

## Study on creation of 3D model by SfM photogrammetry: An example of Taya Cave

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SfM (Structure-from-Motion) photogrammetry is one of the methods for creating 3D models of objects by extracting feature points in the images. Taya Cave, the investigation site of the present study, is a historical site of Yokohama City. It has about 200 base-reliefs on the surface of the cave tunnel walls, however, they are suffering from weathering and difficult to preserve from it in the future. The cave was excavated in Kamakura Era originally, and has a total length of 570 m with a three-layer structure. The present study tried to make a 3D model of this complicated, dark and narrow cave by SfM photogrammetry. The accuracy of the created 3D model were evaluated by comparing the values of distances between from the 3D model and from 2016 actual survey data.

Keywords: SfM, Taya Cave