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Hexagon Integrates Slope and Safety Platforms

In recent years, interactivity from reality capture and resource models have also brought slope design closer to reality and have provided optimization for accessing reserves. The advantage of 3D design interfaces is that they take all parameters into account; users can now visualize and manipulate data in the same space as their slope design tasks.

Tools for slope design are included in most of Hexagon's software packages, although they are strongest in the strategic, long-term and short-term open-pit engineering packages.

"Our slope design tools are always evolving, improved by feedback from our users," said Jose Sanchez, product marketing manager at Hexagon's Mining division. "Our most recent addition gives users the ability to calculate reserves directly in the pit-design tool as they build slopes. This improves existing interactions with the block model, reading parameters from it to affect the output of the design."

Over the past year, Sanchez and his team have worked with Hexagon's safety and monitoring solution developers to create an integration that encompasses slope monitoring with collision avoidance and planning. This relationship is commonly seen as a workflow at mines, but the teams have also taken it a step further so that solutions can transfer data to each other in real time, redesign slopes to correct issues and keep personnel safe.

"Hexagon's focus for the foreseeable future is on integration, connecting all of our systems and having one platform that can take customers from exploration to production," Sanchez explained. "Slope design and drill and blast processes are so closely related. We want to improve data flow between these and other departments."

"In the future, we see slope design and modeling becoming increasingly intelligent and leaning more on machine learning. We hope to see a day where engineers and geologists can save time by making complex decisions based on autonomously created designs and data analysis."
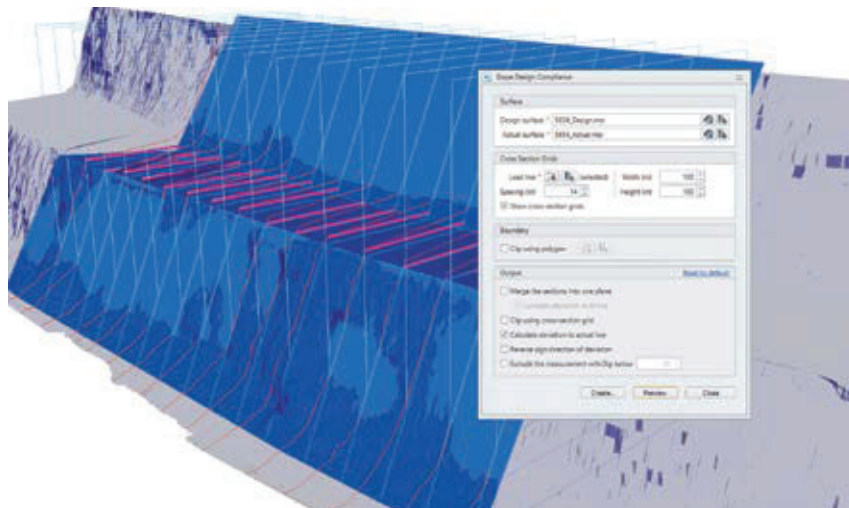
Slope compliance between actual and designed pit surfaces ensures that the slope design is corrected as quickly as possible. (Image: Hexagon Mining)