Digital Technology Showcase 12 June 2014



Supporting University Museums and Collections

LIST OF SELECTED ENTRIES

CultureFinder

Fitzwilliam Museum/University of Cambridge Museums; CRASSH (Centre for Research in the Arts, Social Sciences and Humanities), University of Cambridge; Gooii, Knowledge Integration, Deep Visuals (technical partners). The project is supported by the Digital R&D Fund for the Arts, AHRC and the National Lottery through Arts Council England

The project is a website and mobile app for creating/sharing tours of art and cultural objects. It is intended to assist visitors to Cambridge (and, by extension, any city) in planning their tour whilst introducing the possibility for serendipity and chance discovery. Focusing on objects rather than places, it links together objects from the university museums in Cambridge together with artworks and events across the city. The research element of the project explores the role of mobile technology in cultural tourism.

Curpanion: Bringing Natural History to Life

Play Nicely, University of Bristol and the Horniman

We aim to breathe new life into taxidermy and natural history exhibits by prototyping internetconnected personalized curatorial devices called 'Curpanions'. Although natural history exhibits are popular at museums, and each specimen contains a wealth of stories and scientific information, displays are static and engagement is often one-dimensional. Curpanions break free from the constraints of traditional display and interaction by enabling the visitor to activate augmented physical exhibits whilst collecting and connecting to virtual content about them.

Digital Touch: Unlocking the Story

Manchester Museum and the Department of Mechanical Engineering Loughborough University

A digital replica of an Egyptian Stela can be touched to release its story. It has strategically placed sensors, triggering sound and image files relating to the carved detail which play on an adjacent screen, allowing the visitor to interrogate complex themes, symbols and narratives in a self-guided manner. Information can be updated and allows for a number of narratives themes to be added to the object.

Ghosts in the Garden

Splash & Ripple, UWE History Department, Holburne Museum

Ghosts in the Garden is an audio game where visitors use a Time-Radio to tune into events happening in 1824. The experience was sound designed to give visitors a feel of what Georgian life was like. Choices they make when exploring Sydney Gardens affect the outcome of the story.

Interactive Sensory Objects for and by People with Learning Disabilities

University of Reading's Department of Art and School of Systems Engineering, Rix Research Centre, University of East London, in collaboration with Mencap Liverpool Access to Heritage Forum, Mencap Reading, Reading College Learners with Learning Disabilities, the Tower Project, Speke Hall (National Trust), Museum of English Rural Life, and the British Museum.

This project aims to design and produce multisensory interactive objects that respond to equivalent objects in museum collections, as a way to enhance museum experiences for people with learning disabilities. This project engages people with learning disabilities as co-researchers in the design of the interactive objects, through a series of workshops combining multisensory art, electronics, and multimedia.

Museum Object Examiner

Manchester Museum, Touch and Discover System and; Henshaws Society for Blind People. Funded by the Stavros Niarchos Foundation

This new haptic interactive looks at the needs of the visually impaired visitor and currently displays 3D scans of objects from the Ancient World galleries at Manchester Museum as well as an object from Yale Peabody Museum. These museum objects remain inaccessible to our visitors with sight impairments as they are displayed behind the glass of a museum case. The new interactive system consists of an innovative and immersive application that operates in a virtual digital environment. It incorporates touch-enabled software that allows the user to investigate and explore the topography of an artefact and find information about it, in full 3D and using a new hand held stylus.

Reflecting the Past

University of Bristol, Interactive Places Ltd, A REACT Heritage Sandbox project

Using a specially made mirror and judiciously place speakers, we can augment a space with characters from the past – fictional or real.

Reflection-based interactive museum cabinets

Bristol Interaction and Graphics, University of Bristol, Bristol Museum

We present two prototypes of reflection-based interactive museum cabinets. The first one allows visitors to access information on artefacts in a cabinet by touching them with the reflection of their fingers on a transparent panel. The second prototype allows visitors to reveal the internal structure of objects, using the reflection of their hands or of any object as a 3D scanner.

Riot1831@Nottingham Castle

Nottingham City Museums and Art Galleries, Nottingham Trent University, School of Art & Design, Hot Knife Digital Media and University of Nottingham, School of History and School of Computer Science. The project is supported by the Digital R&D Fund for the Arts.

The project is an augmented reality app that offers visitors the opportunity to experience the 1831 riots that led to Nottingham Castle being set on fire. It uses object-tracking technology to superimpose 3D real-time computer environments and animated first-person performances onto museum objects.

The Kazafani Boat: 3D Visualisation and Printing

University of Brighton, The Cyprus Institute, The Cyprus Museum

This case study by the University of Brighton's Cultural Informatics Research Group looks at the benefits of scanning and 3D printing a twelfth century BC terracotta boat from the Cyprus Museum in Nicosia and considers how this technique can be applied to the wider museum sector.

3DPetrie: Augmented Reality, Gesture Recognition and Touch Technology

UCL Petrie Museum of Egyptian Archaeology, UCL Department of Civil, Environmental and Geomatic Engineering, Arius 3D

Since 2009, UCL has been creating 3D models of objects in the Petrie Museum collection using photogrammetry and 3D colour laser scanning technologies. The aim of 3DPetrie is to integrate the 3D images within a diverse range of 3D interactive resources that can inspire public engagement through multi-platform heuristic experiences. *Tour of the Nile* is an augmented reality-based guide to excavated material in the Nile Valley. *Inti* is an iPad-based interactive which allows visitors to view a 3D image of the skull of an ancient Egypt ruler and build facial characteristics by adding layers of muscle and skin to the image. The 3DPetrie website is an interactive 3D image library.

Virtual Romans App (Baths, Beakers and iBeacons)

De Montfort University, Leicester Arts and Museum Service, University of Leicester Archaeological Services, Mixed Reality Ltd

The Virtual Romans App is a location-based virtual reconstruction, which seeks to bring some aspects of Roman Leicester (Ratae Corieltauvorum) in the year 210 AD back to life. The App allows you to view a selection of 3D Roman buildings and artefacts in virtual reality or to explore these objects in their original geographic locations using augmented reality via GPS (Global Positioning System) and IMU (Inertial Measurement Unit) data available on modern mobile phones and tablets.

Walking with Pictures

Aerian Studios, University of Bristol and University of West of England (UWE)

Focusing on bringing early animation experiences back to cinema and museum visitors, we produced an experience that would truly imitate the actions antique optical devices such as the Zoetrope, Kinora and Phenakistoscope - all considered to be innovative for that era. To engage with audiences, we developed an application that is as fun as it is immersive, allowing users to create their own on screen animations. We developed the touchtable and App that brought these wonderful devices and images to life, with a ground breaking 21st century spin that is currently touring the world and wowing users of all ages.