

Observational Method and Traditional Survey Methods to Monitor Rockslides

Technological advances in recent years have facilitated the use of in-place inclinometers, extensometers, and LiDAR for monitoring of landslides and rockslides. However, these technologies are difficult to implement for rockslides moving at high strain rates. For example, inclinometer casing typically cannot tolerate movements of more than 2 inches, and installation takes time. The traditional observational method and classic surveying monitoring of points provide a more efficient and cost effective method to estimate rates of movement and understand the kinematics involved in rockslides. A case study is presented involving a rock slide in Central Pennsylvania where the rate of movement was approximately 2 inches per day. The rock slide was endangering a commercial shopping plaza, gas and power lines, and did not allow time for installation of advanced instrumentation. Drone pictures and classic survey of a few monitoring points were the only tools available to understand the rockslide and design a remediation.

Here is a picture: also at high resolution at <https://agescup.files.wordpress.com/2016/05/ltc-5-2-16.jpg>

Sebastian Lobo-Guerrero, Ph.D., P.E. Geotechnical Project Manager/ Laboratory Manager
American Geotechnical & Environmental Services, Inc.
Southpointe Business Park
4 Grandview Circle, Suite 100
Canonsburg, PA 15317-8533
Phone: 724-916-0300 x 716 / Fax: 724-916-0315
E-Mail: sebastianl@agesinc.com / Web: www.agesinc.com

