

Design of a geodetic database and associated tools for monitoring rock-slope movements: The example of the top of Randa rockfall scar

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Keywords: database, monitoring, rock-slope, landslides, Randa, monitoring tools, slope movements.

Abstract: The need for monitoring slope movements increases with the increasing need for new areas to inhabit and new land management requirements. Rock-slope monitoring implies the use of a database, but also the use of other tools to facilitate the analysis of movements. The experience and the philosophy of monitoring the top of the Randa rockfall scar which is sliding down into the valley near Randa village in Switzerland are presented. The database includes data correction tools, display facilities and information about benchmarks. Tools for analysing the movement acceleration and spatial changes and forecasting movement are also presented. Using the database and its tools it was possible to discriminate errors from critical slope movement. This demonstrates the efficiency of these tools in monitoring the Randa scar.