

REVIEWS AND COMMENTARIES

THE FUTURE OF THE PAST

Review by Ben Davis

Rome Reborn

<http://www.aud.ucla.edu/~dabernat/rome/index.html>

Forum of Trajan

At the Getty Museum in Los Angeles; exhibit opens December 1997

Virtual Los Angeles

<http://www.gsaup.ucla.edu/bill/LA.html>

Learning Sites

<http://www.learningsites.com>

Ancient Egypt Research Associates

<http://www.pbs.org/wgbh/pages/nova/pyramid/excavation/lehner.html>

Giza Plateau Mapping Project

<http://www.oi.uchicago.edu/OI/PROJ/GIZ/Giza.html>

Qin: Tomb of the Middle Kingdom
CD-ROM for Windows or Macintosh
Time Warner Interactive, New York, 1997 (\$29.95)

Dynamic Timelines

<http://robin.www.media.mit.edu/people/robin/thesis/>



COMPUTER RE-CREATION OF ANCIENT ROME, part of *Rome Reborn*, shows the city as it appeared at the time of Augustus.

Scientific people... know very well that Time is only a kind of Space," wrote H. G. Wells in *The Time Machine*. He defended his argument by observing how data from a barometer, when plotted over time, produce a spatial image. Now, a century later, electronic computers offer a ubiquitous and far more sophisticated means of manipulating time and information into graphic form. Three-dimensional computer visualizations have become a mainstay of modern science, vastly expanding our understanding of the world around us. Intriguingly, the computer-mediated blending of time and space is also being applied inward, to help us understand ourselves. In museums, in computer software and on the Internet, a new technique of "cultural data visualization" is beginning to take shape.

In some cases, researchers are using visualization software, originally intended for scientific and architectural modeling, to re-create the past with a high degree of authenticity. Ironically, much

of the current work on virtual reconstructions is taking place in Los Angeles—a city noted for its ephemeral structures and constant development. One of the most notable projects is *Rome Reborn*, a collaboration among researchers at the University of California at Los Angeles and a raft of U.S. and Italian sponsors. This ambitious project will yield a multilayered, 3-D, interactive virtual-reality simulation of Rome from the ninth century B.C. to the fourth century.

Aimed primarily at high school and college students, *Rome Reborn* would be distributed along high-speed Internet lines and might include virtual guides speaking both English and Latin. The entire project will not be finished until 2020, but the Roman Forum and architecture from the Age of Augustus (50 B.C. to 14 A.D.) should be ready in time for bimillennial celebrations.

Other such architectural-historical recreations will be done sooner. The J. Paul Getty Trust is supporting the construction of a simulated Forum of Tra-

jan in Rome; the result will be on display at the opening of the new Getty Museum in Los Angeles in December 1997. The exhibition will display the virtual forum along with actual statuary from the site so that the visitor can get a sense of how the real objects fit in their historical environment.

Both these ancient Rome projects draw on a software program called uSim (Urban Simulation System), developed at U.C.L.A. In *Rome Reborn*, each of the 14 political districts of the ancient city will be mapped over 14 centuries. A four-dimensional database (spatial coordinates and time) models architectural changes over the recorded life span of the city. Every time a user switches to a different moment in history, the program quickly redraws that part of the city to conform to its appearance at that period. The database can be accessed either locally at U.C.L.A. or globally through the World Wide Web.