ROCKSPOT
Filling the gap in critical monitoring

RockSpot provides 24/7 monitoring and immediate alerts of rockfalls.

IDS GeoRadar: Innovative Interferometric Radar for Mining, Environmental and Civil Engineering Applications

www.idsgeoradar.com
ROCKSPOT

THE FUTURE OF MINE SAFETY STARTS HERE

RockSpot is an innovative radar system able to locate, track and alert on rockfalls in real time. This small yet powerful radar picks up tiny falling rocks at great distances long before the human eye of a spotter can see them. RockSpot is the industry’s first end-to-end solution able to trigger alerts on rockfalls, filling the gap in critical monitoring in mining. Each single rockfall event is detected in real time and immediate alerts issued to geotechs and working crews. All rockfall statistics are recorded in a database, making it possible to analyse each event and to create a proper rockfall risk zonation map. The use of such advanced system brings mine safety to the next level. A true real-time rockfall hazard mitigation strategy is now possible with high confidence and reliability.

REAL-TIME ALERTS

RockSpot never sleeps and provides continuous monitoring night and day. Real-time alerts can be customised for each sector, thanks to an advanced algorithm that distinguishes rock movements from other moving objects (such as haul trucks, animals, people). Depending on the requirements, RockSpot can be connected to on-site alarms, such as sirens, automatic road closures or other alert devices. For maximum effectiveness, all processing is performed on-site. Designed to withstand all weather conditions, its simple and compact design allows you to install the system everywhere.

ROCKFALL STATISTICS

All information on each individual event is displayed and recorded in real time and stored in a robust database within the mine network. The radar can detect and record all important data, such as:

- line of sight velocity
- travel path
- runout distance
- surface size of rockfall
- time of detachment
- source
- deposit area

Relevant information collected for the measured rockfall event can be visualised to create comprehensive and empirical hazard zonation models. Statistical data support the proper design of catch benches and exclusion zones, increasing safety and cost-effective solutions.

INTEGRATED MONITORING SOLUTION

Users can access RockSpot data from the innovative GeoCloud platform, a web-based application that can be hosted in the mine network. Optimised for mobile devices, GeoCloud gives you immediate access to all important data relative to rockfall events. The platform is accessible anywhere and by multiple users, with customised levels of data access. All rockfalls are georeferenced and overlaid on a site map. To complete the information, an integrated livestreaming camera provides continuous imagery of the monitored area. The radar map is available in GeoCloud along with all the relevant statistics. GeoCloud will even send user-customised alerts and notifications via email or SMS.

BENEFITS

- Safety: Effective rockfall hazard mitigation strategies to protect mine workers and assets.
- Camera Recording: Built-in camera that provides streaming video of the monitored area.
- Low maintenance costs: No moving parts with a clean design, significantly lowering maintenance costs.
- Always available: RockSpot never sleeps and monitors night and day. With an external long-running energy solution, users can depend on 24/7 coverage.
- Automatic georeferencing: Embedded GNSS ensures the automatic georeferencing of tracked rockfalls.
- Operates in all weather conditions: Immune to snow and dust, RockSpot’s durable design enables it to operate in the harshest environments.
- Powerful software both on cloud and on-premises: All RockSpot systems are controlled by GeoCloud with the possibility to create multiple users with different levels of access.
- Coverage + Resolution: A single radar unit can cover a field of 40° vertical and 80° horizontal with high resolution, the coverage can double with another sensor within the same configuration.
MODULAR COMPOSITION

ROCKSPOT

FEATURES

- Operating temperature range: -40° to +55° C
- Consumption: 115W (survey unit + control unit)
- Coverage field of view: 40° Vertical 80° Horizontal
- Ability to double the coverage with another radar within the same configuration (only one control unit needed)

All RockSpot systems are controlled by GeoCloud with the possibility to create multiple users with different levels of access.

GeoCloud software platform for immediate access to all important data of any single rockfall.
IDS GeoRadar, part of Hexagon, provides products and solutions, based on radar technology, for mining, civil engineering and monitoring applications. The company is a leading provider of Ground Penetrating Radar (GPR) and Interferometric Radar solutions worldwide.

IDS GeoRadar is committed to delivering best-in-class performance solutions and to the pursuit of product excellence, through the creation of application-specific, innovative and cost-efficient systems for a wide range of applications including mining, utility detection and mapping, civil engineering, geology, archaeology and public safety.

Hexagon is a global leader in digital solutions that create Autonomous Connected Ecosystems (ACE). Hexagon (Nasdaq Stockholm: HEXA B) has approximately 20,000 employees in 50 countries and net sales of approximately 3.8bn EUR. Learn more at hexagon.com and follow us @HexagonAB.