Master Thesis

Control Concept for a modern Multi-Level-Converter

Multi-Level-Converters may be used to transfer electrical power between two high voltage DC links. Within a joint project of some groups of the Faculty of Electrical and Information Engineering a Multi-Level-Converter topology was realized. It has some benefits in terms of power losses and switching action optimization. On the other hand, for fully exploiting its benefits a sophisticated control concept is required. Within this thesis modeling, simulation and controller design and implementation of the developed converter will be investigated. On the basis of already implemented control concepts more powerful feedback loops should be designed, implemented and experimentally evaluated.

The following tasks need to be performed:

- Literature review and review of the implemented concept
- Revise and update the simulation model
- Design and implementation of a control concept
- Experimental studies

Start: yesterday 😊
Contact: Markus Reichhartinger, Martin Horn