

Title suggestions

- Controlling linear motor with ability to self-stabilize a joint rod
- Developing a control for inverted pendulum by linear motor
- Optimization of linear motor's operation with Mindsphere

Introduction

In this research project, our purpose is to get familiar with Siemens Simotics L-FN3 linear motor control and how Siemens' IoT platform Mindsphere can be utilized in function, what the motor is doing. Mindsphere allows us to optimize function of linear motor, and it makes it possible to move data between other devices. That makes the linear motor's function more efficient, which is important, when the function is repeated many time.

The stabilization will be our main focus to get working with the linear motor.

Controlling the linear motor with the function to get the rod being vertical will be a challenge for us but challenges are good to learn new things. With this stabilization we want to show what the linear motor is capable to do and discover new possible use cases for the motor. This solution could be used in the future factory of some sort maybe or even in full scale production.

Structure

Introduction

Equipments and system

- "Balancing device"?
- Linear motor
- Mindsphere

Optimization/Cooperation/Control

- Results

Discussion

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