Thai Printing Support for OpenVMS Version 1.0 Installation Guide

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This document contains instructions for installing the Thai Printing Support kit on the OpenVMS/Thai operating system. It also provides hints for connecting and setting up various supported printers. This document applies to Thai Printing Support for OpenVMS Version 1.0 only.

Revision/Update Information:	This is a new manual.
Operating System & Version:	OpenVMS/Thai VAX Version 5.5 or higher
	OpenVMS/Thai AXP Version 1.5 or higher
Software & Version :	Thai Printing Support for OpenVMS Version 1.0
Prerequisite Software:	DECprint Supervisor for OpenVMS Version 1.0C or higher

Digital Equipment Corporation
Asian Region

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Preface

About this Guide

This guide describes how to install Thai Printing Support for OpenVMS Version 1.0 on the OpenVMS/Thai operating system.

Keep this document with your distribution kit. You may need it to install maintenance updates or to reinstall Thai Printing Support for OpenVMS.

Intended Audience

This guide is intended for system managers who install and configure the Thai Printing Support for OpenVMS software.

Document Structure

This guide is organized as follows:

- Chapter 1 describes the operating system and hardware requirements for installing the Thai Printing Support for OpenVMS software and the related procedures before installing the software.
- Chapter 2 provides step-by-step instructions for the installation.
- Chapter 3 describes the actions and considerations after the installation.
- Chapter 4 describes the procedures on installing and setting up the supported printers.
- Appendix A, which contains sample listings for the installation of the Thai Printing Support for OpenVMS software.
- Appendix B, which contains a list of files created when the Thai Printing Support for OpenVMS software is installed.

Manuals in the Thai Printing Support for OpenVMS Documentation Set

In addition to this guide, the Thai Printing Support for OpenVMS documentation set includes the following documents:

- *DECprint Supervisor for OpenVMS System Manager's Guide*
- *DECprint Supervisor for OpenVMS User's Guide*
- *DECprint Supervisor for OpenVMS Version 1.0C Release Notes*
- *DECprint Supervisor for OpenVMS Installation Guide*
- *Thai Printing Support for OpenVMS Version 1.0 Release Notes*

Associated Documents

- *OpenVMS DCL Dictionary*
- *Introduction to OpenVMS System Management*
- *VMS LAT Control Program (LATCP) Manual*
- *DEClaser 1152 Printer Operator's Guide*
- *DEClaser 5100 Printer User's Guide*
- *DEC PrintServer Supporting Host Software for VMS Installation Guide*
- *DEC PrintServer Supporting Host Software for VMS Management Guide*
- *DECserver 100 Terminal Server Operator's Guide*

Conventions

The following conventions are used in this guide:

UPPERCASE	Uppercase characters indicate DCL commands, qualifiers and parameters.
italics	Italic characters are used in command examples to indicate that you are to substitute a word or value of your choice.
$	The dollar sign is used to indicate the DCL prompt. This prompt may be different on your system.

Ctrl/x	In procedures, a sequence such as Ctrl/X indicates that you must hold down the key labeled Ctrl while you press another key or a pointing device button.
Return	In procedures, a key name is shown enclosed to indicate that you press a key on the keyboard.
. . .	Vertical ellipsis in an example means that information not directly related to the example has been omitted.
file-spec, . . .	Horizontal ellipsis indicates that additional parameters, values, or information can be entered.
OpenVMS	This name is used to refer to the VMS and OpenVMS operating systems.

1

Preparing for Installing Thai Printing Support for OpenVMS

This chapter discusses the preparations and requirements necessary for installing Thai Printing Support for OpenVMS, ThaiPS in short. ThaiPS provides on-line release notes. Digital strongly recommends that you read the release notes before proceeding with the installation. For information on accessing the on-line release notes, see Section 2.1.

1.1 Prerequisite Hardware

To install ThaiPS, you need the following items:

- The appropriate input device to hold the distribution media

  ThaiPS is distributed with the OpenVMS/Thai distribution media.

- Appropriate communications hardware for printer configuration
- Adequate disk space for the installation and operation of ThaiPS, as listed in Table 1–1

In addition, each type of printing device supported by ThaiPS requires special hardware, as described in the following sections.

1.1.1 Serial Printer Hardware Requirements

ThaiPS supports the following serial printers.

- **DEClaser 5100 Printer**

  For best performance, the 4 MB memory option is recommended in addition to the factory installed 2 MB memory for the DEClaser 5100 printer. Also, there is an option to acquire an internal hard disk (128M) for this printer. You may want this option to store the Thai fonts on the hard disk.

- **DEClaser 1152 Printer**

For best performance, the 2 MB memory option is recommended in addition to the factory installed 2 MB memory for the DEClaser 1152 printer.

Serial printers, such as DEClaser printers, are connected to the host system either by a DECserver port, or by a direct serial line interface. The DECserver devices that can be used with Thai Printing Support for OpenVMS are listed in the Software Product Description of the DECprint Supervisor for OpenVMS software. To set up DECserver connections for serial printers, refer to Chapter 4 or Section 6.1 of *DECprint Supervisor for OpenVMS Installation Guide* for more details.

1.1.2 PrintServer Hardware Requirements

ThaiPS supports the following PrintServer printers.

- **PrintServer 17 Printer**
- **Turbo PrintServer 20 Printer**
- **PrintServer 32 Printer**
- **PrintServer 40 Plus Printer**

A PrintServer client system is an OpenVMS system where print queues to the PrintServer printer are created. Before you can run the DECprint Supervisor software on the client system to print files on a PrintServer printer, the PrintServer printer and its associated PrintServer software must be installed on the network. Refer to the printer installation guide for more information.

1.2 Prerequisite Software

1.2.1 General Software Requirements

To install ThaiPS, the host system must be running one of the following operating systems:

- OpenVMS/Thai VAX Version 5.5 or later
- OpenVMS/Thai AXP Version 1.5 or later

In additions, ThaiPS requires one of the following software to operate.

- DECprint Supervisor for OpenVMS AXP Version 1.0C or higher
- DECprint Supervisor for OpenVMS VAX Version 1.0C or higher

You may install the above DECprint Supervisor software (DCPS in short) before or after the installation of ThaiPS .

1.2.2 Software Required for Networked Serial Printers

For serial printers on DECserver devices, ensure that the LAT software is started before you start the print queues. Either LAT or LAT/Master software can be used. Refer to *VMS LAT Control Program (LATCP) Manual* for more information.

1.2.3 Software Required for PrintServer Printers

For PrintServer printers, ensure that the PrintServer printer is installed and booted with its software before you start the print queue. DECnet–VAX software must be running on the client system. DEC PrintServer Supporting Host software must be running on the PrintServer host system. Refer to *DEC PrintServer Supporting Host Software for VMS Installation Guide*.

1.3 License Registration

You do not need a PAK to install ThaiPS, and you do not need a PAK to use the basic features of the ThaiPS. However, you need a DCPS PAK for each of the optional licenses:

- **DCPS-OPEN**

  If your printing system is intended to provide printing to third party printers, you will need the DCPS PAK for the Open license. That is, if you have a third party printer to print Thai characters, you need to install this PAK. The PAK name for this license is DCPS-OPEN.

- **DCPS-PLUS**

  If your printing system requires advanced features, like automatic data type detection, you will need the DCPS PAK for the Plus license. The PAK name for this license is DCPS-PLUS.

1.4 Installation Procedure Requirements

The following sections discuss various requirements for installing ThaiPS.

The installation takes approximately 5 to 20 minutes, depending on your type of media and your system configuration.

1.4.1 Privileges and Disk Space

To install ThaiPS, you must log in to an account that has SETPRV or at least the following privileges:

- CMKRNL
- WORLD
- SYSPRV

On most systems, the SYSTEM account has SETPRV and is used to install software. To check the default privileges of the SYSTEM account, log in as SYSTEM, and enter this DCL command:

```
$ SHOW PROCESS/PRIVILEGES
```

1.4.2 Disk Space

ThaiPS requires different free disk storage space during installation and after installation. Table 1–1 summarizes the storage requirements for both VAX and AXP platforms.

Table 1–1 Disk Space Requirements

Max Disk Space Utilization during installation	6650
Net Disk Space Utilization after installation	6350

To determine the number of free disk blocks on the current system disk, enter the following command at the DCL prompt:

```
$ SHOW DEVICE SYS$SYSDEVICE
```

1.4.3 Process Account Quotas

The account you use to install ThaiPS must have sufficient quotas to enable you to perform the installation. Table 1–2 summarizes the process quotas required for the installation account.

Table 1–2 Process Account Quotas for the Installing Account

Account Quota	Value
ASTLM	24
BIOLM	18
BYTLM	18,000
DIOLM	18
ENQLM	30
FILLM	20

User account quotas are stored in the file SYSUAF.DAT. Use the VMS Authorize Utility (AUTHORIZE) to verify and change user account quotas. First set your directory to SYS$SYSTEM and then run AUTHORIZE:

```
$ SET DEFAULT SYS$SYSTEM
$ RUN AUTHORIZE
UAF>
```

At the UAF> prompt, enter the SHOW command with an account name to check a particular account. For example:

```
UAF> SHOW SMITH
```

To change a quota, enter the MODIFY command. The following example changes the FILLM quota for the SMITH account and then exits from the utility:

```
UAF> MODIFY SMITH /FILLM=50
UAF> EXIT
```

After you exit from the utility, the system displays messages indicating whether or not changes have been made. Once the changes have been made, you must log out and log in again for the new quotas to take effect.

For more information on modifying account quotas, see the description of the Authorize Utility in the VMS System Management Subkit.

1.4.4 VMSINSTAL Requirements

When you invoke VMSINSTAL, it checks the following:

- Whether you have set your default device and directory to SYS$UPDATE
- Whether you are logged in to a privileged account
- Whether you have adequate quotas for installation
- Whether DECnet is running
- Whether any users are logged in to the system

Note that the VMSINSTAL requires that the installation account has a minimum of the following quotas:

ASTLM = 24
BIOLM = 18
BYTLM = 18,000
DIOLM = 18
ENQLM = 30
FILLM = 20

If VMSINSTAL detects any problems during the installation, it notifies you and asks if you want to continue the installation. In some instances, you can enter YES to continue. To stop the installation process and correct the situation, enter NO or press Return. Then correct the problem and restart the installation.

1.4.5 Backing Up Your System Disk

At the beginning of the installation, VMSINSTAL asks if you have backed up your system disk. Digital recommends that you do a system disk backup before installing any software.

Use the backup procedures that are established at your site. For details on performing a system disk backup, see the section on the Backup Utility in the VMS System Management Subkit.

2

Installing Thai Printing Support for OpenVMS

This chapter explains how to install Thai Printing Support for OpenVMS. Section 2.1 contains a step-by-step description of the installation procedure.

2.1 The Installation Procedure

The Thai Printing Support for OpenVMS installation procedure consists of a series of questions and informational messages. See Appendix A for a sample installation.

To abort the installation procedure at any time, press Ctrl/Y. When you press Ctrl/Y, the installation procedure deletes all files it has created up to that point and exits. You can then start the installation again.

1. **Invoke VMSINSTAL.**

   ```
   @SYS$UPDATE:VMSINSTAL saveset-name device-name OPTIONS N
   ```

   To start the installation, invoke the VMSINSTAL command procedure from a privileged account, such as the SYSTEM account. VMSINSTAL is in the SYS$UPDATE directory. The following list defines the elements of the VMSINSTAL command procedure:

   saveset-name
   The installation name for the component. For ThaiPS, use the following installation name:

   ```
   THAIPS010
   ```

   device-name
   The name of the device on which you plan to mount the media. For example, MTA0: is the device name for a tape drive. It is not necessary to use the console drive for this installation. However, if you do use the console drive, you should replace any media you have removed once the installation is complete.

OPTIONS N
An optional parameter that indicates you want to see the question on release notes. If you do not include the OPTIONS N parameter, VMSINSTAL does not ask you about the release notes. You should review the release notes before proceeding with the installation in case they contain additional information about the installation. If you are restarting the installation and have already reviewed the release notes, you do not need to specify OPTIONS N.

Note that there are several other options you can select when you invoke VMSINSTAL.

- Auto_answer option (A): Initially creates a file that contains your answers to VMSINSTAL questions and prompts. You can then use the option (and the answer file) to save time during a reinstallation (typically after upgrading your system).
- Get save set option (G): Lets you store product save sets temporarily on a magnetic tape or in a disk directory.
- File log option (L): Logs all activity to the terminal during installation.
- Alternate root option (R): Lets you install the product to a system root other than that of the running system.

See the VMS documentation on software installation in the VMS System Management Subkit for detailed information on these options. If you specify more than one option, separate the options with commas (OPTIONS A,N).

The following example invokes VMSINSTAL to install ThaiPS from tape drive MTA0: and shows the system response. This example uses the OPTIONS N release note parameter.

```
$ @SYS$UPDATE:VMSINSTAL THAIPS010 MTA0: OPTIONS N

      VAX/VMS Software Product Installation Procedure V5.5-2


It is 05-MAY-1992 at 10:10.
Enter a question mark (?) at any time for help.
```

If you do not supply either the product name or the device name, VMSINSTAL prompts you for this information later in the installation procedure. VMSINSTAL does not prompt you for any options, so be sure to include OPTIONS N on the VMSINSTAL command line to access the release notes during the installation.

2. **Confirm DECnet status.**

```
    .
    .
    .
* Do you want to continue anyway [NO]?
```

VMSINSTAL notifies you if DECnet is running and displays a list of all active processes. It then asks if you want to continue the installation. You should install ThaiPS on a standalone system or cluster with DECnet shut down. NO is the default response to the question.

3. **Confirm system backup.**

```
* Are you satisfied with the backup of your system disk [YES]?
```

VMSINSTAL asks if you are satisfied with your system backup. You should always back up your system disk before performing an installation. If you are satisfied with the backup of your system disk, press Return. Otherwise, enter NO to discontinue the installation. After you back up your system disk, you can restart the installation.

4. **Mount the media.**

```
Please mount the first volume of the set on MTA0:.
* Are you ready? YES
%MOUNT-I-MOUNTED, Thai Printing Support for OpenVMS MOUNTED ON _$$MTA0:  (NODE 1)
The following products will be processed:

  THAIPS V1.0

        Beginning installation of THAIPS V1.0  at 14:32

%VMSINSTAL-I-RESTORE, Restoring product saveset A...
```

You should now mount the first distribution volume on the device you specified when you invoked VMSINSTAL. The device name appears in the line preceding the question. VMSINSTAL then asks you if you are ready to continue with the installation.

If you respond YES to indicate that you are ready, VMSINSTAL displays a message that the media containing ThaiPS has been mounted on the specified device and that the installation has begun.

If you entered the wrong device name when you invoked VMSINSTAL and need to restart the installation, enter NO in response to the ''Are you ready?'' question. To abort the installation for other reasons, press Ctrl/Y.

5. **Select a release notes option.**

ThaiPS release notes, THAIPS010.RELEASE_NOTES, is provided along with the kit. If you specified OPTIONS N when you invoked VMSINSTAL, you are now asked to choose one of the following four options for reviewing the release notes.

```
Release notes included with this kit are always copied to SYS$HELP.

Additional Release Notes Options:

 1.  Display release notes
 2.  Print release notes
 3.  Both 1 and 2
 4.  None of the above

* Select option [2]:
```

If you select option 1, VMSINSTAL displays the release notes immediately on the console terminal. You can terminate the display at any time by pressing Ctrl/C.

If you select option 2, VMSINSTAL prompts you for the name of the print queue that you want to use:

```
* Queue name [SYS$PRINT]:
```

You can press Return to send the files to the default output print device or you can enter another queue name.

If you select option 3, VMSINSTAL displays the release notes immediately on the console terminal and then prompts you for a queue name for the printed versions.

Select option 4 if you have already reviewed the release notes and are restarting the installation.

Next, VMSINSTAL displays the following question:

```
* Do you want to continue the installation [N]?: YES
%VMSINSTAL-I-RELMOVED, The product's release notes have been
                                 successfully moved to SYS$HELP.
```

To continue the installation, enter YES. Otherwise, press Return. In either case, the release notes are copied to files in the SYS$HELP directory:

```
SYS$HELP:THAIPS010.RELEASE_NOTES
```

6. **Purge files.**

```
* Do you want to purge files replaced by this installation [YES]?
```

You have the option to purge files from previous versions of Thai Printing Support for OpenVMS that are superseded by this installation. Purging is

recommended; however, if you need to keep files from the previous version, enter NO in response to the question.

VMSINSTAL checks to see if the amount of disk space required for the installation is available. If the space is not available, a message indicates the amount of disk space that is required, and the installation is aborted. Otherwise, the installation procedure continues.

7. **Read informational messages.**

   At this point, the installation procedure displays a number of informational messages that report on the progress of the installation. There are no further questions. If the installation procedure has been successful up to this point, VMSINSTAL moves the new or modified files to their target directories, updates help files, and updates DCL tables, if necessary. If you have chosen to have files purged, that work is done now. The following messages are displayed:

```
%VMSINSTAL-I-MOVEFILES, files will now be moved to their target
                                directories...
```

8. **End the installation procedure.**

```
   Installation of THAIPS V1.0 completed at 12:15

   VMSINSTAL procedure done at 12:15
```

   This message indicates that the entire installation procedure is complete.

   You can now log out of the privileged account:

```
$ LOGOUT
SYSTEM     logged out at 04-MAY-1993 12:15:10.23
```

   Note that VMSINSTAL deletes or changes entries in the process symbol tables during the installation. Therefore, if you are going to continue using the system manager's account and you want to restore these symbols, you should log out and log in again.

2.2 Error Recovery

If errors occur during the installation, VMSINSTAL displays failure messages.

For descriptions of the error messages generated by those conditions, see the OpenVMS documentation on system messages, recovery procedures, and OpenVMS software installation. If you are notified that any of those conditions exists, you should take the appropriate action as described in the message. For information on the installation requirements, see Chapter 1.

3

After Installing Thai Printing Support for OpenVMS

The following tasks take place after installing ThaiPS. You must perform the following tasks for ThaiPS to be active. All tasks should be performed by system managers under the SYSTEM account as follows:

1. Install the DECprint Supervisor for OpenVMS software.
2. Edit the system startup command file.
3. Edit the printer startup file DCPS$STARTUP.COM.
4. Invoke SYS$STARTUP:DCPS$STARTUP.COM
5. Persistently load Thai fonts to printers.

3.1 Installing the DECprint Supervisor Software

Install the DECprint Supervisor for OpenVMS software by VMSINSTAL if it is not already installed. Please follow the installation procedure documented in *DECprint Supervisor for OpenVMS Installation Guide* to install the above software. After the installation of the DECprint Supervisor software, you need to enable ThaiPS by the following command.

```
$ @SYS$MANAGER:DCPS$ENABLE_THAIPS
```

Enabling ThaiPS should only be done once after the installation.

3.2 Editing the System Startup Command File

Edit the system startup file, SYS$STARTUP:SYSTARTUP_VMS.COM[1], look for the following command procedure call:

```
$ @SYS$STARTUP:DCPS$STARTUP
```

If this line is not in the system startup file, add it. Otherwise, the print queue will not be started automatically during system startup.

For PrintServer printers, make sure the new line comes after the command to start STARTNET.COM. If the SYSTARTUP_VMS.COM file contains the command to start LPS$STARTUP.COM, replace it with the command to start DCPS$STARTUP.COM.

For serial printers on DECserver devices, you should make the necessary changes to the command procedure in SYS$STARTUP:LAT$STARTUP.COM to start the Local Area Transport (LAT) protocol, and to configure application devices for serial printers before you execute DCPS$STARTUP.COM. DCPS$STARTUP.COM also allows users to setup LAT.

To update the system startup file, edit SYS$STARTUP:SYSTARTUP_ VMS.COM, and add the following command procedure in the file:

```
$ @SYS$STARTUP:LAT$STARTUP
```

Make sure that the command line to start DCPS$STARTUP.COM comes after the command to start LAT$STARTUP.COM. If the system startup file does not include the above command line, the Local Area Transport (LAT) protocol will not be started automatically when the system starts up.

3.3 Creating the Printer Startup File

Before you can print, you must create the startup file DCPS$STARTUP.COM for the DECprint Supervisor software. These operations are required for sites that are installing the DECprint Supervisor software for the first time.

Note

If you have customized the print queue in your CPS$STARTUP.COM procedure, you must re-define the same print queues and printer environment in DCPS$STARTUP.COM for them to be active.

[1] Prior to OpenVMS/Thai VAX Version 6.0, the name of the system startup file is SYS$STARTUP:SYSTARTUP_V5.COM

3.3.1 Copying the Printer Startup Command File

The DECprint Supervisor for OpenVMS software provides you with a template printer startup file, DCPS$STARTUP.TEMPLATE. You must copy the template file and edit the file to reflect your own queue structure. You may also add a command to execute this file in the system startup file.

Copy the template printer startup file using the copy command as follows:

```
$ SET DEFAULT SYS$COMMON:[SYS$STARTUP]
$ COPY SYS$COMMON:[SYS$STARTUP]DCPS$STARTUP.TEMPLATE DCPS$STARTUP.COM
```

3.3.2 Editing the Printer Startup File

Edit DCPS$STARTUP.COM to reflect your own queue structure, to include

1. **The Definition of a Device Control Library Logical DCPS_LIB**

   For ThaiPS to work properly, you are required to define the DCPS_LIB logical as follows:

   ```
   $ DEFINE/SYS/EXEC DCPS_LIB DCPS$DEVCTL, DCPS$FONTSCTL
   ```

   If you have customized the PostScript setup modules in your own libraries, you must define a library search list for DCPS_LIB including the name of your library. Note that the DCPS$DEVCTL library should always be the first entry in the list.

2. **The Definition of Execution Queues**

   You may create an execution queue for each PostScript printer. To create an execution queue for your printer, add the following to your DCPS$STARTUP.COM:

   ```
   $ @SYS$STARTUP:DCPS$EXECUTION_QUEUE -
         my_dcps_queue -                ! P1 - Execution queue name
         lta1: -                        ! P2 - Serial Device Name or Printer
         -                              !      Server node name
         DCPS_LIB -                     ! P3 - Logical name for library(ies)
         "" -                           ! P4 - Default queue parameters
         "" -                           ! P5 - Default queue qualifiers
         "" -                           ! P6 - Communication speed (serial
            -                           !      devices only)
         "" -                           ! P7 - Device characteristics
         ""                             ! P8 - Verify on/off
   ```

   For details about creating your own execution queue structure, please refer to *DECprint Supervisor for OpenVMS System Manager's Guide*.

3. **The Definition of Generic Queues**

   You can set up a generic queue for each print job. For example, a generic queue to print Thai can be defined as follows:

```
$ @SYS$STARTUP:DCPS$GENERIC_QUEUE -
        Thai_queue -                    ! P1 - Generic queue name
        my_dcps_queue -                 ! P2 - Execution queue name
        "DATA=TIS_SCM" -                ! P3 - Default parameter
        "" -                            ! P4 - Default queue qualifiers
        ""                              ! P5 - Verify on/off
```

   For details, please refer to *DECprint Supervisor for OpenVMS System Manager's Guide*.

3.4 Executing DCPS$STARTUP to Create/Start the Queues

If the DECprint Supervisor software and ThaiPS are installed and the printer queues are defined in DCPS$STARTUP.COM properly, you can execute DCPS$STARTUP.COM to create the queues.

Invoke DCPS$STARTUP by issuing the following DCL command in the command line:

```
$ @SYS$STARTUP:DCPS$STARTUP
```

For PrintServers, make sure that DECnet is running on the system before you execute DCPS$STARTUP.COM.

If your printer is configured on a DECserver in a local area Ethernet, execute the configured LAT$STARTUP.COM before you execute DCPS$STARTUP.COM.

3.5 Downloading Thai fonts to Printers

You are recommended to download frequently used Thai fonts to printers as persistent resources by the font loading utility provided in ThaiPS. Since Thai characters in text files are printed with the default font **CordiaUPC-Light**, you should persistently load this font to the printers.

Note

For DEClaser 5100 serial printer with the internal hard disk option, you are recommended to download all Thai fonts provided in ThaiPS to the printer hard disk. See Section 4.3.1 for more details.

3.5.1 Downloading Thai fonts to Serial Printers

If your printers are serial printers such as DEClaser 1152 and DEClaser 5100 printers, please follow the following steps to persistently load Thai fonts to the serial printers

1. Invoke the font loading utility.

   ```
   $ @SYS$MANAGER:DCPS$FONT_LOADER.COM
   ```

2. From the main menu, choose item 1 to create the file, FONT_SOURCE_FILES.DAT, containing the list of available Thai fonts. The file will be created in your current directory.
3. Edit FONT_SOURCE_FILES.DAT and delete all font files from the list except the font files you want to download (eg. CORDIAUPC-LIGHT).
4. Rerun the font loading utility.
5. Choose menu item 4 to persistently load fonts to all (local and network) serial printers.
6. Follow the instructions and enter the file name FONT_SOURCE_FILES.DAT (the one being edited) when you are prompted for the font list file name.
7. A message will be displayed to indicate if the font is successfully downloaded and the font loading utility will terminate.
8. Power off and power on the printers.
9. Stop and restart the print queues for the printers affected by the change, using the STOP/QUEUE/NEXT and START/QUEUE command for each queue respectively.

For serial printers, you are recommended to persistently load only the font **CordiaUPC-Light**. If you download more fonts persistently to the serial printers, the printing performance will be affected. For details on how the persistently loaded fonts are operated and the font loading utility, please refer to *Thai Printing Support for OpenVMS Version 1.0 Release Notes*.

3.5.2 Downloading Thai fonts to PrintServer Printers

If your printers are PrintServer printers and the current (running) system is their supporting host, please follow the following steps to persistently load Thai fonts.

Note

For PrintServer 17 printers running PrintServer Software for OpenVMS Version 5.0 or above, you have an option to enable the printers to directly access Thai fonts on the supporting host. Please refer to Section 4.3.2 for more details. With this option, you do not need to perform the following steps to download Thai fonts anymore.

1. Invoke the font loading utility.

   ```
   $ @SYS$MANAGER:DCPS$FONT_LOADER.COM
   ```

2. From the main menu, choose item 1 to create the file, FONT_SOURCE_FILES.DAT, containing the list of available Thai fonts. The file will be created in your current directory.
3. Edit FONT_SOURCE_FILES.DAT and delete all font files from the list except the font files you want to download (eg. CORDIAUPC-LIGHT).
4. Rerun the font loading utility.
5. Choose menu item 5 to persistently load fonts to a PrintServer printer.
6. Follow the instructions and enter the file name FONT_SOURCE_FILES.DAT (the one being edited) when you are prompted for the font list file name.
7. You will also be prompted for the name of the PrintServer printer to which the fonts are downloaded. Please enter the node name of your PrintServer printer.
8. A message will be displayed to indicate if the font is successfully downloaded and the font loading utility will terminate. Repeat steps 4 to 8 for another PrintServer printer.
9. Reboot all the PrintServer printers affected by the change. The persistently loaded fonts will be available on the PrintServer printers after they are restarted.

For details on how the persistently loaded fonts are operated and the font loading utility, please refer to *Thai Printing Support for OpenVMS Version 1.0 Release Notes*.

3.6 Determining and Reporting Problems

If you encounter a problem while using Thai Printing Support for OpenVMS, report it to Digital. Depending on the nature of the problem and the type of support you have, you can take one of the following actions:

- Call Digital if your software contract or warranty agreement entitles you to telephone support.
- Submit a Software Performance Report (SPR).

Review the Software Product Description (SPD) and Warranty Addendum for an explanation of warranty. If you encounter a problem during the warranty period, report the problem as indicated above or follow alternative instructions provided by Digital for reporting SPD nonconformance problems.

4
Setting Up Printers

This chapter describes printer-related operations to be performed after the installation of ThaiPS and the DECprint Supervisor software. These operations are required for sites that are installing the DECprint Supervisor software and ThaiPS for the first time or installing new printers supported by the ThaiPS.

This chapter discusses the following procedures:

- Installing serial printers, Section 4.1
  - DEClaser 1152 Printer
  - DEClaser 5100 Printer
- Installing PrintServer printers, Section 4.2
  - PrintServer 17 Printer
  - Turbo PrintServer 20 Printer
  - PrintServer 32 Printer
  - PrintServer 40 Plus Printer

In addition, Section 4.3 describes some hints and special procedures required for some selected printers.

4.1 Installing Serial Printers

Serial printers require you to set up the communications speed and timeout values for the printer device. (Hardware requirements for installing serial printers are described in Section 1.1.1)

4.1.1 Setting Local Serial Printer Communications Speed

Make sure the serial printer communications speed is set to the default (9600 baud). If you want the printer to run at a different baud rate, then you must enter the appropriate baud rate in the DCPS$STARTUP.COM file, as described in *DECprint Supervisor for OpenVMS System Manager's Guide*. Make sure the baud rate in DCPS$STARTUP.COM matches the baud rate set on the printer.

When choosing a baud rate other than the default of 9600 baud, consider the following limitations:

- VMS drivers do not support baud rates of 3600 and 7200 baud.
- DMZ32 serial interfaces, Revision E or lower, require a speed of 4800 baud or less.
- The DECserver devices that can be used with the DECprint Supervisor for OpenVMS software and the recommended communications speed for each are listed in the Software Product Description (SPD) of the DECprint Supervisor software.

If you selected an improper speed, the printer may not operate or may stop unexpectedly.

To run a locally-connected serial printer at a different communications speed than the default rate of 9600 baud, follow the following steps.

- Stop the execution queue that drives the printer with the DCL command STOP/QUEUE/NEXT.
- Set the printer to the appropriate baud rate. Please refer to your printer hardware installation guide.
- Edit DCPS$STARTUP.COM. Look for the execution queue definition for the printer. Parameter **P6** is reserved for communications speed for locally-connected serial printers. When multiple hosts access the printer, be sure to make this change on every host system.
- Power on the printer. Wait for the printer to eject the power-up test page, and then check the test page to ensure that the desired settings are indicated on the test page.
- Invoke DCPS$STARTUP by issuing the following DCL command:

```
$ @SYS$STARTUP:DCPS$STARTUP
```

If the printer is on a DECserver device, follow the steps below

- Stop the execution queue that drives the printer with the DCL command STOP/QUEUE/NEXT.

- Set the printer to the appropriate baud rate. Please refer to your printer hardware installation guide.
- Set the DECserver communications speed. Please refer to the Terminal server installation guide.
- Power on the printer. Wait for the printer to eject the power-up test page, and then check the test page to ensure that the desired settings are indicated on the test page.
- Start the print queue.

4.1.2 Making DECserver Connections for Serial Printers

PostScript printers with a serial interface can be configured as network printers through a DECserver connection to the Ethernet. For this configuration, you must make the following changes to the system startup procedure:

- Set the necessary DECserver port and server characteristics for the printer. See Section 4.1.2.1.
- Make the necessary changes to SYS$STARTUP:LAT$SYSTARTUP.COM. See Section 4.1.2.2.

4.1.2.1 DECserver Port Characteristics

Table 4–1 lists the DECserver port characteristics required for shared printing.

Table 4–1 Printer-Required DECserver Port Characteristics

Characteristics	Default Settings
ACCESS	REMOTE
AUTOBAUD	DISABLED
AUTOCONNECT	DISABLED
AUTOPROMPT	DISABLED
BREAK	DISABLED
BROADCAST	DISABLED

(continued on next page)

Table 4–1 (Cont.) Printer-Required DECserver Port Characteristics

Characteristics	Default Settings
FLOW CONTROL	XON
INPUT FLOW CONTROL	ENABLED
OUTPUT FLOW CONTROL	ENABLED
INACTIVITY LOGOUT	DISABLED
LOSS NOTIFICATION	DISABLED
MESSAGE CODES	DISABLED
QUEUING	ENABLED
VERIFICATION	DISABLED

Note

On many versions of DECserver devices, QUEUING is not a port characteristic, but is a server characteristic whose default is ENABLED.

Table 4–2 lists the DECserver port characteristics that must match the settings on your printer.

Table 4–2 DECserver Port Characteristics

Character size	8
Parity	None
Input Speed	9600
Output Speed	9600

Make sure the queue limit is not set to 0, which disables queuing. Check that the service groups are set as described in Section 4.1.2.3. For detailed description of DECserver 100 commands and how to change the port characteristics, refer to *DECserver 100 Terminal Server Operator's Guide*. For information about the commands and procedures for another DECserver device, refer to your DECserver management guide.

4.1.2.2 How to Edit LAT Configuration File

The LAT configuration file (SYS$STARTUP:LAT$STARTUP.COM) defines host node service characteristics. Before you start the print queues, make sure the LAT driver is running and the ports are available.

Note

Commands referenced in this section are LATCP commands. For more information on LATCP commands, refer to the *VMS LAT Control Program (LATCP) Manual*.

Follow the steps below to configure a LAT port for a print queue.

- Edit LAT$SYSTARTUP.COM and add the following command to create an applications port on the host node (service node) that will support your printer:

  ```
  CREATE PORT LTAd:/NOLOG/APPLICATION
  ```

  In this command format, you supply the number of the applications port for *d*, which must be a unique number from 1-9999.

- In LAT$SYSTARTUP.COM, add the following command to associate the applications port with a remote port on a server.

  ```
  SET PORT LTAd:/NODE=server_name/PORT=port_n_name/QUEUE/APPLICATION
  ```

  ```
  LTAd         Name of the applications port
  server_name  Name assigned to the DECserver device
  port_n_name  DECserver port name
  ```

  The following example associates application ports LTA9000: with port PORT_7 on a remote DECserver 200 named DECLASER:

  ```
  SET PORT LTA9000: /NODE=DECLASER/PORT=PORT_7/QUEUE/APPLICATION
  ```

4.1.2.3 LAT Groups

To make a successful LAT connection, the following lists of groups must have at least one LAT group in common:

- On the DECserver port, authorized groups and current groups
- On the service node, enabled groups

If you have not set up these groups correctly, you receive the following error message when a print job is submitted:

```
%DCPS-E-LRJACCESSDENIED, Access denied
```

You can use LATCP commands to include the necessary LAT group designations. For additional information, refer to *VMS LAT Control Program (LATCP) Manual*.

4.2 Installing PrintServer Printers

PrintServer printers are network printers. They require the VMS DECnet software to be running on the OpenVMS systems where the DECprint Supervisor software is running. (The hardware required for installing PrintServer printers is described in Section 1.1.2)

The following procedures allow the DECprint Supervisor software to access PrintServer printers.

Note

For a PrintServer 17 printer running PrintServer Software for OpenVMS Version 5.0, please see Section 4.3.2 for additional procedures for setting up the printer.

4.2.1 Including the PrintServer Node Name in DCPS$STARTUP.COM

In the procedure for editing DCPS$STARTUP.COM, include the printer node name in the execution queue definition, as described in *DECprint Supervisor for OpenVMS System Manager's Guide*. For printers in a VMScluster configuration, include the scsnode-name of the system where you want the symbiont to run. The DECnet database must have an entry for each PrintServer printer accessible from the system.

4.2.2 Defining the PrintServer Network Node

The system manager can provide you with the registered DECnet node name and node address for the PrintServer printer. Run the NCP program and add the printer node to the network database. Use the following commands to define a PrintServer network node.

```
$ MCR NCP
NCP> SET NODE node-name ADDRESS node-address
NCP> DEFINE NODE node-name ADDRESS node-address
NCP> EXIT
$
```

```
node-name         Printer node name
node-address      Printer node address
```

For example, issue the following commands to add the printer ABLE (DECnet node address 5.85) to the network database:

```
$ MCR NCP
NCP> SET NODE ABLE ADDRESS 5.85
NCP> DEFINE NODE ABLE ADDRESS 5.85
NCP> EXIT
$
```

4.3 Printer Specific Setup

This section describes the special procedures or hints, other than those specified in Section 4.1 and Section 4.2, on setting up the following printers.

- DEClaser 5100 with internal hard disk, see Section 4.3.1
- PrintServer 17 printer running PrintServer Software for OpenVMS Version 5.0 or later, see Section 4.3.2.

4.3.1 Downloading Fonts to DEClaser 5100 Printer Hard Disk

DEClaser 5100 is a high performance 8 page-per-miniute PostScript printer which can print with 600 dpi resolution. ThaiPS supports printing of Thai script to this printer.

If you buy a DEClaser 5100 printer with the 128M hard disk option, Digital strongly recommend you to download all Thai PostScript fonts provided in ThaiPS to the hard disk. This operation should be done once after the installation of the printer. All fonts downloaded to the hard disk will be immediately available on the printer.

To download Thai fonts to the hard disk of the DEClaser 5100 printer, you have to execute the following procedure.

```
$ @SYS$MANAGER:DCPS$DL5100_LOAD_FONT.COM
```

The procedure will ask you to specify a TT or LAT port to which your DEClaser 5100 is connected. Make sure the speed of the port matches with the speed setting of the printer's main serial channel. If there is currently a print queue running on that port (or that printer), stop the queue by issuing the following command:

```
$ STOP/QUE/RESET your_print_queue
```

For example, if you connect the DEClaser 5100 to the LTA1 port:

```
$ @SYS$MANAGER:DCPS$DL5100_LOAD_FONT.COM

This procedure downloads Asian PostScript fonts to the hard disk of the
DEClaser 5100 printer. Please specify the name of the TT or LAT port that
connects to the printer.
If there is a print queue running on that port, please stop it by typing :

    $ STOP/QUE/RESET your_print_queue

The port to which DEClaser 5100 is connected : LTA1:
```

Then the procedure will list all PostScript fonts available on your system and ask you to specify which fonts you want to be downloaded to the hard disk of the printer.

```
Please select the fonts you want to downloaded to the hard disk of
the printer :

ANGSANAUPC-BOLD          ANGSANAUPC-BOLDITALIC     ANGSANAUPC-ITALIC
ANGSANAUPC-LIGHT         CORDIAUPC-BOLD            CORDIAUPC-BOLDITALIC
     .                         .                         .
     .                         .                         .
     .                         .                         .

You can specify a list of fonts using comma (,) and wildcard
characters (%)(*), e.g. Font*,MyFont

Enter the fonts you want to download : *
```

Normally you would download all PostScript fonts to the hard disk, so you can just answer * to the prompt. If you wish to download only some of the fonts on your system, you can specify a list of files separated by comma(s). You can also specify the files by using wild card characters * and %.

Table 4–3 shows the PostScript fonts available for Thai script. The samples of these fonts are depicted in Appendix A of *Thai Printing Support for OpenVMS Version 1.0 Release Notes*.

Table 4–3 Thai PostScript Fonts

Font Name	Font File Name in the system
AngsanaUPC-Light	ANGSANAUPC-LIGHT.
AngsanaUPC-Bold	ANGSANAUPC-BOLD.
AngsanaUPC-Italic	ANGSANAUPC-ITALIC.
AngsanaUPC-BoldItalic	ANGSANAUPC-BOLDITALIC.
CordiaUPC-Light	CORDIAUPC-LIGHT.
CordiaUPC-Bold	CORDIAUPC-BOLD.
CordiaUPC-Italic	CORDIAUPC-ITALIC.
CordiaUPC-BoldItalic	CORDIAUPC-BOLDITALIC.
EucrosiaUPC-Light	EUCROSIAUPC-LIGHT.
EucrosiaUPC-Bold	EUCROSIAUPC-BOLD.
EucrosiaUPC-Italic	EUCROSIAUPC-ITALIC.
EucrosiaUPC-BoldItalic	EUCROSIAUPC-BOLDITALIC.
FreesiaUPC-Light	FREESIAUPC-LIGHT.
FreesiaUPC-Bold	FREESIAUPC-BOLD.
FreesiaUPC-Italic	FREESIAUPC-ITALIC.
FreesiaUPC-BoldItalic	FREESIAUPC-BOLDITALIC.
IrisUPC-Light	IRISUPC-LIGHT.
IrisUPC-Bold	IRISUPC-BOLD.
IrisUPC-Italic	IRISUPC-ITALIC.
IrisUPC-BoldItalic	IRISUPC-BOLDITALIC.
JasmineUPC-Light	JASMINEUPC-LIGHT.
JasmineUPC-Bold	JASMINEUPC-BOLD.
JasmineUPC-Italic	JASMINEUPC-ITALIC.
JasmineUPC-BoldItalic	JASMINEUPC-BOLDITALIC.
KodchiangUPC-Light	KODCHIANGUPC-LIGHT.
KodchiangUPC-Bold	KODCHIANGUPC-BOLD.

(continued on next page)

Table 4–3 (Cont.) Thai PostScript Fonts

Font Name	Font File Name in the system
KodchiangUPC-Italic	KODCHIANGUPC-ITALIC.
KodchiangUPC-BoldItalic	KODCHIANGUPC-BOLDITALIC.
LilyUPC-Light	LilyUPC-LIGHT.
LilyUPC-Bold	LILYUPC-BOLD.
LilyUPC-Italic	LILYUPC-ITALIC.
LilyUPC-BoldItalic	LILYUPC-BOLDITALIC.
WaterlilyUPC-Light	WATERLILYUPC-LIGHT.
WaterlilyUPC-Bold	WATERLILYUPC-BOLD.
WaterlilyUPC-Italic	WATERLILYUPC-ITALIC.
WaterlilyUPC-BoldItalic	WATERLILYUPC-BOLDITALIC.
YuccaUPC-Light	YUCCAUPC-LIGHT.
YuccaUPC-Bold	YUCCAUPC-BOLD.
YuccaUPC-Italic	YUCCAUPC-ITALIC.
YuccaUPC-BoldItalic	YUCCAUPC-BOLDITALIC.

After you have confirmed that the list of fonts is correct, the procedure will start sending fonts to the printer. There will be informational messages telling you about the status of the job. When all fonts have been downloaded to the hard disk of the printer, you should power off the printer and turn it on again.

Note

The procedure DCPS$DL5100_LOAD_FONT.COM should be executed only once after the installation of the ThaiPS software, the DECprint Supervisor software and the DEClaser 5100 printer.

4.3.2 Enabling PrintServer 17 Printer to Access Thai Fonts

PrintServer 17 printer is a high performance, 17 pages-per-minute PostScript printer which can print with 600 dpi resolution. If the printer is running PrintServer Software for OpenVMS Version 5.0 or later, you have an option to let the PrintServer software to use Thai PostScript fonts directly from the supporting host (OpenVMS/Thai system). After enabling this option for the PrintServer 17 printer, all fonts located at SYS$COMMON:[SYSFONT.PSFONT.FONTS] are automatically available to the printer via the network, and there is no need to download Thai fonts to that printer before Thai documents are printed.

You are strongly recommended to execute the following procedure for each PrintServer 17 printer running PrintServer Software for OpenVMS Verison 5.0 or later to enable this option. Make sure that the running system is the supporting host of the PrintServer, and that the startup procedure SYS$STARTUP:LPS$STARTUP_SERVICES.COM of the PrintServer software has already been executed. Otherwise, this procedure will fail in looking for the LPS$ROOT directories.

```
@SYS$MANAGER:DCPS$LPS17_SETUP.COM
```

The procedure will create two directories under LPS$ROOT:, LPS$ROOT:[FONTS] and LPS$ROOT:[FONTDATA]. If the PrintServer software was installed on the system disk, it will use DCL command SET FILE/ENTER to link all files under SYS$COMMON:[SYSFONT.PSFONT.FONTS] and SYS$COMMON:[SYSFONT.PSFONT.FONTDATA] to these two directories. Otherwise, the procedure will just copy files from ThaiPS directories to LPS$ directories.

The procedure will then ask you to specify the node name of the PrintServer. The node name is used to locate and update the setup and resource files of the PrintServer. The procedure will also prompt you to specify the fonts you want to be loaded to the printer memory as persistent resources. Loading fonts to printer at startup time will greatly improve performance but will consume printer memory.

```
Loading fonts to the memory of a PrintServer at startup time will improve
printing performance. Please select the fonts which you want to persistently
load to the memory of the  printer :

ANGSANAUPC-BOLD          ANGSANAUPC-BOLDITALIC     ANGSANAUPC-ITALIC
ANGSANAUPC-LIGHT         CORDIAUPC-BOLD            CORDIAUPC-BOLDITALIC
     .                          .                         .
     .                          .                         .
     .                          .                         .
```

```
You can specify a list of fonts using comma (,) and wildcard
characters (%)(*),  e.g. Font*,MyFont

Enter the fonts you want to persistently load : CORDIAUPC-LIGHT
```

Normally you would load the PostScript font **CordiaUPC-Light** to the printer's memory since it is the font used to print Thai text file. If you wish to download more fonts on your system, you can specify a list of files separated by comma(s). You can also specify the files by using wild card characters * and %. Table 4–3 lists all the Thai fonts provided by ThaiPS. The samples of these fonts are depicted in Appendix A of the *Thai Printing Support for OpenVMS Version 1.0 Release Notes*.

After you have confirmed that the list of fonts is correct, the procedure will update the file LPSRESOURCE.*printer*. Then you have to reboot the printer so that the new configuration information will be used. After the printer is rebooted, the printer will be able to use the Thai PostScript fonts directly from the supporting host.

Note

The procedure DCPS$LPS17_SETUP.COM should be executed only once after the installation of the ThaiPS software, the DECprint Supervisor software and the PrintServer 17 printer. It does not required to be executed in subsequent system and PrintServer reboots.

A
Sample Installation

This appendix contains a sample installation of Thai Printing Support for OpenVMS. This sample was run on a system that had no previous version of Thai Printing Support for OpenVMS installed.

The sample installation is done on OpenVMS/Thai AXP Verision 1.5 and it assumes that DECnet has been shut down, that no users are logged on to your system.

```
$ @SYS$UPDATE:VMSINSTAL THAIPS010 DKA0:

 OpenVMS ALPHA Software Product Installation Procedure 1.5

It is 21-FEB-1994 at 11:47.

Enter a question mark (?) at any time for help.

* Are you satisfied with the backup of your system disk [YES]? NO

The following products will be processed:

  THAIPS V1.0

 Beginning installation of THAIPS V1.0 at 11:47

%VMSINSTAL-I-RESTORE, Restoring product save set A ...
%VMSINSTAL-I-RELMOVED, Product's release notes have been moved to SYS$HELP.
 ******************************************************************

 Thai Printing Support for OpenVMS, Verison 1.0 installation procedure

 ******************************************************************

 Installation taking place on an OpenVMS AXP system.
```

Sample Installation

```
* Do you want to purge files replaced by this installation [YES]? NO
%THAIPS-I-ESTTIME, This installation will take between 5 and 20 minutes
%THAIPS-I-NOQUES, No further questions will be asked
%VMSINSTAL-I-RESTORE, Restoring product save set B ...
%VMSINSTAL-I-SYSDIR, This product creates system disk directory
         VMI$ROOT:[SYSFONT.PSFONT.FONTS].
%VMSINSTAL-I-SYSDIR, This product creates system disk directory
         VMI$ROOT:[SYSFONT.PSFONT.FONTDATA].
%VMSINSTAL-I-SYSDIR, This product creates system disk directory
         VMI$ROOT:[SYSFONT.PSFONT.BITMAP].

        For Thai printing on PostScript printers, the fonts required by the
        PostScript files must be available on the printers before they are
        printed. Make sure if the printers have those fonts available and
        download the fonts to them if necessary before you print.

             $@SYS$MANAGER:DCPS$FONT_LOADER.COM

        Printing of Thai text files assumes the font "CordiaUPC-Light" for any
        Thai characters. If text files are to be printed, make sure
        "CordiaUPC-Light" is available on the printer. See the Thai Printing
        Support release notes for more details on the Thai printing features
        provide.

%VMSINSTAL-I-MOVEFILES, Files will now be moved to their target directories...
 Installation of THAIPS V1.0 completed at 11:49

    Adding history entry in VMI$ROOT:[SYSUPD]VMSINSTAL.HISTORY

    Creating installation data file: VMI$ROOT:[SYSUPD]THAIPS010.VMI_DATA

 VMSINSTAL procedure done at 11:49
```

B

Files Installed on Your System

The ThaiPS installation procedure installs a number of files on your system. The following list contains the names of all files created on your system:

```
SYS$COMMON:[SYSFONT.PSFONT.FONTS]ANGSANAUPC-BOLD.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]ANGSANAUPC-BOLDITALIC.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]ANGSANAUPC-ITALIC.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]ANGSANAUPC-LIGHT.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]CORDIAUPC-BOLD.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]CORDIAUPC-BOLDITALIC.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]CORDIAUPC-ITALIC.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]CORDIAUPC-LIGHT.
SYS$COMMON:[SYSEXE]DCPS$DL_FONT.EXE
SYS$COMMON:[SYSMGR]DCPS$DL5100_LOAD_FONT.COM
SYS$COMMON:[SYSMGR]DCPS$ENABLE_THAIPS.COM
SYS$COMMON:[SYSMGR]DCPS$FONT_LOADER.COM
SYS$COMMON:[SYSMGR]DCPS$HELP_THAIPS.HLP
SYS$COMMON:[SYSMGR]DCPS$LPS17_SETUP.COM
SYS$COMMON:[SYSMGR]DCPS$TAILOR_FONTNAME.COM
SYS$COMMON:[SYSFONT.PSFONT.FONTS]EUCROSIAUPC-BOLD.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]EUCROSIAUPC-BOLDITALIC.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]EUCROSIAUPC-ITALIC.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]EUCROSIAUPC-LIGHT.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]FREESIAUPC-BOLD.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]FREESIAUPC-BOLDITALIC.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]FREESIAUPC-ITALIC.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]FREESIAUPC-LIGHT.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]IRISUPC-BOLD.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]IRISUPC-BOLDITALIC.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]IRISUPC-ITALIC.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]IRISUPC-LIGHT.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]JASMINEUPC-BOLD.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]JASMINEUPC-BOLDITALIC.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]JASMINEUPC-ITALIC.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]JASMINEUPC-LIGHT.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]KODCHIANGUPC-BOLD.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]KODCHIANGUPC-BOLDITALIC.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]KODCHIANGUPC-ITALIC.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]KODCHIANGUPC-LIGHT.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]LILYUPC-BOLD.
```

Files Installed on Your System

```
SYS$COMMON:[SYSFONT.PSFONT.FONTS]LILYUPC-BOLDITALIC.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]LILYUPC-ITALIC.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]LILYUPC-LIGHT.
SYS$COMMON:[SYSMGR]LPS$TAILOR_TISCODE_FONT.TEMPLATE
SYS$COMMON:[SYSMGR]LPS$TEXTMORPHING.PS
SYS$COMMON:[SYSHLP]THAIPS010.RELEASE_NOTES
SYS$COMMON:[SYSLIB]TRN$TIS_NOSCM_PS.EXE
SYS$COMMON:[SYSLIB]TRN$TIS_SCM_PS.EXE
SYS$COMMON:[SYSFONT.PSFONT.FONTS]WATERLILYUPC-BOLD.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]WATERLILYUPC-BOLDITALIC.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]WATERLILYUPC-ITALIC.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]WATERLILYUPC-LIGHT.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]YUCCAUPC-BOLD.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]YUCCAUPC-BOLDITALIC.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]YUCCAUPC-ITALIC.
SYS$COMMON:[SYSFONT.PSFONT.FONTS]YUCCAUPC-LIGHT.
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