
Performance Confirmation Experiment of the TS-TRACKING-UAV for 3D Land-Surface Surveying

Kentaro HAYAKAWA, Masahiro KURODAI, Nobuyuki NISHITA, Takeshi SASAKI

This article describes the method to produce the 3D model of a site by the photographic surveying using UAV and TS, which improves the performance in the construction area. By this method, the number of the ground control points can be reduced. It has been developed in combination with the three basic technologies; distance and angle measurement using TS, photographic surveying and synchronization technologies of each sensor.

The demonstration experiment has shown the precision of 3D surface model to be less than 50 mm. With the demonstrated precision, the method will be applicable not only to pre-construction surveys or as-built surveys in i-Construction, but also to measuring the damage level of a site in large-scale land-slide disasters.