AN EXAMPLE OF THE USAGE OF THE TUFTE-HANDOUT STYLE

TUFTE-LATEX DEVELOPERS & THE LYX TEAM
OCTOBER 22, 2008

This document describes the *Tufte handout* LATEX document style. It also provides examples and comments on the style's use. It is based on the example file shiped with *tufte-handout.cls*, but adapted for the use with LyX.

The tufte-handout document class[1] defines a style similar to the style EDWARD TUFTE uses in his books and handouts. Tufte's style is known for its extensive use of sidenotes, tight integration of graphics with text, and well-set typography. This document aims to be at once a demonstration of the features of the tufte-handout document class and a style guide to its use.

[1] Cf. `http://ctan.org/tex-archive/macros/latex/contrib/tufte-latex`.

1 Page Layout

1.1 Headings and paragraph design

This style provides A- and B-heads (that is, *section* and *subsection*) demonstrated above.

If you need more than two levels of section headings, you'll have to define them yourself at the moment;[2] there are no predefined styles for anything below a *subsection*. As BRINGHURST points out in *The Elements of Typographic Style,*[3] you should "use as many levels of headings as you need: no more, and no fewer."

The Tufte-handout class will emit an error if you try to use `\subsubsection` and smaller headings.

[2] See see "Defining new sections" on page 4 for help with defining more heading levels.

[3] Robert Bringhurst. *The Elements of Typography*. Hartley & Marks, 3.1 edition, 2005. ISBN 0-88179-205-5.

IN HIS LATER BOOKS,[4] Tufte starts each section with a bit of vertical space, a non-indented paragraph, and sets the first few words of the sentence in SMALL CAPS. To accomplish this, use the NewThought character style (Edit ▷ TextStyle ▷ NewThought).

[4] Edward R. Tufte. *Beautiful Evidence*. Graphics Press, LLC, first edition, May 2006. ISBN 0961392177.

1.2 Sidenotes

One of the most prominent and distinctive features of this style is the extensive use of sidenotes. There is a wide margin to provide ample room for sidenotes and small figures. Any footnotes will automatically be converted to sidenotes.[5] If you'd like to place ancillary information in the margin without the sidenote mark (the superscript number), you can use the `\marginnote{some text}` LATEX command. The normal margin note will work as well, but it will look rather odd.

[5] This is a sidenote that was entered using the `\footnote` command.

This is Tufte's margin note. Notice that there isn't a number preceding the note, and there is no number in the main text where this note was written.

This is a normal margin note. [1] Don't use it.

1.3   References

References are placed alongside their citations as sidenotes, as well. This can be accomplished using the normal citation command.[6]

[6] The first paragraph of this document includes a citation.

The complete list of references may also be printed automatically by using Insert ▷ Lists&TOC ▷ BibTEX References... (see the end of this document for an example.) If you do not want to print a bibliography at the end of your document, use the `\nobibliography` LATEX command in its place.

2   Figures and Tables

Images and graphics play an integral role in Tufte's work. In addition to the standard *figure* and *tabular* floats, this class provides special figure and table environments for full-width floats.

Full page width figures and tables can be produced by using figure or table floats and clicking *Span Columns* in the float dialog. To place figures or tables in the margin, use the *MarginFigure* or *MarginTable* floats (see figure 1).

Figure 2 is an example of the wide figure float and figure 3 is an example of the normal figure float.

replace the box by your figure!

Figure 1: This is a margin figure. The figure will be put in the margin.

replace the box by your figure!

Figure 2: This is a wide figure (*span columns*). *Notice that this figure takes up the full page width.*

replace the box by your figure!

Figure 3: This is a normal figure. *Notice that this figure only takes up the main textblock width.*

Table 1 shows a table created with the `booktabs` package (this is border style "formal" in the tabular dialog). Notice the lack of vertical rules—they serve only to clutter the table's data.

Margin	Length
Paper width	$8^1/2$ inches
Paper height	11 inches
Textblock width	$6^1/2$ inches
Textblock/sidenote gutter	$3/8$ inches
Sidenote width	2 inches

Table 1: Here are the dimensions of the various margins used in the *Tufte-handout* class.

3   Full-width text blocks

In addition to the new float types, there is a *Full Width* environment that stretches across the main text block and the sidenotes area and ragged left:

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetuer id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

4   Typography

4.1   Typefaces

If the *Palatino* and *Bera Mono* typefaces are installed, this style will use them automatically. Otherwise, we'll fall back on the *Computer Modern* typefaces.

4.2   Letterspacing

This document class includes two new commands and some improvements on existing commands for letterspacing.

When setting strings of ALL CAPS or SMALL CAPS, the letterspacing—that is, the spacing between the letters—should be increased slightly.[7] The *AllCaps* character style (Edit ▷ TextStyle ▷ AllCaps) has proper letterspacing for strings of FULL CAPITAL LETTERS, and the *SmallCaps* character style (Edit ▷ TextStyle ▷ SmallCaps) has letterspacing for SMALL CAPITAL LETTERS. These commands will also automatically convert the case of the text to upper- or lowercase, respectively.

The normal *Small Caps* shape has also been redefined to include letterspacing. Its case is left as is, however. This allows one to use both uppercase and lowercase letters: THE INITIAL LETTERS OF THE WORDS IN THIS SENTENCE ARE CAPITALIZED.

[7] Robert Bringhurst. *The Elements of Typography*. Hartley & Marks, 3.1 edition, 2005. ISBN 0-88179-205-5.

5   Customization

5.1   Document class options

The tufte-handout class is based on the article document class. Therefore, you can pass any of the typical article options. There

are a few options that are specific to the tufte-handout document class, however.

- The *a4paper* option will set the paper size to A4 instead of the default US letter size.

- The *sfsidenotes* option will set the sidenotes in a sans serif typeface instead of the default roman.

- The *twoside* option will modify the running heads so that the page number is printed on the outside edge (as opposed to always printing the page number on the right-side edge in *oneside* mode).

- The *symmetric* option typesets the sidenotes on the outside edge of the page. This is how books are traditionally printed, but is contrary to Tufte's book design which sets the sidenotes on the right side of the page. This option implicitly sets the *twoside* option.

- The *justified* option sets all the text fully justified (flush left and right). The default is to set the text ragged right. The body text of Tufte's books are set ragged right. This prevents needless hyphenation and makes it easier to read the text in the slightly narrower column.

5.2 *Defining new sections*

As mentioned on page 1, the tufte-handout document class only defines *section* and *subsection* headings.

If you wanted to define, say, a *paragraph* heading, you could do it as follows:

```
\makeatletter
\renewcommand\paragraph{%
\@startsection{paragraph}% the name of the new section
{4}% the section level number
{0em}% indentation amount
{\baselineskip}% amount of space to leave before heading
{-1.5em}% amount of space to leave after heading
{\normalfont\itshape}% style
}
\makeatother
```

Place that code in Document ▷ Settings ▷ Preamble and you'll now be able to use \paragraph in LaTeX mode.

For more details on defining section levels, see *The LaTeX Companion*,[8] or use the *titlesec* package.

[8] Frank Mittelbach and Michel Goossens. *The LaTeX Companion*. Addison–Wesley, second edition, 2004. ISBN 0-201-36299-6.

6   Installation

To install the tufte-handout class, simply drop the *tufte-handout.cls* file into the same directory as your *.tex* file. Better, however, install it in your T E X M F tree (see the help manuals for details).

7   Support

7.1   Package Dependencies

The following is a list of packages that the tufte-handout document class relies upon. Packages marked with an asterisk are optional.

- geometry
- ragged2e
- chngpage
- paralist
- textcase
- footmisc
- natbib and bibentry
- placeins
- caption
- fancyhdr
- microtype*
- soul*
- palatino*
- beramono*

7.2   Tufte-LATEX Website

The website for the Tufte-LATEX packages is located at `http://code.google.com/p/tufte-latex/`. On our website, you'll find links to our svn repository, mailing lists, bug tracker, and documentation.

References

Robert Bringhurst. *The Elements of Typography*. Hartley & Marks, 3.1 edition, 2005. ISBN 0-88179-205-5.

Frank Mittelbach and Michel Goossens. *The LATEX Companion*. Addison–Wesley, second edition, 2004. ISBN 0-201-36299-6.

Edward R. Tufte. *Beautiful Evidence*. Graphics Press, LLC, first edition, May 2006. ISBN 0961392177.