

Automation of the Linear Shift Mechanism

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5th Nov 2019 at \bar{P} ANDA -Collaboration Meeting Darmstadt

Outline

- 1 Overview
- 2 Control-Theory Model
- 3 Hardware
- 4 Software
- 5 Up Next

Overview

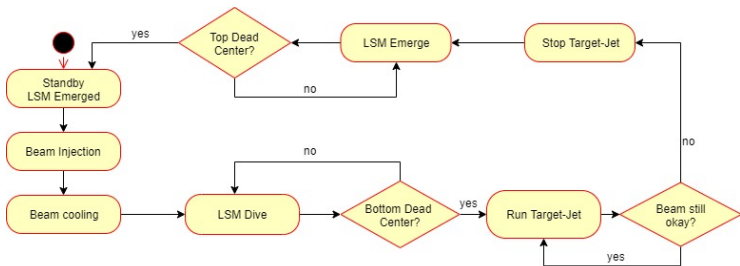


Figure: State Machine Model

Control-Theory Model

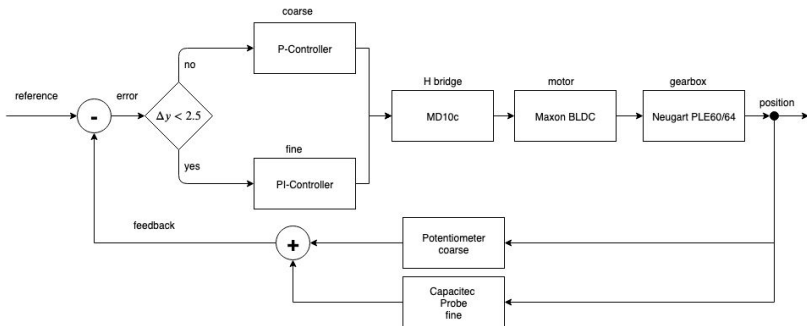


Figure: Control-Theory Model of Diving In LSM

Hardware

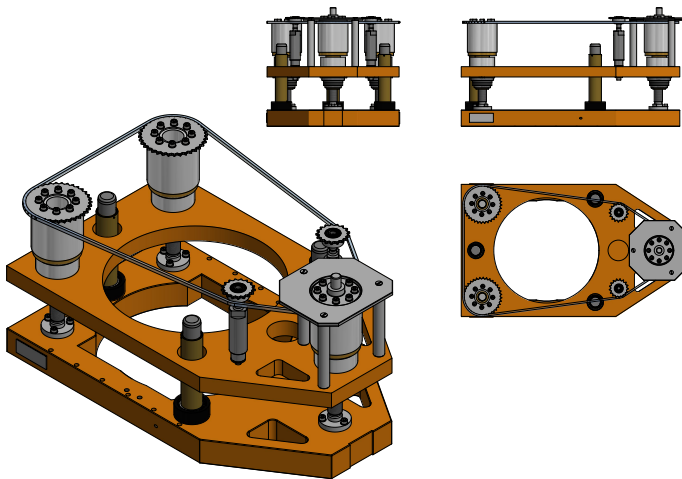


Figure: Hardware of the LSM

Hardware

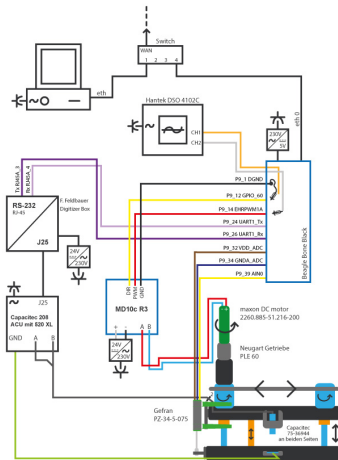


Figure: Hardware of the LSM

Software

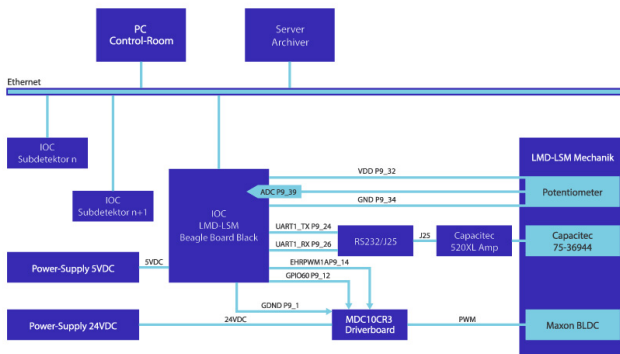


Figure: Wiring of the BBB

H-Bridge

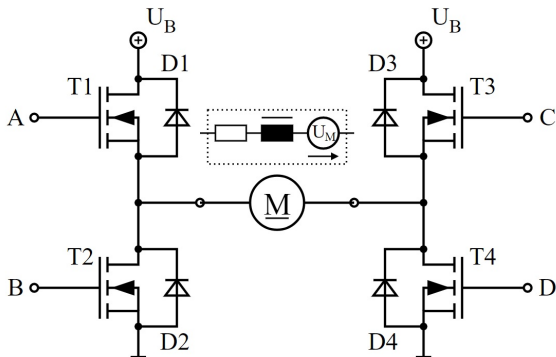


Figure: H-Bridge, work of v. Biezl, Creative-Commons,
<https://commons.wikimedia.org/w/index.php?curid=4792919>

Software

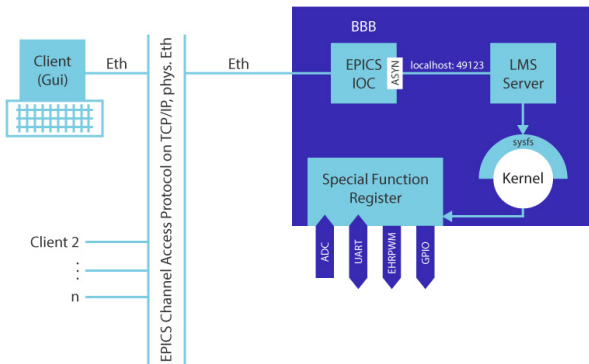


Figure: Infrastructure

Up next

- Mount test-cage to put load on the LSM
- Measure true drive timing, as well as energy-consumption
- Rebuild BBB Image with Florians EPICS Docker Image
- Integrate LSM control into paluma-beam-time GUI
- Optimization of all control parameters

The Ending