

Thesis Title

Optional Subtitle

J. Random Student

Master of Science Thesis

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MASTER OF SCIENCE THESIS

For the degree of Master of Science in Systems and Control at Delft
University of Technology

J. Random Student

June 22, 2010



The work in this thesis was supported by Aquaduct Swimming Supplies Incorporated. Their cooperation is hereby gratefully acknowledged.



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DELFT UNIVERSITY OF TECHNOLOGY
DEPARTMENT OF
DELFT CENTER FOR SYSTEMS AND CONTROL (DCSC)

The undersigned hereby certify that they have read and recommend to the Faculty of
Mechanical, Maritime and Materials Engineering for acceptance a thesis entitled

THESIS TITLE

by

J. RANDOM STUDENT

in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE.

Dated: June 22, 2010

Supervisor:

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Abstract

This is an abstract.

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Preface

According to WIKIPEDIA, a preface (pronounced “*preffus*”) is an introduction to a book written by the author of the book. In this preface I can discuss the interesting story of how this thesis came into being.

This is document is a part of my Master of Science graduation thesis. The idea of doing my thesis on this subject came after a discussion with my good friends Tweedledum and Tweedledee...

Acknowledgements

I would like to thank my supervisor prof.dr.ir. M.Y. Supervisor for his assistance during the writing of this thesis. . .

By the way, it might make sense to combine the Preface and the Acknowledgements. This is just a matter of taste, of course.

Delft, University of Technology
June 22, 2010

J. Random Student

“In the future, airplanes will be flown by a dog and a pilot. And the dog’s job will be to make sure that if the pilot tries to touch any of the buttons, the dog bites him.”

— *Scott Adams*

Chapter 1

Introduction

This is a L^AT_EX thesis and this is Chapter 1.

1-1 About L^AT_EX

L^AT_EX is a document preparation system for the T_EX typesetting program. It offers programmable desktop publishing features and extensive facilities for automating most aspects of typesetting and desktop publishing, including numbering and cross-referencing, tables and figures, page layout, bibliographies, and much more.

L^AT_EX was originally written in 1984 by Leslie Lamport and has become the dominant method for using T_EX; few people write in plain T_EX anymore. The current version is L^AT_EX 2_ε.

If you want to know more about L^AT_EX you better read [1].

1-2 About Acronyms

This section contains an acronym of the Delft Center for Systems and Control (DCSC). The DCSC is our department within the faculty of Mechanical, Maritime and Materials Engineering (3mE) at Delft University of Technology (TU Delft).

Acronyms are automatically listed in the Glossary in the back of this thesis. You have to define acronyms in `glossary.tex` using `\acro{ACRONYM}{Full text}`. You print an acronym by using the command `\ac{...}`. You can always force a full, long or short printout by using `\acf{...}`, `\acl{...}` or `\acs{...}` respectively.

- `\acf{DCSC}`: Delft Center for Systems and Control (DCSC);
- `\acl{DCSC}`: Delft Center for Systems and Control;
- `\acs{DCSC}`: DCSC.

Table 1-1: Nomenclature codes

Code	Usage	Example
<code>\gsymb{}</code>	Greek symbols	γ
<code>\lsymb{}</code>	Letter symbols	$H(s)$
<code>\supers{}</code>	Superscript symbols	<i>only printed in the List of Symbols</i>
<code>\subs{}</code>	Subscript symbols	<i>only printed in the List of Symbols</i>
<code>\others{}</code>	Other symbols	<i>only printed in the List of Symbols</i>

1-3 About the Nomenclature

When you use symbols in your thesis – as you probably will – you can put them into the nomenclature listing (List of Symbols) at the back of your thesis. Table 1-1 shows the \LaTeX commands you need.

Chapter 2

First Real Chapter

This is real chapter for Delft Center for Systems and Control (DCSC), ok? We will use it as a demo for the different headings you can use to structure your text.

2-1 First Section

This is the section. Referring to equations, figures and tables can easily be done by the commands `\eqnref{}`, `\figref{}` and `\tabref{}`.

$$H(s) = \frac{1}{s+2} \quad (2-1)$$

You see? Refer to equations like this Eq. (2-1).

2-1-1 The first subsection

Subsections are the last type of sectioning that is numbered.

The first sub-subsection with a very very very long title, but in the Table of Contents one can only see the short title

Quick! Check the Table of Contents! Nice, ain't it?

A paragraph title Subdividing your text in sections and paragraphs automatically makes it nice and structured.

Chapter 3

Some Basics

This chapter will cover figures and math.

3-1 Figures

Figures are constructed using the `figure` environment:

```
\begin{figure}  
\centering  
\includegraphics[options]{imagefile_location}  
\caption{Captions}  
\label{fig:dummy}  
\end{figure}
```

L^AT_EX automatically decides the best placement of the Figure in your document. This will usually be at the top or bottom of the current page, or at the top of the next page. This system gives good results most of the time, but it can get confused when you have a large number of figures. The command `\clearpage` creates an empty page where any ‘lost’ figures will be printed.

You can refer to a Figure by its label: `\figref{label}`. See for instance Figure 3-1.



Figure 3-1: The DCSC logo. Pretty nice, eh?

3-2 Math: $e^{j\pi} = 0$

I put some fancy math in the section title. Usually this generates complaints from the `hyperref` package, because the bookmarks you see on the left can only handle ‘regular text’. Fortunately, this problem can be solved by using a special command that inserts ‘regular text’ whenever this is necessary during compilation of your thesis: `\texorpdfstring{math}{text}`.

For further information about math in L^AT_EX, I recommend looking at the Short Math Guide found at [the website](#) of the American Mathematical Society (AMS).

$$1 = 2 \tag{3-1}$$

$$x = 5 \tag{3-2}$$

$$y = \theta \tag{3-3}$$

3-3 More About Acronyms

After the start of a new chapter all acronyms are reset and are printed as a full acronym the first time it is used again, e.g. Delft Center for Systems and Control (DCSC). After the first use, only the short acronym is printed again: DCSC.

3-4 More About Nomenclature

This is a test for nomenclature $A(s)$

Appendix A

The Back of the Thesis

Appendices are found in the back.

A-1 An Appendix Section

A-1-1 An appendix subsection with C++ Listing

```
1 //  
2 // C++ Listing Test  
3 //  
4  
5 #include <stdio.h>  
6  
7 for(int i=0;i<10;i++)  
8 {  
9     cout << "Ok\n";  
10 }
```

A-1-2 A MATLAB listing

```
1 %  
2 % Comment  
3 %  
4 n=10;  
5 for i=1:n  
6     disp('Ok');  
7 end
```

Appendix B

Yet Another Appendix

B-1 Test Section (Again?)

Ok, all is well.

Bibliography

- [1] D. E. Knuth, *The T_EXbook*. Addison-Wesley, 1984.

Glossary

List of Acronyms

3mE	Mechanical, Maritime and Materials Engineering
AMS	American Mathematical Society
DCSC	Delft Center for Systems and Control
TU Delft	Delft University of Technology

List of Symbols

γ	Path Angle
$A(s)$	Answer function
$H(s)$	Transfer function
min	Minimum
max	Maximum
$^{\circ}$, [deg]	Degrees
[kts]	Knots

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