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BIM and IoT: A Synopsis from GIS Perspective

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Abstract. Internet-of-Things (IoT) focuses on enabling communication between all devices, things that are existent in real life or that are virtual. Building Information Models (BIMs) and Building Information Modelling is a hype that has been the buzzword of the construction industry for last 15 years. BIMs emerged as a result of a push by the software companies, to tackle the problems of inefficient information exchange between different software and to enable true interoperability. In BIM approach most up-to-date an accurate models of a building are stored in shared central databases during the design and the construction of a project and at post-construction stages. GIS based city monitoring / city management applications require the fusion of information acquired from multiple resources, BIMs, City Models and Sensors. This paper focuses on providing a method for facilitating the GIS based fusion of information residing in digital building "Models" and information acquired from the city objects i.e. "Things". Once this information fusion is accomplished, many fields ranging from Emergency Response, Urban Surveillance, Urban Monitoring to Smart Buildings will have potential benefits.

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