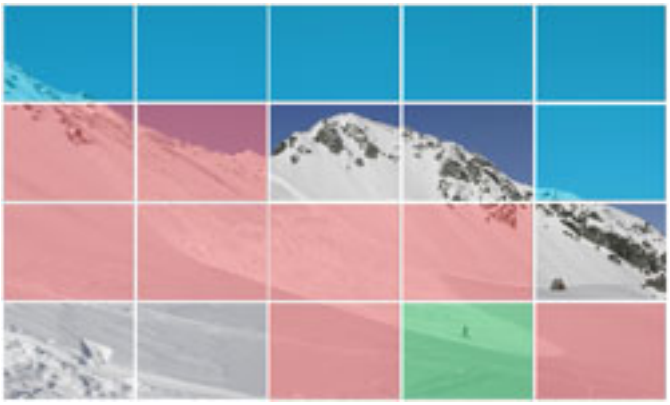
The scan of endangered areas is carried out by a Pulse-Doppler radar which can reliably and accurately detect movement even within a distance of a few kilometers.
Alarm is set off in case well-defined thresholds are exceeded. These alerts can be put out on site (audible signal, warning light) and/or can be transmitted to specific centers (regional emergency management agency, ambulance, road patrol) via mobile communication technology (GSM/GPRS/WLAN).

Additionally to triggering an alarm, video surveillance is activated and records the monitored area. The video is transmitted to a remote station for later analysis which can be helpful e.g. to locate buried disaster victims.

The radar is capable of measuring velocities ranging from 1 km/h to about 300 km/h. Furthermore it provides the option to divide the monitored area into so-called range gates so as to use only a smaller section for analysis. Susceptibility to failure is tremendously reduced by this technique because movements lying out of the section are omitted. This is not possible with conventional radar technology.



In order to keep the the energy consumption low, the new radar technology evades a radar pulse procedure by a suitable type of modulation and constant output power. The system requires only a fraction of the power needed for a conventional radar set.

A substantial advantage of the system is that due to its low energy consumption it can be energized with solar technology. Thus it can be set up in any surrounding without external power supply. The consequences are significant cost savings and high flexibility concerning installation. Since the system weighs only a few kilograms it can be employed mobile as well as stationary.

The radar system’s emitted radiation is harmless to health.