**Aufgabe der Abschlussarbeit im**

**ISE Masterstudiengang**

**für:** Mbombui Nongho Fon-Pah

**gestellt von:** Prof. Dr. H. Ulrich Hoppe

**Thema: The Design and Implementation of an adaptive PBL-specific Whiteboard**

**Aufgabenstellung**

Problem-based Learning (PBL) is an innovative teaching and learning approach. In PBL, learners collaboratively identify problems, identify learning issues, setting learning goals, gather/share information, investigate, generate solutions, and evaluate learning outcomes. In order to facilitate collaborative knowledge building in a PBL process, this master thesis aims at designing and implementing a web-based, multi-user, adaptive, PBL-specific whiteboard.

The whiteboard will be developed by adopting a model-driven approach. The tool will be developed as a set of controllable building blocks that can be dynamically assembled according to a model that specifies the assemble rules. The functions and user interface of the whiteboard will adapt to the current PBL phase, the task specified in the PBL plan, the work state, the collaboration mode, and the role of the user. Each whiteboard will communicate with the PBL engine, handle multimedia information, and share information with other whiteboards used by the learners in the same group.

To pass the thesis the candidate has to accomplish the following tasks:

* Develop a method to make the whiteboard have adaptability,
* Implement the whiteboard to meet all functional requirements and non-functional requirements, and
* Scientific documentation of research work