Software Product Description

PRODUCT NAME: VAX DECalc-PLUS, Version 3.1 **SPD 27.37.03**

DESCRIPTION

VAX DECalc-PLUS is a multiuser spreadsheet designed specifically for technical, engineering and scientific environments. VAX DECalc-PLUS combines an interactive, easy-to-use spreadsheet with the ability to call external routines written in any programming language that supports the VMS calling standard. From within a VAX DECalc-PLUS session, the user can link in one or more external routines and use the spreadsheet grid boxes to hold parameters to be passed as inputs to the routine, or to receive output from the routine. In addition, users can specify that a routine be iteratively executed for a specified number of times. VAX DECalc-PLUS executes in native mode under the VMS Operating System and drives a VT100, VT200 or VT300 series terminal. VAX DECalc-PLUS is easy to learn and requires little computer experience.

The VAX DECalc-PLUS spreadsheet enables users to perform common mathematical, statistical, and financial analyses via built-in functions, including, but not limited to: cosine, tangent, sine, logarithms; average, minimum and maximum value, least squares, standard deviation; payment, payback, depreciation, and discounts. The VAX DECalc-PLUS spreadsheet also enables users to manipulate their data via DELETE, INSERT, MOVE and REPRODUCE commands. The spreadsheet contains an extensive set of date manipulation functions and formatting capabilities. Refer to the VAX DECalc Software Product Description (SPD 25.79.xx) for a more comprehensive description of the spreadsheet functionality.

Features

VAX DECalc-PLUS contains an extensive set of subroutines that can be linked to and that perform many common mathematical and statistical anlayses used in technical and engineering environments. Forms which prompt the user for the location of the arguments in the spreadsheet to be passed to and received from these routines are also provided.

The routines can be categorized in the following manner:

- Parametric and Nonparametric Statistical Analyses including T test (paired and unpaired), one- and two-way ANOVA, multiple linear regression, Kendall Rank correlation test, Spearman Rank correlation test, and Mann-Whitney U-test.
- Matrix mathematics including scalar multiplication, division, addition and subtraction, matrix inversion and transposition, solution of linear equations, Eigenvalues and vectors of a symetric matrix.
- Numerical analyses including numeric integration, zeroes of polynomials, solutions for differential equations, and Fast Fourier transforms.
- Linear and non-linear curve fitting.
- Regression analysis and simulation.

VAX DECalc-PLUS allows the user to create an interface called a template, so that existing routines can be used with VAX DECalc-PLUS. VAX DECalc-PLUS also includes the capability for users to specify how VAX DECalc-PLUS will access external subroutines. Users can:

- Specify the name of the routine, the file name and location where it resides on the system and give a brief description of the routine's functionality.
- Specify the text strings to be used to prompt for input and output arguments when the routine is executed from within VAX DECalc-PLUS.
- Indicate whether an argument is an input or output for the routine, and if it is an integer, real or text data type.
- Specify particular box locations in the VAX DECalc-PLUS grid as default responses for the prompts. This facilitates setting up forms for executing the subroutines that can be used by less experienced users.

VAX DECalc-PLUS allows users to access and execute external routines by means of the APPLICATION LINK command. With this command users can:

- Include in the VAX DECalc-PLUS image the subroutines to execute. These routines can be the ones provided with the VAX DECalc-PLUS product (whose forms have already been provided), or other routines whose prompting forms have been previsouly set up. These routines can be either user-written or provided in a standard, commercially available subroutine package.
- Obtain a listing of the routines that have been included (loaded) into the VAX DECalc-PLUS image. This listing shows the routine name, file location and a brief description of each.
- Define the box locations on the grid for the input and output parameters. Users can specify these locations by means of a special dimensional reference shorthand which allows the completed form to be used for many different grids.
- Save already defined routine forms in a VMS file to be used again.
- Execute subroutines from within the VAX DECalc-PLUS session using the parameters specified in the routine's form. The contents of the grid boxes specified as inputs are passed to the routine and the outputs from the routine are placed in output grid box parameters. Routines can be quickly re-executed by means of a single key on the VT200 or VT300-series keyboard.
- Execute subroutines with a number-of-iterations control. This enables users to try more than one ''what if'' scenario at a time.

By using the VAX DECalc-PLUS spreadsheet for data entry, manipulation and formatting, users can easily perform ''what if'' analyses with sophisticated subroutines, and display the results in a variety of formats.

Integration with other VMS applications

- VAX DECalc-PLUS can also be used with VAX DECgraph. Spreadsheet data is loaded from VAX DECalc-PLUS into VAX DECgraph to be manipulated and plotted as desired.
- VAX DECalc-PLUS can be used with VAX DATATRIEVE. VAX DECalc-PLUS utilizes VAX DATATRIEVE's callable interface to enable users to retrieve information from VAX DATATRIEVE for use in VAX DECalc-PLUS and to use VAX DATATRIEVE interactively.
- From within VAX DECalc-PLUS 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)

HARDWARE REQUIREMENTS

VAX, MicroVAX, VAXstation, or VAXserver configuration as specified in the System Support Addendum (SSA 27.37.03-x).

SOFTWARE REQUIREMENTS*

VMS Operating System
VMS Workstation Software

- Refer to the System Support Addendum (SSA 27.37.03-x) for availability and required versions of prerequisite/optional software.

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This layered product supports the VMS License Management Facility.

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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.

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ORDERING INFORMATION

Software Licenses:

DECalc-PLUS: QL-A98A*-** VAX DECalc-PLUS Migration License: QL-VDFA*-**

Software Media: QA-A98A*-**
Software Documentation: QA-A98AA-GZ
Software Product Services: QT-A98A*-**

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