



MCI Weekly Highlight 6 August 2010

Understanding the American Experience,
Valuing World Cultures

The Museum Conservation Institute (MCI) continues to be a leader in cultural heritage digital imaging.

- Imaging Studio Highlights.** The Imaging program of MCI has made significant strides in the last few months. Our newest imaging technique, Reflectance Transformation Imaging (RTI), has been employed in several museum and research projects. Highlights include examination and documentation of several important paintings in the Smithsonian American Art Museum (SAAM) and the Walters Art Museum, and deciphering lost writing on a quilled leather bag from the National Museum of the American Indian.
- New web site.** An in-house effort by Senior Conservator Mel Wachowiak and Visiting Scholar Elisabeth Keats Webb has resulted in a [website](#) to better describe the many techniques being employed for research and documentation of collections. This will help us present our capabilities and allow our potential collaborators to see an overview. Techniques include 3D scanning and microscopy, multispectral imaging, RTI, and high-dynamic range imaging (HDRI). [<http://www.si.edu/mci/ImagingStudio>]
- Funding.** MCI recently collaborated on a successful NEH grant to document petroglyphs in remote Mongolia using RTI. Our portion of the grant will only fund travel and field expenses. Our recent application for a 2010 Women’s Committee grant can fund the necessary equipment for this rugged setting. High performance battery powered flash units are an example of equipment that we do not currently have for fieldwork. In addition, we have collaborated with the National Museum of Natural History on a Women’s Committee grant to create a website to show deer stones and disseminate results from several field seasons.

MCI had hoped that the new technology of RTI would be an excellent fit for the Smithsonian 2.0 grant. Unfortunately, this grant was not funded. This would have enhanced the open-source software, demonstrated the methods on a wider range of collection material, and created written guidance for users. While we have trained several new users, no real documentation exists: funding is the only obstacle. We hope to pursue other sources to bring this innovative technique to a wider community within SI and the cultural heritage community. September presentations include the SI Digi-fair and VAST, the International Symposium on Virtual Reality, Archaeology and Cultural Heritage in Paris, France.

- Vision for SI.** While these small efforts have been successful and well received despite limited resources, they do reflect a larger vision for the Smithsonian. By utilizing available technologies like 3D scanning and exploring new methods such as RTI to digitize and analyze, we are preparing to implement the Smithsonian Digital Strategic Plan. Secretary Clough has recognized the need for this and has constituted expert committees to put the plan into action. Mel Wachowiak is a member on a unique group, an Action Item Team that will interview and create a registry of experts and expertise in areas of digitization. This is essentially the only team that will examine the *human resources*, not just the methodology such as digital standards and best practices. MCI is positioning itself to become a central location for the best methods for multi-dimensional and multi-spectral imaging.



Henry O. Tanner (SAAM) painting in normal light image (above)
RTI (below) shows color component of design removed by RTI Viewer software. Image therefore shows surface features such as modelling impasto (moon at upper right) and surface defects (bottom third).

