

Creating a digital rubbing from a 3D model of petroglyphs

By ROBERT MARK

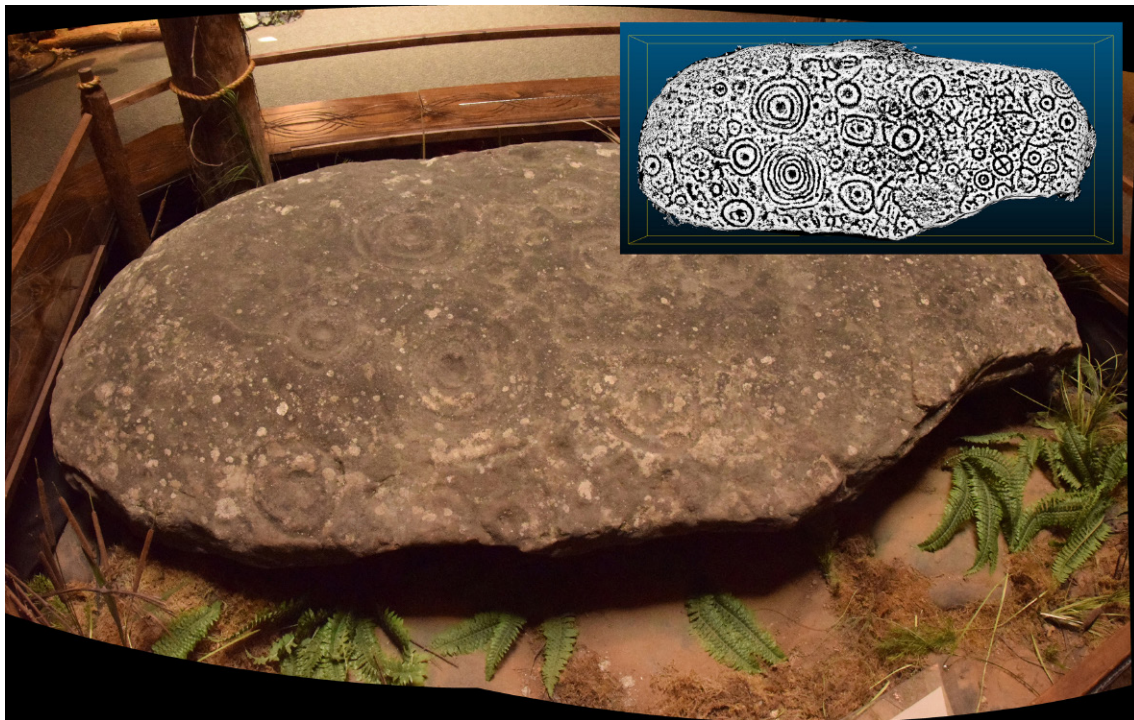
This technique is based upon the use of a dense point cloud from a Structure from Motion (SfM) program such as PhotoScan. The model must be of high-resolution, so as to capture the petroglyph surface texture. The point cloud is opened in CloudCompare (free software) and

a generalised surface is fitted to the points. A display of the points below the surface has the appearance of an inverted rubbing.

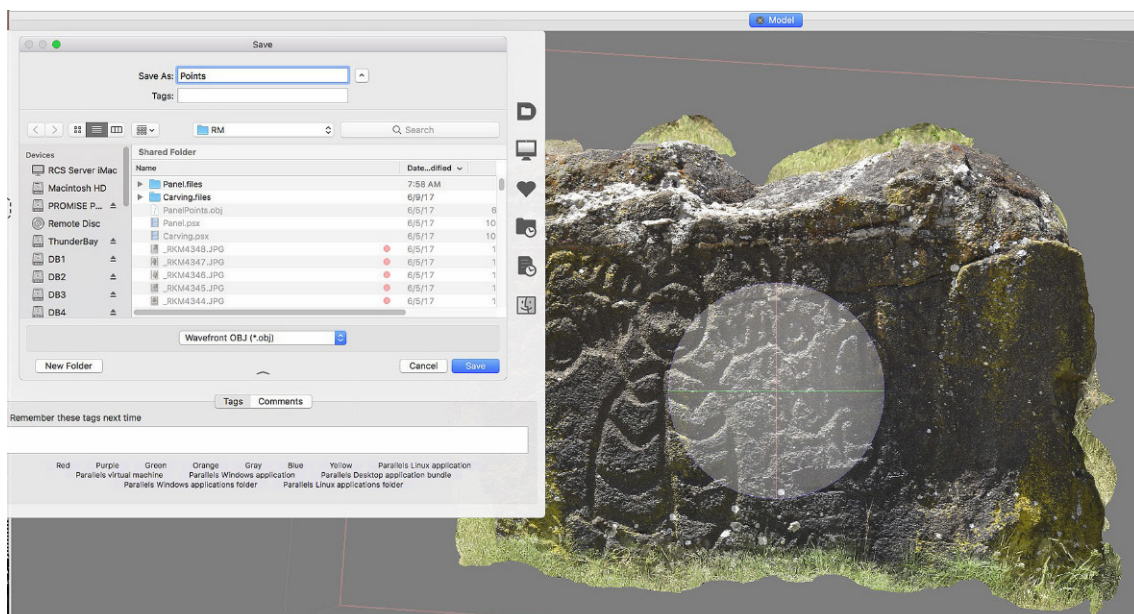
Dr Robert Mark
Rupestrian CyberServices
3644 N. Stone Crest Street
Flagstaff, AZ 86004-6811
U.S.A.

rmark@infomagic.net

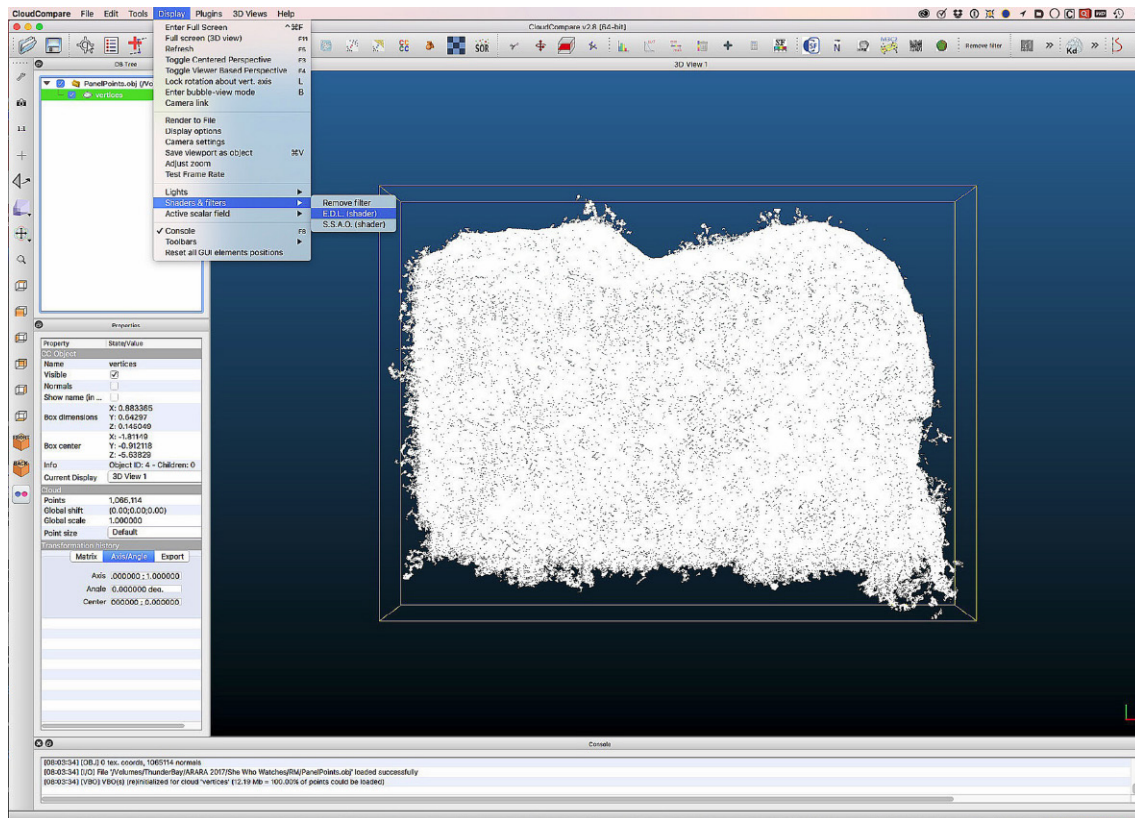
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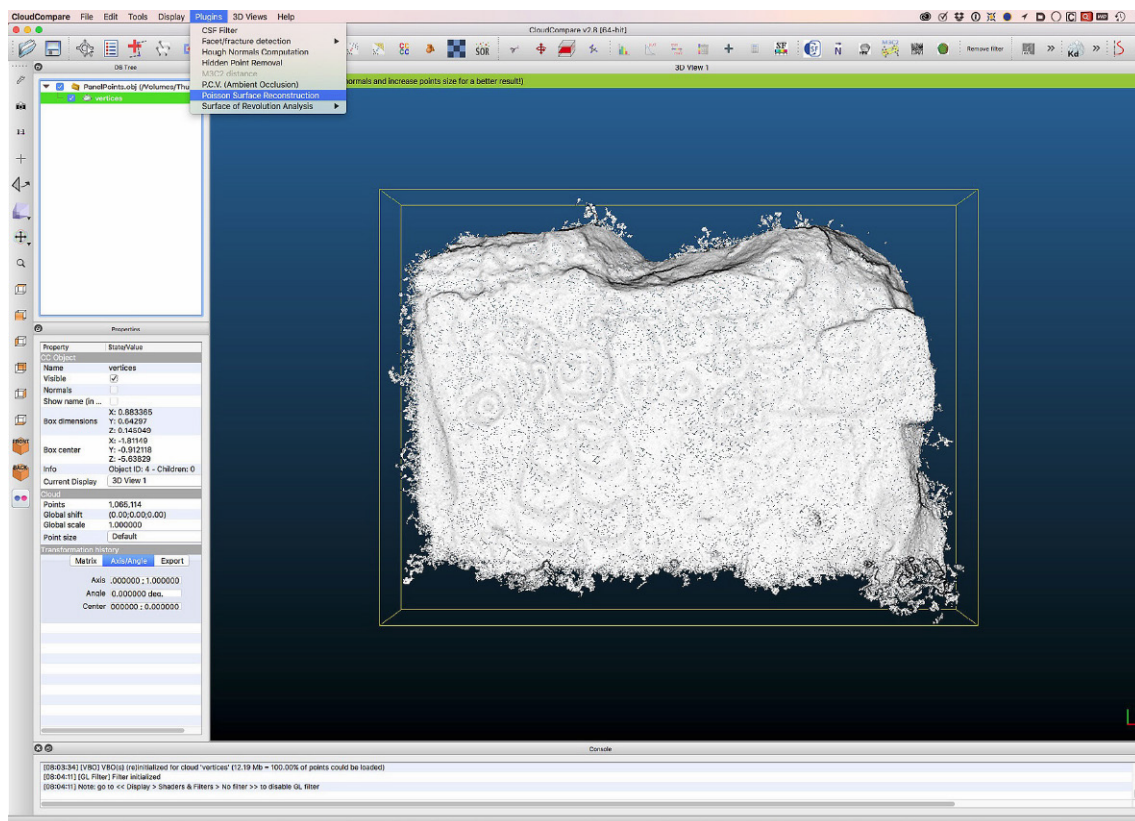
Example of a 'digital rubbing' of boulder at Reinhardt University, Georgia, USA.



Step 1. Export a dense point cloud from the model (Columbia Hills State Park, Washington).



Step 2. Open the point cloud in CloudCompare, and turn on shading.



Step 3. Select the vertices. Then select Plugin: Poisson Surface Reconstruction
[http://www.cloudcompare.org/doc/wiki/index.php?title=Poisson_Surface_Reconstruction_\(plugin\)](http://www.cloudcompare.org/doc/wiki/index.php?title=Poisson_Surface_Reconstruction_(plugin))

