Dear Linguists: Welcome to LaTeX

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1 Introduction

This is a demo document of some of the ways LaTeX is useful for linguists. Feel free to play around editing it![1]

1.1 A few pointers

The key thing to remember about LaTeX is that if you want to know how to do something, google it.

The main thing that googling will tell you is to add a specific package. This means that you should add it to your preamble (see above in the source code) along with all the other \usepackage{xyz} commands. I've put some of the most common linguist packages in this document.

2 Making Fancy Symbols

2.1 IPA

To make IPA symbols you add \usepackage{tipa} to your preamble and then type your symbols using text commands. There's a whole document of them here: `http://www.tug.org/tugboat/tb17-2/tb51rei.pdf` or by googling TIPA LaTeX or IPA LaTeX.

*LaTeX source code for this file: `http://db.tt/jXvJ8pRM`

[1]More comprehensive guide: `http://en.wikibooks.org/wiki/LaTeX`. Tools for linguists: `http://www.essex.ac.uk/linguistics/external/clmt/latex4ling/`

(1) aj hɑɹt lŋgwɪstɪks [2]

(2) More symbols: əħ ə β ɗ ɻ ʟ ʊ

2.2 Semantics

You can also make semantics symbols using math mode. You need to have \usepackage{amsmath} up in the preamble, and then to trigger it, you surround a command or set of commands with dollarsigns.

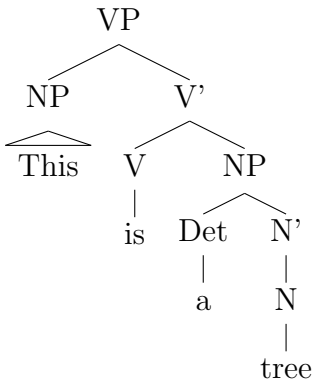
(3) $\neg\forall x[\ \text{LANGUAGE}(x) \rightarrow \exists y[\ \text{LINGUIST}(y)\&\ \text{STUDIES}(y)(x)]]$

This means something like 'it's not the case that for all x, if x is a language, then there exists a y such that y is a linguist and y studies x' i.e. not all languages have a linguist that studies them. You can google LaTeX math mode to learn how to make other symbols.

3 Making trees

I use the package qtree for making trees. It's fairly similar to labelled bracket notation. Documentation is available here `http://www.essex.ac.uk/linguistics/external/clmt/latex4ling/trees/qtree/` or have a look at the source code at left.

(4)



[2] I'm not really sure what the vowel is in "heart". This is just a demo. Humour me.

4 Automatic numbering and aligning

By including the package linguex, you can get your examples to look like the kind you see in linguistics papers. (More documentation here: `http://texdoc.net/texmf-dist/doc/latex/linguex/linguex-doc.pdf`)

The main example command is \ex., to which you can add \a. and so on to make sub-examples.

(5) This is an example.

(6) a. A sub-example
    b. Another sub-example

4.1 Referring to examples

You can use the command \label{xyz} to label an example or sub-example, or a section or subsection. Then if you want to refer to it later, you use \ref{xyz}, where xyz is whatever name you've picked for that example.

So, since I defined the label 'tree' for the tree example in (4) above, I can refer to it using \ref{tree}.

If I add another example above (4), then both the example number beside the tree itself and all references to it in the text will automatically update to (5). This is really useful when making multiple drafts of something.

You can refer to both main examples, like (6) and sub-examples, like (6a). Give them whatever names you want.

4.2 Aligning 3-line glosses

When you're writing about a language that isn't English, you may have to give both word-by-word or morpheme-by-morpheme translations as well as a free translation.

Linguex makes it easy to automatically align the different parts of these examples, using the \exg. command:

(7) Quier-o ver a mi-s amig-a-s
    want-1SG see.INF to my-PL friend-FEM-PL
    'I want to see my friends'

Use \ag. \bg. and so on for glossed sub-examples.

5 Some general examples of other LaTeX features

This and subsequent sections are by the creators of writelatex.com, not by AllThingsLinguistic. I've kept them in because they might be useful.

5.1 Sections

Use `sections` and `subsections` to organize your document. LaTeX handles all the formatting and numbering automatically. Use `ref` and `label` for cross-references — this is Section 5, for example.

5.2 Tables and Figures

Use `tabular` for basic tables — see Table reftab:widgets, for example. You can upload a figure (JPEG, PNG or PDF) using the files menu. To include it in your document, use the `includegraphics` command (see the comment below in the source code).

Item	Quantity
Widgets	42
Gadgets	13

5.3 Mathematics

LaTeX is great at typesetting mathematics. Let $X_1, X_2, \ldots, X_n$ be a sequence of independent and identically distributed random variables with $\mathrm{E}[X_i] = \mu$ and $\mathrm{Var}[X_i] = \sigma^2 < \infty$, and let

$$S_n = \frac{X_1 + X_2 + \cdots + X_n}{n} = \frac{1}{n}\sum_{i}^{n} X_i$$

denote their mean. Then as n approaches infinity, the random variables $\sqrt{n}(S_n - \mu)$ converge in distribution to a normal $\mathcal{N}(0, \sigma^2)$.

5.4 Lists

You can make lists with automatic numbering ...

1. Like this,
2. and like this.

. . . or bullet points . . .

- Like this,
- and like this.