

# Latest Mine Scheduling Tools with Maptek Evolution

New tools in Maptek Evolution improve performance of mine scheduling processes and deliver greater project value. [Evolution 4.5](#) features the stunning new graphics environment which already provides Maptek I-Site, BlastLogic and Eureka software users with a superior visualisation experience.

‘The high-performance graphics engine can display and manipulate large models of several hundred million blocks, along with the solids and triangulations that make up those blocks,’ said Steve Craig, Maptek Manager of Scheduling Solutions.

Scheduling is about maximising the value of your assets at a strategic level. However, it is crucial to ensure these plans are practical and can be implemented at a more tactical level in a shorter time frame. Evolution Strategy and Origin allow the engineer to achieve practical, high-value schedules that can be implemented at a production level.

‘Mines are complex environments and scheduling production is just as complex. Planners must consider cut-off grade, route and equipment allocation, cycle times, fuel burn and waste dump locations.’

‘There’s universal benefit in being able to present an integrated, holistic 3D view of a mine site by simultaneously displaying multiple models, waste dumps, haul networks and topography.’

Evolution Phase is a new member of the Evolution family. This product allows the engineer to build practical phases from a series of optimal shells very quickly. Being able to cycle rapidly through this process ensures value is maximised from pit optimisation through to schedule optimisation. The adage that ‘schedules are only as good as the phases that are designed’ rings true.

Evolution Strategy maximises net present value and generates cut-off grade optimisation policies. New options allow users build blend constraints and to track and report multiple elements and contaminants per process and/or destination. Existing stockpiles can be modelled with tonnage and grade items.

As well as minimum and maximum accumulation constraints for multiple processes, a global minimum cut-off can now be specified.

‘If users want to run Strategy without cut-off grade optimisation, they can now fix their own cut-off grade policy,’ added Craig. ‘The optimisation process then determines the best extraction sequence for that setting. More importantly, users can simply turn this feature on and then determine the value-adding capability of running with cut-off grade optimisation. In most cases, we will see a significant uplift in value of up to 25%.’

Improved charting and export of schedules across multiple elements and processes is also included in upgrades to Strategy in this release.

Evolution Origin generates detailed scheduling scenarios from life-of-mine to short term planning horizons and can apply optimisation policies generated by Strategy.

In version 4.5 users can now set maximum constraints per stage/group/period for manipulating sequences through the model. Specifying multiple truck types to work in the same mining area allows for mining different material types with different equipment.

Improved interoperability for haul network creation allows users to drag and drop a haul network created in Vulcan Envisage into Evolution to automatically configure the schedule network. Multiple digger fleets can also be allocated.

Other features of the Evolution 4.5 release include selecting imperial and metric units and currency and customising settings that persist into reporting and tabulations.

‘Evolution 4.5 adds usability and variety to confirm its place among next-generation technology,’ said Craig. ‘Mines can schedule their operations using our advanced optimisation techniques, which by their very nature are designed to mimic reality and complexity. Interoperability with the resource model, integrated workflows and parallel processing technology, and now the latest visualisation engine gives you a truly world class scheduling solution.’