Maptek Invests with PETRA Data Science

Maptek and PETRA Data Science have established a partnership which will enable seamless value chain optimization and simulation from resource models through to metal produced. Mining companies will be able, for the first time, to use millions of tonnes of their historical performance and resource metadata for dynamic optimization.

"Whether you are looking at their 3D virtual environments for geological modelling and mine optimization, or long-range laser scanners for 3D mapping and monitoring, every aspect is custom built for mining. Any true digital twin in mining needs to consider geology," said a PETRA spokesperson. "Our partnership with Maptek provides PETRA with easy access to upstream geological data for value chain optimization and enables Maptek to extend schedule optimization downstream of the mine. For the first time, miners will be able to play forward the mine schedule into the processing plant."

The integrated technology offerings of PETRA and Maptek cover solutions from geological modelling to plant and process optimization and simulation. The partnership combines deep domain expertise from across the whole value chain and, together, PETRA and Maptek offer the industry a practical alternative to the common practice of siloed optimization.

Under the partnership, Maptek Evolution mine schedule optimization will be dynamically linked to PETRA's latest digital twin performance models including; metal produced, grade, quality, recovery and throughput. Dynamic mine scheduling is made possible by bringing together Maptek optimization engines and PETRA's prediction and simulation algorithms.

Maptek BlastLogic blast design optimization will also benefit from dynamic links to PETRA digital twin models for loading, crushing and grinding. In addition, PETRA MAXTA digital twin blast design simulation will benefit from connection to BlastLogic historical drill and blast design data.

PETRA will continue to operate a platform-agnostic business model, with investment funds channelled into further development of PETRA's open format integrations, including APIs and architecture.

"We need to empower our customers to relate the performance and characteristics of processes and equipment far downstream from geology or planning assumptions and understand the relationships better. PETRA has a proven capability to create prediction and optimization algorithms for miners through the innovative application of their data science expertise and experience in the real world,' said Peter Johnson of Maptek.