HeriTeller 3D, a New Persistent Virtual-World Platform for Cultural Heritage Interpretation and Dissemination

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CH (Cultural Heritage) virtual reconstruction is a way to rebuild artefacts, structures and historical/ archaeological environments in a digital form. In recent years there has been an escalation of visualization projects, mostly installed in museums and cultural centers, using this medium.

However cultural learning in virtual environment is probably the most difficult challenge. The pedagogical aspect of CH digital environments is in fact much more complex than beautiful virtual representation. Other unresolved logistic problems, such as initial costs, maintenance and technological outdating issues also remains when developing 3D contents for CH. For these reasons CH visualization, are often not sustainable (an aspect that is usually required for policies advocated by several guidelines such as the Londoncharter and the Seville Principles.

To solve most of these problems in academic or private initiatives, rather than creating closed applications or un-editable rendered images, it would be advisable to create one consistent environment. This could become always accessible by the interpreters for content creation and modification and, at the same time, always accessible by the public for the final optimal fruition. Unfortunately, this is not the case of many academic projects that never see the light or quickly disappear from the public domain so that their evidence only remains in academic papers.

Here we present a work-in-progress platform that seeks to optimize the process of interpreting CH (Cultural Heritage) contents using sounds, images and text annotation directly into a multiplayer persistent 3D virtual world. The aim is to empower historians, archaeologist, curators and academic interpreters, with a new easy-to-use virtual storytelling environment. All the requirements are discussed with the main users (the interpreters) to tailor the platform around their needs. An interactive 3D environment, which is automatically derived from the working platform, once its interface is hidden, will enable to propose to the final users (the public) an emotional and educative experience. The platform tries to incorporate three important features necessary to fulfil some important requirements for Digital Heritage visualization projects such as: being sustainable, upgradable and easy accessible. Several other features are also included such as the possibility to fully change the weather condition and the time of the day. Our aim focuses on maintaining a persistent virtual world, usable for any CH 3D visualization project, but especially on the implementation of a working platform that facilitate CH contents creation and interpretations. This is to propose the engagement of the public at an emotional and cognitive level

with the chosen material. Therefore, this platform serves as a bridge between the scientific/historical/ archaeological research outcomes and the final digital visualization for the public. Although the gamification aspect has yet to be explored we intend to propose a solution where it would be possible to insert updatable mini-games within the final model. This will permit the final user not only to freely explore the whole environment but also to concentrate in learning throughout playing within the proposed model.

Keywords: Virtual-Worlds; Cultural Heritage; Mini-Games; Virtual Learning Environment.