

PAPER <i>Special Issue on <math>\LaTeX 2\epsilon</math> Class File of IEICE Transactions</i>
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## How to Use ieice.cls Class Files\*\*

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**SUMMARY** This document describes how to use the `ieice.cls`(ver. 1.3) class file, which should be used for an article in the  $\LaTeX 2\epsilon$  format to be contributed to IEICE Transactions.  
*key words:*  $\LaTeX 2\epsilon$  class file

### 1. Introduction

The class file should be set as a document class, not as an option.

Since `twoside`, `twocolumn` and `fleqn` are already set, there is no need to set these options again. Moreover, the parameters for the page styles such as line space, character space, etc. are preset and these should not be changed.

In Section ??, how to make a document using this style file is described and in Section ??, some notes are given on typing and on how to deal with a case in which equations go beyond the margin.

### 2. How to Use Class Files

#### 2.1 Template

Now let us start with Template.

```
\documentclass[paper]{ieice}
%\documentclass[invited]{ieice}
%\documentclass[survey]{ieice}
%\documentclass[invitedsurvey]{ieice}
%\documentclass[review]{ieice}
%\documentclass[letter]{ieice}
```

```
\usepackage[dvips]{graphicx}
```

```
\setcounter{page}{1}
```

```
\def\IEICE{\texttt{ieice.cls}}
```

```
\field{A}
```

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\*Presently, author is with ???.

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```
\vol{85}
\no{1}
\SpecialIssue{IEICE Class File}
%\SpecialSection{}
\title{How to Use ieice.cls Class File}
\titlenote{This paper was presented at ...}
\authorlist{%
\authoreentry{First NAME}{m}{labelA}
\authoreentry{Second NAME}{m}{labelB}
\authoreentry{Third NAME}{n}{labelA}
\authoreentry{Fourth NAME}{n}{labelC}[labeled]
}
%\breakauthorline{2}
%% \breakauthorline{1,2,3,4}
\affiliate[labelA]{The authors are with the
Faculty ...}
\affiliate[labelB]{The author is with the
Faculty ...}
\affiliate[labelC]{The author is with the
Faculty ...}
\paffiliate[labelD]{Presently, author is with
???.}
```

```
\received{2001}{12}{1}
```

```
\revised{2002}{1}{1}
```

```
\final{2002}{1}{15}
```

```
\begin{document}
```

```
\maketitle
```

```
\begin{summary}
```

This document describes how to use the  $\LaTeX$  (ver.\ 1.3) class file which should be used for an article in the  $\LaTeX$  format to be contributed to IEICE Transactions.

```
\end{summary}
```

```
\begin{keywords}
```

```
\LaTeX class file
```

```
\end{keywords}
```

```
\section{Introduction}
```

```
... ..
```

```
\section*{Acknowledgement}
```

```
\begin{thebibliography}{9}
\bibitem{???}
\end{thebibliography}
```

```
\appendix
\section{Fonts}
```

```
\profile{name}{was born in ... }
\end{document}
```

## 2.2 How to Write Preamble

To write Preamble, follow the instructions below.

- As a class option, you can select `paper`, `invited` or `letter` as a format. These are a paper format (`PAPER`), an invited paper format (`INVITED PAPER`) and a letter format (`LETTER`). When it is omitted, it will automatically select the paper format (`PAPER`).

When `letter` is selected, the author's profile at the end of the paper (`\profile`) will not be outputted.

- `\field{}` assigns a separate volume (Society) with A, B, C and D (uppercase letters). See the following for more details.

- A Fundamentals
- B Communications
- C Electronics
- D Information and Systems

- `\vol{}` assigns a volume number as in `\vol{84}`.
- `\no{}` assigns the number of an issue as in `\no{1}`.
- `\SpecialIssue{}` and `\SpecialSection{}` assign the theme of a special issue as in

```
\SpecialIssue{Image Processing}
```

- `\title{}` assigns the title of a paper. When you want a new line within a title, insert `\\` in the title as desired. The argument of the `\title{}` command is used for more than just producing the title; it can also generate a running head at the top of the page, coupled with the author's name. When you want to shorten a running head due to a long title, type as follows.

```
\title[Running Head]{Title}
```

- To assign when the paper was first reported, by which organization the authors were supported, etc., use the `\titlenote{}` command.
- For the macro to produce an author list, see the example on Page 1. Follow the example and it will automatically order the form of output for authors' names, memberships and so on.

To provide the information on authors, use `\authorentry`, which is an argument of the `\authorlist` command. The `\authorentry` command has 3 arguments.

- The first argument is the author's name. Note that family names should be provided all in uppercase letters.
- The second argument is the membership of the author. The option argument is  
`r`(Regular Member)  
`n`(Nonmember)  
`a`(Associate Member)  
`s`(Student Member) or  
`h`(Honorary Member)  
`f`(Fellow)

Other options will not cause errors, but will cause wrong output.

- The third argument is the label of the author's affiliate (corresponding to the label of the `\affiliate`, which is described later). Make a brief label using the name of a university, institute or company. When the `\maketitle` command is extended and the title is outputted, a dagger mark is placed to the right of the author's name. If there are 2 affiliates to mention, mark a break in the label using `“,”`. Do not place a space after `“,”`.
- Do not place any extra spaces before or after these 3 arguments. `{m}` and `{m_}` are recognized as different in this style file.

- To provide an e-mail address, type as follows. Note that this description is only for the authors whose manuscript would be included in Trans. on Fundamentals(A) and Electronics(C).

```
\authorentry[name@xxx.yyy.zz.jp]
{First NAME}{m}{labelA}
```

- If you need to show your present affiliate, type as follows to assign [Present Label] as the fourth argument of `\authorentry` (corresponding to the `\paffiliate` command, which is described later.)

```
\authorentry{Fourth NAME}{n}{labelC}
[labelD]
```

- While the `\authorlist` macro automatically assigns the form of the authors' list, if you have many authors and want to break a line at a certain point, use the `\breakauthorline` command. For example, `\breakauthorline{3}` will place a line-break after the third author, and `\breakauthorline{2,4,6}` will place a line-break after the second, fourth and sixth authors.
- To provide the author's affiliate, use the `\affiliate` command.

```
\affiliate[label]{Affiliate}
```

To provide the author's present affiliate, use the `\paffiliate` command.

`\paffiliate[label]{Present Affiliate}`

It corresponds to the label assigned as the first argument by `\authoreentry`. The author's affiliate is assigned as the second argument. The entry should be in the order as instructed by the `\authorlist` command.

Do not place any extra spaces before or after the label.

- In the `\received{}{}{}{}` command, the date of receipt of the paper is described in numbers in the order of Year/Month/Day as in `\received{2001}{12}{1}`. In the `\revised{}{}{}{}` command, the date of revision is described. In the `\final{}{}{}{}` command, the date of the final version is described. Note that `\final{}{}{}{}` command is only for the authors whose manuscript would be included in Trans. on Fundamentals(A). These 3 commands produce footnotes without footnote symbols in front of them.

These should be written in Preamble.

### 2.3 After the Preamble

`\maketitle` should be placed after the `\begin{document}` command. This generates a title.

- In the `summary` environment, the text of a summary is described. The text should be presented in a single paragraph.
- In the `keywords` environment, keywords are given all in lowercase letters except abbreviations and proper nouns.
- To give acknowledgement(s), use the following command.

`\section*{Acknowledgement}`

- To give appendix, use the `\appendix` command or the `\appendix*` command. The difference between them is that when the `\section` command is used after them, the way in which sectional units are numbered will be changed (different from the  $\LaTeX 2_{\epsilon}$  standard).
- When the `\appendix` command is declared, `\section` will become "Appendix A:", "Appendix B:", ...

The `\appendix*` command should be used when the appendix has no more than on section.

Examples are given below.

If

`\appendix`

`\section{Style file}`

`\subsection{Style file}`

`\section*{Style file}`

then, the following.

**Appendix A: Style file**

A.1 Style file

**Style file**

On the other hand, If typed as follows, `\appendix*`

`\section{Style file}`

then, you will get the following.

**Appendix: Style file**

These commands also change the way in which equations and captions of tables and figures are numbered as follows. A·1, A·2, ...

- `\profile` is the macro which generates an author's profile at the end of the paper. The first and the second arguments assign the author's name and his/her profile respectively. The latter should be written in a single paragraph. If there are no photographs, the `\profile*{}{}{}` command should be used.

### 2.4 Equations

- As described in [Introduction], the `fleqn` package is in effect. It causes equations to be aligned on the left side, at a fixed distance (7 mm) from the left margin, and the equation numbers to be generated on the right side. According to this setting, the length of equations should be adjusted.
- This journal constitutes 2 columns and, therefore, 1 column is not wide. If there is a long equation, the equation number may overlap or the equation itself may go beyond the margin. The `Overfull \hbox ...` message in particular requires special attention. For more information on how to deal with long equations, see the ?? section.

### 2.5 How to Use $\mathcal{A}\mathcal{M}\mathcal{S}\text{-}\mathcal{L}\mathcal{A}\mathcal{T}\mathcal{E}\mathcal{X}$

To use the  $\mathcal{A}\mathcal{M}\mathcal{S}\text{-}\mathcal{L}\mathcal{A}\mathcal{T}\mathcal{E}\mathcal{X}$  package for more complex descriptions of equations, select [`fleqn`] as an option of the `amsmath` package.

`\usepackage[fleqn]{amsmath}`

The `amsmath` package reads many files, but when you want to use Bold Italic only, the following will be sufficient.

`\usepackage{amsbsy}`

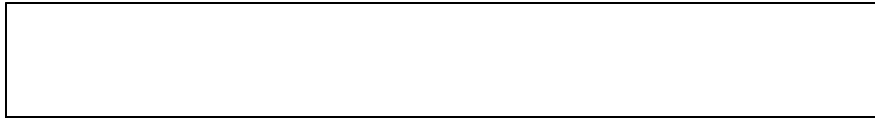
If you want to use symbols only, the following will be sufficient.

`\usepackage{amssymb}`

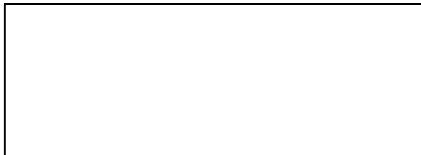
For Bold Italic, it is recommended that `\boldsymbol{a}` be used instead of `\mbox{\boldmath $a$}`. This enables you to use smaller letters for equations (when letters used above/beneath a bar).

### 2.6 How to Use float

As an option to assign the location to which a figure or a table (float) is placed, do not use [`h`] but use [`tb`]



**Fig. 1** Example of caption. Example of caption. Example of caption. Example of caption.



**Fig. 2** Example of caption.

so that the figure/table (float) will be placed at the top or the bottom of the page.

For a figure or table crossing over 2 columns, the caption width is set to two thirds of the text width (See Fig. ??, Fig. ??).

The `float` environment is programmed to be automatically set by `\footnotesize` (8pt).

## 2.7 How to Use `\newtheorem`

Input Example :

```
\newtheorem{guess}{Theorem}
\begin{guess}[Fermat]
There do not exist integers ...
from \LaTeX{} Book.
\end{guess}
```

Output Example :

**Theorem 1** (Fermat): There do not exist integers ...  
from  $\LaTeX$  Book.

## 2.8 Footnotes

The footnote mark is reset on each page. The footnote on the previous page begins with <sup>†</sup>, and when there is a footnote on the following page, it also begins with <sup>†</sup>. As the footnote counter increases, the footnote marks proceed as follows. <sup>†</sup>, <sup>††</sup>, <sup>†††</sup>, ..., <sup>†††††</sup>, \*, \*\*, \*\*\*.

## 2.9 Citations and `thebibliography` environment

The command for citations, `\cite` is a slight modification of `citesort.sty`. For instance, if typed as follows, `\cite{latexbook, texbook, bibunsho, Abrahams, impress, jiyuu, ohno}` it collapses a list of three or more consecutive numbers and sorts the numbers before collapsing them [?], [?], [?], [?], [?], [?], [?], [?], [?]. In the standard style, it would turn out as [2,1,3,14,8,7,6].

## 2.10 Some Other Macros

The following macros are defined in this style file. Use them as necessary.

- `\QED` is defined as the macro to output  $\square$ , which indicates “End of Proof” [?, ]. Note that when you use `\hfill\Box$` and the character immediately before  $\square$  reaches the right margin,  $\square$  is positioned at the beginning of the next line. Use `\QED` to prevent this. To output  $\square$ , `\usepackage{latexsym}` is required as a package.
- `\halflineskip` and `\onelineskip` generate some vertical space,  $1/2\backslashbaselineskip$  and  $1\backslashbaselineskip$  respectively.
- As shown in Table ??, the macros “`\RN{}`” and “`\FRAC{ }{ }`” are defined [?], [?, ].

## 3. Typing

### 3.1 Typing Rules

1. For italic corrections, be sure to use ( $\setminus$ ).
2. As in *et al.* or *etc.*, when a period is used after a lowercase letter in the middle of a sentence, use `etlal.l` or `etc.l` to tell  $\TeX$  that it is not the end of a sentence.  
As in *Mr.*, to prevent a line-break there, use `Mr.~`. When there is a period immediately after an uppercase letter at the end of a sentence, use `U.S.A@.`, `NEC@.` and so on to tell  $\TeX$  that it is the end of a sentence.
3. With respect to Figure, Section, and Equation, when these words appear at the beginning of a sentence, they should be spelt out in full, e.g., “Figure 1 shows ...”. When they appear in the middle of a sentence, abbreviations, e.g., “in Fig. 1”, “in Sect. 2”, “in Eq. (3)” should be used.
4. There should be no space after opening or before closing parentheses as in (`wordl`).
5. The difference in the use of the following should be noted; hyphen (–), en dash (—), and em dash (—). A hyphen is used in connecting English-language words as in “well-known”, and an en dash is used when expressing a range as in “pp.298–301”. An em-dash (—) should be used to concatenate two sentences.

[ e.g. ] The em-dash is even longer—it is used as

**Table 1** \RN and \FRAC

\RN{2}	\RN{117}	\FRAC{\pi}{2}	\FRAC{1}{4}
II	CXVII	$\pi/2$	$1/4$

punctuation, as in this sentence, and you get it by typing --- [?, ].

The double-dash “—” command (\ddash) which is to be used between a main title and a sub-title is defined in this file.

6. \, \hfil\break, \linebreak and so on for making line-breaks in a paragraph should be used with taking into account corrections which may be made later on.
7. It is not recommendable to use the \ command for a purpose other than alignment, especially to make wider space.  
If the \ command is inserted before a blank line or the \ command is used twice in succession, the vertical space will be widen, but the Underfull \hbox message will appear often and it may lead you to overlook more important messages [?, ]. \par\noindent, \hfil\break, Follow the instructions in “Some Other Macros” in Section ??.
8. For the descriptions of program lists, etc. for which indents are important, do not use \, etc. for line-breaks but try to use the list environment or the tabbing environment so that later corrections will be easier.

### 3.2 Typing Equations

For general information on the typing of equations, see the references. For typing complicated equations, consider the use of the amsmath package.

#### 3.2.1 Notes

1. In the maths mode, the difference in the use of minus, hyphen and en dash should be noted.  
For example, be aware of the difference in the following.  
 $t-th \Rightarrow$  minus  
 $t\text{-}th \Rightarrow$  hyphen  
 $A^{\{\rm b\}\mbox{\tiny -}\{\rm c\}} \Rightarrow$  hyphen  
 $A^{\{\rm b\}\mbox{\tiny --}\{\rm c\}} \Rightarrow$  en dash  
 $A^{\{b-c\}} \Rightarrow$  minus
2. In equations, < and > are often used as parentheses, but they are recognized as the less-than and greater-than signs respectively and a space is generated after and before them. When you wish to use these

symbols as parentheses, use \langle or \rangle.

3. For alignment of equations crossing over multiple lines, when the equation begins with + or -, such + or - is assumed to be a unary operator (i.e. the space after/before + in +x and x+y changes). Therefore, when a equation of multiple lines begins with + or -, it is necessary to indicate that it is a binary operator [?, ].

```
\begin{eqnarray}
y &=& a + b + c + \dots + e \\
&& & & \& \mbox{} + f + \dots
\end{eqnarray}
```

4. As T<sub>E</sub>X does not necessarily make a line-break in an equation (\$...\$) at an appropriate point in the paragraph, it is recommended that \allowbreak be used in such a case [?, ].

#### 3.2.2 Long Equations

Below are some hints to how to deal with the case in which an equation overlaps equation numbers or goes beyond the margin.

##### Example 1

$$y = a+b+c+d+e+f+g+h+i+j+k+l+m+n(1)$$

As shown above, when an equation overlaps or is so close to equation numbers, you can place \! before and after the binary operator symbol or another symbol to shorten the distance.

```
\begin{equation}
y\!=\!a\!+\!b\!+\!c\!+\!\dots\!+\!n
\end{equation}
```

If this does not solve the problem, type the following:

```
\begin{eqnarray}
y &=& a+b+c+d+e+f+g+h\nonumber \\
&& & & \& \mbox{}+i+j+k+l+m+n
\end{eqnarray}
```

and then you will get the following.

$$y = a + b + c + d + e + f + g + h + i + j + k + l + m + n \tag{2}$$

If you do not want to break the equation in the middle, type the following:

```
\mathindent=0mm % <-- [1]
\begin{equation}
y=a+b+c+d+e+f+g+h+i+j+k+l+m+n
\end{equation}
\mathindent=7mm % <-- [2] default
```

and then you will get the following and the equation will be aligned to the left margin ([1]).

$$y = a + b + c + d + e + f + g + h + i + j + k + l + m + n(3)$$

When you do this, be sure to get the `\mathindent` parameter back to the original state after the equation ([2]).

**Example 2**

$$\iint_S \left( \frac{\partial V}{\partial x} - \frac{\partial U}{\partial y} \right) dx dy = \oint_C \left( U \frac{dx}{ds} + V \frac{dy}{ds} \right) ds$$

As shown in Example 2, if it is long up to = and the equation goes beyond the margin or overlaps equation numbers, use the following:

```
\begin{eqnarray}
\lefteqn{\iint_S}
\left(\frac{\partial V}{\partial x} - \frac{\partial U}{\partial y}\right)
dx dy \quad \nonumber \\
&= \oint_C \left( U \frac{dx}{ds} + V \frac{dy}{ds} \right) ds
\end{eqnarray}
```

If `\lefteqn` is used and then you will get the following.

$$\iint_S \left( \frac{\partial V}{\partial x} - \frac{\partial U}{\partial y} \right) dx dy = \oint_C \left( U \frac{dx}{ds} + V \frac{dy}{ds} \right) ds \tag{5}$$

**Example 3**

$$A = \begin{pmatrix} a_{11} & a_{12} & \dots & a_{1n} \\ a_{21} & a_{22} & \dots & a_{2n} \\ \vdots & \vdots & \ddots & \vdots \\ a_{m1} & a_{m2} & \dots & a_{mn} \end{pmatrix} \tag{6}$$

For the example above, the `array` environment is used to provide a clear explanation. If the `array` environment is used and an equation goes beyond the margin, before changing the font size of the entire equation with `\small`, try the following.

```
\begin{equation}
\arraycolsep=3pt % <--- [1]
A = \left(
\begin{array}{@{\hspace{2pt}}cccc@{\hspace{2pt}}}
% [2]
a_{11} & a_{12} & \ldots & a_{1n} \\
a_{21} & a_{22} & \ldots & a_{2n} \\
\vdots & \vdots & \ddots & \vdots \\
a_{m1} & a_{m2} & \ldots & a_{mn}
\end{array}
\right)
\end{equation}
```

It is recommended to use [1] to make the value of `\arraycolsep` smaller, or [2] to use the `@` expression (Default is 5 pt).

$$A = \begin{pmatrix} a_{11} & a_{12} & \dots & a_{1n} \\ a_{21} & a_{22} & \dots & a_{2n} \\ \vdots & \vdots & \ddots & \vdots \\ a_{m1} & a_{m2} & \dots & a_{mn} \end{pmatrix} \tag{7}$$

Compare (??) and (??).

For the `\matrix` command and the `\pmatrix` command which are used to form a matrix, the `\quad` is inserted between columns. To shorten the distance, change the definition of the `\def\quad` in the display equation environment.

```
\begin{equation}
\def\quad{\hspace{.75em}\relax}
% Default is \hspace{1em}
A = \pmatrix{
a_{11} & a_{12} & \ldots & a_{1n} \\
a_{21} & a_{22} & \ldots & a_{2n} \\
\vdots & \vdots & \ddots & \vdots \\
a_{m1} & a_{m2} & \ldots & a_{mn}
}
\end{equation}
```

$$A = \begin{pmatrix} a_{11} & a_{12} & \dots & a_{1n} \\ a_{21} & a_{22} & \dots & a_{2n} \\ \vdots & \vdots & \ddots & \vdots \\ a_{m1} & a_{m2} & \dots & a_{mn} \end{pmatrix} \tag{8}$$

If any of the above does not solve the problem, surrounding the display equation environment with `\small`, `\footnotesize`, etc. may solve the problem.

**4. Submission of Data**

- A source file should constitute a single file.
- Source files required for compilation, such as the original macro file created by authors, special macro files, etc. must be submitted.
- The submitted floppy disk must be in MS-DOS or Mac Format. A special format of a word processor, etc. should be avoided. Acceptable formats are: MS-DOS, NEC PC Format (including EPSON) (1.2M bytes with 8 sectors/track [2HD], 640K bytes with 8 sectors/track [2DD]) or IBM PC Format (including IBM compatible) (1.2M bytes with 15 sectors/track [2HC], 720K bytes with 9 sectors/track [2DD]). In case of UNIX, use tar command or copy to an FD with `mcopy`, etc.
- Figures must be on POSTSCRIPT. The final printing is on POSTSCRIPT.

**Acknowledgement**

The following are the references related to  $\TeX$  including those referenced in preparation of this class file.

**References**

[1] D.E. Knuth, The  $\TeX$  book, Addison-Wesley, 1989.  
 [2] L. Lamport,  $\LaTeX$ : A Document Preparation System, Addison-Wesley, 1990.  
 [3] H. Okumura,  $\LaTeX$ , Gijutsu Hyoron, 1991.

- [4] T. Nodera, Rakuraku L<sup>A</sup>T<sub>E</sub>X, Kyoritsu Shuppan, 1990.
- [5] K. Itoh, L<sup>A</sup>T<sub>E</sub>X Total Guide, Shuwa System Trading, 1991.
- [6] Y. Ohno, ed., T<sub>E</sub>X Guidebook, Kyoritsu Shuppan, 1989.
- [7] H. Isozaki, L<sup>A</sup>T<sub>E</sub>X Jiyu Jizai, Science-sha, 1992.
- [8] Y. Sagitani, Japanese L<sup>A</sup>T<sub>E</sub>X Style Book vols.1-3, Impress, 1992-1994.
- [9] T. Nodera, Try Again A<sup>M</sup>S-L<sup>A</sup>T<sub>E</sub>X, Kyoritsu Shuppan, 1991.
- [10] T. Furukawa and T. Iwakuma, The Use of Macro Packages and Style Files of L<sup>A</sup>T<sub>E</sub>X (styleuse.tex), 1993.
- [11] S. Fujita, L<sup>A</sup>T<sub>E</sub>X for Chemists and Biochemists—The Guide to Document Preparation by Personal Computer, Tokyo Kagaku Dojin, 1993.
- [12] R. Seroul and S. Levy, A Beginner's Book of T<sub>E</sub>X, Springer-Verlag, 1989.
- [13] V. Eijkhout, T<sub>E</sub>X by Topic, Addison-Wesley, 1991.
- [14] P.W. Abrahams, T<sub>E</sub>X for the Impatient, Addison-Wesley, 1992.
- [15] S. von Bechtolsheim, T<sub>E</sub>X in Practice, vols.I-IV, Springer-Verlag, 1993.
- [16] G. Grätzer, Math into T<sub>E</sub>X—A Simple Introduction to A<sup>M</sup>S-L<sup>A</sup>T<sub>E</sub>X, Birkhäuser, 1993.
- [17] H. Kopka and P.W. Daly, A Guide to L<sup>A</sup>T<sub>E</sub>X, Addison-Wesley, 1993.
- [18] M. Goossens, F. Mittelbach, and A. Samarin, The L<sup>A</sup>T<sub>E</sub>X Companion, Addison-Wesley, 1994.
- [19] N. Walsh, Making T<sub>E</sub>X Work, O'Reilly & Associates, 1994.
- [20] D. Salomon, The Advanced T<sub>E</sub>Xbook, Springer-Verlag, 1995.
- [21] S. Eguchi, Ghostscript Another Manual, Softbank, 1997.
- [22] K. Nakano, Japanese L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub> Book, ASCII, 1996.
- [23] H. Okumura, L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub>, Gijutu Hyoron, 1997.
- [24] S. Fujita, L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub> revised, Addison-Wesley Publishers Japan, 1996.
- [25] Otohe, S. Eguchi, pL<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub> for Windows Another Manual Vol.0-2, Softbank, 1996-1997.
- [26] M. Goossens, F. Mittelbach, and A. Samarin, The L<sup>A</sup>T<sub>E</sub>X Companion, ASCII, 1998.
- [27] M. Goossens, S. Rahts, and F. Mittelbach The L<sup>A</sup>T<sub>E</sub>X Graphics Companion, Addison-Wesley, 1997.

## Appendix C: Final Notes

When it is compiled with NTT version, be aware that `Overfull \hbox`, `Underfull \hbox` may repeatedly appear.



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## Appendix A: Difference from ieice.sty

Differences from L<sup>A</sup>T<sub>E</sub>X 2.09 Base `ieice.sty` are as follows.

- `\FIELD`, `\VOL`, `\NO`, `\YEAR`, `\TYPE`, `\THEME` and `\TITLE` are deleted, and changed `\field`, `\vol`, `\no`, `\title`, etc.
- `\received`, `\revised` and `\final` are changed. The `SUMMARY` environment has a new name, `summary`.
- The case where the author has multiple affiliates is treated.

## Appendix B: Fonts

At the final output, Times New Roman, not CM Font had been used except for equations (not Shaken, POSTSCRIPT Font), but note that CM Font is used for POSTSCRIPT output from now on.