

Ari Ide-Ektesabi, Professor, Graduate School of Engineering, Kyoto University. (Japan)

His field of research was designing systems of charged particle beams for fabrication and analysis of surfaces and materials. He joined Kyoto University as an associate professor in 1991 and as a professor from 2001. He was the leader of six major projects related to the application of advanced technology in ***Advanced High Resolution Imaging Technology for Conservation of Important artifacts in Libraries and Archives.***

Kei Wada, President of 2bit Company

Mr Kei Wada is a specialist in imaging and 3D reconstruction technology and was in charge of many project in this relation in Kyushu National Museum, to mention the latest, is the 3D reconstruction of an old tomb of about 1000 years old in Inner Mongolia.

In his presentation in the conference he will show how the ultra-high resolution images can be incorporated in the 3D space reconstruction.

Lecture: 3D Digitization Project in Boston Museum of Fine Art, USA

Reconstruction using High Resolution Imaging

High Definition Scanning Demonstration

In this project, high-resolution scanning technology was used to digitize objects at the Museum of Fine Arts, Boston. The scanning project was divided into two parts: the first part was the 600dpi focus stacking scanning of the underside of an Etruscan sarcophagus. The main purpose is to use the stacked focus information for 3D shape reconstruction. In this case, the object was scanned at different focal plane at 1mm interval to capture the image of the surface at different focus. The total scan depth is about 30 mm. The level of focus information was used to calculate the depth of the individual pixel to produce a height map. The hope is that the 3D-reconstructed shape could be used to create information for fabricating a support structure for the sarcophagus when it is moved to different places for an exhibition. The second part of the scanning project was the 2500dpi scanning of a Fayum portrait and two sets of Gauguin woodblocks. In this case the purpose was just to capture ultrahigh resolution images of the surface of the objects for detailed inspection of the surface. The results of the scanning would be used to evaluate the efficacy of the scanning technology for a bigger future scanning project collaboration.