



Friedrich-Alexander-Universität Erlangen-Nürnberg

Faculty of Engineering - Department of Electrical Engineering (EEI)

Chair of Electrical Smart City Systems

Master's Thesis

on the topic

**LPWAN: Deriving the theoretical and practical
limitations, and design of an application/
technology matching algorithm**

by

Marcel Neugebauer

born on DD.MM.YYYY in LOCATION

to achieve the academic degree

Bachelor / Master of Science (B.Sc. / M.Sc.)

Supervisor

Prof. Dr.-Ing. Norman Franchi

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Declaration

I confirm that I have written this thesis unaided and without using sources other than those listed and that this thesis has never been submitted to another examination authority and accepted as part of an examination achievement, neither in this form nor in a similar form. All content that was taken from a third party either verbatim or in substance has been acknowledged as such.

Erlangen, date

name
91054 Erlangen
address

Kurzfassung

Abstract

Introduction to an abstract thesis about the flow of space-time during the creation of any thesis.

Abbreviations and Acronyms

CEA Controlled Environment Agriculture

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Chapter 1

Introduction

Lorem ipsum ... This is some sample text.

This is more sample text :). And I have even more sample text. Test.



Figure 1.1: Image caption

Lorem ipsum ...

1.1 Motivation

The motivation for this work is threefold. One, crafting ideal human environment in the context of smart city. - Taking advantage of synergies. Two, resilience and national autonomy of food supply. - Preparedness for shifting climate. Three, most important to the author, global sustainability of human civilization. - water use - pesticide use and water ?artrification? - local food production - freeing up area for natural ecosystems

?Mehr auslegen einer Vision? - Imagine the future city. Clean green walls dampen the sound of cars, provide cooling in the hot summer months.

1.2 Problem Statement

From the three main motivations laid out before we can extract the main problems of these areas. One - Air quality - disconnection from nature - buildings not properly insulated, taking advantage of synergies. Two - Reliance on a few agricultural plentiful

areas in the world to sustain the hunger of the human population - These might change as climate patterns will shift. Three - High resource use of cities. Uncertainty of future climate. This section laid out a number of different problems. This work can not adress all, but tries to connect

1.2.1 State of the Art

Let us first examine current Controlled Environment Agriculture (CEA) and vertical farming approaches to get a better understanding of the solution methods and shortcomings. Current solutions try to achieve high degree of automation and full control over the environment. This results in high energy

1.3 Solution Proposal

1.3.1 Goals and Contributions

First we shall look - Gliederung der Arbeit

List of Figures

1.1 Image caption 1

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