



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 Zalmay

Co-Advisor: Lukas Bruderer

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

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

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.)

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 “Acknowledgments” is better included by the command `\include{file}`.)

Zürich, 00 March 2013

Daniel Gilgen

Fabio Marti

Abstract

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Chapter 1

Principles of Phase-Locked Loops

1.1 Introduction

1.2 Blabla

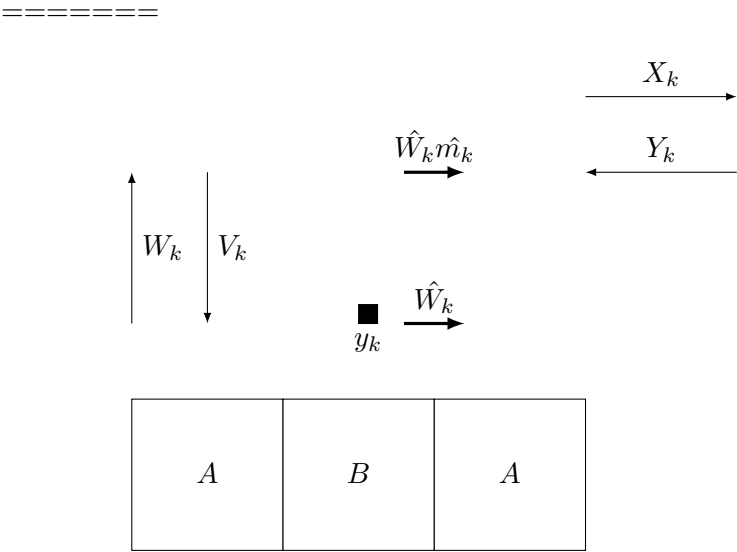


Figure 1.1: All elements from the file factorGraph.sty.

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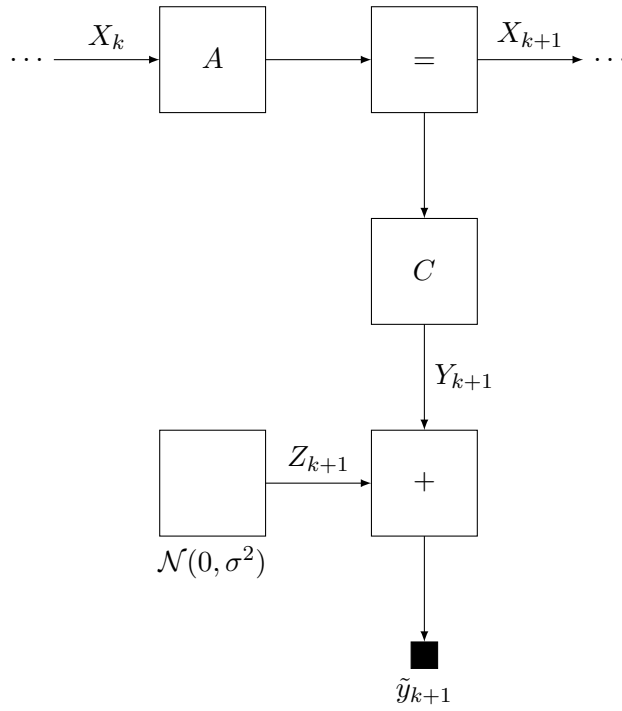


Figure 1.2: This factor graph has been constructed with custom-built TikZ macros.

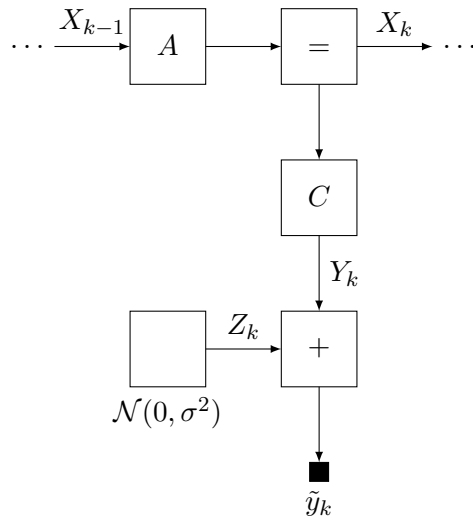


Figure 1.3: This factor graph has been constructed with the factor graph macro from factorGraphs.sty.

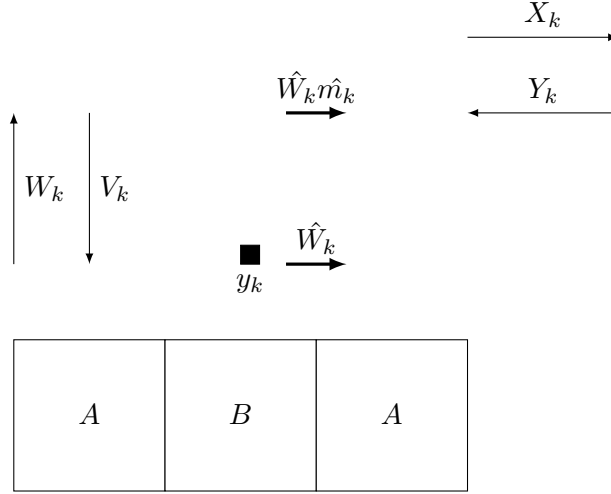


Figure 1.4: All elements from the file factorGraph.sty.

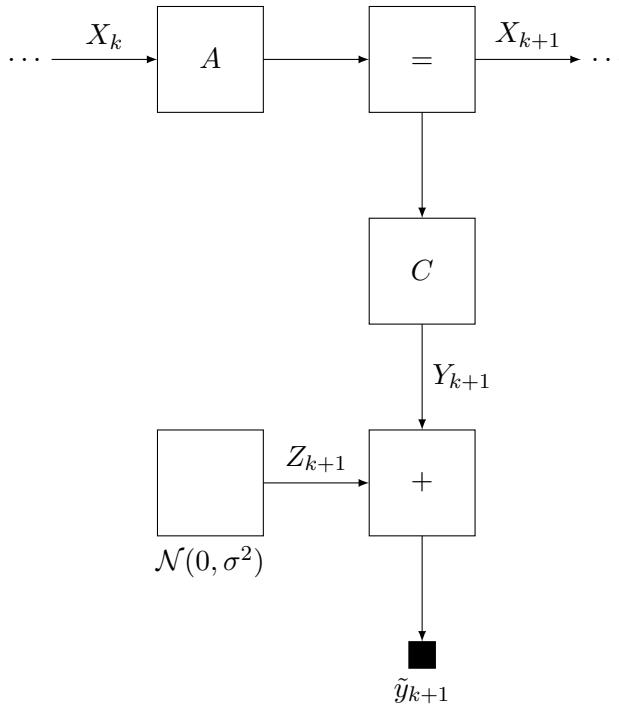


Figure 1.5: This factor graph has been constructed with custom-built TikZ macros.

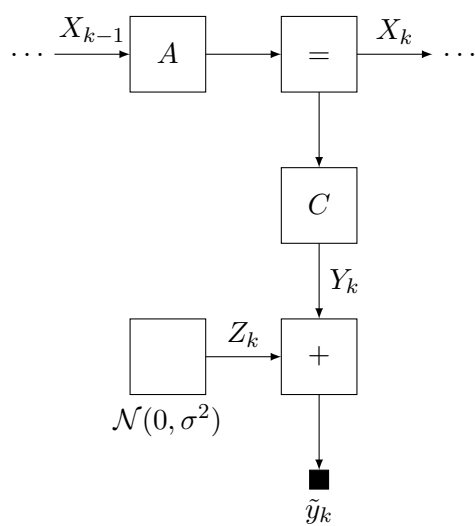


Figure 1.6: This factor graph has been constructed with the factor graph macro from `factorGraphs.sty`.

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