Framework for the semantic enrichment of BIM models through a natural user interface

Fábio Matoseiro Dinis[1], João Poças Martins[2], Bárbara Rangel[3], Ana Sofia Guimarães[4]

[1] CONSTRUCT - GEQUALTEC, Faculdade de Engenharia, Universidade do Porto, Porto, Portugal, fabiodinis@fe.up.pt
[2] CONSTRUCT - GEQUALTEC, Faculdade de Engenharia, Universidade do Porto, Porto, Portugal
[3] CONSTRUCT - GEQUALTEC, Faculdade de Engenharia, Universidade do Porto, Porto, Portugal
[4] CONSTRUCT - LFC, Faculdade de Engenharia, Universidade do Porto, Porto, Portugal

Abstract

The full-fledged uptake of Building Information Modelling (BIM) methodology is not yet acknowledged by all the actors involved in a construction project. In fact, due to the extensive variability of expertise among the various actors of the construction sector, not all have the necessary skills to interact with BIM models holding information. Conversely, Natural User Interfaces allow for streamlining the interaction process with digital tools so that, in a more democratic and inclusive way, the empirical knowledge of many actors in the construction sector can be capitalised.

This paper presents the work in progress of a framework based on a set of BIM information filtering mechanisms and interaction metaphors to streamline the information management process of enriching BIM models with an unsatisfactory Level of Information (LOI). Moreover, the semantic enrichment process focuses on Virtual and Augmented Reality interfaces and will be further validated using a holistic usability assessment methodology.

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