title

subtitle

john doe
name of study

Semester Project

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Electronics Systems
Aalborg Universitet
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AALBORG UNIVERSITY

STUDENT REPORT

Title:

Theme:

Project Period:

Project Group:

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Abstract:

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Contents

Preface

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Reading Guide

The report is structured in chapters, sections, subsections and subsubsections. The chapters, sections and subsections are numbered with Arabic numerals, while the subsubsections will appear without numbering.

Figures, tables, equations and listings are numbered with Arabic numerals, where the first number is the chapter number. For example, Figure 3.2 is the second figure in chapter 3. Appendices are grouped by capital letters, and numbered with Arabic numerals.

The reference method used in this report is the IEEE style. The references are numbered with Arabic numerals, and are referred to in the text with square brackets. They are listed in the bibliography at the end of the report, and are sorted in the order they appear in the report.

Aalborg University,

Chapter 1

Introduction

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Chapter 2

Pre analysis/Preliminaries

Here is the intro to the chapter.

Chapter 3

Test

The Figure 3.1 is made using python and several different libraries. The output from the python script is a pdf file, which is then included in the document.

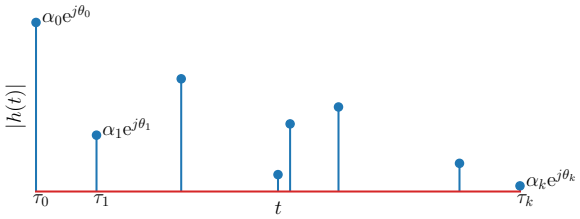

Figure 3.1: The physical setup of the test

Chapter 4

System Development

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In this chapter the development is put.

4.1 Test Table

Marcos have been made to make it easier to make tables. The following is an example of a table made using the `tabular` environment. The macros are "toprule", "midrule", "bottomrule".

Method	Description	Formular
Normalized IQ symbols	As mentioned the two way channel is calculated by multiplying rom the transmitter and receiver. The preprocessing to get the is to normalize the symbols, so the complex number has a length of 1. The input dimension is then 79, which is the number of frequencies	$Z' = \frac{a+bi}{\sqrt{a^2+b^2}}$
Phase	The phase is extracted from the symbols. The input dimension is then 79, which is the number of frequencies	$\phi = \arctan\left(\frac{b}{a}\right)$
Phase unwrapped	The phase is extracted from the and unwrapped using an unwrapping algorithm	$\phi = \arctan\left(\frac{b}{a}\right)$ and Unwrapping algorithm in
Phase difference	The phase is extracted from, the difference between the phase of the current sample and the previous sample is calculated. This results in an input dimension of 78	$\Delta\phi = \phi_1 - \phi_2$
Symbol difference	The are normalized and the difference between the current sample and the previous sample is calculated. This results in an input dimension of 78	$\Delta z_n = z_n - z_{n-1}$

Table 4.1: Preprocessing methods, their description and formular

Chapter 5

Discussion

In this chapter the discussion is put.

5.1 Test1

Chapter 6

Conclusion

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Appendix A

Appendix 1