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Ph.D. project 2024/2025

MuseoXR: Archaeological Exhibits in Museography with Collaborative Extended Reality

Supervisors / Contact

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Themes

Computer-Supported Collaborative Work (CSCW), Virtual Reality (VR), Augmented Reality (AR), Archaeology, Scenography, Museography.

Project description

The practice of scenographers and designers in museography is taking a leap with the immersive medium using eXtended Reality (XR) to curate exhibits. However, for remote and/or inaccessible archaeological sites, the exhibits are often limitedly presented by photographs, 3D printed models and reasonable-size real artefacts at museums. In addition, audiences and public visitors are often left out in this whole process until the final product is finalised and put on display. In this project, using collaborative XR, we aim to bridge this gap by bringing audience (end-users) into the participatory design loop of the dynamic content creation of archaeological exhibits, which, at the same time, helps the scenographic team get feedback on their product from early stages. Moreover, the end-users can have an easy remote access into these archaeological sites and to be able to engage in related creative activities.

We aim to bring in together different stakeholders involved in this curation process for archaeological heritage: museographical team including scenographers and curators at one end, and public audiences at the other end of this symbiosis. Our ultimate goal is to support the democratisation of art with the rise of the digitalisation era. This Ph.D. project is situated in an emerging research area that lies at the intersection of museography, scenography, archaeology and cultural heritage research, human-computer interaction, extended reality, and computer supported collaborative work (CSCW).

Mission

The successful candidate will be involved in the design, modelling and development of a collaborative virtual and augmented reality system for scenography and museography to dynamically create archaeological exhibits. Using user-centred design approach, the Ph.D student will conduct a user research to investigate the current practice of the scenographers and curators in museums. In working closely with a scenographer team, the student will explore novel techniques using collaborative immersive technology to help them generate exhibits with virtual content and real objects.

We envision 4 stages in this project:

1. User research on the current practice of scenographic design in museography for archaeological exhibits.
2. Codesigning an effective hybrid collaborative XR framework supporting dynamic content generation with the practitioners in scenography and museography.
3. Investigating novel immersive techniques to dynamically blending multimodal content of scenographic design process.
4. Evaluation of the co-creation of scenographic design workflow using collaborative XR.