Software Product Description

PRODUCT NAME: HP TDMS for OpenVMS Alpha and OpenVMS Integrity Version 2.0 SPD 82.41.02

DESCRIPTION

HP TDMS for OpenVMS Alpha and OpenVMS Integrity (Terminal Data Management System) is a product designed for the implementation of interactive, forms-intensive applications running on OpenVMS Alpha and Integrity systems. As a terminal subsystem, TDMS can reduce the application development and maintenance effort by replacing application program logic specific to terminal interactions with definitions that are external to the program. HP TDMS is Year 2000 ready for applications that conform to the interpretation of 2 digit year dates as described in the release notes.

HP TDMS provides the following features:

- A Screen Editor to define forms that format data on the terminal.
- A nonprocedural language to define the exchange of data between an application program and its associated terminal. These predefined exchanges are called requests and are external to the program.
- Utilities that enable the creation, modification, and storage of form definitions and request definitions.
- A record level programming interface which the application program uses to invoke the predefined requests. The application program calls the program interface, passing it the request name and the program record buffers used in the exchange of data with the terminal.
- A sliding window algorithm through which the behavior of TDMS can be modified to control how 2 digit year dates are translated.

HP TDMS applications range from database inquiry/response/update to real-time uses such as the periodic display of an industrial process. HP TDMS is typically used as a terminal subsystem in terminal data management applications such as order entry, inventory control, distribution and other form-intensive applications. HP TDMS not only increases application development and maintenance productivity by providing a separation of terminal management code from application code, but it also promotes end user productivity by providing such features as:

- Vertical Field Traversal. Keys can be defined for rapidly traversing forms vertically rather than traversing the form on a field by field basis in the pre-defined field visitation order.
- Immediate access to the first field and last field. Keys can be defined for immediately moving the cursor to the first field and the last field on the form.
- The key function associated with a key can be changed and additional keys can be defined to have other functions. This allows keyboards to be redefined to match the environment of the end user.
- All HP TDMS definitions are stored in the Oracle Common Data Dictionary/Repository (CDD/Repository). Additionally, HP TDMS can use record definitions stored in the Oracle CDD/Repository, Oracle CODASYL DBMS, or Oracle Rdb/VMS. HP TDMS provides full support for Oracle CDD/Repository Dictionary Management Utility (DMU) format definitions and read-only support for Common Dictionary Operator(CDO) definitions.
- HP TDMS is the standard, integrated terminal manager for HP ACMS-based applications.

- HP TDMS supports editing with the HP Language-Sensitive Editor from within the Request Definition Utility (RDU). This editor provides templates that help application developers remember RDU syntax as they develop request definitions.

There are four major steps involved in the implementation of a HP TDMS application. These are:

1. Defining the Request

A request defines what information is displayed at the terminal and what information is collected from the terminal. The HP TDMS request replaces code that would otherwise have to be designed, written, and debugged in the application program.

The request identifies the form and the record definitions to be used in the exchange of data with the terminal. INPUT and OUTPUT statements define the mapping between the form fields and the record fields during execution of the request.

2. Defining the Form

A form definition describes the format of the data that is displayed on the terminal at run time. The form definition also specifies, for each field, what validation procedures are invoked. HP TDMS field validation includes range checks, list checks and picture validations.

3. Defining the Record

Data records that are used in a request and HP TDMS application program must be defined in the Oracle CDD/Repository. The record definition specifies the type, structure and length of the record that is created by Oracle CDD/Repository, Oracle CODASYL DBMS, or Oracle Rdb/VMS. During the execution of a request, HP TDMS performs the necessary data type conversion required to transfer data between the form and the record.

4. The Application Program

An HP TDMS application program performs application-specific processing and controls the flow of information between the terminal and the database. The application communicates at a record level with the terminal by calling HP TDMS to execute requests and it communicates with the database using the subsystem of choice - RMS, Oracle CODASYL DBMS, or Oracle Rdb/VMS.

Applications can be written in any native mode language that adheres to the Procedure Calling and Condition Handling standard. Many languages are able to copy record definitions from the Oracle CDD/Repository at compile time. If the application program is written in one of these languages, then it and the HP TDMS request can share record definitions in the Oracle CDD/Repository. HP TDMS applications written in languages that do not support such copying must include the record definitions in the application program itself as well as in the Oracle CDD/Repository.

Components

HP TDMS is comprised of three major components:

1. The Form Definition Utility

The HP TDMS Form Definition Utility (FDU) provides all of the capabilities needed to create or modify form definitions and store them in the Oracle CDD/Repository. The HP TDMS FDU includes a Screen Editor that is used to create a screen image of the form and assign specific attributes. These include form field video attributes, form field validation procedures, and the order in which the input fields should be processed.

2. The Request Definition Utility

The HP TDMS RDU provides all of the capabilities needed to create and modify requests and store them in the Oracle CDD/Repository. RDU validates each request to make sure that form and record definitions exist and that all transfers of data between form and record fields are valid. The RDU also builds Request Library Files that the HP TDMS run-time system accesses during the execution of requests.

The request library capability is provided to avoid run-time access to the Oracle CDD/Repository and thus improve HP TDMS application performance.

3. Programming Call Interface

An application program uses the HP TDMS programming interface to execute a HP TDMS request. A request defines an exchange of data between the program and its associated terminal. The application program calls the program interface and passes to the program interface the request name and the program record buffers to be used in the exchange of data with the terminal. This record level interface thus eliminates the need for character level or field level communication with the terminal.

The Programming Call Interface allows application programs to perform additional operations including writing text to or reading text from the reserved message line on a terminal, enabling or disabling a facility that traces the action of a request, and canceling a request in progress.

The Programming Call Interface supports both synchronous and asynchronous calls from the application program.

Optional Run-time System

An optional run-time version of HP TDMS is available. The run-time system allows the execution of applications using HP TDMS for terminal display and management on a machine other than the one used to develop the application.

Documentation

The online documentation set is included as part of the HP TDMS Alpha and HP TDMS Integrity development systems. The hardcopy HP TDMS documentation set originally developed for HP TDMS VAX can be ordered.

The HP TDMS documentation set consists of:

- Forms Manual
- Request and Programming Manual
- Reference Manual
- Pocket Guide

HARDWARE REQUIREMENTS

HP TDMS Version 2.0 is supported on all HP hardware configurations referenced in the OpenVMS Operating System for Alpha and Integrity Software Product Description.

Terminals

1. Supported in VT102 mode only.
2. HP TDMS does not support the use of the 25th status line nor the use of the locator device on VT300-series terminals.

Terminal Emulators

Terminal emulators are supported only to the extent that the emulator conforms to the VT100, VT220, or VT320 environment it is emulating.

Printers

HP TDMS forms can be printed on any printer. Video attributes are not printed and lines are drawn using the characters "-", "+", "|" rather than the line-drawing character set.

OTHER HARDWARE REQUIREMENTS

Disk Space Requirements (Block Cluster Size = 1)

The sizes are approximate; actual sizes may fary depending on the user's system environment, configuration, and software options.

Table 1
Full Develoopment System

Disk space required for installation:	12,000 blocks
	(6,114K bytes)
Disk space required for use (permanent):	
With Samples	5,000 blocks
	(2,560K bytes)
Without Samples	2,500 blocks
	(1,280K bytes)

Table 2
Run-time System

Disk space required for installation:	3,000 blocks
	(1,536K bytes)
Disk space required for use (permanent):	500 blocks
	(1,280K bytes)

These counts refer to the disk space required on the system disk. The sizes are approximations; actual sizes may vary depending on your system environment, configuration and software options selected.

CLUSTER ENVIRONMENT*

This layered product is fully supported when installed on any valid and licensed VMScluster configuration without restrictions. The HARDWARE REQUIREMENTS section of this Software Product Description details any special hardware required by this product.

* VMScluster configurations are fully described in the VAXcluster Software Product Description (29.78.xx) and include CI, Ethernet and mixed Interconnect configurations.

SOFTWARE REQUIREMENTS

Operating System:

- OpenVMS Alpha Operating System - V6.2 or higher
- OpenVMS Integrity Operating System - V8.2-1 or higher

Layered Products:

- Oracle CDD/Repository V7.0 or higher

OPTIONAL SOFTWARE

Certain versions of these products depend upon a specific version of the Operating System.

- HP ACMS V4.1 or higher
- HP Language-Sensitive Editor/Source Code Analyzer V4.4 or higher

GROWTH CONSIDERATIONS

The minimum hardware and software requirements for any future version of this product may be different from the requirements for the current version.

ORDERING INFORMATION

This product is in Mature Product Support. As future updates are not planned SW Updates Service is not offered.

Licenses

HP OpenVMS Alpha Licenses	
TDMS Full Development Unlimited Use License:	QL-752A*-AA[1]
TDMS Run-Time Unlimited Use License:	QL-754A*-AA[1]

[1]Asterisk "*" denotes system tier. E=workgroup tier, G=departmental tier, Q=Enterprise tier.

HP OpenVMS Integrity Licenses	
TDMS Development Per-processor Core License (PCL)[1]:	BA473AC
TDMS Run-Time Per-processor Core License (PCL)[1]:	BA474AC

[1]Order one PCL license for each active processor core running OpenVMS.

Media and Documentation

Product binary kits and online documentation are delivered on consolidated media libraries. Delivery model varies by platform.

HP OpenVMS Alpha Media and Online Documentation	
Software Layered Products Library Package	QA-03XAA-H8
Software Layered Products and Operating System Library Package	QA-5G98A-H8

HP OpenVMS Integrity Media and Online Documentation[1]	
Foundation Operating Environment	BA322AA#AJR
Enterprise Operating Environment	BA323AA#AJR
Mission Critical Operating Environment	BA324AA#AJR

[1]Product ships in Layered Product Library all Operating Environment media kits, available with initial OpenVMS OE order.

HP OpenVMS Documentation (Printed)[1]	
TDMS VAX Documentation Set	QA-706AA-GZ

[1]This documentation describes the product on all platforms.

SOFTWARE LICENSING

For more information about the HP licensing terms and policies, contact your local HP office.

LICENSE MANAGEMENT FACILITY

This layered product supports the VMS License Management Facility.

For OpenVMS Alpha the license units for both the Full Development System and the Run-time System are allocated on a CPU-capacity basis.

For OpenVMS Integrity Systems, license type for Integrity is "per-processor core license". One PCL license is required for each active processor core running OpenVMS.

For more information on the License Management Facility, refer to the VMS Operating System Software Product Description (SPD 82.35.xx) or the License Management Facility manual of the VMS Operating System documentation set.

SOFTWARE PRODUCT SERVICES

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

SOFTWARE WARRANTY

A 90-day conformance to SPD warranty in accordance with the applicable HP standard Terms and Conditions is provided by HP with the purchase of a license.