How to Write Theses

With Two Line Titles

by

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Submitted in partial fulfillment of the

requirements for the degree of

Master of Computer Science

at

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DALHOUSIE UNIVERSITY

FACULTY OF COMPUTER SCIENCE

The undersigned hereby certify that they have read and recommend to
the Faculty of Graduate Studies for acceptance a thesis entitled "**How to Write
Theses With Two Line Titles**" by **I. Bee. Graduate** in partial fulfillment of
the requirements for the degree of **Master of Computer Science**.

Dated: April 1, 1999

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DALHOUSIE UNIVERSITY

Date: **April 1, 1999**

Author: **I. Bee. Graduate**

Title: **How to Write Theses With Two Line Titles**

Department: **Computer Science**

Degree: **M.C.Sc.**   Convocation: **May**   Year: **1999**

To Dalhousie,

a great place,

to write a long thesis in LaTeX.

Table of Contents

List of Tables

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Abstract

Theses have elements including an abstract. Isn't that nice?

Acknowledgements

This is the acknowledgements. It is optional. I want to "thank" my committee, without whose input, I would have graduated so, so, very much faster.

Chapter 1

Introduction

Every dissertation should have an introduction. The introduction should introduce a bunch of stuff including the concepts, background, and goals of the dissertation.

If a thesis is typeset in LaTeX [**?**] it will look beautiful. If your a beginner in LaTeX or want to do some fancy stuff you might want to check out

`http://www-h.eng.cam.ac.uk/help/tpl/textprocessing/LaTeX_intro.html`

I like to use big words so a glossary is important. Watch me create a glossary entry using the glossary.sty Style: Many of the problems addressed in this thesis are NP-complete. An entry for NP will now find its way into the glossary if you run the makeindex command. You run it as makeindex -s thesisExample.ist -o thesisExample.gls thesisExample.glo

I can also add in a few entries like NP-hard, P-SPACE, or something long

Chapter 2

Doing the Figures

Every dissertation should consider having nice figures like Figure 2.1.
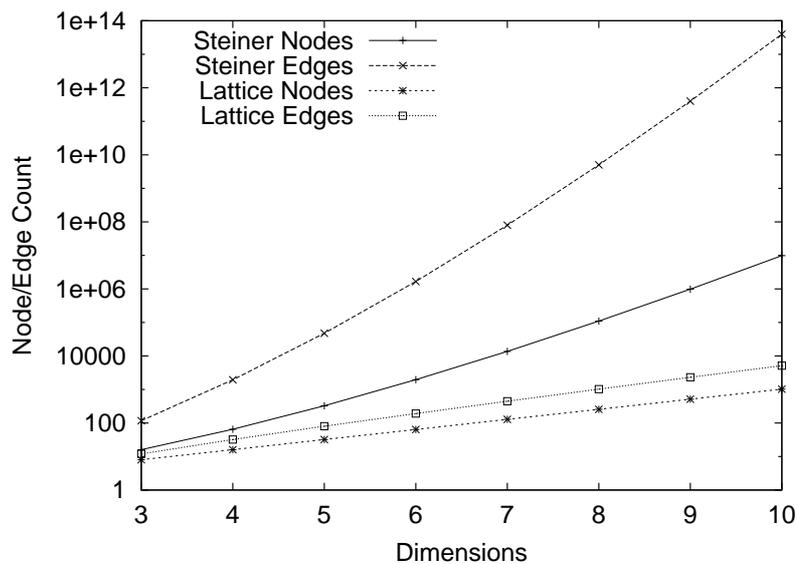
Figure 2.1: Growth patterns for Steiner graph versus original lattice. Note the logarithmic scale.

Sometimes it is useful to group figures together. The following, Figure 2.2, is an example of using the subfigure style.
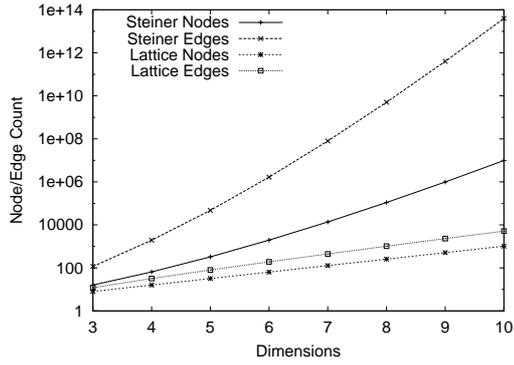
(a) Caption A
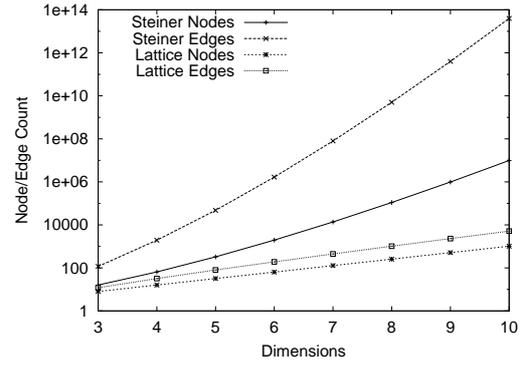
(b) Caption B
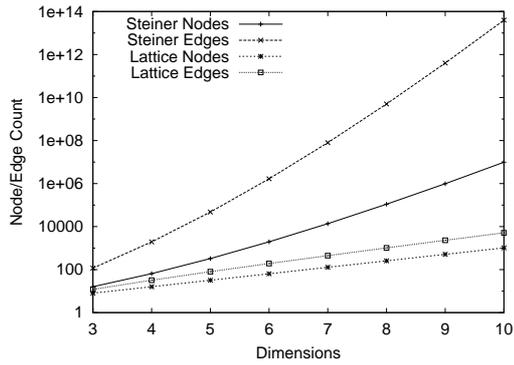
(c) Caption C

(d) Caption D

Figure 2.2: Relative weight reduction for the schedule trees produced on subsets of size (a) 10% (b) 25% (c) 50% (d) 75%. The baseline in this case is chosen as the smaller of (i) a sort of the raw data set for each view or (ii) computation of the full cube.

Chapter 3

Dancing with Tables

The following is just an example of a table.

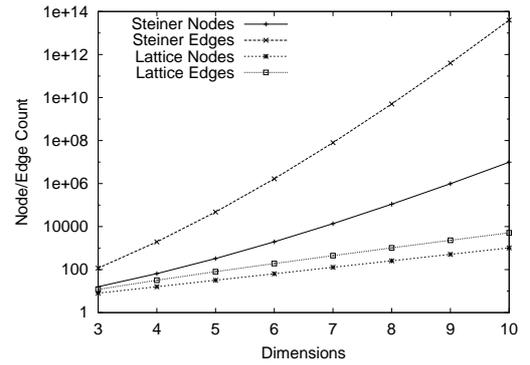| Dimensions	Lattice Nodes	Lattice Edges	Steiner Nodes	Steiner Edges
3	8	12	16	117
4	16	32	65	1948
5	32	80	326	47665
6	64	192	1957	1667286
7	128	448	13700	79777285
8	256	1024	109601	5013145600
9	512	2304	986000	400328720384
10	1024	5120	9864101	39581776871424

Table 3.1: Growth patterns for Steiner graph versus original lattice in tabular form.

3.1   One subsection

Let's include a trial subsection for the table of contents.

3.2   Another subsection

Actually, we'll make two subsections, just to see how it turns out.

Chapter 4

For those with Algorithms

For those who want to include an algorithm in their thesis the algorithm and algorithmic styles are very handy. Of course there are many other ways to layout a wonderful algorithm like the one given in Algorithm 1.

Algorithm 1 Add Non Essential Views

Input: A tree E consisting of the selected group-bys, and a guiding graph G. Also used are auxiliary variables BP (best plan) and CP (current plan).

Output: Reduced tree R.

{Add nodes from $G - R$ to E as long as the total cost improves}

1: **repeat**
2:     clear BP
3:     **for** every v in $G - R$ **do**
4:         clear CP
5:         $CP.node = v$
6:         FindBestParent(R, CP)
7:         FindBestChildren(R, CP)
8:         **if** $CP.benefit > BP.benefit$ **then**
9:            $BP = CP$
10:         **end if**
11:     **end for**
12:     **if** $BP.benefit > 0$ **then**
13:         add $BP.node$ to R and update R accordingly
14:     **end if**
15: **until** $BP.benefit <= 0$

Chapter 5

Doing the Proof

Some other research was once performed and is summarized in Theorem 1.

Here's a proof.

Proof. A simple proof without "title". □

And another one.

Theorem 1 *This is the greatest theorem!*

Proof. Trivial. Just admire it obvious correctness! Sometimes you just have to make things short enough that people believe the result right away.

Then there are other times like this one where you're waiving your hands wildly and hoping that nobody notices...but they always do.

□

We can now include a proof for a theorem and add a title to the proof.

Proof (Theorem 1). A proof that includes a title, for example, to refer to indicate that this is the postponed proof for an earlier theorem. □

There's also a proof sketch version.

Proof sketch. A sketch. □

And this one also has a title.

Proof sketch (Theorem 2). Another sketch. □

There is one caveat, which I didn't consider worth fixing because it should not affect final documents. If the proof is left empty and placed after a lemma, the spacing between the lemma and the proof is decreased. No idea why this happens.

Lemma 1 *This is a caveat.*

Proof.						☐

Chapter 6

How to Compile this Example

To compile this document you must:

```
latex thesisExample
bibtex thesisExample
makeindex -s thesisExample.ist -o thesisExample.gls thesisExample.glo
latex thesisExample
latex thesisExample
```

Appendix A

A Long Proof

Ancillary material should be put in appendices, which appear after the bibliography.