

# Preservation and Enhancement of the Epigraphic Record through Photogrammetry: A Preliminary Study

The epigraphic record, if we exclude dipinti, is by nature three-dimensional. Not only does an inscribed line have height and width, it also has depth. Despite this, the recording of inscriptions has largely remained a two-dimensional undertaking, either in the form of photographs or line drawings. Epigraphic squeezes overcome this short-coming, but making them is time-intensive, limited in access, and potentially damaging to the stone. Over the past two years, with the help of several colleagues and the support of the Digital Scholarship Lab at the University of Rochester, I have been experimenting with different methods of producing and manipulating high-quality 3D images of inscriptions. This paper begins by examining the technical and practical aspects of several of these technologies. Currently, the most promising method is the production of high-resolution 3D photogrammetric models using a DSLR camera and a macro lens. The paper then discusses the benefits these models hold for the epigrapher: these models are easily shared via open-source renderers, they preserve an accurate representation of inscriptions and graffiti that are in danger of being lost to environmental factors, and these images can be manipulated digitally in ways we cannot manipulate the actual inscriptions. This paper closes with a discussion of the most promising of these manipulations, allowing eroded inscriptions to be enhanced to the point in which illegible letters become legible.