IDS GeoRadar

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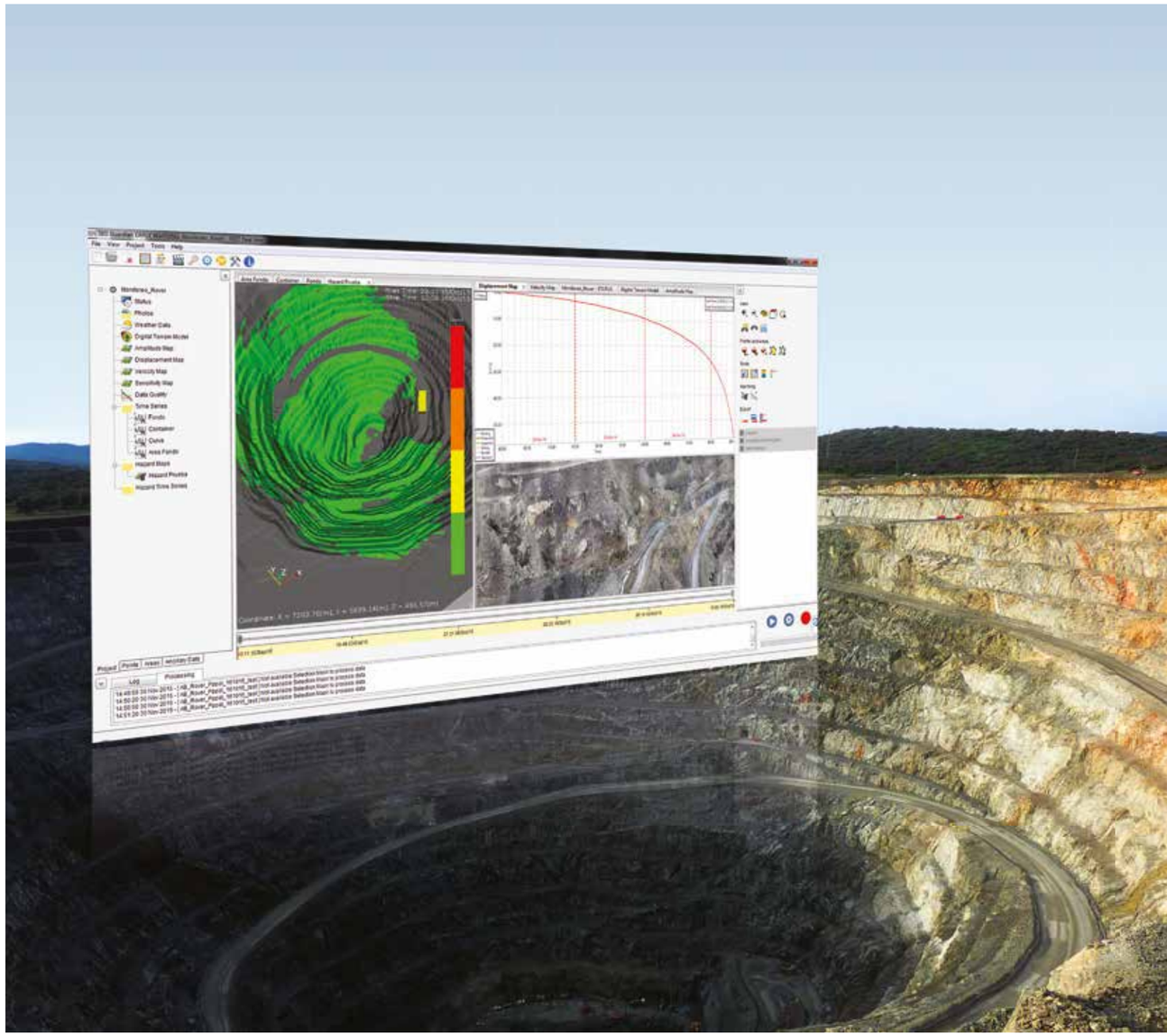
IDS GeoRadar

IBIS Guardian TrueVector

Advanced platform for slope monitoring in open-pit mines.

BOVIAR
sistemi integrati per la diagnostica e il monitoraggio
OFFICIAL DISTRIBUTOR



Feature-rich software suite for the interpretation of IBIS radar data and the management of slope stability risks.

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

www.idsgeoradar.com

IBIS Guardian TrueV

IBIS Guardian software is an extremely powerful and feature-rich monitoring platform for managing slope stability risks in open-pit mining operations. Guardian enables the user to quickly interpret and react to the information delivered during IBIS radar monitoring projects.

ROBUST AND RELIABLE DATA IN REAL TIME

IBIS Guardian offers built-in multiple alarm options and comprehensive geotechnical analysis tools. Key people are immediately alerted in the event of slope displacements through various messaging options (email, SMS, pop-up alert).

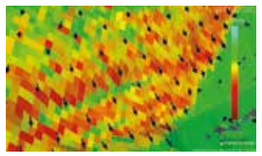
The unique Multi-Scale processing capability enables the user to resolve up to four orders of magnitude of displacement, an essential tool in support of mine design, planning and risk mitigation strategies. Analysis of long-term displacement trends is enabled by IBIS Guardian's capability to store long-term datasets within a single monitoring project.

Reliable and accurate displacement data is provided to the user in real time by employing advanced Automatic Atmospheric Correction techniques. The interpretation of radar data is made simple via visualization of fully geo-referenced 3D data.

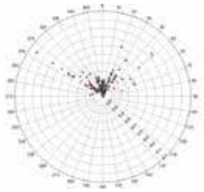
TRUEVECTOR

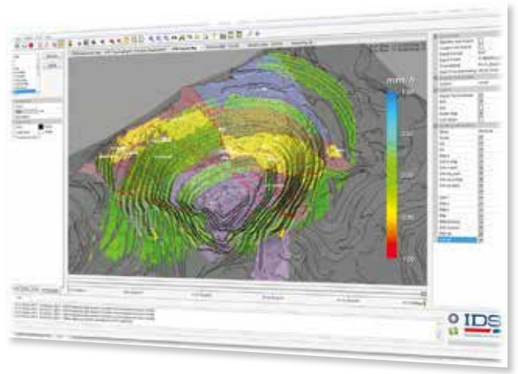
With the TrueVector technology IBIS Guardian is able to resolve the spatial direction of displacement vectors for hundreds of thousands of overlapping radar pixels that are being monitored simultaneously by two or more radar systems. Accuracy is sub-millimetric. No prisms, markers or reflectors are required on the slope, instead the IBIS systems rely on natural backscattered information to rapidly resolve spatially dense and continuous vector displacement information.

Integration with TPS and GNSS



TrueVector radar data





FPM360 with overlay of geological features

INTEGRATION

IBIS Guardian employs Full Pit Monitoring (FPM) capabilities, stitching together data sets from multiple IBIS radar systems on a single radar map. Real-time full pit data provides the user with a universal view of the entire pit and complete situation awareness for the management of slope hazards. The single software platform obviates the need to reproduce the same tasks on multiple workstations.

IBIS Guardian integrates a fully automated function where different Total Station datasets can be imported, enabling the user to compare prism displacement trends with IBIS radar data, adding value to the interpretation of movement behavior. Stereonet charts are also available for quick and immediate representation of displacement vector data.

In addition IBIS Guardian provides high-resolution images, captured by the Eagle-Vision camera and geo-referenced to the monitored scenario. Panoramic imagery can be navigated and zoomed, supporting the analysis and interpretation of radar data.

MAXIMUM FLEXIBILITY

IBIS Guardian server/client architecture is available to further enhance flexibility for multiple users for the interpretation and analysis of radar data. A dedicated Dispatch client feature is designed to provide dispatch operators with all alarm status information in order to react promptly to emergency alerts without interfering with radar projects.

FPM360

Integration of multiple fixed and/or mobile IBIS radar units in a single user interface, stitching together different IBIS radar datasets and displaying them on a single radar map.

TrueVector

Instantly record continuous spatially dense x,y,z displacement vectors over the monitored scenario.

Eagle Vision

Visualization of Eagle-Vision high-resolution imagery for visual correlation with radar data.

INTEGRATION

Geodetic Data

Automatic integration of data from TPS and GNSS (Leica GeoMoS® and Trimble T4D®) and correlation with radar data.

External Public Interface (API)

External Public Interface to quickly exchange IBIS Guardian data with third party software.

Alarm Capabilities

Alarm generation with user-defined levels and multiple alarm criteria based upon: displacement, velocity, acceleration and inverse velocity parameters.

Data Analysis Tools

Extensive tools for data analysis and interpretation, including extraction of time series from user-defined areas, inverse of velocity charts, import of digital layers, movie tool.

3D Interface

3D interactive data visualization and fully geo-referenced radar data for quick export to mine planning software and GIS.

ALARMS, DATA VISUALIZATION AND ANALYSIS

AdaptivePS

Advanced automatic atmospheric correction, able to react to sudden changes of atmosphere. No stable areas required and data is available from the second scan.

Multi-Scale

Multi-scale processing engine able to resolve in real time fast accelerations associated with the risk of collapse (cm/h) and early detection of very slow movements (mm/month) in support of mine planning and mitigation strategies.

Dispatch

Integrated server/client feature designed for dispatch operators, providing real-time alerts for slope displacement and system status.

Server

Server/client architecture with remote clients and real-time automatic processing for analysis and interpretation of data.

FLEXIBILITY

Watchdog

Complete peace of mind that Guardian is up and running and processing critical data thanks to the full-featured watchdog providing autonomous visual and email alerts.

Planning Tool

Powerful planning tool to optimize IBIS radar installation and performance. Maximize the radar's sensitivity according to the radar's LoS and TrueVector coverage for critical areas.