Software Product Description

DESCRIPTION

Micro/RSX DATATRIEVE-11 is an interactive query, report, and data maintenance system designed for the less sophisticated computer user. Micro/RSX DATATRIEVE-11 utilizes the RMS-11 record management services to access data contained in disk files of sequential, indexed, or relative organization. Micro/RSX DATATRIEVE-11 provides facilities for selective data retrieval, sorting, formatting, updating, and report generation without the need for programming.

Record and domain (file) definitions entered in Micro/RSX DATATRIEVE-11 are stored in Data Dictionaries shared by Micro/RSX DATATRIEVE-11 users. Data Dictionaries can also be used to store frequently used sequences of commands to be recalled and processed later. Commands are provided to list the contents of the Data Dictionary, to delete entries, and to control access to individual entries in the Data Dictionary. A Dictionary Compression utility is provided to compress the Data Dictionary file.

Micro/RSX DATATRIEVE-11 enables the user to define domains that cross RMS file definitions and subset record definitions.

The distributed server will allow remote DECSYSTEM-20 and VAX/VMS systems, connected via DECnet and running DATATRIEVE-20 and VAX DATATRIEVE respectively, transparent access to DATATRIEVE domains on the user's system.

The remote call interface will allow the user to write programs in COBOL-81, BASIC-PLUS-2, or FORTRAN-77 to access remote DATATRIEVE domains on DECSYSTEM-20, PDP-11, and VAX/VMS host systems connected via DECnet.

The local call interface will allow users to write programs in COBOL-81, BASIC-PLUS-2 or FORTRAN-77 to access DATATRIEVE domains on their own system.

Micro/RSX DATATRIEVE-11 can use Supervisor Mode RMS on those processors where both the hardware and software support this feature. This feature provides significant additional pool space.

Micro/RSX DATATRIEVE-11 can determine at installation time whether or not the system has floating point hardware, such that inline floating point code can be excluded from the task image if desired. The user will have three choices:

- Include the floating point code regardless of what hardware is present

- Do not include the floating point code regardless of what hardware is present

- Let the installation decide based on the hardware

This feature can provide significant additional pool space, if inline floating point code is excluded from the task image.

Micro/RSX DATATRIEVE-11 provides the Application Design Tool (ADT) to assist the novice user in creating domain and record definitions. The ADT uses an interactive dialogue technique to guide the user through the data definition process. It creates an indirect command file that is then processed to actually update the Micro/RSX DATATRIEVE-11 Data Dictionary.

The Micro/RSX DATATRIEVE-11 report writer provides easy-to-use commands to control the following report functions:

- Report name, date, and page numbering

- Page width and length specification

- Detail line specifications

- Multiple control break specification with automatic totaling at any level

- Multiple report sections

Micro/RSX DATATRIEVE-11 report commands can be freely intermixed with other Micro/RSX DATATRIEVE-11 commands.

Micro/RSX DATATRIEVE-11 uses a set of English language-like commands for data retrieval, modification, and display. Prompting is automatic for both command and data entry. The major commands are as follows:

digital software

- HELP - Provides a summary of each Micro/RSX DATATRIEVE-11 command.

- READY - Identifies a domain for processing and controls the access mode to the appropriate file.

- FIND - Establishes a collection (subset) of records contained in either a domain or a previously established collection based on a Boolean expression.

- SORT - Reorders a collection of records in either ascending or descending sequence based upon the contents of one or more fields in those records.

- PRINT - Prints one or more fields of one or more records. Output can optionally be directed to a line printer or disk file. Format control can be specified. Column headers are generated automatically.

- SELECT - Identifies a single record in a collection for subsequent individual processing.

- MODIFY - Alters the values of one or more fields for either the selected record or all records in a collection. Replacement values are prompted by name.

- STORE - Creates a new record. The value for each field contained in the record is prompted for by name (RMS data structures only).

- ERASE - Removes one or more records from the RMS-11 file corresponding to the appropriate domain (RMS data structures only).

- FOR - Executes a subsequent command once for each record in a record collection, providing a simple looping facility.

- EDIT - Invokes an editor (EDT) that inserts, replaces, or deletes text from procedures defined in the Data Dictionary.

- DROP - Allows the user to drop selected records from a collection.

- DECLARE - Defines global and local variables to be used with a DATATRIEVE query.

- DEFINE - Provides a consistent mechanism for creating domain, record, procedure, table, and view definitions in the Data Dictionary.

- REDEFINE - Functions similarly to the DEFINE command, but an implicit delete is performed on the previous version of the dictionary object.

Micro/RSX DATATRIEVE-11 provides lexical functions consisting of the following four groups:

- Functions using numeric data:

  - FN$ABS - Calculates absolute value of input

  - FN$MOD - Calculates value of input according to specified modulus

  - FN$SIGN - Indicates the sign of a number

- Functions using alphanumeric data:

  - FN$STR__EXTRACT - Extracts substring from input using a default edit string of 30 characters

  - FN$STR__LOC - Calculates starting position of substring in input

  - FN$UPCASE - Changes characters in string to uppercase

- Functions using dates:

  - FN$JULIAN - Calculates Julian date of input

  - FN$YEAR - Extracts year part of input

  - FN$MONTH - Extracts month part of input

  - FN$DAY - Extracts day part of input

  - FN$TIME - Extracts time part of input

  - FN$HOUR - Extracts hour part of input

  - FN$MINUTE - Extracts minute part of input

  - FN$SECOND - Extracts second part of input

  - FN$HUNDREDTH - Extracts hundredth-of-a-second part of input

  - FN$DATE - Converts a date string to an 8-byte data value

- Function relating to processes:

  - FN$DCL - Allows you to spawn directly from your main DATATRIEVE process to a specified Digital Command Language (DCL) command.

In addition to the simple data manipulation commands, a number of more complex commands are available for the advanced user. These commands, such as REPEAT, BEGIN-END, and IF-THEN-ELSE, can be used to combine two or more Micro/RSX DATATRIEVE-11 commands into a single compound command. These, in turn, can be stored in the Data Dictionary as procedures for invocation by less experienced users.

Micro/RSX DATATRIEVE-11 provides a full set of arithmetic operators (addition, subtraction, multiplication, division, and negation), a set of statistical operators (total, average, maximum, minimum, and count), and provides Data Types used in the FORTRAN, COBOL, DIBOL, and BASIC-PLUS-2 languages.

An additional Data Type is provided that supports time and recognizes various date formats.

Micro/RSX DATATRIEVE-11 provides data encoding, decoding, and input validation capabilities through tables stored in the Data Dictionary. The user can also check data validity by storing validation criteria in the record definition.

SOURCE CODE INFORMATION

The following source code modules are provided on all available distribution media for this product: MESSAGE TEXT, DATATRIEVE DICTIONARY OBJECT DEFINITIONS: a) domains, b) records c) procedures d) tables.

This source code is provided on an **''AS IS''** basis without any warranty of any kind, either express or implied.

HARDWARE REQUIREMENTS

Any valid Micro/RSX system configuration with:

- 64K bytes of user memory

- Minimum 3100 blocks (1.59 MB) disk space available for Micro/RSX DATATRIEVE-11

- DTR.TSK requires 400 contiguous blocks of storage

- DDMF.TSK requires 400 contiguous blocks of storage

- LCDDMF.TSK requires 375 contiguous blocks of storage

These block counts refer to the disk space required on the system disk. The sizes are approximate; actual sizes may vary depending on the user's system environment, configuration and software options selected.

OPTIONAL HARDWARE

Supports any disk storage, unit record, or terminal device supported by the prerequisite software.

SOFTWARE REQUIREMENTS

Micro/RSX Operating System

Refer to the Micro/RSX Optional Software Cross Reference Table (SPD 20.95.xx) for the required version.

DECnet Micro/RSX is required to utilize the DATATRIEVE-11 distributed server and remote call interface.

OPTIONAL SOFTWARE

None

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SOFTWARE OPTIONS CHART

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