

## Cultural Heritage Knowledge Exchange Platform Annual Report



<http://smartmuseum.eu>

The goal of the SMARTMUSEUM project is to create an open IT solution for museum visitors enabling personalised access to existing digital content of artworks. Already existing huge amount of digitized cultural heritage information opens enormous user experience opportunities but at the same time rises difficulties to discover relevant data as well. Cultural heritage exponents - museums, exhibitors and historic site promoters are have remained conservative not using the whole potential of digital libraries and web content to attract walk-in visitors. Through the adaptive user profiling and localization, semantics driven content discovery SMARTMUSEUM solution will help users to access easily desired cultural heritage information through the personal smartphone type devices.

### Summary of activities

During the first months of year 2010 project activities were concluded. Successful final review of the project was held in Valletta, Malta in April 2010. Working demo of SMARTMUSEUM solution was demonstrated at Museum of Fine Arts in Valletta. Despite the fact that the project was finished, active publication of scientific results continued. Project partner ELIKO prepared a patent application related to content interest monitoring of mobile users. SMARTMUSEUM's mobile phone application developed by Bulgarian partner Melon Technologies Inc. was rewarded as one of the global winner of World Summit Award Mobile 2010 in category "m-Tourism & Culture", December 2010.

### Important work area

#### Market prospects, user requirements and resulting *product* profile

In today's society several changes and trends are shaping the way individuals and organizations find, use and share information. One of the main trends people are confronted with is an ever growing load and diversity of information including digital cultural heritage content and the lack of ability to find specific content based on their interest and previous experiences. SMARTMUSEUM project results broaden the variety of possibilities to efficiently find and access existing digital cultural heritage content on-site, both indoors (museums) and outdoors (historical locations), according to user preferences resulting improved cultural experiences of individuals.

Significant amount of digital content that is already prepared by museums and travel publishers is weakly utilized, especially for walk-in museum visitors. Mobile Internet information services supporting instant decisions, content delivery, revenue sharing schemes are emerging topics of potential business cases related to cultural heritage content. Due the universal scalable SMARTMUSEUM solution museums and other digital content aggregators

from Europeana, national tourism agencies can share cultural content in personalized manner with significantly reduced costs.

### **Technology outlook and innovative features**

The SMARTMUSEUM technology portfolio starts with RFID and GPS based user localization and interest monitoring, push-mode wireless network messaging and ends up with global web services for user profiling and content discovery. The developed hybrid profiling solution combines user explicit cultural preferences, abilities, skills and experiences with statistical user preferences and takes into account visit context information. Since profile information and content annotation is described through world widely accepted ontologies, e.g. Getty and GUMO vocabularies, the SMARTMUSEUM system is easily deployable at any cultural heritage institution having structured and annotated content. While existing tourist recommendation systems give recommendations only on artifact level the SMARTMUSEUM system is able to provide different content to different users as well, even in case the data is not annotated.

### **The demonstrator and results of field tests**

After the official end of SMARTMUSEUM project, the demonstrators are still available for user evaluation at Museo Galilei in Florence and Museum of Fine Arts in Valletta. User profiling system and mobile device emulation software is accessible through the project's website as well.

### **User involvement, Promotion and Awareness**

The SMARTMUSEUM technical solution is targeted towards European museums and digital content providers. The solution has been promoted within European museum communities. Since the high quality content is a key issue for users, consortium is in dialog with Europeana consortium members and tourism authorities in Bulgaria, Estonia, Finland, Malta.

### **Future Work or Exploitation Prospects**

Despite the project end consortium will continue enhancing developed technologies and seek for commercialization opportunities of the project results, especially in collaboration with national level tourism authorities. It is expected that the solution will acquire critical amount of real users in 2-3 years. Based on project results three continuation programs were initiated by partners on the national level for reusing the R&D outcome. Two international project proposals were created for wide exploitation of the project practical results, the activities will continue in the further.

### **Related links**

SMARTMUSEUM videos <http://smartmuseum.eu/> and introductions <http://brunelleschi.imss.fi.it/smartmuseum/web/eintro.html>