ETH
Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

Signal and Information
Processing Laboratory
Institut für Signal- und
Informationsverarbeitung

Spring Semester 2014 Prof. H.-A. Loeliger

Semester Thesis

Phase-Locked Loops

Daniel Gilgen
and
Fabio Marti

Advisor: Nour Zalmai
Co-Advisor: Lukas Bruderer

(Here the project description may be put in ... page 1)

(Here the project description may be put in . . . page 2)

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Abstract

Here comes the abstract ...

(The abstract is better included by the command `\include{file}`.)

Zusammenfassung

Das ist die Zusammenfassung ...

(Die Zusammenfassung sollte besser mittels des Befehls `\include{file}` eingebunden werden.)

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To Arwen

"Among all the conundrums in the world, the Gordian knot is the most mysterious."

Anon.

Acknowledgements

I would like to thank ...

(The chapter "Acknowledments" is better included by the command `\include{file}`.)

Zürich, 00 March 2013

Daniel Gilgen Fabio Marti

Abstract

Here comes the abstract ...

(The abstract is better included by the command `\include{file}`.)

Zusammenfassung

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Contents

List of Figures

List of Tables

«««< HEAD

Chapter 1

Principles of Phase-Locked Loops

1.1 Introduction

1.2 Blabla

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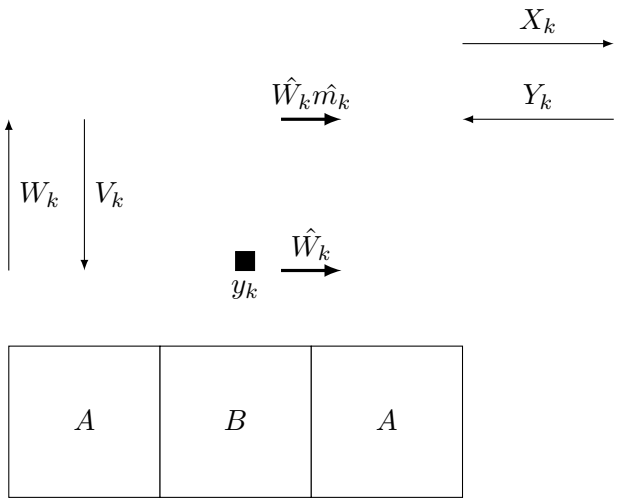

Figure 1.1: All elements from the file factorGraph.sty.

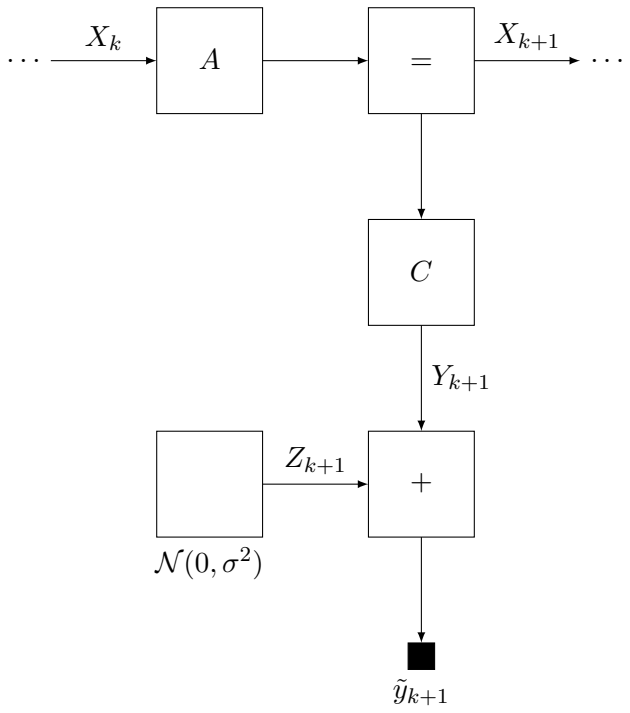

Figure 1.2: This factor graph has been constructed with custom-built TikZ macros.

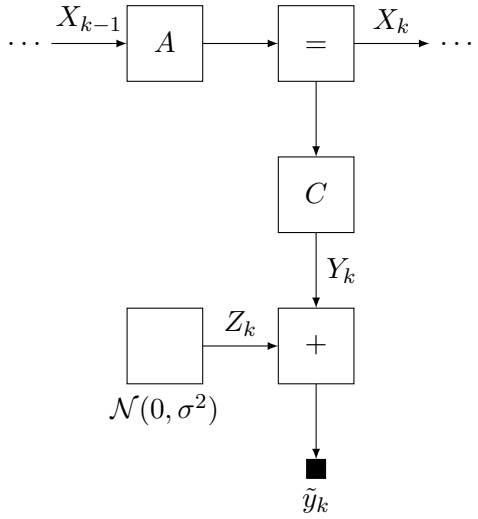

Figure 1.3: This factor graph has been constructed with the factor graph macro from factorGraphs.sty.

Chapter 2

Tracking of a Sinusoidal Signal

2.1 Introduction

2.2 Blabla

Chapter 3

PLL for Harmonic Signals

3.1 Introduction

3.2 Blabla

Chapter 4

BlaBlaBla

Appendix A

Proof for the Lower Bound on the Number of Conundrums

Since we classify the Gordian knot as a conundrum, there is at least one such.

Bibliography