



## News Release

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### **Collaboration With Google Earth Puts U.Va.'s 'Rome Reborn' On the Internet**

November 12, 2008 — "Rome Reborn," the digital re-creation of ancient Rome unveiled last year by the University of Virginia's Institute for Advanced Technology in the Humanities, is now available to all, thanks to Google and a host of other collaborators.

The launch of this new initiative was announced today in Rome at an event hosted by Gianni Alemanno, the mayor of Rome. The event was attended by Google Earth founder Michael T. Jones and dignitaries from the municipality of Rome and the Italian government.

This phase of the digital recreation of ancient Rome, titled "Ancient Rome 3D," follows the debut to international acclaim of "Rome Reborn," in June 2007.

"When we unveiled the model in Rome last year, I said that our next challenge was to find a way to publish it to the Internet so that everyone could use it," said Bernard Frischer, director of the "Rome Reborn" project and director of the Institute for Advanced Technology in the Humanities — or IATH — at U.Va. "Now we have met that challenge."

Bruce Polderman, Google Earth 3D product manager, said, "Throughout history people around the world have been fascinated by Roman civilization. When I first discovered the 'Rome Reborn'

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project, I contacted IATH immediately with the hope we might share this wonderful model with millions of Google Earth users."

Access to the Google Earth interactive 3D model of "Ancient Rome 3D" is available at <http://earth.google.com/rome/>.

"Ancient Rome 3D" shows almost the entire city within the 13-mile-long Aurelian Walls as it appeared in A.D. 320. At that time Rome was the multicultural capital of the Western world and had reached the peak of its development with an estimated population of 1 million.

Users can download the program and access more than 7,000 sites, monuments and buildings in the 3D model. Users can navigate through the model with complete freedom, moving up, down, left and right. They can enter important public buildings such as the Roman Senate and the Colosseum.

In addition, the Google Earth interface enables students of all ages as well as advanced scholars to access related information through "information bubbles" for the more than 250 sites identified in the ancient city. The first "information bubble" provides basic information that school children can understand.

A second click provides more advanced information, including a topographical encyclopedia, ancient literary sources, and bibliographical information about each building. There are also links to 3D models of fragments of a map of ancient Rome, developed at Stanford University. Over time, other resources will be added.

The "information bubbles" for "Ancient Rome 3D" have been translated into English, German, Spanish, Portuguese, French, Italian, Japanese, Russian and Dutch.

"Whether you are a student taking your first ancient history class, a historian who spends your life researching ancient civilizations, or just a history buff, access to this 3D model in Google Earth will help everyone learn more about Ancient Rome," Polderman said.

"Rome Reborn," based at U.Va. and begun at the University of California, Los Angeles (UCLA), was the culmination of more than a decade of work by an international team of archaeologists, architects and computer specialists from Italy, the U.S., the U.K., and Germany who used advanced technology to digitally rebuild ancient Rome.

The team utilized the same high-tech tools employed in simulating contemporary cities, such as laser scanners and virtual reality to build the biggest, most complete simulation of an historic city ever created.

Rome-based Past Perfect Productions, a company that specializes in 3D cultural heritage models, was a major force behind the initiative.

"In an age when any 10-year-old can create a 3D model of a cultural heritage monument using free software, our company firmly believes that for a 3D model to have value, it must be made by highly qualified experts who have spent their careers studying a site," CEO Joel Meyers said.

"Our company is therefore very proud to be associated with IATH's 3D model of ancient Rome, which is the result of a coordinated effort of the leading scholars in the field from all over Europe and North America," he added.

In recent years, scientists, historians and archaeologists around the world have embraced 3D modeling of cultural heritage sites. Information technology has permitted them to recreate buildings and monuments that no longer exist and to digitally restore sites that have been damaged with the passage of time. The results can be used in research to test new theories and in teaching to take students on virtual tours of the historical sites.

"By several orders of magnitude, 'Rome Reborn' is the most ambitious such project ever undertaken," Frischer said. "The 'Rome Reborn' project is the continuation of five centuries of research by scholars, architects and artists since the Renaissance who have attempted to restore the ruins of the ancient city with words, maps and images. Now, through hard work by our interdisciplinary team, we have realized their seemingly impossible dream.

"Making the models available in Google Earth is "another step in the creation of a virtual time machine which our children and grandchildren will use to study the history of Rome and many other great cities around the world."

Frischer said the next challenge is to create an online scholarly journal in which archaeologists can publish the 3D models of the sites they are studying.

"Such a journal will offer an incentive to more scholars to create 3D models of the great cities and sites in Egypt, Greece, South America, Africa and Asia," he said. "Over time, it will transform education and research. Tourists, too, will be beneficiaries."

The starting point for the re-creation was a huge plaster model of the city, according to Gabriele Guidi of the Department of Industrial Design, Art, Communication and Fashion at the Politecnico di Milano, one of the collaborators in the "Rome Reborn" project.

From that, a new model, enriched with all the new archaeological discoveries, was generated.

"The creation of a methodology for transforming such a detailed physical object into a digital model — never attempted before with this extent — was a big step ahead for our researchers," Guidi said.

"This technology can now be reapplied for generating complex digital models of other cities starting from old physical models.

"'Rome Reborn' demonstrates how, by mixing up digital survey with computer-assisted design and procedural modeling, more sophisticated virtual models can be generated. This holds true even for any archaeological ruin, whose survey can be used as starting point for scientifically accurate, but also visually spectacular, virtual visions of the past."

Many individuals and institutions contributed to "Rome Reborn" ([www.romereborn.virginia.edu](http://www.romereborn.virginia.edu)), including U.Va's Institute for the Advancement of Technology in the Humanities ([www.iath.virginia.edu](http://www.iath.virginia.edu)), the U.Va School of Architecture ([www.arch.virginia.edu](http://www.arch.virginia.edu)), UCLA (<http://www.etc.ucla.edu/>) and the Politecnico di Milano (<http://www.polimi.it>). Advisers to the project included scholars from U.Va., UCLA, the Italian Ministry of Culture, the Museum of Roman

Civilization, Bath University, Bryn Mawr College, the Consiglio Nazionale delle Ricerche, the German Archaeological Institute, Ohio University, the University of Florence, the University of Lecce, the University of Rome ("La Sapienza") and the Vatican museums.

The first sponsors of the project were Kirk Mathews and the Creative Kids Education Foundation. Other sponsors have included the Institute for Advanced Technology in the Humanities at U.Va., Alitalia, , Google, Inc., Intel, mental images, Microsoft Encarta, the National Science Foundation, Nvidia, Past, Presagis, Procedural, The Rose Family of New York, Shuttle, Sun, Tecnark Italia, UCLA Academic Technology Services, UCLA College of Arts and Letters, UCLA Division of Humanities, UCLA School of the Arts and Architecture, and Virtuality.