3D in the Age of the Oculus Rift (Vienna, 3-5 Nov 14)

Vienna, Austria, Nov 3–05, 2014
Deadline: Jul 11, 2014

Bernard Frischer

SPECIAL CALL FOR SPECIAL SESSION:

“The State of 3D Modeling of Cultural Heritage
in the Age of Augmented Reality, Xbox Kinect, UAVs, and the Oculus Rift”

at the Conference on Cultural Heritage and New Technologies (CHNT: http://www.chnt.at/), Vienna, Nov. 3-5, 2014

The purpose of this session is to take stock of the current state of the art of 3D modeling of cultural heritage objects of all scales (from a vase or statue, to a building or an entire landscape). It seems particularly opportune to do so in light of the dramatically lower costs of devices for 3D data capture and display. Papers fitting one or more of the following three descriptions would be especially welcome:
(1) cultural heritage projects exploiting Augmented Reality and/or immersive, 3D display devices such as the Oculus Rift
(2) projects collecting 3D data using low-cost devices and methods such as SfM, Kinect or Unmanned Aerial Vehicles
(3) 3D modeling projects (especially those involving reconstructions) that have as their goal not simply illustrating previously existing knowledge of the past but serving as tools to see or understand features of the past that can only emerge after we have made the 3D model. Papers should concentrate less on the “how” of 3D modeling (fairly well understood by now) than on the “why” (i.e., what is the scientific gain in knowledge that results from applying the new technology?).

Topics falling into category (1) should, whenever possible, provide the results of summative assessment: we are interested not simply in bright ideas and clever demonstrations but in proof of concept or full-scale deployment. For example, if a claim is made that AR can help promote better public understanding of cultural heritage, did the pilot AR project actually produce measurably positive results?

Topics falling into category (2) should ideally include a comparison of the results of using low-cost and high-end data gathering devices. What are the strengths and weaknesses of the low-cost approach? Is a low-cost device good for certain cultural heritage applications but not others? For example, we welcome a paper comparing the resolution and accuracy of 3D meshes of a statue resulting from a SfM approach vs. one resulting from traditional scanning.
Papers of two lengths are invited: short (fifteen minutes, or less); and long (twenty minutes). Applicants should indicate the length of time they would need for their presentation.

Each paper, no matter its length, will be followed by five minutes of discussion and debate. To facilitate a lively discussion of the papers in Vienna, all participants are required to circulate a written draft of their talks to the other participants no later than October 1, 2014.

The papers accepted will be published as a special issue in Digital Applications in Archaeology and Cultural Heritage, a new online, peer-reviewed journal started in 2012 by the organizers. For details, see: http://www.journals.elsevier.com/digital-applications-in-archaeology-and-cultural-heritage/

Abstracts of a minimum of 200 words to a maximum of 300 words must be submitted by noon CET on Friday, July 11, 2014. Abstracts should be filed online at:
http://www.chnt.at/call-for-paper/
Inquiries should be directed to the session organizers: Bernard Frischer (Bernard.d.frischer@gmail.com) and Gabriele Guidi (g.guidi@ieee.org).