The abstract of the Ph.D. dissertation:

"Analysis of conditions of BIM-based Model Checking methods in architectural design."

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Abstract:

This study focuses on the utilization of digital building models for project control in the context of Building Information Modeling (BIM) technology. The primary objective is to analyze the feasibility of project verification. The study aims to investigate whether the existing standards, principles of BIM utilization, and tools are sufficient for effective implementation. The analysis incorporates considerations regarding the requirements definition framework. Building regulations, BIM model representation standards, processing of project information, as well as principles of modeling and organizing BIM processes, have been analyzed. The main part of the research entails the control of a hypothetical architectural project of a multi-family residential building. In this task, an analysis and selection of regulations related to residential building design were conducted. A set of rules was developed for verifying compliance with the chosen regulations. The findings of this study will serve as a basis for further exploration of the possibilities of employing BIM tools for checking the conformity of architectural projects with regulations.

Keywords: BIM, checking BIM models, checking compliance, building code compliance

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