**Resume**

Of master degree thesis

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**Theme: “Model-based development of embedded software system with automatic extraction of architecture information”**

**Keywords:** Reverse engineering, reengineering, MDD, UML, Modeling, architecture reconstruction, software architecture, model to text, MOFM2T,

**Annotation:**

Software development is becoming a larger share in more and more industries. Respectively the embedded software penetrates more and more our lives, as its’ rate of distribution is enormous, following the amount of software embedded in devices is growing and its value for businesses is increasing rapidly. As frequently used computer language for the development of these systems is “C”, the abilities for using ready-made tools for modeling are obscure. Using general definitions and methodologies from software architecture discipline, the provided solution focuses on: 1) the ability to extract architecture information and storing it in standard unified model (UML) from embedded software written in “C” and 2) to generate base code for development of similar system from the already extracted model. Here are presented conceptual model and requirements of such tool, as well as: design, implementation and way of testing.

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