# About pLATEX $2\varepsilon$

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pIATEX is a Japanese IATEX format, which is adjusted/extended to be more suitable for writing Japanese documents. It requires pTEX<sup>1</sup>, a TEX engine with extensions for Japanese typesetting, which is designed for high-quality Japanese book "p"ublishing.<sup>2</sup> Both of them were developed by ASCII Corporation (and its successor ASCII Media Works), so they are often referred to as "ASCII pTEX" and "ASCII pIATEX" respectively.

In 2010, ASCII pT<sub>E</sub>X was incorporated into the world-wide T<sub>E</sub>X distribution, T<sub>E</sub>X Live. Since then, pT<sub>E</sub>X has been maintained/improved/changed along with T<sub>E</sub>X Live sources. In recent versions of T<sub>E</sub>X Live and W32T<sub>E</sub>X (around 2011), the default engine of pI<sup>A</sup>T<sub>E</sub>X changed from original pT<sub>E</sub>X to  $\varepsilon$ -pT<sub>E</sub>X (pT<sub>E</sub>X with  $\varepsilon$ -T<sub>E</sub>X extension). Also, the original I<sup>A</sup>T<sub>E</sub>X itself is also frequently updated. On the other hand, pI<sup>A</sup>T<sub>E</sub>X remained unchanged since 2006, which resulted in some incompatibility and limitations.

To follow these upstream changes, we (Japanese TEX Development Community<sup>3</sup>) decided to fork ASCII plaTeX and distribute the "community edition." The development version is available from GitHub repository<sup>4</sup>. The forked community edition is different from the original ASCII edition, so any bug reports and requests should be sent to Japanese TeX Development Community, using GitHub Issue system.

This document (platex-en.pdf) is a brief explanation of the pLATEX  $2_{\varepsilon}$  community edition. It is somewhat of a historical document now, since pLATEX  $2_{\varepsilon}$  came into existence in 1995 (although the English translation has been done by Japanese TeX Development Community since 2017).

 $<sup>^1{\</sup>rm The~pT}_{\rm E\!X}$  website: https://asciidwango.github.io/ptex/ (in Japanese)

<sup>&</sup>lt;sup>2</sup>There is another old implementation of Japanese LATEX by NTT Electrical Communications Laboratories, named JLATEX (unavailable in TEX Live). Also, MiKTEX has another program platex for Polish, but it has nothing to do with our Japanese pLATEX!

 $<sup>^3 {\</sup>tt https://texjp.org}$ 

 $<sup>^4</sup>$ https://github.com/texjporg/platex

# 1 Introduction to this document

This document briefly describes  $pL^AT_EX 2_{\varepsilon}$ , but is not a manual of  $pL^AT_EX 2_{\varepsilon}$ . For the basic functions of  $pL^AT_EX 2_{\varepsilon}$ , see [1] (in Japanese). For extensions of some commands for vertical writing (which were first described in [2] in Japanese), see plext.dtx section in pldoc-en.pdf.

For Japanese typesetting, please refer to the documentation of pTEX (or "Japanese TEX"; the preliminary version of pTEX), [3] (in Japanese), [4] (in English) and [5] (in English).

This document consists of following parts:

- Section 1 This section; describes this document itself.
- Section 2 Brief explanation of extensions in pLATEX  $2_{\varepsilon}$ . Also describes the standard classes and packages.
- Section 3 The compatibility note for users of the old version of pIATEX  $2_{\varepsilon}$  or those of the original IATEX  $2_{\varepsilon}$ .
- **Appendix A** Describes DOCSTRIP Options for this document.
- **Appendix B** Description of 'pldoc.tex' (counterpart for 'source2e.tex' in  $\LaTeX 2_{\varepsilon}$ ).
- **Appendix C** Description of a shell script to process 'pldoc.tex', and a tiny perl program to check DOCSTRIP guards, etc.

# 2 About Functions of pLATEX $2\varepsilon$

The structure of pIAT<sub>E</sub>X  $2_{\varepsilon}$  is similar to that of IAT<sub>E</sub>X  $2_{\varepsilon}$ ; it consists of 3 types of files: a format (platex.ltx), classes and packages.

### 2.1 About the Format

To make a format for pIATeX, process "platex.ltx" with INI mode of  $\varepsilon$ -pTeX.<sup>5</sup> A handy command 'fmtutil-sys' (or 'fmtutil') for this purpose is available in TeX Live. The following command generates platex.fmt.

fmtutil-sys --byfmt platex

<sup>&</sup>lt;sup>5</sup>Formerly both pTeX and  $\varepsilon$ -pTeX can make the format file for pLATeX, however, it's not true anymore because LATeX requires  $\varepsilon$ -TeX since 2017.

The content of platex.ltx is shown below. In the current version of plateX, first we simply load latex.ltx and modify/extend some definitions by loading plcore.ltx.

```
1 \langle *plcore \rangle
```

Temporarily disable \dump at the end of latex.ltx.

- 2 \let\orgdump\dump
- 3 \let\dump\relax

Load latex.ltx here. Within the standard installation of TEX Live, hyphen.cfg provided by "Babel" package will be used.

```
4 \input latex.ltx
```

```
Load plcore.ltx.
```

Load font-related default settings, pldefs.ltx. If a file pldefs.cfg is found, then that file will be used instead. Some code may be executed after loading.

In the previous version, we displayed pLATEX version on the terminal, so that it can be easily recognized during format creation; however \everyjob can contain any code other than showing a banner, so now disabled.

#### 18 %\the\everyjob

Load platex.cfg if it exists at runtime.

Dump to the format file.

 $27 \left( \frac{dump}{dump} \right)$ 

```
28 \let\orgdump\@undefined
```

- 29 \makeatother
- 30 \dump
- 31 %\endinput
- $32 \langle /plcore \rangle$

The file plcore.ltx, which provides modifications/extensions to make pLATEX  $2\varepsilon$ , is a concatenation of stripped files below using DOCSTRIP program.

- plvers.dtx defines the format version of pLATEX  $2\varepsilon$ .
- plfonts.dtx extends NFSS2 for Japanese font selection.
- plcore.dtx defines other modifications to  $\LaTeX 2_{\varepsilon}$ .

Moreover, default settings of pre-loaded fonts and typesetting parameters are done by loading pldefs.ltx inside platex.ltx.<sup>6</sup> This file pldefs.ltx is also stripped from plfonts.dtx.

#### Attention:

You can customize pLATEX  $2_{\varepsilon}$  by tuning these settings. If you need to do that, copy/rename it as pldefs.cfg and edit it, instead of overwriting pldefs.ltx itself. If a file named pldefs.cfg is found at a format creation time, it will be read as a substitute of pldefs.ltx.

#### 2.1.1 Version

The version (like "2020-10-01") and the format name ("pLaTeX2e") of pLaTeX2e" are defined in plvers.dtx.

#### 2.1.2 NFSS2 Commands

LATEX  $2_{\varepsilon}$  uses NFSS2 as a font selection scheme, however, it supports only alphabetic fonts. pLATEX  $2_{\varepsilon}$  extends NFSS2 to enable selection of Japanese fonts in a consistent manner with the original NFSS2.

Most of the interface commands are defined to be clever enough, so that it can automatically judge whether it is going to change alphpabetic fonts or Japanese fonts. It works almost fine with most of the widely used classes and packages, without any modification.

For the defail of (the original) NFSS2, please refer to fntguide.tex in  $\LaTeX$   $2\varepsilon$ .

<sup>&</sup>lt;sup>6</sup>ASCII pLATEX loaded pldefs.ltx inside plcore.ltx; however, pLATEX community edition newer than 2018 loads pldefs.ltx inside platex.ltx.

### 2.1.3 Output Routine and Floats

plcore.dtx modifies and extends some LATEX  $2_{\mathcal{E}}$  commands for Japanese processing.

- Preamble commands
- Page breaking
- Line breaking
- The order of float objects
- Crop marks ("tombow")
- Footnote macros
- Cross-referencing
- Verbatim

# 2.2 Classes and Packages

Classes and packages bundled with pLaTeX  $2_{\varepsilon}$  are based on those in original LaTeX  $2_{\varepsilon}$ , with some Japanese localization.

pLATeX  $2_{\mathcal{E}}$  classes:

- jarticle.cls, jbook.cls, jreport.cls
  Standard *yoko-kumi* (horizontal writing) classes; stripped from jclasses.dtx.
- tarticle.cls, tbook.cls, treport.cls
  Standard *tate-kumi* (vertical writing) classes; stripped from jclasses.dtx.
- jltxdoc.cls

  Class for typesetting Japanese .dtx file; stripped from jltxdoc.dtx.

pIATEX  $2\varepsilon$  packages:

• plext.sty

Useful macros and extensions for vertical writing; stripped from plext.dtx.

#### ptrace.sty

pLATEX  $2_{\varepsilon}$  version of tracefnt.sty; the package tracefnt.sty overwrites pLATEX  $2_{\varepsilon}$ -style NFSS2 commands, so ptrace.sty provides redefinitions to recover pLATEX  $2_{\varepsilon}$  extensions. Stripped from plfonts.dtx.

#### • pfltrace.sty

pLATEX  $2\varepsilon$  version of fltrace.sty (introduced in LATEX  $2\varepsilon$  2014/05/01); stripped from plcore.dtx.

### • oldpfont.sty

Provides pLATEX 2.09 font commands; stripped from pl209.dtx.

The packages "ascmac.sty" and "nidanfloat.sty", which had been included in previous versions of pLATeX, is now distributed as a separate bundle.

# 3 Compatibility with Other Formats and Older Versions

Here we provide some information about the compatibility between current pIATEX  $2_{\varepsilon}$  and older versions or original IATEX  $2_{\varepsilon}$ .

# 3.1 Compatibility with $\LaTeX 2_{\varepsilon}$

pLaTeX  $2_{\varepsilon}$  is in most part upward compatible with LaTeX  $2_{\varepsilon}$ , but some parameters are adjusted to be suitable for Japanese. Therefore, you should not expect identical output, even though the same source can be processed on both LaTeX  $2_{\varepsilon}$  and pLaTeX  $2_{\varepsilon}$ .

We hope that most classes and packages meant for LaTeX  $2_{\varepsilon}$  works also for pLaTeX  $2_{\varepsilon}$  without any modification. However for example, if a class or a package redefines a command which is already modified by pLaTeX  $2_{\varepsilon}$ , it might cause an error at the worst case. We cannot tell whether a class or a package works fine with pLaTeX  $2_{\varepsilon}$  beforehand; the easiest way is to try to use it. If it fails, please refer to the log file or a package manual.

Some IATEX packages are known to be incompatible with pIATEX. For those packages, pIATEX-specific patches might be available. Please refer to the documentation of the plautopatch package (by Hironobu Yamashita).

# 3.2 Compatibility with pLATEX 2.09

pLATEX  $2_{\varepsilon}$  has 'pLATEX 2.09 compatibility mode'; use \documentstyle to enter it, but the support might be limited. Note that the 2.09 compatibility mode is provided solely to allow you to process very old documents, which were written for a very old system.

# 3.3 Support for Package 'latexrelease'

pLATEX provides 'platexrelease' package, which is based on 'latexrelease' package (introduced in LATEX <2015/01/01>). It may be used to ensure stability where needed, by emulating the specified format date without regenerating the format file. For more detail, please refer to its documentation.

# A DOCSTRIP Options

By processing platex.dtx with DOCSTRIP program, different files can be generated. Here are the DOCSTRIP options for this document:

Option	Function	
plcore	Generates a fragment of format sources	
$\operatorname{pldoc}$	Generates 'pldoc.tex' for type setting pLATEX $2_{\varepsilon}$ sources	
shprog	Generates a shell script to process 'pldoc.tex'	
plprog	Generates a tiny perl program to check DOCSTRIP guards nesting	
Xins	Generates a DOCSTRIP batch file 'Xins.ins' for generating the	
	above shell/perl scripts	

# B Documentation of pLATEX $2_{\varepsilon}$ sources

The contents of 'pldoc.tex' for type setting pIATEX  $2_{\varepsilon}$  sources is described here. Compared to individual processings, batch processing using 'pldoc.tex' prints also changes and an index. The whole document will have about 200 pages.

By default, the description of pLATEX  $2_{\varepsilon}$  sources is written in Japanese. If you need English version, first save

#### \newif\ifJAPANESE

as platex.cfg, and process pldoc.tex (pLATEX  $2_{\varepsilon}$  Community Edition newer than July 2016 is required).

```
First, create pldoc.dic; it serves as a dictionary for 'mendex' (Japanese index processor<sup>7</sup>), which is necessary for indexing control sequences containing Japanese characters (\ 西曆 and \ 和曆).
```

```
33 (*pldoc)
34 \begin{filecontents}{pldoc.dic}
35 西暦
         せいれき
36 和暦
         われき
37 \end{filecontents}
  We use jltxdoc class; we also require plext package, since plext.dtx contains
several examples of partial vertical writing.
38 \documentclass{jltxdoc}
39 \usepackage{plext}
40 \ listfiles
41
Do not index some TFX primitives, and some common plain TFX commands.
42 \DoNotIndex{\def,\long,\edef,\xdef,\gdef,\let,\global}
43 \DoNotIndex{\if,\ifnum,\ifdim,\ifcat,\ifmmode,\ifvmode,\ifhmode,\%
              \iftrue,\iffalse,\ifvoid,\ifx,\ifeof,\ifcase,\else,\or,\fi}
45 \DoNotIndex{\box,\copy,\setbox,\unvbox,\unhbox,\hbox,%
46
              \vbox,\vtop,\vcenter}
47 \DoNotIndex{\@empty,\immediate,\write}
48 \DoNotIndex{\egroup,\bgroup,\expandafter,\begingroup,\endgroup}
49 \DoNotIndex{\divide,\advance,\multiply,\count,\dimen}
50 \DoNotIndex{\relax,\space,\string}
51 \DoNotIndex{\csname,\endcsname,\@spaces,\openin,\openout,%
              \closein,\closeout}
53 \DoNotIndex{\catcode,\endinput}
54 \DoNotIndex{\jobname,\message,\read,\the,\m@ne,\noexpand}
55 \DoNotIndex{\hsize,\vsize,\hskip,\vskip,\kern,\hfil,\hfill,\hss,\vss,\unskip}
56 \label{lower} \label{lower} $$ 56 \DoNotIndex{\mone,\z0,\z0skip,\one,\tw0,\p0,\cminus,\oplus} $$
57 \DoNotIndex{\dp,\wd,\ht,\setlength,\addtolength}
58 \DoNotIndex{\newcommand, \renewcommand}
Set up the Index and Change History to use \part.
60 \ifJAPANESE
61 \IndexPrologue{\part*{索 引}%
                   \markboth{索 引}{索 引}%
                   \addcontentsline{toc}{part}{索 引}%
64 イタリック体の数字は、その項目が説明されているページを示しています。
65 下線の引かれた数字は、定義されているページを示しています。
66 その他の数字は、その項目が使われているページを示しています。}
67 \else
68 \IndexPrologue{\part*{Index}%
```

 $<sup>^7</sup>$ Developed by ASCII Corporation; the program 'make index' cannot handle Japanese characters properly, especially Kanji characters which should be sorted by its readings.

```
69
                      \markboth{Index}{Index}%
                      \addcontentsline{toc}{part}{Index}%
70
71 The italic numbers denote the pages where the corresponding entry
72 is described, numbers underlined point to the definition,
73 \ {\rm all} \ {\rm others} \ {\rm indicate} \ {\rm the} \ {\rm places} \ {\rm where} \ {\rm it} \ {\rm is} \ {\rm used.} \}
74 \fi
75 %
76 \ifJAPANESE
77 \GlossaryPrologue{\part*{変更履歴}%
                      \markboth{変更履歴}{変更履歴}%
78
                      \addcontentsline{toc}{part}{変更履歴}}
79
80 \ensuremath{\setminus} \texttt{else}
81 \GlossaryPrologue{\part*{Change History}%
                      \markboth{Change History}{Change History}%
83
                      \addcontentsline{toc}{part}{Change History}}
84 \fi
85
Modify the standard \changes command slightly, to better cope with this multiple
file document.
86 \makeatletter
87 \def\changes@#1#2#3{%
     \let\protect\@unexpandable@protect
88
     \edef\@tempa{\noexpand\glossary{#2\space
89
                    \currentfile\space#1\levelchar
90
91
                    \ifx\saved@macroname\@empty
92
                       \space\actualchar\generalname
93
                    \else
                       \expandafter\@gobble
94
                       \saved@macroname\actualchar
95
                       \string\verb\quotechar*%
96
                       \verbatimchar\saved@macroname
97
98
                       \verbatimchar
                    \fi
99
                    :\levelchar #3}}%
100
     \@tempa\endgroup\@esphack}
101
Codelines are allowed to run over a bit without showing up as overfull.
102 \verb|\renewcommand*| MacroFont{fontencoding} encoding default
103
                         \fontfamily\ttdefault
104
                         \fontseries\mddefault
                         \fontshape\updefault
105
106
                         \small
                         \hfuzz 6pt\relax}
107
Section numbers now reach eg 19.12 which need more space.
108 \renewcommand*\l@subsection{\@dottedtocline{2}{1.5em}{2.8em}}
109 \renewcommand*\l@subsubsection{\@dottedtocline{3}{3.8em}{3.4em}}
110 \makeatother
```

```
Produce a Change Log and (2 column) Index.
111 \RecordChanges
112 \CodelineIndex
113 \EnableCrossrefs
114 \setcounter{IndexColumns}{2}
115 \settowidth\MacroIndent{\ttfamily\scriptsize 000\ }
Set the title, authors and the date for this document.
116 \title{The \pLaTeXe\ Sources}
117 \author{Ken Nakano \& Japanese \TeX\ Development Community}
118
119 % Get the date and patch level from plvers.dtx
120 \makeatletter
121 \let\patchdate=\@empty
122 \begingroup
      \def\ProvidesFile#1\pfmtversion#2#3\ppatch@level#4{%
123
         \date{#2}\xdef\patchdate{#4}\endinput}
124
125
      \input{plvers.dtx}
126 \endgroup
127
128 % Add the patch version if available.
129 \left( Xpatch{0} \right)
130 \ifx\patchdate\Xpatch\else
131 % number is assumed
132 \ifnum\patchdate>0
133 \edef\@date{\@date\space Patch level\space\patchdate}
134 \else
    \edef\@date{\@date\space Pre-Release\patchdate}
136 \fi\fi
137
138 \% Add the last update info, in case format date unchanged
139 % Note: \@ifl@t@r can be used only in preamble.
141 \begingroup
      \def\ProvidesFile#1[#2 #3]{%
142
143
         \def\@tempd@te{#2}\endinput
144
         \@ifl@t@r{\@tempd@te}{\lastupd@te}{%
145
            \global\let\lastupd@te\@tempd@te
146
         }{}}
147
      \let\ProvidesClass\ProvidesFile
148
      \let\ProvidesPackage\ProvidesFile
149
      \input{plvers.dtx}
      \input{plexpl3.dtx}
150
      \input{plfonts.dtx}
151
      \input{plcore.dtx}
152
      \input{plext.dtx}
153
      \input{pl209.dtx}
154
      \input{kinsoku.dtx}
155
      \input{jclasses.dtx}
156
157
      \input{jltxdoc.cls}
```

```
158 \endgroup
159 \@ifl@t@r{\lastupd@te}{\pfmtversion}{%
    \edef\@date{\@date\break (last updated: \lastupd@te)}%
161 }{}
162 \text{ } \text{makeatother}
Here starts the document body.
163 \begin{document}
164 \pagenumbering{roman}
165 \setminus maketitle
166 \renewcommand\maketitle{}
167 \tableofcontents
168 \clearpage
169 \verb|\pagenumbering{arabic}|
170
171 \DocInclude{plvers}
                          % pLaTeX version
172
173 \DocInclude{plexpl3} % additions to expl3
174
175 \DocInclude{plfonts} % NFSS2 commands
177 \DocInclude{plcore}
                          % kernel commands
178
179 \DocInclude{plext}
                          % external commands
180
                          % 2.09 compatibility mode commands
181 \DocInclude{pl209}
182
183 \DocInclude{kinsoku} % kinsoku parameter
184
185 \DocInclude{jclasses} % Standard class
187 \DocInclude{jltxdoc} % dtx documents class
 Stop here if ltxdoc.cfg says \AtEndOfClass{\OnlyDescription}.
189 \StopEventually{\end{document}}
 Print Change History and Index. Please refer to Appendix C.1 for processing of
 Change History and Index.
191 \clearpage
192 \pagestyle{headings}
193 % Make TeX shut up.
194 \hbadness=10000
195 \newcount\hbadness
196 \hfuzz=\maxdimen
197 %
198 \PrintChanges
199 \clearpage
200 %
```

```
201 \begingroup
202 \def\endash{--}
203 \catcode'\-\active
204 \def-{\futurelet\temp\indexdash}
205 \def\indexdash{\ifx\temp-\endash\fi}
206
207 \PrintIndex
208 \endgroup
```

Make sure that the index is not printed twice (ltxdoc.cfg might have a second command).

```
209 \let\PrintChanges\relax 210 \let\PrintIndex\relax 211 \end{document} 212 \langle \text{pldoc} \rangle
```

# C Additional Utility Programs

# C.1 Shell Script mkpldoc.sh

A shell script to process 'pldoc.tex' and produce a fully indexed source code description. Run sh mkpldoc.sh to use it.

### C.1.1 Content of mkpldoc.sh

First, delete auxiliary files which might be created in the previous runs.

```
213 \( *shprog \)
214 \( ja \) rm -f pldoc.toc pldoc.idx pldoc.glo
215 \( \seta n \) rm -f pldoc-en.toc pldoc-en.idx pldoc-en.glo

First run: empty the config file ltxdoc.cfg.
216 echo "" > ltxdoc.cfg

Now process pldoc.tex.
217 \( ja \) platex pldoc.tex
218 \( \seta n \) platex -jobname=pldoc-en pldoc.tex
```

Make the Change log and Glossary (Change History) using mendex. 'Mendex' is a Japanese index processor, which is mostly upward compatible with 'makeindex' and automatically handles readings of Kanji words.

Option -s employs a style file for formatting. Here we use gind.ist and gglo.ist from  $\LaTeX$   $2\varepsilon$ .

Option -o specifies output index file name.

Option -f forces to output Kanji characters even non-existent in dictionaries. (Makeindex does not have this option.)

```
219 \( \)ja\\mendex -s \( \)gind.ist -d \( \)pldoc.dic -o \( \)pldoc.ind \( \)pldoc.idx

220 \( \)\en\\mendex -s \( \)gind.ist -d \( \)pldoc.dic -o \( \)pldoc.glo

221 \( \)ja\\mendex -f -s \( \)gglo.ist -o \( \)pldoc.gls \( \)pldoc.glo

222 \( \)\en\\mendex -f -s \( \)gglo.ist -o \( \)pldoc-en.gls \( \)pldoc-en.glo

Second run: append \( \)includeonly\{\}\ to \( \)ltxdoc.cfg to speed up things. This run is needed only to get changes and index listed in .toc file.

223 \( \)echo \( \)\'\includeonly\{\}\'' > \ltxdoc.cfg

224 \( \)ja\\platex \( \)pldoc.tex

225 \( \)\( \)en\\platex -jobname=pldoc-en \( \)pldoc.tex

Third and final run: restore the cfg file to put everything together.

226 \( \)echo \( \)\'' > \ltxdoc.cfg

227 \( \)ja\\platex \( \)pldoc.tex

228 \( \)\( \)en\\platex -jobname=pldoc-en \( \)pldoc.tex

229 \( \)\( \)en\\platex -jobname=pldoc-en \( \)pldoc.tex
```

# C.2 Perl Script dstcheck.pl

Here we provide a perl script which helps checking the nested DOCSTRIP guards. Usage:

```
perl dstcheck.pl <file-name>
```

The description of this script itself is available only in Japanese.

```
231 (*plprog)
232 ##
233 ## DOCSTRIP 文書内の環境や条件の入れ子を調べる perl スクリプト
235 push(@dst,"DUMMY"); push(@dst,"000");
236 push(@env,"DUMMY"); push(@env,"000");
237 while (<>) {
    if (/^%<\*([^>]+)>/) { # check conditions
238
239
       push(@dst,$1);
240
       push(@dst,$.);
241 } elsif (/^%<\/([^>]+)>/) {
       $linenum = pop(@dst);
242
       $conditions = pop(@dst);
243
244
       if ($1 ne $conditions) {
245
         if ($conditions eq "DUMMY") {
246
          print "$ARGV: '</$1>' (1.$.) is not started.\n";
247
           push(@dst,"DUMMY");
          push(@dst,"000");
248
         } else {
249
           print "$ARGV: '<*$conditions>' (1.$linenum) is ended ";
250
```

```
print "by '<*$1>' (1.$.)\n";
251
252
         }
       }
253
254
     }
     if (/^% *\\begin\{verbatim\}/) { # check environments
255
       while(<>) {
256
           last if (/^% *\\ (\text{verbatim}));
257
258
259
     } elsif (/^% *\\begin\{([^{\}]+)\\}\\((.*)\\)/) {
260
       push(@env,$1);
       push(@env,$.);
     } elsif (/^% *\\begin\{([^{}]+)\}/) {
262
263
       push(@env,$1);
264
       push(@env,$.);
     } elsif (/^% *\\end\{([^{\}]+)\}/) {
265
       $linenum = pop(@env);
266
       $environment = pop(@env);
267
       if ($1 ne $environment) {
268
         if ($environment eq "DUMMY") {
269
           print "ARGV: '\end{$1}' (1.$.) is not started.\n";
270
           push(@env,"DUMMY");
271
272
           push(@env,"000");
273
         } else {
           print "$ARGV: \begin{$environement} (1.$linenum) is ended ";
274
           print "by \\end{$1} (1.$.)\n";
275
276
       }
277
278
     }
279 }
280 $linenum = pop(@dst);
281 $conditions = pop(@dst);
282\;\mathrm{while} ($conditions ne "DUMMY") {
       print "$ARGV: '<*$conditions>' (1.$linenum) is not ended.\n";
283
       $linenum = pop(@dst);
284
285
       $conditions = pop(@dst);
286 }
287 $linenum = pop(@env);
288 $environment = pop(@env);
289 \ \mbox{while} ($environment ne "DUMMY") {
       print "$ARGV: '\begin{$environment}' (1.$linenum) is not ended.\n";
290
       $linenum = pop(@env);
291
292
       $environment = pop(@env);
293 }
294 exit;
295 (/plprog)
```

# C.3 DOCSTRIP Batch file

Here we introduce a DOCSTRIP batch file 'Xins.ins,' which generates the scripts described in Appendix C.1 and C.2.

```
296 \langle *Xins \rangle
297 \setminus input docstrip
298 \keepsilent
299 {\catcode'#=12 \gdef\MetaPrefix{## }}
300 \declarepreamble\thispre
301 \endpreamble
302 \usepreamble\thispre
303 \verb|\declarepostamble\thispost|
304 \endpostamble
305 \slashed{usepostamble\thispost}
306 \generate{
       \file{dstcheck.pl}{\from{platex.dtx}{plprog}}
       \file{mkpldoc.sh}{\from{platex.dtx}{shprog,ja}}
308
       \file{mkpldoc-en.sh}{\from{platex.dtx}{shprog,en}}
309
310 }
311 \endbatchfile
_{312} \langle /Xins \rangle
```

# References

- [1] 中野 賢『日本語  $\LaTeX$   $2\varepsilon$  ブック』 アスキー, 1996.
- [2] インプレス・ラボ監修, アスキー書籍編集部編 『縦組対応 パーソナル日本語  $T_FX$ 』 アスキー出版局, 1994
- [3] アスキー出版技術部責任編集 『日本語  $T_{EX}$  テクニカルブック I』 アスキー, 1990.
- [4] Haruhiko Okumura, pTEX and Japanese Typesetting The Asian Journal of TEX, Volume 2, No. 1, 2008. (http://ajt.ktug.org/2008/0201okumura.pdf)
- [5] Hisato Hamano, Vertical Typesetting with T<sub>E</sub>X. TUGboat issue 11:3, 1990. (https://tug.org/TUGboat/tb11-3/tb29hamano.pdf)
- [6] Donald E. Knuth. "*The T<sub>E</sub>Xbook*". Addison-Wesley, 1984. (邦訳:斎藤信男監修, 鷺谷好輝訳, T<sub>E</sub>X ブック 改訂新版, アスキー出版局, 1989)
- [7] Laslie Lamport. "ATEX: A Document Preparation System". Addison-Wesley, second edition, 1994.
- [8] Laslie Lamport. "*PTEX: A Document Preparation System*". Addison-Wesley, 1986. (邦訳:倉沢良一監修, 大野俊治・小暮博通・藤浦はる美訳, 文書処理システム IPTFX, アスキー, 1990)
- [9] Michel Goossens, Frank Mittelbach, Alexander Samarin. "The LATEX Companion". Addison-Wesley, 1994.
- [10] 河野 真治『入門 Perl』アスキー出版局, 1994

# Change History

1995/05/08 v1.0	2016/08/26 v1.0m
first edition 2	Moved loading platex.cfg from
1995/08/25 v1.0a	plcore.ltx to platex.ltx 3
Added 'Compatibility', 'Usage of	2016/09/14  v1.0n
DOCSTRIP' and 'References' 2	Improved banner saving method 3
1996/02/01 v1.0b	2017/09/24 v1.0o
Adjusted for the latest DOCSTRIP	Allow negative patch level for
(omake-sh.ins and	pre-release 10
omake-pl.ins. 15	2017/11/11  v1.0p
1997/01/23 v1.0c	Moved banner saving code from
Adjusted for the latest DOCSTRIP. 15	platex.ltx to plcore.ltx 3
Don't copy gind.ist and gglo.ist	2017/12/02  v1.0r
from	English references added 2
TEXMF/tex/latex2e/base	2017/12/05  v1.0s
directory 12	Moved loading default settings
1997/01/25  v1.0c	from plcore.ltx to
Add to filecontents environment	platex.ltx 3
for pldoc.dic 7	2018/02/07  v1.0t
1997/01/29  v1.0c	Moved ascmac package to separate
Rename pltpatch.ltx to	bundle 6
plpatch.ltx 10	2018/02/18 v1.0u
2016/01/27  v1.0d	Moved nidanfloat package to
Add -e test before rm command . 12	separate bundle 6
Updated descriptions of pLATeX $2\varepsilon$	2018/04/06  v1.0v
files 5	Sync with the latest source2e.tex 9
2016/02/16  v1.0e	2018/04/08  v1.0w
Add a description of platexrelease 7	Stop showing banner during
2016/04/12 v1.0f	format generation for safety 3
Update document 1	2018/09/03 v1.0x
2016/05/07 v1.0g	Mention platexcheat (Japanese
Save LATEX banner 3	only)
2016/05/08 v1.0h	Mention plautopatch 6
Exclude plpatch.ltx from the	Update document 1
document	2018/09/22 v1.0y
2016/05/12 v1.0i	Show last update info on
Undefine temporary command	pldoc.pdf 10
\orgdump in the end 3	2019/09/29 v1.0z
2016/05/20 v1.0j	Fix typos in document 1
Add description of 'pfltrace' 5	2020/03/24 v1.1
2016/05/21 v1.0k	Update document 1
Print also changes 1	2020/09/26 v1.1a
2016/06/19 v1.0l	Add plexpl3.dtx
Get the patch level from	2020/09/28 v1.1b
plvers.dtx 10	Add hook after loading defs 3