



Round Table

From Plans to Pixels: The Evolution and Future of Digital Building Modeling

Chairpersons:

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Description and Motivation:

Architectural modelling and digital reconstruction are essential tools for preserving and researching cultural heritage. The central theme of the proposed roundtable discussion is a building modelling method based on original architectural plans, which enables the authentic reconstruction of historical states of buildings, with a particular emphasis on the potential for interdisciplinary collaboration.

This approach stands out due to its authentic and critical analysis and interpretation of sources, such as original and archival plans, whereas the more common reconstruction method relies on photographs and site remains.

Comparing these two main approaches offers new perspectives on visualization and historical interpretation. The discussion will explore the methodology's critical and technical aspects, as well as the potential applications of such models in areas like education, research, and community engagement.

At the Budapest City Archives, we have initiated this less common method based on original plans, in collaboration with the architecture faculty of ÓE-Ybl.

This method raises several questions: How should we integrate different sources into a single model? Should we integrate them at all? What might be the reasons for the limited adoption of this method in the broader professional scene in Europe? What other approaches are prevalent in the field of urban history?

I would like to invite three or four experts from various cultural institutions and universities across Europe to discuss our visions and potential collaborative solutions in this field. Each participant will have the opportunity to present their state-of-the-art work, followed by a joint discussion of each other's ideas.

Directions for the Discussion

Preservation and Archiving:

How can the long-term preservation of digital reconstructions be ensured? What technical and legal challenges must be addressed in the creation and management of archives? How can accessibility and data integrity be guaranteed for future generations?

Authenticity and Source Criticism:

What methods can ensure the scientific authenticity of reconstructions? How can interpretative decisions (paradata) be documented transparently to help future users understand the underlying processes of the reconstructions?

Interdisciplinary Collaboration:

How can collaboration among architects, historians, IT specialists, and other professionals be strengthened in developing digital reconstructions? What tools and standards can support effective collaborative work?

Technological Innovation:

What new technologies (e.g., AI, AR/VR) can be integrated into the reconstruction processes? How can their sustainability and usability be ensured?

Target Audience:

The target audience for the roundtable includes architectural historians, heritage conservation experts, digital modelling specialists, educators, and researchers interested in the interdisciplinary approach to built heritage. Additionally, representatives of institutions and projects working on applying new technologies to preserve the built environment are key stakeholders.

Keywords:

Digital Reconstruction Architectural Modeling Cultural Heritage Preservation
Interdisciplinary Collaboration Technological Innovation

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