Software Product Description

PRODUCT NAME: **PDP-11 DATATRIEVE/VAX, Version 3.3** **SPD 25.14.18**

DESCRIPTION

PDP-11 DATATRIEVE/VAX is an interactive query, report, and data maintenance system designed for the less sophisticated computer user. DATATRIEVE/VAX runs under the VMS Operating System in conjunction with VAX-11 RSX. DATATRIEVE/VAX utilizes the RMS (Record Management Services) to access data contained in disk files of sequential, indexed, or relative organization. DATATRIEVE/VAX provides facilities for selective data retrieval, sorting, formatting, updating, and report generation without the need for programming.

Record and domain (file) definitions entered in DATATRIEVE/VAX are stored in Data Dictionaries shared by DATATRIEVE/VAX users. 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 index file.

DATATRIEVE/VAX enables the user to define domains that cross RMS file definitions and subset record definitions.

DATATRIEVE/VAX provides an 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 DATATRIEVE/VAX Data Dictionary.

The DATATRIEVE/VAX 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 specification
- Multiple control break specification with automatic totaling at any level
- Multiple report sections

DATATRIEVE/VAX report commands can be freely intermixed with other DATATRIEVE/VAX commands.

DATATRIEVE/VAX uses simple 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:

- HELP provides a summary of each DATATRIEVE 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 an 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 be optionally directed to a line printer or disk file. Format control can be specified. A column header is 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 for by name.
- STORE creates a new record. The value for each field contained in the record is prompted for by name.
- ERASE removes one or more records corresponding to the appropriate domain.
- FOR executes a subsequent command once for each record in a 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 within 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 DEFINE, but an implicit delete is performed on the previous version of the dictionary object.

DATATRIEVE/VAX 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 DATATRIEVE/VAX commands into a single compound command. These, in turn, can be stored in the Data Dictionary as procedures for invocation by less experienced users.

DATATRIEVE/VAX provides a full set of arithmetic operators (addition, subtraction, multiplication, division, and negation) and 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.

DATATRIEVE/VAX 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 magnetic distribution media:

- MESSAGE TEXT
- DATATRIEVE DICTIONARY
- OBJECT DEFINITION
  - DOMAINS
  - RECORDS
  - PROCEDURES
  - TABLES

HARDWARE REQUIREMENTS

VAX configuration as specified in the System Support Addendum (SSA 25.14.18-x).

SOFTWARE REQUIREMENTS*

VMS Operating System

VAX-11 RSX

* Refer to the System Support Addendum (SSA 25.14.18-x) for availability and required versions of prerequisite/optional software.

ORDERING INFORMATION

Software Licenses: QL-105A*-**
Software Media: QA-105A*-**
Software Documentation: QA-105AA-GZ
Software Product Services: QT-105A*-**

* Denotes variant fields. For additional information on available licenses, services and media, refer to the appropriate price book.

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