Heritage Reloaded: Innovative Reuse of 3D Cultural Content

Abstract

As part of the common European data space for cultural heritage the project 5Dculture started out as a combined effort of cultural heritage preservation institutions, international networks, and IT solution enterprises to jointly explore potential re-use scenarios for already existing 3D cultural content. 5DCultures’s efforts are focusing on enabling and demonstrating how 3D cultural heritage content from the domains of fashion, archaeology, and architecture can be creatively reused in museums, schools, tourism and by cultural and creative industries. In doing so, partners make available a set of tools for working with 3D content, from AI and Semantic technologies for 3D enrichment to 3D content storage, management, viewing, interaction and storytelling.

Reusing 3D content means reimagining it. We foster innovation that inspires new narratives and fresh perspectives, making cultural heritage a dynamic tool for education, creativity, and meaningful experiences. The different reuse scenarios covered by the project can be grouped based on the domain of the 3D content used (Farella et al., 2024, Corns et al., 2024):

* Fashion Collections: using 3D digitised historical garments for an enhanced visitor experience in museums with virtual try-ons and social VR.
* Archaeology: exploring new methods of experiencing archaeological sites and artefacts, adding the dimension of artistic reuse, gamification, and education, e.g. by using 3D prints of archaeological artefacts in educational activities with children and young adults, as well as people with visual impairments.
* Historic Buildings and Cityscapes: working with enhanced visual applications that redefine cultural tourism, empower research, and transform education through virtual exploration of historical sites.

5Dculture complements the ongoing efforts of setting up the common European data space for cultural heritage, a European Union flagship initiative that aims to accelerate the digital transformation of the cultural heritage sector, building upon the work of the Europeana Initiative (European Commission, 2021). A digital community of practice for heritage professionals working with 3D content has been set up by the project to share resources, news and best practices on the topic.

During the panel speakers coming from various project partners will share with the audience the highlights and lessons learned from the different scenarios that were targeted within the project, and will discuss the future possibilities that these demonstrate and the challenges ahead that remain to be tackled.

Motivation

In recent years the process of digitising cultural heritage in 3D with a high level of detail has seen a stark increase within many member states of the EU, in part driven by the fact that many cultural heritage objects are vulnerable and at risk. Coupled with the need to accelerate the digital transformation of the cultural heritage organisations, it is key to ensure that the sector is well equipped to make the most out of the opportunities offered by 3D data, opening up to the next generation use and reuse scenarios that are more immersive, engaging, informative and sustainable.

So, as more cultural content is digitised in 3D, catalysed by such innovative initiatives like the Twin it! campaign run by the common European data space for cultural heritage, it is important to considerer how this 3D content can be stored, shared, visualised and re-used.

The project team of 5Dculture will showcase innovative scenarios for the reuse of 3D digital content, aiming to actively engage with experts in the respective fields as well as inspire the audience by showing potential use cases for scientific, educational, artistic, touristic, and even commercial engagement.

Target Audience

Cultural heritage professionals, 3D digitisation experts, researchers, educators, creative industries, destination managers, general public

Key words

3D, reuse, heritage, best practice, Europeana

References

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