Title:
Imag(n)ing the Shuilu Temple:
a report on the project in China...
and the path ahead

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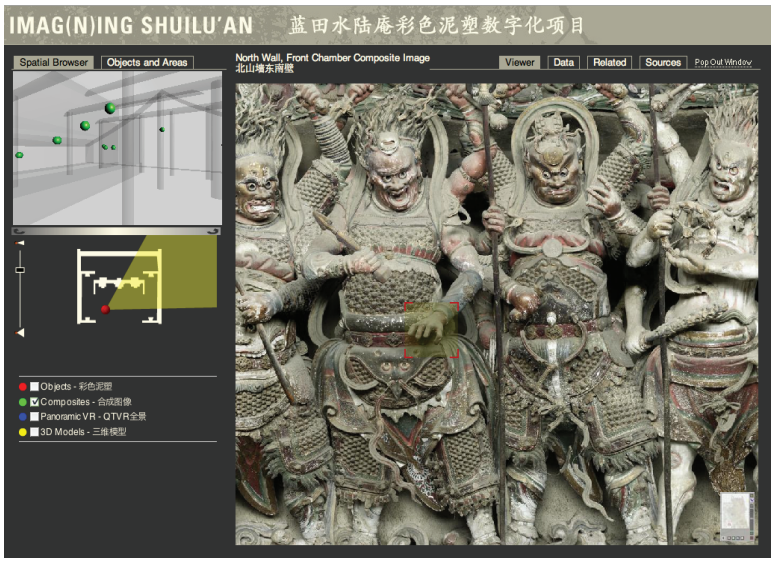
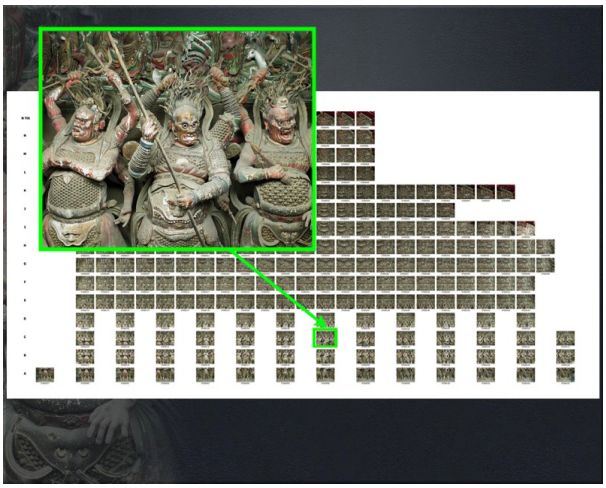



Abstract:

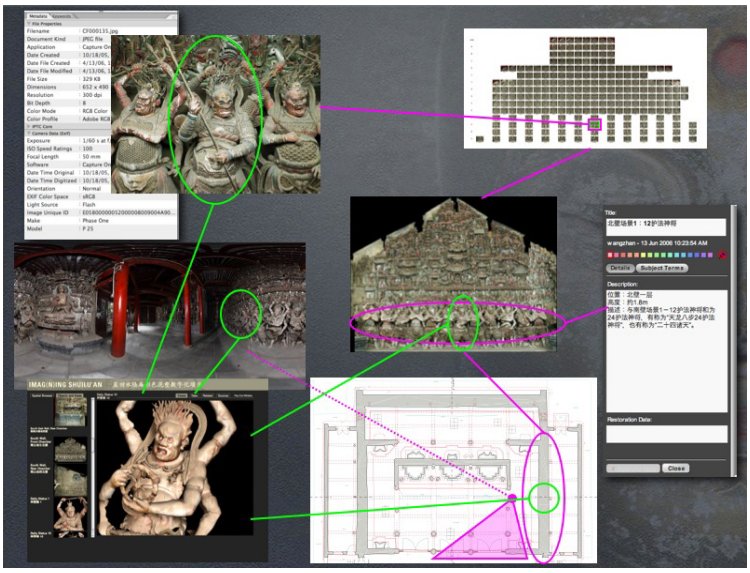
Northwestern University recently completed a two-year project near Xi'an (China), digitizing at very high resolution the free-standing Shuilu ("Water and Land") Buddhist temple, in partnership with experts from the Xi'an Center for Conservation and Restoration and with support from the Andrew W. Mellon Foundation.

Surrounded by three rivers and located at the foot of Wangshui Mountain, the Shuilu Temple contains over 3500 terracotta sculptures in its main Buddha Hall. The Hall and its sculptures had been previously identified by the Xi'an Center for Conservation and Restoration of Cultural Relics as heritage site at particular risk and in need, as soon as possible, of comprehensive documentation and preservation.

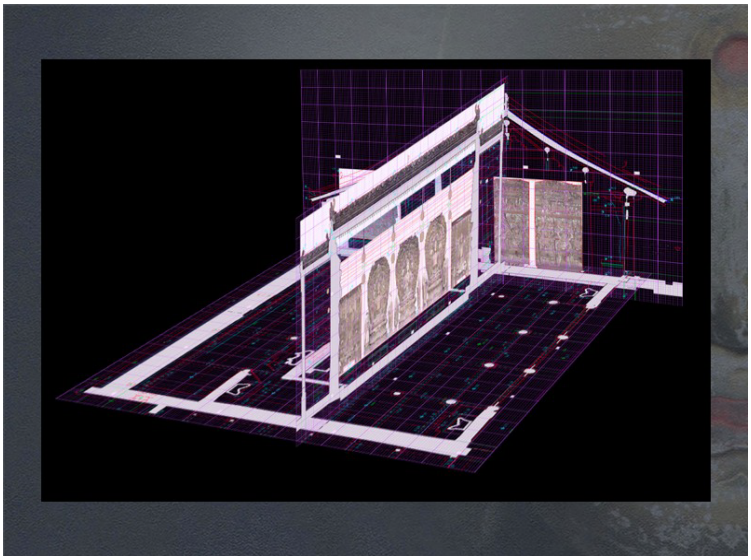
A planning study in 2004, led by the Northwestern team along with the Xi'an Center and the Mellon Foundation, concluded that digitization techniques that had originally been developed for study of the Dunhuang (China) caves could be extended so as to tackle the more demanding, three-dimensional presentation of the sculptures of the Shuilu temple. If the digitization work in Shuilu'an turned out to be as successful as the planning study predicted, however, it was going to be the case that the resulting multi-featured dataset was going to be far more complex than current digital archive applications were prepared to navigate. It was decided that the Northwestern team would also develop a prototype of a scholars' interface to the Shuilu'an dataset, even though issues of how exactly the Chinese centers or international image collections (such as ARTstor) would ultimately manage the presentation of the dataset was undefined.

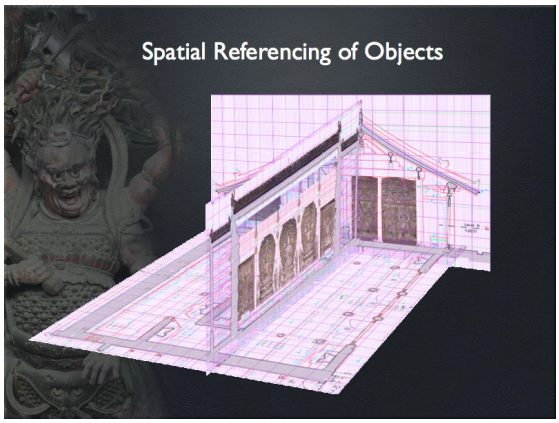


The CNI briefing describes the technical scope of the international Imag(n)ing Shuilu'an project in China, 2005-2007; it includes a tour of the comprehensive visual archive of the temple that was created for preservation purposes; and it presents the experimental interface that was developed as a first investigation into scholarly technologies that enable collaborative study of massive 2D and 3D datesets from cultural heritage sites such as Shuilu'an. This scholars interface includes a web-based annotation system that allowed the Xi'an team to assign conservation and descriptive metadata to arbitrary regions of the photographic textures, at the same time as the post-production team worked in Evanston. The experimental interface exploits 3D spatial/structural metadata to unify and navigate the presentation, description, and digital provenance of the massive visual dataset that we now have in hand.



The CNI briefing will also include a summary of Northwestern's current thinking about paths forward: at next steps that build upon the work that was completed 6 months ago with our partners in China; that extend this work into other cultural heritage domains; and our highest priorities for development of digital tools that have been identified by conservationists, archaeologists and scholars as important to new work. Future work by the Northwestern team will apply metadata standards in Fedora content models, in order to better address management and preservation goals. We will also describe the benefits of integration of presentation tools with Fedora to support scholarly access, annotation, and commentary for integrated 3D archives. Although the current Shuilu image dataset meets all of the immediate preservation and restoration needs of the Xi'an Center, it does not yet satisfy the emerging aspirations of 21st century scholary communities to study this cultural heritage site in interdisciplinary dimensions, nor to do so in a more fully-featured and collaborative, on-line environment.






We will discuss current plans for moving the Shuilu'an content into a standards-based Fedora repository, and one that anticipates emerging forms of on-line scholarship. This effort will include the creation of content models and access models for:

- Stitched Murals
- Raw camera captures
- Floor plans (CAD drawings)
- 3D models of sculptural relief
- 3D full site models
- QTVR panoramic photography
- Conservation notes
- Annotations

These next steps require standards selection and profiling for the following metadata:

- Descriptive metadata including Buddhist iconographic terms
- Conservation metadata and annotation
- Relationship metadata for digital provenance of raw to stitched items
- Relationship metadata for mural / sculptural relief objects
- Technical metadata from camera captures, floor plans, and 3D objects
- 3D boundary metadata for all items