3D Scanning of Archaeological Artifacts

Archeologists have studied ancient carvings, artifacts, ruins and statues for hundreds of years. To captures these items they first used sketches until the invention of the camera. With a camera 2D images could be taken and studied anywhere.

The Problem

The University of South Florida wanted to capture ancient Mayan statues, monuments and carvings in 3D and build a on-line digital data repository. This would allow archeologist from around the world the ability study and decipher them in full 3D. Many of these artifacts are exposed to the weather and are deteriorating. 3D scanning them would preserve them forever in a 3D digital format. Furthermore using rapid prototyping or CNC machining physical models can be produced from the 3D scan data to study as well or use in presentations.

The Solution

To perform the 3D scanning, USF purchased a Konica-Minolta Vivid 9i 3D laser scanner to 3D scan the artifacts. The Vivid 9i includes three interchangeable lenses to 3D scan small, medium or large parts with excellent resolution and accuracy. The Vivid 9i is also portable so traveling on-site to 3D scan the artifacts in remote areas is possible.

Once the artifacts are 3D scanned the 3D scan data can be saved in STL, VRML, OBJ, IGES and other formats. There are many free 3D viewers on the market that allow anyone to download the data and analyze, scale and measure the artifacts. This saves archeologists time and money because they can study any 3D scanned artifact in the comfort of their office in full detail.

Conclusion

When it comes to preserving ancient artifacts, statues, carvings and the like the Konica-Minolta Vivid 9i offers excellent portability, ease of use, high resolution and accuracy needed to capture that data in the most challenging environments.

To learn more visit www.ems-usa.com

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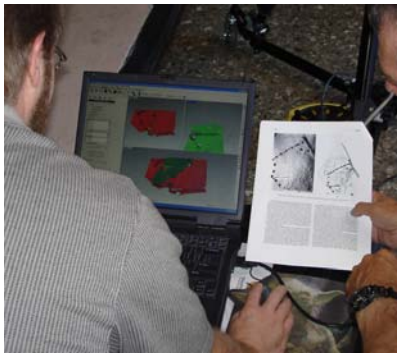
Final 3D Scan data



Analyzing 3D scan data