

Fraunhofer-Institut für Bauphysik IBP

Forschung, Entwicklung,
Demonstration und Beratung auf
den Gebieten der Bauphysik

Zulassung neuer Baustoffe,
Bauteile und Bauarten

Bauaufsichtlich anerkannte Stelle für
Prüfung, Überwachung und Zertifizierung

Institutsleitung

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Life cycle phase-spanning use of planning and building data using the example of the Alte Schöfflerei, Benediktbeuern

Abstract for the CHNT, PhD/Master Session

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Abstract

In the course of planning, construction and (re)use with associated maintenance of a building, a large number of data records are created. These contain detailed information about the condition of the building and its components as well as, for example, about necessary maintenance and servicing cycles. However, this wealth of information is currently rarely used beyond the corresponding life cycle phase of a building. In order to address this problem, the master's thesis presented here examines the application of BIM methodology for the creation of an Asset Information Model using a listed reference building, the Alte Schäfllerei in Benediktbeuern.

First, a suitable procedure for the acquisition and representation of information is derived on the basis of a guideline from Historic England (cf. Historic England, 2019) and the BIM manual for federal constructions (BIM Handbuch für Bundesbauten) (cf. BMVg et al., 2022) and enriched using relevant standards. In the second step, an exemplary implementation of individual sub-steps is carried out on the specific object of investigation, the Alte Schäfllerei.

Asset Information Requirements for the Alte Schäfllerei are defined on the basis of the 'Sample AIA work aid' (Arbeitshilfe Muster-AIA) of the 'BIM introduction and implementation strategy for federal buildings' (Einführungs- und Umsetzungsstrategie BIM für Bundesbauten). Subsequently, the building is modeled in the CAD software 'Archicad 26' on the basis of a point cloud previously recorded by the author and using the BIMm-Tool add-on. The modeling result is available as an IFC model. Finally, this is exemplarily linked to relevant documents in the MonArch information system, which becomes the common data environment. The target group of the work are actors from the fields of H-BIM (Historic BIM) and digital room book.

This work clarifies the specific needs of historic buildings when using the BIM methodology and sets out a suitable procedure for its use in existing buildings. This includes a comprehensive and precise analysis of the building, the involvement of all actors involved in the identification of information requirements and the conscious selection of suitable technologies for capturing and modeling the existing building.

In the session, the derived working method will be demonstrated and some of the work results will be presented.

BMVg, BMWStB, & BImA. (2022). *BIM-Handbuch—Arbeitshilfe Muster-AIA*. https://www.bim-deutschland.de/fileadmin/media/Downloads/Download-Liste/Hochbau/BIM_fuer_Bundesbauten_AH_Muster-AIA.pdf

Historic England. (2019). *BIM for Heritage Developing the Asset Information Model*. Historic England. <https://historicengland.org.uk/images-books/publications/bim-for-heritage-aim/heag271-bim-developing-asset-info-model/>