Community Research and Development Information Service - CORDIS

EU Research Projects

Top Story

Project reference: 270198
Funded under: FP7-ICT

Feature Stories - Personalised, dynamic stories for engaging museum visits

Stories are an integral part of our lives. From bedside tales as a child to a good book, film or a chat with friends, stories help define our social activities, culture and history. A team of EU-funded researchers are exploiting the power of good storytelling to engage museum visitors, helping people delve deeper and gain a clearer understanding of everything from history to science.

There are around 55,000 museums in the world. Some are small and quirky, covering obscure and off-beat topics of interest to only a select number of people. Others are vast repositories of historical heritage - many deemed to be among the most important cultural institutions in the world - including the heritage of the industrial revolution or more recent science, technology and space exploration. But in the modern digital era, all of them face a similar challenge: how to attract visitors, engage them and provide an experience they can find nowhere else.

'Previously museums were gatekeepers of the past and potential sites for tourists' visits, but now museums are actual enterprises, with the same challenges SMEs face: sales, profitability, and adequate resources. Today museums have to remain attractive, and to attract people not only during vacation periods but also all year long. They have to demonstrate their value and relevance in contemporary life,' explains Martine Julien, the head of the RTD Department, Simulation and Virtual Reality Division, at DIGINEXT in France. She says people can find dynamic, digital, multimedia and interactive activities all around them, whether outdoors or at home, so museums and cultural institutions have to reinvent their offer, becoming digital themselves. With high maintenance costs to support, gaining revenue can be a matter of survival for many museums.

A museum website, offering visitors digital audio guides or installing interactive displays for exhibitions help, but they do not go far enough toward offering the immersive, highly interactive and above all personalised experiences museum visitors, especially younger people, increasingly seek.

One solution, now being validated in trials at the Cite de l'Espace Museum in Toulouse, France, and at the Acropolis Museum in Athens, Greece, focuses on providing precisely that personalised, unique and immersive experience. By providing each visitor with their own narrative to follow, via a tablet computer, it offers a personalised story linking museum artefacts and information; exhibits and external resources that take into account the interests and preferences of each person.

'We decided to research and develop a solution centred on the visitors themselves, using digital tools to create unique experiences for each visitor. Even coming several times to a museum, a visitor can live a new experience during each visit; then they can report their experiences to family and friends, as none of them will live the same experience,' says Ms Julien, who oversaw development of the solution as coordinator of the project 'Cultural-heritage experiences through socio-personal interactions and storytelling' (CHESS), a three-year initiative supported by more than EUR 2.8 million in funding from the European Commission.

Unlike a human museum guide who will usually tell a generic story to different groups of visitors, in the CHESS experience each visitor is told a dedicated story, focused on the exhibits most relevant to their interests and mood, with many or few details, and reactive to their own behaviour and actions in the story. According to the stories written and personas chosen by the museum, the visitor can be told a more or less innovative story, from a more traditional one enhanced with multimedia, 3D and 'augmented reality' to a story where objects talk and invite visitors to interact with them.

'One of the most innovative aspects of our approach is to consider that the people best placed to know the museum exhibits, as well as the profile of museum visitors, are people from the museum itself. Instead of subcontracting the creation of digital applications, the museum teams should be able to produce stories and digital applications by themselves. The solution proposed is thus first visitor-centred then museum-centred,' the CHESS coordinator says.

Visitor-centric, then museum-centric

See also

Other Results in Brief under FP7-ICT

Similar documents in CORDIS

Related services

research*eu results magazine

Send us your project news

Participant Portal

OpenAire

To achieve that, the CHESS team developed several innovative tools and applications.

Firstly, the 'CHESS visitor survey' (CVS) identifies the characteristics and interests of the visitor. The tool allows museums to create surveys with single- or multiple-choice questions in a variety of presentation formats and to link answers with a persona, i.e. a character representative of the visitor's profile. The storytelling will then be adapted first to the persona, then to the visitor's behaviour.

The 'CHESS authoring tool' (CAT) is designed to allow non-IT professionals such as museum curators and staff to easily develop multi-path dynamic storylines integrated with multimedia content. The content itself is maintained by an 'asset manager' tool that provides easy access to different media elements and enables them to be adapted and reused for different stories.

Finally, the 'Storytelling engine' runs the story according to the paths defined in the CAT and adds the personalised and adaptive aspects of the storytelling, updating the visitor profile right through the course of the story according to their individual choices.

'At the end of a visit, the visitor will also find souvenirs from their own story on the museum website, where they will have an after-experience memory to look at and share with family and friends. For young people, stories can deliver specific memories to share such as a journal customised with their name, featuring the results of a game they played or with photos they took, for example,' Ms Julien says.

The personalised storytelling approach has been highly valued by visitors at the two trial sites. At the Cite de l'Espace Museum, visitors have been invited to discover objects in ways they have never seen them before, including information about team work and life within the Mir space station, the interior of the Ariane rocket displayed using augmented reality, games about the solar system, and other interactive features.

At the Acropolis Museum, visitors have been able to discover the museum through animal stories, such as the representations of horses, snakes and owls that feature heavily in the Archaic Gallery and their connection with the Olympic Games, war and Greek mythology.

In light of the success of the trials and the positive feedback from visitors of all ages, and museum curators themselves, the CHESS team is looking to apply their system in more museums across Europe, initially targeting technical museums that focus on areas such as science and industry.

'The more ancient the objects exhibited are, the more difficult the introduction of the storytelling will be, as archaeological history is long, complicated and often still the subject of top-level research,' Ms Julien notes.

In addition, the two CHESS industrial partners have plans to commercialise technology developed in the project. DIGINEXT is looking to develop a commercial version of the CAT tool as a scenario editor and mobile publication system to be distributed with a license-based business model including support, training and services. REAL FUSIO, meanwhile, plans to distribute its patented algorithms dedicated to the optimisation of 3D displays, while their Asset Manager may be commercialised under a license-based scheme.

'The CHESS experience was designed as an individual one; the next step would be to offer visitors a shared version with linked digital devices enabling a common experience for families and groups,' Ms Julien says. 'It is the challenge DIGINEXT and its partners will face in the MAGELLAN FP7 project that will begin soon, dedicated to a "Multimodal authoring and gaming environment for location-based collaborative adventures".'

CHESS received research funding under the European Union's Seventh Framework Programme (FP7).

Link to project on CORDIS:

- FP7 on CORDIS
- CHESS project factsheet on CORDIS

Link to project's website:

- 'Cultural heritage experiences through socio-personal interactions and storytelling' website

Other links:

- European Commission's Digital Agenda website

DE ES FR IT PL

Record Number: 12054 / **Last updated on**: 2013-11-04