Title: Design Coordination in BIM: Decision Criteria for Determining Tolerances

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Abstract.

Building information modeling (BIM) has popularly grown among construction, enabling cross-disciplinary collaborations across the whole life cycle of building construction. Using BIM could improve cost estimates and control, more efficient construction planning and administration, higher design and project quality. However, there are some barriers towards BIM adaptation, including tolerance issues which are the main problems that slow the process of BIM implementation. Thus, this study objective is to identify decision criteria involved in determining the tolerance during BIM-based clash resolution. To do that, the study involves interviewing twenty industry practitioners with experience in managing BIM-based design coordination. The data collected were analyzed using thematic analysis. The analysis results concluded that two criteria groups affect acceptable tolerance: existing standard and project involved categories. The existing standard categories include ‘standard,’ and ‘value.’ While the project involved categories include ‘experience,’ ‘discipline,’’ process,’ and ‘system.’ The research findings would help researchers and industry practitioners determine the tolerance and assist in the BIM implementation.

Keywords:

Building information modeling (BIM); Decision making; Clash resolution; Tolerance; Interview

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