

# ucs.sty - Unicode Support

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## 1 Usage

Simply use `\usepackage{ucs}` and `\usepackage[utf8x]{inputenc}`, then you will be able to write your LaTeX-Documents in UTF-8.

You can access a Unicode character with `\unichar{<code>}`, even when the active input encoding is not `utf8`.

An unicode character can have an default glyph macro and several glyph macros associated with options. If one of these options is set, the associated macro is used, otherwise the default macro. If several associated options are set, an error is yielded. You may activate an option `<name>` by including it in the option list while loading the ucs package, or by using `\SetUnicodeOption{<name>}`. To deactivate an option, prefix its name by `no`. Note that you must load `ucs.sty` before `\usepackage[utf8x]{inputenc}` if you want to supply options. Any option which you want to use must be used at least once in the preamble.

`\SetUnicodeOption`

When you activate an option, you can supply a priority as optional argument. If there are several glyphs for a given code position, the one having the option with the highest priority is taken (an error is yielded in case of ambiguity). If you do not supply a priority, 100 is taken as default. “Normal” glyphs are associated with the option `default`, which is initially activated with a priority of 0.

NB: UTF-8 characters are interpreted by T<sub>E</sub>X as a sequence of commands, so don’t use calls like `\macro ä` instead of `\macro{ä}` (this does not apply to ASCII characters).

This input encoding does not change the fontencoding automatically. For that purpose, you can use `autofe.sty`, which is included in the ucs package.

### 1.1 Special options

Several options have a special hardcoded meaning:

- |                      |   |
|----------------------|---|
| <code>combine</code> | • <b>combine</b> : Activates combining mode. See section 1.3.   |
| <code>default</code> | • <b>default</b> : This option contains all characters, which are not explicitly associated with another option. But see also the option <code>document</code> . This option is activated per default, but has priority 0, i.e. any other activated option is preferred, unless its priority is explicitly given to be smaller. |

<code>document</code>	<ul style="list-style-type: none"> <li>• <b>document:</b> Every character you define in your document using <code>\DeclareUnicodeCharacter</code> has the option <code>document</code>. This option is activated per default having the priority 1000, therefore manually declared characters take precedence over all other characters, unless some other option has explicitly gotten a higher priority.</li> </ul>
<code>fasterrors</code>	<ul style="list-style-type: none"> <li>• <b>fasterrors:</b> When used, the name of an unicode character is not included in error messages any more, which runs much faster.</li> </ul>
<code>graphics</code>	<ul style="list-style-type: none"> <li>• <b>graphics:</b> When used, unknown characters are replaced by GIFs downloaded from <a href="http://unicode.org">unicode.org</a>. Commands to download and convert these are executed if <code>-shell-escape</code> is passed to <math>\LaTeX</math>, otherwise they are proposed to the user in a warning message. A UNIX-machine supporting the commands <code>wget</code>, <code>giftopnm</code> and <code>pnmtops</code> is assumed.</li> </ul>
<code>savemem</code>	<ul style="list-style-type: none"> <li>• <b>savemem:</b> When used, only the character needed at the moment is loaded, not a whole page. This slows down operation, but saves space in the <math>\TeX</math>-pool, especially with sparsely used character set like <code>kanji</code>. Use this, if you get an out of pool error or similar from <math>\TeX</math>. If you change the state of this option during the run, you may get unexpected results.</li> </ul>
<code>warnunknown</code>	<ul style="list-style-type: none"> <li>• <b>warnunknown:</b> When used, an unknown unicode character does not generate an error, but a warning.</li> </ul>

## 1.2 Normal options

The options described here are—strictly spoken—not part of `ucs.sty`, but are defined by the unicode data files. They are included here for convenience.

<code>autogenerated</code>	<ul style="list-style-type: none"> <li>• <b>autogenerated:</b> This enables the characters, which are autogenerated as composition of other characters according to the informations in the <code>UnicodeData.txt</code>. These may or may not look good. You may have to define the <code>\unicodetextcircle</code>, <code>\unicodetextsquare</code>, <code>\unicodetextvertical</code>, <code>\unicodetextwide</code> and <code>\unicodetextsmall</code> macros to let all autogenerated macros work. Furthermore you may have to set some other options, when the autogenerated characters are build out of characters, which are not in the default set.</li> </ul>
<code>cjkgb5</code>	<ul style="list-style-type: none"> <li>• <b>cjkgb5:</b> See the explanation for <code>ckkjis</code> below and substitute C40 by C00, JIS by BIG-5 and <code>kanji48</code> by some appropriate font which has BIG-5 encoding (e.g. one of the "Arphic AR PL * Big5" fonts).</li> </ul>
<code>ckkgb</code>	<ul style="list-style-type: none"> <li>• <b>ckkgb:</b> See the explanation for <code>ckkjis</code> below and substitute C40 by C10, JIS by GB and <code>kanji48</code> by some appropriate font which has GB encoding (e.g. one of the "Arphic AR PL * GB" fonts).</li> </ul>
<code>ckkhangul</code>	<ul style="list-style-type: none"> <li>• <b>ckkhangul:</b> See the explanation for <code>ckkjis</code> below and substitute C40 by C61, JIS by "KSC5601 hangul syllables" and <code>kanji48</code> by some appropriate</li> </ul>

	font which has KSC5601 encoding and hangul syllables (e.g. the <code>han</code> or the <code>han1</code> font from CJK- $\text{\LaTeX}$ ).
<code>ckjjis</code>	<ul style="list-style-type: none"> <li>• <code>ckjjis</code>: This enables the use of C40 (JIS) or C42 (JISdnp) encoded fonts. You need to have the <code>c40*.fd</code> files which are contributed with the package CJK and the <code>kanji48</code> font installed for this. Further you have to load the <code>fontenc</code> C40 (an option to the package <code>fontenc</code>).</li> </ul> <p>It is not necessary to load the package CJK. If you want to use it nevertheless take care of the following:</p> <ul style="list-style-type: none"> <li>– Load CJK before <code>fontenc</code>, or quite strange errors will occur.</li> <li>– Load CJK with option <code>encapsulated</code>, or it will overwrite some of the UTF8 input encoding.</li> <li>– Don't use the CJK environment, it destroys the input encoding. Use <code>ucjk</code> instead, which is a patched version and takes no arguments.</li> </ul>
<code>fullmathletters</code>	<ul style="list-style-type: none"> <li>• <code>fullmathletters</code>: This option has been removed. Replace all occurrences by <code>mathletters</code>.</li> </ul>
<code>mathletters</code>	<ul style="list-style-type: none"> <li>• <code>mathletters</code>: When using this option is set, some unicode code characters like greek or some hebrew letters generate the math mode glyphs. This option is disabled by default, because using math greek in a normal text does not look good. But you may set it in <code>\everymath</code> and <code>\everydisplay</code> and such enable the use of unicode characters in math mode. You can also use this to get a poor man's greek, it is however recommended to use the <code>cb</code> fonts instead.</li> </ul>
<code>postscript</code>	<ul style="list-style-type: none"> <li>• <code>postscript</code>: This option enables use of postscript, e.g. of postscript fonts. Some DVI-viewers may have problems with documents using this option, but most viewers can handle it correctly.</li> </ul>
<code>privatecsur</code>	<ul style="list-style-type: none"> <li>• <code>privatecsur</code>: This option enables use of characters in the private area according to the mapping by the ConScript Unicode Registry (<a href="http://www.evertype.com/standards/csur/">http://www.evertype.com/standards/csur/</a> and also <a href="http://home.ccil.org/~cowan/csur/index.html">http://home.ccil.org/~cowan/csur/index.html</a>).</li> </ul>
<code>tipa</code>	<ul style="list-style-type: none"> <li>• <code>tipa</code>: This enables the use of the macros in the <code>tipa</code> package to display IPA symbols.</li> </ul>

### 1.3 Combining mode

In some cases, Unicode documents contain sequences like U+0063 LATIN SMALL LETTER C U+0301 COMBINING ACUTE ACCENT (producing  $\acute{c}$ ). In order to typeset them correctly, we cannot render U+0063 LATIN SMALL LETTER C immediately when it occurs, instead we have to wait whether some combining character is going to follow.

`combine` To enable this way of parsing in `ucs.sty`, we have to use the option `combine`. As long as this option is in effect, characters are not immediately rendered, but stored in a token register until they are output via

- resetting of the option (`\SetUnicodeOption{nocombine}`) or
- `\unicodecombine` • the command `\unicodecombine`.

Since characters handled by `ucs.sty` are not immediately output while ASCII characters are handled by `TEX` and directly rendered, you should not mix ASCII characters and non-ASCII characters while this option is in effect. Thus to obtain the above glyph, you cannot use

`\SetUnicodeOption{combine}cô\SetUnicodeOption{nocombine}`

(where `ô` is U+0301 COMBINING ACUTE ACCENT), instead you can use one of the following constructions:

- `\SetUnicodeOption{combine}\unichar{"63}ô%`  
`\SetUnicodeOption{nocombine}`
- `\unicodevirtual` • `\SetUnicodeOption{combine}\unicodevirtual{c}ô%`  
`\SetUnicodeOption{nocombine}` (`\unicodevirtual` takes arbitrary L<sup>A</sup>T<sub>E</sub>X code and inserts it, as though it was a Unicode character; do not use Unicode characters inside `\unicodevirtual`).
- `\SetUnicodeOption{combine}\myverbatim|cô|%`  
`\SetUnicodeOption{nocombine}`  
where `\myverbatim`<sup>1</sup> is a command similar to `\verb`, but setting the catcodes of the ASCII characters to 13 (active) and then defining character no. *n* to expand to `\unichar{n}`.

In cases where you only want to render occasional words containing combining characters and *no* ASCII, you can use a macro like

`\newcommand\combword[1]{\SetUnicodeOption{combine}#1%`  
`\SetUnicodeOption{nocombine}}`

and then simply typeset the concerning word as an argument to `\combword`.

## 1.4 Defining unicode data

A unicode character may be defined by

`\DeclareUnicodeCharacter` `\DeclareUnicodeCharacter{⟨code⟩}{⟨macro⟩}`

or, when it is to be associated with a special option, by using

`\DeclareUnicodeCharacterAsOptional` `\DeclareUnicodeCharacterAsOptional{⟨code⟩}{⟨option⟩}{⟨macro⟩}`

where `⟨code⟩` is the unicode character number, `⟨option⟩` the associated option and `⟨macro⟩` the glyph's macro.

<sup>1</sup>This command is not provided by `ucs.sty`, but some similar command may appear in future.

This definition is local.

In the automatically loaded data files `\uc@dc1c` should be used instead.

An option  $\langle option \rangle$  can be defined by

`\DeclareUnicodeOption`      `\DeclareUnicodeOption[ $\langle pkg \rangle$ ]{ $\langle option \rangle$ }.`

If  $\langle pkg \rangle$  is supplied, the option is set, if the package  $\langle pkg \rangle$  is loaded.

You can add further packages, which automatically set an option, by

`\LinkUnicodeOptionToPkg`      `\LinkUnicodeOptionToPkg{ $\langle option \rangle$ }{ $\langle pkg \rangle$ }.`

If a character  $c$  is unknown, it is looked up in the `uni- $n$ .def`-file, whereby  $n = \lfloor \frac{c}{256} \rfloor$ . So characters which are not document specific, should be defined in those file. For generating them, you should use the program `makeunidef.pl`.

You may find `\dirtyunicode` and `\UnicodeNeeds` interesting for writing glyphs macros, see in the implementation section.

## 1.5 Known problems

Note, that if a character from some not yet loaded Unicode page appears, a file has to be loaded. If this appears inside a word, kerning and ligatures do not work at that position.

Further there are some commands, which expand their arguments in non-executing contexts, this makes it impossible for `ucs.sty` to load the character definition file at this place if this has not yet been done. In this case the concerning character is replaced by some message that you have to use `\PrerenderUnicode{...}`.

Both problems can be solved by preloading the offending characters. If you have for example U+03B1 GREEK SMALL LETTER ALPHA, which should be preloaded, simply use

- |                                  |  |
|----------------------------------|--|
| <code>\PreloadUnicodePage</code> | <ul style="list-style-type: none"> <li>• <code>\PreloadUnicodePage{3}</code> (the argument to <code>\PreloadUnicodePage</code> is <math>\lfloor \frac{n}{256} \rfloor</math>, where <math>n</math> is the number of the character (here <math>0x3B1 = 945</math>)) or</li> </ul>   |
| <code>\PrerenderUnicode</code>   | <ul style="list-style-type: none"> <li>• <code>\PrerenderUnicode{<math>\alpha</math>}</code> (the argument to <code>\PrerenderUnicode</code> can contain any <math>\text{\LaTeX}</math> code, which is then rendered in an <code>hbox</code>, all still unknown characters are loaded and the result is thrown away; do not use e.g. <code>\footnote</code> or other commands which might not like to be executed several times).</li> </ul> |

## 2 Thanks

Thanks to...

- Michel Goossens who supplied many characters (e.g. Vietnamese, polytonic Greek),

- Manuel Kauers for testing my package before the first upload,
- Werner Lemberg, who wrote the CJK package, where I got the font definitions in `cenccmn.tex` from,
- Karsten Tinnfeld for many of the glyph macros in `cyrillic.ucf`,
- Pablo Rodriguez for reporting many bugs, especially concerning the interaction between `ucs.sty` and other packages.
- Stefan Röhrich for testing my package before the first upload,
- the authors of all those many L<sup>A</sup>T<sub>E</sub>X-packages for different scripts.

## 3 Implementation

### 3.1 File `ucs.sty`

```

1 \*ucs.sty
2 \catcode'\@11
3 \ifx\@gobble\undefined\def\@gobble#1{}\fi
4 \ifx\@gobbletwo\undefined\def\@gobbletwo#1#2{}\fi
5 \ifx\@gobblethree\undefined\def\@gobblethree#1#2#3{}\fi
6 \ifx\@gobblefour\undefined\def\@gobblefour#1#2#3#4{}\fi
7 \ifx\@firstofone\undefined\def\@firstofone#1{#1}\fi
8 \ifx\@tempcnta\undefined\csname newcount\endcsname\@tempcnta\fi
9 \ifx\@tempcntb\undefined\csname newcount\endcsname\@tempcntb\fi
10 \ifx\@testopt\undefined
11 \def\@testopt#1#2{%
12 \ifnextchar[{#1}{#1[#2]}}\fi
13 \ifx\@protected@testopt\undefined\def\@protected@testopt{\expandafter\@testopt\@gobble}\fi
14 \ifx\@ifnextchar\undefined
15 \def\@ifnextchar#1#2#3{%
16 \let\reserved@d=#1%
17 \def\reserved@a{#2}%
18 \def\reserved@b{#3}%
19 \futurelet\@let@token\@ifnch}\fi
20 \ifx\@ifnch\undefined
21 \def\@ifnch{%
22 \ifx\@let@token\@sptoken
23 \let\reserved@c\@xifnch
24 \else
25 \ifx\@let@token\reserved@d
26 \let\reserved@c\reserved@a
27 \else
28 \let\reserved@c\reserved@b
29 \fi
30 \fi
31 \reserved@c}\fi

```



```

32 \ifx\@inputcheck\undefined\newread\@inputcheck\fi
33 \ifx\IfFileExists\undefined
34 \long\def\IfFileExists#1#2#3{%
35   \openin\@inputcheck#1 %SPACE
36   \ifeof\@inputcheck\def\reserved@a{#3}%
37   \else\closein\@inputcheck\def\reserved@a{#2}%
38   \fi
39   \reserved@a}%
40 \fi
41 \ifx\InputIfFileExists\undefined
42 \long\def\InputIfFileExists#1#2{%
43   \IfFileExists{#1}{#2\input #1 }}
44 \fi
45 \ifx\protect\undefined\let\protect\relax\fi
46 \ifx\@typeset@protect\undefined\let\@typeset@protect\relax\fi
47 \ifx\IeC\undefined\def\IeC{\ifx\protect\@typeset@protect
48   \expandafter\@firstofone\else\noexpand\IeC\fi}\fi

```

`\XDeclareUnicodeOption` Synopsis:  $\{\langle pkg \rangle\}\{\langle name \rangle\}\{\langle activate \rangle\}\{\langle on \rangle\}\{\langle off \rangle\}$

`\DeclareUnicodeOption` Synopsis:  $[\langle pkg \rangle]\{\langle name \rangle\}$

Declare an unicode option, i.e. the command `\ifUnicodeOption $\langle name \rangle$`  to test if  $\langle name \rangle$  is activated, further the commands `\@unicode@option@ $\langle name \rangle$`  and `\@unicode@option@no $\langle name \rangle$`  to switch the option on and off, which take a priority as argument (it is ignored in case of the deactivation command). If the optional argument  $\langle pkg \rangle$  is specified and not empty, the option is automatically activated, if package  $\langle pkg \rangle$  is loaded.

If  $\{\langle activate \rangle\}$  is code which is executed when the option is first used.

$\{\langle on \rangle\}$  and  $\{\langle off \rangle\}$  are executed every time the option is switched on resp. off.

The activation and deactivation commands call `\uni@activate@option` at their first call, which then sets their normal behaviour. This is done to ensure, that on the initial call we can mark this option as “in use”, so we can do optimizations when loading data.

```

49 \def\unicode@knownoptions{}
50 \def\XDeclareUnicodeOption#1#2#3#4#5{%
51   \expandafter\let\csname ifUnicodeOption#2\endcsname\iffalse
52   \expandafter\def\csname UnicodeOption#2true%
53     \expandafter\endcsname\expandafter{%
54       \expandafter\let\csname ifUnicodeOption#2\endcsname\iftrue}%
55   \expandafter\def\csname UnicodeOption#2false%
56     \expandafter\endcsname\expandafter{%
57     \expandafter\let\csname ifUnicodeOption#2\endcsname\iffalse}%
58   \expandafter\def\csname @unicode@option@#2\endcsname{%
59     #3\uni@activate@option{#2}{#4}{#5}}%
60   \expandafter\def\csname @unicode@option@no#2\endcsname{%

```

```

61     #3\uni@activate@option{#2}{no}{#4}{#5}}%
62     \ifx~#1~\else\LinkUnicodeOptionToPkg{#2}{#1}\fi

```

Keep a list of known options

```

63     \let\uc@tempa\\\let\\\relax
64     \edef\unicode@knownoptions{\{\{#2\}\unicode@knownoptions}%
65     \let\\\uc@tempa
66     }%
67     \let\uc@newcommand\def
68     \uc@newcommand\DeclareUnicodeOption{\@protected@testopt\DeclareUnicodeOption\DeclareUnicodeOption@{#1}#2}%
69     \uc@newcommand\DeclareUnicodeOption@{#1}#2{%
70     \XDeclareUnicodeOption{#1}{#2}{-}{-}{-}}%

```

\uc@errormsg ||| TO BE DONE |||

```

71 \uc@newcommand\uc@errormsg#1#2{%
72   \ifx\PackageError\undefined
73     {\newlinechar'\^^J\def\MessageBreak{^^J}%
74     \errhelp{#2}\errmessage{Package ucs: #1}}%
75   \else
76     \PackageError{ucs}{#1}{#2}%
77   \fi
78 }%
79 \uc@newcommand\uc@warnmsg#1{%
80   \ifx\PackageWarning\undefined
81     {\newlinechar'\^^J\def\MessageBreak{^^J}%
82     \message{Package ucs: #1\MessageBreak}}%
83   \else
84     \PackageWarning{ucs}{#1}%
85   \fi
86 }%

```

\uni@activate@option Synopsis:  $\{\langle option \rangle\}\{\langle no \rangle\}\{\langle on \rangle\}\{\langle off \rangle\}\{\langle prio \rangle\}$   
This sets the \@unicode@option@ $\langle name \rangle$  and \@unicode@option@no $\langle name \rangle$  commands to their normal behavior (setting and unsetting the option), and then executes the first (in case  $\langle no \rangle$  is empty) or the latter (in case  $\langle no \rangle$  is no) with  $\langle prio \rangle$  as argument.

$\{\langle on \rangle\}$  and  $\{\langle off \rangle\}$  are executed when the option is swtiched on resp. off.

```

87 \def\uni@activate@option#1#2#3#4#5{%
88   \ifx\uni@dataloaded\undefined
89     \global\expandafter\def\csname @unicode@option@#1\endcsname##1{%
90       \csname UnicodeOption#1true\endcsname
91       \expandafter\def\csname uo-prio-#1\endcsname{##1}#3}%
92     \global\expandafter\def\csname @unicode@option@no#1\endcsname##1{%
93       \csname UnicodeOption#1false\endcsname#4}%

```

Mark this option as in use

```

94 \csname @unicode@option@#2#1\endcsname{#5}\else
95 \uc@errormsg{Option #1 must be activated or deactivated %SPACE
96   at least once in the preamble before using it in the document}{%
97   For optimization causes I must know all %SPACE
98   options before loading any unicode data.\MessageBreak
99   Try e.g. #1 or no#1 as package option to ucs.}\fi}

```

`\LinkUnicodeOptionToPkg` Synopsis: `{<option>}{<pkg>}`  
 Links the option `<option>` to package `<pkg>`, i.e. if `<pkg>` is loaded, `<option>` is set.  
 This mechanism is deprecated!

```

100 \def\LinkUnicodeOptionToPkg#1#2{%
101   \AtBeginDocument{\@ifpackageloaded{#2}{\SetUnicodeOption{#1}}{}}}%

```

`\SetUnicodeOption` Synopsis: `[<prio>]{<option>}`  
 Activates the unicode option `<option>`, or disables it, if prefixed by `no`. The option  
 get the priority `<prio>` if activated, whereby the default ist 100.

```

102 \uc@newcommand\SetUnicodeOption{\@protected@testopt\SetUnicodeOption\SetUnicodeOption@{100}}
103 \uc@newcommand\SetUnicodeOption@[#1]#2{%
104   \edef\uc@temp@a{\unicode@option@#2}%
105   \expandafter\ifx\csname\uc@temp@a\endcsname\relax
106     \PackageError{ucs}{Unknown unicode option #2}{}%
107   \else
108     \csname\uc@temp@a\endcsname{#1}%
109   \fi}

110 \ifx\ProvidesPackage\undefined\else
111 \ProvidesPackage{ucs}[2004/10/17 UCS: Unicode input support]%
112 \fi

```

Loads the global definitions of the unicode data. This is done so early, because we  
 need the option definitions.

```

113 \ifx\@input\undefined\input uni-global.def \else\input{uni-global.def}\fi

```

If this option is set, we don't include the characters name in error messages, which  
 runs much faster.

```

114 \DeclareUnicodeOption{fasterrors}

```

If this option is set, errors about unknown characters become warnings.

```

115 \DeclareUnicodeOption{warnunknown}

```

If this option is set, we try to download and include GIFs from `unicode.org` to  
 replace missing characters.

```

116 \DeclareUnicodeOption{graphics}

```

If this option is set, we try several memory saving optimizations, which slow down the operation.

```
117 \DeclareUnicodeOption{savemem}
```

This option is reserved for manual declarations in the document (using `\DeclareUnicodeCharacter` and `\DeclareUnicodeCharacterAsOptional`). It is activated by default.

```
118 \DeclareUnicodeOption{document}
119 \SetUnicodeOption[1000]{document}
```

This option contains all normal characters. It is activated by default, but with priority 0, i.e. all other options take precedence.

```
120 \DeclareUnicodeOption{default}
121 \SetUnicodeOption[0]{default}
```

This option switches character combination on and off (see section ??). Switching it off also flushes the combination buffer.

```
122 \XDeclareUnicodeOption{}{combine}{}{ }%
123 \let\uc@cmb\empty{}{ }%
124 \ifx\unicodecombine\undefined\else\unicodecombine\fi
125 \def\uc@cmb{\uc@warn@nocombine}}%
126 \ifx\AtBeginDocument\undefined\else
127 \AtEndDocument{\unicodecombine}\fi
128 \SetUnicodeOption{nocombine}%
```

`\uc@cmb` This is called by all combining characters to give a warning, if character combination is not enabled. Its default value is to give a warning, it is redefined to `\empty`, when character combination is enabled.

```
129 \def\uc@cmb{\uc@warn@nocombine}%
```

The usual option processing stuff.

```
130 \ifx\DeclareOption\undefined\else
131 \DeclareOption{showmagickern}{\def\uc@magic@glue{6805678}}%
132 \DeclareOption{hyperref}{\AtEndOfPackage{\RequirePackage{ucshyper}}}%
133 \DeclareOption*{\SetUnicodeOption{\CurrentOption}}\ProcessOptions*
134 \fi
```

Patch some fontencodings.

```
135 \ifx\AtBeginDocument\undefined
136 \uc@warnmsg{Not loading ucsencs.def automatically.\MessageBreak
137 Please load it after initializing fontencodings}%
138 \else
139 \AtBeginDocument{\input{ucsencs.def}}\fi
```

If the option `graphics` is set, we need to load the package `graphicx`.

```
140 \AtBeginDocument{\ifUnicodeOptiongraphics\RequirePackage{graphicx}\fi}%
```

`\unicode@numtohex` Synopsis: `{\langle target \rangle}{\langle number \rangle}{\langle len \rangle}`  
 Puts the hex representation of `\langle number \rangle` into the macro `\langle target \rangle` with at least `\langle len \rangle` digits. `\langle number \rangle` can be any valid T<sub>E</sub>X-number. The result contains uppercase letters. The assignment to `\langle target \rangle` is global.

```
141 \uc@newcommand\unicode@numtohex{\protect\unicode@numtohex@}%
142 \uc@newcommand\unicode@numtohex@#1#2#3{%
143   {\let\empty\relax\relax
144    %\ifx\empty\relax\def\empty{}%
145    \count255=#2\relax\gdef#1{%
146      \count252=#3%
147      \loop
148        \count253=\count252\advance\count253by\count255\relax
149        \ifnum\count253>0%
150          \ifnum\count252>0\advance\count252by-1\relax\fi
151          \count254=\count255%
152          \divide\count255by16%
153          \multiply\count255by16%
154          \advance\count254by-\count255%
155          \xdef#1{\ifcase\count254 0\or1\or2\or3\or4\or5\or6\or7\or
156            8\or9\or A\or B\or C\or D\or E\or F\fi#1}%
157          \divide\count255by16\relax
158          \repeat
159        %\else
160        % \def#1{dec:#2}%
161        %\fi
162      }}
```

`\uc@spc` Same meaning as `\space`, but `\space` is redefined in some contexts (e.g. in a bookmark in `hyperref` with option `pdftex`).

```
163 \let\uc@spc\space
```

`\uc@secondtry` If data is loaded to typeset a given character, its code position is saved herein, so when the character is called again, endless recursion in case of unfixable errors can be avoided using the information in `\uc@secondtry`

```
164 \newcount\uc@secondtry
```

`\unicode@invalid` Expands into L<sup>A</sup>T<sub>E</sub>X-Code, which is to be inserted for an unknown unicode character. The character number is given as argument.

```
165 \uc@newcommand\unicode@invalid#1{%
166   \unicode@combine%
```

If use of GIFs is activated, begin a group,...

```
167 \ifUnicodeOptiongraphics{%  
  
...calculate URL without http:// and trailing .gif, save it to \uc@temp@c  
  
168 \ifx\unicode@graphicsdir\undefined  
169 \def\unicode@graphicsdir{ucs-glyphs}\fi  
170 \ifx\unicode@graphicscmd\undefined  
171 \def\unicode@graphicscmd{ucs-getglyph \hex\space \dec\space \path\space}\fi  
172 \unicode@numtohex\hex{#1}4%  
173 \count255=#1\relax  
174 \divide\count255 by256\relax  
175 \unicode@numtohex\uc@temp@b{\count255}2%  
176 \edef\path{\unicode@graphicsdir/\uc@temp@b/U\hex.ps}%  
177 \edef\dec{\number#1}%
```

Test if we already have that image (as PS)

```
178 \IfFileExists{\uc@temp@c}{}%  
  
otherwise run shell commands for download and conversion  
  
179 \typeout{Running: \unicode@graphicscmd}%  
180 \immediate\write18{\unicode@graphicscmd}%  
181 }%
```

Try if we have the file now

```
182 \IfFileExists{\path}{%  
  
then include it  
  
183 \setbox255=\hbox{X}%  
184 \edef\uc@temp@b{\begingroup\noexpand\uni@resetcatcodes  
185 \noexpand\includegraphics[height=\the\ht255, trim=0 22.5 0 17.5]%  
186 {\path}%  
187 \noexpand\ProvidesFile{U\hex.ps}%  
188 [Downloaded glyph for U+\hex]%  
189 \endgroup}%  
190 \typeout{\meaning\uc@temp@b}%  
191 \expandafter\unicodevirtual\expandafter{\uc@temp@b}%  
192 }{%
```

otherwise we give a warning

```
193 \PackageWarning{ucs}{File \uc@temp@d\uc@temp@c.ps %SPACE  
194 not found.\MessageBreak  
195 Use\MessageBreak  
196 \space\space\space\space\unicode@graphicscmd\MessageBreak  
197 or start latex with option -shell-escape\MessageBreak  
198 if you have not already done so.}%
```

and use the standard glyph for unknown characters

```
199 \unicodevirtual{\unicode@invalidglyph{#1}}}\else
```

In case we don't want to use GIFs, simply include the standard glyph for invalid characters

```
200 \unicodevirtual{\unicode@invalidglyph{#1}}\fi}
```

`\unicode@invalidglyph` This is macro creates the glyph to insert for an unknown character, if everything else fails (see `\unicode@invalid`). The character code for the substituted character is given in the first argument.

```
201 \uc@newcommand\unicode@invalidglyph#1{%
202   {\unicode@numtohex\uc@temp@d{#1}4%
203   \fontencoding{0T1}\texttt{[U+\uc@temp@d]}}}
```

`\uni@char` Synopsis: `{<code>}`  
Expands into the L<sup>A</sup>T<sub>E</sub>X-macro for unicode character `<code>`. Loads the corresponding `uni-...def`-file if necessary.

```
204 \uc@newcommand\uni@char#1{%
205   \ucs@protected@unichar@iftrue
206   \expandafter\ifx\csname u-\number#1-h/o\endcsname\relax
207
```

If the character is not defined yet, load it.

```
208   \begingroup
209   % In case \let is not executed, this (until ==) expands
210   % to \let\relax\relax,
211   % otherwise we have \let\uc@notloaderr@gobble
212   % Number of \empty's must equal number of args of \uc@char@notloaded
213   \let\uc@notloaderr@gobble\empty@gobbletwo\relax\relax
214   % ==
215   \expandafter\endgroup
216   % If \let not executed: Warning is emitted (see |\uc@notloaderr|)
217   % otherwise: |\uc@char@notloaded| is called.
218   \uc@notloaderr{\number#1}\uc@char@notloaded{#1}%
219 \else
220
```

If the character is loaded, run `\uc@checkopts` with the options of this character as first arg and the code position as second; this will display the character with the correct option.

```
221   \expandafter\expandafter\expandafter\uc@checkopts
222   \expandafter\expandafter\expandafter
223   {\csname u-\number#1-h/o\endcsname}{#1}%
224 \fi
```

```

225 \else
226 \noexpand\unichar{#1}%
227 \fi
228 }
229 \begingroup
230 \lccode'\A='{\lccode'\B='\}\lccode'\C='\%
231 \lccode'\P='\P\lccode'\U='\U%
232 \lowercase{%
233 \endgroup
234 \uc@newcommand\uc@notloaderr#1#2#3{%
235 \ifx\@gobble#1\else[Please insert %SPACE
236 CPrerenderUnicodeACunicharA#1BB into preamble]\fi}}

```

`\uc@checkopts` Synopsis:  $\{\langle options \rangle\}\{\langle code \rangle\}$   
For the character  $\langle code \rangle$  which has options  $\langle options \rangle$  (each option enclosed in  $\{\}$ ) the corresponding macro is searched and executed.

```

237 \uc@newcommand\uc@checkopts#1#2{%

```

Start the automaton. See ?? for an explanation.

```

238 \expandafter\uc@checkopt@error\expandafter{\number#2}%
239 {error}{error}{infinity}#1\@nil
240 }

```

`\uo-prio-infinity` Set the priority of the option `infinity` to something near to  $-\infty$ . This option does not exist, but is used internally in the automaton described in ??.

```

241 \expandafter\uc@newcommand\csname uo-prio-infinity\endcsname{-2100000000}

```

`\uc@checkopt@stick` Now the autogenerated code for the automaton described in ?? follows. It is generated by `mkcovariants.pl`.

```

\uc@checkopt@change
\uc@checkopt@error
\uc@checkopt@errorstick
242 %% === BEGIN AUTOGENERATED CODE
243 \uc@newcommand\uc@checkopt@stick#1#2#3#4#5{%
244 \ifx\@nil#5%
245 \expandafter\ifx\csname u-#2-#1\endcsname\relax
246 \uc@localdeferr{#1}{#2}%
247 \else
248 \uc@output{\csname u-#2-#1\endcsname}{#1}%
249 \fi
250 \expandafter\@gobblefour
251 \else
252 \iftrue\csname fi\endcsname
253 \csname ifUnicodeOption#5\endcsname
254 \ifnum\csname uo-prio-#2\endcsname>\csname uo-prio-#5\endcsname\uc@spc
255 \expandafter\expandafter\expandafter\expandafter\expandafter\expandafter
256 \uc@checkopt@stick
257 \else

```



```

258         \ifnum\csname uo-prio-#2\endcsname<\csname uo-prio-#5\endcsname\uc@spc
259         \expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\
260         \expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\
261         \uc@checkopt@change
262     \else
263         \expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\
264         \expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\
265         \uc@checkopt@error
266     \fi
267 \fi
268 \else
269     \expandafter\expandafter\expandafter\uc@checkopt@stick
270 \fi
271 \fi
272 {#1}{#2}{#5}{#2}%
273 }
274 \uc@newcommand\uc@checkopt@change#1#2#3#4#5{%
275     \ifx\@nil#5%
276     \expandafter\ifx\csname u-#3-#1\endcsname\relax
277     \uc@localdeferr{#1}{#3}%
278 \else
279     \uc@output{\csname u-#3-#1\endcsname}{#1}%
280 \fi
281     \expandafter\@gobblefour
282 \else
283     \iftrue\csname fi\endcsname
284     \csname ifUnicodeOption#5\endcsname
285     \ifnum\csname uo-prio-#3\endcsname>\csname uo-prio-#5\endcsname\uc@spc
286     \expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\
287     \uc@checkopt@stick
288 \else
289     \ifnum\csname uo-prio-#3\endcsname<\csname uo-prio-#5\endcsname\uc@spc
290     \expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\
291     \expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\
292     \uc@checkopt@change
293 \else
294     \expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\
295     \expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\
296     \uc@checkopt@error
297 \fi
298 \fi
299 \else
300     \expandafter\expandafter\expandafter\uc@checkopt@stick
301 \fi
302 \fi
303 {#1}{#3}{#5}{#3}%
304 }
305 \uc@newcommand\uc@checkopt@error#1#2#3#4#5{%
306     \ifx\@nil#5%
307     \uc@errordrawopt{#1}{#2, #3}{#4}%

```

```

308     \expandafter \@gobblefour
309   \else
310     \iftrue\csname fi\endcsname
311     \csname ifUnicodeOption#5\endcsname
312     \ifnum\csname uo-prio-#4\endcsname>\csname uo-prio-#5\endcsname\uc@spc
313     \expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter
314     \uc@checkopt@errorstick
315   \else
316     \ifnum\csname uo-prio-#4\endcsname<\csname uo-prio-#5\endcsname\uc@spc
317     \expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter
318     \expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter
319     \uc@checkopt@change
320   \else
321     \expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter
322     \expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter
323     \uc@checkopt@error
324   \fi
325 \fi
326 \else
327   \expandafter\expandafter\expandafter\uc@checkopt@errorstick
328 \fi
329 \fi
330 {#1}{#2, #3}{#5}{#4}%
331 }
332 \uc@newcommand\uc@checkopt@errorstick#1#2#3#4#5{%
333   \ifx\@nil#5%
334     \uc@errordrawopt{#1}{#2}{#4}%
335     \expandafter \@gobblefour
336   \else
337     \iftrue\csname fi\endcsname
338     \csname ifUnicodeOption#5\endcsname
339     \ifnum\csname uo-prio-#4\endcsname>\csname uo-prio-#5\endcsname\uc@spc
340     \expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter
341     \uc@checkopt@errorstick
342   \else
343     \ifnum\csname uo-prio-#4\endcsname<\csname uo-prio-#5\endcsname\uc@spc
344     \expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter
345     \expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter
346     \uc@checkopt@change
347   \else
348     \expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter
349     \expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter
350     \uc@checkopt@error
351   \fi
352 \fi
353 \else
354   \expandafter\expandafter\expandafter\uc@checkopt@errorstick
355 \fi
356 \fi
357 {#1}{#2}{#5}{#4}%

```

```

358 }
359 % === END AUTOGENERATED CODE

```

`\uc@errordrawopt` Synopsis:  $\langle code \rangle \langle bestopts \rangle \langle prefopt \rangle$   
This is called, if several options match the character  $\langle code \rangle$  with same priority or when no option matches (then  $\langle prefopt \rangle$  is infinity).

In case of several matching options,  $\langle bestopts \rangle$  is a comma separated list (with spaces, intended for display) and  $\langle prefopt \rangle$  s one of these.

After yielding an error or warning, the character is displayed with option  $\langle prefopt \rangle$  (except when  $\langle prefopt \rangle$  is infinity, then `\unicode@invalid` is rendered.

```

360 \let\unicode@empty\empty
361 \uc@newcommand\uc@errordrawopt#1#2#3{%

```

Check whether we are in executing context

```

362 \let\unicode@empty\relax\relax
363 \ifx\unicode@empty\relax\let\unicode@empty\empty

```

if yes, operate normally

```

364 \unicode@numtohex\uc@temp@b{#1}4%
365 \ifnum\csname uo-prio-#3\endcsname=-2100000000\relax

```

If  $\langle prefopt \rangle$  is infinity, give an unknown character error and display the character

```

366 \expandafter\ifx\csname
367 missing-unicode-warned-\number#1\endcsname\relax
368 \global\expandafter\let\csname
369 missing-unicode-warned-\number#1\endcsname\@ne
370 \unicode@error@unknown\@ne{Character \number#1\uc@spc
371 \uc@spc= U+\uc@temp@b\uc@spc
372 matches no activated options.\MessageBreak
373 Type H to see available options}{#1}%
374 \else
375 \PackageWarning{ucs}{Character % SPACE
376 % \tobe: nothing rendered?
377 \number#1 \uc@spc= 0x\uc@temp@b\uc@spc
378 appeared again.}%
379 \fi
380 \else

```

Otherwise inform the user of the collision...

```

381 \@getcharinfo\uc@temp@c{#1}%
382 \PackageWarning{ucs}{Character %SPACE
383 \number#1 \uc@spc= 0x\uc@temp@b\uc@spc
384 matches options\MessageBreak
385 \uc@spc\uc@spc\uc@spc#2\MessageBreak

```

```

386         with same priority \csname uo-prio-#3\endcsname. %SPACE
387         Selecting option #3.\MessageBreak
388         \uc@temp@c}%

```

and render the glyph corresponding to option  $\langle prefopt \rangle$ .

```

389     \uc@output{\csname u-#3-#1\endcsname}{#1}%
390     \fi

```

if we are in non-executing context, replace ourself by a `\unichar` call, since otherwise constructs like `\section{abc \SetUnicodeOption{def} ghi}` may yield errors (because of writing to the toc file). Note that this is a hack, it is better to make `\unichar` protected when this happens.

```

391     \else
392     \noexpand\unichar{#1}%
393     \fi
394 }

```

`\uc@output` Synopsis:  $\{\langle macro \rangle\}\{\langle code \rangle\}$

Output an unicode character. Its glyph macro is  $\langle macro \rangle$ , its code (for error messages)  $\langle code \rangle$ .

If `\unicode@delay` equals 1 (via `\let`), the character is not output.

If character combination is enabled, outputting is done by `\uc@combine`.

If the glyph macro defines `\uc@throw`, `\uc@throw` is executed after defining `\uc@got` to  $\langle code \rangle$ . This allows the macros to yield error messages containing the character code.

```

395 \uc@newcommand\uc@output#1#2{%
396   \ifx\unicode@delay1\let\unicode@delay\relax\else
397     \ifUnicodeOptioncombine

```

If the character is combining, outputting is handled by `\uc@combine`.

```

398     \expandafter\uc@combine\expandafter{#1}{#2}%
399     \else

```

Output the character

```

400     \uc@prechar@exec{#2}%
401 %     \ifx\unicode@charfilter\undefined
402 %     #1}%
403 %     \else
404     \unicode@charfilter{#1}%
405 %     \fi
406     \fi

```

If an exception has been thrown by the glyph macro, execute it with `\uc@got` defined to `<code>`.

```

407 \ifx\uc@throw\undefined\else
408 \def\uc@got{#2}\uc@throw\global\let\uc@throw\undefined\fi
409 \fi
410 }%
411 \uc@newcommand\uc@prechar@exec#1{%
412 \ifx\uc@prechar\undefined\else\uc@prechar{#1}\fi}

```

`\uc@localdeferr` `[[[ TO BE DONE ]]]`

```

413 \uc@newcommand\uc@localdeferr#1#2{%
414 \@getcharinfo\uc@temp@a{#1}%
415 \PackageError{ucs}{Internal error in character \number#1, %SPACE
416 option #2}{I probably got confused by intermixed local %SPACE
417 and global definitions.\MessageBreak Try to load the needed %SPACE
418 code page via \noexpand\PreloadUnicodePage
419 before declaring anything by yourself.}\uc@temp@a}%
420 \unicode@invalid{#1}%
421 }%

```

`\uc@warn@nocombine` Document me!!!![[[ TO BE DONE ]]]

```

422 \uc@newcommand\uc@warn@nocombine{%
423 \PackageError{ucs}{Please activate option 'combine'}{Composed %SPACE
424 characters can only be rendered correctly, when the option %SPACE
425 'combine' is activated}}

```

`\uc@combtoks` Document me!!!![[[ TO BE DONE ]]]

```

\uc@combtoksb
\uc@temptokena 426 \newtoks\uc@combtoks
427 \newtoks\uc@combtoksb
428 \newtoks\uc@temptokena

```

`\unicode@combine` Document me!!!![[[ TO BE DONE ]]]

```

429 \uc@newcommand\unicode@combine{%
430 \uc@check@magicglue%
431 \ifx\uc@combining@prechar\undefined\global\let\uc@comb@code\undefined\fi
432 \ifx\uc@comb@code\undefined\uc@temptokena{}\else
433 \uc@temptokena\expandafter{\expandafter\uc@prechar@exec
434 \expandafter{\uc@comb@code}}\fi%
435 \global\let\uc@comb@code\undefined
436 \global\expandafter\expandafter\expandafter\expandafter\expandafter
437 \expandafter\expandafter\uc@combtoksb
438 \expandafter\expandafter\expandafter
439 \expandafter\expandafter\expandafter\expandafter{%
440 \expandafter\expandafter\expandafter\the

```

```

441 \expandafter\expandafter\expandafter\uc@combtoksb
442 \expandafter\the\expandafter\uc@temptokena\the\uc@combtoks}%
443 \global\uc@combtoks{}}
444 %\def\uc@magic@glue{680567893}
445 \def\uc@magic@glue{5381}
446 \uc@newcommand\uc@check@magicglue{%
447 \ifnum\lastskip=\uc@magic@glue\unskip\else
448 \begingroup
449 \edef\uc@temp@a{\the\uc@combtoks}%
450 \ifx\uc@temp@a\empty\else
451 \PackageWarning{ucs}{Magic kern expected. Probably some %SPACE
452 non-unicode characters mixed in while option combine was %SPACE
453 in effect.}\fi\endgroup
454 \fi}

```

`\unicodevirtual`

```

455 \uc@newcommand\unicodevirtual#1{%
456 \def\uc@temp@a##1{#1}\uc@output{\csname uc@temp@a\endcsname}{\FFFF}}

```

`\unicode@combine` Document me!!!![[[ TO BE DONE ]]]

```

457 \uc@newcommand\unicodecombine{%
458 \ifx\protect\@typeset@protect
459 \unicode@combine%
460 %\typeout{WRITING: \the\uc@combtoksb}%
461 \the\uc@combtoksb
462 \uc@prechar@exec{-1}%
463 \global\uc@combtoksb{}}%

```

If an exception has been thrown by the glyph macro, execute it with `\uc@got` defined to `<code>`.

```

464 \ifx\uc@throw\undefined\else
465 \def\uc@got{-1}\uc@throw\global\let\uc@throw\undefined\fi
466 \else
467 \noexpand\unicodecombine\fi
468 }

```

`\uc@combine` Document me!!!![[[ TO BE DONE ]]]

```

469 \uc@newcommand\uc@combine#1#2{%
470 \ifx\protect\@typeset@protect
471 \@temptokena\expandafter{#1{}}%
472 \expandafter\expandafter\expandafter\ifx
473 \expandafter\uc@firstofmany\the\@temptokena\uc@firstofmany\uc@cmb
474 \uc@check@magicglue%
475 \uc@combtoks\expandafter\expandafter\expandafter\expandafter
476 \expandafter\expandafter\expandafter{

```

```

477     \expandafter\expandafter\expandafter\@gobble
478     \expandafter#1\expandafter{\the\uc@combtoks}}%
479   \else
480     \unicode@combine%
481     \xdef\uc@comb@code{\number#2}%
482     \global\uc@combtoks\expandafter{#1{}}%
483   \fi
484   %\typeout{->COMBTOKS: \the\uc@combtoks}%
485   \hskip\uc@magic@glue spplusOptminusOpt %SPACE ; Insert magic glue
486 \else
487   \noexpand\unichar{\number#2}\fi
488 }

```

`\uc@char@notloaded` Part of `\uni@char` which is only executed when the character is not defined (yet).

Note that this command breaks kerning and ligatures.

```

489 \uc@newcommand\uc@char@notloaded#1{%

```

Calculate the name of the corresponding file

```

490   \count255=#1\divide\count255 by 256%
491   \edef\uc@temp@a{uni-\number\count255.def}%

```

If the file was not loaded yet (`\(filename)` is not set) and we are not just called by `uni@char` after a first failure (`\uc@secondtry` is not set to actual character), jump to `\else-Branch`

```

492   \expandafter\ifx\csname\uc@temp@a\endcsname\relax\else
493     \uc@secondtry#1\relax\fi
494   \ifnum\uc@secondtry=#1\relax

```

If the file has already been loaded, but the character is unknown, output an error and show the replacement glyph

```

495   \unicode@numtohex\uc@temp@b{#1}4%
496   \expandafter\ifx\csname
497     missing-unicode-warned-\number#1\endcsname\relax
498     \global\expandafter\let\csname
499       missing-unicode-warned-\number#1\endcsname\@ne
500     \unicode@error@unknown\@ne{Unknown Unicode character % SPACE
501       \number#1 \uc@spc= U+\uc@temp@b,\MessageBreak
502       possibly declared in \uc@temp@a.\MessageBreak
503       Type H to see if it is available with options}{#1}%
504   \else
505     \PackageWarning{ucs}{Unknown character % SPACE
506       \number#1 \uc@spc = 0x\uc@temp@b\uc@spc
507       appeared again.}%
508     \unicode@invalid{#1}%
509   \fi
510 \else

```

Begin a group for included file, so that only explicitly exported macros are defined globally

```
511 \begingroup
```

Mark file as loaded (premature, but that's OK)

```
512 \ifUnicodeOptionsavemem
513 % \expandafter\let\csname\uc@temp@a\endcsname\@ne
514 \else
515 \global\expandafter\let\csname\uc@temp@a\endcsname\@ne
516 \fi
```

Set `\uc@got` to the code position to be loaded (needed for option `savemem`)

```
517 \def\uc@got{#1}%
```

Reset catcodes to a reasonable default.

```
518 \uni@resetcatcodes
```

Load file.

```
519 \expandafter\InputIfFileExists\expandafter{\uc@temp@a}{%
```

Indicate, that unicode data has been loaded (for `\uni@activate@option`).

```
520 \global\let\uni@dataloaded1%
521 }{%
522 }%
```

End of local group for inputted file

```
523 \endgroup
```

Retry displaying character. This won't cause infinite recursion, because we have marked this file as loaded (globally or, if `savemem` is set, at least here).

```
524 \uc@secondtry#1\relax%
525 \uni@char{#1}%
526 \fi
527 }
```

`\PreloadUnicodePage` Loads the `uni-...def`-file with the given number. Deprecated, not maintained any more. May be removed in the future.

```
528 \uc@newcommand\PreloadUnicodePage#1{%
529 \begingroup
530 \global\expandafter\let\csname uni-#1.def\endcsname\@ne
531 \uni@resetcatcodes
532 \InputIfFileExists{uni-#1.def}{\let\uni@dataloaded1}{%
533 \PackageError{ucs}{Could not find uni-#1.def}{}}%
534 \endgroup}
```



`\PrerenderUnicode` [[[ TO BE DONE ]]]

```

535 \uc@newcommand\PrerenderUnicode{%
536   \@ifstar{\@prerenderunicode\unichar}{\@prerenderunicode@gobble}}%
537 \uc@newcommand\@prerenderunicode#1#2{%
538   \begingroup
539   \UnicodeCharFilter\@gobble
540   \let#1\@gobble\setbox0\hbox{#2}\endgroup}

```

`\DeclareUnicodeCharacter` `\DeclareUnicodeCharacter{<code>}{<macro>}` is an abbreviation for  
`\DeclareUnicodeCharacterAsOptional{<code>}{document}{<macro>}`.

```

541 \uc@newcommand\DeclareUnicodeCharacter#1#2{%
542   \DeclareUnicodeCharacterAsOptional{#1}{document}{#2}}

```

`\DeclareUnicodeCharacterAsOptional` Synopsis: `{<code>}{<option>}{<macro>}`  
`\uc@dclc` Both macros set `<macro>` to be the glyph macro for the character `<code>` if option  
`<option>` is set.

The glyph macro is stored in `\u-<option>-<code>` and `<options>` is added to the  
list `\u-<code>-h/o`, which is a concatenation of entries of the following syntax:  
`\{<option>\}`.

The following paragraph applies only to `\uc@dclc`: The character is declared  
globally. If `savemem` is set, the character is only declared, if it's code equals  
`\uc@got` and it's option is used (it does not matter, whether enabled or disabled).  
If `savemem` is not set and the option is not used, the macro is not defined but  
the option is saved in `\u-<code>-h/o` to support informative error messages. An  
existing character declaration is not overwritten. `\uc@dclc` must not be used  
outside the automatically loaded `uni-*.def` files.

Note that if a character is declared by `\DeclareUnicodeCharacterAsOptional`  
locally, and then its `uni-*.def`-file is loaded, it is not overwritten, so after leaving  
the group the character is undefined, even if it was in the `uni-*.def`-file. This  
constellation will not arise, if you declare document-local characters with option  
`document`.

```

543 \uc@newcommand\DeclareUnicodeCharacterAsOptional{%
544   \let\uc@temp@a\relax\uni@declcharopt}
545 \uc@newcommand\uc@dclc#1#2{%
546   \let\next=\uni@declcharopt
547   \ifUnicodeOptionsavemem
548     \ifnum\uc@got=#1\else
549       \let\next=\@gobblethree\fi
550   \fi
551   \ifx\next\uni@declcharopt
552     \expandafter\ifx\csname uni@active@#2\endcsname\relax
553     \let\next\@gobblethree\else
554     \expandafter\ifx\csname u-#2-\number#1\endcsname\relax\else
555     \let\next\@gobblethree\fi\fi

```

```

556 \let\uc@temp@a\global
557 \fi
558 \next{#1}{#2}}

```

`\uni@declcharopt` This macros does the real work for `\DeclareUnicodeCharacterAsOptional` and `\uc@dclic`. The options are the same as with those macros. `\uc@temp@a` must be `\relax` for a local definition and `\global` for a global definition.

```

559 \uc@newcommand\uni@declcharopt#1#2#3{%
560 %\typeout{Defining: u-#2-\number#1 (\meaning\uc@temp@a)}}%
561 \ifx\utf@viii@map\undefined\else
562 \expandafter\utf@viii@map\expandafter{\number#1}\fi
563 \expandafter\uc@temp@a\expandafter\def
564 \csname u-#2-\number#1\endcsname##1{#3}%\fi
565 \expandafter\ifx\csname u-\number#1-h/o\endcsname\relax
566 \expandafter\def\csname u-\number#1-h/o\endcsname{}\fi
567 \expandafter\uc@temp@a\expandafter\edef
568 \csname u-\number#1-h/o\endcsname{%
569 {#2}\csname u-\number#1-h/o\endcsname}%
570 }%

```

`\unichar` Outputs the unicode character number #1.

```

571 \let\unichar\uni@char

```

`\unicodesuper` Commands to apply to compositions which have the flag `<super>`, `<sub>`, `<circle>`, `<square>`, `<vertical>`, `<wide>` resp. `<small>` in the unicode database.  
`\unicodesub`  
`\unicodecircle` These are needed for some autogenerated macros, but you have to define them by yourself. These macros are only used inside `\uc@output`, `\uc@throw` can be used.  
`\unicodesquare`  
`\unicodevertical`

```

572 \uc@newcommand\unicodesuper#1{\textsuperscript{#1}}%
573 %\uc@newcommand\unicodesub#1{%
574 % \@latex@error{\protect\unicodesub\uc@spc not supported}\@eha}
575 %\uc@newcommand\unicodecircle#1{%
576 % \@latex@error{\protect\unicodecircle\uc@spc not supported}\@eha}
577 %\uc@newcommand\unicodesquare#1{%
578 % \@latex@error{\protect\unicodesquare\uc@spc not supported}\@eha}
579 %\uc@newcommand\unicodevertical#1{%
580 % \@latex@error{\protect\unicodevertical\uc@spc not supported}\@eha}
581 %\uc@newcommand\unicodewide#1{%
582 % \@latex@error{\protect\unicodewide\uc@spc not supported}\@eha}
583 %\uc@newcommand\unicodesmall#1{%
584 % \@latex@error{\protect\unicodesmall\uc@spc not supported}\@eha}

```

`\@getcharinfo` Synopsis: `{\langle target \rangle}{\langle code \rangle}`  
Generates information for character `\langle code \rangle` and stores it into `\langle target \rangle`. `uninames.dat` is scanned for this purpose, unless disabled by the option `fasterrors`.

```

585 \uc@newcommand\@getcharinfo#1#2{%
586   \begingroup
587   \countdef\uc@got0\relax\uc@got#2\relax
588   \global\def#1{Character's name unknown}%
589   \def\info##1{\xdef#1{##1}}%
590   \uni@resetcatcodes
591   \ifUnicodeOptionfasterrors
592   \global\def#1{No further informations known % SPACE
593     because of option fasterrors.}\else
594   {\InputIfFileExists{uninames.dat}{}}{%
595     \global\def#1{Character database uninames.dat not found. %SPACE
596       \MessageBreak Character \number#2 \uc@spc unknown}}}%
597   \fi
598 %
599   \toks255{}%
600   \def\uc@dcl#1##2##3{\ifnum##1=\uc@got
601     \toks255\expandafter{\the\toks255, ##2}\fi}%
602   \count255\uc@got\divide\count255by256\relax
603   %\edef\temp@a{uni-\number\count255.def}%
604   \InputIfFileExists{uni-\number\count255.def}{}}{%
605   \expandafter\ifx\expandafter\@nil\the\toks255 \@nil
606     \xdef#1{#1\noexpand\MessageBreak
607       Character is not defined in uni-*.def files}%
608   \else
609     \expandafter\expandafter\expandafter\@getcharinfo@
610     \expandafter\expandafter\expandafter#1%
611     \expandafter\expandafter\expandafter
612     {\expandafter#1\expandafter}\the\toks255 \@nil%
613   \fi
614   \endgroup}
615 \def\@getcharinfo@#1#2, #3\@nil{\gdef#1{#2\MessageBreak
616   Character available with following options:\MessageBreak
617   \uc@spc\uc@spc\uc@spc #3}}

```

`\PrintUnicodeName` Synopsis: `{\langle number \rangle}`  
 Prints information on character `\langle number \rangle` via `\typeout`.

```

618 \uc@newcommand\PrintUnicodeName#1{%
619   \@getcharinfo{\ci}{#1}%
620   \def\MessageBreak{^^J}%
621   \typeout{^^J\ci^^J}}

```

`\UnicodeCharFilter` Synopsis: `{\langle command \rangle}`  
 Sets `\langle command \rangle` to be called as a filter for each glyph macro. The glyph macro is given as the only argument.

```

622 \uc@newcommand\UnicodeCharFilter#1{\let\unicode@charfilter=#1}

```

```

\UCSPProtectionNone
\UCSPProtectionIeC
\UCSPProtectionUnichar

```

```

623 \uc@newcommand\UCSProtectionNone{%
624   \def\ucs@protected@unichar{%
625     \UnicodeCharFilter\@firstofone}
626 \uc@newcommand\UCSProtectionIeC{%
627   \def\ucs@protected@unichar{%
628     \UnicodeCharFilter\IeC}
629 \uc@newcommand\UCSProtectionUnichar{%
630   \def\ucs@protected@unichar##1{\ifx\protect\@typeset@protect}%
631   \UnicodeCharFilter\@firstofone}
632 \UCSProtectionIeC

```

`\uni@resetcatcodes` Sets the catcode to reasonable defaults. Used before inputting `uni-...def`-files, because this can occur anywhere. Note that `@` is of category “letter”.

```

633 \uc@newcommand\uni@resetcatcodes{%
634   \endlinechar=13\relax
635   \def\reserved@a##1##2{%
636     \@tempcnta##1\relax
637     \@tempcntb##2\relax
638     \reserved@b
639   }%
640   \def\reserved@b{%
641     \ifnum\@tempcnta>\@tempcntb\else
642       \reserved@c\@tempcnta
643       \advance\@tempcnta\@ne
644       \expandafter\reserved@b
645     \fi
646   }%
647   \catcode'\ =10\relax
648   \catcode'\#=6\relax
649   \catcode'\$=3\relax
650   \catcode'\%=14\relax
651   \catcode'\&=4\relax
652   \catcode'\'=0\relax
653   \catcode'\^=7\relax
654   \catcode'\_ =8\relax
655   \catcode'\{=1\relax
656   \catcode'\}=2\relax
657   \catcode'\~=13\relax
658   \catcode'\@=11\relax
659   \catcode'\^I=10\relax
660   \catcode'\^J=12\relax
661   \catcode'\^L=12\relax
662   \catcode'\^M=5\relax
663   \def\reserved@c##1{\catcode##1=12\relax}%
664   \reserved@c{'!}%
665   \reserved@c{'\"}%
666   \reserved@a{'\' }{'\?}%
667   \reserved@c{'[]}%
668   \reserved@c{'\]}%

```

```

669 \reserved@c{'\'}%
670 \reserved@c{'\|'}%
671 \def\reserved@c##1{\catcode##1=11\relax}%
672 \reserved@a{'\A'}{'\Z'}%
673 \reserved@a{'\a'}{'\z'}%
674 \def\reserved@c##1{\catcode##1=15\relax}%
675 \reserved@a{0}{'\^H}%
676 \reserved@c{'\^K'}%
677 \reserved@a{'\^N'}{31}%
678 \catcode"7F=15\relax
679 \relax}

```

`\unicode@error@unknown` Synopsis:  $\langle replacement \rangle \langle msg \rangle \langle code \rangle$

Outputs a warning or an error, depending of option `warnunknown`. When the user types “I”, he is asked for a definition for the missing glyph which is defined with option `default`. If  $\langle replacement \rangle$  is `ne`, typeset the invalid glyph or the newly defined one.  $\langle replacement \rangle$  must be `z` otherwise. character.

`\@getcharinfo` is used for the detail message.

```

680 \catcode'\!13\relax
681 \uc@newcommand\unicode@error@unknown{\protect\unicode@error@unknown@}%
682 \uc@newcommand\unicode@error@unknown@#1#2#3{%

```

When we are in an `amstex` environment like `align`, errors and warnings are disabled during measurement. Since an missing character error is only yielded once, this should not be so. So we trick `amstex` by setting `\measuring@false` locally.

```

683 {\expandafter\countdef\expandafter\uc@got\expandafter0%
684 \expandafter\relax\expandafter\uc@got\number#3\relax
685 \ifx\measuring@false\undefined\else\measuring@false\fi
686 \@getcharinfo\uc@temp@c{#3}%
687 \ifUnicodeOptionwarnunknown
688 \PackageWarning{ucs}{#2\MessageBreak\uc@temp@c.\MessageBreak
689 Enter I\noexpand!<RET> to define the glyph.}%
690 \ifx#1\@ne\unicode@invalid{#3}\fi
691 \else
692 \let!\unicode@read@definition\catcode'\!13\relax
693 \let\uc@read@definition\undefined
694 \PackageError{ucs}{#2}{\uc@temp@c.\MessageBreak
695 Enter I\noexpand!<RET> to define the glyph.}%
696 \ifx#1\@ne
697 \ifx\uc@read@definition\undefined\unicode@invalid{#3}%
698 \else\uc@read@definition\fi\fi
699 \fi}}
700 \catcode'\!12\relax
701 \uc@newcommand\unicode@read@definition{%
702 \uni@resetcatcodes
703 \typein[\definition]{Please enter definition for %SPACE
704 unicode character \number\uc@got}%

```

```

705 \global\let\uc@read@definition\definition
706 \toks255\expandafter{\definition}%
707 \edef\definition{\noexpand\DeclareUnicodeCharacter%
708   {\number\uc@got}{\the\toks255}}%
709 \toks255\expandafter{\definition}%
710 \typeout{Tip:\MessageBreak You may include\MessageBreak
711   \uc@spc\uc@spc\the\toks255\MessageBreak
712   into your document source.}%
713 \the\toks255\relax
714 }

```

`\uc@firstofmany` Use `\uc@firstofmany<args>\uc@firstofmany` to get the first token of `<args>`.

```

715 \def\uc@firstofmany#1#2\uc@firstofmany{#1}

```

utf8.def has been renamed to utf8x.def, utf8.def is now the LaTeX kernel's UTF-8. To support old documents, we detect whether ucs.sty and utf8.def are in used, but utf8x is not loaded. In that case we emit a warning and try to patch `\inputencoding` to emulate the old behaviour. (If no `\usepackage{ucs}` appears, we are helpless, of course.)

```

716 \ifx\AtBeginDocument\undefined\else
717 \AtBeginDocument{\def\uc@tempa{\@inpenc@undefined@{utf8}}%
718   \ifx\@inpenc@undefined\uc@tempa
719   \ifx\restore@utf@viii@actives\undefined
720   \PackageWarning{ucs}{*****\MessageBreak You %SPACE
721     seem to have loaded inputencoding utf8\MessageBreak (LaTeX kernel %SPACE
722     UTF-8) instead of utf8x (ucs.sty UTF-8).\MessageBreak Probably you %SPACE
723     are compiling a document written for a\MessageBreak
724     pre-august-2004 ucs.sty.\MessageBreak
725     *****\MessageBreak Please use %SPACE
726     \string\usepackage[utf8x]{inputenc} instead of\MessageBreak
727     \string\usepackage[utf8]{inputenc}.\MessageBreak
728     *****\MessageBreak If you should really want %SPACE
729     to use ucs.sty and kernel's\MessageBreak utf8.def together, use %SPACE
730     \string\usepackage[utf8x,utf8]{inputenc}\MessageBreak to disable %SPACE
731     compatibility mode\MessageBreak
732     *****\MessageBreak Activating compatibility %SPACE
733     mode.\MessageBreak *****\MessageBreak}%
734 \global\let\uc@inputencoding\inputencoding
735 \inputencoding{utf8x}%
736 \def\inputencoding#1{%
737   {\def\uc@tempa{#1}\def\uc@tempb{utf8}\ifx\uc@tempa\uc@tempb
738     \aftergroup\@firstoftwo\else\aftergroup\@secondoftwo\fi}%
739   {\restore@utf@viii@actives}{\uc@inputencoding{#1}}}%
740 \fi\fi
741 }\fi
742 %

```

```

743 %
744 </ucs.sty>

```

### 3.2 File ucsutils.sty

```

745 <*ucsutils.sty>

```

If running under L<sup>A</sup>T<sub>E</sub>X, parse options. Each option is assumed to be the name of macro to be imported. All macro names are saved into \@ucsutils, each prefixed by \.

When running Plain-T<sub>E</sub>X, define \@ucsutils directly and then load ucsutils.sty using \input.

```

746 \ifx\DeclareOption\undefined\else
747 \ProvidesPackage{ucsutils}[2002/04/23 UCS: Auxiliary macros]%
748 \RequirePackage{ucs}%
749 \ifx\@ucsutils\undefined\let\@ucsutils\empty\fi
750 \DeclareOption*{%
751   \edef\uc@temp@a{\csname\CurrentOption\endcsname}%
752   \expandafter\g@addto@macro\expandafter\@ucsutils\expandafter
753     {\expandafter\\uc@temp@a}}%
754 \ProcessOptions*%
755 \fi

```

Define each macro, which is to be loaded, to 1. This is later using to be able to check fast, whether a macro should be defined.

```

756 {\def\#1{\ifx#1\relax\global\let#11\fi}\@ucsutils}%

```

\@ucsutils@section Checks whether the gives macro is to be defined. If yes, ^^B is ignored, otherwise ^^B is a comment. So after a call to \@ucsutils@section every line should be prefixes with ^^B.

This macro is only used during the loading of ucsutils.sty.

```

757 \def\@ucsutils@section#1{\ifx#11\catcode2=9\else\catcode2=14\fi\relax}%

```

Execute the following stuff (prefixed with ^^B) only if \UnicodeEmbedFont is to be loaded.

```

758 \@ucsutils@section\UnicodeEmbedFont

```

We need keyval.sty for \setkeys in \UnicodeEmbedFont.

```

759 ^^B\RequirePackage{keyval}%

```

\UnicodeEmbedFont Synopsis: {\<options>}

Declares an Unicode character range to be mapped directly to a font.

<options> is a comma separated list of key/value-pairs. The following keys are supported.

- **encoding**: This is currently ignored. You may set it to the encoding of the font. If your font has a fontencoding, then you should provide it, since this key may be implemented in future.
- **start**: Start of the mapped range (Unicode position). This key is mandatory.
- **fontstart**: Start of the mapped range (in the font). Default: 0.
- **num**: Length of the range. Default: Upto the end of the font.
- **option**: Unicode-Option of the defined Unicode characters. Default: document.

Note that presently you have to switch to the desired font manually before using the Unicode characters. No checking whether the correct font is activated is done.

```
760 ^^B\def\UnicodeEmbedFont#1{%
```

Define keys for \setkeys if not yet done.

```
761 ^^B \ifx\KV@ucembedfont@start\undefined
762 ^^B \define@key{ucembedfont}{encoding}{\def\uc@embedfont@enc{##1}}%
763 ^^B \define@key{ucembedfont}{start}{\def\uc@embedfont@start{##1}}%
764 ^^B \define@key{ucembedfont}{fontstart}%
765 ^^B {\def\uc@embedfont@fontstart{##1}}%
766 ^^B \define@key{ucembedfont}{num}{\def\uc@embedfont@fontstart{##1}}%
767 ^^B \define@key{ucembedfont}{option}{\def\uc@embedfont@option{##1}}%
768 ^^B \fi
```

Define defaults.

```
769 ^^B \let\uc@embedfont@enc\undefined % Ignored
770 ^^B \let\uc@embedfont@start\undefined
771 ^^B \def\uc@embedfont@fontstart{0}%
772 ^^B \let\uc@embedfont@num\undefined
773 ^^B \def\uc@embedfont@option{document}%
```

Parse arguments.

```
774 ^^B \setkeys{ucembedfont}{#1}%
```

Error, when no start of range is given.

```
775 ^^B \ifx\uc@embedfont@start\undefined
776 ^^B \uc@errormsg{\string\UnicodeEmbedFont\space
777 ^^B needs argument start=...}\fi
```

Rewrite numbers in \uc@embedfont@fontstart and \uc@embedfont@start, so that we know them to be simple decimal (and hopefully positive) numbers.

```
778 ^^B \edef\uc@embedfont@fontstart{\number\uc@embedfont@fontstart}%
779 ^^B \edef\uc@embedfont@start{\number\uc@embedfont@start}%
```



If no num-argument was given, calculate it so that the range goes until the end of the font.

```
780 ^^B \ifx\uc@embedfont@num\undefined
781 ^^B \uc@embedfont@fontstart
782 ^^B \advance\@tempcnta by256
783 ^^B \edef\uc@embedfont@num{\number\@tempcnta}%
784 ^^B \fi
```

Start real work.

For \@tempcnta = 0 to \uc@embedfont@num... For \@tempcntb = 0 to \uc@embedfont@start+\uc@embedfont@fontstart

```
785 ^^B \@tempcnta0
786 ^^B \@tempcntb\uc@embedfont@fontstart
787 ^^B \loop\ifnum\@tempcnta<\uc@embedfont@num
```

Temporarily increase \@tempcnta by \uc@embedfont@fontstart, now it points to the actual position in the font.

```
788 ^^B \advance\@tempcnta by\uc@embedfont@start
```

We put the \char...-call into \uc@temp@a.

```
789 ^^B \edef\uc@temp@a{%
790 ^^B \noexpand\char\number\@tempcntb\space}%
```

And we define the Unicode character number \@tempcntb (option \uc@embedfont@option) to call character \uc@temp@a.

```
791 ^^B \expandafter\DeclareUnicodeCharacterAsOptional
792 ^^B \expandafter{\expandafter\@tempcnta\expandafter}%
793 ^^B \expandafter{\expandafter\uc@embedfont@option\expandafter}%
794 ^^B \expandafter{\uc@temp@a}%
```

Restore tempcnta.

```
795 ^^B \advance\@tempcnta by-\uc@embedfont@start
```

Increase loop variables.

```
796 ^^B \advance\@tempcntb by1
797 ^^B \advance\@tempcnta by1
798 ^^B \repeat
799 ^^B}
```

Execute the following stuff (prefixed with ^^B) only if \univerb is to be loaded.

```
800 \@ucsutils@section\univerb
```

`\uc@vbsetchar`

```
801 ^^B\def\uc@vbsetchar#1#2{%
802 ^^B  \catcode#1\active
803 ^^B  \begingroup\uccode'\~#1\uppercase{\endgroup\edef~}{#2}}
```

`\univerb` This macro behaves similar to the `\verb` macro. Note the following:

- No font change is effectuated.
- All characters < 128 (exceptions below) are handled by `\unichar`.
- All characters >= 128 are handled by the active inputencoding (try e.g. `utf8`).
- Combining mode is activated during the `\univerb` execution.
- Space (ASCII 32) does an implicit `\unicodecombine`.
- CR (ASCII 13) gives a line break (and an implicit `\unicodecombine`), but does not call `\unichar{13}`.
- Do not use `[` as the beginning of the verbatim sequence, this is reserved for future enhancements.

```
804 ^^B\DeclareRobustCommand\univerb[1] [] {\ifx\@nil#1\@nil\else\PackageError{ucs}{%
805 ^^B  \string\univerb\space has optional argument}{%
806 ^^B  \string\univerb[...] is not supported}\fi%
807 ^^B  \bgroup
808 ^^B  \@tempcnta\@ne
809 ^^B  \loop\ifnum\@tempcnta<128\relax
810 ^^B    \uc@vbsetchar\@tempcnta{\noexpand\unichar{\number\@tempcnta}}}%
811 ^^B    \advance\@tempcnta by\@ne
812 ^^B  \repeat
813 ^^B  \uc@vbsetchar{32}{\noexpand\unicodecombine\noexpand\unichar{32}}}%
814 ^^B  \uc@vbsetchar{13}{\noexpand\unicodecombine\noexpand\leavevmode\noexpand\\%
815 ^^B    \noexpand\leavevmode}%}
```

`\verb@egroup`

```
816 ^^B  \def\verb@egroup{%
817 ^^B    \SetUnicodeOption{nocombine}%
818 ^^B    \global\let\verb@balance@group\@empty\egroup}%
819 ^^B  \SetUnicodeOption{combine}%
820 ^^B  \@sverb}
```

[[[ TO BE DONE ]]]

```
821 \@ucsutils@section\unistring
822 ^^B\def\uc@spacechar{\futurelet\uc@spacechar\empty}\expandafter\uc@spacechar\uc@spc
```

```

823 ^^B\def\@unistring#1{%
824 ^^B  \ifx\uc@temp@a\uc@spacechar
825 ^^B    \@temptokena\expandafter{\the\@temptokena\unicodecombine\unichar{32}}%
826 ^^B  \fi
827 ^^B  \ifx\tw@#1\else
828 ^^B    \ifx\@ne#1\else
829 ^^B      \ifnum'#1<128
830 ^^B        \@temptokena\expandafter{\the\@temptokena\unichar{'#1}}%
831 ^^B      \else
832 ^^B        \@temptokena\expandafter{\the\@temptokena#1}%
833 ^^B      \fi
834 ^^B    \fi%
835 ^^B  \expandafter\futurelet\expandafter\uc@temp@a\expandafter\@unistring
836 ^^B  \fi
837 ^^B}
838 ^^B\DeclareRobustCommand\unistring[1]{%
839 ^^B  \let\uc@temp@a\undefined
840 ^^B  \@temptokena{}%
841 ^^B  \@unistring\@ne#1\tw@
842 ^^B  {\SetUnicodeOption{combine}}%
843 ^^B  \the\@temptokena
844 ^^B  \SetUnicodeOption{nocombine}}}%

```

Find out with macros where requested but not defined. Give an error for each. Undefine them (they were defined to 1 above).

```

845 {\def\@#1{%
846   \ifx#1%
847   \uc@errormsg{Can't load \string#1}{You have given the option
848     \expandafter\@gobble\string#1 to ucsutils,\MessageBreak but
849     there is no command called \string#1 in ucsutils.sty.}%
850   \global\let#1\undefined
851   \fi}
852 \@ucsutils}%

```

Clean up.

```

853 \let\@ucsutils\undefined
854 \let\@ucsutils@section\undefined
855 \catcode2=15
856 %
857 %
858 %
859 </ucsutils.sty>

```

### 3.3 File utf8x.def

```

860 <*utf8x.def>
861 \ifx\ProvidesFile\undefined\else
862 \ProvidesFile{utf8x.def}[2004/10/17 UCS: Input encoding UTF-8]%

```

863 \fi

Only load this file once. If it has already been loaded, just execute \restore@utf@viii@actives.

```
864 \expandafter\ifx\csname restore@utf@viii@actives\endcsname\relax\else
865   \csname restore@utf@viii@actives\endcsname\expandafter\endinput\fi
866 \count255=\catcode'\@catcode'\@11 %SPACE
867 \ifx@gobble\undefined\def@gobble#1{}\fi
868 \ifx@gobbletwo\undefined\def@gobbletwo#1#2{}\fi
```

Checks if \unichar is defined. Otherwise yields an error. This check is delayed until \begin{document} if necessary.

```
869 \ifx\AtBeginDocument\undefined\else
870   \ifx\@nodocument\relax\else\expandafter\AtBeginDocument\fi
871   {\ifx\unichar\undefined{\PackageError{utf8x}{%
872     Please use \protect\usepackage{ucs} to support encoding utf8x{}}\fi}%
873 \fi
```

Requires package ucs at end of including inputenc package, if still in preamble.

```
874 \ifx\AtEndOfPackage\undefined\else
875 \ifx\@nodocument\relax\else\AtEndOfPackage{\RequirePackage{ucs}}\fi%
876 \fi
```

```
877 \def\utf@viii@err#1{%
878   \PackageError{utf8x}{Character \number#1 \uc@spc appeared alone}{%
879     Characters 128-191 are only allowed as arguments to characters 194-244}}
880 \def\utf@viii@xnum#1#2\utf@viii@err#3#4\@nil{%
881   \ifx\empty#3%
882     \count#1=-1\relax
883     \PackageError{utf8x}{Malformed UTF-8 sequence}{%
884       If the character is an argument, put it in {} }\else
885     \count#1=#3\fi}
886 \def\utf@viii@undef#1#2#3#4{%
887   \begingroup
888   \count0=#1\relax
889   \ifx#3\@nil % Two-byte sequences
890     \expandafter\utf@viii@xnum\expandafter1#2\empty\empty\empty\empty\empty\empty\empty\empty\empty
891     \ifnum\count1=-1 \count0=192\count1="1007D\fi
892     \multiply\count0by64\relax
893     \advance\count0by\count1\relax
894     \advance\count0by-12416\relax
895   \else
896     \ifx#4\@nil % Three-byte sequences
897       \expandafter\utf@viii@xnum\expandafter1#2\empty\empty\empty\empty\empty\empty\empty\empty\empty
898       \expandafter\utf@viii@xnum\expandafter2#3\empty\empty\empty\empty\empty\empty\empty\empty\empty
899       \ifnum\count1=-1 \count0=224\count1=128\count2="1007D\fi
900       \ifnum\count2=-1 \count0=224\count1=128\count2="1007D\fi
901       \multiply\count0by64\relax
902       \advance\count0by\count1\relax
903       \multiply\count0by64\relax
```

```

904 \advance\count0by\count2\relax
905 \advance\count0by-925824\relax
906 \else % Four-byte sequences
907 \expandafter\utf@viii@xnum\expandafter1#2\empty\empty\empty\empty\empty\empty\empty\empty\empty\empty
908 \expandafter\utf@viii@xnum\expandafter2#3\empty\empty\empty\empty\empty\empty\empty\empty\empty\empty
909 \expandafter\utf@viii@xnum\expandafter3#4\empty\empty\empty\empty\empty\empty\empty\empty\empty\empty
910 \ifnum\count1=-1 \count0=240\count1=128\count2=128\count3="1007D\fi
911 \ifnum\count2=-1 \count0=240\count1=128\count2=128\count3="1007D\fi
912 \ifnum\count3=-1 \count0=240\count1=128\count2=128\count3="1007D\fi
913 \multiply\count0by64%
914 \advance\count0by\count1%
915 \multiply\count0by64%
916 \advance\count0by\count2%
917 \multiply\count0by64%
918 \advance\count0by\count3%
919 \advance\count0by-"3C82080\relax
920 \fi\fi
921 \begingroup\expandafter\utf@viii@map\expandafter{\number\count0}\endgroup
922 \expandafter\endgroup
923 \expandafter\unichar\expandafter{\number\count0}}%
924 \def\utf@viii@make#1#2#3#4#5#6{%
925 \count255=#1\relax
926 \loop\ifnum\count255<#2\relax
927 \catcode\count255\active
928 \begingroup
929 \uccode'\~\count255%
930 \uccode'\u'\u%
931 \uppercase{%
932 \endgroup
933 \edef~%
934 #3{\noexpand\expandafter\noexpand\ifx\noexpand\csname u8-\number\count255-#4\noexpand\endcsname
935 \begingroup

```

In case `\let` is not executed, this (until `===`) expands to `\let\relax\relax`, otherwise we have `\let\utf@viii@undeferr\@gobble` Number of 's must equal number of args of `\utf@viii@undef`

```

936 \let\noexpand\utf@viii@undeferr
937 \noexpand\@gobble\noexpand\empty\noexpand\empty
938 \noexpand\empty\noexpand\empty\noexpand\@gobbletwo\relax\relax
939 % ===
940 \noexpand\expandafter\endgroup
941 % If \let not executed: \utf@viii@undeferr is called
942 % otherwise: \utf@viii@undef.
943 \noexpand\utf@viii@undeferr{\noexpand\string\noexpand~\noexpand\string#6}%
944 \noexpand\utf@viii@undef{\number\count255}#5%
945 \noexpand\else
946 \noexpand\expandafter\noexpand\unichar\noexpand\expandafter{%
947 \noexpand\csname u8-\number\count255-#4\noexpand\endcsname}\noexpand\fi}}%
948 \advance\count255by1\relax

```

```

949 \repeat}%

950 \def\restoreUtf@viii@actives{%
951 \let\@inpenc@test\relax
952 \utf@viii@make{194}{224}{####1}{\noexpand\string####1}{####1}\noexpand\@nil\noexpand\@nil}{#
953 \utf@viii@make{224}{240}{####1####2}{\noexpand\string####1\noexpand\string####2}{####1}{####
954 \utf@viii@make{240}{245}{####1####2####3}{\noexpand\string####1\noexpand\string####2\noexpand
955 %
956 \count255=128\relax
957 \loop\ifnum\count255<192\relax
958 \catcode\count255\active
959 \begingroup
960 \uccode'\count255 %SPACE
961 \uppercase{%
962 \endgroup
963 \edef~}%
964 {\noexpand\utf@viii@err{\number\count255}}}%
965 \advance\count255by1\relax
966 \repeat}%

967 \def\utf@viii@map#1{%
968 \begingroup
969 \count0=#1\divide\count0by64\relax
970 \ifnum#1<"80\relax
971 % ASCII is not handled by utf8x.def
972 \else\ifnum#1<"800\relax
973 \count1=-\count0\multiply\count1by64\advance\count1by#1\relax
974 \advance\count0by192\advance\count1by128\relax
975 \begingroup
976 \lccode'\B=\count1 %SPACE
977 \lowercase{%
978 \endgroup
979 % \tracingassigns=3 \tracingonline=3
980 \expandafter\gdef\csname u8-\number\count0-B\endcsname}{#1}%
981 \else\ifnum#1<"10000\relax
982 \count2=-\count0\multiply\count2by64\advance\count2by#1\relax
983 \divide\count0by64 %SPACE
984 \count1=-\count0\multiply\count1by4096\advance\count1by#1%
985 \divide\count1by64%
986 \advance\count0by224\advance\count1by128\advance\count2by128 %SPACE
987 \begingroup
988 \lccode'\B=\count1 %SPACE
989 \lccode'\C=\count2 %SPACE
990 \lowercase{%
991 \endgroup
992 \expandafter\gdef\csname u8-\number\count0-BC\endcsname}{#1}%
993 \else\ifnum#1<"110000 %SPACE
994 \count3=-\count0\multiply\count3by64\advance\count3by#1\relax
995 \divide\count0by64 %SPACE
996 \count2=-\count0\multiply\count2by4096\advance\count2by#1%
997 \divide\count2by64%

```

```

998     \divide\count0by64 %SPACE
999     \count1=-\count0\multiply\count1by262144\advance\count1by#1%
1000    \divide\count1by4096 %SPACE
1001 %    \typeout{\number#1=\number\count0*262144+\number\count1*4096+\number\count2*64+\number\count3}
1002    \advance\count0by240\advance\count1by128%
1003    \advance\count2by128\advance\count3by128 %SPACE
1004    \begingroup
1005        \lccode'\B=\count1 %SPACE
1006        \lccode'\C=\count2 %SPACE
1007        \lccode'\D=\count3 %SPACE
1008        \lowercase{%
1009    \endgroup
1010    \expandafter\gdef\csname u8-\number\count0-BCD\endcsname}{#1}%
1011    \else
1012        \PackageWarning{utf8x}{Invalid code position \number#1 \uc@spc
1013        defined,\MessageBreak unrepresentable in UTF-8}%
1014    \fi\fi\fi\fi
1015    \endgroup
1016 }
1017 \begingroup
1018     \lccode'\A='{ \lccode'\B=' \lccode'\C=' \lccode'\D='
1019     \lccode'\P='P\lccode'\U='U%
1020     \lowercase{%
1021 \endgroup
1022     \def\utf@viii@undeferr#1#2#3#4#5#6{%
1023         \ifx@gobble#1\else[Please insert CPrerenderUnicodeA#1B into preamble]\fi}}

```

Checks (at `\begin{document}`) whether some utf8-chars have been redefined (e.g. by `polutonikogreek.ldf`). Warns and corrects if necessary.

```

1024 \ifx\AtBeginDocument\undefined\else
1025     \ifx@nodocument\relax\else
1026         \AtBeginDocument{%
1027             \begingroup
1028             \expandafter\def\expandafter\temp@a\expandafter#\expandafter1%
1029                 \string\utf@viii@#2@nil{%
1030                     \ifx@nil#2@nil\count2\count0\else\count1\count0\fi}%
1031                 \count0=128 \count1=0 \count2=0 %SPACE
1032                 \loop\ifnum\count0<245 %SPACE
1033                     \ifnum\count0=192 \advance\count0by2 \fi
1034                     \lccode'\~\count0 %SPACE
1035                     \ifnum\catcode\count0=13 %SPACE
1036                         \lowercase{%
1037                             \expandafter\expandafter\expandafter\temp@a\expandafter\meaning\expandafter~%
1038                             \string\utf@viii@#2@nil}%
1039                     \else
1040                         \count2\count0\fi
1041                     \advance\count0by1 %SPACE
1042                     \repeat
1043                 \ifnum\count1=0 \else\ifnum\count2=0 \else

```

```

1044     \PackageWarning{utf8x.def}{Character(s) \number\count2\space\space
1045     etc. got redefined somewhere.\MessageBreak
1046     Restoring to its utf8x-meaning}%
1047     \aftergroup\restore@utf@viii@actives
1048   \fi\fi
1049   \endgroup}%
1050 \fi
1051 \fi

Restore @

1052 \catcode'\@=\count255\relax
1053 \csname restore@utf@viii@actives\endcsname
1054 %
1055 %
1056 \</utf8x.def>

```

### 3.4 File ucsencs.def

```

1057 <*ucsencs.def>
1058 \ifx\ProvidesFile\undefined\else
1059 \ProvidesFile{ucsencs.def}[2011/01/21 Fixes to fontencodings LGR, T3]
1060 \fi
1061 \expandafter\edef\csname uc@temp@d\endcsname{%
1062   \noexpand\catcode'\noexpand\@=\number\catcode'\@ \relax
1063   \noexpand\catcode'\noexpand\^=\number\catcode'\^ \relax
1064   \noexpand\catcode'\noexpand\"=\number\catcode'\\" \relax
1065   \noexpand\catcode1=\number\catcode1 \relax
1066   \noexpand\catcode2=\number\catcode2 \relax
1067 }%
1068 \catcode'\@11
1069 \catcode'\\"12
1070 \ifx\@backslashchar\undefined
1071   \edef\@backslashchar{\expandafter\@gobble\string\\}\fi
1072 \catcode'\^7
1073 \@tempcnta\catcode1
1074 \@tempcntb\catcode2
1075 \catcode1=13 \relax
1076 \def\uc@temp@c#1
1077 {}%
1078 \def^^A#1{%
1079   \let\uc@temp@a\undefined
1080 %   \ifx#1\newcommand\let\uc@temp@a\providecommand\fi
1081   \ifx#1\def\let\uc@temp@a\thr@@\fi
1082   \ifx#1\DeclareTextSymbol\let\uc@temp@a\@ne\fi
1083   \ifx#1\DeclareTextComposite\let\uc@temp@a\tw\fi
1084   \ifx#1\DeclareTextCommand\let\uc@temp@a\@ne\fi
1085   \ifx#1\DeclareTextAccent\let\uc@temp@a\@ne\fi
1086   \ifx#1\DeclareTextCompositeCommand\let\uc@temp@a\tw\fi
1087   \ifx#1\typeout\let\uc@temp@a\typeout\fi
1088   \ifx\uc@temp@a\@ne

```



```

1089 \def\uc@temp@a##1##2{%
1090 \expandafter\ifx\csname ##2\string##1\endcsname\relax
1091 \expandafter#1%
1092 \else
1093 \wlog{##2\string##1 already defined.}%
1094 \expandafter\uc@temp@c
1095 \fi##1{##2}}%
1096 \fi
1097 \ifx\uc@temp@a\tw@
1098 \def\uc@temp@a##1##2##3{%
1099 \expandafter\ifx\csname \@backslashchar##2\string##1-\string##3\endcsname\relax
1100 \expandafter#1%
1101 \else
1102 \wlog{\@backslashchar##2\string##1-\string##3 already defined.}%
1103 \expandafter\uc@temp@c
1104 \fi##1{##2}##3}%
1105 \fi
1106 \ifx\uc@temp@a\thr@@
1107 \def\uc@temp@a##1{%
1108 \ifx##1\undefined
1109 \expandafter\def\expandafter##1%
1110 \else
1111 \expandafter\def\expandafter\uc@temp@a
1112 \fi}
1113 \fi
1114 \ifx\uc@temp@a\undefined
1115 \errmessage{ucsencs.def: Dont know how to handle \string#1}%
1116 \let\uc@temp@a#1%
1117 \fi
1118 \uc@temp@a}
1119 \def\uc@temp@b#1{\expandafter\ifx\csname T@#1\endcsname\relax
1120 \catcode1=14\relax\catcode2=14\relax
1121 \else\catcode1=13\relax\catcode2=9\relax\fi}%
1122 \ifx\autofe@mode\undefined\else\ifx\autofe@mode0\else\let\autofe@mode1\fi\fi

```

\textasci is a wrapper for outputting ASCII chars in the range 0x21–0x7e characters &#% must be preceded by \ (i.e. \textasci i&), all other characters must be given as is (i.e. \textasci i: or \textasci i A).

```

1123 \ProvideTextCommandDefault{\textasci i}[1]{\@textasci i{#1}}%
1124 \def\@textasci i#1{\expandafter\@textasci i\string#1\empty\@nil}%
1125 \def\@textasci i#1#2\@nil{\ifx#2\empty#1\else#2\fi}%
1126 \def\textasci iencoding{\encodingdefault}%
1127 \def\@textasci i@switch#1{\begingroup\@use@text@encoding{\textasci iencoding}\def\textasci iencoding
1128 \let\uc@text@composite\@text@composite
1129 \def\@text@composite#1#2#3\@text@composite{%
1130 \ifx\textasci i#2\expandafter\@secondoftwo\else\expandafter\@firstoftwo\fi
1131 {\uc@text@composite{#1}{#2}{#3}\@text@composite}%
1132 {\uc@text@composite{#1}#3\@text@composite}}%
1133 %

```

Commands for an encoding-portable access to Greek characters in LGR follow. The accents are used as follows (the Unicode character codes give the according non combining characters as examples):

- \': Tonos (U+0384).
- \greekoxia: Oxia (U+1FFD). In the LGR encoding it is identical to \': (it calls the latter), but fonts may want to render a tonos and an oxia differently, so another name has been reserved for the oxia.
- \': Varia (U+1FEF).
- \~: Perispomeni (U+1FC0).
- \": Dilytika (U+00A8)
- \greeksubiota: Subscript iota (U+1FBE). Both for capital and small letters.
- \greekdasia: Dasia (U+1FFE).
- \greekpsili: Psili (U+1FBF).
- \u: Vrachy (U+0306).
- \=: Macron (U+0304).
- \greekdasiaoxia: Dasia and oxia (U+1FDE)
- \greekdasiavaria: Dasia and varia (U+1FDD)
- \greekdasiaperispomeni: Perispomeni over dasia (U+1FDF)
- \greekpsilioxia: Psili and oxia (U+1FCE)
- \greekpsilivaria: Psili and varia (U+1FCD)
- \greekpsiliperispomeni: Perispomeni over psili (U+1FCF)
- \greekdialytikatonos: Tonos over dialytika (U+0385)
- \greekdialytikaoxia: Tonos over oxia (U+1FEE) (here identical to \greekdialytikatonos)
- \greekdialytikavaria: Varia over dialytika (U+1FED)
- \greekdialytikaperispomeni: Perispomeni over dialytika (U+1FC1)
- \greekoxiaiota: Oxia + subscript iota
- \greekvariaiota: Varia + subscript iota

- \greekpsiliiota: Psili + subscript iota
- \greekdasiaiota: Dasia + subscript iota
- \greekperispomeniiota: Perispomeni + subscript iota
- \greekdasiaoxiaiota: Dasia and oxia + subscript iota
- \greekdasiavariaiota: Dasia and varia + subscript iota
- \greekdasiaperispomeniiota: Perispomeni over dasia + subscript iota
- \greekpsilioxiaiota: Psili and oxia + subscript iota
- \greekpsilivariaiota: Psili and varia + subscript iota
- \greekpsiliperispomeniiota: Perispomeni over psili + subscript iota

```

1135 % 00 hyphen
1136 % 01 TODO
1137 ^^A\DeclareTextCommand{\textascii}{LGR}[1]{\@textascii@switch{#1}}
1138 ^^A\DeclareTextSymbol{\textpentedeka}{LGR}{2}
1139 ^^A\DeclareTextSymbol{\textpentehkaton}{LGR}{3}
1140 ^^A\DeclareTextSymbol{\textpenteqilioi}{LGR}{4}
1141 ^^A\DeclareTextSymbol{\textpentemuria}{LGR}{5}
1142 ^^A\DeclareTextSymbol{\textstigma}{LGR}{6}
1143 ^^A\DeclareTextSymbol{\textstigmavariant}{LGR}{7}
1144 % 08 adscript iota (done by \textsubiota, "7C)
1145 % 09--0B see 7C (\textsubiota)
1146 % 0C--11 TODO
1147 ^^A\DeclareTextSymbol{\textqoppa}{LGR}{12}
1148 ^^A\DeclareTextSymbol{\textqoppavariant}{LGR}{13}
1149 % 14--17 TODO
1150 ^^A\DeclareTextSymbol{\texteuro}{LGR}{18}
1151 ^^A\DeclareTextSymbol{\textperthousand}{LGR}{19}
1152 % 1A TODO
1153 ^^A\DeclareTextSymbol{\textsanpi}{LGR}{1B}
1154 ^^A\DeclareTextSymbol{\textquoteleft}{LGR}{1C}
1155 ^^A\DeclareTextSymbol{\textquoteright}{LGR}{1D}
1156 ^^A\DeclareTextAccent{\u}{LGR}{1E}
1157 ^^A\DeclareTextAccent{\=}{LGR}{1F}
1158 ^^A\DeclareTextAccent{\textdialytikaperispomeni}{LGR}{20}
1159 % 21 exclamation mark
1160 ^^A\DeclareTextAccent{\!}{LGR}{22}
1161 ^^A\DeclareTextAccent{\textdialytikatonos}{LGR}{23}
1162 ^^A\DeclareTextCommand{\textdialytikaoxia}{LGR}[1]{\textdialytikatonos{#1}}
1163 ^^A\DeclareTextAccent{\textdialytikavaria}{LGR}{24}
1164 ^^A\DeclareTextSymbol{\textpercent}{LGR}{25}
1165 ^^A\DeclareTextSymbol{\textperiodcentered}{LGR}{26}
1166 ^^A\DeclareTextAccent{\'}{LGR}{27}
1167 ^^A\DeclareTextCommand{\textoxia}{LGR}[1]{\@tabacckludge'#{1}}

```

```

1168 ^^A\DeclareTextSymbol{\textparenleft}{LGR}{"28}
1169 ^^A\DeclareTextSymbol{\textparenright}{LGR}{"29}
1170 % 2A asterisk
1171 % 2B plus
1172 % 2C comma
1173 % 2D hyphen
1174 % 2E period
1175 % 2F slash
1176 % 30--39 digits 0-9
1177 % 3A colon
1178 ^^A\DeclareTextSymbol{\textanoteleia}{LGR}{"3B}
1179 ^^A\DeclareTextAccent{\textdasia}{LGR}{"3C}
1180 % 3D equal
1181 ^^A\DeclareTextAccent{\textpsili}{LGR}{"3E}
1182 ^^A\DeclareTextSymbol{\textquestion}{LGR}{"3F}
1183 ^^A\DeclareTextAccent{\textdasiaperispomeni}{LGR}{"40}
1184 ^^A\DeclareTextSymbol{\textAlpha}{LGR}{"41}
1185 ^^A\DeclareTextSymbol{\textBeta}{LGR}{"42}
1186 ^^A\DeclareTextAccent{\textdasiavaria}{LGR}{"43}
1187 ^^A\DeclareTextSymbol{\textDelta}{LGR}{"44}
1188 ^^A\DeclareTextSymbol{\textEpsilon}{LGR}{"45}
1189 ^^A\DeclareTextSymbol{\textPhi}{LGR}{"46}
1190 ^^A\DeclareTextSymbol{\textGamma}{LGR}{"47}
1191 ^^A\DeclareTextSymbol{\textEta}{LGR}{"48}
1192 ^^A\DeclareTextSymbol{\textIota}{LGR}{"49}
1193 ^^A\DeclareTextSymbol{\textTheta}{LGR}{"4A}
1194 ^^A\DeclareTextSymbol{\textKappa}{LGR}{"4B}
1195 ^^A\DeclareTextSymbol{\textLambda}{LGR}{"4C}
1196 ^^A\DeclareTextSymbol{\textMu}{LGR}{"4D}
1197 ^^A\DeclareTextSymbol{\textNu}{LGR}{"4E}
1198 ^^A\DeclareTextSymbol{\textOmicron}{LGR}{"4F}
1199 ^^A\DeclareTextSymbol{\textPi}{LGR}{"50}
1200 ^^A\DeclareTextSymbol{\textChi}{LGR}{"51}
1201 ^^A\DeclareTextSymbol{\textRho}{LGR}{"52}
1202 ^^A\DeclareTextSymbol{\textSigma}{LGR}{"53}
1203 ^^A\DeclareTextSymbol{\textTau}{LGR}{"54}
1204 ^^A\DeclareTextSymbol{\textUpsilon}{LGR}{"55}
1205 ^^A\DeclareTextAccent{\textdasiaoxia}{LGR}{"56}
1206 ^^A\DeclareTextSymbol{\textOmega}{LGR}{"57}
1207 ^^A\DeclareTextSymbol{\textXi}{LGR}{"58}
1208 ^^A\DeclareTextSymbol{\textPsi}{LGR}{"59}
1209 ^^A\DeclareTextSymbol{\textZeta}{LGR}{"5A}
1210 % 5B left bracket '['
1211 ^^A\DeclareTextAccent{\textpsiliperispomeni}{LGR}{"5C}
1212 % 5D right bracket
1213 ^^A\DeclareTextAccent{\textpsilioxia}{LGR}{"5E}
1214 ^^A\DeclareTextAccent{\textpsilivaria}{LGR}{"5F}
1215 ^^A\DeclareTextAccent{\'}{LGR}{"60}
1216 ^^A\DeclareTextSymbol{\textalpha}{LGR}{"61}
1217 ^^A\DeclareTextSymbol{\textbeta}{LGR}{"62}

```

```

1218 ^^A\DeclareTextSymbol{\textvarsigma}{LGR}{ "63}
1219 ^^A\DeclareTextSymbol{\textdelta}{LGR}{ "64}
1220 ^^A\DeclareTextSymbol{\textepsilon}{LGR}{ "65}
1221 ^^A\DeclareTextSymbol{\textphi}{LGR}{ "66}
1222 ^^A\DeclareTextSymbol{\textgamma}{LGR}{ "67}
1223 ^^A\DeclareTextSymbol{\texteta}{LGR}{ "68}
1224 ^^A\DeclareTextSymbol{\textiota}{LGR}{ "69}
1225 ^^A\DeclareTextSymbol{\texttheta}{LGR}{ "6A}
1226 ^^A\DeclareTextSymbol{\textkappa}{LGR}{ "6B}
1227 ^^A\DeclareTextSymbol{\textlambda}{LGR}{ "6C}
1228 ^^A\DeclareTextSymbol{\textmu}{LGR}{ "6D}
1229 ^^A\DeclareTextSymbol{\textnu}{LGR}{ "6E}
1230 ^^A\DeclareTextSymbol{\textomicron}{LGR}{ "6F}
1231 ^^A\DeclareTextSymbol{\textpi}{LGR}{ "70}
1232 ^^A\DeclareTextSymbol{\textchi}{LGR}{ "71}
1233 ^^A\DeclareTextSymbol{\textrho}{LGR}{ "72}
1234 ^^A\DeclareTextSymbol{\textautosigma}{LGR}{ "73}

```

With the CB-fonts, "73 is an automatic sigma. To force a mid sigma, I insert `\char"9B` afterwards (iff fontfamily start with cm). Whoever knows a better macro for `\textsigma`, please tell me.

```

1235 ^^B\ifx\lgr@sig@fix\undefined\def\lgr@sig@fix#1cm#2\@nil{\ifx!#1!\char"9B \fi}\fi
1236 ^^A\DeclareTextCommand{\textsigma}{LGR}{\char"73 \expandafter\lgr@sig@fix\f@family cm\@nil}
1237 ^^A\DeclareTextSymbol{\texttau}{LGR}{ "74}
1238 ^^A\DeclareTextSymbol{\textupsilon}{LGR}{ "75}
1239 % 76 undefined
1240 ^^A\DeclareTextSymbol{\textomega}{LGR}{ "77}
1241 ^^A\DeclareTextSymbol{\textxi}{LGR}{ "78}
1242 ^^A\DeclareTextSymbol{\textpsi}{LGR}{ "79}
1243 ^^A\DeclareTextSymbol{\textzeta}{LGR}{ "7A}
1244 ^^A\DeclareTextSymbol{\guillemotleft}{LGR}{ "7B}
1245 % 7C the following commands:
1246 ^^A\DeclareTextCommand{\textsubiota}{LGR}[1]{#1|}
1247 ^^A\DeclareTextCommand{\textpsiliiota}{LGR}[1]{\textpsili{#1}|}
1248 ^^A\DeclareTextCommand{\textdasiaiota}{LGR}[1]{\textdasia{#1}|}
1249 ^^A\DeclareTextCommand{\textvariaiota}{LGR}[1]{\@tabacckludge'#{#1}|}
1250 ^^A\DeclareTextCommand{\textoxiaiota}{LGR}[1]{\@tabacckludge'#{#1}|}
1251 ^^A\DeclareTextCommand{\textpsilivariiaiota}{LGR}[1]{\textpsilivaria{#1}|}
1252 ^^A\DeclareTextCommand{\textdasiavariiaiota}{LGR}[1]{\textdasiavaria{#1}|}
1253 ^^A\DeclareTextCommand{\textpsilioxiaiota}{LGR}[1]{\textpsilioxia{#1}|}
1254 ^^A\DeclareTextCommand{\textdasiioxiaiota}{LGR}[1]{\textdasiioxia{#1}|}
1255 ^^A\DeclareTextCommand{\textperispomeniiaiota}{LGR}[1]{\@tabacckludge~#{#1}|}
1256 ^^A\DeclareTextCommand{\textpsiliperispomeniiaiota}{LGR}[1]{\textpsiliperispomeni{#1}|}
1257 ^^A\DeclareTextCommand{\textdasiaperispomeniiaiota}{LGR}[1]{\textdasiaperispomeni{#1}|}
1258 ^^A\DeclareTextComposite{\textsubiota}{LGR}{\textAlpha}{9}
1259 ^^A\DeclareTextComposite{\textsubiota}{LGR}{\textEta}{ "A}
1260 ^^A\DeclareTextComposite{\textsubiota}{LGR}{\textOmega}{ "B}
1261 ^^A\DeclareTextSymbol{\guillemotright}{LGR}{ "7D}
1262 ^^A\DeclareTextAccent{\~}{LGR}{ "7E}

```

```

1263 ^^A\DeclareTextSymbol{\textemdash}{LGR}{7F}
1264 ^^A\DeclareTextComposite{\'}{LGR}{\textalpha}{80}
1265 ^^A\DeclareTextComposite{\textdasia}{LGR}{\textalpha}{81}
1266 ^^A\DeclareTextComposite{\textpsili}{LGR}{\textalpha}{82}
1267 ^^A\DeclareTextComposite{\textdasiavaria}{LGR}{\textalpha}{83}
1268 % 84--87 subiota combinations are created correctly
1269 ^^A\DeclareTextComposite{\'}{LGR}{\textalpha}{88}
1270 ^^A\DeclareTextComposite{\textdasiaoxia}{LGR}{\textalpha}{89}
1271 ^^A\DeclareTextComposite{\textpsilioxia}{LGR}{\textalpha}{8A}
1272 ^^A\DeclareTextComposite{\textpsilivaria}{LGR}{\textalpha}{8B}
1273 % 8C--8F subiota combinations are created correctly
1274 ^^A\DeclareTextComposite{\~}{LGR}{\textalpha}{90}
1275 ^^A\DeclareTextComposite{\textdasiaperispomeni}{LGR}{\textalpha}{91}
1276 ^^A\DeclareTextComposite{\textpsiliperispomeni}{LGR}{\textalpha}{92}
1277 ^^A\DeclareTextSymbol{\textdigamma}{LGR}{93}
1278 % 94--96 subiota combinations are created correctly
1279 % 97 TODO
1280 ^^A\DeclareTextComposite{\'}{LGR}{\texteta}{98}
1281 ^^A\DeclareTextComposite{\textdasia}{LGR}{\texteta}{99}
1282 ^^A\DeclareTextComposite{\textpsili}{LGR}{\texteta}{9A}
1283 % 9B undefined
1284 % 9C--9E subiota combinations are created correctly
1285 % 9F undefined
1286 ^^A\DeclareTextComposite{\'}{LGR}{\texteta}{A0}
1287 ^^A\DeclareTextComposite{\textdasiaoxia}{LGR}{\texteta}{A1}
1288 ^^A\DeclareTextComposite{\textpsilioxia}{LGR}{\texteta}{A2}
1289 ^^A\DeclareTextComposite{\textdasiavaria}{LGR}{\texteta}{A3}
1290 % A4--A7 subiota combinations are created correctly
1291 ^^A\DeclareTextComposite{\~}{LGR}{\texteta}{A8}
1292 ^^A\DeclareTextComposite{\textdasiaperispomeni}{LGR}{\texteta}{A9}
1293 ^^A\DeclareTextComposite{\textpsiliperispomeni}{LGR}{\texteta}{AA}
1294 ^^A\DeclareTextComposite{\textpsilivaria}{LGR}{\texteta}{AB}
1295 % AC--AF subiota combinations are created correctly
1296 ^^A\DeclareTextComposite{\'}{LGR}{\textomega}{B0}
1297 ^^A\DeclareTextComposite{\textdasia}{LGR}{\textomega}{B1}
1298 ^^A\DeclareTextComposite{\textpsili}{LGR}{\textomega}{B2}
1299 ^^A\DeclareTextComposite{\textdasiavaria}{LGR}{\textomega}{B3}
1300 % B4--B7 subiota combinations are created correctly
1301 ^^A\DeclareTextComposite{\'}{LGR}{\textomega}{B8}
1302 ^^A\DeclareTextComposite{\textdasiaoxia}{LGR}{\textomega}{B9}
1303 ^^A\DeclareTextComposite{\textpsilioxia}{LGR}{\textomega}{BA}
1304 ^^A\DeclareTextComposite{\textpsilivaria}{LGR}{\textomega}{BB}
1305 % BC--BF subiota combinations are created correctly
1306 ^^A\DeclareTextComposite{\~}{LGR}{\textomega}{C0}
1307 ^^A\DeclareTextComposite{\textdasiaperispomeni}{LGR}{\textomega}{C1}
1308 ^^A\DeclareTextComposite{\textpsiliperispomeni}{LGR}{\textomega}{C2}
1309 ^^A\DeclareTextSymbol{\textDigamma}{LGR}{C3}
1310 % C4--C6 subiota combinations are created correctly
1311 % C7 undefined
1312 ^^A\DeclareTextComposite{\'}{LGR}{\textiota}{C8}

```

```

1313 ^^A\DeclareTextComposite{\textdasia}{LGR}{\textiota}{"C9}
1314 ^^A\DeclareTextComposite{\textpsili}{LGR}{\textiota}{"CA}
1315 ^^A\DeclareTextComposite{\textdasiavaria}{LGR}{\textiota}{"CB}
1316 ^^A\DeclareTextComposite{\'}{LGR}{\textupsilon}{"CC}
1317 ^^A\DeclareTextComposite{\textdasia}{LGR}{\textupsilon}{"CD}
1318 ^^A\DeclareTextComposite{\textpsili}{LGR}{\textupsilon}{"CE}
1319 ^^A\DeclareTextComposite{\textdasiavaria}{LGR}{\textupsilon}{"CF}
1320 ^^A\DeclareTextComposite{\'}{LGR}{\textiota}{"D0}
1321 ^^A\DeclareTextComposite{\textdasiaoxia}{LGR}{\textiota}{"D1}
1322 ^^A\DeclareTextComposite{\textpsilioxia}{LGR}{\textiota}{"D2}
1323 ^^A\DeclareTextComposite{\textpsilivaria}{LGR}{\textiota}{"D3}
1324 ^^A\DeclareTextComposite{\'}{LGR}{\textupsilon}{"D4}
1325 ^^A\DeclareTextComposite{\textdasiaoxia}{LGR}{\textupsilon}{"D5}
1326 ^^A\DeclareTextComposite{\textpsilioxia}{LGR}{\textupsilon}{"D6}
1327 ^^A\DeclareTextComposite{\textpsilivaria}{LGR}{\textupsilon}{"D7}
1328 ^^A\DeclareTextComposite{\~}{LGR}{\textiota}{"D8}
1329 ^^A\DeclareTextComposite{\textdasiaperispomeni}{LGR}{\textiota}{"D9}
1330 ^^A\DeclareTextComposite{\textpsiliperispomeni}{LGR}{\textiota}{"DA}
1331 ^^A\DeclareTextComposite{\"}{LGR}{\textiota}{"DB}
1332 ^^A\DeclareTextComposite{\~}{LGR}{\textupsilon}{"DC}
1333 ^^A\DeclareTextComposite{\textdasiaperispomeni}{LGR}{\textupsilon}{"DD}
1334 ^^A\DeclareTextComposite{\textpsiliperispomeni}{LGR}{\textupsilon}{"DE}
1335 ^^A\DeclareTextComposite{\~}{LGR}{\textupsilon}{"DF}
1336 ^^A\DeclareTextComposite{\'}{LGR}{\textepsilon}{"E0}
1337 ^^A\DeclareTextComposite{\textdasia}{LGR}{\textepsilon}{"E1}
1338 ^^A\DeclareTextComposite{\textpsili}{LGR}{\textepsilon}{"E2}
1339 ^^A\DeclareTextComposite{\textdasiavaria}{LGR}{\textepsilon}{"E3}
1340 ^^A\DeclareTextComposite{\'}{LGR}{\textomicron}{"E4}
1341 ^^A\DeclareTextComposite{\textdasia}{LGR}{\textomicron}{"E5}
1342 ^^A\DeclareTextComposite{\textpsili}{LGR}{\textomicron}{"E6}
1343 ^^A\DeclareTextComposite{\textdasiavaria}{LGR}{\textomicron}{"E7}
1344 ^^A\DeclareTextComposite{\'}{LGR}{\textepsilon}{"E8}
1345 ^^A\DeclareTextComposite{\textdasiaoxia}{LGR}{\textepsilon}{"E9}
1346 ^^A\DeclareTextComposite{\textpsilioxia}{LGR}{\textepsilon}{"EA}
1347 ^^A\DeclareTextComposite{\textpsilivaria}{LGR}{\textepsilon}{"EB}
1348 ^^A\DeclareTextComposite{\'}{LGR}{\textomicron}{"EC}
1349 ^^A\DeclareTextComposite{\textdasiaoxia}{LGR}{\textomicron}{"ED}
1350 ^^A\DeclareTextComposite{\textpsilioxia}{LGR}{\textomicron}{"EE}
1351 ^^A\DeclareTextComposite{\textpsilivaria}{LGR}{\textomicron}{"EF}
1352 ^^A\DeclareTextComposite{\"}{LGR}{\textiota}{"F0}
1353 ^^A\DeclareTextComposite{\textdialytikavaria}{LGR}{\textiota}{"F1}
1354 ^^A\DeclareTextComposite{\textdialytikatonos}{LGR}{\textiota}{"F2}
1355 ^^A\DeclareTextComposite{\textdialytikaperispomeni}{LGR}{\textiota}{"F3}
1356 ^^A\DeclareTextComposite{\~}{LGR}{\textupsilon}{"F4}
1357 ^^A\DeclareTextComposite{\textdialytikavaria}{LGR}{\textupsilon}{"F5}
1358 ^^A\DeclareTextComposite{\textdialytikatonos}{LGR}{\textupsilon}{"F6}
1359 ^^A\DeclareTextComposite{\textdialytikaperispomeni}{LGR}{\textupsilon}{"F7}
1360 % F8--FA subiota combinations are created correctly
1361 ^^A\DeclareTextComposite{\textdasia}{LGR}{\textrho}{"FB}
1362 ^^A\DeclareTextComposite{\textpsili}{LGR}{\textrho}{"FC}

```

```

1363 % FD undefined
1364 ^^A\DeclareTextSymbol{\textdexiakraia}{LGR}{"FE}
1365 ^^A\DeclareTextSymbol{\textaristerikeraia}{LGR}{"FF}

```

Some composites follow, which are intuitively accents, but must be generated as ligatures in the CB fonts:

```

1366 ^^A\DeclareTextCompositeCommand{\'}{LGR}{\textAlpha}{\char"5F A}
1367 ^^A\DeclareTextCompositeCommand{\'}{LGR}{\textAlpha}{\char"5F A}
1368 ^^A\DeclareTextCompositeCommand{\textpsili}{LGR}{\textAlpha}{>A}
1369 ^^A\DeclareTextCompositeCommand{\textdasia}{LGR}{\textAlpha}{<A}
1370 ^^A\DeclareTextCompositeCommand{\textpsilivaria}{LGR}{\textAlpha}{\char"5F A}
1371 ^^A\DeclareTextCompositeCommand{\textdasiavaria}{LGR}{\textAlpha}{CA}
1372 ^^A\DeclareTextCompositeCommand{\textpsilioxia}{LGR}{\textAlpha}{\char"5E A}
1373 ^^A\DeclareTextCompositeCommand{\textdasiaoxia}{LGR}{\textAlpha}{VA}
1374 ^^A\DeclareTextCompositeCommand{\textpsiliperispomeni}{LGR}{\textAlpha}{\char"5C A}
1375 ^^A\DeclareTextCompositeCommand{\textdasiaperispomeni}{LGR}{\textAlpha}{@A}
1376 ^^A\DeclareTextCompositeCommand{\'}{LGR}{\textEpsilon}{\char"5F E}
1377 ^^A\DeclareTextCompositeCommand{\'}{LGR}{\textEpsilon}{\char"5F E}
1378 ^^A\DeclareTextCompositeCommand{\textpsili}{LGR}{\textEpsilon}{>E}
1379 ^^A\DeclareTextCompositeCommand{\textdasia}{LGR}{\textEpsilon}{<E}
1380 ^^A\DeclareTextCompositeCommand{\textpsilivaria}{LGR}{\textEpsilon}{\char"5F E}
1381 ^^A\DeclareTextCompositeCommand{\textdasiavaria}{LGR}{\textEpsilon}{CE}
1382 ^^A\DeclareTextCompositeCommand{\textpsilioxia}{LGR}{\textEpsilon}{\char"5E E}
1383 ^^A\DeclareTextCompositeCommand{\textdasiaoxia}{LGR}{\textEpsilon}{VE}
1384 ^^A\DeclareTextCompositeCommand{\'}{LGR}{\textEta}{\char"5F H}
1385 ^^A\DeclareTextCompositeCommand{\'}{LGR}{\textEta}{\char"5F H}
1386 ^^A\DeclareTextCompositeCommand{\textpsili}{LGR}{\textEta}{>H}
1387 ^^A\DeclareTextCompositeCommand{\textdasia}{LGR}{\textEta}{<H}
1388 ^^A\DeclareTextCompositeCommand{\textpsilivaria}{LGR}{\textEta}{\char"5F H}
1389 ^^A\DeclareTextCompositeCommand{\textdasiavaria}{LGR}{\textEta}{CH}
1390 ^^A\DeclareTextCompositeCommand{\textpsilioxia}{LGR}{\textEta}{\char"5E H}
1391 ^^A\DeclareTextCompositeCommand{\textdasiaoxia}{LGR}{\textEta}{VH}
1392 ^^A\DeclareTextCompositeCommand{\textpsiliperispomeni}{LGR}{\textEta}{\char"5C H}
1393 ^^A\DeclareTextCompositeCommand{\textdasiaperispomeni}{LGR}{\textEta}{@H}
1394 ^^A\DeclareTextCompositeCommand{\'}{LGR}{\textIota}{\char"5F I}
1395 ^^A\DeclareTextCompositeCommand{\'}{LGR}{\textIota}{\char"5F I}
1396 ^^A\DeclareTextCompositeCommand{\textpsili}{LGR}{\textIota}{>I}
1397 ^^A\DeclareTextCompositeCommand{\textdasia}{LGR}{\textIota}{<I}
1398 ^^A\DeclareTextCompositeCommand{\textpsilivaria}{LGR}{\textIota}{\char"5F I}
1399 ^^A\DeclareTextCompositeCommand{\textdasiavaria}{LGR}{\textIota}{CI}
1400 ^^A\DeclareTextCompositeCommand{\textpsilioxia}{LGR}{\textIota}{\char"5E I}
1401 ^^A\DeclareTextCompositeCommand{\textdasiaoxia}{LGR}{\textIota}{VI}
1402 ^^A\DeclareTextCompositeCommand{\textpsiliperispomeni}{LGR}{\textIota}{\char"5C I}
1403 ^^A\DeclareTextCompositeCommand{\textdasiaperispomeni}{LGR}{\textIota}{@I}
1404 ^^A\DeclareTextCompositeCommand{\'}{LGR}{\textOmicron}{\char"5F O}
1405 ^^A\DeclareTextCompositeCommand{\'}{LGR}{\textOmicron}{\char"5F O}
1406 ^^A\DeclareTextCompositeCommand{\textpsili}{LGR}{\textOmicron}{>O}
1407 ^^A\DeclareTextCompositeCommand{\textdasia}{LGR}{\textOmicron}{<O}
1408 ^^A\DeclareTextCompositeCommand{\textpsilivaria}{LGR}{\textOmicron}{\char"5F O}

```



```

1409 ^^A\DeclareTextCompositeCommand{\textdasiavaria}{LGR}{\textOmicron}{C0}
1410 ^^A\DeclareTextCompositeCommand{\textpsilioxia}{LGR}{\textOmicron}{\char"5E 0}
1411 ^^A\DeclareTextCompositeCommand{\textdasiaoxia}{LGR}{\textOmicron}{V0}
1412 ^^A\DeclareTextCompositeCommand{\'}{LGR}{\textUpsilon}{'U}
1413 ^^A\DeclareTextCompositeCommand{\'}{LGR}{\textUpsilon}{'U}
1414 ^^A\DeclareTextCompositeCommand{\textdasia}{LGR}{\textUpsilon}{<U}
1415 ^^A\DeclareTextCompositeCommand{\textdasiavaria}{LGR}{\textUpsilon}{CU}
1416 ^^A\DeclareTextCompositeCommand{\textdasiaoxia}{LGR}{\textUpsilon}{VU}
1417 ^^A\DeclareTextCompositeCommand{\textdasiaperispomeni}{LGR}{\textUpsilon}{@U}
1418 ^^A\DeclareTextCompositeCommand{\'}{LGR}{\textOmega}{'W}
1419 ^^A\DeclareTextCompositeCommand{\'}{LGR}{\textOmega}{'W}
1420 ^^A\DeclareTextCompositeCommand{\textpsili}{LGR}{\textOmega}{>W}
1421 ^^A\DeclareTextCompositeCommand{\textdasia}{LGR}{\textOmega}{<W}
1422 ^^A\DeclareTextCompositeCommand{\textpsilivaria}{LGR}{\textOmega}{\char"5F W}
1423 ^^A\DeclareTextCompositeCommand{\textdasiavaria}{LGR}{\textOmega}{CW}
1424 ^^A\DeclareTextCompositeCommand{\textpsilioxia}{LGR}{\textOmega}{\char"5E W}
1425 ^^A\DeclareTextCompositeCommand{\textdasiaoxia}{LGR}{\textOmega}{VW}
1426 ^^A\DeclareTextCompositeCommand{\textpsiliperispomeni}{LGR}{\textOmega}{\char"5C W}
1427 ^^A\DeclareTextCompositeCommand{\textdasiaperispomeni}{LGR}{\textOmega}{@W}
1428 ^^A\DeclareTextCompositeCommand{\textpsiliiota}{LGR}{\textOmega}{>W|}
1429 ^^A\DeclareTextCompositeCommand{\textdasiaiota}{LGR}{\textOmega}{<W|}
1430 ^^A\DeclareTextCompositeCommand{\textpsilivariaiota}{LGR}{\textOmega}{\char"5F W|}
1431 ^^A\DeclareTextCompositeCommand{\textdasiavariaiota}{LGR}{\textOmega}{CW|}
1432 ^^A\DeclareTextCompositeCommand{\textpsilioxiaiota}{LGR}{\textOmega}{\char"5E W|}
1433 ^^A\DeclareTextCompositeCommand{\textdasiaoxiaiota}{LGR}{\textOmega}{VW|}
1434 ^^A\DeclareTextCompositeCommand{\textpsiliperispomeni iota}{LGR}{\textOmega}{\char"5C W|}
1435 ^^A\DeclareTextCompositeCommand{\textdasiaperispomeni iota}{LGR}{\textOmega}{@W|}
1436 ^^A\DeclareTextCompositeCommand{\textdasia}{LGR}{\textRho}{<R}

```

Uppercase-lowercase mapping:

```

1437 \ifx\@uclclist\undefined\else
1438 ^^A\def\update@uclc@with@text{%
1439 ^^B \expandafter\def\expandafter\@uclclist\expandafter
1440 ^^B {\@uclclist

```

Not that mapping for `\textautosigma` must come last, otherwise `\MakeLowercase{\textSigma}` is not `\textautosigma`.

```

1441 ^^B \textalpha\textAlpha \textbeta\textBeta \textdelta\textDelta
1442 ^^B \textepsilon\textEpsilon \textphi\textPhi
1443 ^^B \textgamma\textGamma \texteta\textEta \textiota\textIota
1444 ^^B \texttheta\textTheta \textkappa\textKappa
1445 ^^B \textlambda\textLambda \textmu\textMu \textnu\textNu
1446 ^^B \textomicron\textOmicron \textpi\textPi \textchi\textChi
1447 ^^B \textrho\textRho \textsigma\textSigma
1448 ^^B \textvarsigma\textSigma \textautosigma\textSigma
1449 ^^B \texttau\textTau \textupsilon\textUpsilon
1450 ^^B \textomega\textOmega \textxi\textXi \textpsi\textPsi
1451 ^^B \textzeta\textZeta \textdigamma\textDigamma}%
1452 ^^B \let\update@uclc@with@text\empty}

```

```

1453 ^^B\update@uc1c@with@text
1454 \fi
1455 ^^A\typeout{fontencoding LGR patched}

```

Patches for encoding T3 follow

```

1456 \uc@temp@b{T3}
1457 \def\ifxx#1#2{\toks255{#1==#2}}\typeout{ifx:\the\toks255}\ifx#1#2}

```

Older TIPA versions (pre 1.0) do not have \textscriptg

```

1458 ^^A\DeclareTextSymbol{\textscriptg}{T3}{103}
1459 ^^A\DeclareTextCommand{\textascii}{T3}[1]{\ifx#1g\char164 \else\@textascii{#1}\fi}
1460 ^^A\typeout{fontencoding T3 patched}

```

Patches for encoding T5 follow

```

1461 \uc@temp@b{T5}
1462 ^^A\DeclareTextCompositeCommand{\~}{T5}{\i}{\~i}
1463 ^^A\DeclareTextCompositeCommand{\'}{T5}{\i}{\~i}
1464 ^^A\DeclareTextCompositeCommand{\'}{T5}{\i}{\~i}
1465 ^^A\typeout{fontencoding T5 patched}

```

Patches for encoding T4 follow

```

1466 \uc@temp@b{T4}
1467 ^^A\DeclareTextCommand\textthbar{T4}{\B h}
1468 ^^A\DeclareTextCommand\textHbar{T4}{\B H}
1469 ^^A\DeclareTextCommand\textbhook{T4}{\m b}
1470 ^^A\DeclareTextCommand\textBhook{T4}{\m B}
1471 ^^A\DeclareTextCommand\textdhook{T4}{\m d}
1472 ^^A\DeclareTextCommand\textDhook{T4}{\m D}
1473 ^^A\DeclareTextCommand\texteopen{T4}{\m e}
1474 ^^A\DeclareTextCommand\textEopen{T4}{\m E}
1475 ^^A\DeclareTextCommand\textschwa{T4}{\M e}
1476 ^^A\DeclareTextCommand\texteturned{T4}{\M e}
1477 ^^A\DeclareTextCommand\textEreversed{T4}{\M E}
1478 ^^A\DeclareTextCommand\textGammaafrican{T4}{\m G}
1479 ^^A\DeclareTextCommand\textgammalatinsmall{T4}{\m g}
1480 ^^A\DeclareTextCommand\textKhook{T4}{\m K}
1481 ^^A\DeclareTextCommand\textkhook{T4}{\m k}
1482 ^^A\DeclareTextCommand\textDafrican{T4}{\M D}
1483 ^^A\DeclareTextCommand\textdtail{T4}{\M d}
1484 ^^A\DeclareTextCommand\textTretroflexhook{T4}{\M T}
1485 ^^A\DeclareTextCommand\texttretroflexhook{T4}{\M t}
1486 ^^A\DeclareTextCommand\textOopen{T4}{\m O}
1487 ^^A\DeclareTextCommand\textOopen{T4}{\m o}
1488 ^^A\DeclareTextCommand\textIotaafrikan{T4}{\m I}
1489 ^^A\DeclareTextCommand\textiotafrikan{T4}{\m i}
1490 ^^A\DeclareTextCommand\textFhook{T4}{\m F}
1491 ^^A\DeclareTextCommand\textflorin{T4}{\m f}

```

```

1492 ^^A\DeclareTextCommand\textYhook{T4}{\m Y}
1493 ^^A\DeclareTextCommand\textyhook{T4}{\m y}
1494 ^^A\DeclareTextCommand\textEsh{T4}{\m S}
1495 ^^A\DeclareTextCommand\textesh{T4}{\m s}
1496 ^^A\DeclareTextCommand\textThook{T4}{\m T}
1497 ^^A\DeclareTextCommand\textthook{T4}{\m t}
1498 ^^A\DeclareTextCommand\textEzh{T4}{\m Z}
1499 ^^A\DeclareTextCommand\textezh{T4}{\m z}
1500 ^^A\DeclareTextCommand\textChook{T4}{\m C}
1501 ^^A\DeclareTextCommand\textchook{T4}{\m c}
1502 ^^A\DeclareTextCommand\textTbar{T4}{\B T}
1503 ^^A\DeclareTextCommand\texttbar{T4}{\B t}
1504 ^^A\DeclareTextCommand\textVhook{T4}{\m V}
1505 ^^A\DeclareTextCommand\textvhook{T4}{\m v}
1506 ^^A\DeclareTextCommand\textPhook{T4}{\m P}
1507 ^^A\DeclareTextCommand\textphook{T4}{\m p}
1508 ^^A\DeclareTextCommand\textNhookleft{T4}{\m J}
1509 ^^A\DeclareTextCommand\textnhookleft{T4}{\m j}
1510 ^^A\DeclareTextCommand\texttresh{T4}{\tsh}
1511 ^^A\DeclareTextCompositeCommand{\~}{T4}{\textEopen}{\T E}
1512 ^^A\DeclareTextCompositeCommand{\~}{T4}{\texteopen}{\T e}
1513 ^^A\DeclareTextCompositeCommand{\~}{T4}{\textOopen}{\T O}
1514 ^^A\DeclareTextCompositeCommand{\~}{T4}{\textOopen}{\T o}
1515 ^^A\DeclareTextSymbol\textexclamdown{T4}{'275}
1516 ^^A\DeclareTextSymbol\textquestiondown{T4}{'276}
1517 ^^A\DeclareTextAccent\textdblgravecmb{T4}{'237}
1518 ^^A\typeout{fontencoding T4 patched}

```

Clean up.

```

1519 \uc@temp@d
1520 %
1521 %
1522 </ucsencs.def>

```

## 4 Contributed files

These files are needed by some glyph macros. They are not really part of the UCS package, but they stay here until available somewhere else.

### 4.1 File autofe.sty

```

1523 <*autofe.sty>
1524 \ProvidesPackage{autofe}[2002/12/17 Automatic switching of fontencodings]
1525
1526 \let\autofe@model
1527

```

```

1528 \let\autofe@DeclareTextCommand\DeclareTextCommand
1529 \def\DeclareTextCommand{\autofe@parse@declaretextcommand\autofe@DeclareTextCommand}
1530 \let\autofe@ProvideTextCommand\ProvideTextCommand
1531 \def\ProvideTextCommand{\autofe@parse@declaretextcommand\autofe@ProvideTextCommand}
1532 \let\autofe@DeclareTextSymbol\DeclareTextSymbol
1533
1534 \def\autofe@parse@declaretextcommand#1#2#3{%
1535   \@ifnextchar[%
1536     {\autofe@parse@declaretextcommand@a{#1}{#2}{#3}}%
1537     {\autofe@parse@declaretextcommand@dd{#1}{#2}{#3}}}
1538 \def\autofe@parse@declaretextcommand@a#1#2#3[#4]{%
1539   \@ifnextchar[%
1540     {\autofe@parse@declaretextcommand@aa{#1}{#2}{#3}{#4}}%
1541     {\autofe@parse@declaretextcommand@ad{#1}{#2}{#3}{#4}}}
1542
1543
1544 \def\autofe@parse@declaretextcommand@aa#1#2#3#4[#5]#6{%
1545   %{\toks255{#1{#2}{#3}[#4][#5]{#6}}\typeout{Running \the\toks255}}%
1546   \ifx\autofe@mode0\else\expandafter\autofe@defdef\expandafter{#3}{\autofe@ProvideTextCommand{#
1547     #1{#2}{#3}[#4][#5]{#6}}%
1548 }
1549 \def\autofe@parse@declaretextcommand@ad#1#2#3#4#5{%
1550   %{\toks255{#1{#2}{#3}[#4]{#5}}\typeout{Running \the\toks255}}%
1551   \ifx\autofe@mode0\else\expandafter\autofe@defdef\expandafter{#3}{\autofe@ProvideTextCommand{#
1552     #1{#2}{#3}[#4]{#5}}%
1553 }
1554 \def\autofe@parse@declaretextcommand@dd#1#2#3#4{%
1555   %{\toks255{#1{#2}{#3}{#4}}\typeout{Running \the\toks255}}%
1556   \ifx\autofe@mode0\else\expandafter\autofe@defdef\expandafter{#3}{#1{#2}{?}}{#4}\fi
1557   #1{#2}{#3}{#4}%
1558 }
1559 \def\DeclareTextSymbol#1#2#3{%
1560   %{\toks255{\autofe@DeclareTextSymbol{#1}{#2}{#3}}\typeout{Running \the\toks255}}%
1561   \ifx\autofe@mode0\else\expandafter\autofe@defdef\expandafter{#2}{\autofe@ProvideTextCommand{#
1562     \autofe@DeclareTextSymbol{#1}{#2}{#3}}%
1563 }
1564
1565 \def\autofe@defdef#1#2#3{%
1566   \begingroup
1567     \def\temp@a{#1}\def\temp@b{?}%
1568     \ifx\temp@a\temp@b
1569       \let\temp@a\@gobbletwo
1570     \else
1571       \ifx\autofe@mode1%
1572         \let\temp@a\@firstoftwo
1573       \else
1574         \let\temp@a\@secondoftwo
1575       \fi
1576     \fi
1577   \expandafter\endgroup

```

```

1578 \temp@a
1579 {#2{\fontencoding{#1}\selectfont#3}}}%
1580 {#2{\fontencoding{#1}\selectfont#3}}}%
1581 }
1582
1583 \def\autofe@options{}
1584 \def\autofe@add@fe#1{\g@addto@macro\autofe@options{\RequirePackage[#1]{fontenc}}}
1585 %\DeclareOption{global}{\PackageError{autofe}{Option global not supported yet}{Changing to local}}
1586 \DeclareOption{global}{\g@addto@macro\autofe@options{\let\autofe@mode2}}
1587 \DeclareOption{local}{\g@addto@macro\autofe@options{\let\autofe@mode1}}
1588 \DeclareOption{off}{\g@addto@macro\autofe@options{\let\autofe@mode0}}
1589 \DeclareOption*{\expandafter\autofe@add@fe\expandafter{\CurrentOption}}
1590 \ProcessOptions*
1591
1592 \typeout{\meaning\autofe@options}
1593 \autofe@options
1594
1595 \let\autofe@options\undefined
1596 \let\autofe@add@fe\undefined
1597
1598 %
1599 %
1600 </autofe.sty>

```

## 4.2 File cenccmn.tex

```

1601 <*cenccmn.tex>
1602 \ProvidesFile{cenccmn.tex}[2001/10/25
1603   Macros common to fontencodings C00, C40, C61]%
1604 %\gdef\CJK@plane{***__SET_CJK@plane_before_using_fontencoding_%
1605 % \f@encoding__***}
1606 \def\CJK@empty#1{%
1607   \ifx\CJK@plane\undefined\def\mandatory@arg{cmr10}\else
1608     \edef\mandatory@arg{\mandatory@arg\CJK@plane}\fi%
1609   \empty@sfcnt#1%
1610   \xdef\font@name{\csname \curr@fontshape/\f@size/%
1611     \ifx\CJK@plane\undefined\else\CJK@plane\fi\endcsname}%
1612 \def\CJK@sub#1{%
1613   \expandafter\ifx\csname CJK@\mandatory@arg/\f@size\endcsname\relax
1614     \expandafter\gdef\csname CJK@\mandatory@arg/\f@size\endcsname{}%
1615     \sub@sfcnt#1%
1616   \else
1617     \sub@sfcnt\@gobble
1618   \fi}
1619 \def\CJK@DNPgen{%
1620   \ifx\CJK@plane\undefined\def\external@font{cmr10}\else
1621     \edef\external@font{%
1622       \mandatory@arg\CJK@plane\f@size}\fi
1623   \xdef\font@name{%
1624     \csname \curr@fontshape/\f@size/%

```

```

1625 \ifx\CJK@plane\undefined\else\CJK@plane\fi\endcsname}}%
1626 \def\CJK@DNP{%
1627 \ifx\CJK@plane\undefined\def\external@font{cmr10}\else
1628 \@tempdimb \f@size\p@
1629 \edef\external@font{%
1630 \mandatory@arg\CJK@plane\optional@arg\space at \the\@tempdimb}\fi
1631 \xdef\font@name{%
1632 \csname \curr@fontshape/\f@size/%
1633 \ifx\CJK@plane\undefined\else\CJK@plane\fi\endcsname\endcsname}}
1634 %
1635 \DeclareSizeFunction{CJK}{\CJK@empty\@font@warning}
1636 \DeclareSizeFunction{CJKb}{\CJK@empty\@font@warning}
1637 \DeclareSizeFunction{sCJK}{\CJK@empty\@font@info}
1638 \DeclareSizeFunction{sCJKb}{\CJK@empty\@font@info}
1639 \DeclareSizeFunction{CJKsub}{\CJK@@sub\@font@warning}
1640 \DeclareSizeFunction{CJKssub}{\CJK@@sub\@font@info}
1641 \DeclareSizeFunction{DNPgen}{\CJK@DNPgen}
1642 \DeclareSizeFunction{DNPgenb}{\CJK@DNPgen}
1643 \DeclareSizeFunction{DNP}{\CJK@DNP}
1644 \DeclareSizeFunction{DNPb}{\CJK@DNP}
1645 %
1646 \@ifpackageloaded{CJK}{-}{%
1647 \AtBeginDocument{%
1648 \@ifpackageloaded{CJK}{%
1649 \PackageError{fontenc C??}{Load fontencoding C00/C40/... after CJK}{%
1650 Otherwise strange things may happen, when you use those encodings}}{}}
1651 \def\CJKresetplane{\let\CJK@plane\undefined}
1652 %%% Local Variables:
1653 %%% mode: latex
1654 %%% coding: utf-8
1655 %%% TeX-master: "../test.tex"
1656 %%% End:
1657 %%% Local IspellDict: british
1658 %
1659 </cencmn.tex>

```

### 4.3 File c00enc.def

```

1660 <*c00enc.def>
1661 \ProvidesFile{c00enc.def}[2001/10/11 Fontencoding C00 (Big5)]%
1662 \DeclareFontEncoding{C00}{-}{-}%
1663 \DeclareFontSubstitution{C00}{song}{m}{n}%
1664 \input{cencmn.tex}%
1665 \expandafter\let\csname C00/song/m/n\endcsname\undefined
1666 %
1667 </c00enc.def>

```

### 4.4 File c10enc.def

```

1668 <*c10enc.def>

```

```

1669 \ProvidesFile{c10enc.def}[2001/10/11 Fontencoding C10 (Big5)]%
1670 \DeclareFontEncoding{C10}{-}{-}%
1671 \DeclareFontSubstitution{C10}{song}{m}{n}%
1672 \input{cencmn.tex}%
1673 \expandafter\let\csname C10/song/m/n\endcsname\undefined
1674 %
1675 \</c10enc.def>

```

## 4.5 File c40enc.def

```

1676 \<*c40enc.def>
1677 \ProvidesFile{c40enc.def}[2002/11/25 Fontencoding C40 (JIS)]%
1678 \DeclareFontEncoding{C40}{-}{-}%
1679 \DeclareFontSubstitution{C40}{song}{m}{n}%
1680 \input{cencmn.tex}%
1681 \expandafter\let\csname C40/song/m/n\endcsname\undefined
1682 \def\cjk@Cforty#1#2#3#4{% Takes JIS0208 codepos in hex
1683   {%
1684     \count0="#1#2
1685     \multiply\count0 by94
1686     \advance\count0 by"#3#4
1687     \advance\count0 by-"B3F
1688     \count1\count0
1689     \divide\count0 by256
1690     \multiply\count0 by256
1691     \advance\count1 by-\count0
1692     \divide\count0 by256
1693     \% \typeout{C0=\number\count0, C1=\number\count1}%
1694     \edef\temp@a{\ifnum\count0<10 0\fi\number\count0}%
1695     \edef\temp@b{\ifx\temp@a\CJK@plane\else
1696       \def\noexpand\CJK@plane{\temp@a}\noexpand\selectfont\fi
1697       \char\number\count\@ne\space}%
1698     \% \typeout{C40: \meaning\temp@b}%
1699     \expandafter\temp@b%
1700   }%
1701 \DeclareTextCommand\jischar{C40}[1]{\cjk@Cforty#1}
1702 \DeclareTextCommandDefault\jischar[1]{\fontencoding{C40}%
1703   \let\CJK@plane\undefined\cjk@Cforty#1}}
1704 %
1705 %
1706 \</c40enc.def>

```

## 4.6 File c42enc.def

```

1707 \<*c42enc.def>
1708 \ProvidesFile{c42enc.def}[2002/11/25 Fontencoding C42 (JISdnp)]%
1709 \DeclareFontEncoding{C42}{-}{-}%
1710 \DeclareFontSubstitution{C42}{song}{m}{n}%
1711 \input{cencmn.tex}%
1712 \expandafter\let\csname C42/song/m/n\endcsname\undefined

```

```

1713 \def\cjk@Cfrttw#1#2#3{%
1714   \advance\count1 by#3
1715   \ifnum\count1>256\advance\count1by-256\def\temp@a{#2}\else\def\temp@a{#1}\fi
1716   %\typeout{#1/#2/#3, \meaning\temp@a, \number\count1}%
1717 }
1718 \def\cjk@Cfrttw#1#2#3#4{% Takes JIS0208 codepos in hex
1719   %\typeout{JIS: #1#2#3#4}%
1720   {%
1721     \count0="#1#2 \count1="#3#4
1722     \advance\count0by-33
1723     \expandafter\cjk@Cfrttw@
1724     \ifcase\count0
1725     {sy}{err}{-32}\or % 0
1726     {sy}{err}{68}\or % 1
1727     {roma}{err}{0}\or % 2
1728     {hira}{err}{-32}\or % 3
1729     {kata}{err}{-32}\or % 4
1730     {greek}{err}{-32}\or % 5
1731     {russian}{err}{-32}\or % 6
1732     {keisen}{err}{-32}\or % 7
1733     {err}{err}{128}\or % 8
1734     {err}{err}{128}\or % 9
1735     {err}{err}{128}\or % 10
1736     {err}{err}{128}\or % 11
1737     {err}{err}{128}\or % 12
1738     {err}{err}{128}\or % 13
1739     {err}{err}{128}\or % 14
1740     {ka}{err}{-33}\or % 15
1741     {ka}{err}{61}\or % 16
1742     {ka}{kb}{155}\or % 17
1743     {kb}{err}{-7}\or % 18
1744     {kb}{err}{87}\or % 19
1745     {kb}{kc}{181}\or % 20
1746     {kc}{err}{19}\or % 21
1747     {kc}{err}{113}\or % 22
1748     {kc}{kd}{207}\or % 23
1749     {kd}{err}{45}\or % 24
1750     {kd}{ke}{139}\or % 25
1751     {ke}{err}{-23}\or % 26
1752     {ke}{err}{71}\or % 27
1753     {ke}{kf}{165}\or % 28
1754     {kf}{err}{3}\or % 29
1755     {kf}{err}{97}\or % 30
1756     {kf}{kg}{191}\or % 31
1757     {kg}{err}{29}\or % 32
1758     {kg}{err}{123}\or % 33
1759     {kg}{kh}{217}\or % 34
1760     {kh}{err}{55}\or % 35
1761     {kh}{ki}{149}\or % 36
1762     {ki}{err}{-13}\or % 37

```



```

1763 {ki}{err}{81}\or % 38
1764 {ki}{kj}{175}\or % 39
1765 {kj}{err}{13}\or % 40
1766 {kj}{err}{107}\or % 41
1767 {kj}{kk}{201}\or % 42
1768 {kk}{err}{39}\or % 43
1769 {kk}{kl}{133}\or % 44
1770 {kl}{err}{-29}\or % 45
1771 {kl}{err}{65}\or % 46
1772 {km}{err}{-33}\or % 47
1773 {km}{err}{61}\or % 48
1774 {km}{kn}{155}\or % 49
1775 {kn}{err}{-7}\or % 50
1776 {kn}{err}{87}\or % 51
1777 {kn}{ko}{181}\or % 52
1778 {ko}{err}{19}\or % 53
1779 {ko}{err}{113}\or % 54
1780 {ko}{kp}{207}\or % 55
1781 {kp}{err}{45}\or % 56
1782 {kp}{kq}{139}\or % 57
1783 {kq}{err}{-23}\or % 58
1784 {kq}{err}{71}\or % 59
1785 {kq}{kr}{165}\or % 60
1786 {kr}{err}{3}\or % 61
1787 {kr}{err}{97}\or % 62
1788 {kr}{ks}{191}\or % 63
1789 {ks}{err}{29}\or % 64
1790 {ks}{err}{123}\or % 65
1791 {ks}{kt}{217}\or % 66
1792 {kt}{err}{55}\or % 67
1793 {kt}{ku}{149}\or % 68
1794 {ku}{err}{-13}\or % 69
1795 {ku}{err}{81}\or % 70
1796 {ku}{kv}{175}\or % 71
1797 {kv}{err}{13}\or % 72
1798 {kv}{err}{107}\or % 73
1799 {kv}{kw}{201}\or % 74
1800 {kw}{err}{39}\or % 75
1801 {kw}{kx}{133}\or % 76
1802 {kx}{err}{-29}\or % 77
1803 {kx}{err}{65}\or % 78
1804 {kx}{ky}{159}\or % 79
1805 {ky}{err}{-3}\or % 80
1806 {ky}{err}{91}\or % 81
1807 {ky}{kz}{185}\or % 82
1808 {kz}{err}{23}\else % 83
1809 {err}{err}0\fi
1810 \edef\temp@b{\ifx\temp@a\CJK@plane\else
1811 \def\noexpand\CJK@plane{\temp@a}\noexpand\selectfont\fi
1812 \char\number\count\@ne\space}%

```

```

1813     %\typeout{C42: \meaning\temp@b}%
1814     \expandafter\temp@b%
1815 }%
1816 \DeclareTextCommand\jischar{C42}[1]{\cjk@Cfrttw#1}
1817 \DeclareTextCommandDefault\jischar[1]{\fontencoding{C42}%
1818     \let\CJK@plane\undefined\cjk@Cfrttw#1}}
1819 %
1820 %
1821 \</c42enc.def>

```

## 4.7 File c61enc.def

```

1822 <*c61enc.def>
1823 \ProvidesFile{c61enc.def}[2001/10/11 Fontencoding C61 (KSC5601 hangul)]%
1824 \DeclareFontEncoding{C61}{-}{-}%
1825 \DeclareFontSubstitution{C61}{mj}{m}{n}%
1826 \input{cencmn.tex}%
1827 \expandafter\let\csname C61/mj/m/n\endcsname\undefined
1828 %
1829 \</c61enc.def>

```

## 4.8 File lklenc.def

```

1830 <*lklenc.def>
1831 \ProvidesFile{lklenc.def}[2001/10/17 Okuda (Klingon) Font Encoding LKL]
1832 \DeclareFontEncoding{LKL}{-}{-}
1833 \DeclareFontSubstitution{LKL}{kli}{m}{n}
1834 \DeclareTextSymbol{\klingona}{LKL}{\a}
1835 \DeclareTextSymbol{\klingonb}{LKL}{\b}
1836 \DeclareTextSymbol{\klingonch}{LKL}{\C}
1837 \DeclareTextSymbol{\klingonD}{LKL}{\D}
1838 \DeclareTextSymbol{\klingone}{LKL}{\e}
1839 \DeclareTextSymbol{\klingongh}{LKL}{\G}
1840 \DeclareTextSymbol{\klingonH}{LKL}{\H}
1841 \DeclareTextSymbol{\klingonI}{LKL}{\I}
1842 \DeclareTextSymbol{\klingonj}{LKL}{\j}
1843 \DeclareTextSymbol{\klingonl}{LKL}{\l}
1844 \DeclareTextSymbol{\klingonm}{LKL}{\m}
1845 \DeclareTextSymbol{\klingonn}{LKL}{\n}
1846 \DeclareTextSymbol{\klingonng}{LKL}{\N}
1847 \DeclareTextSymbol{\klingono}{LKL}{\o}
1848 \DeclareTextSymbol{\klingonp}{LKL}{\p}
1849 \DeclareTextSymbol{\klingonq}{LKL}{\q}
1850 \DeclareTextSymbol{\klingonQ}{LKL}{\Q}
1851 \DeclareTextSymbol{\klingonr}{LKL}{\r}
1852 \DeclareTextSymbol{\klingonS}{LKL}{\S}
1853 \DeclareTextSymbol{\klingont}{LKL}{\t}
1854 \DeclareTextSymbol{\klingontlh}{LKL}{\T}
1855 \DeclareTextSymbol{\klingonu}{LKL}{\u}
1856 \DeclareTextSymbol{\klingonv}{LKL}{\v}

```

```

1857 \DeclareTextSymbol{\klingonw}{LKL}{'\w}
1858 \DeclareTextSymbol{\klingony}{LKL}{'\y}
1859 \DeclareTextSymbol{\klingonglotstop}{LKL}{'\'}
1860 \DeclareTextSymbol{\klingonzero}{LKL}{'\0}
1861 \DeclareTextSymbol{\klingonone}{LKL}{'\1}
1862 \DeclareTextSymbol{\klingontwo}{LKL}{'\2}
1863 \DeclareTextSymbol{\klingonthree}{LKL}{'\3}
1864 \DeclareTextSymbol{\klingonfour}{LKL}{'\4}
1865 \DeclareTextSymbol{\klingonfive}{LKL}{'\5}
1866 \DeclareTextSymbol{\klingonsix}{LKL}{'\6}
1867 \DeclareTextSymbol{\klingonseven}{LKL}{'\7}
1868 \DeclareTextSymbol{\klingoneight}{LKL}{'\8}
1869 \DeclareTextSymbol{\klingonnine}{LKL}{'\9}
1870 %
1871 </lklenc.def>

```

## 4.9 File lklkli.fd

```
1872 <*lklkli.fd>
```

I have named this fontfamily kli, since it uses the font found on the KLI homepage (<http://www.kli.org>)

```

1873 \ProvidesFile{lklkli.fd}[2001/10/11 Fontfamily kli for Fontencoding LKL]%
1874 \DeclareFontFamily{LKL}{kli}{}%
1875 \DeclareFontShape{LKL}{kli}{m}{n}{<-> pIq}{}%

```

Since there is no case distinction, small caps is identical to normal.

```

1876 \DeclareFontShape{LKL}{kli}{m}{sc}{<-> pIq}{}%
1877 %
1878 </lklkli.fd>

```

## 4.10 File ldvenc.def

```

1879 <*ldvenc.def>
1880 \NeedsTeXFormat{LaTeX2e}[1998/12/01]
1881 \ProvidesFile{ldvenc.def}[2004/10/17 Autogenerated encoding LDV]
1882 \DeclareFontEncoding{LDV}{}{}
1883 \DeclareFontSubstitution{LDV}{arial}{m}{n}
1884 \DeclareTextSymbol{\guillemotleft}{LDV}{19}
1885 \DeclareTextSymbol{\guillemotright}{LDV}{20}
1886 \DeclareTextSymbol{\guilsinglleft}{LDV}{14}
1887 \DeclareTextSymbol{\guilsinglright}{LDV}{15}
1888 \DeclareTextSymbol{\i}{LDV}{25}
1889 \DeclareTextSymbol{\quotedblbase}{LDV}{18}
1890 \DeclareTextSymbol{\quotesinglbase}{LDV}{13}
1891 \DeclareTextSymbol{\textasciicircum}{LDV}{'\^}
1892 \DeclareTextSymbol{\textasciitilde}{LDV}{'\~}
1893 \DeclareTextSymbol{\textbackslash}{LDV}{'\\}
1894 \DeclareTextSymbol{\textbar}{LDV}{'\|}

```

```

1895 \DeclareTextSymbol{\textbraceleft}{LDV}{'\{ }
1896 \DeclareTextSymbol{\textbraceright}{LDV}{'\} }
1897 \DeclareTextSymbol{\textdollar}{LDV}{'\$ }
1898 \DeclareTextSymbol{\textemdash}{LDV}{\{22}
1899 \DeclareTextSymbol{\textendash}{LDV}{\{21}
1900 \DeclareTextSymbol{\textgreater}{LDV}{'\> }
1901 \DeclareTextSymbol{\textless}{LDV}{'\< }
1902 \DeclareTextSymbol{\textquotedblleft}{LDV}{\{16}
1903 \DeclareTextSymbol{\textquotedblright}{LDV}{\{17}
1904 \DeclareTextSymbol{\textquotedbl}{LDV}{'\"}
1905 \DeclareTextSymbol{\textquoteleft}{LDV}{'\{ }
1906 \DeclareTextSymbol{\textquoteright}{LDV}{'\} }
1907 \DeclareTextSymbol{\textunderscore}{LDV}{\{95}
1908 \DeclareTextCommand{\textdevanagarcandrabindu}{LDV}[1]{\#1\char129 }
1909 \DeclareTextCommand{\textdevanagarianusvara}{LDV}[1]{\#1\char130 }
1910 \DeclareTextCommand{\textdevanagarivisarga}{LDV}[1]{\#1\char131 }
1911 \DeclareTextSymbol{\textdevanagaria}{LDV}{\{133}
1912 \DeclareTextSymbol{\textdevanagariaa}{LDV}{\{134}
1913 \DeclareTextSymbol{\textdevanagarii}{LDV}{\{135}
1914 \DeclareTextSymbol{\textdevanagariii}{LDV}{\{136}
1915 \DeclareTextSymbol{\textdevanagariu}{LDV}{\{137}
1916 \DeclareTextSymbol{\textdevanagariuu}{LDV}{\{138}
1917 \DeclareTextSymbol{\textdevanagarivocalicr}{LDV}{\{139}
1918 \DeclareTextSymbol{\textdevanagarivocalicl}{LDV}{\{140}
1919 \DeclareTextSymbol{\textdevanagaricandrae}{LDV}{\{141}
1920 \DeclareTextSymbol{\textdevanagarishorte}{LDV}{\{142}
1921 \DeclareTextSymbol{\textdevanagarie}{LDV}{\{143}
1922 \DeclareTextSymbol{\textdevanagariai}{LDV}{\{144}
1923 \DeclareTextSymbol{\textdevanagaricandrao}{LDV}{\{145}
1924 \DeclareTextSymbol{\textdevanagarishorto}{LDV}{\{146}
1925 \DeclareTextSymbol{\textdevanagario}{LDV}{\{147}
1926 \DeclareTextSymbol{\textdevanagariau}{LDV}{\{148}
1927 \DeclareTextSymbol{\textdevanagarika}{LDV}{\{149}
1928 \DeclareTextSymbol{\textdevanagarikha}{LDV}{\{150}
1929 \DeclareTextSymbol{\textdevanagariga}{LDV}{\{151}
1930 \DeclareTextSymbol{\textdevanagarigha}{LDV}{\{152}
1931 \DeclareTextSymbol{\textdevanagaringa}{LDV}{\{153}
1932 \DeclareTextSymbol{\textdevanagarica}{LDV}{\{154}
1933 \DeclareTextSymbol{\textdevanagaricha}{LDV}{\{155}
1934 \DeclareTextSymbol{\textdevanagarija}{LDV}{\{156}
1935 \DeclareTextSymbol{\textdevanagarijha}{LDV}{\{157}
1936 \DeclareTextSymbol{\textdevanagarinya}{LDV}{\{158}
1937 \DeclareTextSymbol{\textdevanagarittha}{LDV}{\{159}
1938 \DeclareTextSymbol{\textdevanagarittha}{LDV}{\{160}
1939 \DeclareTextSymbol{\textdevanagaridda}{LDV}{\{161}
1940 \DeclareTextSymbol{\textdevanagariddha}{LDV}{\{162}
1941 \DeclareTextSymbol{\textdevanagarinna}{LDV}{\{163}
1942 \DeclareTextSymbol{\textdevanagarita}{LDV}{\{164}
1943 \DeclareTextSymbol{\textdevanagaritha}{LDV}{\{165}
1944 \DeclareTextSymbol{\textdevanagarida}{LDV}{\{166}

```

```

1945 \DeclareTextSymbol{\textdevanagaridha}{LDV}{167}
1946 \DeclareTextSymbol{\textdevanagarina}{LDV}{168}
1947 \DeclareTextSymbol{\textdevanagarinnna}{LDV}{169}
1948 \DeclareTextSymbol{\textdevanagaripa}{LDV}{170}
1949 \DeclareTextSymbol{\textdevanagaripha}{LDV}{171}
1950 \DeclareTextSymbol{\textdevanagariba}{LDV}{172}
1951 \DeclareTextSymbol{\textdevanagaribha}{LDV}{173}
1952 \DeclareTextSymbol{\textdevanagarima}{LDV}{174}
1953 \DeclareTextSymbol{\textdevanagariya}{LDV}{175}
1954 \DeclareTextSymbol{\textdevanagarira}{LDV}{176}
1955 \DeclareTextSymbol{\textdevanagarirra}{LDV}{177}
1956 \DeclareTextSymbol{\textdevanagarila}{LDV}{178}
1957 \DeclareTextSymbol{\textdevanagarilla}{LDV}{179}
1958 \DeclareTextSymbol{\textdevanagarillla}{LDV}{180}
1959 \DeclareTextSymbol{\textdevanagariva}{LDV}{181}
1960 \DeclareTextSymbol{\textdevanagarisha}{LDV}{182}
1961 \DeclareTextSymbol{\textdevanagarissa}{LDV}{183}
1962 \DeclareTextSymbol{\textdevanagarisa}{LDV}{184}
1963 \DeclareTextSymbol{\textdevanagariha}{LDV}{185}
1964 \DeclareTextCommand{\textdevanagarinukta}{LDV}[1]{#1\char188 }
1965 \DeclareTextSymbol{\textdevanagariavagraha}{LDV}{189}
1966 \DeclareTextCommand{\textdevanagarivowelaa}{LDV}[1]{#1\char190 }
1967 \DeclareTextCommand{\textdevanagarivowelii}{LDV}[1]{\char191 #1}
1968 \DeclareTextCommand{\textdevanagarivowelii}{LDV}[1]{#1\char192 }
1969 \DeclareTextCommand{\textdevanagarivoweluu}{LDV}[1]{#1\char193 }
1970 \DeclareTextCommand{\textdevanagarivoweluu}{LDV}[1]{#1\char194 }
1971 \DeclareTextCommand{\textdevanagarivowelvocalicr}{LDV}[1]{#1\char195 }
1972 \DeclareTextCommand{\textdevanagarivowelvocalicrr}{LDV}[1]{#1\char196 }
1973 \DeclareTextCommand{\textdevanagarivowelcandrae}{LDV}[1]{#1\char197 }
1974 \DeclareTextCommand{\textdevanagarivowelshorte}{LDV}[1]{#1\char198 }
1975 \DeclareTextCommand{\textdevanagarivowele}{LDV}[1]{#1\char199 }
1976 \DeclareTextCommand{\textdevanagarivowelai}{LDV}[1]{#1\char200 }
1977 \DeclareTextCommand{\textdevanagarivowelcandrao}{LDV}[1]{#1\char201 }
1978 \DeclareTextCommand{\textdevanagarivowelshorto}{LDV}[1]{#1\char202 }
1979 \DeclareTextCommand{\textdevanagarivoweloo}{LDV}[1]{#1\char203 }
1980 \DeclareTextCommand{\textdevanagarivowelau}{LDV}[1]{#1\char204 }
1981 \DeclareTextCommand{\textdevanagarivirama}{LDV}[1]{#1\char205 }
1982 \DeclareTextSymbol{\textdevanagariom}{LDV}{208}
1983 \DeclareTextCommand{\textdevanagariudatta}{LDV}[1]{#1\char209 }
1984 \DeclareTextCommand{\textdevanagarianudatta}{LDV}[1]{#1\char210 }
1985 \DeclareTextCommand{\`}{LDV}[1]{#1\char211 }
1986 \DeclareTextCommand{\'}{LDV}[1]{#1\char212 }
1987 \DeclareTextSymbol{\textdevanagariqa}{LDV}{216}
1988 \DeclareTextSymbol{\textdevanagarikhha}{LDV}{217}
1989 \DeclareTextSymbol{\textdevanagarighha}{LDV}{218}
1990 \DeclareTextSymbol{\textdevanagariza}{LDV}{219}
1991 \DeclareTextSymbol{\textdevanagariddha}{LDV}{220}
1992 \DeclareTextSymbol{\textdevanagarirha}{LDV}{221}
1993 \DeclareTextSymbol{\textdevanagarifa}{LDV}{222}
1994 \DeclareTextSymbol{\textdevanagariyya}{LDV}{223}

```

```

1995 \DeclareTextSymbol{\textdevanagarivocalicrr}{LDV}{224}
1996 \DeclareTextSymbol{\textdevanagarivocalicl1}{LDV}{225}
1997 \DeclareTextCommand{\textdevanagarivowelvocalic1}{LDV}[1]{#1\char226 }
1998 \DeclareTextCommand{\textdevanagarivowelvocalic11}{LDV}[1]{#1\char227 }
1999 \DeclareTextSymbol{\textdevanagaridanda}{LDV}{228}
2000 \DeclareTextSymbol{\textdevanagaridoubledanda}{LDV}{229}
2001 \DeclareTextSymbol{\textdevanagarizero}{LDV}{230}
2002 \DeclareTextSymbol{\textdevanagarione}{LDV}{231}
2003 \DeclareTextSymbol{\textdevanagaritwo}{LDV}{232}
2004 \DeclareTextSymbol{\textdevanagarithree}{LDV}{233}
2005 \DeclareTextSymbol{\textdevanagarifour}{LDV}{234}
2006 \DeclareTextSymbol{\textdevanagarifive}{LDV}{235}
2007 \DeclareTextSymbol{\textdevanagarisix}{LDV}{236}
2008 \DeclareTextSymbol{\textdevanagariseven}{LDV}{237}
2009 \DeclareTextSymbol{\textdevanagarieight}{LDV}{238}
2010 \DeclareTextSymbol{\textdevanagarinine}{LDV}{239}
2011 \DeclareTextSymbol{\textdevanagariabbreviation}{LDV}{240}
2012 %
2013 \end{ldvenc.def}

```

#### 4.11 File ldvarial.fd

```

2014 \begin{ldvarial.fd}
2015 \ProvidesFile{ldvarial.fd}[2004/10/17 Autogenerated .fd file for encoding LDV, family arial]
2016 \DeclareFontFamily{LDV}{arial}{}
2017 \DeclareFontShape{LDV}{arial}{m}{n}{<-> * arialuni090t}{}
2018 %
2019 \end{ldvarial.fd}

```

#### 4.12 File ldvc2000.fd

```

2020 \begin{ldvc2000.fd}
2021 \ProvidesFile{ldvc2000.fd}[2004/10/17 Autogenerated .fd file for encoding LDV, family c2000]
2022 \DeclareFontFamily{LDV}{c2000}{}
2023 \DeclareFontShape{LDV}{c2000}{m}{n}{<-> * code2k090t}{}
2024 %
2025 \end{ldvc2000.fd}

```

#### 4.13 File letenc.def

```

2026 \begin{letenc.def}
2027 \NeedsTeXFormat{LaTeX2e}[1998/12/01]
2028 \ProvidesFile{letenc.def}[2004/10/17 Autogenerated encodings LET, Let]
2029 \DeclareFontEncoding{LET}{}{}
2030 \DeclareFontSubstitution{LET}{gfm}{m}{n}
2031 \DeclareFontEncoding{Let}{}{}
2032 \DeclareFontSubstitution{Let}{gfm}{m}{n}
2033 \DeclareTextCommand{\textascii}{LET}[1]{\@textascii@switch{#1}}
2034 \DeclareTextCommand{\textascii}{Let}[1]{\@textascii@switch{#1}}
2035 \DeclareTextSymbol{\textethiopia}{LET}{0}

```

```

2036 \DeclareTextCommand{\texttethiopicba}{Let}{\fontencoding{LET}\selectfont\texttethiopicba}
2037 \DeclareTextSymbol{\texttethiopicbu}{LET}{1}
2038 \DeclareTextCommand{\texttethiopicbu}{Let}{\fontencoding{LET}\selectfont\texttethiopicbu}
2039 \DeclareTextSymbol{\texttethiopicbi}{LET}{2}
2040 \DeclareTextCommand{\texttethiopicbi}{Let}{\fontencoding{LET}\selectfont\texttethiopicbi}
2041 \DeclareTextSymbol{\texttethiopicbaa}{LET}{3}
2042 \DeclareTextCommand{\texttethiopicbaa}{Let}{\fontencoding{LET}\selectfont\texttethiopicbaa}
2043 \DeclareTextSymbol{\texttethiopicbee}{LET}{4}
2044 \DeclareTextCommand{\texttethiopicbee}{Let}{\fontencoding{LET}\selectfont\texttethiopicbee}
2045 \DeclareTextSymbol{\texttethiopicbe}{LET}{5}
2046 \DeclareTextCommand{\texttethiopicbe}{Let}{\fontencoding{LET}\selectfont\texttethiopicbe}
2047 \DeclareTextSymbol{\texttethiopicbo}{LET}{6}
2048 \DeclareTextCommand{\texttethiopicbo}{Let}{\fontencoding{LET}\selectfont\texttethiopicbo}
2049 \DeclareTextSymbol{\texttethiopicbla}{LET}{8}
2050 \DeclareTextCommand{\texttethiopicbla}{Let}{\fontencoding{LET}\selectfont\texttethiopicbla}
2051 \DeclareTextSymbol{\texttethiopicclu}{LET}{9}
2052 \DeclareTextCommand{\texttethiopicclu}{Let}{\fontencoding{LET}\selectfont\texttethiopicclu}
2053 \DeclareTextSymbol{\texttethiopiccli}{LET}{10}
2054 \DeclareTextCommand{\texttethiopiccli}{Let}{\fontencoding{LET}\selectfont\texttethiopiccli}
2055 \DeclareTextSymbol{\texttethiopiclaa}{LET}{11}
2056 \DeclareTextCommand{\texttethiopiclaa}{Let}{\fontencoding{LET}\selectfont\texttethiopiclaa}
2057 \DeclareTextSymbol{\texttethiopiclee}{LET}{12}
2058 \DeclareTextCommand{\texttethiopiclee}{Let}{\fontencoding{LET}\selectfont\texttethiopiclee}
2059 \DeclareTextSymbol{\texttethiopicle}{LET}{13}
2060 \DeclareTextCommand{\texttethiopicle}{Let}{\fontencoding{LET}\selectfont\texttethiopicle}
2061 \DeclareTextSymbol{\texttethiopiclo}{LET}{14}
2062 \DeclareTextCommand{\texttethiopiclo}{Let}{\fontencoding{LET}\selectfont\texttethiopiclo}
2063 \DeclareTextSymbol{\texttethiopiclwa}{LET}{15}
2064 \DeclareTextCommand{\texttethiopiclwa}{Let}{\fontencoding{LET}\selectfont\texttethiopiclwa}
2065 \DeclareTextSymbol{\texttethiopicsha}{LET}{16}
2066 \DeclareTextCommand{\texttethiopicsha}{Let}{\fontencoding{LET}\selectfont\texttethiopicsha}
2067 \DeclareTextSymbol{\texttethiopicshu}{LET}{17}
2068 \DeclareTextCommand{\texttethiopicshu}{Let}{\fontencoding{LET}\selectfont\texttethiopicshu}
2069 \DeclareTextSymbol{\texttethiopicshi}{LET}{18}
2070 \DeclareTextCommand{\texttethiopicshi}{Let}{\fontencoding{LET}\selectfont\texttethiopicshi}
2071 \DeclareTextSymbol{\texttethiopicshaa}{LET}{19}
2072 \DeclareTextCommand{\texttethiopicshaa}{Let}{\fontencoding{LET}\selectfont\texttethiopicshaa}
2073 \DeclareTextSymbol{\texttethiopicshhe}{LET}{20}
2074 \DeclareTextCommand{\texttethiopicshhe}{Let}{\fontencoding{LET}\selectfont\texttethiopicshhe}
2075 \DeclareTextSymbol{\texttethiopicshhe}{LET}{21}
2076 \DeclareTextCommand{\texttethiopicshhe}{Let}{\fontencoding{LET}\selectfont\texttethiopicshhe}
2077 \DeclareTextSymbol{\texttethiopicshho}{LET}{22}
2078 \DeclareTextCommand{\texttethiopicshho}{Let}{\fontencoding{LET}\selectfont\texttethiopicshho}
2079 \DeclareTextSymbol{\texttethiopicshwa}{LET}{23}
2080 \DeclareTextCommand{\texttethiopicshwa}{Let}{\fontencoding{LET}\selectfont\texttethiopicshwa}
2081 \DeclareTextSymbol{\texttethiopicma}{LET}{24}
2082 \DeclareTextCommand{\texttethiopicma}{Let}{\fontencoding{LET}\selectfont\texttethiopicma}
2083 \DeclareTextSymbol{\texttethiopicmu}{LET}{25}
2084 \DeclareTextCommand{\texttethiopicmu}{Let}{\fontencoding{LET}\selectfont\texttethiopicmu}
2085 \DeclareTextSymbol{\texttethiopicmi}{LET}{26}

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2086 \DeclareTextCommand{\texttethiopicmi}{Let}{\fontencoding{LET}\selectfont\texttethiopicmi}
2087 \DeclareTextSymbol{\texttethiopicmaa}{LET}{27}
2088 \DeclareTextCommand{\texttethiopicmaa}{Let}{\fontencoding{LET}\selectfont\texttethiopicmaa}
2089 \DeclareTextSymbol{\texttethiopicmee}{LET}{28}
2090 \DeclareTextCommand{\texttethiopicmee}{Let}{\fontencoding{LET}\selectfont\texttethiopicmee}
2091 \DeclareTextSymbol{\texttethiopicme}{LET}{29}
2092 \DeclareTextCommand{\texttethiopicme}{Let}{\fontencoding{LET}\selectfont\texttethiopicme}
2093 \DeclareTextSymbol{\texttethiopicmo}{LET}{30}
2094 \DeclareTextCommand{\texttethiopicmo}{Let}{\fontencoding{LET}\selectfont\texttethiopicmo}
2095 \DeclareTextSymbol{\texttethiopicmwa}{LET}{31}
2096 \DeclareTextCommand{\texttethiopicmwa}{Let}{\fontencoding{LET}\selectfont\texttethiopicmwa}
2097 \DeclareTextSymbol{\texttethiopicsza}{LET}{32}
2098 \DeclareTextCommand{\texttethiopicsza}{Let}{\fontencoding{LET}\selectfont\texttethiopicsza}
2099 \DeclareTextSymbol{\texttethiopicszu}{LET}{33}
2100 \DeclareTextCommand{\texttethiopicszu}{Let}{\fontencoding{LET}\selectfont\texttethiopicszu}
2101 \DeclareTextSymbol{\texttethiopicszi}{LET}{34}
2102 \DeclareTextCommand{\texttethiopicszi}{Let}{\fontencoding{LET}\selectfont\texttethiopicszi}
2103 \DeclareTextSymbol{\texttethiopicszaa}{LET}{35}
2104 \DeclareTextCommand{\texttethiopicszaa}{Let}{\fontencoding{LET}\selectfont\texttethiopicszaa}
2105 \DeclareTextSymbol{\texttethiopicszee}{LET}{36}
2106 \DeclareTextCommand{\texttethiopicszee}{Let}{\fontencoding{LET}\selectfont\texttethiopicszee}
2107 \DeclareTextSymbol{\texttethiopicsze}{LET}{37}
2108 \DeclareTextCommand{\texttethiopicsze}{Let}{\fontencoding{LET}\selectfont\texttethiopicsze}
2109 \DeclareTextSymbol{\texttethiopicszo}{LET}{38}
2110 \DeclareTextCommand{\texttethiopicszo}{Let}{\fontencoding{LET}\selectfont\texttethiopicszo}
2111 \DeclareTextSymbol{\texttethiopicszwa}{LET}{39}
2112 \DeclareTextCommand{\texttethiopicszwa}{Let}{\fontencoding{LET}\selectfont\texttethiopicszwa}
2113 \DeclareTextSymbol{\texttethiopicra}{LET}{40}
2114 \DeclareTextCommand{\texttethiopicra}{Let}{\fontencoding{LET}\selectfont\texttethiopicra}
2115 \DeclareTextSymbol{\texttethiopicru}{LET}{41}
2116 \DeclareTextCommand{\texttethiopicru}{Let}{\fontencoding{LET}\selectfont\texttethiopicru}
2117 \DeclareTextSymbol{\texttethiopicri}{LET}{42}
2118 \DeclareTextCommand{\texttethiopicri}{Let}{\fontencoding{LET}\selectfont\texttethiopicri}
2119 \DeclareTextSymbol{\texttethiopicraa}{LET}{43}
2120 \DeclareTextCommand{\texttethiopicraa}{Let}{\fontencoding{LET}\selectfont\texttethiopicraa}
2121 \DeclareTextSymbol{\texttethiopicree}{LET}{44}
2122 \DeclareTextCommand{\texttethiopicree}{Let}{\fontencoding{LET}\selectfont\texttethiopicree}
2123 \DeclareTextSymbol{\texttethiopicre}{LET}{45}
2124 \DeclareTextCommand{\texttethiopicre}{Let}{\fontencoding{LET}\selectfont\texttethiopicre}
2125 \DeclareTextSymbol{\texttethiopicro}{LET}{46}
2126 \DeclareTextCommand{\texttethiopicro}{Let}{\fontencoding{LET}\selectfont\texttethiopicro}
2127 \DeclareTextSymbol{\texttethiopicrwa}{LET}{47}
2128 \DeclareTextCommand{\texttethiopicrwa}{Let}{\fontencoding{LET}\selectfont\texttethiopicrwa}
2129 \DeclareTextSymbol{\texttethiopicsa}{LET}{48}
2130 \DeclareTextCommand{\texttethiopicsa}{Let}{\fontencoding{LET}\selectfont\texttethiopicsa}
2131 \DeclareTextSymbol{\texttethiopicsu}{LET}{49}
2132 \DeclareTextCommand{\texttethiopicsu}{Let}{\fontencoding{LET}\selectfont\texttethiopicsu}
2133 \DeclareTextSymbol{\texttethiopicsi}{LET}{50}
2134 \DeclareTextCommand{\texttethiopicsi}{Let}{\fontencoding{LET}\selectfont\texttethiopicsi}
2135 \DeclareTextSymbol{\texttethiopicsaa}{LET}{51}

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2136 \DeclareTextCommand{\texttethiopicxaa}{Let}{\fontencoding{LET}\selectfont\texttethiopicxaa}
2137 \DeclareTextSymbol{\texttethiopicsee}{LET}{52}
2138 \DeclareTextCommand{\texttethiopicsee}{Let}{\fontencoding{LET}\selectfont\texttethiopicsee}
2139 \DeclareTextSymbol{\texttethiopicse}{LET}{53}
2140 \DeclareTextCommand{\texttethiopicse}{Let}{\fontencoding{LET}\selectfont\texttethiopicse}
2141 \DeclareTextSymbol{\texttethiopicso}{LET}{54}
2142 \DeclareTextCommand{\texttethiopicso}{Let}{\fontencoding{LET}\selectfont\texttethiopicso}
2143 \DeclareTextSymbol{\texttethiopicswa}{LET}{55}
2144 \DeclareTextCommand{\texttethiopicswa}{Let}{\fontencoding{LET}\selectfont\texttethiopicswa}
2145 \DeclareTextSymbol{\texttethiopicsha}{LET}{56}
2146 \DeclareTextCommand{\texttethiopicsha}{Let}{\fontencoding{LET}\selectfont\texttethiopicsha}
2147 \DeclareTextSymbol{\texttethiopicshu}{LET}{57}
2148 \DeclareTextCommand{\texttethiopicshu}{Let}{\fontencoding{LET}\selectfont\texttethiopicshu}
2149 \DeclareTextSymbol{\texttethiopicshi}{LET}{58}
2150 \DeclareTextCommand{\texttethiopicshi}{Let}{\fontencoding{LET}\selectfont\texttethiopicshi}
2151 \DeclareTextSymbol{\texttethiopicshaa}{LET}{59}
2152 \DeclareTextCommand{\texttethiopicshaa}{Let}{\fontencoding{LET}\selectfont\texttethiopicshaa}
2153 \DeclareTextSymbol{\texttethiopicshee}{LET}{60}
2154 \DeclareTextCommand{\texttethiopicshee}{Let}{\fontencoding{LET}\selectfont\texttethiopicshee}
2155 \DeclareTextSymbol{\texttethiopicshe}{LET}{61}
2156 \DeclareTextCommand{\texttethiopicshe}{Let}{\fontencoding{LET}\selectfont\texttethiopicshe}
2157 \DeclareTextSymbol{\texttethiopicsho}{LET}{62}
2158 \DeclareTextCommand{\texttethiopicsho}{Let}{\fontencoding{LET}\selectfont\texttethiopicsho}
2159 \DeclareTextSymbol{\texttethiopicshwa}{LET}{63}
2160 \DeclareTextCommand{\texttethiopicshwa}{Let}{\fontencoding{LET}\selectfont\texttethiopicshwa}
2161 \DeclareTextSymbol{\texttethiopicqa}{LET}{64}
2162 \DeclareTextCommand{\texttethiopicqa}{Let}{\fontencoding{LET}\selectfont\texttethiopicqa}
2163 \DeclareTextSymbol{\texttethiopicqu}{LET}{65}
2164 \DeclareTextCommand{\texttethiopicqu}{Let}{\fontencoding{LET}\selectfont\texttethiopicqu}
2165 \DeclareTextSymbol{\texttethiopicqi}{LET}{66}
2166 \DeclareTextCommand{\texttethiopicqi}{Let}{\fontencoding{LET}\selectfont\texttethiopicqi}
2167 \DeclareTextSymbol{\texttethiopicqaa}{LET}{67}
2168 \DeclareTextCommand{\texttethiopicqaa}{Let}{\fontencoding{LET}\selectfont\texttethiopicqaa}
2169 \DeclareTextSymbol{\texttethiopicqee}{LET}{68}
2170 \DeclareTextCommand{\texttethiopicqee}{Let}{\fontencoding{LET}\selectfont\texttethiopicqee}
2171 \DeclareTextSymbol{\texttethiopicqe}{LET}{69}
2172 \DeclareTextCommand{\texttethiopicqe}{Let}{\fontencoding{LET}\selectfont\texttethiopicqe}
2173 \DeclareTextSymbol{\texttethiopicqo}{LET}{70}
2174 \DeclareTextCommand{\texttethiopicqo}{Let}{\fontencoding{LET}\selectfont\texttethiopicqo}
2175 \DeclareTextSymbol{\texttethiopicqwa}{LET}{72}
2176 \DeclareTextCommand{\texttethiopicqwa}{Let}{\fontencoding{LET}\selectfont\texttethiopicqwa}
2177 \DeclareTextSymbol{\texttethiopicqwi}{LET}{74}
2178 \DeclareTextCommand{\texttethiopicqwi}{Let}{\fontencoding{LET}\selectfont\texttethiopicqwi}
2179 \DeclareTextSymbol{\texttethiopicqwa}{LET}{75}
2180 \DeclareTextCommand{\texttethiopicqwa}{Let}{\fontencoding{LET}\selectfont\texttethiopicqwa}
2181 \DeclareTextSymbol{\texttethiopicqwee}{LET}{76}
2182 \DeclareTextCommand{\texttethiopicqwee}{Let}{\fontencoding{LET}\selectfont\texttethiopicqwee}
2183 \DeclareTextSymbol{\texttethiopicqwe}{LET}{77}
2184 \DeclareTextCommand{\texttethiopicqwe}{Let}{\fontencoding{LET}\selectfont\texttethiopicqwe}
2185 \DeclareTextSymbol{\texttethiopicqha}{LET}{80}

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2186 \DeclareTextCommand{\texttethiopicqha}{Let}{\fontencoding{LET}\selectfont\texttethiopicqha}
2187 \DeclareTextSymbol{\texttethiopicqhu}{LET}{81}
2188 \DeclareTextCommand{\texttethiopicqhu}{Let}{\fontencoding{LET}\selectfont\texttethiopicqhu}
2189 \DeclareTextSymbol{\texttethiopicqhi}{LET}{82}
2190 \DeclareTextCommand{\texttethiopicqhi}{Let}{\fontencoding{LET}\selectfont\texttethiopicqhi}
2191 \DeclareTextSymbol{\texttethiopicqhaa}{LET}{83}
2192 \DeclareTextCommand{\texttethiopicqhaa}{Let}{\fontencoding{LET}\selectfont\texttethiopicqhaa}
2193 \DeclareTextSymbol{\texttethiopicqhee}{LET}{84}
2194 \DeclareTextCommand{\texttethiopicqhee}{Let}{\fontencoding{LET}\selectfont\texttethiopicqhee}
2195 \DeclareTextSymbol{\texttethiopicqhe}{LET}{85}
2196 \DeclareTextCommand{\texttethiopicqhe}{Let}{\fontencoding{LET}\selectfont\texttethiopicqhe}
2197 \DeclareTextSymbol{\texttethiopicqho}{LET}{86}
2198 \DeclareTextCommand{\texttethiopicqho}{Let}{\fontencoding{LET}\selectfont\texttethiopicqho}
2199 \DeclareTextSymbol{\texttethiopicqhwa}{LET}{88}
2200 \DeclareTextCommand{\texttethiopicqhwa}{Let}{\fontencoding{LET}\selectfont\texttethiopicqhwa}
2201 \DeclareTextSymbol{\texttethiopicqhwi}{LET}{90}
2202 \DeclareTextCommand{\texttethiopicqhwi}{Let}{\fontencoding{LET}\selectfont\texttethiopicqhwi}
2203 \DeclareTextSymbol{\texttethiopicqhwa}{LET}{91}
2204 \DeclareTextCommand{\texttethiopicqhwa}{Let}{\fontencoding{LET}\selectfont\texttethiopicqhwa}
2205 \DeclareTextSymbol{\texttethiopicqhwee}{LET}{92}
2206 \DeclareTextCommand{\texttethiopicqhwee}{Let}{\fontencoding{LET}\selectfont\texttethiopicqhwee}
2207 \DeclareTextSymbol{\texttethiopicqhwe}{LET}{93}
2208 \DeclareTextCommand{\texttethiopicqhwe}{Let}{\fontencoding{LET}\selectfont\texttethiopicqhwe}
2209 \DeclareTextSymbol{\texttethiopicba}{LET}{96}
2210 \DeclareTextCommand{\texttethiopicba}{Let}{\fontencoding{LET}\selectfont\texttethiopicba}
2211 \DeclareTextSymbol{\texttethiopicbu}{LET}{97}
2212 \DeclareTextCommand{\texttethiopicbu}{Let}{\fontencoding{LET}\selectfont\texttethiopicbu}
2213 \DeclareTextSymbol{\texttethiopicbi}{LET}{98}
2214 \DeclareTextCommand{\texttethiopicbi}{Let}{\fontencoding{LET}\selectfont\texttethiopicbi}
2215 \DeclareTextSymbol{\texttethiopicbaa}{LET}{99}
2216 \DeclareTextCommand{\texttethiopicbaa}{Let}{\fontencoding{LET}\selectfont\texttethiopicbaa}
2217 \DeclareTextSymbol{\texttethiopicbee}{LET}{100}
2218 \DeclareTextCommand{\texttethiopicbee}{Let}{\fontencoding{LET}\selectfont\texttethiopicbee}
2219 \DeclareTextSymbol{\texttethiopicbe}{LET}{101}
2220 \DeclareTextCommand{\texttethiopicbe}{Let}{\fontencoding{LET}\selectfont\texttethiopicbe}
2221 \DeclareTextSymbol{\texttethiopicbo}{LET}{102}
2222 \DeclareTextCommand{\texttethiopicbo}{Let}{\fontencoding{LET}\selectfont\texttethiopicbo}
2223 \DeclareTextSymbol{\texttethiopicbwa}{LET}{103}
2224 \DeclareTextCommand{\texttethiopicbwa}{Let}{\fontencoding{LET}\selectfont\texttethiopicbwa}
2225 \DeclareTextSymbol{\texttethiopicva}{LET}{104}
2226 \DeclareTextCommand{\texttethiopicva}{Let}{\fontencoding{LET}\selectfont\texttethiopicva}
2227 \DeclareTextSymbol{\texttethiopicvu}{LET}{105}
2228 \DeclareTextCommand{\texttethiopicvu}{Let}{\fontencoding{LET}\selectfont\texttethiopicvu}
2229 \DeclareTextSymbol{\texttethiopicvi}{LET}{106}
2230 \DeclareTextCommand{\texttethiopicvi}{Let}{\fontencoding{LET}\selectfont\texttethiopicvi}
2231 \DeclareTextSymbol{\texttethiopicvaa}{LET}{107}
2232 \DeclareTextCommand{\texttethiopicvaa}{Let}{\fontencoding{LET}\selectfont\texttethiopicvaa}
2233 \DeclareTextSymbol{\texttethiopicvee}{LET}{108}
2234 \DeclareTextCommand{\texttethiopicvee}{Let}{\fontencoding{LET}\selectfont\texttethiopicvee}
2235 \DeclareTextSymbol{\texttethiopicve}{LET}{109}

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2236 \DeclareTextCommand{\textethiopicve}{Let}{\fontencoding{LET}\selectfont\textethiopicve}
2237 \DeclareTextSymbol{\textethiopicvo}{LET}{110}
2238 \DeclareTextCommand{\textethiopicvo}{Let}{\fontencoding{LET}\selectfont\textethiopicvo}
2239 \DeclareTextSymbol{\textethiopicvwa}{LET}{111}
2240 \DeclareTextCommand{\textethiopicvwa}{Let}{\fontencoding{LET}\selectfont\textethiopicvwa}
2241 \DeclareTextSymbol{\textethiopicta}{LET}{112}
2242 \DeclareTextCommand{\textethiopicta}{Let}{\fontencoding{LET}\selectfont\textethiopicta}
2243 \DeclareTextSymbol{\textethiopictu}{LET}{113}
2244 \DeclareTextCommand{\textethiopictu}{Let}{\fontencoding{LET}\selectfont\textethiopictu}
2245 \DeclareTextSymbol{\textethiopiciti}{LET}{114}
2246 \DeclareTextCommand{\textethiopiciti}{Let}{\fontencoding{LET}\selectfont\textethiopiciti}
2247 \DeclareTextSymbol{\textethiopictaa}{LET}{115}
2248 \DeclareTextCommand{\textethiopictaa}{Let}{\fontencoding{LET}\selectfont\textethiopictaa}
2249 \DeclareTextSymbol{\textethiopictee}{LET}{116}
2250 \DeclareTextCommand{\textethiopictee}{Let}{\fontencoding{LET}\selectfont\textethiopictee}
2251 \DeclareTextSymbol{\textethiopicte}{LET}{117}
2252 \DeclareTextCommand{\textethiopicte}{Let}{\fontencoding{LET}\selectfont\textethiopicte}
2253 \DeclareTextSymbol{\textethiopicto}{LET}{118}
2254 \DeclareTextCommand{\textethiopicto}{Let}{\fontencoding{LET}\selectfont\textethiopicto}
2255 \DeclareTextSymbol{\textethiopicwa}{LET}{119}
2256 \DeclareTextCommand{\textethiopicwa}{Let}{\fontencoding{LET}\selectfont\textethiopicwa}
2257 \DeclareTextSymbol{\textethiopicca}{LET}{120}
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2259 \DeclareTextSymbol{\textethiopiccu}{LET}{121}
2260 \DeclareTextCommand{\textethiopiccu}{Let}{\fontencoding{LET}\selectfont\textethiopiccu}
2261 \DeclareTextSymbol{\textethiopicci}{LET}{122}
2262 \DeclareTextCommand{\textethiopicci}{Let}{\fontencoding{LET}\selectfont\textethiopicci}
2263 \DeclareTextSymbol{\textethiopiccaa}{LET}{123}
2264 \DeclareTextCommand{\textethiopiccaa}{Let}{\fontencoding{LET}\selectfont\textethiopiccaa}
2265 \DeclareTextSymbol{\textethiopiccee}{LET}{124}
2266 \DeclareTextCommand{\textethiopiccee}{Let}{\fontencoding{LET}\selectfont\textethiopiccee}
2267 \DeclareTextSymbol{\textethiopicce}{LET}{125}
2268 \DeclareTextCommand{\textethiopicce}{Let}{\fontencoding{LET}\selectfont\textethiopicce}
2269 \DeclareTextSymbol{\textethiopicco}{LET}{126}
2270 \DeclareTextCommand{\textethiopicco}{Let}{\fontencoding{LET}\selectfont\textethiopicco}
2271 \DeclareTextSymbol{\textethiopiccwa}{LET}{127}
2272 \DeclareTextCommand{\textethiopiccwa}{Let}{\fontencoding{LET}\selectfont\textethiopiccwa}
2273 \DeclareTextSymbol{\textethiopicxa}{LET}{128}
2274 \DeclareTextCommand{\textethiopicxa}{Let}{\fontencoding{LET}\selectfont\textethiopicxa}
2275 \DeclareTextSymbol{\textethiopicxu}{LET}{129}
2276 \DeclareTextCommand{\textethiopicxu}{Let}{\fontencoding{LET}\selectfont\textethiopicxu}
2277 \DeclareTextSymbol{\textethiopicxi}{LET}{130}
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2281 \DeclareTextSymbol{\textethiopicxee}{LET}{132}
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2283 \DeclareTextSymbol{\textethiopicxe}{LET}{133}
2284 \DeclareTextCommand{\textethiopicxe}{Let}{\fontencoding{LET}\selectfont\textethiopicxe}
2285 \DeclareTextSymbol{\textethiopicxo}{LET}{134}

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2286 \DeclareTextCommand{\texttethiopicxo}{Let}{\fontencoding{LET}\selectfont\texttethiopicxo}  
2287 \DeclareTextSymbol{\texttethiopicxwa}{LET}{136}  
2288 \DeclareTextCommand{\texttethiopicxwa}{Let}{\fontencoding{LET}\selectfont\texttethiopicxwa}  
2289 \DeclareTextSymbol{\texttethiopicxwi}{LET}{138}  
2290 \DeclareTextCommand{\texttethiopicxwi}{Let}{\fontencoding{LET}\selectfont\texttethiopicxwi}  
2291 \DeclareTextSymbol{\texttethiopicxwaa}{LET}{139}  
2292 \DeclareTextCommand{\texttethiopicxwaa}{Let}{\fontencoding{LET}\selectfont\texttethiopicxwaa}  
2293 \DeclareTextSymbol{\texttethiopicxwee}{LET}{140}  
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2295 \DeclareTextSymbol{\texttethiopicxwe}{LET}{141}  
2296 \DeclareTextCommand{\texttethiopicxwe}{Let}{\fontencoding{LET}\selectfont\texttethiopicxwe}  
2297 \DeclareTextSymbol{\texttethiopicna}{LET}{144}  
2298 \DeclareTextCommand{\texttethiopicna}{Let}{\fontencoding{LET}\selectfont\texttethiopicna}  
2299 \DeclareTextSymbol{\texttethiopicnu}{LET}{145}  
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2303 \DeclareTextSymbol{\texttethiopicnaa}{LET}{147}  
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2309 \DeclareTextSymbol{\texttethiopicno}{LET}{150}  
2310 \DeclareTextCommand{\texttethiopicno}{Let}{\fontencoding{LET}\selectfont\texttethiopicno}  
2311 \DeclareTextSymbol{\texttethiopicnwa}{LET}{151}  
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2313 \DeclareTextSymbol{\texttethiopicnya}{LET}{152}  
2314 \DeclareTextCommand{\texttethiopicnya}{Let}{\fontencoding{LET}\selectfont\texttethiopicnya}  
2315 \DeclareTextSymbol{\texttethiopicnyu}{LET}{153}  
2316 \DeclareTextCommand{\texttethiopicnyu}{Let}{\fontencoding{LET}\selectfont\texttethiopicnyu}  
2317 \DeclareTextSymbol{\texttethiopicnyi}{LET}{154}  
2318 \DeclareTextCommand{\texttethiopicnyi}{Let}{\fontencoding{LET}\selectfont\texttethiopicnyi}  
2319 \DeclareTextSymbol{\texttethiopicnyaa}{LET}{155}  
2320 \DeclareTextCommand{\texttethiopicnyaa}{Let}{\fontencoding{LET}\selectfont\texttethiopicnyaa}  
2321 \DeclareTextSymbol{\texttethiopicnyee}{LET}{156}  
2322 \DeclareTextCommand{\texttethiopicnyee}{Let}{\fontencoding{LET}\selectfont\texttethiopicnyee}  
2323 \DeclareTextSymbol{\texttethiopicnye}{LET}{157}  
2324 \DeclareTextCommand{\texttethiopicnye}{Let}{\fontencoding{LET}\selectfont\texttethiopicnye}  
2325 \DeclareTextSymbol{\texttethiopicnyo}{LET}{158}  
2326 \DeclareTextCommand{\texttethiopicnyo}{Let}{\fontencoding{LET}\selectfont\texttethiopicnyo}  
2327 \DeclareTextSymbol{\texttethiopicnywa}{LET}{159}  
2328 \DeclareTextCommand{\texttethiopicnywa}{Let}{\fontencoding{LET}\selectfont\texttethiopicnywa}  
2329 \DeclareTextSymbol{\texttethiopicglottala}{LET}{160}  
2330 \DeclareTextCommand{\texttethiopicglottala}{Let}{\fontencoding{LET}\selectfont\texttethiopicglottala}  
2331 \DeclareTextSymbol{\texttethiopicglottalu}{LET}{161}  
2332 \DeclareTextCommand{\texttethiopicglottalu}{Let}{\fontencoding{LET}\selectfont\texttethiopicglottalu}  
2333 \DeclareTextSymbol{\texttethiopicglottali}{LET}{162}  
2334 \DeclareTextCommand{\texttethiopicglottali}{Let}{\fontencoding{LET}\selectfont\texttethiopicglottali}  
2335 \DeclareTextSymbol{\texttethiopicglottalaa}{LET}{163}

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2336 \DeclareTextCommand{\texttethiopicglottalaa}{Let}{\fontencoding{LET}\selectfont\texttethiopicglottalaa}{164}
2337 \DeclareTextSymbol{\texttethiopicglottalee}{LET}{164}
2338 \DeclareTextCommand{\texttethiopicglottalee}{Let}{\fontencoding{LET}\selectfont\texttethiopicglottalee}{164}
2339 \DeclareTextSymbol{\texttethiopicglottale}{LET}{165}
2340 \DeclareTextCommand{\texttethiopicglottale}{Let}{\fontencoding{LET}\selectfont\texttethiopicglottale}{165}
2341 \DeclareTextSymbol{\texttethiopicglottalo}{LET}{166}
2342 \DeclareTextCommand{\texttethiopicglottalo}{Let}{\fontencoding{LET}\selectfont\texttethiopicglottalo}{166}
2343 \DeclareTextSymbol{\texttethiopicglottalwa}{LET}{167}
2344 \DeclareTextCommand{\texttethiopicglottalwa}{Let}{\fontencoding{LET}\selectfont\texttethiopicglottalwa}{167}
2345 \DeclareTextSymbol{\texttethiopicka}{LET}{168}
2346 \DeclareTextCommand{\texttethiopicka}{Let}{\fontencoding{LET}\selectfont\texttethiopicka}{168}
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2348 \DeclareTextCommand{\texttethiopicku}{Let}{\fontencoding{LET}\selectfont\texttethiopicku}{169}
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2350 \DeclareTextCommand{\texttethiopicki}{Let}{\fontencoding{LET}\selectfont\texttethiopicki}{170}
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2352 \DeclareTextCommand{\texttethiopickaa}{Let}{\fontencoding{LET}\selectfont\texttethiopickaa}{171}
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2383 \DeclareTextSymbol{\texttethiopickxwa}{LET}{192}
2384 \DeclareTextCommand{\texttethiopickxwa}{Let}{\fontencoding{LET}\selectfont\texttethiopickxwa}{192}
2385 \DeclareTextSymbol{\texttethiopickxwi}{LET}{194}

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2386 \DeclareTextCommand{\texttethiopickxwi}{Let}{\fontencoding{LET}\selectfont\texttethiopickxwi}  
2387 \DeclareTextSymbol{\texttethiopickxwaa}{LET}{195}  
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2485 \DeclareTextSymbol{\texttethiopicddu}{LET}{249}

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2486 \DeclareTextCommand{\texttethiopicddu}{Let}{\fontencoding{LET}\selectfont\texttethiopicddu}
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2495 \DeclareTextSymbol{\texttethiopicddo}{LET}{254}
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2521 \DeclareTextSymbol{\texttethiopicgaa}{Let}{11}
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2523 \DeclareTextSymbol{\texttethiopicgee}{Let}{12}
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2527 \DeclareTextSymbol{\texttethiopicgo}{Let}{14}
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2529 \DeclareTextSymbol{\texttethiopicgwa}{Let}{16}
2530 \DeclareTextCommand{\texttethiopicgwa}{Let}{\fontencoding{Let}\selectfont\texttethiopicgwa}
2531 \DeclareTextSymbol{\texttethiopicgwi}{Let}{18}
2532 \DeclareTextCommand{\texttethiopicgwi}{Let}{\fontencoding{Let}\selectfont\texttethiopicgwi}
2533 \DeclareTextSymbol{\texttethiopicgwaa}{Let}{19}
2534 \DeclareTextCommand{\texttethiopicgwaa}{Let}{\fontencoding{Let}\selectfont\texttethiopicgwaa}
2535 \DeclareTextSymbol{\texttethiopicgwee}{Let}{20}

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2536 \DeclareTextCommand{\texttethiopicgwee}{LET}{\fontencoding{Let}\selectfont\texttethiopicgwee}
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2539 \DeclareTextSymbol{\texttethiopicgga}{Let}{24}
2540 \DeclareTextCommand{\texttethiopicgga}{LET}{\fontencoding{Let}\selectfont\texttethiopicgga}
2541 \DeclareTextSymbol{\texttethiopicggu}{Let}{25}
2542 \DeclareTextCommand{\texttethiopicggu}{LET}{\fontencoding{Let}\selectfont\texttethiopicggu}
2543 \DeclareTextSymbol{\texttethiopicggi}{Let}{26}
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2583 \DeclareTextSymbol{\texttethiopicchwa}{Let}{47}
2584 \DeclareTextCommand{\texttethiopicchwa}{LET}{\fontencoding{Let}\selectfont\texttethiopicchwa}
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2586 \DeclareTextCommand{\texttethiopicpha}{LET}{\fontencoding{Let}\selectfont\texttethiopicpha}
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2596 \DeclareTextCommand{\texttethiopicphe}{LET}{\fontencoding{Let}\selectfont\texttethiopicphe}
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2598 \DeclareTextCommand{\texttethiopicpho}{LET}{\fontencoding{Let}\selectfont\texttethiopicpho}
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2673 \DeclareTextSymbol{\texttethiopiccomma}{Let}{99}
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2708 \DeclareTextCommand{\texttethipicthirty}{LET}{\fontencoding{Let}\selectfont\texttethipicthirty}
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2710 \DeclareTextCommand{\texttethipicforty}{LET}{\fontencoding{Let}\selectfont\texttethipicforty}
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2713 \DeclareTextSymbol{\texttethipicsixty}{Let}{119}
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2717 \DeclareTextSymbol{\texttethipiceighty}{Let}{121}
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2722 \DeclareTextCommand{\texttethipichundred}{LET}{\fontencoding{Let}\selectfont\texttethipichundred}
2723 \DeclareTextSymbol{\texttethiopictenthousand}{Let}{124}
2724 \DeclareTextCommand{\texttethiopictenthousand}{LET}{\fontencoding{Let}\selectfont\texttethiopictenthousand}
2725 %
2726 </letenc.def>

```

#### 4.14 File letgfmz.fd

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2727 <*letgfmz.fd>
2728 \ProvidesFile{letgfmz.fd}[2004/10/17 Autogenerated .fd file for encodings LET, Let, family gfmz]
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2730 \DeclareFontFamily{Let}{gfmz}{}
2731 \DeclareFontShape{LET}{gfmz}{m}{n}{<-> * gfmzen12}{}
2732 \DeclareFontShape{Let}{gfmz}{m}{n}{<-> * gfmzen13}{}

```

```

2733 %
2734 </letgfzem.fd>

```

#### 4.15 File letjiret.fd

```

2735 <*letjiret.fd>
2736 \ProvidesFile{letjiret.fd}[2004/10/17 Autogenerated .fd file for encodings LET, Let, family jiret]
2737 \DeclareFontFamily{LET}{jiret}{}
2738 \DeclareFontFamily{Let}{jiret}{}
2739 \DeclareFontShape{LET}{jiret}{m}{n}{<-> * jiret12}{}
2740 \DeclareFontShape{Let}{jiret}{m}{n}{<-> * jiret13}{}
2741 %
2742 </letjiret.fd>

```

#### 4.16 File letc2000.fd

```

2743 <*letc2000.fd>
2744 \ProvidesFile{letc2000.fd}[2004/10/17 Autogenerated .fd file for encodings LET, Let, family c2000]
2745 \DeclareFontFamily{LET}{c2000}{}
2746 \DeclareFontFamily{Let}{c2000}{}
2747 \DeclareFontShape{LET}{c2000}{m}{n}{<-> * code2k12}{}
2748 \DeclareFontShape{Let}{c2000}{m}{n}{<-> * code2k13}{}
2749 %
2750 </letc2000.fd>

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#### 4.17 File ltaenc.def

```

2751 <*ltaenc.def>
2752 \NeedsTeXFormat{LaTeX2e}[1998/12/01]
2753 \ProvidesFile{ltaenc.def}[2004/10/17 Autogenerated encoding LTA]
2754 \DeclareFontEncoding{LTA}{}{}
2755 \DeclareFontSubstitution{LTA}{arial}{m}{n}
2756 \DeclareTextSymbol{\guillemotleft}{LTA}{19}
2757 \DeclareTextSymbol{\guillemotright}{LTA}{20}
2758 \DeclareTextSymbol{\guilsinglleft}{LTA}{14}
2759 \DeclareTextSymbol{\guilsinglright}{LTA}{15}
2760 \DeclareTextSymbol{\i}{LTA}{25}
2761 \DeclareTextSymbol{\quotedblbase}{LTA}{18}
2762 \DeclareTextSymbol{\quotesinglbase}{LTA}{13}
2763 \DeclareTextSymbol{\textasciicircum}{LTA}{'\^}
2764 \DeclareTextSymbol{\textasciitilde}{LTA}{'\~}
2765 \DeclareTextSymbol{\textbackslash}{LTA}{'\}
2766 \DeclareTextSymbol{\textbar}{LTA}{'|}
2767 \DeclareTextSymbol{\textbraceleft}{LTA}{'\{ }
2768 \DeclareTextSymbol{\textbraceright}{LTA}{'\} }
2769 \DeclareTextSymbol{\textdollar}{LTA}{'\$}
2770 \DeclareTextSymbol{\textendash}{LTA}{22}
2771 \DeclareTextSymbol{\textendash}{LTA}{21}
2772 \DeclareTextSymbol{\textgreater}{LTA}{'\>}
2773 \DeclareTextSymbol{\textless}{LTA}{'\<}

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2774 \DeclareTextSymbol{\textquotedblleft}{LTA}{16}  
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 2777 \DeclareTextSymbol{\textquoteleft}{LTA}{‘}  
 2778 \DeclareTextSymbol{\textquoteright}{LTA}{’}  
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 2781 \DeclareTextSymbol{\thaiKhoKhai}{LTA}{130}  
 2782 \DeclareTextSymbol{\thaiKhoKhuat}{LTA}{131}  
 2783 \DeclareTextSymbol{\thaiKhoKhwai}{LTA}{132}  
 2784 \DeclareTextSymbol{\thaiKhoKhon}{LTA}{133}  
 2785 \DeclareTextSymbol{\thaiKhoRakhang}{LTA}{134}  
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 2788 \DeclareTextSymbol{\thaiChoChing}{LTA}{137}  
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 2792 \DeclareTextSymbol{\thaiYoYing}{LTA}{141}  
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 2817 \DeclareTextSymbol{\thaiLu}{LTA}{166}  
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 2823 \DeclareTextSymbol{\thaiLoChula}{LTA}{172}

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2824 \DeclareTextSymbol{\thai0Ang}{LTA}{173}
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2830 \DeclareTextSymbol{\thaiSaraAm}{LTA}{179}
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2852 \DeclareTextSymbol{\thaiNikhahit}{LTA}{205}
2853 \DeclareTextSymbol{\thaiYamakkan}{LTA}{206}
2854 \DeclareTextSymbol{\thaiFongman}{LTA}{207}
2855 \DeclareTextSymbol{\thaizero}{LTA}{208}
2856 \DeclareTextSymbol{\thaione}{LTA}{209}
2857 \DeclareTextSymbol{\thaitwo}{LTA}{210}
2858 \DeclareTextSymbol{\thaithree}{LTA}{211}
2859 \DeclareTextSymbol{\thaifour}{LTA}{212}
2860 \DeclareTextSymbol{\thaifive}{LTA}{213}
2861 \DeclareTextSymbol{\thaisix}{LTA}{214}
2862 \DeclareTextSymbol{\thaiseven}{LTA}{215}
2863 \DeclareTextSymbol{\thaieight}{LTA}{216}
2864 \DeclareTextSymbol{\thainine}{LTA}{217}
2865 \DeclareTextSymbol{\thaiAngkhankhu}{LTA}{218}
2866 \DeclareTextSymbol{\thaiKhomut}{LTA}{219}
2867 %
2868 </ltaenc.def>

```

#### 4.18 File ltaarial.fd

```

2869 <*ltaarial.fd>
2870 \ProvidesFile{ltaarial.fd}[2004/10/17 Autogenerated .fd file for encoding LTA, family arial]

```

```

2871 \DeclareFontFamily{LTA}{arial}{}
2872 \DeclareFontShape{LTA}{arial}{m}{n}{<-> * arialuni0e0t}{}
2873 %
2874 </ltaarial.fd>

```

#### 4.19 File ltac2000.fd

```

2875 <*ltac2000.fd>
2876 \ProvidesFile{ltac2000.fd}[2004/10/17 Autogenerated .fd file for encoding LTA, family c2000]
2877 \DeclareFontFamily{LTA}{c2000}{}
2878 \DeclareFontShape{LTA}{c2000}{m}{n}{<-> * code2k0e0t}{}
2879 %
2880 </ltac2000.fd>

```

#### 4.20 File ltgenc.def

```

2881 <*ltgenc.def>
2882 \NeedsTeXFormat{LaTeX2e}[1998/12/01]
2883 \ProvidesFile{ltgenc.def}[2004/10/17 Autogenerated encoding LTG]
2884 \DeclareFontEncoding{LTG}{}{}
2885 \DeclareFontSubstitution{LTG}{c2000}{m}{n}
2886 \DeclareTextCommand{\texttelugustart}{LTG}{}
2887 \DeclareTextCommand{\texttelugustop}{LTG}{}
2888 \DeclareTextSymbol{\guillemotleft}{LTG}{19}
2889 \DeclareTextSymbol{\guillemotright}{LTG}{20}
2890 \DeclareTextSymbol{\guilsinglleft}{LTG}{14}
2891 \DeclareTextSymbol{\guilsinglright}{LTG}{15}
2892 \DeclareTextSymbol{\i}{LTG}{25}
2893 \DeclareTextSymbol{\quotedblbase}{LTG}{18}
2894 \DeclareTextSymbol{\quotesinglbase}{LTG}{13}
2895 \DeclareTextSymbol{\textasciicircum}{LTG}{'\^}
2896 \DeclareTextSymbol{\textasciitilde}{LTG}{'\~}
2897 \DeclareTextSymbol{\textbackslash}{LTG}{'\'}
2898 \DeclareTextSymbol{\textbar}{LTG}{'|}
2899 \DeclareTextSymbol{\textbraceleft}{LTG}{'\{ }
2900 \DeclareTextSymbol{\textbraceright}{LTG}{'\} }
2901 \DeclareTextSymbol{\textdollar}{LTG}{'\$ }
2902 \DeclareTextSymbol{\textemdash}{LTG}{22}
2903 \DeclareTextSymbol{\textendash}{LTG}{21}
2904 \DeclareTextSymbol{\textgreater}{LTG}{'\> }
2905 \DeclareTextSymbol{\textless}{LTG}{'\< }
2906 \DeclareTextSymbol{\textquotedblleft}{LTG}{16}
2907 \DeclareTextSymbol{\textquotedblright}{LTG}{17}
2908 \DeclareTextSymbol{\textquotedbl}{LTG}{'\"}
2909 \DeclareTextSymbol{\textquoteleft}{LTG}{'\'}
2910 \DeclareTextSymbol{\textquoteright}{LTG}{'\'}
2911 \DeclareTextSymbol{\textunderscore}{LTG}{95}
2912 \DeclareTextCommand{\texttelugucandrabinu}{LTG}[1]{#1\char129 }
2913 \DeclareTextCommand{\textteluguanusvara}{LTG}[1]{#1\char130 }
2914 \DeclareTextCommand{\textteluguvisarga}{LTG}[1]{#1\char131 }

```



```

2915 \DeclareTextSymbol{\texttelugua}{LTG}{133}
2916 \DeclareTextSymbol{\textteluguaa}{LTG}{134}
2917 \DeclareTextSymbol{\texttelugui}{LTG}{135}
2918 \DeclareTextSymbol{\textteluguii}{LTG}{136}
2919 \DeclareTextSymbol{\textteluguu}{LTG}{137}
2920 \DeclareTextSymbol{\textteluguuu}{LTG}{138}
2921 \DeclareTextSymbol{\textteluguvocalicr}{LTG}{139}
2922 \DeclareTextSymbol{\textteluguvocalicl}{LTG}{140}
2923 \DeclareTextSymbol{\texttelugue}{LTG}{142}
2924 \DeclareTextSymbol{\textteluguee}{LTG}{143}
2925 \DeclareTextSymbol{\textteluguai}{LTG}{144}
2926 \DeclareTextSymbol{\textteluguo}{LTG}{146}
2927 \DeclareTextSymbol{\textteluguoo}{LTG}{147}
2928 \DeclareTextSymbol{\textteluguau}{LTG}{148}
2929 \DeclareTextSymbol{\textteluguka}{LTG}{149}
2930 \DeclareTextSymbol{\texttelugukha}{LTG}{150}
2931 \DeclareTextSymbol{\textteluguga}{LTG}{151}
2932 \DeclareTextSymbol{\texttelugugha}{LTG}{152}
2933 \DeclareTextSymbol{\texttelugunga}{LTG}{153}
2934 \DeclareTextSymbol{\textteluguca}{LTG}{154}
2935 \DeclareTextSymbol{\texttelugucha}{LTG}{155}
2936 \DeclareTextSymbol{\textteluguja}{LTG}{156}
2937 \DeclareTextSymbol{\texttelugujha}{LTG}{157}
2938 \DeclareTextSymbol{\texttelugunya}{LTG}{158}
2939 \DeclareTextSymbol{\texttelugutta}{LTG}{159}
2940 \DeclareTextSymbol{\textteluguttha}{LTG}{160}
2941 \DeclareTextSymbol{\texttelugudda}{LTG}{161}
2942 \DeclareTextSymbol{\textteluguddha}{LTG}{162}
2943 \DeclareTextSymbol{\texttelugunna}{LTG}{163}
2944 \DeclareTextSymbol{\textteluguta}{LTG}{164}
2945 \DeclareTextSymbol{\texttelugutha}{LTG}{165}
2946 \DeclareTextSymbol{\textteluguda}{LTG}{166}
2947 \DeclareTextSymbol{\texttelugudha}{LTG}{167}
2948 \DeclareTextSymbol{\textteluguna}{LTG}{168}
2949 \DeclareTextSymbol{\texttelugupa}{LTG}{170}
2950 \DeclareTextSymbol{\texttelugupha}{LTG}{171}
2951 \DeclareTextSymbol{\textteluguba}{LTG}{172}
2952 \DeclareTextSymbol{\texttelugubha}{LTG}{173}
2953 \DeclareTextSymbol{\textteluguma}{LTG}{174}
2954 \DeclareTextSymbol{\textteluguya}{LTG}{175}
2955 \DeclareTextSymbol{\texttelugura}{LTG}{176}
2956 \DeclareTextSymbol{\texttelugurra}{LTG}{177}
2957 \DeclareTextSymbol{\texttelugula}{LTG}{178}
2958 \DeclareTextSymbol{\texttelugulla}{LTG}{179}
2959 \DeclareTextSymbol{\textteluguva}{LTG}{181}
2960 \DeclareTextSymbol{\texttelugusha}{LTG}{182}
2961 \DeclareTextSymbol{\texttelugussa}{LTG}{183}
2962 \DeclareTextSymbol{\texttelugusa}{LTG}{184}
2963 \DeclareTextSymbol{\textteluguha}{LTG}{185}
2964 \DeclareTextCommand{\textteluguvowelaa}{LTG}[1]{\char190 }

```

```

2965 \DeclareTextCommand{\textteluguvowelii}{LTG}[1]{#1\char191 }
2966 \DeclareTextCommand{\textteluguvoweliii}{LTG}[1]{#1\char192 }
2967 \DeclareTextCommand{\textteluguvoweluu}{LTG}[1]{#1\char193 }
2968 \DeclareTextCommand{\textteluguvoweluuu}{LTG}[1]{#1\char194 }
2969 \DeclareTextCommand{\textteluguvowelvocalicr}{LTG}[1]{#1\char195 }
2970 \DeclareTextCommand{\textteluguvowelvocalicrr}{LTG}[1]{#1\char196 }
2971 \DeclareTextCommand{\textteluguvowele}{LTG}[1]{#1\char198 }
2972 \DeclareTextCommand{\textteluguvoweleee}{LTG}[1]{#1\char199 }
2973 \DeclareTextCommand{\textteluguvowelai}{LTG}[1]{#1\char200 }
2974 \DeclareTextCommand{\textteluguvowelo}{LTG}[1]{#1\char202 }
2975 \DeclareTextCommand{\textteluguvoweloo}{LTG}[1]{#1\char203 }
2976 \DeclareTextCommand{\textteluguvowelau}{LTG}[1]{#1\char204 }
2977 \DeclareTextCommand{\textteluguvirama}{LTG}[1]{#1\char205 }
2978 \DeclareTextCommand{\texttelugulengthmark}{LTG}[1]{#1\char213 }
2979 \DeclareTextCommand{\textteluguailengthmark}{LTG}[1]{#1\char214 }
2980 \DeclareTextSymbol{\textteluguvocalicrr}{LTG}{224}
2981 \DeclareTextSymbol{\textteluguvocalicll}{LTG}{225}
2982 \DeclareTextSymbol{\textteluguzero}{LTG}{230}
2983 \DeclareTextSymbol{\textteluguone}{LTG}{231}
2984 \DeclareTextSymbol{\texttelugutwo}{LTG}{232}
2985 \DeclareTextSymbol{\textteluguthree}{LTG}{233}
2986 \DeclareTextSymbol{\texttelugufour}{LTG}{234}
2987 \DeclareTextSymbol{\texttelugufive}{LTG}{235}
2988 \DeclareTextSymbol{\texttelugusix}{LTG}{236}
2989 \DeclareTextSymbol{\textteluguseven}{LTG}{237}
2990 \DeclareTextSymbol{\texttelugueight}{LTG}{238}
2991 \DeclareTextSymbol{\texttelugunine}{LTG}{239}
2992 %
2993 </ltgenc.def>

```

## 4.21 File ltgc2000.fd

```

2994 <*ltgc2000.fd>
2995 \ProvidesFile{ltgc2000.fd}[2004/10/17 Autogenerated .fd file for encoding LTG, family c2000]
2996 \DeclareFontFamily{LTG}{c2000}{}
2997 \DeclareFontShape{LTG}{c2000}{m}{n}{<-> * code2k0c0t}{}
2998 \DeclareFontShape{LTG}{c2000}{m}{n}{<-> * arialuni0c0t}{}
2999 %
3000 </ltgc2000.fd>

```

## 4.22 File ltlenc.def

```

3001 <*ltlenc.def>
3002 \DeclareFontEncoding{LTL}{}{}
3003 \DeclareFontSubstitution{LTL}{cmr}{m}{n}

```

Load tlsyllable.tex, but disable loading of tlxlate.tex

```

3004 \let\uc@temp@a\@@input
3005 \def\@@input#1 {\def\@tempa{tlxlate}\def\@tempb{#1}\ifx\@tempb\@tempa\expandafter\@firstoftwo\expandafter\input tlsyllable
3006 \input tlsyllable

```

```

3007 \let\@@input\uc@temp@a
3008 %
3009 \let\ltl@state0
3010 \let\ltl@tlvoa\tlvoa
3011 \DeclareTextCommand{\texttelugustart}{LTL}{\let\ltl@state1}
3012 \newcommand\ltl@vowel[2]{\let\ltl@tlvoa\empty#1\let\ltl@tlvoa\tlvoa\ifx\ltl@state2\let\ltl@stat
3013 \newcommand\ltl@cons[1]{\ifx\ltl@state2\let\ltl@state1\fi#1\ltl@tlvoa}
3014 \newcommand\ltl@ivowel[1]{\ifx\ltl@state2\let\ltl@state1\tlvoX\fi#1}
3015 \newcommand\ltl@dcons[1]{\ifx\ltl@state1\let\ltl@state2\fi#1\ifx\ltl@state0\tlvoX\fi}
3016 \DeclareTextCommand{\texttelugustop}{LTL}{\ifx\ltl@state2\tlvoX\fi\let\ltl@state0}
3017 %
3018 % \newcommand\ltl@gencons[2]{%
3019 %   \expandafter\ifx\csname tlc#2\endcsname\relax
3020 %     \PackageError{ltlenc.def}{\expandafter\string\csname tlc#2\endcsname\space
3021 %       undefined}{\fi}
3022 %   \edef\@tempa{%
3023 %     \noexpand\DeclareTextCommand{\expandafter\noexpand\csname
3024 %       texttelugu#1\endcsname}{LTL}%
3025 %     {\noexpand\ltl@cons{\expandafter\noexpand\csname tlc#2\endcsname}}%
3026 %     \noexpand\DeclareTextCompositeCommand{\noexpand\textteluguvirama}{LTL}%
3027 %     {\expandafter\noexpand\csname texttelugu#1\endcsname}%
3028 %     {\noexpand\ltl@dcons{\expandafter\noexpand\csname tlc#2\endcsname}}}
3029 %   \toks255\expandafter{\@tempa}\typeout{\the\toks255}%
3030 %   \@tempa}
3031 % \newcommand\ltl@genvow[2]{%
3032 %   \expandafter\ifx\csname tlvo#2\endcsname\relax
3033 %     \PackageError{ltlenc.def}{\expandafter\string\csname tlvo#2\endcsname\space
3034 %       undefined}{\fi}
3035 %   \edef\@tempa{%
3036 %     \noexpand\DeclareTextCommand{\expandafter\noexpand\csname
3037 %       textteluguvowel#1\endcsname}{LTL}[1]%
3038 %     {\noexpand\ltl@vowel{###1}{\expandafter\noexpand\csname tlvo#2\endcsname}}%
3039 %     \noexpand\DeclareTextCommand{\expandafter\noexpand\csname texttelugu#1\endcsname}{LTL}%
3040 %     {\noexpand\ltl@ivowel{\expandafter\noexpand\csname tlvo#2\endcsname}}}
3041 %   \toks255\expandafter{\@tempa}\typeout{\the\toks255}%
3042 %   \@tempa}
3043 % \newcommand\ltl@gensymb[2]{%
3044 %   \edef\@tempa{%
3045 %     \noexpand\DeclareTextCommand{\expandafter\noexpand\csname texttelugu#1\endcsname}{LTL}%
3046 %     {\noexpand\ltl@ivowel{#2}}}
3047 %   \toks255\expandafter{\@tempa}\typeout{\the\toks255}%
3048 %   \@tempa}
3049 %
3050 \DeclareTextCommand{\textascii}{LTL}[1]{\@textascii@switch{#1}}
3051 \DeclareTextCommand{\textteluguvirama}{LTL}[1]{\ltl@vowel{#1}{\tlvoX}}
3052 %\DeclareTextCommand{\texttelugucandrabinu}{LTL}[1]{\ltl@vowel{#1}{\tluaas}}
3053 %\DeclareTextCommand{\textteluguanusvara}{LTL}[1]{\ltl@vowel{#1}{\tluasu}}
3054 %\DeclareTextCommand{\textteluguvigarga}{LTL}[1]{\ltl@vowel{#1}{\tluavi}}
3055 \DeclareTextCommand{\texttelugucandrabinu}{LTL}[1]{#1\ltl@ivowel{\tluaas}}
3056 \DeclareTextCommand{\textteluguanusvara}{LTL}[1]{#1\ltl@ivowel{\tluasu}}

```

```

3057 \DeclareTextCommand{\textteluguvisarga}{LTL}[1]{\#1\ltl@ivowel{\tluavi}}
3058 %
3059 \DeclareTextCommand{\texttelugudda}{LTL}{\ltl@cons{\tlcbD}}
3060 \DeclareTextCompositeCommand{\textteluguvirama}{LTL}{\texttelugudda}{\ltl@dcons{\tlcbD}}
3061 \DeclareTextCommand{\texttelugubha}{LTL}{\ltl@cons{\tlcbbh}}
3062 \DeclareTextCompositeCommand{\textteluguvirama}{LTL}{\texttelugubha}{\ltl@dcons{\tlcbbh}}
3063 \DeclareTextCommand{\texttelugunga}{LTL}{\ltl@cons{\tlcbNG}}
3064 \DeclareTextCompositeCommand{\textteluguvirama}{LTL}{\texttelugunga}{\ltl@dcons{\tlcbNG}}
3065 \DeclareTextCommand{\texttelugudha}{LTL}{\ltl@cons{\tlcbdh}}
3066 \DeclareTextCompositeCommand{\textteluguvirama}{LTL}{\texttelugudha}{\ltl@dcons{\tlcbdh}}
3067 \DeclareTextCommand{\textteluguka}{LTL}{\ltl@cons{\tlcbk}}
3068 \DeclareTextCompositeCommand{\textteluguvirama}{LTL}{\textteluguka}{\ltl@dcons{\tlcbk}}
3069 \DeclareTextCommand{\texttelugussa}{LTL}{\ltl@cons{\tlcbSh}}
3070 \DeclareTextCompositeCommand{\textteluguvirama}{LTL}{\texttelugussa}{\ltl@dcons{\tlcbSh}}
3071 \DeclareTextCommand{\textteluguma}{LTL}{\ltl@cons{\tlcbm}}
3072 \DeclareTextCompositeCommand{\textteluguvirama}{LTL}{\textteluguma}{\ltl@dcons{\tlcbm}}
3073 \DeclareTextCommand{\texttelugutta}{LTL}{\ltl@cons{\tlcbT}}
3074 \DeclareTextCompositeCommand{\textteluguvirama}{LTL}{\texttelugutta}{\ltl@dcons{\tlcbT}}
3075 \DeclareTextCommand{\texttelugusha}{LTL}{\ltl@cons{\tlcbS}}
3076 \DeclareTextCompositeCommand{\textteluguvirama}{LTL}{\texttelugusha}{\ltl@dcons{\tlcbS}}
3077 \DeclareTextCommand{\textteluguba}{LTL}{\ltl@cons{\tlcbb}}
3078 \DeclareTextCompositeCommand{\textteluguvirama}{LTL}{\textteluguba}{\ltl@dcons{\tlcbb}}
3079 \DeclareTextCommand{\texttelugusa}{LTL}{\ltl@cons{\tlcbs}}
3080 \DeclareTextCompositeCommand{\textteluguvirama}{LTL}{\texttelugusa}{\ltl@dcons{\tlcbs}}
3081 \DeclareTextCommand{\textteluguda}{LTL}{\ltl@cons{\tlcbd}}
3082 \DeclareTextCompositeCommand{\textteluguvirama}{LTL}{\textteluguda}{\ltl@dcons{\tlcbd}}
3083 \DeclareTextCommand{\texttelugujha}{LTL}{\ltl@cons{\tlcbjh}}
3084 \DeclareTextCompositeCommand{\textteluguvirama}{LTL}{\texttelugujha}{\ltl@dcons{\tlcbjh}}
3085 \DeclareTextCommand{\textteluguha}{LTL}{\ltl@cons{\tlcbH}}
3086 \DeclareTextCompositeCommand{\textteluguvirama}{LTL}{\textteluguha}{\ltl@dcons{\tlcbH}}
3087 \DeclareTextCommand{\textteluguttha}{LTL}{\ltl@cons{\tlcbTh}}
3088 \DeclareTextCompositeCommand{\textteluguvirama}{LTL}{\textteluguttha}{\ltl@dcons{\tlcbTh}}
3089 \DeclareTextCommand{\textteluguya}{LTL}{\ltl@cons{\tlcbY}}
3090 \DeclareTextCompositeCommand{\textteluguvirama}{LTL}{\textteluguya}{\ltl@dcons{\tlcbY}}
3091 \DeclareTextCommand{\texttelugucha}{LTL}{\ltl@cons{\tlcbch}}
3092 \DeclareTextCompositeCommand{\textteluguvirama}{LTL}{\texttelugucha}{\ltl@dcons{\tlcbch}}
3093 \DeclareTextCommand{\textteluguja}{LTL}{\ltl@cons{\tlcbj}}
3094 \DeclareTextCompositeCommand{\textteluguvirama}{LTL}{\textteluguja}{\ltl@dcons{\tlcbj}}
3095 \DeclareTextCommand{\texttelugunya}{LTL}{\ltl@cons{\tlcbnx}}
3096 \DeclareTextCompositeCommand{\textteluguvirama}{LTL}{\texttelugunya}{\ltl@dcons{\tlcbnx}}
3097 \DeclareTextCommand{\texttelugulla}{LTL}{\ltl@cons{\tlcbL}}
3098 \DeclareTextCompositeCommand{\textteluguvirama}{LTL}{\texttelugulla}{\ltl@dcons{\tlcbL}}
3099 \DeclareTextCommand{\texttelugupha}{LTL}{\ltl@cons{\tlcbph}}
3100 \DeclareTextCompositeCommand{\textteluguvirama}{LTL}{\texttelugupha}{\ltl@dcons{\tlcbph}}
3101 \DeclareTextCommand{\textteluguna}{LTL}{\ltl@cons{\tlcbn}}
3102 \DeclareTextCompositeCommand{\textteluguvirama}{LTL}{\textteluguna}{\ltl@dcons{\tlcbn}}
3103 \DeclareTextCommand{\texttelugugha}{LTL}{\ltl@cons{\tlcbgh}}
3104 \DeclareTextCompositeCommand{\textteluguvirama}{LTL}{\texttelugugha}{\ltl@dcons{\tlcbgh}}
3105 \DeclareTextCommand{\textteluguddha}{LTL}{\ltl@cons{\tlcbDh}}
3106 \DeclareTextCompositeCommand{\textteluguvirama}{LTL}{\textteluguddha}{\ltl@dcons{\tlcbDh}}

```

```

3107 \DeclareTextCommand{\textttelugunna}{LTL}{\ltl@cons{\tlcbN}}
3108 \DeclareTextCompositeCommand{\texttteluguvirama}{LTL}{\textttelugunna}{\ltl@dcons{\tlcbN}}
3109 \DeclareTextCommand{\textttelugupa}{LTL}{\ltl@cons{\tlcbp}}
3110 \DeclareTextCompositeCommand{\texttteluguvirama}{LTL}{\textttelugupa}{\ltl@dcons{\tlcbp}}
3111 \DeclareTextCommand{\textttelugura}{LTL}{\ltl@cons{\tlcbr}}
3112 \DeclareTextCompositeCommand{\texttteluguvirama}{LTL}{\textttelugura}{\ltl@dcons{\tlcbr}}
3113 \DeclareTextCommand{\texttteluguca}{LTL}{\ltl@cons{\tlcbc}}
3114 \DeclareTextCompositeCommand{\texttteluguvirama}{LTL}{\texttteluguca}{\ltl@dcons{\tlcbc}}
3115 \DeclareTextCommand{\textttelugutha}{LTL}{\ltl@cons{\tlcbth}}
3116 \DeclareTextCompositeCommand{\texttteluguvirama}{LTL}{\textttelugutha}{\ltl@dcons{\tlcbth}}
3117 \DeclareTextCommand{\textttelugukha}{LTL}{\ltl@cons{\tlcbkh}}
3118 \DeclareTextCompositeCommand{\texttteluguvirama}{LTL}{\textttelugukha}{\ltl@dcons{\tlcbkh}}
3119 \DeclareTextCommand{\texttteluguga}{LTL}{\ltl@cons{\tlcbg}}
3120 \DeclareTextCompositeCommand{\texttteluguvirama}{LTL}{\texttteluguga}{\ltl@dcons{\tlcbg}}
3121 \DeclareTextCommand{\textttelugurra}{LTL}{\ltl@cons{\tlcbR}}
3122 \DeclareTextCompositeCommand{\texttteluguvirama}{LTL}{\textttelugurra}{\ltl@dcons{\tlcbR}}
3123 \DeclareTextCommand{\textttelugula}{LTL}{\ltl@cons{\tlcbl}}
3124 \DeclareTextCompositeCommand{\texttteluguvirama}{LTL}{\textttelugula}{\ltl@dcons{\tlcbl}}
3125 \DeclareTextCommand{\texttteluguta}{LTL}{\ltl@cons{\tlcbt}}
3126 \DeclareTextCompositeCommand{\texttteluguvirama}{LTL}{\texttteluguta}{\ltl@dcons{\tlcbt}}
3127 \DeclareTextCommand{\texttteluguva}{LTL}{\ltl@cons{\tlcbv}}
3128 \DeclareTextCompositeCommand{\texttteluguvirama}{LTL}{\texttteluguva}{\ltl@dcons{\tlcbv}}
3129 \DeclareTextCommand{\textttelugublackbox}{LTL}{\ltl@cons{\tlcbbb}}
3130 \DeclareTextCompositeCommand{\texttteluguvirama}{LTL}{\textttelugublackbox}{\ltl@dcons{\tlcbbb}}
3131 \DeclareTextCommand{\texttteluguemptybox}{LTL}{\ltl@cons{\tlcbeb}}
3132 \DeclareTextCompositeCommand{\texttteluguvirama}{LTL}{\texttteluguemptybox}{\ltl@dcons{\tlcbeb}}
3133 \DeclareTextCommand{\texttteluguoutlinebox}{LTL}{\ltl@cons{\tlcbob}}
3134 \DeclareTextCompositeCommand{\texttteluguvirama}{LTL}{\texttteluguoutlinebox}{\ltl@dcons{\tlcbob}}
3135 % \ltl@gencons{dda}{D}
3136 % \ltl@gencons{bha}{bh}
3137 % \ltl@gencons{nga}{NG}
3138 % \ltl@gencons{dha}{dh}
3139 % \ltl@gencons{ka}{k}
3140 % \ltl@gencons{ssa}{Sh}
3141 % \ltl@gencons{ma}{m}
3142 % \ltl@gencons{tta}{T}
3143 % \ltl@gencons{sha}{S}
3144 % \ltl@gencons{ba}{b}
3145 % \ltl@gencons{sa}{s}
3146 % \ltl@gencons{da}{d}
3147 % \ltl@gencons{jha}{jh}
3148 % \ltl@gencons{ha}{H}
3149 % \ltl@gencons{ttha}{Th}
3150 % \ltl@gencons{ya}{Y}
3151 % \ltl@gencons{cha}{ch}
3152 % \ltl@gencons{ja}{j}
3153 % \ltl@gencons{nya}{nx}
3154 % \ltl@gencons{lila}{L}
3155 % \ltl@gencons{pha}{ph}
3156 % \ltl@gencons{na}{n}

```

```

3157 % \ltl@gencons{gha}{gh}
3158 % \ltl@gencons{ddha}{Dh}
3159 % \ltl@gencons{inna}{N}
3160 % \ltl@gencons{pa}{p}
3161 % \ltl@gencons{ra}{r}
3162 % \ltl@gencons{ca}{c}
3163 % \ltl@gencons{tha}{th}
3164 % \ltl@gencons{kha}{kh}
3165 % \ltl@gencons{ga}{g}
3166 % \ltl@gencons{rra}{R}
3167 % \ltl@gencons{la}{l}
3168 % \ltl@gencons{ta}{t}
3169 % \ltl@gencons{va}{v}
3170 % \ltl@gencons{blackbox}{bb}
3171 % \ltl@gencons{emptybox}{eb}
3172 % \ltl@gencons{outlinebox}{ob}
3173 %
3174 \DeclareTextCommand{\textteluguvowela}{LTL}[1]{\ltl@vowel{#1}{\tlvoa}}
3175 \DeclareTextCommand{\texttelugua}{LTL}{\ltl@ivowel{\tlvoa}}
3176 \DeclareTextCommand{\textteluguvowelaa}{LTL}[1]{\ltl@vowel{#1}{\tlvoA}}
3177 \DeclareTextCommand{\textteluguaa}{LTL}{\ltl@ivowel{\tlvoA}}
3178 \DeclareTextCommand{\textteluguvowelii}{LTL}[1]{\ltl@vowel{#1}{\tlvoi}}
3179 \DeclareTextCommand{\texttelugui}{LTL}{\ltl@ivowel{\tlvoi}}
3180 \DeclareTextCommand{\textteluguvoweliii}{LTL}[1]{\ltl@vowel{#1}{\tlvoI}}
3181 \DeclareTextCommand{\textteluguiii}{LTL}{\ltl@ivowel{\tlvoI}}
3182 \DeclareTextCommand{\textteluguvowelu}{LTL}[1]{\ltl@vowel{#1}{\tlvou}}
3183 \DeclareTextCommand{\textteluguu}{LTL}{\ltl@ivowel{\tlvou}}
3184 \DeclareTextCommand{\textteluguvoweluu}{LTL}[1]{\ltl@vowel{#1}{\tlvoU}}
3185 \DeclareTextCommand{\textteluguuu}{LTL}{\ltl@ivowel{\tlvoU}}
3186 \DeclareTextCommand{\textteluguvowelvocalicr}{LTL}[1]{\ltl@vowel{#1}{\tlvorx}}
3187 \DeclareTextCommand{\textteluguvocalicr}{LTL}{\ltl@ivowel{\tlvorx}}
3188 \DeclareTextCommand{\textteluguvowelvocalicl}{LTL}[1]{\ltl@vowel{#1}{\tlvolx}}
3189 \DeclareTextCommand{\textteluguvocalicl}{LTL}{\ltl@ivowel{\tlvolx}}
3190 \DeclareTextCommand{\textteluguvowelvocalicrr}{LTL}[1]{\ltl@vowel{#1}{\tlvoRx}}
3191 \DeclareTextCommand{\textteluguvocalicrr}{LTL}{\ltl@ivowel{\tlvoRx}}
3192 \DeclareTextCommand{\textteluguvowelvocalicl1}{LTL}[1]{\ltl@vowel{#1}{\tlvoLx}}
3193 \DeclareTextCommand{\textteluguvocalicl1}{LTL}{\ltl@ivowel{\tlvoLx}}
3194 \DeclareTextCommand{\textteluguvowele}{LTL}[1]{\ltl@vowel{#1}{\tlvoe}}
3195 \DeclareTextCommand{\texttelugue}{LTL}{\ltl@ivowel{\tlvoe}}
3196 \DeclareTextCommand{\textteluguvowelee}{LTL}[1]{\ltl@vowel{#1}{\tlvoE}}
3197 \DeclareTextCommand{\textteluguee}{LTL}{\ltl@ivowel{\tlvoE}}
3198 \DeclareTextCommand{\textteluguvowelai}{LTL}[1]{\ltl@vowel{#1}{\tlvoy}}
3199 \DeclareTextCommand{\textteluguai}{LTL}{\ltl@ivowel{\tlvoy}}
3200 \DeclareTextCommand{\textteluguvowelo}{LTL}[1]{\ltl@vowel{#1}{\tlvoo}}
3201 \DeclareTextCommand{\textteluguo}{LTL}{\ltl@ivowel{\tlvoo}}
3202 \DeclareTextCommand{\textteluguvoweloo}{LTL}[1]{\ltl@vowel{#1}{\tlvoO}}
3203 \DeclareTextCommand{\textteluguoo}{LTL}{\ltl@ivowel{\tlvoO}}
3204 \DeclareTextCommand{\textteluguvowelau}{LTL}[1]{\ltl@vowel{#1}{\tlvoow}}
3205 \DeclareTextCommand{\textteluguau}{LTL}{\ltl@ivowel{\tlvoow}}
3206 % \ltl@genvow{a}{a}

```

```

3207 % \ltl@genvow{aa}{A}
3208 % \ltl@genvow{i}{i}
3209 % \ltl@genvow{ii}{I}
3210 % \ltl@genvow{u}{u}
3211 % \ltl@genvow{uu}{U}
3212 % \ltl@genvow{vocalicr}{rx}
3213 % \ltl@genvow{vocalicl}{lx}
3214 % \ltl@genvow{vocalicrr}{Rx}
3215 % \ltl@genvow{vocalicll}{Lx}
3216 % \ltl@genvow{e}{e}
3217 % \ltl@genvow{ee}{E}
3218 % \ltl@genvow{ai}{y}
3219 % \ltl@genvow{o}{o}
3220 % \ltl@genvow{oo}{O}
3221 % \ltl@genvow{au}{ow}
3222 %
3223 \DeclareTextCommand{\textteluguzero}{LTL}{\ltl@ivowel{\char\dtzeroCODE}}
3224 \DeclareTextCommand{\textteluguone}{LTL}{\ltl@ivowel{\char\dtoneCODE}}
3225 \DeclareTextCommand{\texttelugutwo}{LTL}{\ltl@ivowel{\char\dttwoCODE}}
3226 \DeclareTextCommand{\textteluguthree}{LTL}{\ltl@ivowel{\char\dtthreeCODE}}
3227 \DeclareTextCommand{\texttelugufour}{LTL}{\ltl@ivowel{\char\dtfourCODE}}
3228 \DeclareTextCommand{\texttelugufive}{LTL}{\ltl@ivowel{\char\dtfiveCODE}}
3229 \DeclareTextCommand{\texttelugusix}{LTL}{\ltl@ivowel{\char\dtsixCODE}}
3230 \DeclareTextCommand{\textteluguseven}{LTL}{\ltl@ivowel{\char\dtsevenCODE}}
3231 \DeclareTextCommand{\texttelugueight}{LTL}{\ltl@ivowel{\char\dteightCODE}}
3232 \DeclareTextCommand{\texttelugunine}{LTL}{\ltl@ivowel{\char\dtnineCODE}}
3233 % \ltl@gensymb{zero}{\char\dtzeroCODE}%
3234 % \ltl@gensymb{one}{\char\dtoneCODE}%
3235 % \ltl@gensymb{two}{\char\dttwoCODE}%
3236 % \ltl@gensymb{three}{\char\dtthreeCODE}%
3237 % \ltl@gensymb{four}{\char\dtfourCODE}%
3238 % \ltl@gensymb{five}{\char\dtfiveCODE}%
3239 % \ltl@gensymb{six}{\char\dtsixCODE}%
3240 % \ltl@gensymb{seven}{\char\dtsevenCODE}%
3241 % \ltl@gensymb{eight}{\char\dteightCODE}%
3242 % \ltl@gensymb{nine}{\char\dtnineCODE}%
3243 %%% Local Variables:
3244 %%% mode: latex
3245 %%% coding: utf-8
3246 %%% TeX-master: "../test.tex"
3247 %%% End:
3248 %%% Local IspellDict: british
3249 %
3250 \ltlenc.def

```

## 4.23 File lt1cmr.fd

```

3251 \ltlcmr.fd
3252 \DeclareFontFamily{LTL}{cmr}{}%
3253 \DeclareFontShape{LTL}{cmr}{m}{n}{%

```

```

3254 <10> <11> <12> <15> <18> <20> <25> <30> <35> <40> <55> <72> <100> <172>
3255 gen * tel
3256 }{}%
3257 \DeclareFontShape{LTL}{cmr}{bx}{n}{%
3258 <10> tel10b
3259 <11> tel11b
3260 <12> tel12b
3261 <15> tel15b
3262 <18> tel18b
3263 <20> tel20b
3264 <25> tel25b
3265 }{}%
3266 \DeclareFontShape{LTL}{cmr}{b}{n}{%
3267 <-> sub * cmr/m/bx }{}%
3268 \DeclareFontShape{LTL}{cmr}{m}{sl}{%
3269 <10> tel10s
3270 <11> tel11s
3271 <12> tel12s
3272 <15> tel15s
3273 <18> tel18s
3274 <20> tel20s
3275 <25> tel25s
3276 <30> tel30s
3277 <35> tel35s
3278 <40> tel40s
3279 <55> tel55s
3280 }{}%
3281 \DeclareFontShape{LTL}{cmr}{m}{it}{%
3282 <-> sub * cmr/m/sl }{}%
3283 \DeclareFontShape{LTL}{cmr}{nx}{n}{%
3284 <10> tel10nx
3285 <11> tel11nx
3286 <12> tel12nx
3287 }{}%
3288 \DeclareFontShape{LTL}{cmr}{ny}{n}{%
3289 <10> tel10ny
3290 <11> tel11ny
3291 <12> tel12ny
3292 }{}%
3293 \DeclareFontShape{LTL}{cmr}{nx}{sl}{%
3294 <-> sub * cmr/m/sl }{}%
3295 \DeclareFontShape{LTL}{cmr}{ny}{sl}{%
3296 <-> sub * cmr/m/sl }{}%
3297 \DeclareFontShape{LTL}{cmr}{nx}{it}{%
3298 <-> sub * cmr/m/sl }{}%
3299 \DeclareFontShape{LTL}{cmr}{ny}{it}{%
3300 <-> sub * cmr/m/sl }{}%
3301 %
3302 \ltlcmr.fd>

```



## 4.24 File ltwenc.def

3303 `{*ltwenc.def}`

This encoding is for tengwar fonts ordered according to the Unicode page 0xE0xx as defined on <http://www.evertype.com/standards/csur/tengwar.html>.

U+E000..U+E07F is at positions 0x00..0x7F. The upper half is reserved for extensions.

3304 `\ProvidesFile{ltwenc.def}[2001/10/17 Fontencoding LTW for Tengwar]`

3305 `\DeclareFontEncoding{LTW}{-}{-}`

3306 `\DeclareFontSubstitution{LTW}{dsque}{m}{n}`

Tengwar (normal letters)

3307 `\DeclareTextSymbol{\tengwarTinfo}{LTW}{00}`

3308 `\DeclareTextSymbol{\tengwarParma}{LTW}{01}`

3309 `\DeclareTextSymbol{\tengwarCalma}{LTW}{02}`

3310 `\DeclareTextSymbol{\tengwarQuesse}{LTW}{03}`

3311 `\DeclareTextSymbol{\tengwarAndo}{LTW}{04}`

3312 `\DeclareTextSymbol{\tengwarUmbar}{LTW}{05}`

3313 `\DeclareTextSymbol{\tengwarAnga}{LTW}{06}`

3314 `\DeclareTextSymbol{\tengwarUngwe}{LTW}{07}`

3315 `\DeclareTextSymbol{\tengwarThuule}{LTW}{08}`

3316 `\DeclareTextSymbol{\tengwarFormen}{LTW}{09}`

3317 `\DeclareTextSymbol{\tengwarHarma}{LTW}{0A}`

3318 `\DeclareTextSymbol{\tengwarHwesta}{LTW}{0B}`

3319 `\DeclareTextSymbol{\tengwarAnto}{LTW}{0C}`

3320 `\DeclareTextSymbol{\tengwarAmpa}{LTW}{0D}`

3321 `\DeclareTextSymbol{\tengwarAnca}{LTW}{0E}`

3322 `\DeclareTextSymbol{\tengwarUnque}{LTW}{0F}`

3323 `\DeclareTextSymbol{\tengwarNuumen}{LTW}{10}`

3324 `\DeclareTextSymbol{\tengwarMalta}{LTW}{11}`

3325 `\DeclareTextSymbol{\tengwarNoldo}{LTW}{12}`

3326 `\DeclareTextSymbol{\tengwarNwalme}{LTW}{13}`

3327 `\DeclareTextSymbol{\tengwarOore}{LTW}{14}`

3328 `\DeclareTextSymbol{\tengwarVala}{LTW}{15}`

3329 `\DeclareTextSymbol{\tengwarAnna}{LTW}{16}`

3330 `\DeclareTextSymbol{\tengwarVilya}{LTW}{17}`

3331 `\DeclareTextSymbol{\tengwarRoomen}{LTW}{18}`

3332 `\DeclareTextSymbol{\tengwarArda}{LTW}{19}`

3333 `\DeclareTextSymbol{\tengwarLambe}{LTW}{1A}`

3334 `\DeclareTextSymbol{\tengwarAlda}{LTW}{1B}`

3335 `\DeclareTextSymbol{\tengwarSilme}{LTW}{1C}`

3336 `\DeclareTextSymbol{\tengwarSilmeNuquerna}{LTW}{1D}`

3337 `\DeclareTextSymbol{\tengwarAare}{LTW}{1E}`

3338 `\DeclareTextSymbol{\tengwarAareNuquerna}{LTW}{1F}`

3339 `\DeclareTextSymbol{\tengwarHyarmen}{LTW}{20}`

3340 `\DeclareTextSymbol{\tengwarHwestaSindarinwa}{LTW}{21}`

3341 `\DeclareTextSymbol{\tengwarYanta}{LTW}{22}`

3342 `\DeclareTextSymbol{\tengwarUure}{LTW}{23}`

```

3343 \DeclareTextSymbol{\tengwarHalla}{LTW}{ "24}
3344 \DeclareTextSymbol{\tengwarShortCarrier}{LTW}{ "25}
3345 \DeclareTextSymbol{\tengwarLongCarrier}{LTW}{ "26}
3346 \DeclareTextSymbol{\tengwarAnnaSindarinwa}{LTW}{ "27}
3347 \DeclareTextSymbol{\tengwarExtThuule}{LTW}{ "28}
3348 \DeclareTextSymbol{\tengwarExtFormen}{LTW}{ "29}
3349 \DeclareTextSymbol{\tengwarExtHarma}{LTW}{ "2A}
3350 \DeclareTextSymbol{\tengwarExtHwesta}{LTW}{ "2B}
3351 \DeclareTextSymbol{\tengwarExtAnto}{LTW}{ "2C}
3352 \DeclareTextSymbol{\tengwarExtAmpa}{LTW}{ "2D}
3353 \DeclareTextSymbol{\tengwarExtAnca}{LTW}{ "2E}
3354 \DeclareTextSymbol{\tengwarExtUnque}{LTW}{ "2F}
3355 \DeclareTextSymbol{\tengwarStemlessOore}{LTW}{ "30}
3356 \DeclareTextSymbol{\tengwarStemlessVala}{LTW}{ "31}
3357 \DeclareTextSymbol{\tengwarStemlessAnna}{LTW}{ "32}
3358 \DeclareTextSymbol{\tengwarStemlessVilya}{LTW}{ "33}

```

#### Punctuation

```

3359 \DeclareTextSymbol{\tengwarPusta}{LTW}{ "50}
3360 \DeclareTextSymbol{\tengwarDoublePusta}{LTW}{ "51}
3361 \DeclareTextSymbol{\tengwarExclam}{LTW}{ "52}
3362 \DeclareTextSymbol{\tengwarQuestion}{LTW}{ "53}
3363 \DeclareTextSymbol{\tengwarSection}{LTW}{ "54}
3364 \DeclareTextSymbol{\tengwarLongSection}{LTW}{ "55}

```

#### Digits

```

3365 \ProvideTextCommandDefault{\tengwarZero}{\tengwarStemlessOore}
3366 \ProvideTextCommandDefault{\tengwarOne}{\tengwarStemlessVilya}
3367 \DeclareTextSymbol{\tengwarTwo}{LTW}{ "62}
3368 \DeclareTextSymbol{\tengwarThree}{LTW}{ "63}
3369 \DeclareTextSymbol{\tengwarFour}{LTW}{ "64}
3370 \DeclareTextSymbol{\tengwarFive}{LTW}{ "65}
3371 \DeclareTextSymbol{\tengwarSix}{LTW}{ "66}
3372 \DeclareTextSymbol{\tengwarSeven}{LTW}{ "67}
3373 \DeclareTextSymbol{\tengwarEight}{LTW}{ "68}
3374 \DeclareTextSymbol{\tengwarNine}{LTW}{ "69}
3375 \DeclareTextSymbol{\tengwarTen}{LTW}{ "6A}
3376 \DeclareTextSymbol{\tengwarEleven}{LTW}{ "6B}

```

#### Tehta (accents)

```

3377 \DeclareTextCommand{\tengwarThreeDotsAbove}{LTW}[1]{#1\char"40 }
3378 \DeclareTextCommand{\tengwarThreeDotsBelow}{LTW}[1]{#1\char"41 }
3379 \DeclareTextCommand{\tengwarTwoDotsAbove}{LTW}[1]{#1\char"42 }
3380 \DeclareTextCommand{\tengwarTwoDotsBelow}{LTW}[1]{#1\char"43 }
3381 \DeclareTextCommand{\tengwarAmaticse}{LTW}[1]{#1\char"44 }
3382 \DeclareTextCommand{\tengwarNunticse}{LTW}[1]{#1\char"45 }
3383 \DeclareTextCommand{\tengwarAcute}{LTW}[1]{#1\char"46 }
3384 \DeclareTextCommand{\tengwarDoubleAcute}{LTW}[1]{#1\char"47 }
3385 \DeclareTextCommand{\tengwarRightCurl}{LTW}[1]{#1\char"48 }

```

```

3386 \DeclareTextCommand{\tengwarDoubleRightCurl}{LTW}[1]{#1\char"49 }
3387 \DeclareTextCommand{\tengwarLeftCurl}{LTW}[1]{#1\char"4A }
3388 \DeclareTextCommand{\tengwarDoubleLeftCurl}{LTW}[1]{#1\char"4B }
3389 \DeclareTextCommand{\tengwarNasalizer}{LTW}[1]{#1\char"4C }
3390 \DeclareTextCommand{\tengwarDoubler}{LTW}[1]{#1\char"4D }
3391 \DeclareTextCommand{\tengwarTilde}{LTW}[1]{#1\char"4E }
3392 \DeclareTextCommand{\tengwarBreve}{LTW}[1]{#1\char"4F }
3393 \DeclareTextCommand{\tengwarLongCarrierBelow}{LTW}[1]{#1\char"56 }
3394 \DeclareTextCommand{\tengwarDoubleAcuteBelow}{LTW}[1]{#1\char"57 }
3395 \DeclareTextCommand{\tengwarRightCurlBelow}{LTW}[1]{#1\char"58 }
3396 \DeclareTextCommand{\tengwarLeftCurlBelow}{LTW}[1]{#1\char"59 }
3397
3398 %
3399 \ltwenc.def

```

#### 4.25 File ltwdsque.fd

```

3400 \ltwdsque.fd

```

This fontfamily loads the Quenya fonts from Dan Smith.

```

3401 \ProvidesFile{ltwdsque.fd}[2001/10/11 Fontfamily dsque for Fontencoding LTW]%
3402 \DeclareFontFamily{LTW}{dsque}{}
3403 \DeclareFontShape{LTW}{dsque}{m}{n}{<-> tengdsq}{}
3404 %
3405 \ltwdsque.fd

```

#### 4.26 File ltwdsnol.fd

```

3406 \ltwdsnol.fd

```

This fontfamily loads the Noldor fonts from Dan Smith.

```

3407 \ProvidesFile{ltwdsnol.fd}[2001/10/11 Fontfamily dsno for Fontencoding LTW]%
3408 \DeclareFontFamily{LTW}{dsnol}{}
3409 \DeclareFontShape{LTW}{dsnol}{m}{n}{<-> tengdsn}{}
3410 %
3411 \ltwdsnol.fd

```

#### 4.27 File ltwdssin.fd

```

3412 \ltwdssin.fd

```

This fontfamily loads the Sindarin fonts from Dan Smith.

```

3413 \ProvidesFile{ltwdssin.fd}[2001/10/11 Fontfamily dssin for Fontencoding LTW]%
3414 \DeclareFontFamily{LTW}{dssin}{}
3415 \DeclareFontShape{LTW}{dssin}{m}{n}{<-> tengdss}{}
3416 %
3417 \ltwdssin.fd

```

#### 4.28 File lucenc.def

```

3418 (*lucenc.def)
3419 % Stuff working with TeX:
3420 \catcode'\@11
3421 \ifx\@tempcnta\undefined\csname newcount\endcsname\@tempcnta\fi
3422 \ifx\@tempcntb\undefined\csname newcount\endcsname\@tempcntb\fi
3423 \def\lucchar#1{%
3424   \begingroup
3425     \@tempcnta=#1\divide\@tempcnta by"1000
3426     \multiply\@tempcnta by-"1000\advance\@tempcnta by#1%
3427     \divide\@tempcnta by"100%
3428     \@tempcntb=#1\divide\@tempcntb by"10000
3429     \multiply\@tempcntb by-"10000\advance\@tempcntb by#1%
3430     \divide\@tempcntb by"1000%
3431     \xdef\LUC@plane@LUC{%
3432       \ifcase\@tempcntb0\or1\or2\or3\or4\or5\or6\or7\or
3433         8\or9\or a\or b\or c\or d\or e\or f\fi
3434       \ifcase\@tempcnta0\or1\or2\or3\or4\or5\or6\or7\or
3435         8\or9\or a\or b\or c\or d\or e\or f\fi}%
3436     \ifnum#1>"FFFF
3437       \@tempcnta=#1\divide\@tempcnta by"100000
3438       \multiply\@tempcnta by-"100000\advance\@tempcnta by#1%
3439       \divide\@tempcnta by"10000%
3440       \xdef\LUC@plane@LUC{%
3441         \ifcase\@tempcnta0\or1\or2\or3\or4\or5\or6\or7\or
3442           8\or9\or a\or b\or c\or d\or e\or f\fi
3443         \LUC@plane@LUC}%
3444       \ifnum#1>"FFFFF
3445         \@tempcnta=#1\divide\@tempcnta by"1000000
3446         \multiply\@tempcnta by-"1000000\advance\@tempcnta by#1%
3447         \divide\@tempcnta by"100000%
3448         \xdef\LUC@plane@LUC{%
3449           \ifcase\@tempcnta0\or1\or2\or3\or4\or5\or6\or7\or
3450             8\or9\or a\or b\or c\or d\or e\or f\fi
3451           \LUC@plane@LUC}%
3452       \fi
3453     \fi
3454     \@tempcnta=#1\divide\@tempcnta by"100
3455     \multiply\@tempcnta by-"100\advance\@tempcnta by#1%
3456     \relax
3457     %\typeout{Plane: \LUC@plane@LUC, Char: \number\@tempcnta}%
3458   \expandafter\endgroup
3459   \expandafter\luc@char\expandafter{\number\@tempcnta}%
3460 }
3461 \def\luc@loadfont{%
3462   \expandafter\ifx\csname LUC-font-\LUCfont\LUC@plane@LUC\endcsname\relax
3463     \expandafter\font\csname LUC-font-\LUCfont\LUC@plane@LUC\endcsname=
3464     \LUCfont\LUC@plane@LUC\fi
3465   \csname LUC-font-\LUCfont\LUC@plane@LUC\endcsname}
3466 \def\luc@char#1{%
3467   \ifx\LUC@plane@LUC\LUC@plane@old\else

```

```

3468     \ifx\LUCfont\undefined\selectfont
3469     \else\luc@loadfont\fi
3470     \fi
3471     \char#1 }
3472 \ifx\NeedsTeXFormat\undefined\endinput\fi
3473
3474 % LaTeX-only stuff follows.
3475 \ProvidesFile{lucenc.def}[2002/02/20 Encoding for Unicode fonts]
3476 \DeclareFontEncoding{LUC}{-}{-}%
3477 \DeclareFontSubstitution{LUC}{arial}{m}{n}%
3478 %
3479 \providecommand\LUC@@empty[1]{%
3480   \edef\mandatory@arg{\mandatory@arg\csname LUC@plane@\f@encoding\endcsname}%
3481   \empty@sfcnt#1%
3482   \edef\uc@temp@a{\csname LUC@plane@\f@encoding\endcsname}%
3483   \xdef\font@name{\csname \curr@fontshape/\f@size/\uc@temp@a\endcsname}}
3484 \providecommand\LUC@@sub[1]{%
3485   \expandafter\ifx\csname LUC@\mandatory@arg/\f@size\endcsname\relax
3486   \expandafter\gdef\csname LUC@\mandatory@arg/\f@size\endcsname{}%
3487   \sub@sfcnt#1%
3488   \else
3489   \sub@sfcnt\@gobble
3490   \fi}
3491 \DeclareSizeFunction{LUC}{\LUC@@empty\@font@warning}
3492 \DeclareSizeFunction{LUCb}{\LUC@@empty\@font@warning}
3493 \DeclareSizeFunction{sLUC}{\LUC@@empty\@font@info}
3494 \DeclareSizeFunction{sLUCb}{\LUC@@empty\@font@info}
3495 \DeclareSizeFunction{LUCsub}{\LUC@@sub\@font@warning}
3496 \DeclareSizeFunction{LUCssub}{\LUC@@sub\@font@info}
3497 %
3498 \gdef\LUC@plane@LUC{00}%
3499 \DeclareTextCommand{\textasciic}{\LastDeclaredEncoding}[1]{\textunicodechar{'#1}}
3500 \DeclareTextCommand{\textunicodechar}{\LastDeclaredEncoding}[1]{\lucchar{#1}}
3501
3502 %%% Local Variables:
3503 %%% mode: latex
3504 %%% coding: utf-8
3505 %%% TeX-master: "../test.tex"
3506 %%% End:
3507 %%% Local IspellDict: british
3508 %
3509 </lucenc.def>

```

## 4.29 File lucarial.fd

```

3510 <*lucarial.fd>
3511 \ProvidesFile{lucarial.fd}[2002/02/17 .fd file for encoding LUC, family arial]
3512 \DeclareFontFamily{LUC}{arial}{-}
3513 \DeclareFontShape{LUC}{arial}{m}{n}{<-> LUC * arialuni}{-}
3514 %

```

3515 </lucarial.fd>

#### 4.30 File lucc2000.fd

```
3516 <*lucc2000.fd>
3517 \ProvidesFile{lucc2000.fd}[2002/02/17 .fd file for encoding LUC, family c2000]
3518 \DeclareFontFamily{LUC}{c2000}{}
3519 \DeclareFontShape{LUC}{c2000}{m}{n}{<-> LUC * code2k}{}
3520 %
3521 </lucc2000.fd>
```

#### 4.31 File mkrenc.def

```
3522 <*mkrenc.def>
3523 \ProvidesFile{mkrenc.def}[2003/11/29 Fontencoding MKR for use with package makor]
3524 \makeatletter
3525 %
3526 \AtBeginDocument{%
3527   \let\mkr@quote"
3528   \RequirePackage{makor}%
3529   \let"\mkr@quote
3530   \expandafter\ifx\csname !hdefaultfont\endcsname\relax
3531     \expandafter\def\csname !hdefaultfont\endcsname{NFSS}\fi
3532   }%
3533 \expandafter\g@addto@macro\csname selectfont \endcsname{\protect\@hfontadapt}
3534 %
3535 \begingroup
3536 \escapechar=-1
3537 \edef\temp@a{%
3538   \gdef\noexpand\@hfontadapt@
3539   \expandafter\string\csname select font \endcsname##1 ##2%
3540   \noexpand\@nil{%
3541     \edef\noexpand\temp@a{%
3542       \noexpand\noexpand\noexpand\hfontdef{\noexpand\mkr@font}{##1}{\noexpand\fontsize pt}}\noexpand
3543   \xdef\mkr@at{\expandafter\string\csname space at \endcsname}%
3544 \endgroup
3545 %
3546 \def\@hfont@enc{MKR}
3547 \def\@hfontadapt{%
3548   \ifx\fontencoding\@hfont@enc%
3549     \edef\mkr@font{\mkr@\fontfamily\fontseries\fontshape-\fontsize}%
3550     %\typeout{HFONTADAPT: ID:\mkr@font, SIZE: \fontsize}%
3551     \@ifundefined{\mkr@font}{%
3552       %\typeout{Needs adapting. (\expandafter\meaning\the\font)}}%
3553     \edef\temp@a{\noexpand\@hfontadapt\expandafter\meaning\the\font\space\noexpand\@nil}\temp@a
3554   }{%
3555     \expandafter\hfont\expandafter{\mkr@font}%
3556   \fi
3557 }
3558 %
```

```

3559 %
3560 \DeclareFontEncoding{MKR}{-}{-}
3561 \DeclareFontSubstitution{MKR}{omega}{m}{n}
3562 %
3563 \DeclareTextCommand\hebalef{MKR}{‘}
3564 \DeclareTextCommand\hebbet{MKR}{v}
3565 \DeclareTextCommand\hebgimel{MKR}{g}
3566 \DeclareTextCommand\hebdalet{MKR}{d}
3567 \DeclareTextCommand\hebhe{MKR}{h}
3568 \DeclareTextCommand\hebvav{MKR}{w}
3569 \DeclareTextCommand\hebzayin{MKR}{z}
3570 \DeclareTextCommand\hebbet{MKR}{x}
3571 \DeclareTextCommand\hebtet{MKR}{t}
3572 \DeclareTextCommand\hebyod{MKR}{y}
3573 \DeclareTextCommand\hebfinalkaf{MKR}{K\char94 }
3574 \DeclareTextCommand\hebkaf{MKR}{K\NOBOUNDARY}
3575 \DeclareTextCommand\heblamed{MKR}{l}
3576 \DeclareTextCommand\hebfinalmem{MKR}{m\char94 }
3577 \DeclareTextCommand\hebmeme{MKR}{m\NOBOUNDARY}
3578 \DeclareTextCommand\hebfinalnun{MKR}{n\char94 }
3579 \DeclareTextCommand\hebnun{MKR}{n\NOBOUNDARY}
3580 \DeclareTextCommand\hebsamekh{MKR}{s}
3581 \DeclareTextCommand\hebayin{MKR}{‘}
3582 \DeclareTextCommand\hebfinalpe{MKR}{f\char94 }
3583 \DeclareTextCommand\hebpe{MKR}{f\NOBOUNDARY}
3584 \DeclareTextCommand\hebfinaltsadi{MKR}{ts\char94 }
3585 \DeclareTextCommand\hebtsadi{MKR}{ts\NOBOUNDARY}
3586 \DeclareTextCommand\he bqof{MKR}{q}
3587 \DeclareTextCommand\hebre sh{MKR}{r}
3588 \DeclareTextCommand\hebs hin{MKR}{sh}
3589 \DeclareTextCommand\hebtav{MKR}{s\char94 }
3590 \DeclareTextSymbol\doublevav{MKR}{"83}
3591 \DeclareTextSymbol\vavyod{MKR}{"84}
3592 \DeclareTextSymbol\doubleyod{MKR}{"81}
3593 \DeclareTextCommand\maqaf{MKR}{-{} }
3594 \DeclareTextCommand\sofpasuq{MKR}{:}
3595 \DeclareTextSymbol\geresh{MKR}{251}
3596 \DeclareTextSymbol\gershayim{MKR}{"22}
3597 \DeclareTextSymbol\hebaleflamed{MKR}{"A4}
3598 %
3599 \DeclareTextCommand\dagesh{MKR}[1]{#1*}
3600 \DeclareTextCommand\sheva{MKR}[1]{#1\vw1SHEVA}
3601 \DeclareTextCommand\hatafsegol{MKR}[1]{#1\vw1COLON\vw1E}
3602 \DeclareTextCommand\hatafpatah{MKR}[1]{#1\vw1COLON\vw1A}
3603 \DeclareTextCommand\hatafqamats{MKR}[1]{#1\vw1COLON\vw1PLUS}
3604 \DeclareTextCommand\hiriq{MKR}[1]{#1\vw1I}
3605 \DeclareTextCommand\tseres{MKR}[1]{#1\vw1E\vw1I}
3606 \DeclareTextCommand\segol{MKR}[1]{#1\vw1E}
3607 \DeclareTextCommand\patah{MKR}[1]{#1\vw1A}
3608 \DeclareTextCommand\qamats{MKR}[1]{#1\vw1PLUS}

```

```

3609 \DeclareTextCommand\qubuts{MKR}[1]{#1\vwIU}
3610 \DeclareTextCommand\meteg{MKR}[1]{#1\vwVERT}
3611 \DeclareTextCommand\holam{MKR}[1]{#1o}
3612 \DeclareTextCommand\shindot{MKR}[1]{sh\char94 }% Only useful as \shindot\shin
3613 \DeclareTextCommand\sindot{MKR}[1]{\char94s}% Only useful as \sindot\shin
3614 %
3615 \DeclareTextCommand{\textascii}{MKR}[1]{\@textascii@switch{#1}}
3616 \DeclareTextComposite\patach{MKR}\doubleyod{"82}
3617 \DeclareTextCompositeCommand\dagesh{MKR}\finalkaf{K*\char94 }
3618 \DeclareTextCompositeCommand\dagesh{MKR}\kaf{K*\NOBOUNDARY}
3619 \DeclareTextCompositeCommand\dagesh{MKR}\finalmem{m*{}}
3620 \DeclareTextCompositeCommand\dagesh{MKR}\mem{m*\NOBOUNDARY}
3621 \DeclareTextCompositeCommand\dagesh{MKR}\finalnun{n*{}}
3622 \DeclareTextCompositeCommand\dagesh{MKR}\nun{n*\NOBOUNDARY}
3623 %\DeclareTextCompositeCommand\dagesh{MKR}\finalpe{f*\char94 }
3624 \DeclareTextCompositeCommand\dagesh{MKR}\pe{f*\NOBOUNDARY}
3625 %\DeclareTextCompositeCommand\dagesh{MKR}\finaltsadi{ts*\char94 }
3626 \DeclareTextCompositeCommand\dagesh{MKR}\tsadi{ts*\NOBOUNDARY}
3627 %
3628 %
3629 \mkreenc.def

```

## 4.32 File mkrezra.fd

```

3630 <*mkrezra.fd>
3631 \ProvidesFile{mkrezra.fd}[2002/09/20 ezra family for encoding MKR]%
3632 \DeclareFontFamily{MKR}{ezra}{}
3633 \DeclareFontShape{MKR}{ezra}{m}{n}{<-> * ezramm}{}
3634 \DeclareFontShape{MKR}{ezra}{m}{it}{<-> * ezraimm}{}
3635 \DeclareFontShape{MKR}{ezra}{bx}{n}{<-> * ezrabmm}{}
3636 \DeclareFontShape{MKR}{ezra}{bx}{it}{<-> * ezrabimm}{}
3637 \DeclareFontShape{MKR}{ezra}{m}{o}{<-> * ezraomm}{}
3638 %
3639 %
3640 \mkrezra.fd

```

## 4.33 File mkrhadas.fd

```

3641 <*mkrhadas.fd>
3642 \ProvidesFile{mkrhadas.fd}[2002/09/20 hadas family for encoding MKR]%
3643 \DeclareFontFamily{MKR}{hadas}{}
3644 \DeclareFontShape{MKR}{hadas}{m}{n}{<-> * hadassahmm}{}
3645 \DeclareFontShape{MKR}{hadas}{m}{it}{<-> * hadassaimm}{}
3646 \DeclareFontShape{MKR}{hadas}{bx}{n}{<-> * hadassabmm}{}
3647 \DeclareFontShape{MKR}{hadas}{bx}{it}{<-> * hadassbimm}{}
3648 %
3649 %
3650 \mkrhadas.fd

```

## 4.34 File mkromega.fd



```

3651 <*mkromega.fd>
3652 \ProvidesFile{mkromega.fd}[2002/09/20 omega family for encoding MKR]%
3653 \DeclareFontFamily{MKR}{omega}{}
3654 \DeclareFontShape{MKR}{omega}{m}{n}{<-> * ohebrmm}{}
3655 %
3656 %
3657 </mkromega.fd>

```

#### 4.35 File mkrrashi.fd

```

3658 <*mkrrashi.fd>
3659 \ProvidesFile{mkrrashi.fd}[2002/09/20 rashi family for encoding MKR]%
3660 \DeclareFontFamily{MKR}{rashi}{}
3661 \DeclareFontShape{MKR}{rashi}{m}{n}{<-> * rashimm}{}
3662 \DeclareFontShape{MKR}{rashi}{bx}{n}{<-> * rashbmm}{}
3663 %
3664 %
3665 </mkrrashi.fd>

```

#### 4.36 File t2denc.def

```

3666 <*t2denc.def>
3667 % This file is a hack. When a manually created t2denc.def
3668 % appears (e.g. contributed with the LH fonts), this hack should be deleted.
3669 \NeedsTeXFormat{LaTeX2e}[1998/12/01]%
3670 \ProvidesFile{t2denc.def}[Experimental T2D]%
3671 \DeclareFontEncoding{T2D}{}{}%
3672 \DeclareFontSubstitution{\LastDeclaredEncoding}{cmr}{m}{n}%
3673 \DeclareTextSymbol\CYRA\LastDeclaredEncoding{"C0}%
3674 \DeclareTextSymbol\cyra\LastDeclaredEncoding{"E0}%
3675 \DeclareTextSymbol\CYRB\LastDeclaredEncoding{"C1}%
3676 \DeclareTextSymbol\cyrb\LastDeclaredEncoding{"E1}%
3677 \DeclareTextSymbol\CYRV\LastDeclaredEncoding{"C2}%
3678 \DeclareTextSymbol\cyrv\LastDeclaredEncoding{"E2}%
3679 \DeclareTextSymbol\CYRG\LastDeclaredEncoding{"C3}%
3680 \DeclareTextSymbol\cyrg\LastDeclaredEncoding{"E3}%
3681 \DeclareTextSymbol\CYRD\LastDeclaredEncoding{"C4}%
3682 \DeclareTextSymbol\cyrd\LastDeclaredEncoding{"E4}%
3683 \DeclareTextSymbol\CYRE\LastDeclaredEncoding{"C5}%
3684 \DeclareTextSymbol\cyre\LastDeclaredEncoding{"E5}%
3685 \DeclareTextSymbol\CYRZH\LastDeclaredEncoding{"C6}%
3686 \DeclareTextSymbol\cyrzh\LastDeclaredEncoding{"E6}%
3687 \DeclareTextSymbol\CYRZ\LastDeclaredEncoding{"C7}%
3688 \DeclareTextSymbol\cyrz\LastDeclaredEncoding{"E7}%
3689 \DeclareTextSymbol\CYRI\LastDeclaredEncoding{"C8}%
3690 \DeclareTextSymbol\cyri\LastDeclaredEncoding{"E8}%
3691 \DeclareTextSymbol\CYRISHRT\LastDeclaredEncoding{"C9}%
3692 \DeclareTextSymbol\cyrishrt\LastDeclaredEncoding{"E9}%
3693 \DeclareTextSymbol\CYRK\LastDeclaredEncoding{"CA}%
3694 \DeclareTextSymbol\cyrk\LastDeclaredEncoding{"EA}%

```

```

3695 \DeclareTextSymbol\CYRL\LastDeclaredEncoding{"CB}%
3696 \DeclareTextSymbol\cyr1\LastDeclaredEncoding{"EB}%
3697 \DeclareTextSymbol\CYRM\LastDeclaredEncoding{"CC}%
3698 \DeclareTextSymbol\cyrm\LastDeclaredEncoding{"EC}%
3699 \DeclareTextSymbol\CYRN\LastDeclaredEncoding{"CD}%
3700 \DeclareTextSymbol\cyrn\LastDeclaredEncoding{"ED}%
3701 \DeclareTextSymbol\CYRO\LastDeclaredEncoding{"CE}%
3702 \DeclareTextSymbol\cyro\LastDeclaredEncoding{"EE}%
3703 \DeclareTextSymbol\CYRP\LastDeclaredEncoding{"CF}%
3704 \DeclareTextSymbol\cyrp\LastDeclaredEncoding{"EF}%
3705 \DeclareTextSymbol\CYRR\LastDeclaredEncoding{"D0}%
3706 \DeclareTextSymbol\cyr\LastDeclaredEncoding{"F0}%
3707 \DeclareTextSymbol\CYRS\LastDeclaredEncoding{"D1}%
3708 \DeclareTextSymbol\cyrs\LastDeclaredEncoding{"F1}%
3709 \DeclareTextSymbol\CYRT\LastDeclaredEncoding{"D2}%
3710 \DeclareTextSymbol\cyr\LastDeclaredEncoding{"F2}%
3711 \DeclareTextSymbol\CYRU\LastDeclaredEncoding{"D3}%
3712 \DeclareTextSymbol\cyr\LastDeclaredEncoding{"F3}%
3713 \DeclareTextSymbol\CYRF\LastDeclaredEncoding{"D4}%
3714 \DeclareTextSymbol\cyr\LastDeclaredEncoding{"F4}%
3715 \DeclareTextSymbol\CYRH\LastDeclaredEncoding{"D5}%
3716 \DeclareTextSymbol\cyr\LastDeclaredEncoding{"F5}%
3717 \DeclareTextSymbol\CYRC\LastDeclaredEncoding{"D6}%
3718 \DeclareTextSymbol\cyr\LastDeclaredEncoding{"F6}%
3719 \DeclareTextSymbol\CYRCH\LastDeclaredEncoding{"D7}%
3720 \DeclareTextSymbol\cyr\LastDeclaredEncoding{"F7}%
3721 \DeclareTextSymbol\CYRSH\LastDeclaredEncoding{"D8}%
3722 \DeclareTextSymbol\cyr\LastDeclaredEncoding{"F8}%
3723 \DeclareTextSymbol\CYRSHCH\LastDeclaredEncoding{"D9}%
3724 \DeclareTextSymbol\cyr\LastDeclaredEncoding{"F9}%
3725 \DeclareTextSymbol\CYRHRDSN\LastDeclaredEncoding{"DA}%
3726 \DeclareTextSymbol\cyr\LastDeclaredEncoding{"FA}%
3727 \DeclareTextSymbol\CYRERY\LastDeclaredEncoding{"DB}%
3728 \DeclareTextSymbol\cyr\LastDeclaredEncoding{"FB}%
3729 \DeclareTextSymbol\CYRSFTSN\LastDeclaredEncoding{"DC}%
3730 \DeclareTextSymbol\cyr\LastDeclaredEncoding{"FC}%
3731 \DeclareTextSymbol\CYREREV\LastDeclaredEncoding{"DD}%
3732 \DeclareTextSymbol\cyr\LastDeclaredEncoding{"FD}%
3733 \DeclareTextSymbol\CYRYU\LastDeclaredEncoding{"DE}%
3734 \DeclareTextSymbol\cyr\LastDeclaredEncoding{"FE}%
3735 \DeclareTextSymbol\CYRYA\LastDeclaredEncoding{"DF}%
3736 \DeclareTextSymbol\cyr\LastDeclaredEncoding{"FF}%
3737 \DeclareTextSymbol\CYRYO\LastDeclaredEncoding{"9C}%
3738 \DeclareTextSymbol\cyr\LastDeclaredEncoding{"BC}%
3739 \DeclareTextSymbol\CYRDZE\LastDeclaredEncoding{"8F}%
3740 \DeclareTextSymbol\cyr\LastDeclaredEncoding{"AF}%
3741 \DeclareTextSymbol\CYRYAT\LastDeclaredEncoding{"93}%
3742 \DeclareTextSymbol\cyr\LastDeclaredEncoding{"B3}%
3743 \DeclareTextSymbol\CYRBYUS\LastDeclaredEncoding{"97}%
3744 \DeclareTextSymbol\cyr\LastDeclaredEncoding{"B7}%

```

```

3745 \DeclareTextSymbol\CYRIZH\LastDeclaredEncoding{"8A}%
3746 \DeclareTextSymbol\cyrizh\LastDeclaredEncoding{"AA}%
3747 \DeclareTextSymbol\CYRIE\LastDeclaredEncoding{"99}%
3748 \DeclareTextSymbol\cyrie\LastDeclaredEncoding{"B9}%
3749 \DeclareTextSymbol\CYREPS\LastDeclaredEncoding{"9B}%
3750 \DeclareTextSymbol\cyreps\LastDeclaredEncoding{"BB}%
3751 \DeclareTextSymbol\CYRAZ\LastDeclaredEncoding{"80}%
3752 \DeclareTextSymbol\cyraz\LastDeclaredEncoding{"A0}%
3753 \DeclareTextSymbol\CYRIAZ\LastDeclaredEncoding{"81}%
3754 \DeclareTextSymbol\cyriaz\LastDeclaredEncoding{"A1}%
3755 \DeclareTextSymbol\CYRLYUS\LastDeclaredEncoding{"82}%
3756 \DeclareTextSymbol\cyrlyus\LastDeclaredEncoding{"A2}%
3757 \DeclareTextSymbol\CYRIOTLYUS\LastDeclaredEncoding{"83}%
3758 \DeclareTextSymbol\cyriotlyus\LastDeclaredEncoding{"A3}%
3759 \DeclareTextSymbol\CYRGERV\LastDeclaredEncoding{"84}%
3760 \DeclareTextSymbol\cyrgerv\LastDeclaredEncoding{"A4}%
3761 \DeclareTextSymbol\CYRZEMLA\LastDeclaredEncoding{"86}%
3762 \DeclareTextSymbol\cyrzemla\LastDeclaredEncoding{"A6}%
3763 \DeclareTextSymbol\CYRKSI\LastDeclaredEncoding{"87}%
3764 \DeclareTextSymbol\cyrksi\LastDeclaredEncoding{"A7}%
3765 \DeclareTextSymbol\CYRVARIZHE\LastDeclaredEncoding{"88}%
3766 \DeclareTextSymbol\cyrvarizhe\LastDeclaredEncoding{"A8}%
3767 \DeclareTextSymbol\CYRIZHE\LastDeclaredEncoding{"89}%
3768 \DeclareTextSymbol\cyrizhe\LastDeclaredEncoding{"A9}%
3769 \DeclareTextSymbol\CYROMGA\LastDeclaredEncoding{"8B}%
3770 \DeclareTextSymbol\cyromga\LastDeclaredEncoding{"AB}%
3771 \DeclareTextSymbol\CYROMRND\LastDeclaredEncoding{"8C}%
3772 \DeclareTextSymbol\cyromrnd\LastDeclaredEncoding{"AC}%
3773 \DeclareTextSymbol\CYROT\LastDeclaredEncoding{"8D}%
3774 \DeclareTextSymbol\cyrot\LastDeclaredEncoding{"AD}%
3775 \DeclareTextSymbol\CYROMTLO\LastDeclaredEncoding{"8E}%
3776 \DeclareTextSymbol\cyromtlo\LastDeclaredEncoding{"AE}%
3777 \DeclareTextSymbol\CYRFITA\LastDeclaredEncoding{"90}%
3778 \DeclareTextSymbol\cyrfita\LastDeclaredEncoding{"B0}%
3779 \DeclareTextSymbol\CYRKOPPA\LastDeclaredEncoding{"91}%
3780 \DeclareTextSymbol\cyrkoppa\LastDeclaredEncoding{"B1}%
3781 \DeclareTextSymbol\CYRUK\LastDeclaredEncoding{"92}%
3782 \DeclareTextSymbol\cyruk\LastDeclaredEncoding{"B2}%
3783 \DeclareTextSymbol\CYRCHERV\LastDeclaredEncoding{"94}%
3784 \DeclareTextSymbol\cyrcherv\LastDeclaredEncoding{"B4}%
3785 \DeclareTextSymbol\CYRPSI\LastDeclaredEncoding{"95}%
3786 \DeclareTextSymbol\cyrpsi\LastDeclaredEncoding{"B5}%
3787 \DeclareTextSymbol\CYRSHTA\LastDeclaredEncoding{"96}%
3788 \DeclareTextSymbol\cyrshsta\LastDeclaredEncoding{"B6}%
3789 \DeclareTextSymbol\CYRIOTBYUS\LastDeclaredEncoding{"98}%
3790 \DeclareTextSymbol\cyriotbyus\LastDeclaredEncoding{"B8}%
3791 \DeclareTextSymbol\CYRIOTEST\LastDeclaredEncoding{"9A}%
3792 \DeclareTextSymbol\cyriotest\LastDeclaredEncoding{"BA}%
3793 \DeclareTextSymbol\CYRNARROWE\LastDeclaredEncoding{"9B}%
3794 \DeclareTextSymbol\cyrnarowe\LastDeclaredEncoding{"BB}%

```

```

3795 \DeclareTextAccent\` \LastDeclaredEncoding{"00}%
3796 \DeclareTextAccent\' \LastDeclaredEncoding{"01}%
3797 \DeclareTextAccent\^ \LastDeclaredEncoding{"02}%
3798 \DeclareTextAccent\~ \LastDeclaredEncoding{"03}%
3799 \DeclareTextAccent\" \LastDeclaredEncoding{"04}%
3800 \DeclareTextAccent\H \LastDeclaredEncoding{"05}%
3801 \DeclareTextAccent\r \LastDeclaredEncoding{"06}%
3802 \DeclareTextAccent\v \LastDeclaredEncoding{"07}%
3803 \DeclareTextAccent\u \LastDeclaredEncoding{"08}%
3804 \DeclareTextAccent\= \LastDeclaredEncoding{"09}%
3805 \DeclareTextAccent\. \LastDeclaredEncoding{"0A}%
3806 \DeclareTextSymbol\cyrlangle\LastDeclaredEncoding{"0E}%
3807 \DeclareTextSymbol\cyrrangle\LastDeclaredEncoding{"0F}%
3808 \DeclareTextAccent\F \LastDeclaredEncoding{"12}%
3809 \DeclareTextAccent\C \LastDeclaredEncoding{"13}%
3810 \DeclareTextAccent\U \LastDeclaredEncoding{"14}%
3811 \DeclareTextSymbol\cyrdash\LastDeclaredEncoding{"16}%
3812 \DeclareTextSymbol\perthousand\LastDeclaredEncoding{"18}%
3813 \DeclareTextSymbol\i \LastDeclaredEncoding{"19}%
3814 \DeclareTextSymbol\j \LastDeclaredEncoding{"1A}%
3815 \DeclareTextSymbol\CYRNo\LastDeclaredEncoding{"9D}%
3816 \DeclareTextSymbol\textsection\LastDeclaredEncoding{"9F}%
3817 \DeclareTextSymbol\quotedblbase\LastDeclaredEncoding{"BD}%
3818 \DeclareTextSymbol\guillemotleft\LastDeclaredEncoding{"BE}%
3819 \DeclareTextSymbol\guillemotright\LastDeclaredEncoding{"BF}%
3820 \DeclareTextAccent\CYRtitlo\LastDeclaredEncoding{"0B}%
3821 \DeclareTextAccent\CYRpalatal\LastDeclaredEncoding{"0C}%
3822 \DeclareTextAccent\CYRpaerok\LastDeclaredEncoding{"0D}%
3823 \DeclareTextAccent\CYRkamora\LastDeclaredEncoding{"17}%
3824 \DeclareTextAccent\CYRpsili\LastDeclaredEncoding{"1B}%
3825 \DeclareTextAccent\CYRdasia\LastDeclaredEncoding{"1C}%
3826 \DeclareTextAccent\CYRzvat\LastDeclaredEncoding{"1D}%
3827 \DeclareTextAccent\CYRpneuac\LastDeclaredEncoding{"1E}%
3828 \DeclareTextAccent\CYRpneugrav\LastDeclaredEncoding{"1F}%
3829 \DeclareTextAccent\CYRthousands\LastDeclaredEncoding{"9E}%
3830 \DeclareTextSymbol\CYRNASH\LastDeclaredEncoding{"85}%
3831 \DeclareTextSymbol\cyrnash\LastDeclaredEncoding{"A5}%
3832 %
3833 </t2denc.def>

```

#### 4.37 File t2dcmr.fd

```

3834 <*t2dcmr.fd>
3835 \ProvidesFile{t2dcmr.fd}
3836 [Experimental T2D cmr]
3837 \providecommand{\EC@family}[5]{%
3838   \DeclareFontShape{#1}{#2}{#3}{#4}%
3839     {<5><6><7><8><9><10><10.95><12><14.4>%
3840       <17.28><20.74><24.88><29.86><35.83>genb*#5}{}}
3841 \DeclareFontFamily{T2D}{cmr}{}

```

```

3842 \EC@family{T2D}{cmr}{m}{n}{ldrm}
3843 \EC@family{T2D}{cmr}{m}{sl}{lds1}
3844 \EC@family{T2D}{cmr}{m}{it}{ldti}
3845 \EC@family{T2D}{cmr}{m}{sc}{ldcc}
3846 \EC@family{T2D}{cmr}{bx}{n}{ldbx}
3847 \EC@family{T2D}{cmr}{b}{n}{ldrb}
3848 \EC@family{T2D}{cmr}{bx}{it}{ldbi}
3849 \EC@family{T2D}{cmr}{bx}{sl}{ldbl}
3850 \EC@family{T2D}{cmr}{bx}{sc}{ldxc}
3851 \EC@family{T2D}{cmr}{m}{ui}{ldui}
3852 %
3853 </t2dcmr.fd>

```

#### 4.38 File tengwarDS.enc

```

3854 <*tengwarDS.enc>
3855 %
3856 %
3857 % nomapping(anna_sindarinwa,h) % (in Quenya-A)
3858 % nomapping(stl_vala,???)
3859 %
3860 % nomapping(double_acute)
3861 % nomapping(double_right_curl)
3862 % nomapping(double_left_curl)
3863 % nomapping(tilde)
3864
3865 %
3866
3867 %
3868 %
3869 % ligature tinco three_above (one E) is OK.
3870 %
3871 % ligature anna three_above (h E) is OK.
3872 % ligature anna acute (h R) is OK.
3873 % ligature anna amaticse (h T) is OK.
3874 % ligature anna right_curl (h Y) is OK.
3875 % ligature anna chevron (h Ugrave) is OK.
3876 % ligature anna nasalizer (h bracketleft) is OK.
3877
3878 % ligature quesse three_above (z E) is OK.
3879 % ligature quesse acute (z R) is OK.
3880 % ligature quesse amaticse (z T) is OK.
3881 % ligature quesse right_curl (z Y) is OK.
3882 % ligature quesse chevron (z Ugrave) is OK.
3883 % ligature quesse nasalizer (z bracketleft) is OK.
3884
3885 % ligature lambe three_above (j E) is OK.
3886 % ligature lambe acute (j R) is OK.
3887 % ligature lambe amaticse (j T) is OK.
3888 % ligature lambe right_curl (j Y) is OK.

```

```

3889 % ligature lambe chevron (j Ugrave) is OK.
3890 % ligature lambe nasalizer (j bracketleft) is OK.
3891
3892 % ligature malta three_above:
3893 % LIGKERN t E |> numbersign
3894 % ligature malta acute:
3895 % LIGKERN t R |> dollar
3896 % ligature malta amaticse:
3897 % LIGKERN t T |> percent
3898 % ligature malta right_curl:
3899 % LIGKERN t Y |> asciicircum
3900 % ligature malta chevron:
3901 % LIGKERN t Ugrave |> Oslash
3902 % ligature malta nasalizer:
3903 % LIGKERN t bracketleft |> braceleft
3904
3905 % ligature nuumen three_above:
3906 % LIGKERN five E |> numbersign
3907 % ligature nuumen acute:
3908 % LIGKERN five R |> dollar
3909 % ligature nuumen amaticse:
3910 % LIGKERN five T |> percent
3911 % ligature nuumen right_curl:
3912 % LIGKERN five Y |> asciicircum
3913 % ligature nuumen chevron:
3914 % LIGKERN five Ugrave |> Oslash
3915 % ligature nuumen nasalizer:
3916 % LIGKERN five bracketleft |> braceleft
3917
3918 % ligature parma three_above (q E) is OK.
3919 % ligature parma acute (q R) is OK.
3920 % ligature parma amaticse (q T) is OK.
3921 % ligature parma right_curl (q Y) is OK.
3922 % ligature parma chevron (q Ugrave) is OK.
3923 % ligature parma nasalizer (q bracketleft) is OK.
3924
3925 % ligature silme_nuquerna three_above (i E) is OK.
3926 % ligature silme_nuquerna acute (i R) is OK.
3927 % ligature silme_nuquerna amaticse (i T) is OK.
3928 % ligature silme_nuquerna right_curl (i Y) is OK.
3929 % ligature silme_nuquerna chevron (i Ugrave) is OK.
3930 % ligature silme_nuquerna nasalizer (i bracketleft) is OK.
3931
3932 % ligature tinco three_above (one E) is OK.
3933 % ligature tinco acute (one R) is OK.
3934 % ligature tinco amaticse (one T) is OK.
3935 % ligature tinco right_curl (one Y) is OK.
3936 % ligature tinco chevron (one Ugrave) is OK.
3937 % ligature tinco nasalizer (one bracketleft) is OK.
3938

```

```

3939 % ligature vala three_above (y E) is OK.
3940 % ligature vala acute (y R) is OK.
3941 % ligature vala amaticse (y T) is OK.
3942 % ligature vala right_curl (y Y) is OK.
3943 % ligature vala chevron (y Ugrave) is OK.
3944 % ligature vala nasalizer (y bracketleft) is OK.
3945
3946 % ligature short_carrier three_above:
3947 % LIGKERN grave E |=:> C
3948 % ligature short_carrier acute:
3949 % LIGKERN grave R |=:> V
3950 % ligature short_carrier amaticse:
3951 % LIGKERN grave T |=:> B
3952 % ligature short_carrier right_curl:
3953 % LIGKERN grave Y |=:> N
3954 % ligature short_carrier chevron:
3955 % LIGKERN grave Ugrave |=:> Ucircumflex
3956 % ligature short_carrier nasalizer (grave bracketleft) is OK.
3957
3958 % ligature three_above nasalizer:
3959 % LIGKERN numbersign bracketleft |=:> braceleft
3960 % ligature acute nasalizer:
3961 % LIGKERN dollar bracketleft |=:> braceleft
3962 % ligature amaticse nasalizer:
3963 % LIGKERN percent bracketleft |=:> braceleft
3964 % ligature right_curl nasalizer:
3965 % LIGKERN asciicircum bracketleft |=:> braceleft
3966 % ligature chevron nasalizer:
3967 % LIGKERN Oslash bracketleft |=:> braceleft
3968
3969 % ligature nasalizer three_above:
3970 % LIGKERN braceleft E |=:> numbersign
3971 % ligature nasalizer acute:
3972 % LIGKERN braceleft R |=:> dollar
3973 % ligature nasalizer amaticse:
3974 % LIGKERN braceleft T |=:> percent
3975 % ligature nasalizer right_curl:
3976 % LIGKERN braceleft Y |=:> asciicircum
3977 % ligature nasalizer chevron:
3978 % LIGKERN braceleft Ugrave |=:> Oslash
3979 %
3980 %
3981 %
3982 /TengwarEncoding [
3983
3984 % 0x00
3985 /one /q /a /z
3986 /two /w /s /x
3987 /three /e /d /c
3988 /four /r /f /v

```

```

3989 % 0x10
3990 /five /t /g /b
3991 /six /y /h /n
3992 /seven /eight /j /m
3993 /eight /i /k /comma
3994 % 0x20
3995 /nine /o /l /period
3996 /onehalf /grave /asciitilde /.c0x7f
3997 /exclam /Q /A /Z
3998 /at /W /S /X
3999 % 0x30
4000 /.c240 /.c0x7f /bracketright /.c241
4001 /space /space /space /space % 4567
4002 /space /space /space /space % 89AB
4003 /space /space /space /space % CDEF
4004 % 0x40
4005 /E /.c209 /.c213 /.c205
4006 /T /.c201 /R /.c0x7f
4007 /Y /.c0x7f /.c225 /.c0x7f
4008 /bracketleft /quotesingle /.c0x7f /.c0x7f
4009 % 0x50
4010 /equal /hyphen /.c193 /.c192
4011 /backslash /.c194 /.c0x7f /.c0x7f
4012 /.c0x7f /space /.c0x7f /space
4013 /.c0x7f /.c0x7f /space /space
4014 % 0x60
4015 /space /space /.c242 /.c243
4016 /.c244 /.c245 /.c246 /.c247
4017 /.c248 /.c249 /.c250 /.c251
4018 /.c0x7f /.c0x7f /.c0x7f /space
4019 % 0x70
4020 /space /space /space /space % 0123
4021 /space /space /space /space % 4567
4022 /space /space /space /space % 89AB
4023 /space /space /space /space
4024
4025 % 0x80
4026 /numbersign /D /C /Oslash % 0123
4027 /Uacute /Ucircumflex /dollar /F % 4567
4028 /V /percent /G /B % 89AB
4029 /asciicircum /H /N /braceleft % CDEF
4030 % 0x90
4031 /quotedbl /question /.c212 /.c214 % 0123
4032 /.c215 /.c204 /.c206 /.c207 % 4567
4033 /.c208 /.c210 /.c211 /.c200 % 89AB
4034 /.c202 /.c203 /.c224 /.c226 % CDEF
4035 % 0xA0
4036 /.c227 /.notdef /.notdef /.notdef % 0123
4037 /.notdef /.notdef /.notdef /.notdef % 4567
4038 /.notdef /.notdef /.notdef /.notdef % 89AB

```



```

4039 /.notdef /.notdef /.notdef /.notdef % CDEF
4040 % 0xB0
4041 /.notdef /.notdef /.notdef /.notdef % 0123
4042 /.notdef /.notdef /.notdef /.notdef % 4567
4043 /.notdef /.notdef /.notdef /.notdef % 89AB
4044 /.notdef /.notdef /.notdef /.notdef % CDEF
4045 % 0xC0
4046 /.notdef /.notdef /.notdef /.notdef % 0123
4047 /.notdef /.notdef /.notdef /.notdef % 4567
4048 /.notdef /.notdef /.notdef /.notdef % 89AB
4049 /.notdef /.notdef /.notdef /.notdef % CDEF
4050 % 0xD0
4051 /.notdef /.notdef /.notdef /.notdef % 0123
4052 /.notdef /.notdef /.notdef /.notdef % 4567
4053 /.notdef /.notdef /.notdef /.notdef % 89AB
4054 /.notdef /.notdef /.notdef /.notdef % CDEF
4055 % 0xE0
4056 /.notdef /.notdef /.notdef /.notdef % 0123
4057 /.notdef /.notdef /.notdef /.notdef % 4567
4058 /.notdef /.notdef /.notdef /.notdef % 89AB
4059 /.notdef /.notdef /.notdef /.notdef % CDEF
4060 % 0xF0
4061 /.notdef /.notdef /.notdef /.notdef % 0123
4062 /.notdef /.notdef /.notdef /.notdef % 4567
4063 /.notdef /.notdef /.notdef /.notdef % 89AB
4064 /.notdef /.notdef /.notdef /.notdef % CDEF
4065 ] def
4066
4067
4068 % eof
4069 %
4070 </tengwarDS.enc>

```

### 4.39 File cp1252.enc

```

4071 <*cp1252.enc>
4072 /CP1252Encoding [
4073 /.c0x0000 /.c0x0001 /.c0x0002 /.c0x0003 /.c0x0004 /.c0x0005 /.c0x0006
4074 /.c0x0007 /.c0x0008 /.c0x0009 /.c0x000A /.c0x000B /.c0x000C /.c0x000D
4075 /.c0x000E /.c0x000F /.c0x0010 /.c0x0011 /.c0x0012 /.c0x0013 /.c0x0014
4076 /.c0x0015 /.c0x0016 /.c0x0017 /.c0x0018 /.c0x0019 /.c0x001A /.c0x001B
4077 /.c0x001C /.c0x001D /.c0x001E /.c0x001F /.c0x0020 /.c0x0021 /.c0x0022
4078 /.c0x0023 /.c0x0024 /.c0x0025 /.c0x0026 /.c0x0027 /.c0x0028 /.c0x0029
4079 /.c0x002A /.c0x002B /.c0x002C /.c0x002D /.c0x002E /.c0x002F /.c0x0030
4080 /.c0x0031 /.c0x0032 /.c0x0033 /.c0x0034 /.c0x0035 /.c0x0036 /.c0x0037
4081 /.c0x0038 /.c0x0039 /.c0x003A /.c0x003B /.c0x003C /.c0x003D /.c0x003E
4082 /.c0x003F /.c0x0040 /.c0x0041 /.c0x0042 /.c0x0043 /.c0x0044 /.c0x0045
4083 /.c0x0046 /.c0x0047 /.c0x0048 /.c0x0049 /.c0x004A /.c0x004B /.c0x004C
4084 /.c0x004D /.c0x004E /.c0x004F /.c0x0050 /.c0x0051 /.c0x0052 /.c0x0053
4085 /.c0x0054 /.c0x0055 /.c0x0056 /.c0x0057 /.c0x0058 /.c0x0059 /.c0x005A

```

```

4086 /.c0x005B /.c0x005C /.c0x005D /.c0x005E /.c0x005F /.c0x0060 /.c0x0061
4087 /.c0x0062 /.c0x0063 /.c0x0064 /.c0x0065 /.c0x0066 /.c0x0067 /.c0x0068
4088 /.c0x0069 /.c0x006A /.c0x006B /.c0x006C /.c0x006D /.c0x006E /.c0x006F
4089 /.c0x0070 /.c0x0071 /.c0x0072 /.c0x0073 /.c0x0074 /.c0x0075 /.c0x0076
4090 /.c0x0077 /.c0x0078 /.c0x0079 /.c0x007A /.c0x007B /.c0x007C /.c0x007D
4091 /.c0x007E /.c0x007F /.c0x20AC /.notdef /.c0x201A /.c0x0192 /.c0x201E
4092 /.c0x2026 /.c0x2020 /.c0x2021 /.c0x02C6 /.c0x2030 /.c0x0160 /.c0x2039
4093 /.c0x0152 /.notdef /.c0x017D /.notdef /.notdef /.c0x2018 /.c0x2019
4094 /.c0x201C /.c0x201D /.c0x2022 /.c0x2013 /.c0x2014 /.c0x02DC /.c0x2122
4095 /.c0x0161 /.c0x203A /.c0x0153 /.notdef /.c0x017E /.c0x0178 /.c0x00A0
4096 /.c0x00A1 /.c0x00A2 /.c0x00A3 /.c0x00A4 /.c0x00A5 /.c0x00A6 /.c0x00A7
4097 /.c0x00A8 /.c0x00A9 /.c0x00AA /.c0x00AB /.c0x00AC /.c0x00AD /.c0x00AE
4098 /.c0x00AF /.c0x00B0 /.c0x00B1 /.c0x00B2 /.c0x00B3 /.c0x00B4 /.c0x00B5
4099 /.c0x00B6 /.c0x00B7 /.c0x00B8 /.c0x00B9 /.c0x00BA /.c0x00BB /.c0x00BC
4100 /.c0x00BD /.c0x00BE /.c0x00BF /.c0x00C0 /.c0x00C1 /.c0x00C2 /.c0x00C3
4101 /.c0x00C4 /.c0x00C5 /.c0x00C6 /.c0x00C7 /.c0x00C8 /.c0x00C9 /.c0x00CA
4102 /.c0x00CB /.c0x00CC /.c0x00CD /.c0x00CE /.c0x00CF /.c0x00D0 /.c0x00D1
4103 /.c0x00D2 /.c0x00D3 /.c0x00D4 /.c0x00D5 /.c0x00D6 /.c0x00D7 /.c0x00D8
4104 /.c0x00D9 /.c0x00DA /.c0x00DB /.c0x00DC /.c0x00DD /.c0x00DE /.c0x00DF
4105 /.c0x00E0 /.c0x00E1 /.c0x00E2 /.c0x00E3 /.c0x00E4 /.c0x00E5 /.c0x00E6
4106 /.c0x00E7 /.c0x00E8 /.c0x00E9 /.c0x00EA /.c0x00EB /.c0x00EC /.c0x00ED
4107 /.c0x00EE /.c0x00EF /.c0x00F0 /.c0x00F1 /.c0x00F2 /.c0x00F3 /.c0x00F4
4108 /.c0x00F5 /.c0x00F6 /.c0x00F7 /.c0x00F8 /.c0x00F9 /.c0x00FA /.c0x00FB
4109 /.c0x00FC /.c0x00FD /.c0x00FE /.c0x00FF
4110 ] def
4111
4112 % eof
4113 %
4114 </cp1252.enc>

```

## 4.40 File xsenc.def

```

4115 < *xsenc.def >
4116 % This file is a hack. When a manually created xsenc.def
4117 % appears (e.g. contributed with the LH fonts), this hack should be deleted.
4118 \NeedsTeXFormat{LaTeX2e}[1998/12/01]%
4119 \ProvidesFile{xsenc.def}[Experimental XS]%
4120 \DeclareFontEncoding{XS}{-}{-}%
4121 \DeclareFontSubstitution{\LastDeclaredEncoding}{cmr}{m}{n}%
4122 \DeclareTextSymbol\CYRII\LastDeclaredEncoding{"41}%
4123 \DeclareTextSymbol\cyrii\LastDeclaredEncoding{"61}%
4124 \DeclareTextSymbol\CYRJE\LastDeclaredEncoding{"42}%
4125 \DeclareTextSymbol\cyrje\LastDeclaredEncoding{"62}%
4126 \DeclareTextSymbol\CYRDZE\LastDeclaredEncoding{"43}%
4127 \DeclareTextSymbol\cyrdze\LastDeclaredEncoding{"63}%
4128 \DeclareTextSymbol\CYRYAT\LastDeclaredEncoding{"44}%
4129 \DeclareTextSymbol\cyr yat\LastDeclaredEncoding{"64}%
4130 \DeclareTextSymbol\CYRBYUS\LastDeclaredEncoding{"45}%
4131 \DeclareTextSymbol\cyrbyus\LastDeclaredEncoding{"65}%
4132 \DeclareTextSymbol\CYRIZH\LastDeclaredEncoding{"46}%

```

```

4133 \DeclareTextSymbol\cyrizh\LastDeclaredEncoding{"66}%
4134 \DeclareTextSymbol\CYRYI\LastDeclaredEncoding{"47}%
4135 \DeclareTextSymbol\cyryi\LastDeclaredEncoding{"67}%
4136 \DeclareTextSymbol\CYRNG\LastDeclaredEncoding{"48}%
4137 \DeclareTextSymbol\cyrng\LastDeclaredEncoding{"68}%
4138 \DeclareTextSymbol\CYRIE\LastDeclaredEncoding{"49}%
4139 \DeclareTextSymbol\cyrie\LastDeclaredEncoding{"69}%
4140 \DeclareTextSymbol\CYRAZ\LastDeclaredEncoding{"4A}%
4141 \DeclareTextSymbol\cyraz\LastDeclaredEncoding{"6A}%
4142 \DeclareTextSymbol\CYRIAZ\LastDeclaredEncoding{"4B}%
4143 \DeclareTextSymbol\cyriaz\LastDeclaredEncoding{"6B}%
4144 \DeclareTextSymbol\CYRLYUS\LastDeclaredEncoding{"4C}%
4145 \DeclareTextSymbol\cyrlyus\LastDeclaredEncoding{"6C}%
4146 \DeclareTextSymbol\CYRIOTLYUS\LastDeclaredEncoding{"4D}%
4147 \DeclareTextSymbol\cyriotlyus\LastDeclaredEncoding{"6D}%
4148 \DeclareTextSymbol\CYRGERV\LastDeclaredEncoding{"4E}%
4149 \DeclareTextSymbol\cyrgerv\LastDeclaredEncoding{"6E}%
4150 \DeclareTextSymbol\CYRZEMLA\LastDeclaredEncoding{"50}%
4151 \DeclareTextSymbol\cyrzemla\LastDeclaredEncoding{"70}%
4152 \DeclareTextSymbol\CYRKSI\LastDeclaredEncoding{"51}%
4153 \DeclareTextSymbol\cyrksi\LastDeclaredEncoding{"71}%
4154 \DeclareTextSymbol\CYRVARIZHE\LastDeclaredEncoding{"52}%
4155 \DeclareTextSymbol\cyrvarizhe\LastDeclaredEncoding{"72}%
4156 \DeclareTextSymbol\CYRIZHE\LastDeclaredEncoding{"53}%
4157 \DeclareTextSymbol\cyrizhe\LastDeclaredEncoding{"73}%
4158 \DeclareTextSymbol\CYROMGA\LastDeclaredEncoding{"54}%
4159 \DeclareTextSymbol\cyromga\LastDeclaredEncoding{"74}%
4160 \DeclareTextSymbol\CYROMRND\LastDeclaredEncoding{"55}%
4161 \DeclareTextSymbol\cyromrnd\LastDeclaredEncoding{"75}%
4162 \DeclareTextSymbol\CYROT\LastDeclaredEncoding{"56}%
4163 \DeclareTextSymbol\cyrot\LastDeclaredEncoding{"76}%
4164 \DeclareTextSymbol\CYROMTLO\LastDeclaredEncoding{"57}%
4165 \DeclareTextSymbol\cyromtlo\LastDeclaredEncoding{"77}%
4166 \DeclareTextSymbol\CYRFITA\LastDeclaredEncoding{"58}%
4167 \DeclareTextSymbol\cyrfita\LastDeclaredEncoding{"78}%
4168 \DeclareTextSymbol\CYRKOPPA\LastDeclaredEncoding{"59}%
4169 \DeclareTextSymbol\cyrkoppa\LastDeclaredEncoding{"79}%
4170 \DeclareTextSymbol\CYRUK\LastDeclaredEncoding{"5A}%
4171 \DeclareTextSymbol\cyruk\LastDeclaredEncoding{"7A}%
4172 \DeclareTextSymbol\CYRCHERV\LastDeclaredEncoding{"80}%
4173 \DeclareTextSymbol\cyrcherv\LastDeclaredEncoding{"A0}%
4174 \DeclareTextSymbol\CYRPSI\LastDeclaredEncoding{"81}%
4175 \DeclareTextSymbol\cyrpsi\LastDeclaredEncoding{"A1}%
4176 \DeclareTextSymbol\CYRSHTA\LastDeclaredEncoding{"82}%
4177 \DeclareTextSymbol\cyrshsta\LastDeclaredEncoding{"A2}%
4178 \DeclareTextSymbol\CYRIOTBYUS\LastDeclaredEncoding{"83}%
4179 \DeclareTextSymbol\cyriotbyus\LastDeclaredEncoding{"A3}%
4180 \DeclareTextSymbol\CYRIOTEST\LastDeclaredEncoding{"84}%
4181 \DeclareTextSymbol\cyriotest\LastDeclaredEncoding{"A4}%
4182 \DeclareTextSymbol\CYRNARROWE\LastDeclaredEncoding{"85}%

```

```

4183 \DeclareTextSymbol\cyrnarrowe\LastDeclaredEncoding{"A5}%
4184 \DeclareTextSymbol\CYRZEL0\LastDeclaredEncoding{"86}%
4185 \DeclareTextSymbol\cyrzelo\LastDeclaredEncoding{"A6}%
4186 \DeclareTextSymbol\CYRVARUK\LastDeclaredEncoding{"87}%
4187 \DeclareTextSymbol\cyrvaruk\LastDeclaredEncoding{"A7}%
4188 \DeclareTextSymbol\CYRVIA\LastDeclaredEncoding{"88}%
4189 \DeclareTextSymbol\cyrvia\LastDeclaredEncoding{"A8}%
4190 \DeclareTextSymbol\CYRVLYUS\LastDeclaredEncoding{"89}%
4191 \DeclareTextSymbol\cyrvlyus\LastDeclaredEncoding{"A9}%
4192 \DeclareTextSymbol\CYRIZHDGR\LastDeclaredEncoding{"8A}%
4193 \DeclareTextSymbol\cyrizhdgr\LastDeclaredEncoding{"AA}%
4194 \DeclareTextSymbol\CYRIZHUM1\LastDeclaredEncoding{"8B}%
4195 \DeclareTextSymbol\cyrizhum1\LastDeclaredEncoding{"AB}%
4196 \DeclareTextSymbol\CYROLG\LastDeclaredEncoding{"8C}%
4197 \DeclareTextSymbol\cyro1g\LastDeclaredEncoding{"AC}%
4198 \DeclareTextSymbol\CYROERY\LastDeclaredEncoding{"8D}%
4199 \DeclareTextSymbol\cyroery\LastDeclaredEncoding{"AD}%
4200 \DeclareTextSymbol\CYROHSN\LastDeclaredEncoding{"8E}%
4201 \DeclareTextSymbol\cyrohsn\LastDeclaredEncoding{"AE}%
4202 \DeclareTextSymbol\CYROOCDOT\LastDeclaredEncoding{"8F}%
4203 \DeclareTextSymbol\cyroocdot\LastDeclaredEncoding{"AF}%
4204 \DeclareTextSymbol\CYROOCDDOT\LastDeclaredEncoding{"90}%
4205 \DeclareTextSymbol\cyroocddot\LastDeclaredEncoding{"B0}%
4206 \DeclareTextSymbol\CYRVIZH\LastDeclaredEncoding{"91}%
4207 \DeclareTextSymbol\cyrvizh\LastDeclaredEncoding{"B1}%
4208 \DeclareTextSymbol\CYRPPETER\LastDeclaredEncoding{"92}%
4209 \DeclareTextSymbol\cyrppeter\LastDeclaredEncoding{"B2}%
4210 \DeclareTextSymbol\CYRTPETER\LastDeclaredEncoding{"93}%
4211 \DeclareTextSymbol\cyrtpeter\LastDeclaredEncoding{"B3}%
4212 \DeclareTextSymbol\CYRZELOM\LastDeclaredEncoding{"94}%
4213 \DeclareTextSymbol\cyrzelo\LastDeclaredEncoding{"B4}%
4214 \DeclareTextAccent\F\LastDeclaredEncoding{"00}%
4215 \DeclareTextAccent\C\LastDeclaredEncoding{"01}%
4216 \DeclareTextAccent\U\LastDeclaredEncoding{"02}%
4217 \DeclareTextSymbol\cyrdash\LastDeclaredEncoding{"16}%
4218 \DeclareTextAccent\CYRtitlo\LastDeclaredEncoding{"05}%
4219 \DeclareTextAccent\CYRpalatal\LastDeclaredEncoding{"06}%
4220 \DeclareTextAccent\CYRpaerok\LastDeclaredEncoding{"07}%
4221 \DeclareTextAccent\CYRkamora\LastDeclaredEncoding{"17}%
4222 \DeclareTextAccent\CYRpsili\LastDeclaredEncoding{"1B}%
4223 \DeclareTextAccent\CYRdasia\LastDeclaredEncoding{"1C}%
4224 \DeclareTextAccent\CYRzvat\LastDeclaredEncoding{"1D}%
4225 \DeclareTextAccent\CYRpneuac\LastDeclaredEncoding{"1E}%
4226 \DeclareTextAccent\CYRpneugrav\LastDeclaredEncoding{"1F}%
4227 \DeclareTextAccent\CYRthousands\LastDeclaredEncoding{"9E}%
4228 \DeclareTextAccent\CYRaccte\LastDeclaredEncoding{"08}%
4229 \DeclareTextAccent\CYRtma\LastDeclaredEncoding{"09}%
4230 \DeclareTextAccent\CYRlegion\LastDeclaredEncoding{"0A}%
4231 \DeclareTextAccent\CYRleodr\LastDeclaredEncoding{"0B}%
4232 \DeclareTextAccent\CYRvran\LastDeclaredEncoding{"0C}%

```

```

4233 \DeclareTextAccent\CYRkoloda\LastDeclaredEncoding{"0E}%
4234 \DeclareTextAccent\CYRtmatem\LastDeclaredEncoding{"0F}%
4235 \DeclareTextAccent\CYRvzvat\LastDeclaredEncoding{"10}%
4236 \DeclareTextAccent\CYRvdasia\LastDeclaredEncoding{"11}%
4237 \DeclareTextAccent\CYRvpsili\LastDeclaredEncoding{"12}%
4238 \DeclareTextAccent\CYRvpneuac\LastDeclaredEncoding{"13}%
4239 \DeclareTextAccent\CYRvpneugrav\LastDeclaredEncoding{"14}%
4240 \DeclareTextSymbol\CYRNASH\LastDeclaredEncoding{"4F}%
4241 \DeclareTextSymbol\cyrnash\LastDeclaredEncoding{"6F}%
4242 %
4243 </xsenc.def>

```

#### 4.41 File xscmr.fd

```

4244 <*xscmr.fd>
4245 \ProvidesFile{xscmr.fd}
4246 [Experimental XS cmr]
4247 \providecommand{\EC@family}[5]{%
4248   \DeclareFontShape{#1}{#2}{#3}{#4}%
4249     {<5><6><7><8><9><10><10.95><12><14.4>%
4250       <17.28><20.74><24.88><29.86><35.83>genb*#5}{}}
4251 \DeclareFontFamily{XS}{cmr}{%
4252   \EC@family{XS}{cmr}{m}{n}{rslm}
4253   \EC@family{XS}{cmr}{m}{sl}{rssl}
4254   \EC@family{XS}{cmr}{m}{it}{rsti}
4255   \EC@family{XS}{cmr}{m}{sc}{rscc}
4256   \EC@family{XS}{cmr}{bx}{n}{rsbx}
4257   \EC@family{XS}{cmr}{b}{n}{rsrb}
4258   \EC@family{XS}{cmr}{bx}{it}{rsbi}
4259   \EC@family{XS}{cmr}{bx}{sl}{rsbl}
4260   \EC@family{XS}{cmr}{bx}{sc}{rsxc}
4261   \EC@family{XS}{cmr}{m}{ui}{rsui}
4262 %
4263 </xscmr.fd>

```

#### 4.42 File ucshyper.sty

```

4264 <*ucshyper.sty>
4265 \ProvidesPackage{ucshyper}[2002/03/05
4266   UCS: Unicode in Hyperref's PDF bookmarks]%
4267 \ifx\pdfoutput\undefined
4268   \PackageWarning{ucshyper}{ucshyper needs to be run with
4269     pdflatex.\MessageBreak Disabling functionality}%
4270 \expandafter\endinput\fi
4271 \RequirePackage[pdftex,unicode]{hyperref}
4272 %
4273 \newif\ifucshyper@prerender\ucshyper@prerendertrue
4274 \newif\ifucshyper@direct\ucshyper@directtrue
4275 \DeclareOption{nodirect}{\ucshyper@directfalse}%
4276 \DeclareOption{direct}{\ucshyper@directtrue}%

```

```

4277 \DeclareOption{noprerender}{\ucshyper@prerenderfalse}%
4278 \DeclareOption{prerender}{\ucshyper@prerendertrue}%
4279 \ProcessOptions*%
4280 %
4281 \newcommand\UCSPU@tmp{%
4282 \newcommand\UCSPU[1]{%
4283 \begin{group}\let\UCSPU@tmp\relax\relax\ifx\UCSPU@tmp\relax
4284 \ifx\utf@viii@map\undefined\else
4285 \expandafter\utf@viii@map\expandafter{\number#1}\fi
4286 \ifnum#1>"FFFF
4287 \PackageError{ucshy}{UCSPU does not support codes greater than
4288 \number"FFFF}\fi
4289 \@tempcntb#1\divide\@tempcntb by'40000
4290 \edef\uc@temp@a{\@backslashchar\number\@tempcntb}%
4291 \multiply\@tempcntb by'40000 \@tempcnta#1\advance\@tempcnta by-\@tempcntb
4292 \@tempcntb\@tempcnta\divide\@tempcntb by'4000
4293 \edef\uc@temp@a{\uc@temp@a\number\@tempcntb}%
4294 \multiply\@tempcntb by'4000\advance\@tempcnta by-\@tempcntb
4295 \@tempcntb\@tempcnta\divide\@tempcntb by'400
4296 \edef\uc@temp@a{\uc@temp@a\number\@tempcntb\@backslashchar}%
4297 \multiply\@tempcntb by'400\advance\@tempcnta by-\@tempcntb
4298 \@tempcntb\@tempcnta\divide\@tempcntb by'100
4299 \edef\uc@temp@a{\uc@temp@a\number\@tempcntb}%
4300 \multiply\@tempcntb by'100\advance\@tempcnta by-\@tempcntb
4301 \@tempcntb\@tempcnta\divide\@tempcntb by'10
4302 \edef\uc@temp@a{\uc@temp@a\number\@tempcntb}%
4303 \multiply\@tempcntb by'10\advance\@tempcnta by-\@tempcntb
4304 \@tempcntb\@tempcnta
4305 \expandafter\xdef\csname UCS2PU\number#1\endcsname{%
4306 \uc@temp@a\number\@tempcntb}%
4307 % \typeout{UCS2PU: \number#1 -> \uc@temp@a\number\@tempcntb}%
4308 \fi\endgroup
4309 }
4310 \newcommand\ucspu@err[1]{%
4311 \csname[*** Insert \string\UCSPU{\number#1}
4312 into preamble ***]\endcsname}
4313 \@ifundefined{pdfstringdefPreHook}{\let\pdfstringdefPreHook\@empty}{%
4314 \g@addto@macro\pdfstringdefPreHook{%
4315 \ifucshyper@direct
4316 \let\old@unichar\unichar
4317 \def\unichar#1{%
4318 \expandafter\ifx\csname UCS2PU\number#1\endcsname\relax
4319 \ucspu@err{#1}\old@unichar{#1}\else
4320 \csname UCS2PU\number#1\endcsname\fi
4321 }%
4322 \fi
4323 \let\selectfont\empty
4324 \let\fontencoding\@gobble
4325 \let\selectlanguage\@gobble
4326 \let\foreignlanguage\@gobble

```

```

4327 }
4328 \let\ucshyper@old@pdfstringdef\pdfstringdef
4329 \def\pdfstringdef#1#2{%
4330   \ifucshyper@prerender
4331     \begingroup
4332       \let\old@unichar\unichar
4333       \let\uc@output\@gobbletwo
4334       \fontencoding{PU}\enc@update
4335       \def\unichar##1{\old@unichar{##1}\UCSPU{##1}}%
4336       \edef\0{\string\0}%
4337       \edef\1{\string\1}%
4338       \edef\2{\string\2}%
4339       \edef\3{\string\3}%
4340       \edef\8{\string\8}%
4341       \edef\9{\string\9}%
4342       \Hy@pdfstringtrue
4343       \PrerenderUnicode{#2}%
4344     \endgroup
4345   \fi
4346   \ucshyper@old@pdfstringdef{#1}{#2}}
4347 \newcommand\UCSPUrange[2]{%
4348   \count255=#1\relax
4349   \loop\ifnum\count255>#2\relax\else
4350     \UCSPU{\count255}%
4351     \advance\count255 by1\relax
4352   \repeat}
4353 \@onlypreamble\UCSPUrange
4354 %
4355 </ucshyper.sty>

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## Change History

v1.99			
General: Last version by Dominique Unruh	..... 1		from <code>\varletter</code> to <code>\letter</code> in order to conform to the Unicode standard
v2.0			..... 1
General: Added <code>mathletters</code> mappings for variants of greek small letters	..... 1	Created makefile	..... 1
Added support for various symbols	..... 1	Removed the redefinition of <code>\show</code> from <code>ucsencs.def</code>	..... 48
Changed the <code>mathletters</code> mappings of some greek small letters		Switched from <code>\mathbbm</code> to <code>\mathbb</code> for double-struck characters	..... 1
		Switched to LPPL 1.3	..... 1
		Various small improvements	... 1