [COMPONENTS [ONLY {item-name } [,{item-name }] ...]]
                             {group-name}   {group-name}

        [FUNCTIONS [ONLY function-name [,function-name] ...]]

        [STRINGS [ONLY string-name [,string-name] ...]]
    FROM member-name [AS library-name]

        [, member-name [AS library-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:

    {UPDATES   }
    {KNOWN-AS  }

output-form-2 is:

    {UPDATES   }
    {KNOWN-AS  }
    {ALIAS     }

condition is:

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