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**Working title**

Working title

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Abstract

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**Keywords:** smoke detector, Keyword2, Keyword3, Keyword4, Tessel 2

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# Introduction

## Problem Definition

Test [1] oder [2]

## Aim of this work

## Methodological Approach

## Personal Motivation

## Structure of this thesis

# Technical fundamentals

## Smoke detectors

### Principles of smoke detection

### Ionization smoke detectors

Mention commercial use

### Photoelectric smoke detectors

Mention commercial use

### Carbon Monoxide detectors

Mention commercial use

### Multiple sensor detectors

Mention commercial use

### Aspirating smoke detectors

Mention commercial use

### Linear detectors

Relevant???

### Smoke detectors for home use

### Regulations for smoke detectors

## Hardware

### Tessel 2

### IR-Sensor

### IR-Receiver

## Software

### Node package manager

### JavaScript

### Node.js

# Design

## Concept

Mention how it is implemented and NTC and CO are not measured due to hardware restrictions on the tessel IO Ports

## Architecture

Block Diagramm

# Results and Discussion

# Summary

# Bibliography

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| [2] | A. Merschbacher, Brandschutzfibel, Planegg, Deutschland: Springer Vieweg, 2008. |

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**Es konnten keine Einträge für ein Abbildungsverzeichnis gefunden werden.**

# List of Abbreviations

|  |  |
| --- | --- |
| ACK | Acknowledgement |
| AD | Active Directory |
| AES | Advanced Encryption Security |
| API | Application programming interface |
| APL | Application layer |
| APS | Application support sublayer |
| AWG | Abfallwirtschaftsgesetz |
| BMNT | Bundesministerium für Nachhaltigkeit und Tourismus |
| BPSK | Binary phase-shift keying |
| BSC | Base Station Controller |
| CA | Collision avoidance |
| CSMA | Carrier sense multiple access |
| CU | Central Unit (Zentraleinheit) |
| DL | Datenlogger |
| EEPROM | Electrical erasable programmable read only memory |
| FDX | Full-Duplex-Verfahren |
| FPU | Floating Point Unit |
| GPRS | General Packet Radio Service |
| GSM | Global System for Mobile Communications |
| HDX | Halb-Duplex-Verfahren |
| HF | High Frequency |
| HTTPS | Hypertext transfer protocol secure |
| IDE | Integrated development environment |
| IEC | International electrotechnical commission |
| ISO | International standard organization |
| LBT | Listen before talk |
| LF | Low Frequency |
| MA 48 | Magistratsabteilung 48 |
| MAC | Media access control layer |
| MW | Mikrowellen |
| NWK | Network layer |
| OQPSK | Offset quadrature phase-shift keying |
| PDU | Protocol data unit |
| PHY | Physical layer |
| RFID | Radio Frequency Identification |
| SA | Systemadministrator |
| SAP | Service access point |
| SIFS | Short Interframe Space |
| SOAP | Simple object access protocol |
| SOC | System-on-a-Chip |
| SQL | Structured querry language |
| SSH | Secure Shell |
| TCP | Transmission control protocol |
| TDMA | Time Division Multiple Access |
| UART | Universal Asynchronous Receiver-Transmitter |
| UHF | Ultra High Frequency |
| UID | Unique Identifier |
| UMTS | Universal Mobile Telecommunications System |
| WLAN | Wireless local area network |
| WPAN | Wireless personal area network |
| XML | Extensible markup language |

# Appendix A

# Appendix B