

Lazy LaTeXing with RDx

Yusuke Kubota

November 4, 2008

1 What is RDx, why is it useful?

Editing LaTeX files isn't easy. Even if you use emacs (in which you have powerful editing modes such as AUCTeX and yateX), in order to edit LaTeX files more or less comfortably, you need to remember the keystrokes associated with many completion functions and the code itself looks very much cluttered (even if you use font-lock).

For editing html, there is a simple alternative to directly editing the source files: the so-called 'lightweight markup languages'. That is, you edit text files with simplified markups for structures (such as section headings and itemized lists) and then convert these files to html. There are various conventions for doing this, the most popular of which is perhaps Markdown (<http://daringfireball.net/projects/markdown/>).

This document describes a way of doing precisely the same thing in LaTeX, by using an extended variant of one such lightweight markup language called RD. RD was originally designed for writing documents for the script language Ruby. In this document, I describe my own extension to RD (which I call RDx, 'RD extended'), which has some additional markups that facilitate writing LaTeX codes easily (especially, writing linguistics papers).

Note:

This short manual is actually the first document that I wrote in RDx. It's not particularly fancy, but you can see that it has enough expressive power for ordinary papers and handouts. My own impression is that this makes the whole editing process much easier and much more efficient than directly editing LaTeX source files. Perhaps the most remarkable feature of RDx is that it provides a seamless connection to LaTeX in allowing one to embed LaTeX codes inside the document WITHOUT any explicit declaration (see section 3.6). Thus, wherever needed, you can DIRECTLY use whatever LaTeX command you like to use to supplement the (deliberately) impoverished expressive power of RDx.

Warning:

I deviate freely from the original conventions of RD and will NOT specifically mention such deviations in what follows, since they are either irrelevant (that is, if you are not interested in using RD for purposes other than converting the files to LaTeX) or obvious (that is, if you know the original conventions). For a description of the original RD format, see this Wikipedia entry (http://en.wikipedia.org/wiki/Ruby_Document_format).

2 Using RDx (overall procedure)

The overall procedure is as illustrated in the following chart:

```
filename.rdx =====> filename.tex =====> filename.{ps,pdf}
      (rdx2latex.pl)          (latexmk, etc.)
```

You edit files in the RDx format (with extension `.rdx`) and then convert them to LaTeX files using a perl script `rdx2latex.pl`. The rest is the same as usual: compile the `.tex` file and produce outputs in whatever format you like (`.ps` or `.pdf`).

3 Using RDx (editing RDx files)

3.1 Section headers

Section and subsection headers are indicated by lines starting with `=`. The number of `=` indicates the depth of embedding. Thus, the following input:

```
= Comparison with syntactic approaches

Here we compare the proposed pragmatic analysis with previous
syntactic approaches ...

== Previous syntactic accounts

=== Thor (1981, 1985, 1987)

Perhaps the most famous syntactic account of VP ellipsis is the
one advocated by Au Thor (Thor 1981, 1985, 1987). ...
```

produces an output that looks like:

```
1 Comparison with syntactic approaches

Here we compare the proposed pragmatic analysis with previous syntactic ap-
proaches ...

1.1 Previous syntactic accounts

1.1.1 Thor (1981, 1985, 1987)

Perhaps the most famous syntactic account of VP ellipsis is the one advocated by
Au Thor (Thor 1981, 1985, 1987). ...
```

That is, `=` is for `\section`, `==` for `\subsection` and `===` for `\subsubsection`.

3.2 Emphasis, boldface and italics, quotation marks

These are all easy. The following input:

```
The word "dangerous" is *not* dangerous. Two asterisks for
**boldface**. Single 'quotes' are converted appropriately.
```

converts to:

```
The word dangerous is NOT dangerous. Two asterisks for boldface. Single 'quotes'
are converted appropriately.
```

(when `\emph` is redefined as `\textsc`).

Note:

You should use " (`\textit`) and * (`\emph`) for different purposes. Linguistic expressions are almost always typeset in italics. So you should use " (rather than *) for the 'italics for linguistic expressions'. But emphasis in the text is not necessarily typeset in italics. So, you should consistently use * for indicating emphasis (and not use " for that purpose). This will enable you to print emphasis with SMALL CAPS (by redefining `\emph` appropriately) if it later becomes necessary to do.

3.3 Itemized environments

Itemized lists can simply be written with lines starting with '- ' (a hyphen followed by a white space):

```
- first item
- second item
- third item
```

- first item
- second item
- third item

For embedded lists, add two white spaces before -. Thus:

```
- first item
  - first embedded item
  - second embedded item
- second item
  - first embedded item in the second item
```

- first item
 - first embedded item
 - second embedded item
- second item
 - first embedded item in the second item

Numbered lists can be produced with lines starting with ‘n. ’ (where n is a number):

```
1. first item
4. second item
3. third item
```

```
(i) first item
(ii) second item
(iii) third item
```

Note that the actual numbers in the .rdx file are irrelevant.

You can also embed a numbered list inside bullet points (and vice versa):

```
- first item
  1. first embedded item
  2. second embedded item
- second item
  - first embedded item in the second item
```

```
• first item
  (i) first embedded item
  (ii) second embedded item
• second item
  - first embedded item in the second item
```

3.4 Quotes and verbatim

>> corresponds to `\begin{quote}` and `\end{quote}`.

So, from:

```
Sir William Jones remarked:
>>
The Sanscrit language, whatever be its antiquity, is of a
wonderful structure; more perfect than the Greek, more copious
than the Latin, and more exquisitely refined than either, yet
bearing to both of them a stronger affinity, both in the roots
of verbs and the forms of grammar, than could possibly have been
produced by accident; ...
>>

The above passage from ‘Third Anniversary Discourse, on the
Hindus’ (1786) ...
```

you get

Sir William Jones remarked:

The Sanscrit language, whatever be its antiquity, is of a wonderful structure; more perfect than the Greek, more copious than the Latin, and more exquisitely refined than either, yet bearing to both of them a stronger affinity, both in the roots of verbs and the forms of grammar, than could possibly have been produced by accident; ...

The above passage from ‘Third Anniversary Discourse, on the Hindus’ (1786) ...

Likewise, `~~` (two tildes) is for `\begin{verbatim} ... \end{verbatim}`.

So, the following stuff is typeset verbatim:

~~

In the verbatim environment, you can write things like
`\item`, `\begin{document}`, etc.

~~

So, the following stuff is typeset verbatim:

In the verbatim environment, you can write things like
`\item`, `\begin{document}`, etc.

Enclosing texts with `|` (vertical bar) as in `|foobar|` has the same effect as LaTeX’s `\verb|foobar|` (more accurately, `rdx2latex.pl` converts `|foobar|` to `\verb|foobar|`).

3.5 Example environment (gb4e)

If you use `gb4e`, you can write example lists in the following way in your `.rdx` file, which is converted to the `gb4e` example environment in the `.tex` output. (If you use a different example environment, you can modify `rdx2latex.pl` so that the output will be in the appropriate format.)

Here is some example:

Sentences (`<duck>`) and (`<planes>`) are ambiguous:

`@ambiguous`

`@duck`

I saw her duck.

`@planes`

Flying planes can be dangerous.

`@chomsky`

Colorless green ideas sleep furiously. `\hfill <p>chomsky:1957a`

The famous example (`<chomsky>`) from `<>chomsky:1957a` has been cited by ...

Sentences (1a) and (1b) are ambiguous:

- (1) a. I saw her duck.
- b. Flying planes can be dangerous.
- (2) Colorless green ideas sleep furiously. (Chomsky, 1957)

The famous example (2) from Chomsky (1957) has been cited by ...

The above example also illustrates how cross-reference works. Each example starts with `@name`, where `name` is the label for cross-reference. You can refer to these labels by writing `<name>`.

Assuming that you use `natbib`, `<>key`, `<p>key` and `<s>key` convert to `\citet{name}`, `\citep{name}` and `\cites{name}`, respectively.

Note:

`\cites` is just the following macro:

```
\newcommand{\cites}[1]{\citeauthor{#1}'s \citeyearpar{#1}}
```

3.6 Other commands

What `rdx2latex.pl` does is just to convert the markups in `RDx` to the corresponding `LaTeX` markups. So, if a command that you use in your `LaTeX` file is not defined in `RDx`, you can either extend `RDx` the way you like and modify `rdx2latex.pl` accordingly or simply write the `LaTeX` code in your `.rdx` file. (And in most cases nothing wrong happens; if something wrong happens, inspect `rdx2latex.pl` or please let me know.)

4 Bug reports, etc.

There are probably bugs or you might find some feature(s) lacking. For bug reports, requests and suggestions, please contact me (email address: kubota@ling.ohio-state.edu).

References

Chomsky, Noam. 1957. *Syntactic Structures*. The Hague: Mouton.