

Identifying best practice: the design and evaluation of adaptable technology ecosystems for creating geo-located cultural heritage experiences

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In this paper we consider the design, iterative development and user evaluation of a geo-located game for discovery of cultural heritage and history, known as pilot 4. The app facilitates situated discovery of historical narratives and objects. The app is used to demonstrate the development of an adaptable technology ecosystem that connects together Personalisation (profiling, location tracking and recommendation), Crowdsourcing (content, augmentation, content creation and), Social Networks (comments, rating, micro-blogging), Content visualisation, notifications and Gamification. The ecosystem is expected to enable the creation of different Apps that make use of technology modules to engage and enhance users understanding of historical topics from different perspectives. It is one of four pilots that will be realised on the completion of the CrossCult project in 2019 (Funded by a Horizon 2020 innovation action (under grant agreement no 693150).

The resulting app developed in Pilot 4 is designed to foster new, in-place experiences for its users. Its purpose is to lead players to discover meaningful coexistent connections within their city and between the two cities. The app should encourage users, through playful interactions, to evaluate both their surroundings and the historical objects (as well their descriptions) that they encounter hidden in the city. Users can also contribute to the narrative by sharing their own geolocated reflections and personal stories. As well as this main app, the Pilot 4 ecosystem has two companion apps that (1) permits crowdsourced or expert moderation of user-generated content (comments, reflections and stories) to avoid the presence of hate speech and/or potentially offensive language and (2) serves a user-friendly interface for simple to use authoring of geo-located content by non-technically savvy users. This App and its ecosystem provide new ways of disseminating and interacting with digital objects in a manner that removes the traditional constructed environment of the classroom or the museum and integrates discovery and reflection as part of the lived experience of the city.

For this end, we consider the end to end co-design process that was adapted to for Pilot 4. We discuss the benefits and limitations of paper prototyping through the design of a board game highlighting best practice for other digital humanities and cultural heritage projects. We also explore the results of iterative testing and multiple phases of evaluation that were carried out as controlled experiments and discuss how qualitative analysis conducted on the experiment results can help us to understand more effectively the position of the participant within the experiment, their attitude towards technology adoption and the perceived value that they placed on the App.

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