Portable, Reusable, Integrated Software Modules (PRISM) Documentation Library Version Description Document Release 1.0 Central Archive for Reusable Defense Software (CARDS)

Informal Technical Data

Central Archive for Reusable Defense Software

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INFORMAL TECHNICAL REPORT
For The
SOFTWARE TECHNOLOGY FOR ADAPTABLE, RELIABLE SYSTEMS
(STARS)

Portable, Reusable, Integrated Software
Modules (PRISM) Documentation Library
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Contract NO. F19628–93–C–0130
Line Item 0002AB

Prepared for:
Electronic Systems Center
Air Force Material Command, USAF
Hanscom AFB, MA 01731–2816

Prepared by:
Electronic Warfare Associates, Inc.
under contract to
Unisys Corporation
12010 Sunrise Valley Drive
Reston, VA 22091

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Version Description Document Release 1.0
Central Archive for Reusable Defense Software (CARDS)

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ABSTRACT

This Version Description Document has been prepared for CARDS (Central Archive for Reusable Defense Software) Portable, Reusable, Integrated Software Modules (PRISM) Documentation Library (PDL) Release 1.0 and describes:

- Since there were no previous release, there are no changes.
- Known problems and work arounds (where possible).
- Installation instructions.
- A list of files for this release.
- A release tape file list.

This VDD is part of the CARDS library release package which includes the actual release, a library user's manual, and a library model document.
**Title and Subtitle:**
Portable Reusable Integrated Software Modules (PRISM) Documentation Library - Version 1.0

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1 Version Description

1.1 Scope

1.1.1 Identification

This Version Description Document (VDD) describes the Portable, Reusable, Integrated Software Modules (PRISM) Documentation Library (PDL), Release 1.0. This VDD was developed for the Central Archive for Reusable Defense Software (CARDS) Program.

1.1.2 System Overview

The long-term mission of CARDS is to provide operational reusable software libraries designed to support multiple domains. Another important mission is to serve as a model, or 'knowledge blueprint,' for the construction of other domain-specific reuse libraries. CARDS libraries consist of the Reuse Library Framework (RLF), a distributed file system (AFS), and the models. The RLF is provided by the Software Technology for Adaptable, Reliable Systems (STARS) Program and is used to represent the CARDS domain model.

CARDS initially applied its methodology and tools to the command center domain. CARDS now has two operational libraries (Command Center Library and the PDL) in the CARDS System Library. Each library has its own set of release documents and tapes. Future domains and libraries may be addressed in later releases.

The library software contains various library maintenance and user browsing tools. CARDS overall function is to maintain library operations; it is general in nature and is not specific to command centers or other particular domains. The encoded library model allows tailoring of the library software. Library components are stored in the library as Unix files and are referenced by the library software through the encoded library model. The entire library system is supported by the underlying POSIX-compliant operating system (SunOS) and an X-Window System.

CARDS supports the full life cycle of software development by providing mechanisms to support rapid prototyping, requirements analysis, integration, testing, and maintenance.

1.1.3 Document Overview

This VDD describes the necessary hardware and software to operate this CARDS PDL release. It lists the initial contents of the /afs/cards.com/Library directory which contains the encoded domain model for the library and the library support files and tools.

1.2 Inventory of Materials Released
1.2.1 CARDS Library

The directory /afs/cards.com/Library and its subdirectories contain the operational library. See Appendix A for a complete listing of the contents of these directories.

1.2.2 Tape

The library distribution tape contains tar files for the library, library installation procedures, and related documents. See Appendix B for a listing of the contents.

1.3 Inventory of Minimum Requirements to Operate the Library

1.3.1 Software

- X11 R4 or R5 of the X Window System.
- Motif (version 1.1 or higher) window manager.
- SunOS 4.1.1 or higher.
- Access to the standard Unix tools: csh, sh, xterm, xwud, cp, sed, awk, expr, split, find, mkdir, date, ln, and printenv.
- AFS client software version 3.1B (with the cell 'cards.com' mounted) is required for the interoperability actions of the library.
- For remote access to the CARDS library:
  - An Internet connection with its associated hardware and software permits Telnet access to the library.
  - The addition of AFS client software version 3.1B with the cell 'cards.com' mounted permits AFS access to the library.
1.3.2 Hardware

- Sun 4 Architecture workstation.
- 16 Megabytes of RAM with black and white monitor; 24 Megabytes of RAM is recommended.
- 24 Megabytes of RAM with color monitor; 48 Megabytes recommended.
- 80 Megabytes of swap space.
- If extracting library contents, users must have writable disk space.
- Installation of the library from tape requires 108 Megabytes of disk space. The installed library requires 54 Megabytes of disk space. Note that this does not include space required for the RLF software.

1.3.3 Adaptation Data

No adaptation required to install system.

1.3.4 Interface Compatibility

There are no interface compatibility issues.

1.4 Bibliography of Reference Documents


• AFS installation Guide. FS-00-D504,Transarc Corporation, December 1991.


1.5 Obtaining Help

If problems/issues are discovered, please contact the CARDS hotline at 1-800-828-8161.

1.6 Acronyms

CARDS Central Archive for Reusable Defense Software
CCL Command Center Library
PDL PRISM Documentation Library
PRISM Portable, Reusable, Integrated Software Modules
RAM Random Access Memory
RLF Reuse Library Framework
STARS Software for Adaptable, Reliable Systems
2 Release Notes: PRISM Documentation Library Release 1.0

2.1 Changes From Previous Version

This PRISM Documentation Library (PDL) release 1.0 is the first release of this library; therefore, there are no changes since there was no previous release. However, the following may be new to some CARDS users:

CARDS Library Launcher

CARDS Library Launcher provides users with the capability to select libraries and associated options. In previous releases, Launcher provided only two options: 'CC Library' and 'View Roadmaps'. Launcher has been updated for future expansion of the Library for multiple models. User's must still log into the Library using the 'rungb' script, but the new Launcher is executed automatically by that script. The Launcher window provides a brief message about the display time of the browser and additional helpful system information. Current choices available to users through pull-down menus are:

- Choose a Library. Command Center Library version 3.2.1 is the only library available for this release.
- Choose an Option:
  - Enter Library. Activates the current library selected.
  - View Roadmap. Displays the current library roadmap.
  - View Release Notes. Informs the user of the latest updates to the CARDS Library.

After you select the library and option, you enter the library using the 'execute' button.

Future releases will include multiple libraries, such as PRISM Documentation Library, and options, such as the ability to view the CARDS Library release documents. Context sensitive help will also be available for each library option.

2.2 Possible Problems and Known Errors

The known errors and possible problems with this library release are listed below. If you discover other problems/issues, please contact the CARDS Hotline at 1-800-828-8161.

RLF/LIBRARY FRAMEWORK PROBLEMS:

When the user exits an Reuse Library Framework (RLF) Graphical Browser (GB) window with the default Motif window manager menu for that window, the GB crashes. The work-around is to use the exit button provided by the GB (System Trouble Report (STR) VER22).
The RLF Graphical_Browser causes the X Server to consume a significant amount of memory and swap space when displaying a large library model such as ours. This problem is particularly severe on color workstations. When swap space is exhausted, library actions appear to fail, i.e., no window is displayed as a result of selecting the action. In addition, this memory is not released when the GB is exited. The workaround is to exit the X Server periodically.

The text message 'Warning: XtRemoveGrab asked to remove a widget not on the list' appears in the originating window and often occurs when a window in the Graphical_Browser is exited or cancelled.

The 'menu bar' menu may relocate to the upper left hand corner of the screen when the 'Node History' menu bar option is selected. As the pointer passes over the menu entry, the cascading menu may be placed in the upper left hand corner of the screen.

A display alert box containing the message 'Node menu creation error' randomly appears when a node is selected. If the node is selected again, the error usually does not occur. Reselect the node and the correct menu should appear.

The bottom scroll bar of the main GB window does not always appear. Resizing the window will solve this problem.

OTHER:

3 Release Notes: PRISM Documentation Library Release 1.0

3.1 Installation Process

This release is installed in two steps:

- The tape is down loaded.
- The tape supplied installation procedure is executed to install the library files.

The complete installation process requires 108 Mb of disk space; the final installed library requires 54 Mb.

The installation process requires you to have previously installed the Reuse Library Framework (RLF) Version 4.1 and are able to access the directory where it is installed.

3.2 Conventions

The following conventions are used in the installation instructions:

- `%` is used to indicate the UNIX system prompt.
- A fixed pitch bold font is used to indicate commands you type as shown.
- An italic font is used to indicate items you replace with site-specific information.

3.3 Unloading the Tape

- Change to the directory where you wish to unload the tape: `% cd directory-name`
- Then, use the `tar` command to extract the contents of the tape: `% tar xvf tape-device-name`

3.4 Installing the Library Files

- In the directory `directory-name`, run the `cc-install.sh` script to install the library: `% ./cc-install.sh`

This script first prompts you for the location of the RLF Graphical_Browser executable and then for the location of the 'Browser' file which is supplied with RLF. This information is used to automatically modify the library supplied `rungb` script.

The script then prompts you for the directory where you want to install the library and then places files in the correct location relative to that directory. The library supplied `rungb` file is...
modified to set path names relative to the installation directory. Finally, the script cleans up the working files from the tape, leaving only the installed library and the release related documents on your system.

3.5 Accessing the Library

Access to the library is provided by the RLF Graphical_BROWSER application. A library supplied script file, rungb, is provided to aid in setting environment variables required by the Graphical_BROWSER. To easily access this script file, library users should add install-directory/Library/bin to their search paths. install-directory should be replaced with the directory specified when you ran the cc-install.sh script (see section 3.4). Use the script rungb to access the library through the RLF Graphical_BROWSER application: % rungb

3.6 Moving the Location of RLF after Installing the Library

If you move the location of RLF 4.1 after installing the library, make changes to the rungb script as indicated below. To change the rungb script, change to the directory where rungb is located and make a copy of the original file:

- % cd install-directory/Library/bin

- % cp rungb rungb.orig

Using your favorite editor, edit the rungb file. Go to lines 30 - 31 of the file where the values of RLFGBHOME and BROWSERHOME are set. RLFGBHOME must be set to the location of the RLF Graphical_BROWSER executable and BROWSERHOME must be set to the location of the RLF Browser file.

3.7 Obtaining Help

If problems occur during installation, please call the CARDS Hotline at 1-800-828-8161.
APPENDIX A - List of Files in the Release

In addition to the files associated with the RLF and AFS, the following directories and their contents comprise the CARDS PRISM Documentation Library. The files in the release are listed relative to the directory install-directory/Library. For the operational library, this corresponds to: /afs/cards.com/Library.

== Library

== Library/bin

launcher: PD-VER1-0
launcher.cfg,v 1.6
preview: PD-VER1-0
rungb: PD-VER1-0

== Library/bin/prism_documentation

RELEASE.NOTES,v 1.2
launcher-prism.sh,v 1.3
prism_desc.txt,v 1.2

== Library/domains

== Library/domains/gcc

== Library/domains/gcc/prism_documentation

== Library/domains/gcc/prism_documentation/model

== Library/domains/gcc/prism_documentation/model/prism_documentation

== Library/domains/gcc/prism_documentation/model/prism_documentation/lmdl

prism_documentation.lmdl,v 1.5

== Library/domains/gcc/prism_documentation/library
1048577.HYB: PD-VER1-0
ALL: PD-VER1-0
AdaNET_States: PD-VER1-0
KNET1048578MI_GEN_RESTR: PD-VER1-0
KNET1048578MI_PAR_RESTR: PD-VER1-0
KNET1048578SUBROLE: PD-VER1-0
NET1048579ACTION: PD-VER1-0
NET1048579ACTION_ATTRS: PD-VER1-0
NET1048579ACT_ATTR_TBL: PD-VER1-0
NET1048579GC: PD-VER1-0
NET1048579GEN_ACT_SUPPLY_TBL: PD-VER1-0
NET1048579GEN_SUPPLY_TBL: PD-VER1-0
NET1048579INDIV: PD-VER1-0
NET1048579INDIV_TBL: PD-VER1-0
NET1048579IND_SUPPLY_TBL: PD-VER1-0
NET1048579RNG_RESTR_TBL: PD-VER1-0
NET1048579ROLE: PD-VER1-0
NET1048579SATUS_TBL: PD-VER1-0
NET1048579SPEC_TBL: PD-VER1-0
NET1048579SUBROLE_TBL: PD-VER1-0
NET1048579VALUE_TBL: PD-VER1-0
STATE: PD-VER1-0
UID_FILE: PD-VER1-0

Library/domains/gcc/prism_documentation/library/Taustuff

Inf_UID_Mapping: PD-VER1-0

Library/domains/gcc/prism_documentation/library/Text

1048624: PD-VER1-0
1048625: PD-VER1-0
1048626: PD-VER1-0
1048627: PD-VER1-0
1048628: PD-VER1-0
1048629: PD-VER1-0
1048630: PD-VER1-0
1048631: PD-VER1-0
1048632: PD-VER1-0
1048633: PD-VER1-0
1048634: PD-VER1-0
1048635: PD-VER1-0
contents: PD-VER1-0

== Library/domains/gcc/prism_documentation/library/Text/prism_documentation/com \
== ponents/POC_July_92/docs

poc_rpt_jul92.ps,v 1.2
poc_rpt_jul92.txt,v 1.2

== Library/domains/gcc/prism_documentation/library/Text/prism_documentation/com \
== ponents/POC_July_92/text

POC_July_92_desc.txt,v 1.1

== Library/domains/gcc/prism_documentation/library/Text/prism_documentation/com \
== ponents/POC_Nov_92/docs

poc_rpt_nov92.ps,v 1.2
poc_rpt_nov92.txt,v 1.2

== Library/domains/gcc/prism_documentation/library/Text/prism_documentation/com \
== ponents/POC_Nov_92/text

POC_Nov_92_desc.txt,v 1.1

== Library/domains/gcc/prism_documentation/library/Text/prism_documentation/com \
== ponents/QDR_release_2.0/docs

poc_2.0.ps,v 1.2
poc_2.0.ps,v 1.2
poc_2.0.txt,v 1.2
poc_2.0.txt,v 1.2

== Library/domains/gcc/prism_documentation/library/Text/prism_documentation/com \

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APPENDIX B - List of Files on the Release Tape

The tape distribution of the release contains: the installation script; tar files with the library contents; a table of contents of each of the tar files on the tape, an installation script; and the documents for this release. The VDD contains the release notes and installation instructions.

The files on the release tape are as follows:

- `cc-install.sh` - Library installation script.
- `cclmd.ps` - The PRISM Documentation Library (PDL) Model Document in postscript format.
- `cclmd.txt` - The PDL Model Document in ASCII/text format.
- `Library.docs.tar` — Tape archive file containing RLF docs, LUG, VDD, and LMD.
- `Library.docs.toc` — Table of contents for the file above
- `Library.bin.tar` — Tape archive file containing non-library specific binaries.
- `Library.bin.toc` — Table of contents for the file above
- `model.mdl.tar` — Tape archive file containing the mdl file.
- `model.mdl.toc` — Table of contents for the file above
- `library.taustuff.tar` — Tape archive file containing files from Lmdl parsing.
- `library.taustuff.toc` — Table of contents for the file above
- `library.Text.tar` — Tape archive file containing files from Lmdl parsing.
- `library.Text.toc` — Table of contents for the file above
- `Text.bin.tar` — Tape archive containing library specific binaries.
- `Text.bin.toc` — Table of contents for the file above
- `Text.text.tar` — Tape archive containing of description files for categories.
- `Text.text.toc` — Table of contents for the file above
- `Text.components.tar` - Tape archive file containing components of this library.
- `Text.components.toc` — Table of contents for the file above
- `vdd.ps` - This VDD in postscript format.
- `vdd.txt` - This VDD in ASCII/text format.