The building permit – how to standardize traditionally established processes

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1 Abstract

To get a building permit is a lengthy process involving a series of review and verification phases by the consultants and by the authorities and their agents. The work processes are, nowadays, governed by a large degree of individualistic work performances.

In order to facilitate a BIM-based building permit application, which exclusively uses the model and its data as its sole base of information, we analyzed traditional processes in the phase of issuing a building permit. This allows to restructure the steps of designing a building according to all required criteria and, step by step, remodel for the application of automated processes.

The facilitation of authorization processes will lead to checking machines which will already be applied by the consultants. Nevertheless, authorities need a secure way to evaluate the quality of the specific design in every regard.

For this purpose, we show how to combine different algorithms to check on the quality criteria for a building permit. There are qualitative criteria but also quantitative boundaries and also some nice-to-have items which can be compensated by alternative measures.

Keywords: Building Permit, Building Application, Building Information Modeling (BIM), Design Process, Automated Code Compliance Checking (ACCC), Model Checking