

# Building Virtual Rome – Immaginare Roma Antica

World Expo on Virtual Archaeology

Market of Trajan, Rome – Italy  
15 September – 15 November 2005

## 1. The Virtual Heritage Center Project (VHC)

The application of digital technologies in the cultural sector, supports the development of new ways for enjoying the heritage, as well as new professional profiles and new enterprises. The relevance, also economic, of the new technologies applied to cultural heritage that has emerged from the analysis carried out by the Municipality of Rome, the Institute for Technologies Applied to Cultural Heritage of the CNR, the Research Centre on Information Systems of LUISS University and Federculture, is the base of the *Virtual Heritage Center Project*.

*Building Virtual Rome* will represent an important event for attracting the attention on the integration of technological and cultural aspects deriving from the synergy between the VHC project and the Markets of Trajan, with the final aim of strengthening the cooperation with the Municipality of Rome for the realization of a permanent facility.

## 1. The Virtual Heritage Center Project (VHC)

The Virtual Heritage Center is a project that brings together our past and the future, both extraordinary in their own right:

### Our Past

- The rich cultural heritage of ancient Rome, which even nowadays is present throughout the world and continues to amaze and inspire us.

### Our Future

The immersive digital multimedia technologies of virtual reality, which represents a new and powerful way for the public to understand, appreciate and be emotionally involved and stimulated to learn more about our cultural heritage.

Thanks to the unique synergy of cultural heritage (the basis of our current identity) and cutting-edge virtual reality technology (a part of our new identity) our society may enter into the magic world of the ancient Rome as though it had come back to life. Yet, at the same time, society is being affected by scientific research, whether it is in archaeology or technology, the growth of cultural and professional knowledge offers a generation of new challenges in advanced technological research niches and an obligation for quality assistance.

## 2. The *Virtual Reality, and the Building Virtual Rome Exhibition*

The foundations for such as project are based in training and providing of a continuing environment for evolving solutions and communications. Our first step then, is the organisation of the exhibition: *Building Virtual Rome*, to call for a collective and global effort from diverse sectors that have already broached the subjects of ancient Rome and technology, discuss and examine the international projects, scientifically select the best examples from each sector, and offer the general public a chance to view and comment on them.

The international exhibition: “*Building Virtual Rome*”, realized in collaboration with FILAS, is a world first in its dedication to ancient Rome and its Empire, in terms of virtual archaeology.

It is our hope that the exhibition will produce a flow of precious information in order to streamline the following phase of the VHC project, on the base of proven knowledge and empirical results in the field, serving as an important first step, in focusing attention on the Virtual Heritage Center’s technological and cultural themes, and on Markets of Trajan, resulting in the beginning of modular planning for the center, in collaboration with Rome’s City Council.

## **2.1 - The Markets of Trajan, Rome**

The exhibition will take place at the Markets of Trajan, which is not only a place of extreme beauty and a highly suggestive setting for Italians and the millions of international tourists that Rome hosts, but it is also an archaeological site of international monumental and historical importance and value, which is a fundamental key to the philosophy of the VHC, that is linking past and future.

## **2.2 - The Exhibition Itinerary Sections**

The exhibition itinerary will be separated into four sections, based on differing technological and cultural themes.

- **The ancient city of Rome**  
This section will offer applications related to the proto-historical, republican and imperial age of ancient Rome in its topographical, architectural and urban contexts.
- **The Roman Empire**  
This section will offer applications concerning the topography and Roman architecture in all areas outside of the city of Rome but in the Roman Empire.
- **Rome online**  
This section is dedicated to websites and portals available on ancient Rome.
- **Research and Experimentation**  
This section will host particularly innovative projects that are not necessarily linked to the theme of ancient Rome, but involve all the themes of virtual archaeology, interfaces, software development, advanced visualiation solutions, artificial intelligence, mobile systems, avators, robotics, motion capture, and virtual sets - to name but a few.

## **2.3 - The Scientific Committee**

All projects presented (according to the following formalities) will be judged and selected by a panel of experts from the VHC Science Committee, and those selected will be made available for public viewing in the exhibition that will be held from the 16<sup>th</sup> of September to the 15<sup>th</sup> of November 2005.

- **Selection Criteria**  
The Scientific Committee will use the following criteria to select applying projects for the exhibition:
  - Cultural content
  - Innovation and experimental technology

- Graphic quality
- Congruity of treated themes
- Quality of didactics and communication
- Ability to create involvement in the narrative
- Interaction and edutainment
- Impact of knowledge and learning dynamics

## 2.4 - Who can take part in the exhibition?

Research institutes, private companies, freelance professionals, public/private authorities and professional studios that have developed projects in virtual reality, computer graphics, multimedia and virtual storytelling, linked to any of the *Exhibition Itinerary* Sections (see above), are eligible for the selection process. Each participating entity can only show one project per section.

## 2.5 - Prerequisites

A descriptive summary of the project (maximum 3,500 words) must be attached to each applying project, as well as an accurate description of the archaeological, cultural and technological themes the project deals with.

Each applying project will be evaluated using the following criteria:

- Archaeological-cultural background
  - What is the added value of the digital version as compared to traditional formats?
  - What is its cultural content?
  - In which way has the project modified the state-of-the-art?
- The Technological Background

A debate over the adopted methodology and technology with respect to the cultural contents of the work, choice of software and of graphics, the study behind the interface and the dynamics of interaction, as well as the innovative value of the work.

The Scientific Committee's resulting Planning Report will be divulged by the panel at the end of the selective process, as well as in the exhibition catalogue, which will be published to coincide with the event's starting date.

## 2.6 - Method of Participation and Delivery of Materials required for the Selection Process

All digital materials, to be considered for in the Selection Process of the exhibition, must be sent via post or express courier before 15/07/2005 without fail to the following address:

Maurizio Forte,  
 Subject: "Building Virtual Rome"  
 CNR-ITABC, AREA DELLA RICERCA ROMA 1  
 VIA SALARIA KM.29,300 C.P.10 – 00016 MONTEROTONDO ST. (RM)  
 ITALY

The materials must correspond with one of the following formats:

- *Realtime*  
Software can be in the native format, or in any film format that corresponds to the real time recording of the application on DVD.
- *Multimedia*  
The entire application on CD or DVD.
- Computer graphics film:  
Filmed entirely in mov, avi, mpg, divx, wmv, video dvd formats on CD or DVD.

All digital material must be sent with the previously mentioned descriptive summary and description of the archaeological, cultural and technological themes the project deals with, which must include the technical characteristics of the project. Further informative materials can also be enclosed (eg. articles, papers, critiques, prizes and so on) which could be useful to appraise the content and quality of the work.

All participants, regardless of the type of project to be presented, must also provide a digital trailer or film, of at least 3 minutes long, which presents and offers a summary of the project. These films will be part of the digital catalogue of the exhibition and available to the press.

All materials for projects that are selected by the Scientific Committee will be on show for the duration of the exhibition, according to a calendar and organised by the exhibition management, and published in an interactive exhibition catalogue that will be sold in the bookshop. Film-trailers will also be available for viewing in this catalogue.

## 2.7 - Selected Works

The list of selected projects will be posted by the panel by the 20 July 2005, and published on the exhibition web site, [www.buildingvirtualrome.org](http://www.buildingvirtualrome.org), where the respective authors of such projects will be notified via e-mail and confirmed as participants.

These participants will then be asked to hand-in digital applications of their projects to the exhibition management, that are most suitable for public entertainment and education. In particular for the following:

- Virtual applications destined for virtual theatres equipped with appropriate workstations for real time navigation.
- Multimedia applications will be placed on hardware belonging to the project authors, or placed on visualization hardware with a 42" display.
- Computer graphic films will be fully assembled in a video-anthology and projected in a video room for the duration of the exhibition.

## 2.8 - The Exhibition Layout

The exhibition will be centred around a variety of technological attractions of notable and spectacular impact.

The main Markets of Trajan area will offer a complete stereoscopic virtual reality theatre experience, sponsored by Fakespace Systems Inc. (USA), who provided the VR technology for the internationally successful 3D show on "Inside the Mummy" at the British Museum, London.

A secondary virtual reality area will also be provided on the first floor of the Markets of Trajan, sponsored by Barco (Belgium).

These virtual reality areas will host the virtual reality projects, whilst in the middle of the exhibition space at the Markets of Trajan on the first floor, there will be 10 *tabernae*, where the multimedia creations will be mounted (one in each room to give the public a good view, and to assist the flow of people around the room). A video projection room will also be provided for the computer graphic films with a large screen, with a 30-40 people seating area.

All the installations, apart from the video projection room, will be completely interactive and the public will be given special 3D glasses, so that they can appreciate high-impact stereoscopic viewing and surround sound audio. The visiting general public will also be offered realtime navigation of some virtual reality applications, with help from specialist personnel.

The exhibition route runs from the northern to southern end, to the Great Hall on the northern side, and includes a spectacular view onto the Roman Forum and Vittoriano along the *tabernae*, found on different levels of the Markets of Trajan. There will also be three further rooms dedicated to the exhibition sponsors who will run presentations specifically related to virtual heritage activities and to innovative technologies of digital interaction (already on the market and under development for the future).

The amount of space that each project is given (i.e. in the rooms or *tabernae*) will be decided by the exhibition management depending on the amount of space available, the architectural restrictions and on the congruity of the exhibition course.

## **2.9 - Sponsors**

ArtResearch, Fakespace Inc., Barco, Sono-Euphon, IBM, Italtel Solutions SpA.

## **Scientific Committee**

Lon Addison, Unesco, WHC

Francesco Antinucci, CNR-ISTI, Istituto di Scienze e Tecnologie della Cognizione, Roma

Juan Barcelo, Universitat Autònoma de Barcelona, Spagna

Benedetto Benedetti, Scuola Normale Superiore di Pisa

Massimo Bergamasco, Scuola S.Anna di Pisa

Maurizio Forte, CNR-ITABC, Istituto per le Tecnologie Applicate ai Beni Culturali

Bernie Frischer, University of Virginia, USA

Andrea Granelli, Fondazione Cotec

Mario Hernandez, Unesco,

Eugenio La Rocca, Soprintendenza Archeologica Comunale di Roma

Oleg Missikoff, LUISS/CeRSI

Daniel Pletinckx, Ename Center, Belgio

Donald Sanders, Learning Sites, Inc., Digitally Reconstructed Ancient Worlds for Interactive Education and Research, USA

Lucrezia Ungaro, Soprintendenza Archeologica Comunale

## **Organising Committee**

Maurizio Forte, Lucrezia Ungaro, Oleg Missikoff

## **Patronage**

UNESCO World Heritage Centre, Virtual Heritage Network