## WEBDAV OVER COAP

Read/Write Web using Resource Constrained Devicess

## VAIBHAV BAJPAI

**Masters Thesis** 

School of Engineering and Science Jacobs University Bremen Bremen, Germany

Advisor: Prof. Dr. Jürgen Schönwälder

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## ABSTRACT

Short summary of the contents in English. . .

We have seen that computer programming is an art, because it applies accumulated knowledge to the world, because it requires skill and ingenuity, and especially because it produces objects of beauty.

— Donald E. Knuth [5]

## **ACKNOWLEDGMENTS**

Put your acknowledgments here.

Many thanks to everybody who already sent me a postcard!

Regarding the typography and other help, many thanks go to Marco Kuhlmann, Philipp Lehman, Lothar Schlesier, Jim Young, Lorenzo Pantieri and Enrico Gregorio<sup>1</sup>, Jörg Sommer, Joachim Köstler, Daniel Gottschlag, Denis Aydin, Paride Legovini, Steffen Prochnow, Nicolas Repp, Hinrich Harms, Roland Winkler, and the whole LATEX-community for support, ideas and some great software.

*Regarding LyX*: The LyX port was intially done by *Nicholas Mariette* in March 2009 and continued by *Ivo Pletikosić* in 2011. Thank you very much for your work and the contributions to the original style.

<sup>1</sup> Members of GuIT (Gruppo Italiano Utilizzatori di TEX e LATEX)



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## ACRONYMS

API Application Programming Interface

UML Unified Modeling Language

## Part I SOME KIND OF MANUAL

You can put some informational part preamble text here



INTRODUCTION

This bundle for LATEX has two goals:

- 1. Provide students with an easy-to-use template for their Master's or PhD thesis. (Though it might also be used by other types of authors for reports, books, etc.)
- 2. Provide a classic, high-quality typographic style that is inspired by Bringhurst's "The Elements of Typographic Style" [2].

The bundle is configured to run with a *full* MiKT<sub>E</sub>X or T<sub>E</sub>XLive<sup>1</sup> installation right away and, therefore, it uses only freely available fonts. (Minion fans can easily adjust the style to their needs.)

People interested only in the nice style and not the whole bundle can now use the style stand-alone via the file thesis.sty. This works now also with "plain" LATEX.

As of version 3.0, thesis can also be easily used with LyX<sup>2</sup> thanks to Nicholas Mariette and Ivo Pletikosić. The LyX version of this manual will contain more information on the details.

This should enable anyone with a basic knowledge of LaTeX  $2_{\varepsilon}$  or LyX to produce beautiful documents without too much effort. In the end, this is my overall goal: more beautiful documents, especially theses, as I am tired of seeing so many ugly ones.

The whole template and the used style is released under the GNU General Public License.

If you like the style then I would appreciate a postcard:

André Miede Detmolder Straße 32 31737 Rinteln Germany

The postcards I received so far are available at:

http://postcards.miede.de

So far, many theses, some books, and several other publications have been typeset successfully with it. If you are interested in some typographic details behind it, enjoy Robert Bringhurst's wonderful book. A well-balanced line width improves the legibility of the text. That's what typography is all about, right?

WebDAV over CoAP Version 3.0

<sup>1</sup> See the file LISTOFFILES for needed packages. Furthermore, thesis works with most other distributions and, thus, with most systems LATEX is available for.

<sup>2</sup> http://www.lyx.org

4

IMPORTANT NOTE: Some things of this style might look unusual at first glance, many people feel so in the beginning. However, all things are intentionally designed to be as they are, especially these:

- No bold fonts are used. Italics or spaced small caps do the job quite well.
- The size of the text body is intentionally shaped like it is. It supports both legibility and allows a reasonable amount of information to be on a page. And, no: the lines are not too short.
- The tables intentionally do not use vertical or double rules. See
  the documentation for the booktabs package for a nice discussion of this topic.<sup>3</sup>
- And last but not least, to provide the reader with a way easier access to page numbers in the table of contents, the page numbers are right behind the titles. Yes, they are not neatly aligned at the right side and they are not connected with dots that help the eye to bridge a distance that is not necessary. If you are still not convinced: is your reader interested in the page number or does she want to sum the numbers up?

Therefore, please do not break the beauty of the style by changing these things unless you really know what you are doing! Please.

## 1.1 ORGANIZATION

A very important factor for successful thesis writing is the organization of the material. This template suggests a structure as the following:

- chapters/ is where all the "real" content goes in separate files such as chapter1.tex etc.
- frontback/ is where all the stuff goes that surrounds the "real" content, such as the acknowledgments, dedication, etc.
- figures/ is where you put all the graphics you use in the thesis. Maybe they should be organized into subfolders depending on the chapter they are used in, if you have a lot of graphics.
- bibliography.bib: the BibTEX database to organize all the references you might want to cite.
- thesis.sty: the style definition to get this awesome look and feel. Does not only work with this thesis template but also on its own (see folder Examples). Bonus: works with both LATEX and PDFLATEX... and LyX.

http://www.ctan.org/tex-archive/macros/latex/contrib/booktabs/.

You can use these margins for summaries of the text body...

<sup>3</sup> To be found online at

- thesis.tcp a TeXnicCenter project file. Great tool and it's free!
- thesis.tex: the main file of your thesis where all gets bundled together.
- thesis-preamble.sty: a central place to load all nifty packages that are used. You can also load it with the option backref in order to have information about where a source was cited in the bibliography.

Make your changes and adjustments here. This means that you specify here the options you want to load thesis.sty with. You also adjust the title of your thesis, your name, and all similar information here. Refer to Section 1.3 for more information.

This had to change as of version 3.0 in order to enable an easy transition from the "basic" style to LyX.

In total, this should get you started in no time.

#### 1.2 STYLE OPTIONS

There are a couple of options for thesis.sty that allow for a bit of freedom concerning the layout:

#### • General:

 drafting: prints the date and time at the bottom of each page, so you always know which version you are dealing with. Might come in handy not to give your Prof. that old draft.

## Parts and Chapters:

- parts: if you use Part divisions for your document, you should choose this option. (Cannot be used together with nochapters.)
- nochapters: allows to use the look-and-feel with classes that do not use chapters, e.g., for articles. Automatically turns off a couple of other options: eulerchapternumbers, linedheaders, listsseparated, and parts.
- linedheaders: changes the look of the chapter headings a bit by adding a horizontal line above the chapter title. The chapter number will also be moved to the top of the page, above the chapter title.

## • Typography:

 eulerchapternumbers: use figures from Hermann Zapf's Euler math font for the chapter numbers. By default, old style figures from the Palatino font are used. ...or your supervisor might use the margins for some comments of her own while reading.

- beramono: loads Bera Mono as typewriter font. (Default setting is using the standard CM typewriter font.)
- eulermath: loads the awesome Euler fonts for math. (Palatino is used as default font.)
- pdfspacing: makes use of pdftex' letter spacing capabilities via the microtype package.<sup>4</sup> This fixes some serious issues regarding math formulæ etc. (e.g., "ß") in headers.
- minionprospacing: uses the internal textssc command of the MinionPro package for letter spacing. This automatically enables the minionpro option and overrides the pdfspacing option.

## • Table of Contents:

- tocaligned: aligns the whole table of contents on the left side. Some people like that, some don't.
- dottedtoc: sets pagenumbers flushed right in the table of contents.
- manychapters: if you need more than nine chapters for your document, you might not be happy with the spacing between the chapter number and the chapter title in the Table of Contents. This option allows for additional space in this context. However, it does not look as "perfect" if you use \parts for structuring your document.

## • Floats:

- listings: loads the listings package (if not already done) and configures the List of Listings accordingly.
- floatperchapter: activates numbering per chapter for all floats such as figures, tables, and listings (if used).
- subfig(ure): is passed to the tocloft package to enable compatibility with the subfig(ure) package. Use this option if you want use thesis with the subfig package.

The best way to figure these options out is to try the different possibilities and see, what you and your supervisor like best.

In order to make things easier in general, thesis-preamble.sty contains some useful commands that might help you.

#### 1.3 CUSTOMIZATION

This section will give you some hints about how to adapt thesis to your needs.

<sup>4</sup> Use microtype's DVIoutput option to generate DVI with pdftex.

The file thesis.sty contains the core functionality of the style and in most cases will be left intact, whereas the file classicthesis-preamble.sty is used for some common user customizations.

The first customization you are about to make is to alter the document title, author name, and other thesis details. In order to do this, replace the data in the following lines of thesis-preamble.sty:

Modifications in classicthesis-preamble.sty

```
% Re-usable information
% ****************
\newcommand{\myTitle}{A Classic Thesis Style\xspace}
\newcommand{\mySubtitle}{An Homage to...\xspace}
```

Further customization can be made in thesis-preamble.sty by choosing the options to thesis.sty (see Section 1.2) in a line that looks like this:

```
\PassOptionsToPackage{eulerchapternumbers,drafting,listings,
   subfig,eulermath,parts}{thesis}
```

If you want to use backreferences from your citations to the pages they were cited on, uncomment the following line:

```
\PassOptionsToPackage{backref}{thesis-preamble}
```

Many other customizations in thesis-preamble.sty are possible, but you should be careful making changes there, since some changes could cause errors.

Finally, changes can be made in the file thesis.sty, although this is mostly not designed for user customization. The main change that might be made here is the text-block size, for example, to get longer lines of text.

Modifications in thesis.sty

#### 1.4 ISSUES

This section will list some information about problems using classicthesis in general or using it with other packages.

Beta versions of thesis can be found at the following Google code repository:

```
http://code.google.com/p/thesis/
```

There, you can also post serious bugs and problems you encounter.

Compatibility with the glossaries Package

If you want to use the glossaries package, take care of loading it with the following options:

\usepackage[style=long,nolist]{glossaries}

Thanks to Sven Staehs for this information.

#### 1.5 FUTURE WORK

So far, this is a quite stable version that served a couple of people well during their thesis time. However, some things are still not as they should be. Proper documentation in the standard format is still missing. In the long run, the style should probably be published separately, with the template bundle being only an application of the style. Alas, there is no time for that at the moment...it could be a nice task for a small group of LATEXnicians.

Please do not send me email with questions concerning LATEX or the template, as I do not have time for an answer. But if you have comments, suggestions, or improvements for the style or the template in general, do not hesitate to write them on that postcard of yours.

## 1.6 BEYOND A THESIS

It is easy to use the layout of thesis.sty without the framework of this bundle. To make it even easier, this section offers some plug-and-play-examples.

The LATEX-sources of these examples can be found in the folder with the name Examples. They have been tested with latex and pdflatex and are easy to compile. To assure you even a bit more, PDFs built from the sources can also be found in the folder.

## 1.7 LICENSE

GNU GENERAL PUBLIC LICENSE: This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but *without any warranty*; without even the implied warranty of *merchantability* or *fitness for a particular purpose*. See the GNU General Public License for more details.

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## Part II

## THE SHOWCASE

You can put some informational part preamble text here



Ei choro aeterno antiopam mea, labitur bonorum pri no Dueck [4]. His no decore nemore graecis. In eos meis nominavi, liber soluta vim cu. Sea commune suavitate interpretaris eu, vix eu libris efficiantur.

## 2.1 A NEW SECTION

Illo principalmente su nos. Non message *occidental* angloromanic da. Debitas effortio simplificate sia se, auxiliar summarios da que, se avantiate publicationes via. Pan in terra summarios, capital interlingua se que. Al via multo esser specimen, campo responder que da. Le usate medical addresses pro, europa origine sanctificate nos se.

Examples: Italics, ALL CAPS, SMALL CAPS, LOW SMALL CAPS.

## 2.1.1 Test for a Subsection

Lorem ipsum at nusquam appellantur his, ut eos erant homero concludaturque. Albucius appellantur deterruisset id eam, vivendum partiendo dissentiet ei ius. Vis melius facilisis ea, sea id convenire referrentur, takimata adolescens ex duo. Ei harum argumentum per. Eam vidit exerci appetere ad, ut vel zzril intellegam interpretaris.

Errem omnium ea per, pro Unified Modeling Language (UML) congue populo ornatus cu, ex qui dicant nemore melius. No pri diam iriure euismod. Graecis eleifend appellantur quo id. Id corpora inimicus nam, facer nonummy ne pro, kasd repudiandae ei mei. Mea menandri mediocrem dissentiet cu, ex nominati imperdiet nec, sea odio duis vocent ei. Tempor everti appareat cu ius, ridens audiam an qui, aliquid admodum conceptam ne qui. Vis ea melius nostrum, mel alienum euripidis eu.

Ei choro aeterno antiopam mea, labitur bonorum pri no. His no decore nemore graecis. In eos meis nominavi, liber soluta vim cu.

## 2.1.2 Autem Timeam

Nulla fastidii ea ius, exerci suscipit instructior te nam, in ullum postulant quo. Congue quaestio philosophia his at, sea odio autem vulputate ex. Cu usu mucius iisque voluptua. Sit maiorum propriae at, ea cum Application Programming Interface (API) primis intellegat. Hinc cotidieque reprehendunt eu nec. Autem timeam deleniti usu id, in nec nibh altera.

Note: The content of this chapter is just some dummy text. It is not a real language.

#### 2.2 ANOTHER SECTION IN THIS CHAPTER

Non vices medical da. Se qui peano distinguer demonstrate, personas internet in nos. Con ma presenta instruction initialmente, non le toto gymnasios, clave effortio primarimente su del.<sup>1</sup>

Sia ma sine svedese americas. Asia Bentley [1] representantes un nos, un altere membros qui.<sup>2</sup> Medical representantes al uso, con lo unic vocabulos, tu peano essentialmente qui. Lo malo laborava anteriormente uso.

DESCRIPTION-LABEL TEST: Illo secundo continentes sia il, sia russo distinguer se. Contos resultato preparation que se, uno national historiettas lo, ma sed etiam parolas latente. Ma unic quales sia. Pan in patre altere summario, le pro latino resultato.

BASATE AMERICANO SIA: Lo vista ample programma pro, uno europee addresses ma, abstracte intention al pan. Nos duce infra publicava le. Es que historia encyclopedia, sed terra celos avantiate in. Su pro effortio appellate, o.

Tu uno veni americano sanctificate. Pan e union linguistic Cormen et al. [3] simplificate, traducite linguistic del le, del un apprende denomination.

## 2.2.1 Personas Initialmente

Uno pote summario methodicamente al, uso debe nomina hereditage ma. Iala rapide ha del, ma nos esser parlar. Maximo dictionario sed al.

## 2.2.1.1 A Subsubsection

Deler utilitate methodicamente con se. Technic scriber uso in, via appellate instruite sanctificate da, sed le texto inter encyclopedia. Ha iste americas que, qui ma tempore capital.

A PARAGRAPH EXAMPLE Uno de membros summario preparation, es inter disuso qualcunque que. Del hodie philologos occidental al, como publicate litteratura in web. Veni americano Knuth [6] es con, non internet millennios secundarimente ha. Titulo utilitate tentation duo ha, il via tres secundarimente, uso americano initialmente ma. De duo deler personas initialmente. Se duce facite westeuropee web, Table 1 nos clave articulos ha.

## A. Enumeration with small caps (alpha)

<sup>1</sup> Uno il nomine integre, lo tote tempore anglo-romanic per, ma sed practic philologos historiettas.

<sup>2</sup> De web nostre historia angloromanic.

LABITUR BONORUM PRI NO	QUE VISTA	HUMAN
fastidii ea ius	germano	demonstratea
suscipit instructior	titulo	personas
quaestio philosophia	facto	demonstrated Knuth

Table 1: Autem timeam deleniti usu id. Knuth

## в. Second item

Medio integre lo per, non Sommerville [7] es linguas integre. Al web altere integre periodicos, in nos hodie basate. Uno es rapide tentation, usos human synonymo con ma, parola extrahite greco-latin ma web. Veni signo rapide nos da.

## 2.2.2 Linguistic Registrate

Veni introduction es pro, qui finalmente demonstrate il. E tamben anglese programma uno. Sed le debitas demonstrate. Non russo existe o, facite linguistic registrate se nos. Gymnasios, e. g., sanctificate sia le, publicate ?? methodicamente e qui.

Lo sed apprende instruite. Que altere responder su, pan ma, i. e., signo studio. ?? Instruite preparation le duo, asia altere tentation web su. Via unic facto rapide de, iste questiones methodicamente o uno, nos al.



## MATH TEST CHAPTER

Ei choro aeterno antiopam mea, labitur bonorum pri no. His no decore nemore graecis. In eos meis nominavi, liber soluta vim cu. Sea commune suavitate interpretaris eu, vix eu libris efficiantur.

## 3.1 SOME FORMULAS

Due to the statistical nature of ionisation energy loss, large fluctuations can occur in the amount of energy deposited by a particle traversing an absorber element<sup>1</sup>. Continuous processes such as multiple scattering and energy loss play a relevant role in the longitudinal and lateral development of electromagnetic and hadronic showers, and in the case of sampling calorimeters the measured resolution can be significantly affected by such fluctuations in their active layers. The description of ionisation fluctuations is characterised by the significance parameter  $\kappa$ , which is proportional to the ratio of mean energy loss to the maximum allowed energy transfer in a single collision with an atomic electron:

$$\kappa = \frac{\xi}{E_{max}}$$

 $E_{\text{max}}$  is the maximum transferable energy in a single collision with an atomic electron.

$$E_{max} = \frac{2m_e\beta^2\gamma^2}{1+2\gamma m_e/m_x+\left(m_e/m_x\right)^2} \; , \label{eq:emax}$$

where  $\gamma = E/m_x$ , E is energy and  $m_x$  the mass of the incident particle,  $\beta^2 = 1 - 1/\gamma^2$  and  $m_e$  is the electron mass.  $\xi$  comes from the Rutherford scattering cross section and is defined as:

$$\xi = \frac{2\pi z^2 e^4 N_{Av} Z \rho \delta x}{m_e \beta^2 c^2 A} = 153.4 \frac{z^2}{\beta^2} \frac{Z}{A} \rho \delta x \quad \text{keV},$$

where

z charge of the incident particle

N<sub>Av</sub> Avogadro's number

Z atomic number of the material

A atomic weight of the material

ρ density

 $\delta x$  thickness of the material

You might get unexpected results using math in chapter or section heads. Consider the pdfspacing option.

<sup>1</sup> Examples taken from Walter Schmidt's great gallery: http://home.vrweb.de/~was/mathfonts.html

 $\kappa$  measures the contribution of the collisions with energy transfer close to  $E_{max}$ . For a given absorber,  $\kappa$  tends towards large values if  $\delta x$  is large and/or if  $\beta$  is small. Likewise,  $\kappa$  tends towards zero if  $\delta x$  is small and/or if  $\beta$  approaches 1.

The value of  $\kappa$  distinguishes two regimes which occur in the description of ionisation fluctuations:

- 1. A large number of collisions involving the loss of all or most of the incident particle energy during the traversal of an absorber.
  - As the total energy transfer is composed of a multitude of small energy losses, we can apply the central limit theorem and describe the fluctuations by a Gaussian distribution. This case is applicable to non-relativistic particles and is described by the inequality  $\kappa > 10$  (i. e., when the mean energy loss in the absorber is greater than the maximum energy transfer in a single collision).
- 2. Particles traversing thin counters and incident electrons under any conditions.

The relevant inequalities and distributions are  $0.01 < \kappa < 10$ , Vavilov distribution, and  $\kappa < 0.01$ , Landau distribution.

## 3.2 VARIOUS MATHEMATICAL EXAMPLES

If n > 2, the identity

$$t[u_1,...,u_n] = t[t[u_1,...,u_{n_1}],t[u_2,...,u_n]]$$

defines  $t[u_1, \ldots, u_n]$  recursively, and it can be shown that the alternative definition

$$t[u_1,...,u_n] = t[t[u_1,u_2],...,t[u_{n-1},u_n]]$$

gives the same result.

# Part III APPENDIX





## APPENDIX TEST

Lorem ipsum at nusquam appellantur his, ut eos erant homero concludaturque. Albucius appellantur deterruisset id eam, vivendum partiendo dissentiet ei ius. Vis melius facilisis ea, sea id convenire referrentur, takimata adolescens ex duo. Ei harum argumentum per. Eam vidit exerci appetere ad, ut vel zzril intellegam interpretaris.

Errem omnium ea per, pro congue populo ornatus cu, ex qui dicant nemore melius. No pri diam iriure euismod. Graecis eleifend appellantur quo id. Id corpora inimicus nam, facer nonummy ne pro, kasd repudiandae ei mei. Mea menandri mediocrem dissentiet cu, ex nominati imperdiet nec, sea odio duis vocent ei. Tempor everti appareat cu ius, ridens audiam an qui, aliquid admodum conceptam ne qui. Vis ea melius nostrum, mel alienum euripidis eu.

#### A.1 APPENDIX SECTION TEST

Ei choro aeterno antiopam mea, labitur bonorum pri no. His no decore nemore graecis. In eos meis nominavi, liber soluta vim cu. Sea commune suavitate interpretaris eu, vix eu libris efficiantur.

Nulla fastidii ea ius, exerci suscipit instructior te nam, in ullum postulant quo. Congue quaestio philosophia his at, sea odio autem vulputate ex. Cu usu mucius iisque voluptua. Sit maiorum propriae at, ea cum primis intellegat. Hinc cotidieque reprehendunt eu nec. Autem timeam deleniti usu id, in nec nibh altera.

## A.2 ANOTHER APPENDIX SECTION TEST

Equidem detraxit cu nam, vix eu delenit periculis. Eos ut vero constituto, no vidit propriae complectitur sea. Diceret nonummy in has, no qui eligendi recteque consetetur. Mel eu dictas suscipiantur, et sed placerat oporteat. At ipsum electram mei, ad aeque atomorum mea.

LABITUR BONORUM PRI NO	QUE VISTA	HUMAN
fastidii ea ius	germano	demonstratea
suscipit instructior	titulo	personas
quaestio philosophia	facto	demonstrated

Table 2: Autem usu id.

More dummy text.

Listing 1: A floating example

```
for i:=maxint to 0 do
begin
{ do nothing }
end;
```

Ei solet nemore consectetuer nam. Ad eam porro impetus, te choro omnes evertitur mel. Molestie conclusionemque vel at, no qui omittam expetenda efficiendi. Eu quo nobis offendit, verterem scriptorem ne vix.

## **BIBLIOGRAPHY**

- [1] Jon Bentley. *Programming Pearls*. Addison–Wesley, Boston, MA, USA, 2nd edition, 1999.
- [2] Robert Bringhurst. *The Elements of Typographic Style*. Version 2.5. Hartley & Marks, Publishers, Point Roberts, WA, USA, 2002.
- [3] Thomas H. Cormen, Charles E. Leiserson, Ronald L. Rivest, and Clifford Stein. *Introduction to Algorithms*. The MIT Press, Cambridge, MA, USA, 2nd edition, 2001.
- [4] Gunter Dueck. *Dueck's Trilogie: Omnisophie Supramanie Topothesie*. Springer, Berlin, 2005. http://www.omnisophie.com.
- [5] Donald E. Knuth. Computer Programming as an Art. *Communications of the ACM*, 17(12):667–673, December 1974.
- [6] Donald E. Knuth. Big Omicron and Big Omega and Big Theta. *SIGACT News*, 8(2):18–24, April/June 1976.
- [7] Ian Sommerville. *Software Engineering*. Addison-Wesley, Boston, MA, USA, 4th edition, 1992.

#### COLOPHON

This thesis was typeset with LATEX  $2_{\mathcal{E}}$  using Hermann Zapf's *Palatino* and *Euler* type faces (Type 1 PostScript fonts *URW Palladio L* and *FPL* were used). The listings are typeset in *Bera Mono*, originally developed by Bitstream, Inc. as "Bitstream Vera". (Type 1 PostScript fonts were made available by Malte Rosenau and Ulrich Dirr.)

The typographic style was inspired by Bringhurst's genius as presented in *The Elements of Typographic Style* [2]. It is available for LATEX via CTAN as "thesis".

NOTE: The custom size of the textblock was calculated using the directions given by Mr. Bringhurst (pages 26–29 and 175/176). 10 pt Palatino needs 133.21 pt for the string "abcdefghijklmnopqrstuvwxyz". This yields a good line length between 24–26 pc (288–312 pt). Using a "double square textblock" with a 1:2 ratio this results in a textblock of 312:624 pt (which includes the headline in this design). A good alternative would be the "golden section textblock" with a ratio of 1:1.62, here 312:505.44 pt. For comparison, DIV9 of the typearea package results in a line length of 389 pt (32.4 pc), which is by far too long. However, this information will only be of interest for hardcore pseudotypographers like me.

To make your own calculations, use the following commands and look up the corresponding lengths in the book:

```
\settowidth{\abcd}{abcdefghijklmnopqrstuvwxyz}
\the\abcd\ % prints the value of the length
```

Please see the file thesis.sty for some precalculated values for Palatino and Minion.

```
145.86469pt
```

DECLARATION	
Put your declaration here.	
Bremen, Germany, June 2012	
	 Vaibhav Bajpai