

Staying Connected

Management, control and scheduling

Minetec has introduced SMARTS II, an enhanced version of the company's flagship mine management and control system. Minetec states that SMARTS II "brings an entirely new level of productivity to underground mining operations through improved 3D graphics and reporting

capability, dynamic scheduling of real-time events, and easy-to-import mine planning formats."

"Minetec has improved the intelligence inherent in the SMARTS II modules to address the mining cycles for literally any mining method and associated scenarios," said Andy Sheppard, Executive General Manager, Minetec. "The core of the SMARTS II system is an optimisation engine that interfaces to the recently released Trax+Tags II system as well as a unique scheduling and simulation interface. The efficiencies that result from a SMARTS II implementation result in a more accurate alignment between planned and actual scenarios, providing real time data from the face of the mine."

SMARTS II provides a collection of intelligent software modules which can be utilised either independently or as an integrated mine management and control solution to give "unparalleled visualisation, control and optimisation capabilities" including resource shift schedule planning across complex multiple heading rapid developments; user or machine based physicals capture for production management and reporting; interactive real-time shift optimisation based on simulation using actual machine and location data; concurrent parallel simulations for comparative analysis of scenarios for bottleneck scheduling; and full integration into the Minetec Trax+Tags for real-time machine and vehicle movement monitoring

Example of OTN optic fibre network layout for underground coal operation

and status. The web-based interface provides system control from any location.

Minetec designed the Trax+Tags suite to replicate GPS underground data, able to be integrated with third party software. A scalable system, Trax+Tags can be implemented cost-effectively to address the accuracy and investment requirements of the mine at different stages of operation by building up the system with modules over time. The system can also be configured so that some areas are using high accuracy and others lower accuracy allowing the same equipment to be used throughout the mine.

As a Real-Time Locating System (RTLS), Trax+Tags utilises a number of technologies including Receive Signal Strength Indicators (RSSI), Time Distance of Arrival (TDoA) and Inertial Navigation Systems (INS), to follow personnel and assets as they move through an underground mine to enhance safety, increase production and improve efficiency.

By utilising the Minetec Trax+Tags suite for critical applications and in hazardous workplaces, RTLS data can be provided to dispatch operators, shift supervisors or anyone with access to the mine network. It provides the ability to locate workers in emergency situations by tracking and showing where every individual is in the mine at all times.

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An acknowledged leader in underground communications solutions, Minetec provides next-generation technology to improve the safety and productivity of today's critical mining operations.

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