

An Optimizing

by

Lucien William

Submitted to the Department of Electrical Engineering and
Computer Science

in partial fulfillment of the requirements for the degree of

Bachelor of Science in Computer Science and Engineering

at the

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

June 2017

© Massachusetts Institute of Technology 2017. All rights reserved.

Author
Electrical Engineering and Computer Science
May 18, 1990

Certified by
Associate Professor
William J. Dally
Thesis Supervisor

An Optimizing

by

Lucien William

Submitted to the Department of Electrical Engineering and Computer Science
on May 18, 1990, in partial fulfillment of the
requirements for the Bachelor of Science in Computer Science and Engineering of

Abstract

In this thesis, I designed and implemented a compiler which performs optimizations that reduce the number of low-level floating point operations necessary for a specific task; this involves the optimization of chains of floating point operations as well as the implementation of a “fixed” point data type that allows some floating point operations to be simulated with integer arithmetic. The source language of the compiler is a subset of C, and the destination language is assembly language for a micro-floating point CPU. An instruction-level simulator of the CPU was written to allow testing of the code. A series of test pieces of code was compiled, both with and without optimization, to determine how effective these optimizations were.

Thesis Supervisor: Associate Professor

Title: William J. Dally

Acknowledgments

The Lord and Savior SpongeBob Squarepants as well as my kitties for making life bearable.

Contents

| | |
|------------------------|-----------|
| Introduction | 12 |
| Body | 12 |
| References | 12 |
| A Tables | 13 |
| B Figures | 15 |

List of Figures

| | | |
|-----|--|----|
| B-1 | Armadillo slaying lawyer. | 15 |
| B-2 | Armadillo eradicating national debt. | 16 |

List of Tables

| | |
|--------------------------|----|
| A.1 Armadillos | 13 |
|--------------------------|----|

Abstract: Here we have created a test pub to show how Pubs look when output to LaTeX.

Introduction

Here we introduce the subject matter and talk more about things like how screwed we are for instance. How bad things are in this world except for the internet. The internet is pretty cool. “Hassan Shaikley”¹

Why is the internet cool?

Because I said so. *ibid.*² Does that make sense? Or does it not make sense. *it better god damn make sense.*

Body

A wise man once said

I don’t want to live on this planet anymore.

Every day I wonder how to

```
var p = hassan.getLife()  
p.relaxCircumstance();
```

References

“Hassan Shaikley”. “‘Absolute Truths’” *“Journal of Bigly”*, ”2017”.

¹“‘Absolute Truths’,” *“Journal of Bigly”*, ”2017”.
²

Appendix A

Tables

Table A.1: Armadillos

| | |
|------------|---------|
| Armadillos | are |
| our | friends |

Appendix B

Figures

Figure B-1: Armadillo slaying lawyer.

Figure B-2: Armadillo eradicating national debt.