

## **Research about emergency measuring technique for the time of landslide disaster**

### **[ Point ]**

It is desired to observe displacement of the surface of the ground from a distance, with consideration to regulation of entering into dangerous areas in order to conduct measurement at the time of landslide disaster. In this research, applicability of measurement of the surface of the ground was attempted for review by using a measuring technique by 3D scanner and a measuring technique of digital photographic measurement.

As a result, it was possible to easily create topographic map as well as displacement vector diagram by using measuring techniques of 3D scanner and digital photographic measurement. Errors in the obtained outcomes were assessed, and it was revealed that applicability of landslide measurement was high in the case of larger displacement of 3D scanner. Furthermore, it was possible to create topographic map by the technique of digital photographic measurement used this time, but the measurement errors were high. As a result, reliability of displacement recognition was not high.

Keywords: landslide, disaster, measurement, 3D scanner, digital photographic measurement