
Double tracking antennas for drone communication

- Automation and control -

Project Report
Group 832

Aalborg University
Electronics and IT

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AALBORG UNIVERSITY STUDENT REPORT

Title:

Double tracking antennas for drone communication

Abstract:

Here is the abstract

Theme:

Multivariable control

Project Period:

Spring Semester 2016

Project Group:

Group: 832

Participant(s):

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Copies: 1**Page Numbers:** 20**Date of Completion:**

February 9, 2016

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Aalborg Universitet
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Her er resuméet

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Multivariable control

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Deltager(e):

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Oplagstal: 1**Sidetal:** 20**Afleveringsdato:**

9. februar 2016

Rapportens indhold er frit tilgængeligt, men offentliggørelse (med kildeangivelse) må kun ske efter aftale med forfatterne.

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Figure: A overview of the project!	1
█ Is it possible to add a subsubparagraph?	20
█ I think that a summary of this exciting chapter should be added.	20
█ I think this word is misspelled	20
Figure: We need a figure right here!	20

Preface

Here is the preface. You should put your signatures at the end of the preface.

Aalborg University, February 9, 2016

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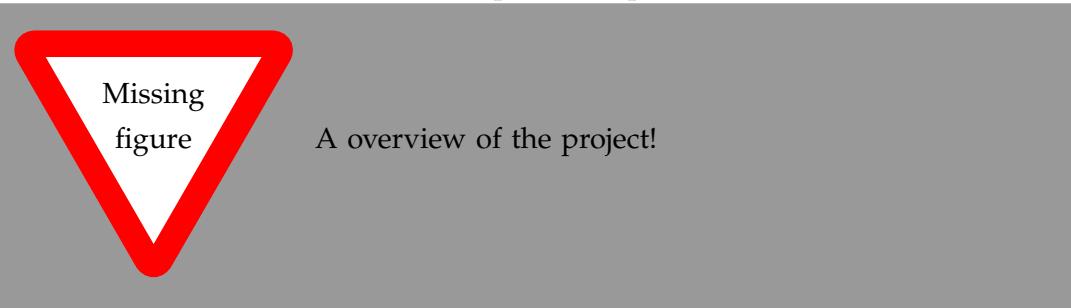
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Chapter 1

Introduction

Here is the introduction. The next chapter is chapter 2.



Chapter 2

Scenario

2.1

So what is this all about?

$$L = 20 \log \left(\frac{4\pi d}{\lambda} \right)$$

2.2 Rescue missions

2.2.1 What do they do today?

2.2.2 Compare the rescue missions

2.3 Pipeline survey

The pipeline survey could be to transport oil from a factory to another facility. To ensure that there is no thieves that want to steal the oil, they have to hire people to patrol. Instead they could use a drone to search the area. Potential danger

- Terrorist
- Thieves



Figure 2.1: Pipeline survey

Chapter 3

Hardware setup

Our hardware setup.

3.1 Drone (eBee)



Figure 3.1: The professional mapping drone *eBee* (www.sensefly.com). Fully autonomous drone to capture high-resolution aerial photos that can transform into accurate 2D orthomosaics & 3D models.

3.2 Basestation

3.2.1 Laptop

3.2.2 Antennas

3.2.3 Gimbals (Camera)

Chapter 4

Telecommunication

Our telecommunication.

4.1 Telemetry

4.2 MavLink (protocol)

4.3 Link Budget

Chapter 5

Verification

Our verification.

Chapter 6

Simulation

Our simulations.

6.1 Drone model

6.2 Controller

6.3 V-Rep

6.4 Drone in real life (real data)

Chapter 7

Discussion

Our discussion.

Chapter 8

Conclusion

Our conclusion.

Bibliography

- [1] Lars Madsen. *Introduktion til LaTeX*. <http://www.imf.au.dk/system/latex/bog/>. 2010.
- [2] Frank Mittelbach. *The LATEX companion*. 2. ed. Addison-Wesley, 2005.
- [3] Tobias Oetiker. *The Not So Short A Introduction to LaTeX2e*. <http://tobi.oetiker.ch/lshort/lshort.pdf>. 2010.

Appendix A

Appendix LaTeX Tips

A.1 Example 1

You can also have examples in your document such as in example A.1.

Example A.1 (An Example of an Example)

Here is an example with some math

$$0 = \exp(i\pi) + 1 . \quad (\text{A.1})$$

You can adjust the colour and the line width in the `macros.tex` file.

A.2 How Does Sections, Subsections, and Subsections Look?

Well, like this

A.2.1 This is a Subsection

and this

This is a Subsubsection

and this.

A Paragraph You can also use paragraph titles which look like this.

A Subparagraph Moreover, you can also use subparagraph titles which look like this. They have a small indentation as opposed to the paragraph titles.

I think that a summary of this exciting chapter should be added.

Is it possible to add
subsubparagraph?

A.3 Example 2

I think this word is misspelled

Here is chapter 2. If you want to learn more about L^AT_EX 2_&, have a look at [1], [3] and [2].

