

# Org-mode Latex Export Example

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## 1 Version information

Emacs version: GNU Emacs 24.5.1 (x86\_64-unknown-linux-gnu, GTK+ Version 3.10.8)  
of 2015-05-04 on dflt1w  
org version: 8.2.10

## 2 Some $\text{\LaTeX}$ links

- Link formatting
  - This is described in the  $\text{\LaTeX}$  [hyperref](#) manual.
  - This is an example how to get links that are not framed by red rectangles, but just have a blue font color

#+LaTeX\_HEADER: \hypersetup{colorlinks=true, linkcolor=blue}

- Building a L<sup>A</sup>T<sub>E</sub>X Document Class
  - <http://tutex.tug.org/pracjourn/2005-4/hefferon/hefferon.pdf>

### 3 Equations

This is an example for an equation

$$cores_{extrapol} = cores_{intern2013} \cdot of fl\% \cdot \frac{gf \cdot (volume_{user} + volume_{intern})}{volume_{intern}}$$

This is an example for an equation embedded in the text  $cores_{extrapol} = cores_{intern2013} \cdot of fl\% \cdot \frac{gf \cdot (volume_{user} + volume_{intern})}{volume_{intern}}$  The text continues after the formula.

Here follows a numbered equation that also can be referenced like in the following parentheses (eq 1).

$$cores_{extrapol} = cores_{intern2013} \cdot of fl\% \cdot \frac{gf \cdot (volume_{user} + volume_{intern})}{volume_{intern}} \quad (1)$$

## 4 Figures

I can reference the figure like this: Fig. ??.

Note

- there must be no empty line between the picture's link and the meta definitions for name, caption, etc.
- The OPTION `tex:t` must be set for references to work.

Specifier	Permission
h	Place the float here, i.e., approximately at the same point it occurs in the source text (however, not exactly at the spot)
t	Position at the top of the page.
b	Position at the bottom of the page.
p	Put on a special page for floats only.
!	Override internal parameters $\text{\LaTeX}$ uses for determining "good" float positions.
H	Places the float at precisely the location in the $\text{\LaTeX}$ code. Requires the float package, e.g., float. This is somewhat equivalent to h!.

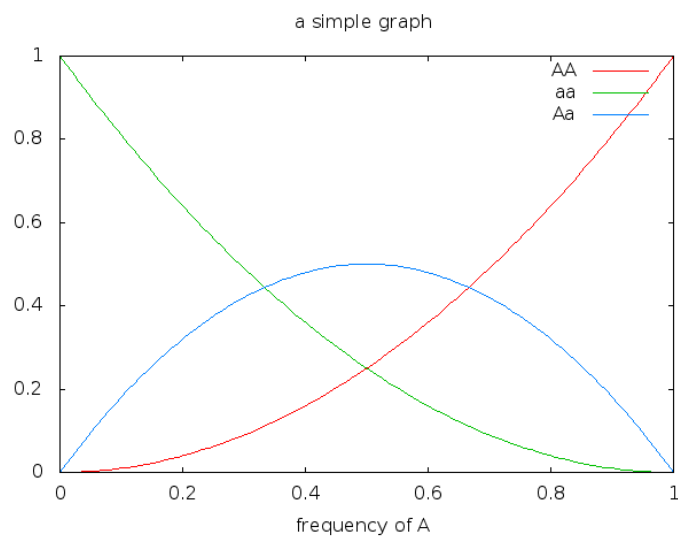


Figure 1: A simple graph

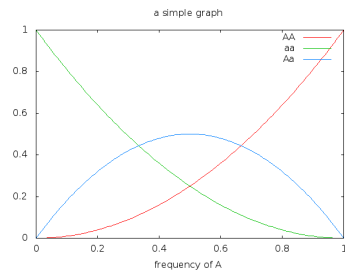


Figure 2: A simple graph at half the width

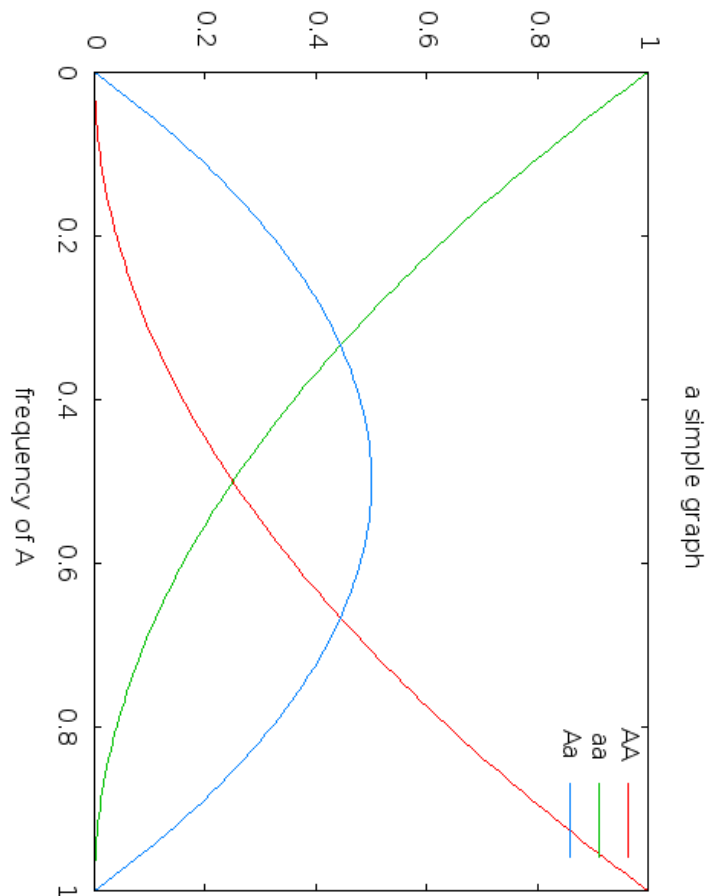


Figure 3: A simple graph rotated 270°

A pdf can be included the same way, e.g. by specifying

```
#+ATTR_LATEX: :options page=10 :width 10cm
[[file:myfig.pdf]]
```

## 4.1 inclusion of SVG graphics

q.v. my plantuml related documentation.

## 5 Footnotes and margin notes

This is a text with a footnote <sup>1</sup>. The footnote will be displayed on the bottom of the current page. One can also place all footnotes in a separate chapter called *footnotes* at the end of the org file<sup>2</sup>.

Margin notes one can set by directly inlining the L<sup>A</sup>T<sub>E</sub>X command as demonstrated here. By default the margin notes are justified. This often looks awkward. Using this [stackexchange answer](#), I define a macro which yields:

I like the margin notes to be left aligned instead of being justified.

*a default  
margin note*

*a left aligned  
margin note  
that looks  
nicer*

## 6 Tables

### 6.1 nicer table formatting using booktab style

Some [interesting tips](#) for booktab style tables by M. Püschel.

Whether table captions appear above or below the table can be configured using this variable:

```
(setq org-latex-table-caption-above nil)
```

Table 1: default table			
Column 1	Column 2	Column 3	Column 4
1	10	100	1000
2	11	101	1001
3	12	102	1002
4	13	103	1003
5	14	104	1004
15	60	510	5010

Table 2: table using booktabs style			
Column 1	Column 2	Column 3	Column 4
1	10	100	1000
2	11	101	1001
3	12	102	1002
4	13	103	1003
5	14	104	1004
15	60	510	5010

---

<sup>1</sup>This is the footnote text

<sup>2</sup>this is a footnote from the end of the org document

## 6.2 Math in tables

Use *math* or *inline math* together with *array* environment.

Here we use the simple math mode

<i>Column1</i>	<i>Column2</i>
$\sin(x)$	$\tan(x)$

This uses the `inline-math` mode

<i>Column1</i>	<i>Column2</i>
$\sin(x)$	$\tan(x)$

## 6.3 Table font size

The font size is determined by the `:font` switch in the `#+ATTR_LATEX` line.

Column 1	Column 2
Some text	Some other text
10	20

Sidenote:

- When a caption is used, the latex export uses a `table` environment.
- The previous captionless table generates a `tabular` environment.

Table 3: Table small size

Column 1	Column 2
Some text	Some other text
10	20

Table 4: Table footnotesize

Column 1	Column 2
Some text	Some other text
10	20

Table 5: Table tiny size

Column 1	Column 2
Some text	Some other text
10	20

## 6.4 Sidewaystable

Using the `sidewaystable` together with a `:placement [H]` specifier requires that one uses the `rotfloat` environment.

Table 6: A sidewaysstable					
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
1	10	100	1000	example	result
2	11	101	1001	example	result
3	12	102	1002	example	result
4	13	103	1003	example	result
5	14	104	1004	example	result
6	15	105	1005	example	result
7	16	106	1006	example	result

## 7 Text font size

Text Example Text Example Text Example Text Example Text Example (default) Text Example Text Example Text Example Text Example Text Example (default)

## 8 Index creation

Must be solved by including L<sup>A</sup>T<sub>E</sub>X source commands:

- Requires in the preamble
  - `\usepackage{makeidx}`
  - `\makeindex`
- Mark up words by `\index{word}`
- At the location where the index should appear, use `\printindex`
- to render the document, a call to the `makeindex` binary needs to be added in the build command. I use the following definition in my `init.el`.

```
(setq org-latex-pdf-process
  (let
    ((cmd (concat "pdflatex -shell-escape -interaction nonstopmode"
      " -output-directory %o %f")))
    (list cmd
      "cd %o; if test -r %b.idx; then makeindex %b.idx; fi"
      cmd
      cmd)))
```



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Emacs 24.5.1 (Org mode 8.3.1)