Automated Remote Monitoring for Large Mines

Overview

Canary Systems implemented an automated remote monitoring solution at a large producing gold mine in the Dominican Republic. The mine began construction in 2008, with its first production in 2012 and currently has a life expectancy of approximately 20 years. This is the fifth largest gold-producing mine in the world and includes two open pits, a processing plant, and a tailings storage facility.

Due to the lack of telemetry and an automated data processing platform, the mine collected their data manually, using Excel spreadsheets to process data and create graphs and reports.

What We Did

Canary Systems proposed a solution to automatically collect and manage instrument data with the installation of more than 80 **MLRemote®** monitoring stations and 2 **MLBase™** centralized collection points in the first and second installation phases.

Experienced Canary Systems field technicians installed the MLRemotes to assist in the data collection of over 200 instruments. Despite dense vegetation and terrain, connection was achieved to the MLBases with the use of a 900Mhz point-to-multipoint network.

MLWebHardware, the web-based system configuration and management platform, provided the means to communicate with each MLBase and organize and administer the MLRemote data collection accordingly.

REMOTE MONITORING SYSTEM DESIGN

ON-SITE INSTALLS & TRAINING

WEB-BASED SYSTEM CONFIGURATION

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Monitoring and Integration

Using MLWeb and MLWebHardware, the mine records new data from the MLRemotes every hour and integrated additional monitoring tools within their database such as radars, prisms, inclinometers, and InSAR. To support the large environment, a three-server deployment was implemented to allow for multiple user-access and frequent 3D data processing.

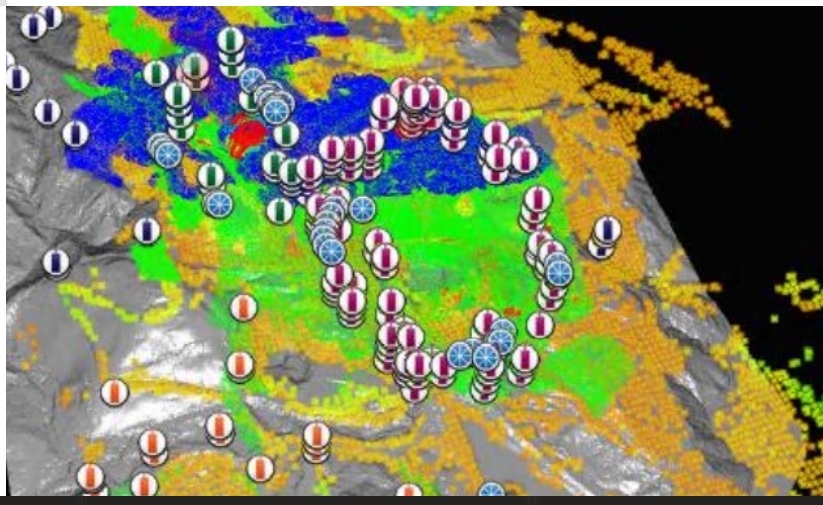
Improved Reporting

Rather than using Excel spreadsheets to process data and create graphs or reports, MLWeb automatically performs the process and generates daily and weekly reports. The reports that are automatically generated by the automated data acquisition system (ADAS) make it possible for the site to conform to and fulfill ICMM reporting guidelines.

The MLRemotes allowed data collection across significant distances. In the examples provided, one MLBase connected MLRemotes 1.6 km away while the second MLBase reached MLRemotes as far as 2.6 km.

Improvements Through Automation

By removing the variability of manual instrument readings and replacing with automated data acquisition systems, the mine can make informed operational decisions, better understand their infrastructure, and improve accountability. Additionally, a fully automated system architecture yields long term cost savings while providing a significantly better risk factor reduction.



CONTACT US

For more information about this project and others we've worked on, please visit our website or contact **info@canarysystems.com**.