



National Science Foundation Awards Grant to Princeton University and Cultural Heritage Imaging (CHI)

October 26, 2010, San Francisco, CA — The National Science Foundation has awarded a grant of \$550,000 to the Princeton University Department of Computer Science, with Cultural Heritage Imaging (CHI), a nonprofit organization based in San Francisco, acting as sub-grantee. The team will work on a project entitled "Automated Documentation and Illustration of Material Culture through the Collaborative Algorithmic Rendering Engine (CARE)."

The award, granted under the NSF's Cyber-enabled Discover and Innovation (CDI-Type 1) program, will enable the Princeton/CHI team to conduct research on algorithmic rendering, building on prior non-photorealistic rendering work conducted by Princeton's Dr. Szymon Rusinkiewicz, Co-Principal Investigator. The end product will be an open source tool called the Collaborative Algorithmic Rendering Engine (CARE), which will allow for the production of accurate rendered drawings from the same photographic data sets that are used in Reflectance Transformation Imaging (RTI).

The CARE tool will extract and merge visual details available only under certain lighting conditions, certain wavelengths, or certain imaging modalities. By focusing on minimal user effort, cross-site collaborative visualization design, and integrated archiving and process history (provenance) tracking, the CARE tool is specifically designed to remove existing obstacles to widespread adoption of digital tools for visual analysis and communication in the field of cultural heritage.

Rusinkiewicz, along with Co-Principal Investigator Mark Mudge, will lead the research and testing on this project. "We are honored to partner with Dr. Rusinkiewicz on this significant area of research," said Mudge, CHI President and Co-Founder. "We look forward to integrating the CARE tool into RTI imaging technology."

The Department of Computer Science at Princeton University has been at the forefront of computing since Alan Turing, Alonzo Church, and John von Neumann were among its residents. The Department has experienced significant growth over the last few years, and is now home to 30 faculty, with strong groups in theory, systems, networking, graphics/media, programming languages, computational science, security, AI, and computational biology.

Cultural Heritage Imaging is a 501 (c) 3 nonprofit organization dedicated to the development and implementation of new imaging technologies for cultural, historic, and artistic heritage. CHI is committed to the democratization of technology, relying on open source software and accessible methods and equipment. For more information on CHI, please see www.culturalheritageimaging.org.

The National Science Foundation is an independent federal agency created by Congress in 1950 "to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense..." With an annual budget of about \$6.9 billion (FY 2010), the NSF is the funding source for approximately 20 percent of all federally supported basic research conducted by America's colleges and universities. In many fields such as mathematics, computer science and the social sciences, NSF is the major source of federal backing.

CHI Contact:
Elizabeth S. Peña
415-558-8672
elizabeth@c-h-i.org