A vision of adaptive cultural experiences through the use of interactive storytelling in museums

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Abstract

Storytelling has been embraced as an alternative method of communication and interpretation to guide museum visitors. To date, storytelling has been an explicit aspect of a museum visit expressed through human or even audio guides. However, with the widespread adoption of interactive digital exhibits and mobile technologies, storytelling in a museum is taking new forms, incorporating such mechanisms as branching narratives, personalisation, and adaptivity to visitor behaviour and actions [1].

A story-based approach requires that the traditional set of exhibit-oriented descriptions is replaced by cohesive story-centred narratives with carefully-designed references to the exhibits. The adoption of a more explicit storytelling approach to exhibition design contributes to making collections more accessible and engaging for different kinds of audiences: it creates a relaxed environment that raises self-confidence [2]; establishes a universal way of communication; and because it invites visitors to fill in the blanks with their own experiences, it helps to set emotional connections, which can be deeper than intellectual understanding [3] [4].

Nevertheless, museums raise significant new challenges for interactive storytelling research. The nature of viewer-exhibit interaction is such that digital media must gracefully complement physical artefacts, which remain the primary focus, and at the same time take into account visitor needs and preferences [5]. Thus, realizing an immersive, and, at the same time, interactive and personalised digital storytelling experience within a museum is a challenging task. It involves meeting multiple and often contrasting needs: evolving visitor expectations as well as the museum's objectives; an engaging story that flows and provides dramatic tension, as well as interactivity and user control and feedback; personal relevance as well as a variety of multimedia material for all; mobile interface and interaction design as well as focus on the physical space.

This presentation will touch on the vision and different phases, from conceptualisation and authoring to production and formative evaluation, in the design and development lifecycle of an interactive personalised mobile storytelling research project named CHESS [6]. The approach assumed by the CHESS project attempts to address the contradiction of creating adaptive stories, tailored to evolving visitor needs and actions, while at the same time respecting story flow and coherence. The main issues and lessons learned from the application of the CHESS prototype at the Acropolis Museum in Athens will be highlighted, with a goal of contributing good practices and design guidelines, derived from on-going evaluation at the Museum with visitors.

Acknowledgments

References

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Bio

Maria Roussou is Founding Director of makebelieve design & consulting, as well as a researcher and Adjunct Lecturer at the University of Athens, Greece, teaching courses in Human Computer Interaction and 'Museums and Digital Technologies'. Previously (1998-2002), she established and directed the Virtual Reality Department at the Foundation of the Hellenic World, a cultural heritage museum in Athens primarily presenting reconstructions of ancient Greek monuments in immersive virtual reality theatres. She has also collaborated with many other museums, including contemporary art museums such as the Walker Art Center to design and create interactive art education material for ArtsConnectEd.org. Currently her main research is within the EU funded project CHESS (www.chessexperience.eu), which she will be presenting at VAMCT 2013. Maria holds a PhD in Computer Science from the University College London (UK), a Master in Fine Arts in Electronic Visualization and an MSc in Computer Science from the University of Illinois at Chicago.
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