Some Precautions in Using Latex
(Internal Use Only)

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I. Introduction

Some precautions in using latex are summarized in this document. This document is intended for those people who have some basic knowledge in using Latex. Readers may refer it before writing a manuscript, or check the latex documents before submission to the editor or to the co-authors.

The rest of this document is organized as follows: Precautions and some examples are provided in Section II. Some skills in making the layout look better are presented in Section III. Here, when mentioning Section II or Section III, we should use '\ref{}' after the word 'Section'. Remember DO NOT use the Roman numerals, e.g., II or III, directly.

II. Precautions and Some Examples

In this section, we will give three precautions and several examples on the usage of equations, definitions and figures, respectively. Some wrong examples are also provided to reminder the readers not to make similar mistakes.

A. Usage of Equations

Each equation should be defined in the form of '\label{}'. When citing the equation, DO NOT directly use the number, use '(\ref{})' instead. Also, pay more attentions to the punctuation after the equation, as well as the first word after punctuation, especially the upper case or lower case of the first letter.

1) Right Example: The code of Equation (1) which is used in this Latex document is shown in Fig 1. We defined (1) as '\label{equ:coverage_element}', and cite it using '(\ref{equ:coverage_element})'. In this example, there is a comma after the equation, so the next word 'where' begins with a lower case letter 'w'.

$$C_v = g(\tau_v),\tag{1}$$

where (1) is an example.

```
\begin{align}\label{equ:coverage_element}
C_{v}=g(\tau_v),
\end{align}
where (\ref{equ:coverage_element}) is an example.
```

Fig. 1.   A right example on how to use the equation.

2) Wrong Example: The wrong usage of equation is depicted in Fig. 2, where the equation is not defined, and it is cited directly using number 1. Besides, there is a comma after the equation, however, the next word 'Where' begins with a upper case letter 'W'.

```
\begin{align}
C_{v}=g(\tau_v),
\end{align}
Where (1) is an example.
```

Fig. 2.   A wrong example on the usage of equation.

B. Usage of Definitions

This subsection presents how to give definitions and how to cite them. Similar extensions can be applied to Theorem, Lemma, Remark, Proposition, Corollary and Algorithm. Each definition should be defined in the form of '\label{}'. When citing it, DO NOT directly use the number, use 'Definition \ref{}' instead.

1) Right Example: In Fig. 3, the definition is defined with '\label{Def:CP_Popularity}', and cite it using 'Definition \ref{Def:CP_Popularity}' after. The result of this code in Fig. 3 is shown below in blue color.

Definition 1. *CPs' Popularity: MUs' preferences towards CPs are regarded as CPs' popularity.*

We give an example of **Definition 1**.

```
\begin{definition}\label{Def:CP_Popularity}
CPs' Popularity: MUs' preferences towards CPs are regarded as CPs' popularity.
\end{definition}
We give an example of \textbf{Definition \ref{Def:CP_Popularity}}.
```

Fig. 3. A right example on how to give definition.

2) Wrong Example: In Fig. 4, the definition is not defined. It is cited directly using number 1. The outcome of the code in Fig. 4 is shown in blue color as follows.

Definition 1. *CP's Popularity. MUs' preferences towards CPs are regarded as CPs' popularity.*
We give an example of **Definition 1**.

```
\textbf{Definition 1. }\textit{CP's Popularity. MUs' preferences towards CPs are
regarded as CPs' popularity.}

We give an example of \textbf{Definition 1}.
```

Fig. 4. A wrong example on definition.

Although, the outcome of the wrong one looks like the right one. It is not convenient to reproduce this manuscript following the wrong example.

C. Usage of Figures

Readers are suggested to look at the code of this document to see how to name figures and cite them. In general, each figure should be defined in the form of '\label{}'. When one wants to cite it, DO NOT directly use the number, use 'Fig. \ref{}' instead.

III. MAKE LAYOUT LOOK BETTER

1) Put figures on the top of the page, using the command '\begin{figure}[tp!]'.

2) Use command '\bibliographystyle{IEEEtran}' and ' \bibliography{IEEEabrv,yourfilesname}' to generate the reference list.

3) For reviewing, one may remove the acknowledgement and author's biography parts if they are not required.

4) If the manuscript has two columns, use the command '\balance' to balance the last page.

This document is for internal use only, so it is not very strict. If there are some mistakes, do not hesitate to contact Tingting Liu (E-mail: liutt26@gmail.com). Comments are also very welcome.