



DEVELOPMENT OF LOCAL POSITIONING SYSTEM FOR A PIPE-LESS PLANT

Automation & Robotics
Group Project SS18

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Abstract

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1 Introduction

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2 Pipeless Plant

2.1 Existing setup

2.2 Problems with the Existing Setup

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zb

- Fish eye
- Sunlight..

3 Selection Process

About the 4 techniques..

3.1 Triangulation

Summary

Implementation

Pro and con

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3.2 Pattern Recognition

Summary

Implementation

Pro and con

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3.3 RFID

Summary

Implementation

Pro and con

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3.4 Map-Based Localization

Summary

Implementation

Pro and con

..

example:

Col1	Col2	Col2	Col3
1	6	87837	787
2	7	78	5415
3	545	778	7507
4	545	18744	7560
5	88	788	6344

Table 1: Should be a caption

4 Theoretical Background

4.1 Radio Frequency Identification

4.2 Trilateration

4.3 Simulation

4.4 ...

5 Simulation¹

5.1 Emulator

5.2 RSSI Measurements with real HW

5.3 Simulation with emulated data

5.4 Results

¹Stephan

6 Implementation

7 Hardware²

7.1 Communication (Abdul and/or Stefan)

7.2 Initialization procedure (Stephan and Stefan)

7.2.1 Recording and filtering data (Stefan)

7.2.2 Analysing data (Stefan)

7.2.3 Estimation of position and orientation (Stephan)

7.3 Results

7.4 Improvements

²Abdul and Stephan

8 Conclusion

conclude..

9 Future Work

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10 References

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11 Appendixes