C-Y. LIN, C-C. CHOU. **MDA-based facility management applications under BIM.** *Gerontechnology 2012;11(2):181;* doi:10.4017/gt.2012.11.02.367.00 **Purpose** The recent research trend of building information modelling (BIM) involves interoperability and issues pertaining to the design, construction, operations, and maintenance phases of a building[1]. However, few researchers are concerned with problems encountered in the last two phases of the building life cycle. Since BIM has been widely used in the design and construction phases, further expanding the BIM data stream to the post-construction phase can not only establish a consistent, shared database for information exchange between the phases but assist in current facility management applications. This research reconceptualises BIM with object-oriented thoughts to a space-based representation, and tries to construct an interface between BIM and existing facility management software. **Method** Model-driven architecture (MDA) is one of the modern software design approaches. With its foundation – meta-object facility (MOF) – and model transformation, MDA provides an ideal solution for easily maintaining the interoperability. In this research, a MOF of a building is constructed by imitating the MDA approach, encapsulating BIM data and providing an interface for external facility management software. This MOF of a building is designed with spatial interference due to the maintenance and repair work is usually based on the space. **Results & Discussion** A conceptual demonstration of disaster mitigation is conducted to test the feasibility of using MDA to encapsulate BIM data for extended applications. Furthermore, the expected results are reconstructing maintenance records to a space-based database for a better software design and a solution for interoperability.

References
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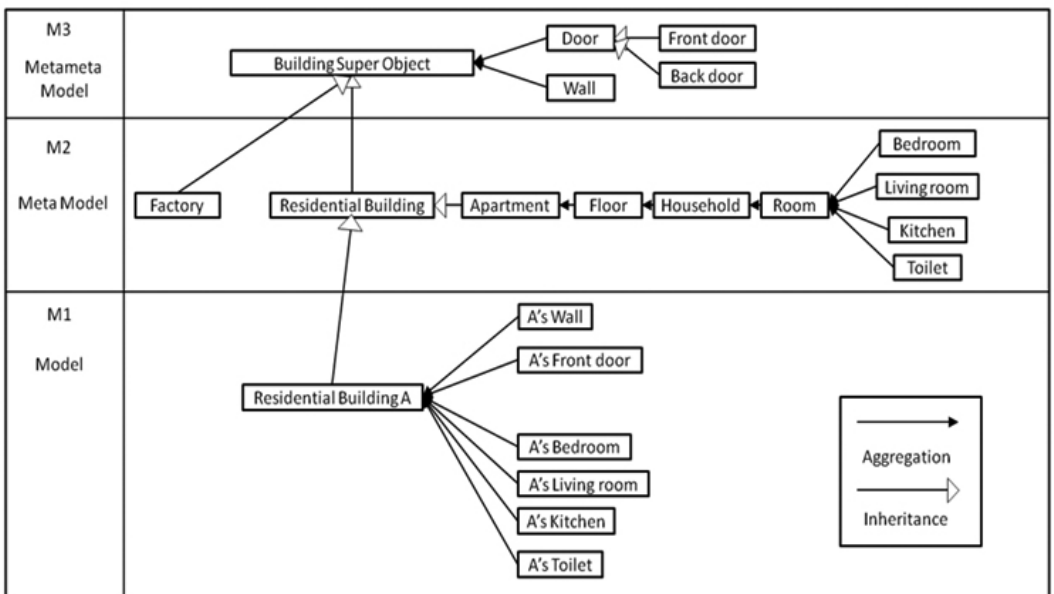
Figure 1. Meta Object Facility of a building