Software Product Description

PRODUCT NAME: VAX DECalc, Version 3.1 **SPD 25.79.10**

DESCRIPTION

VAX DECalc is an electronic spreadsheet package for creating, editing, and manipulating numbers in a worksheet format. VAX DECalc is specifically designed for use on multiuser systems and over a network. VAX DECalc executes in native mode under the VMS Operating System and drives VT100, VT200, or VT300 series terminals. VAX DECalc comes with an extensive reference manual containing practice sessions and therefore, requires little computer experience.

Features

The VAX DECalc spreadsheet consists of a rectangular grid (702 columns x 9999 rows). Each box or cell in the grid can contain:

- An alphanumeric label (up to 255 characters long)
- A numerical value (up to 12 decimal digits, or up to 12 significant decimal digits within a range of .294E-38 to 1.7E-38)
- A relationship

  A relationship is a a mathematical expression that defines the value of the box as a function of the value of other boxes. Among the features and limitations of relationships are:

  — Relative/Absolute Referencing - Absolute and relative box referencing, the ability to put the $ symbol in a box name to differentiate between relative and absolute row and column references.

  — Addition, subtraction, multiplication, division, and exponentiation are supported; as well as various mathematical, statistical, and trigonometric functions.

  — The user can specify, on a global basis, whether expressions are evaluated according to standard algebraic order of precedence, or strictly left to right. The order can also be modified by parentheses.

  — Comments may be included after an expression.

  — Maximum length of any box entry is 255 characters (including comments).

  — Recursive relationships are not permitted; they are detected and reported as errors.

The maximum theoretical size of the grid is 702 columns by 9999 rows. The practical limit is a function of available memory and/or storage space. VAX DECalc allows multiple grids to be stored and retrieved, but users can access only one grid at a time.

Upon entering VAX DECalc, the terminal display screen is divided into:

- A window onto the grid
- A set of reserved areas for messages, prompts, and other user interaction

The window displays a portion of the total grid. The current value of each box within the window is displayed. For boxes containing relationships, the resulting values are displayed.

The number of boxes displayed at any time is a function of various parameters (start-up = 7 columns x 20 rows). Various portions of large grids can be viewed by scrolling the window over the grid.

The user can specify the displayed width for each column and the display positions formats for each box. Labels, values, and relationships are entered interactively, via the terminal keyboard, as follows:

- The marker (highlighted grid box pointer) is positioned to the desired box using the cursor keys. The window will scroll as necessary.
- As new data is entered, it is displayed outside the window. It may be altered or canceled at any time prior to termination, leaving the grid unchanged.
- When the data-entry is terminated with the RETURN key or one of the marker keys, the new data replaces the previous contents of the box. The new value is displayed within the window.

- In the normal AUTOMATIC RECALCULATION mode, if the box just changed is referenced directly or indirectly by other boxes, all of the affected boxes will be recalculated. The new values will be displayed if they appear within the window.

VAX DECalc also provides commands for grid manipulation. During command input the user is prompted for any options or suboptions. The user can abort at any point prior to completing entry of the command, leaving the grid unchanged. Some of the major commands are:

- BLANK the contents of one or more boxes or the entire grid. The user has the option of blanking formulas, values, or both.
- INSERT, DELETE, or MOVE multiple rows, columns, or grid sections. Grid references within relationships are adjusted to maintain the original logical relationship.
- Specify a CONTINUOUS LABEL that will continue from left to right across boxes in the display, ignoring the space character that normally separates grid columns.
- CONSOLIDATE - Retrieves grid sections from up to 99 other grids and overlays them onto a section of the current grid and either adds, subtracts, multiplies, divides or replaces the overlaid values.
- ORDER - Used to sort data. Two sort keys are allowed with either ascending or descending precedence. Sorts can be done by column or row.
- REPRODUCE - Copies the contents of a box or section of boxes into one or more new locations.
- TITLES - Locks headings and descriptions on the screen.
- WINDOW - The screen can be split either horizontally or vertically into two windows. The windows can be scrolled independently or together. A grid box can be given a different format within each window.
- NAME - Any section of a grid can be named and that name used to represent that section in any other VAX DECalc operation.

Other important features include:

- Using the LINK_VALUE function, users can extract a single box value from another grid and use that value in a grid calculation in the current grid.
- Many keystroke combinations are available to move the marker up, down, left, or right by pages, to the top or bottom of a row or column and to the next filled box.
- The Privacy Key Sequence (PF1 twice) - Toggles the screen image on or off, without affecting the contents of the grid.
- The HELP Keys (PF2 and HELP) - Provide assistance in the use of VAX DECalc. If the user does not specify a topic, VAX DECalc provides help on the user's current activity.
- The Edit Key (PF3) - Permits simple modification of the contents of a box.
- The Retrieve Key Sequence (PF4, PF3) - Retrieves the last box that was altered.
- Tabular Data Entry and Automatic Summation allow strings of numbers to be entered into successive boxes via the keypad, and summed, with a minimum number of keystrokes.
- An ''If, Then, Else'' logical function allows the user to specify different results for a box based upon a user-specified criterion. Nested ''If, Then, Else'' functions are allowed as well as the Boolean operators AND, OR, and NOT.
- The ability to specify via special format descriptor characters exactly what the display of the box on the screen should look like. Special characters such as ''$'', '','', ''CR'', ''DB'', ''+'', ''-'', and ''%'' can be included with the display of a box's value. The user can specify the number of decimal digits.
- Extensive financial functions including Internal Rate of Return, Net Present Value, Depreciation, Payback, and Cash Flow Analysis.

Storage

- Complete grids (including all relationships and formats) can be saved and restored as VMS files. The names of the grids stored within a directory can be listed either one at a time, or as a group. The grid data storage format is unique to VAX DECalc. This format is not usually accessible to other programs.

  In addition to normal operating system security, grids can be stored keyed to a password. Without this password, grids cannot be restored.

- Dump-format Print files are standard ASCII files containing commands that reconstruct the grid. The grid can be re-created from a Dump file by reading it in as a Command file. A Dump Command file may also be mailed to others on the network.

- Print files are standard ASCII files that contain the image of a grid. Only the displayed values of boxes are included, thus the grid cannot be reconstructed from this type of file. These files are intended for printing and editing into documents.

  Any contiguous portion of the grid (up to 255 characters wide) can be output. A special default permits selection of the current window image. Multiple selections may be appended to a Print file, or written to any valid VMS filename specified by the user. If the filename the user specifies already exists, then the user can choose to have the data appended to the existing file, or create a new version of the file.

Integration

- VAX DECalc can also be used with VAX DECgraph. Spreadsheet data is loaded from VAX DECalc into VAX DECgraph to be manipulated and plotted as desired.
- VAX DECalc can be used with VAX DATATRIEVE. VAX DECalc utilizes VAX DATATRIEVE's callable interface to enable users to retrieve information from VAX DATATRIEVE for use in VAX DECalc, and to use VAX DATATRIEVE interactively.
- From within VAX DECalc users can access:
  - — A mail utility of their choice
  - — An editor of their choice
  - — The VMS DIRECTORY command to view the directory of their choice
  - — VMS DCL (may be disabled if desired)
- Using VAX Xway, users can translate grids from one spreadsheet format to another. Supported formats are DECalc/DECalc-PLUS, Lotus 1-2-3™, Multiplan ™, DIF ®, and ASCII tabular, and ASCII field.

LICENSE MANAGEMENT FACILITY SUPPORT

This layered product supports the VMS License Management Facility.

License units for this product are allocated on a CPU-capacity basis.

For more information on the License Management Facility, refer to the VMS Operating System Software Product Description (SPD 25.01.xx) or the License Management Facility manual of the VMS Operating System documentation set.

For more information about Digital's licensing terms and policies, contact your local Digital office.

HARDWARE REQUIREMENTS

VAX, MicroVAX, VAXstation, or VAXserver configuration as specified in the System Support Addendum (SSA 25.79.10-x.)

SOFTWARE REQUIREMENTS

VMS Operating System
VMS Workstation Software

Refer to the System Support Addendum (SSA 25.79.10-x) for availability and versions of required software.

OPTIONAL SOFTWARE*

VAX DECgraph
VAX DATATRIEVE
VAX Xway

* Refer to the System Support Addendum for availability and required versions of Prerequisite/Optional software (SSA 25.79.10-x).

ORDERING INFORMATION

Software Licenses: QL-310A*-**
Software Media: QA-310A*-**
Software Documentation: QA-310A*-GZ
Software Product Services: QT-310A*-**

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