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3D Laser Scanning Modeling and Application on Dazu Thousand-hand Bodhisattva in China

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Abstract. The Dazu Thousand-hand Bodhisattva Statue is located at Baoding Mountain in Chongqing. It has the reputation as "the Gem of World' is Rock Carving Art". At present, the Dazu Thousand-hand Bodhisattva Statue is basically well conserved, while the local damage is already very serious. However, the Dazu Thousand-hand Bodhisattva Statue is a three-dimensional caved statue, the present plane surveying and mapping device cannot reflect the preservation situation completely. Therefore, the documentation of the Dazu Thousand-hand Bodhisattva Statue using terrestrial laser scanning is of great significance. This paper will introduce a new method for superfine 3D modeling of Thousand-hand Bodhisattva based on the high-resolution 3D cloud points. By analyzing these 3D cloud points and 3D models, some useful information, such as several 3D statistics, 3D thematic map and 3D shape restoration suggestion of Thousand-hand Bodhisattva will be revealed, which are beneficial to restoration work and some other application.

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