

# 3D Digital Literacy: Digital Cultural Heritage as Resource in Education and Research

## Workshop

This workshop will explore the use of two DFG-funded projects for digital heritage models: Infrastructure for documentation of virtual reconstructions (IDOVIR) and the DFG Viewer 3D - Infrastructure for digital 3D reconstructions (DFG Viewer 3D) enabling the publication of 3D models using a free 3D viewer. The first part focuses on the process of documenting digital reconstructions based on the “Reconstruction Argumentation Method” (RAM) using the IDOVIR platform. This method uses a subdivision of the reconstructed object into different spatial areas and possible reconstruction variants as the basis for documentation. Each of these areas is represented by 1) renderings / 3D model of the reconstruction, 2) images of the sources used, and 3) a textual argument explaining how the sources have given rise to the reconstruction. For each area it is possible to represent several variants within this triad of reconstruction – sources – argumentation. It is a simple method that allows participant also a quick evaluation of the hypothesis level of their reconstruction models using predefined or self-chosen criteria, as well as the automatic generation of structured documentation in the form of a PDF document.

The second part deals with the publication of the digital model in 3D repository developed within the DFG Viewer 3D project. The 3D Repository is based on Wiss-KI and aims at spreading the availability of 3D digital resources of cultural heritage, emphasizing on enabling the reuse of published data and ensuring long-term accessibility. The workshop will address the requirements and preparation of the model for publication on the web to ensure correct visualization of the model in a web browser, as well as issues in making the data available for reuse based on the “Scientific Reference Model” (SRM). The 3D model will also be put into context by cross-referencing with other data and platforms considering IDOVIR. Participants will be able to use the 3D repository in practice by filling out a documentation form and uploading their own models.

The workflow presented should enable participants to understand the requirements for publishing 3D models online and demonstrate the benefits of sharing their data online, contributing to actively increasing the availability of 3D digital resources of cultural heritage.

## Motivation

With advances in technology, there is an increasing amount of digital cultural heritage resources, much of which is still inaccessible to a public audience due to the lack of standardization of documentation issues and methods for sharing digital models. However, new tools are being developed to increase accessibility of 3D models of cultural heritage, following current principles of good practice for documentation (London Charter, Sevilla Principles) or sharing digital resources (FAIR principles). The motivation of this workshop is to present the use of these new infrastructures for the documentation and publication of 3D models and to demonstrate their potential for use in the education and research sector of digital cultural heritage.

## **Target Audience**

The target audience is amateurs and professionals practicing the use of 3D models of cultural heritage, with an emphasis on hypothetical digital reconstructions (although not limited to these). The workshop may benefit archaeologists, art historians, architects, digital humanists, or museum curators who are looking for solutions to document the process of 3D model creation and provide open, permanent access to published digital resources.

## **Keywords**

#digitalheritage #digitalreconstruction #3Dmodels #documentation #IDOVIR #publication  
#3Drepository