A Literature Review on the Usage of Ontologies for Quality Management in the Construction Execution Phase

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ABSTRACT

Quality and defect management is a huge topic in the construction execution phase. By now, digital methods like BIM are mostly used in the planning phase. In the construction execution, especially in the management of qualities are analogous or document-oriented systems state of the art. Current quality management systems usually focus on the management and correction of defects, but the quality-related construction supervision contains more activities like planning quality inspections. The distribution of quality and defect-related data is still limited due to corporate solutions, missing project relation, and non-standardization. Ontologies can link heterogeneous data sources and can be used to plan and check quality inspection by standardized rule languages. The following paper will overview current research in using ontologies for quality management in the construction execution phase. The research will investigate and compare current methods of construction quality management by ontologies. We examine and compare methods for querying and rule checking of quality information based on ontologies. This review enables further research and improves research activities lasting.