DIGITAL UNIX

Technical Reference for Using Thai Features

October 1998

This guide provides the Thai-specific information and describes the Thai features supported on the DIGITAL UNIX system.

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Software Version:	Version 4.0E

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Preface

This guide provides Thai-specific information, such as character sets and locales, for end users and programmers so that they can use and develop internationalized applications in Thai locales on the DIGITAL UNIX operating system. The details of the Thai features are also documented in this guide.

Intended Audience

This guide is intended for new and experienced DIGITAL UNIX operating system end users and programmers who are interested in the Thai variant.

Structure of This Guide

This guide consists of nine chapters:

Chapter 1 Describes the Thai character sets supported in the DIGITAL UNIX operating system software.

Chapter 2 Describes the Thai codesets.

Chapter 3 Describes the Thai locales.

Chapter 4 Describes the hardware devices that support the Thai locales.

Chapter 5 Provides information on Thai fonts.

Chapter 6 Provides information on Thai keyboards.

Chapter 7 Describes how to input Thai characters.

Chapter 8 Introduces the Thai printing support.

Chapter 9 Describes other Thai features.

Related Documents

Writing Software for the International Market

Programming for the World: A Guide to Internationalization, Sandra Martin O'Donnell, Prentice Hall, 1994

OSF/Motif User's Guide Revision 1.2, Open Software Foundation, Prentice Hall, Englewood Cliffs, New Jersey 07632

OSF/Motif Style Guide Revision 1.2, Open Software Foundation, Prentice Hall, Englewood Cliffs, New Jersey 07632

X Window System, Third Edition, Robert W. Scheifler and James Gettys, Digital Press

Programmer's Supplement for Release 5 of the X Window System, Version 11, David Flanagan, O'Reilly & Associates, Inc.

Draft Industrial Standard - Thai Language Software Standard WTT2.0

Conventions

The following typographical conventions are used in this manual:

% $	A percent sign represents the C shell system prompt. A dollar sign represents the system prompt for the Bourne and Korn shell.
#	A number sign represents the superuser prompt.
% **cat**	Boldface type in interactive examples indicates typed user input.
file	Italic (slanted) type indicates variable values, placeholders, and function argument names.
[|] **{ | }**	In syntax definitions, brackets indicate items that are optional and braces indicate items that are required.

	Vertical bars separating items inside brackets or braces indicate that you choose one item from among those listed.
`...`	In syntax definitions, a horizontal ellipsis indicates that the preceding item can be repeated one or more times.
`cat(1)`	A cross-reference to a reference page includes the appropriate section number in parentheses. For example, `cat`(1) indicates that you can find information on the `cat` command in Section 1 of the reference pages.
[RETURN]	In an example, a key name enclosed in a box indicates that you press that key.
Ctrl/*x*	This symbol indicates that you hold down the first named key while pressing the key or mouse button that follows the slash. In examples, this key combination is enclosed in a box (for example [Ctrl/C]).

1

Character Sets

The DIGITAL UNIX operating system software supports the Thai Industrial Standard (TIS) character set TIS 620-2533.

The TIS 620 character set is a national standard for a primary set of graphic characters for Thai information interchange. It was first published by the Thai Industrial Standards Institute, Ministry of Industry, Thailand in 1986 (Buddhist year 2529) and was revised in 1990 (Buddhist year 2533). It defines 89 characters.

1.1 Consonants

The TIS 620 character set contains 44 consonants, as shown in the following table:

Decimal	Hexadecimal	Character Name
161	A1	KO KAI
162	A2	KHO KHAI
163	A3	KHO KHUAT
164	A4	KHO KHWAI
165	A5	KHO KHON
166	A6	KHO RAKHANG
167	A7	NGO NGU
168	A8	CHO CHAN
169	A9	CHO CHING
170	AA	CHO CHANG
171	AB	SO SO
172	AC	CHO CHOE
173	AD	YO YING
174	AE	DO CHADA

Decimal	Hexadecimal	Character Name
175	AF	TO PATAK
176	B0	THO THOTHAN
177	B1	THO NANGMONTHO
178	B2	THO PHOO THAO
179	B3	NOR NANE
180	B4	DOR DEK
181	B5	TO TAO
182	B6	THO THUNG
183	B7	THO THAHAN
184	B8	THO THONG
185	B9	NO NU
186	BA	BO BAIMAI
187	BB	PO PLA
188	BC	PHO PERNG
189	BD	FO FA
190	BE	PO PAN
191	BF	FO FAN
192	C0	PO SAMPOW
193	C1	MO MA
194	C2	YO YAK
195	C3	RO RUA
197	C5	LO LING
199	C7	WO WAEN
200	C8	SO SALA
201	C9	SO RUSI
202	CA	SO SUA
203	CB	HO HEEP
204	CC	LO CHULA
205	CD	O ANG
206	CE	HO NOKHUK

1.2 Vowels

The TIS 620 character set contains 18 vowels, divided into four groups.

Five leading vowels; these vowels are placed before consonants:

Decimal	Hexadecimal	Character Name
224	E0	SARA E
225	E1	SARA AE
226	E2	SARA O
227	E3	SARA AI MAIMUAN
228	E4	SARA AI MAIMALAI

Six following vowels; these vowels are placed after consonants. The six following vowels are further divided into two groups.

Normal following vowels:

Decimal	Hexadecimal	Character Name
208	D0	SARA A
210	D2	SARA AA
211	D3	SARA AM
229	E5	LAKKHANGYAO

Special following vowels:

Decimal	Hexadecimal	Character Name
196	C4	RU
198	C6	LU

Two below vowels; these vowels are placed below consonants:

Decimal	Hexadecimal	Character Name
216	D8	SARA U
217	D9	SARA UU

Five above vowels; these vowels are placed above consonants:

Decimal	Hexadecimal	Character Name
209	D1	MAI HAN-AKAT
212	D4	SARA E
213	D5	SARA EE
214	D6	SARA UR
215	D7	SARA UUR

1.3 Tone Marks

The TIS 620 character set contains four tone marks:

Decimal	Hexadecimal	Character Name
232	E8	MAI EK
233	E9	MAI THO
234	EA	MAI TRIE
235	EB	MAI CHATTAWA

1.4 Diacritics

The TIS 620 character set contains five diacritics divided into two groups.

Four above diacritics; these diacritics are placed above initial or final consonants:

Decimal	Hexadecimal	Character Name
231	E7	MAITAIKHU
236	EC	THANTHAKHAT
237	ED	NIKHAHIT
238	EE	YAMAKKAN

One below diacritic; this diacritic is placed below final or clustered consonants:

Decimal	Hexadecimal	Character Name
218	DA	PHINTHU

1.5 Noncomposible Characters

The TIS 620 character set contains 18 noncomposible characters. These characters cannot be composed with above vowels, below vowels, tone marks, above diacritics and below diacritic. Noncomposible characters are divided into four groups.

One no-break space:

Decimal	Hexadecimal	Character Name
160	A0	NO-BREAK SPACE

Ten Thai digits:

Decimal	Hexadecimal	Character Name
240	F0	THAI ZERO
241	F1	THAI ONE
242	F2	THAI TWO
243	F3	THAI THREE
244	F4	THAI FOUR
245	F5	THAI FIVE
246	F6	THAI SIX
247	F7	THAI SEVEN
248	F8	THAI EIGHT
249	F9	THAI NINE

Six Thai special characters:

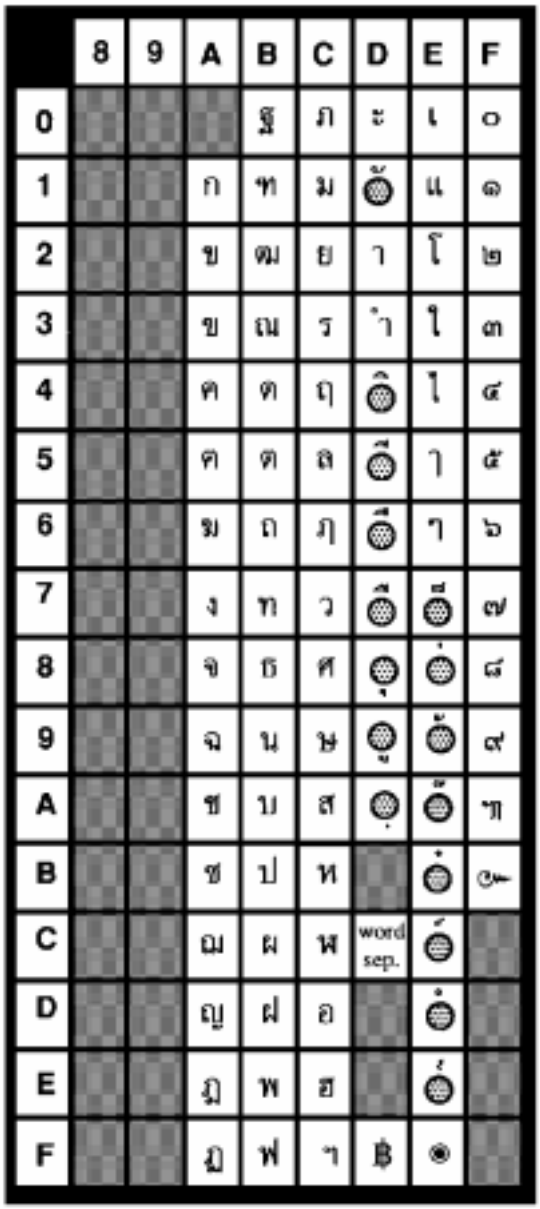
Decimal	Hexadecimal	Character Name
207	CF	PAYANGNOI
223	DF	BAHT (Thai currency sign)
230	E6	MAIYAMOK
239	EF	FONGMAN
250	FA	ANGKHANKHU
251	FB	KHOMUT

One word separator:

Decimal	Hexadecimal	Character Name
220	DC	WORD SEPARATOR

This character is a nonprintable character. It is used for separating words in Thai sentences. Applications can make use of it to simplify Thai word processing.

Figure 1-1: TIS 620-2533 Character Set



2

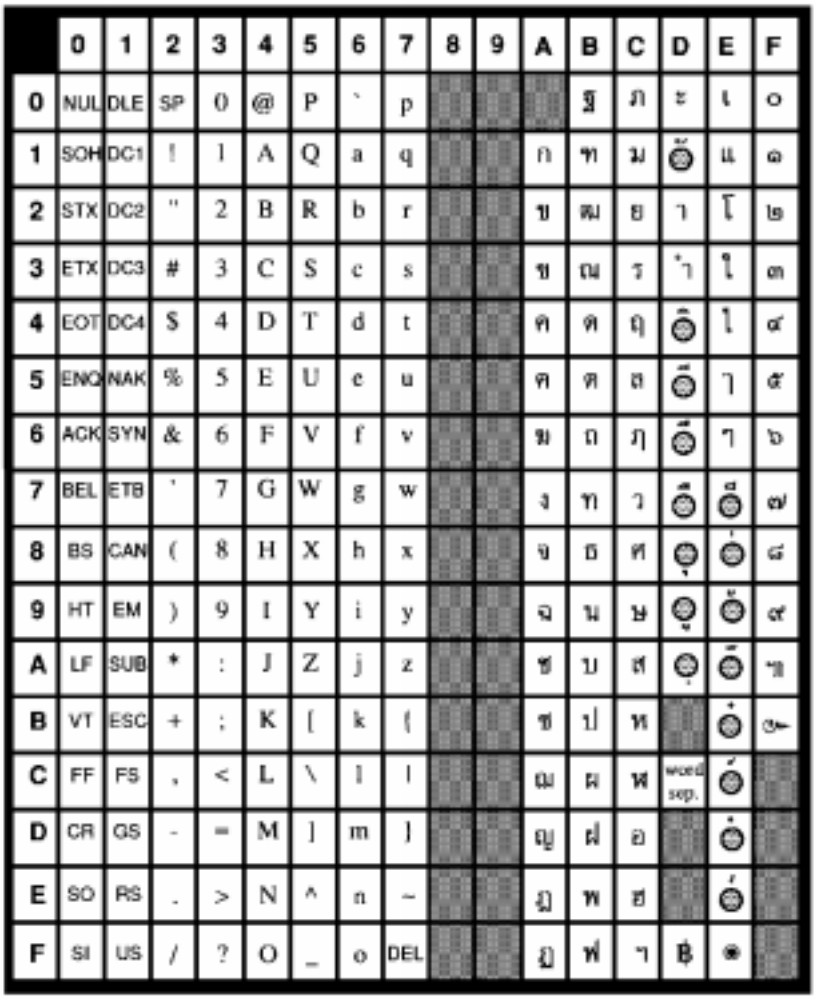
Codesets

The DIGITAL UNIX operating system software supports the following Thai codeset:

- TACTIS (Thai API Consortium/Thai Industrial Standard)

The TACTIS codeset, shown in Figure 2-1, is composed of the ASCII (ISO 646-1991) character set and the TIS 620-2533 character set. This is an 8-bit codeset with characters assigned values from 0x0 to 0xFF.

Figure 2-1: TACTIS Codeset



	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	NUL	DLE	SP	0	@	P	`	p				ฐ	ภ	ะ	เ	๐
1	SOH	DC1	!	1	A	Q	a	q			ก	ฑ	ม	◌ั	แ	๑
2	STX	DC2	"	2	B	R	b	r			ข	ฒ	ย	า	โ	๒
3	ETX	DC3	#	3	C	S	c	s			ฃ	ณ	ร	◌ำ	ใ	๓
4	EOT	DC4	$	4	D	T	d	t			ค	ด	ฤ	◌ิ	ไ	๔
5	ENQ	NAK	%	5	E	U	e	u			ฅ	ต	ล	◌ี	ๅ	๕
6	ACK	SYN	&	6	F	V	f	v			ฆ	ถ	ฦ	◌ึ	ๆ	๖
7	BEL	ETB	'	7	G	W	g	w			ง	ท	ว	◌ื	◌็	๗
8	BS	CAN	(	8	H	X	h	x			จ	ธ	ศ	◌ุ	◌่	๘
9	HT	EM	)	9	I	Y	i	y			ฉ	น	ษ	◌ู	◌้	๙
A	LF	SUB	*	:	J	Z	j	z			ช	บ	ส	◌ฺ	◌๊	ฯ
B	VT	ESC	+	;	K	[	k	{			ซ	ป	ห		◌๋	๏
C	FF	FS	,	<	L	\	l	|		ฌ	ผ	ฬ	word sep.	◌์	
D	CR	GS	-	=	M	]	m	}			ญ	ฝ	อ		◌ํ	
E	SO	RS	.	>	N	^	n	~			ฎ	พ	ฮ		◌๎	
F	SI	US	/	?	O	_	o	DEL			ฏ	ฟ	ฯ	฿	◌๏	

word sep. = word separator character

2.1 Character Classification

To facilitate the processing of characters encoded in the TACTIS codeset, such as displaying Thai characters and input-sequence checking, characters are classified into several categories:

- Control Characters (CTRL). Nondisplayable control characters can be used to control output or for data communication. The 66 control characters are: 00-1F, 7F, 80-9F and FF.
- Consonants (CONS). The 44 Thai consonants defined in TIS 620-2533.
- Vowels (-V)
  - Leading vowels (LV). The five leading vowels defined in TIS 620-2533.
  - Following vowels (FV). The six following vowels defined in TIS 620-2533.
  - Below vowels (BV). The two below vowels defined in TIS 620-2533.
  - Above vowels (AV). The five above vowels defined in TIS 620-2533.
  - Tone marks (TONE). The four tone marks defined in TIS 620-2533.
- Diacritics (-D)
  - Above diacritics (AD). The four above diacritics defined in TIS 620-2533.
  - Below diacritic (BD). The below diacritic defined in TIS 620-2533.
- Noncomposibles (NON). Those characters that do not fit into the other four character classes. This group of characters cannot be composed with above vowels, below vowels, tone marks, above diacritics, and below diacritic. There are 119 noncomposible characters divided into seven groups:
  - Graphic characters. The 94 graphic characters defined in ISO 646-1991. They include:
    - 52 English alphabetic characters (A-Z, a-z)
    - 10 digits (0-9)
    - 32 special characters: 21-2F, 3A-3F and 7B-7E
  - Space. The character code is 20.
  - No-Break space. The character code is A0.
  - Thai digits. The ten Thai digits defined in TIS 620-2533.
  - Thai special characters. The six Thai special characters defined in TIS 620-2533.

– Word separator. The word separator defined in TIS 620-2533.

– Reserved code points. Six code points are reserved for future use.

To meet some special requirements of Thai input and output, some character classes, such as FV, BV, AV, and AD, are further divided into subclasses. For details, see Table 2–1.

Table 2–1: Thai Character Classification

Class	Number	Description
CTRL	66	ISO 646-1983 control codes: 00-1F, 7F, 80-9F, FF
NON	119	• ISO 646-1991 character codes: 20-7E • TIS 620-2533 character codes: A0, CF, DC, DF, E6, EF, F0-F9, FA, FI • Reserved code points: DB, DD, DE, FC, FD, FE.
CONS	44	A1-C3, C5, C7-CE
LV	5	E0, E1, E2, E3, E4
FV1	3	D0, D2, D3
FV2	2	E5
FV3	2	C4 and C6 (These two characters also behave as LV in the case of LV+CONS)
BV1	1	D8
BV2	1	D9
BD	1	DA
TONE	4	E8, E9, EA, EB
AD1	2	ED, EC
AD2	1	E7
AD3	1	EE
AV1	1	D4
AV2	2	D1, D6
AV3	2	D5, D7

2.2 Character Levels

Characters defined in the TACTIS codeset can also be classified according to character levels. There are five character levels:

- Nondisplayable level includes all control characters in the CTRL category.
- Base level includes all characters in the NON, CONS, FV and LV categories. Characters at this level are drawn on baseline.
- Above level includes all characters in the AD3, AV1, AV2 and AV3 categories. Characters at this level are drawn directly above final consonants.
- Below level includes all characters in the BV1, BV2 and BD categories. Characters at this level are drawn directly below final consonants.
- Top level includes all characters in the TONE, AD1 and AD2 categories. Characters at this level are drawn on top of above characters. If above level characters do not exist, top level characters can be drawn at the above level. Characters at this level also indicate the end of character cells.

3

Locales

The DIGITAL UNIX operating system software supports a single Thai locale that has two names:

- th_TH
- th_TH.TACTIS

If you are using DECwindows Motif, you can choose the locale from the Language menu of the Session Manager. If you are using CDE, you can choose the locale from the language menu on the CDE login screen.

4

Local Language Devices

4.1 Terminals

The DIGITAL UNIX operating system software supports the VT382-T Thai terminal. Thai DECterm is the emulation of the VT382-T Thai terminal, which provides compatible functionalities for running Thai character-cell terminal applications. For the details of Thai DECterm, see Chapter 9, Other Thai Features.

Character-cell terminal applications can process the Thai locale properly through DIGITAL UNIX run-time libraries, such as the C library and the curses library, with the information defined in the terminfo and termcap databases. To set up the environment to process in the Thai locale, you should set the TERM environment variable to vt382t by entering the following command:

```
% setenv TERM vt382t
```

4.2 Printers

The DIGITAL UNIX operating system software supports the following dot matrix Thai printer:

- Epson LQ1050+

The following PostScript printers can be configured for Thai printing:

- DEClaser 1152
- DEClaser 5100 with font disk (LN09X-HD)
- PrintServer 17

The generic `wwpsof` filter can be used to print Thai characters on any PostScript printer.

The print filters in Table 4-1 are provided to support Thai printers.

Table 4–1: Thai Print Filters

Filter Name	Printer Name
thailpof	Epson LQ1050+
dl1152wrof	DEClaser 1152
dl5100wrof	DEClaser 5100
lpsof	PrintServer 17
wwpsof	All PostScript printers

Note

To use PrintServer 17, the PrintServer Software V5.0 or later for Digital UNIX, is also required.

For the details about setting up Thai printer queues, see Chapter 8, Thai Printing Support.

5

Fonts

5.1 DECwindows Fonts

The DIGITAL UNIX operating system software provides the Thai DECwindows fonts described in Table 5-1 in various sizes for 75 dpi (dot-per-inch) display devices.

Table 5–1: Thai Screen Fonts

Typefaces	Bounding Box	Remarks
Screen	7 x 14	Mandatory font
	8 x 18	Mandatory font
	12 x 24	Mandatory font

These mandatory fonts are available when you install the Thai variant. In addition to these Thai fonts, several miscellaneous screen fonts are provided in the Thai DECterm and toolkit.

No 100 dpi Thai fonts are provided in the kit. To allow you to use the Thai fonts on 100 dpi display devices, a font alias file is provided to map the 75 dpi font names to the respective 100 dpi font names.

5.1.1 XLFD Font Names

You must specify the DECwindows font names in XLFD (X Logical Font Description) format in your application programs or in the application resource files. You can specify wildcards (*) for any fields in the font names.

You can use the following font names for either 75 dpi or 100 dpi display devices. To explicitly state the display resolution, you can specify *75* or *100* in the X- and Y-resolution fields, that is, the asterisks in the following XLFD names.

Screen family font names in XLFD format:

-ADECW-Screen-Medium-R-Normal--18-180-*-*-P-80-TIS620.2533-1
-ADECW-Screen-Medium-R-Normal--14-140-*-*-P-70-TIS620.2533-1
-ADECW-Screen-Medium-R-Normal--24-240-*-*-P-120-TIS620.2533-1

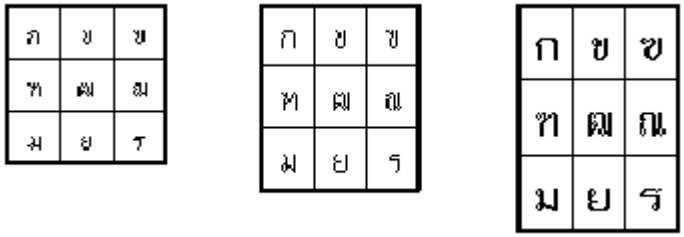
XLFD of miscellaneous Thai screen fonts:

XLFD-Font Name	Character Set
-ADECW-Screen-Medium-R-Normal--18-180-*-*-M-80-iso8859-1	ISO Latin-1
-ADECW-Screen-Medium-R-Normal--18-180-*-*-M-80-DEC-DECctrl	DEC Display Control
-ADECW-Screen-Medium-R-Normal--18-180-*-*-M-80-DEC-DECsuppl	DEC Supplemental
-ADECW-Screen-Medium-R-Normal--18-180-*-*-M-80-DEC-DECtech	DEC Technical
-ADECW-Screen-Medium-R-Normal--24-240-*-*-M-120-iso8859-1	ISO Latin-1
-ADECW-Screen-Medium-R-Normal--24-240-*-*-M-120-DEC-DECctrl	DEC Display Control
-ADECW-Screen-Medium-R-Normal--24-240-*-*-M-120-DEC-DECsuppl	DEC Supplemental
-ADECW-Screen-Medium-R-Normal--24-240-*-*-M-120-DEC-DECtech	DEC Technical

5.1.2 Bitmap Font Samples

Figure 5–1 shows samples of the screen family of Thai fonts.

Figure 5–1: Screen Font Sample



5.1.3 Specifying Fonts in DECwindows Applications

Table 5-2 shows the default font list used in the Motif Toolkit.

Table 5–2: Thai Default Font List

XLFD Font Name	Character Set
-ADECW-Screen-Medium-R-Normal--*-180-*-*-M-80-iso8859-1	iso8859-1
-ADECW-Screen-Medium-R-Normal--*-180-*-*-P-80-TIS620.2533-1	TIS620.2533-1
-ADECW-Screen-Medium-R-Normal--*-180-*-*-*-*-*	Fontset

To override the default font list of a Thai DECwindows application, you should specify the ISO Latin-1 and Thai fonts as well as the Thai fontset when creating widget instances. For details, see *Writing Software for the International Market*.

5.1.4 Outline Fonts

The DIGITAL UNIX operating system software provides the Thai outline fonts shown in Table 5-3.

Table 5–3: Thai Outline Fonts

Font Family	Font Name
AngsanaUPC Family	AngsanaUPC-Light AngsanaUPC-Italic AngasanaUPC-Bold AngsanaUPC-BoldItalic
CordiaUPC Family	CordiaUPC-Light CordiaUPC-Italic CordiaUPC-Bold CordiaUPC-BoldItalic
EucrosiaUPC Family	EucrosiaUPC-Light EucrosiaUPC-Italic EucrosiaUPC-Bold EucrosiaUPC-BoldItalic
FreesiaUPC Family	FreesiaUPC-Light FreesiaUPC-Italic FreesiaUPC-Bold FreesiaUPC-BoldItalic
IrisUPC Family	IrisUPC-Light IrisUPC-Italic IrisUPC-Bold IrisUPC-BoldItalic

JasmineUPC Family	JasmineUPC-Light JasmineUPC-Italic JasmineUPC-Bold JasmineUPC-BoldItalic
KodchiangUPC Family	KodchiangUPC-Light KodchiangUPC-Italic KodchiangUPC-Bold KodchiangUPC-BoldItalic
LilyUPC Family	LilyUPC-Light LilyUPC-Italic LilyUPC-Bold LilyUPC-BoldItalic
WaterlilyUPC Family	WaterlilyUPC-Light WaterlilyUPC-Italic WaterlilyUPC-Bold WaterlilyUPC-BoldItalic
YuccaUPC Family	YuccaUPC-Light YuccaUPC-Italic YuccaUPC-Bold YuccaUPC-BoldItalic

These Thai outline fonts can be used for:

- Printing on PostScript printers. For details see Chapter 8, Thai Printing Support.
- Displaying through the R6 X Windows System Type 1 rasterizer. To use these outline fonts, you must add the `$I18NPATH/usr/lib/X11/fonts/Type1UPC` directory to your font path with the following command:

  ```
  % xset +fp $I18NPATH/usr/lib/X11/fonts/Type1UPC
  ```

- Displaying through Display PostScript. You can view PostScript files with Thai characters using the CDA Viewer or through the Display PostScript extension.

5.2 XLFD Font Names of Thai Outline Fonts

To use the Thai outline fonts through the Type 1 rasterizer, you can specify the font names in XLFD format in your application programs or in the application resource files, just as you do with ordinary DECwindows bitmap fonts.

To specify the XLFD font name of an outline font, you can replace the fields currently marked with 0 (zero) with the following information:

1. Field 1 — The font height in number of dots. Usually, an asterisk is entered in this field.
2. Field 2 — The font height in point size. For example, you can enter 240 to specify a 24 point font.

3. Fields 3 and 4 — The X- and Y-resolution. Usually, they have the value of 75 or 100.
4. Field 5 — The average font width in point size. Usually, an asterisk is put in this field.

For example, if you want to use a 48 point font of the AngsanaUPC family in bold-italic style for a 100 dpi display device, you would specify:

```
-upc-angsana-bold-i-normal--*-480-100-100-p-*-tis620.2533-1
```

Table 5–4: XLFD of Thai Outline Fonts

Outline Font	XLFD Font Name
AngsanaUPC-Bold	-upc-angsana-bold-r-normal--0-0-0-0-p-0-tis620.2533-1
AngsanaUPC-BoldItalic	-upc-angsana-bold-i-normal--0-0-0-0-p-0-tis620.2533-1
AngsanaUPC-Italic	-upc-angsana-medium-i-normal--0-0-0-0-p-0-tis620.2533-1
AngsanaUPC-Light	-upc-angsana-medium-r-normal--0-0-0-0-p-0-tis620.2533-1
CordiaUPC-Bold	-upc-cordia-bold-r-normal--0-0-0-0-p-0-tis620.2533-1
CordiaUPC-BoldItalic	-upc-cordia-bold-i-normal--0-0-0-0-p-0-tis620.2533-1
CordiaUPC-Italic	-upc-cordia-medium-i-normal--0-0-0-0-p-0-tis620.2533-1
CordiaUPC-Light	-upc-cordia-medium-r-normal--0-0-0-0-p-0-tis620.2533-1
EucrosiaUPC-Bold	-upc-eucrosia-bold-r-normal--0-0-0-0-p-0-tis620.2533-1
EucrosiaUPC-BoldItalic	-upc-eucrosia-bold-i-normal--0-0-0-0-p-0-tis620.2533-1
EucrosiaUPC-Italic	-upc-eucrosia-medium-i-normal--0-0-0-0-p-0-tis620.2533-1
EucrosiaUPC-Light	-upc-eucrosia-medium-r-normal--0-0-0-0-p-0-tis620.2533-1
FreesiaUPC-Bold	-upc-freesia-bold-r-normal--0-0-0-0-p-0-tis620.2533-1
FreesiaUPC-BoldItalic	-upc-freesia-bold-i-normal--0-0-0-0-p-0-tis620.2533-1
FreesiaUPC-Italic	-upc-freesia-medium-i-normal--0-0-0-0-p-0-tis620.2533-1
FreesiaUPC-Light	-upc-freesia-medium-r-normal--0-0-0-0-p-0-tis620.2533-1
IrisUPC-Bold	-upc-iris-bold-r-normal--0-0-0-0-p-0-tis620.2533-1
IrisUPC-BoldItalic	-upc-iris-bold-i-normal--0-0-0-0-p-0-tis620.2533-1
IrisUPC-Italic	-upc-iris-medium-i-normal--0-0-0-0-p-0-tis620.2533-1
IrisUPC-Light	-upc-iris-medium-r-normal--0-0-0-0-p-0-tis620.2533-1
JasmineUPC-Bold	-upc-jasmine-bold-r-normal--0-0-0-0-p-0-tis620.2533-1
JasmineUPC-BoldItalic	-upc-jasmine-bold-i-normal--0-0-0-0-p-0-tis620.2533-1
JasmineUPC-Italic	-upc-jasmine-medium-i-normal--0-0-0-0-p-0-tis620.2533-1
JasmineUPC-Light	-upc-jasmine-medium-r-normal--0-0-0-0-p-0-tis620.2533-1
KodchiangUPC-Bold	-upc-kodchiang-bold-r-normal--0-0-0-0-p-0-tis620.2533-1
KodchiangUPC-BoldItalic	-upc-kodchiang-bold-i-normal--0-0-0-0-p-0-tis620.2533-1
KodchiangUPC-Italic	-upc-kodchiang-medium-i-normal--0-0-0-0-p-0-tis620.2533-1

KodchiangUPC-Light	-upc-kodchiang-medium-r-normal--0-0-0-0-p-0-tis620.2533-1
LilyUPC-Bold	-upc-lily-bold-r-normal--0-0-0-0-p-0-tis620.2533-1
LilyUPC-BoldItalic	-upc-lily-bold-i-normal--0-0-0-0-p-0-tis620.2533-1
LilyUPC-Italic	-upc-lily-medium-i-normal--0-0-0-0-p-0-tis620.2533-1
LilyUPC-Light	-upc-lily-medium-r-normal--0-0-0-0-p-0-tis620.2533-1
WaterlilyUPC-Bold	-upc-waterlily-bold-r-normal--0-0-0-0-p-0-tis620.2533-1
WaterlilyUPC-BoldItalic	-upc-waterlily-bold-i-normal--0-0-0-0-p-0-tis620.2533-1
WaterlilyUPC-Italic	-upc-waterlily-medium-i-normal--0-0-0-0-p-0-tis620.2533-1
WaterlilyUPC-Light	-upc-waterlily-medium-r-normal--0-0-0-0-p-0-tis620.2533-1
YuccaUPC-Bold	-upc-yucca-bold-r-normal--0-0-0-0-p-0-tis620.2533-1
YuccaUPC-BoldItalic	-upc-yucca-bold-i-normal--0-0-0-0-p-0-tis620.2533-1
YuccaUPC-Italic	-upc-yucca-medium-i-normal--0-0-0-0-p-0-tis620.2533-1
YuccaUPC-Light	-upc-yucca-medium-r-normal--0-0-0-0-p-0-tis620.2533-1

5.3 Outline Font Samples

Figures 5-2 through 5-11 illustrate samples of Thai outline fonts.

Figure 5–2: AngsanaUPC Font Sample

Family AngsanaUPC

Light: แบบฟอนท์ภาษาไทย AngsanaUPC ตัวธรรมดา

Italic: *แบบฟอนท์ภาษาไทย AngsanaUPC ตัวเอน*

Bold: **แบบฟอนท์ภาษาไทย AngsanaUPC ตัวหนา**

Bold Italic: ***แบบฟอนท์ภาษาไทย AngsanaUPC ตัวหนาเอน***

Figure 5–3: CordiaUPC Font Sample

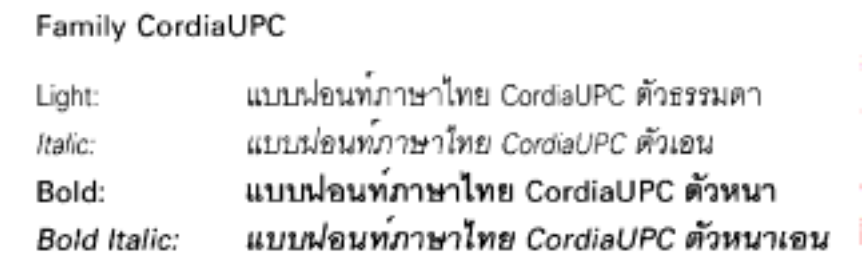


Figure 5–4: EucrosiaUPC Font Sample

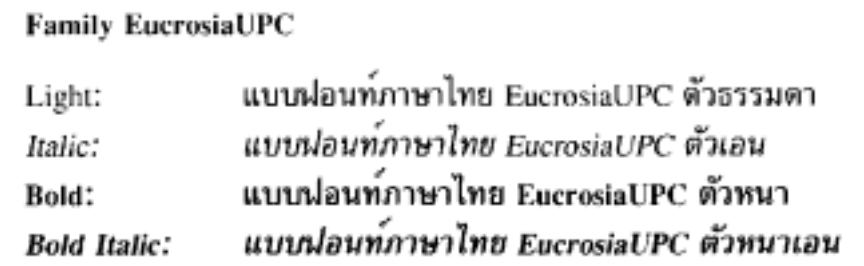


Figure 5–5: FreesiaUPC Font Sample

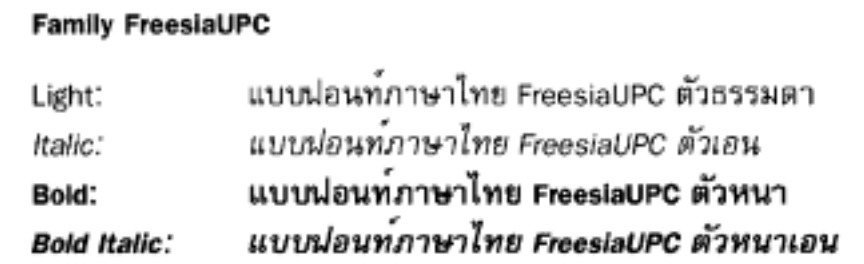


Figure 5–6: IrisUPC Font Sample

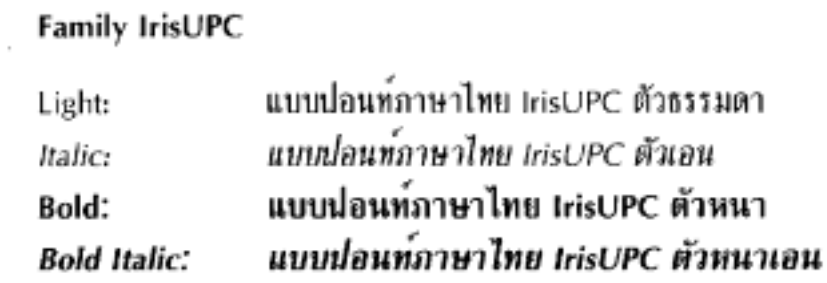


Figure 5–7: JasmineUPC Font Sample

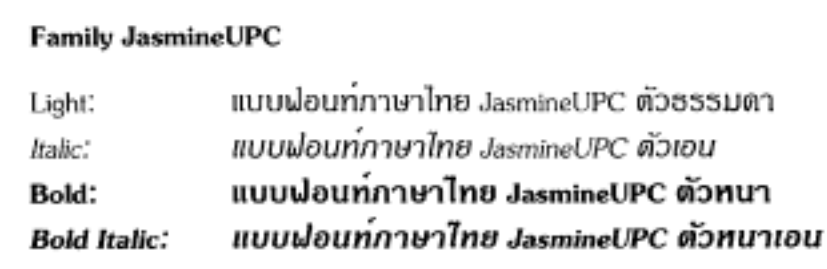


Figure 5–8: KodchiangUPC Font Sample

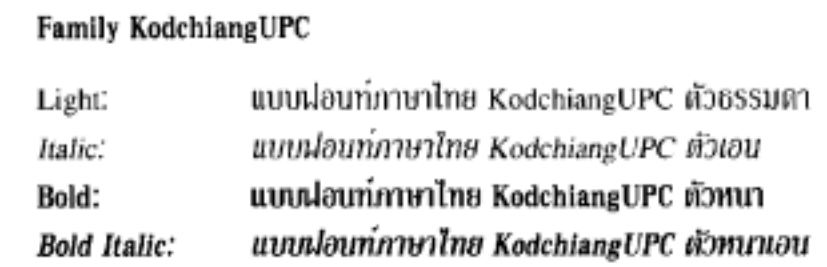


Figure 5–9: LilyUPC Font Sample

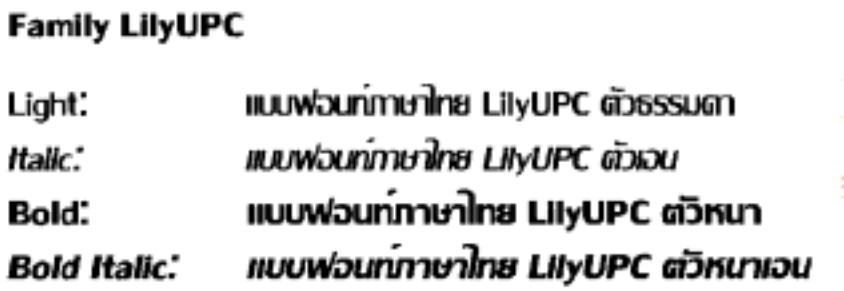


Figure 5–10: WaterlilyUPC Font Sample

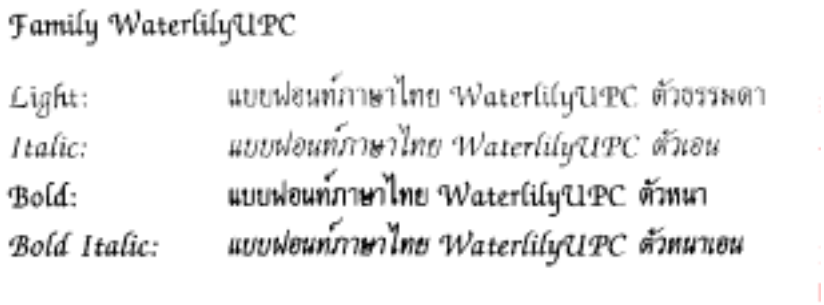
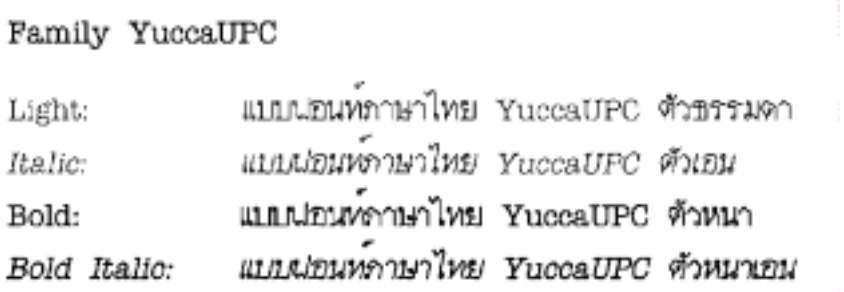


Figure 5–11: YuccaUPC Font Sample



6

Keyboards

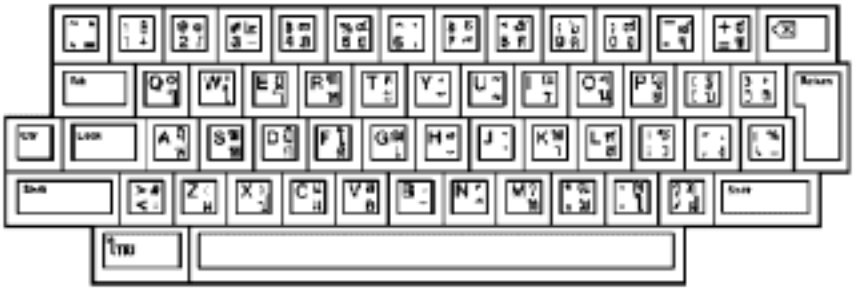
The DIGITAL UNIX operating system software supports the following Thai keyboard types:

- LK201-T
- LK401-T
- LK443-T
- PCXAL

6.1 Keyboard Layout

The figures in this chapter show the keyboard layouts for the Thai input methods. You can find online copies of these figures at the locations specified. These figures are in .ddif format.

Figure 6-1: LK201-T Keyboard Layout

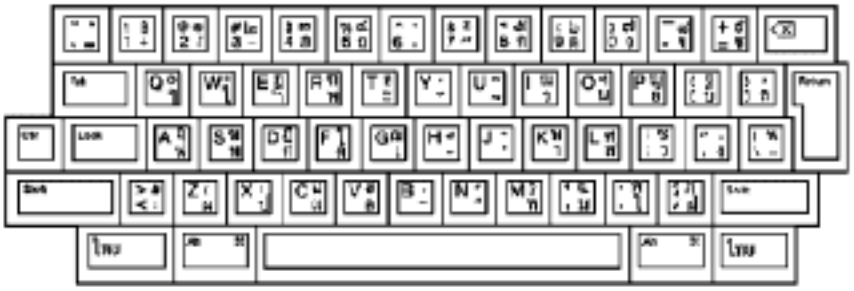


Required Keymap: thai lk201t

Mode: Thai Mode (Gatemanee keyboard used in VT382-T)

Location of File: `/usr/lib/cda/thai-lk201t-100.ddif`

Figure 6-2: LK401-T Keyboard Layout

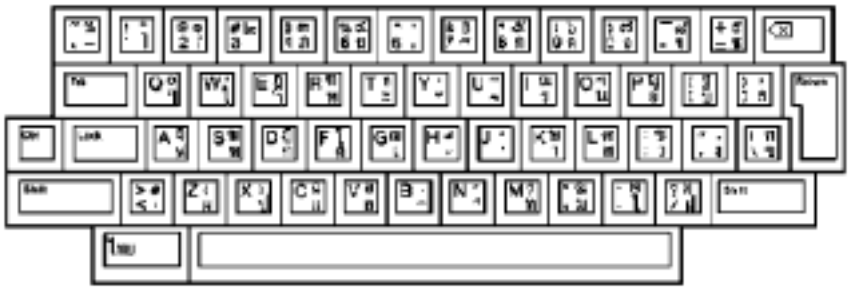


Required Keymap: thai lk201wtt

Mode: Thai Mode (Gatemanee keyboard used in VT382-T)

Location of File: `/usr/lib/cda/thai-lk401t-100.ddif`

Figure 6-3: LK201-WTT Keymap Layout

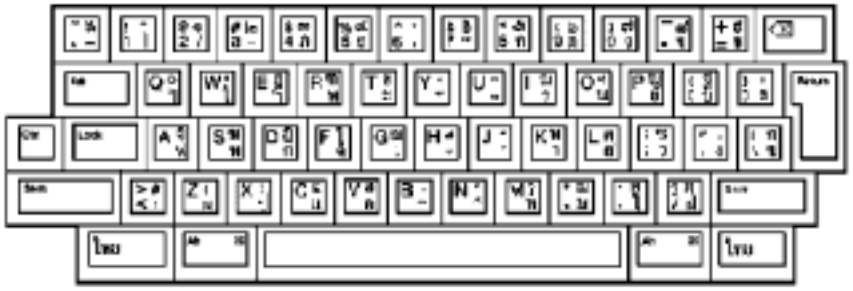


Required Keymap: thai lk201wtt

Mode: Thai Mode (defined in WTT V2.0)

Location of File: `/usr/lib/cda/thai-lk201wtt-100.ddif`

Figure 6-4: LK401-WTT Keymap Layout



Required Keymap: thai lk401wtt

Mode: Thai Mode (defined in WTT V2.0)

Location of File: `/usr/cda/thai-lk401wtt-100.ddif`

6.2 Keyboard Indicator

If you are using XDM, the keyboard indicator (`kb_indicator`) is automatically activated by the session manager and controls the compose lamp of the Thai keyboards. To start the keyboard indicator, the following command has been added to Automatic Startup menu of Session Manager:

```
"/usr/bin/X11/kb_indicator   -map"
```

Compose status is displayed in the keyboard indicator window. A button in the keyboard indicator window controls the compose mode like the compose key on the keyboard.

If you are using CDE, you can manually execute the preceding command, or add it to your personal profile.