Software Product Description

PRODUCT NAME: VAX RALLY, Version 2.3 **SPD 27.03.06**

DESCRIPTION

VAX RALLY provides a powerful fourth-generation environment for developing interactive database applications. As an integrated package, RALLY provides tools to define Rdb/VMS databases, forms, reports, menus, and on-line help for the application user.

Application developers can use RALLY's menu interface and extensive defaulting capabilities to create simple applications quickly. More sophisticated applications can be created in the RALLY editing environment. Once applications are created they can be:

- Run directly from within RALLY without compilation
- Installed in a VAX TEAMDATA folder*
- Accessed directly from an ALL–IN–1 menu*
- Run from other 3GL programs*
- Run from DCL*

* On systems where VAX RALLY Development Option (also known as the VAX RALLY Base Option) or VAX RALLY Run-Time Option are installed.

Features

VAX RALLY offers the application developer the following features and capabilities:

Application Development Tools

RALLY provides a fourth-generation environment for creating VAX Rdb/VMS and RMS applications. RALLY can also access data from any database through the Open Data Interface (ODI). RALLY provides tools to create databases, forms, reports, menus, and procedural routines. Generated applications can run in one or more user-controlled windows on the terminal screen.

RALLY has a set of integrated Builder Tools that provide extensive defaulting capabilities for quick prototyping of applications. Once the initial design is complete, RALLY offers dozens of powerful features for customizing and tailoring applications.

Application data can come from multiple data sources, including local and remote Rdb/VMS databases, RMS files, TEAMDATA tables, and DBMS databases that have been defined as VAX DATATRIEVE domains.

In addition, users can create RALLY forms and reports that access data from any other source. This is accomplished through use of the ODI. Users write data access routines in the VAX programming language of the users' choice, link them into a shareable image, and then use the ODI to integrate them into the application. At runtime, RALLY will call the users' code when it would normally call Rdb/VMS.

The ODI can be used to call 3GL code that acts as a VAX ACMS agent, allowing the user's RALLY application to use database servers that are implemented using VAX ACMS. The result is a client/server application. VAX ACMS manages the client/server link. This enables users to off-load front-end processing efficiently onto cost-effective client VAX processors, or to move transactions onto central back-end processors. A complete example of a RALLY application that uses ACMS servers in this way is provided.

"Simple Applications Simply" Capabilities

Building RALLY applications is as easy as filling in a form. All parts of the application (menus, forms, reports, help, database) are created in the same manner, using the same interface. RALLY has a special screen editor to allow for designing and editing screens.

RALLY provides tools for less experienced application developers to get started designing and building applications. Business systems analysts can take advantage of the extensive defaulting capabilities of the product to design the databases, forms, reports and menus that make up, for example, a simple data entry application. As the user gains more experience, such simple applications can be expanded and modified.

RALLY includes a builder tool that creates a default application from an Rdb/VMS database. The application definer specifies the name of the database either by CDD/Plus pathname or by filename. RALLY builds a

data source definition and a form/report for each relation in the database, and connects all the form/reports on a new main menu for the application.

Database Creation/Maintenance Features

RALLY provides a menu-driven tool for the creation and maintenance of Rdb/VMS databases in a style consistent with the other RALLY application definition system facilities. The database builder allows the definer to define and edit databases, relations, fields, and indexes.

Unified Forms and Reports

The centerpiece of RALLY is its integrated form/report processor. One RALLY subsystem supports both forms and reports. If the application developer so allows, anything that can be done with a form can also be done with a report, and vice versa. Depending on how the application definer specifies access to a form/report (input only, output only, query, update), users interact with an object as a form, a report, template for queries, or as an editable report.

RALLY automatically generates a form/report using the information from a database description. The definer can then use the form/report screen editor to customize the form/report. RALLY form/reports can include scrolled regions, field-level validation mechanisms, video highlighting, complex completion handlers, and can span multiple screens.

Besides allowing the user to create complex reports with totaling and subtotaling, multiple data source access, and flexible formatting, the RALLY form/report processor lets the user actually manipulate the underlying data dynamically through the screen form/report. This means that if the application definer so allows, a user can use a form/report to browse through data, change values, add/delete records, and then either save the changes or quit from the report. Changes that affect computed fields are reflected instantly on the screen. RALLY also allows application developers to create control break reports.

Transaction Management Options

RALLY provides several options for controlling transactions in form/reports. The use of certain options improves the performance of applications by reducing the length of Rdb transactions, reducing the number of database attaches, and reducing lock contention. A form/report requires only a single database attach if the following options are used:

- Defer updates until commit
- Rollback at end of table
- Force read to end of table

Moreover, if these options are used in several form /reports chained together (for example, through local functions) then a single database attach can be used for the entire chain of form/reports.

Two-Phase Commit

RALLY form/reports can access data from two or more databases. RALLY presents the end user with a model where modifications to all groups are treated as a single transaction that can be committed or rolled back as a unit. RALLY provides a form/report option, "use two-phase commit," that uses DECdtm to ensure that transactions to several databases are, in effect, treated as one. This option takes effect only when using Data Source Definitions based on Rdb/VMS.

DECtrace/RdbExpert Support

RALLY support for DECtrace allows users to obtain a breakdown of database resources by form/report for their application. DECtrace support with RdbExpert also provides the user with the ability to optimize the databases that are used by the RALLY application. This support assumes an association between the RALLY form/report and the SQL statements. With RdbExpert the user rates the importance/use of the SQL statements used by the application.

Flow Control

Application flow control is typically controlled by menus. RALLY provides a menu definition tool that lets application definers create user menus in a variety of styles. Menus similar to VAX TEAMDATA strip menus are the default style for simple, defaulted applications from the Builder Tools. However, other menu formats such as vertical ALL–IN–1 styles can be created by the definer. Various mechanisms such as action sites, application commands, and tasks for controlling application flow are also supported.

Integrated Dictionary and RMS Support

RALLY supports integration with VAX CDD/Plus in the following areas:

- Storage in VAX CDD/Plus of VAX Rdb/VMS metadata created or changed by RALLY
- Storage in VAX CDD/Plus of VAX RALLY Data Source Definition and RALLY application information to support usage tracking
- Access to VAX CDD/Plus field attributes—used when defaulting forms/reports
- Access to RMS file and record definitions given the dictionary pathname
- Access to VAX DATATRIEVE domains given the dictionary pathname

- Access to record definitions for ODI routines

Built-In Application Development Language (ADL)

RALLY includes an integrated application development language for such things as special field validation operations, special-purpose arithmetic computations, and unusual database management interactions. ADL is intended to supplement an application composed primarily of other RALLY objects (for example, forms, reports, menus) with computations and flow-of-control.

The Language-Sensitive Editor component of VAX Language-Sensitive Editor/Source Code Analyzer (LSE/SCA) can optionally be used to edit ADL procedures. An LSE template for ADL is provided.

Access to Third Generation Language (3GL) Programs

While most RALLY application requirements are satisfied using the tools provided with the product, application developers with special requirements can create applications that directly call external routines (for example, a COBOL routine, VMS Run-Time Library routine, or a VMS Utility).

Optional Integration with ALL–IN–1 and VAX TEAMDATA

RALLY provides integration with ALL–IN–1 in the following areas:

- Function keys are (by default) similar to ALL–IN–1 and WPS–PLUS
- Support for ALL–IN–1 GOLD-Interrupt facility

RALLY applications can be run from a TEAMDATA directory, an ALL–IN–1 menu, or directly from DCL.

Comprehensive On-line Help

At every stage in the development process, the definer can get context-sensitive help on particular areas being worked. RALLY continually makes the definer aware of appropriate values for fields, options, and variables.

RALLY allows definers to define context-sensitive interactive help, legend, and error messages for an application.

Other Features

- Date arithmetic
- Computed fields and aggregate functions
- Password security for entire applications or selected application parts (for example, forms or reports)
- Single-user or multi-user access to Rdb/VMS relations
- Ability to save keystroke sequences in named macro files
- Virtual multi-tasking with windowing
- Default function key mappings similar to ALL–IN–1 /WPS–PLUS; optional EDT function key mappings included; can be customized by definer
- A callable interface
- Application reporting utility to generate reports describing the entire application, single objects, all objects of a single type, and cross-references between the RALLY application and the database.
- Trace logging and ADL debugging options

Run-Time Option

The VAX RALLY Run-Time Option is available separately and is a subset of VAX RALLY Development Option. The VAX RALLY Run-Time Option supports the execution of RALLY applications on a target machine that have been developed on a host machine using the VAX RALLY Development Option. Application development is not supported by the VAX RALLY Run-Time Option.

Internationalization

RALLY can be tailored for various languages. Conditional form/report text can display different labels for different users. Standard error messages are provided in French, Spanish, German, Danish, and Hebrew. Individual users can use different languages on the same machine.

Documentation

VAX RALLY Development Option includes the following printed documentation:

- *Introduction to VAX RALLY*
- *VAX RALLY Definition System User's Guide*
- *VAX RALLY Command Reference Manual*
- *VAX RALLY ADL User's Guide*
- *VAX RALLY Reference Manual and Master Index*
- *VAX RALLY Installation Guide*
- *VAX RALLY Application User's Guide*
- *VAX RALLY Guide to Application Development*

VAX RALLY Run-Time Option includes the following printed documentation:

- *VAX RALLY Installation Guide*
- *VAX RALLY Application User's Guide*

RALLY includes the following Bookreader documentation:

- *Introduction to VAX RALLY*
- *VAX RALLY Definition System User's Guide*

- *VAX RALLY Command Reference Manual*
- *VAX RALLY ADL User's Guide*
- *VAX RALLY Reference Manual*
- *VAX RALLY Application User's Guide*
- *VAX RALLY Guide to Application Development*

RALLY also provides the source file for the *Application User's Guide*, to be customized by the definer (requires VAX DOCUMENT).

Additionally, RALLY provides complete on-line help.

HARDWARE REQUIREMENTS

VAX, MicroVAX, VAXstation, or VAXserver configuration as specified in the System Support Addendum (SSA 27.03.06-x).

SOFTWARE REQUIREMENTS

For Systems Using Terminals (No DECwindows Interface):

VMS Operating System

For Workstations Running VWS:

VMS Operating System
VMS Workstation Software

For Workstations Running DECwindows:

VMS Operating System (and necessary components of VMS DECwindows)

VAX Rdb/VMS (Interactive or Development System) is required for the VAX RALLY Development Option. VAX Rdb/VMS (Run-Time, Interactive, or Development) is required for the VAX RALLY Run-Time Option if the application uses VAX Rdb/VMS. If using the VAX RALLY Run-Time Option with RMS files only, VAX Rdb/VMS is NOT required.

VAX CDD/Plus is required for the VAX RALLY Development Option, but not required for the VAX RALLY Run-Time Option.

Refer to the System Support Addendum (SSA 27.03.06-x) for availability and required versions of prerequisite /optional software and for information regarding components of VMS DECwindows.

ORDERING INFORMATION

VAX RALLY Development Option (includes VAX RALLY Run-Time Option):

Software Licenses: QL-A86A*-**

Software Media: QA-A86A*-**

Software Documentation: QA-A86AA-GZ

Software Product Services: QT-A86A*-**

VAX RALLY Run-Time Option:

Software Licenses: QL-VF4A*-**

Software Media: QA-VF4A*-**

Software Documentation: QA-VF4AA-GZ

Software Product Services: QT-VF4A*-**

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

SOFTWARE LICENSING

This software is furnished under the licensing provisions of Digital Equipment Corporation's Standard Terms and Conditions. For more information about Digital's licensing terms and policies, contact your local Digital office.

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.

SOFTWARE PRODUCT SERVICES

A variety of service options are available from Digital. For more information, contact your local Digital office.

SOFTWARE WARRANTY

Warranty for this software product is provided by Digital with the purchase of a license for the product as defined in the Software Warranty Addendum of this SPD.

™ The DIGITAL Logo, ALL–IN–1, CI, DATATRIEVE, DBMS, DECterm, DECwindows, MicroVAX, RALLY, Rdb/VMS, TEAMDATA, TK50, VAX, VAX ACMS, VAX CDD/Plus, VAX DOCUMENT, VMS, VAXstation, VAXserver, VAXcluster, VT, VAXft, VT220, VT320, VT330, VT380 and WPS–PLUS are trademarks of Digital Equipment Corporation.