



Bridging the planning gap between designing and scheduling

Deswik.IS joins the power of Deswik.CAD and Deswik.Sched, dynamically linking your mine designs and schedules, enabling you to spend more time analyzing and planning scenarios rather than manipulating data. Gantt chart schedules can be modified and updated directly from the graphical environment, setting dependencies and specific resource input paths. Schedule-driven graphical animations give instant feedback on your planning changes, facilitating rapid schedule development.

Using process-driven reserving routines to generate schedule tasks from your mine design data, Deswik.IS automatically generates ancillary tasks such as drilling and blasting, adding the detail you need, while a set of flexible updating tools keeps both your graphics and schedule up to date. Multiple project schedules at different planning horizons can be merged and managed giving even greater flexibility to your mine planning structure.

SEAMLESSLY MERGES DESIGN AND SCHEDULING

- » Direct integration of the Deswik.CAD 3D design environment with the Gantt chart-based Deswik.Sched.
- » Instant feedback with animated schedule visualization and dynamic updating between design and schedule.
- » Take any type of design entity in the Deswik.CAD graphical platform and transform it into a task solid with a directly linked schedule task created inside Deswik.Sched; update, re-create, delete and manage task solids with any changes dynamically reflected in their associated schedule tasks.
- » Creates a direct link in real time – don't waste time exporting data or settings files that have to be uploaded and managed between different modules.
- » Manage any combination of open cut and underground, coal and metaliferrous mines from a single interface using universal processes.
- » Ability to change the linked Deswik.CAD and Deswik.Sched files as needed; multiple schedule scenario files can all be matched against a single set of task solids.
- » Record schedule changes as customizable animations to be shared across all stakeholders, keeping everyone up to date.

PROCESS DRIVEN

- » Comprehensive toolbox automates the conversion of design entities into schedule tasks with linked 3D solids.
- » Define complex mining processes through derived tasks such as drill and blast or dragline re-handle passes.
- » Wizard-based or manual project setup applies intuitive, process-driven routines to generate schedulable tasks from mine design data:
 - Define metadata to carry across the interactive link between the design and schedule.\
 - Set rules to generate additional data during task solid creation
 - Run interrogation against geological models during or after the task solid creation process.
- » Develop derived tasks to represent a task that is involved in the cycle of extracting the main mining block; drilling and blasting could both be derived tasks for a mining extraction task:
 - Tasks can be scheduled and resourced separately to their parent task
 - Representative solids can be created for inclusion in animations.
- » Use linked attribute data to build a comprehensive set of activity type rules that define how a design entity is transformed into a task solid with linked schedule task:
 - Bench blocks
 - Tunnels
 - Stopes
 - Reserve solids
 - Outlines.
- » Incorporate solids Boolean processes during task solid creation to cut solids against each other and remove overlapping volumes; that is: remove development drives from within stope solids.



INCLUSIVE DESIGN

- » Create bench blocks or generate solids from reserve solids, tunnel centrelines and stope sections.
- » Specialized tools produce pit shell solids, bench block polygons, ore drive centrelines and assign attributes.
- » Take a series of pit or dump shell surfaces and cut them against a starting topography, and each other, to generate a series of closed solids.
- » Cut pit stage solids against grids to generate polygons representing the bench block shapes to be mined on each bench of a pit.
 - Automatically merges small polygons created at the edge of a pit shell with larger adjacent blocks, to create more practical mining shapes.
- » Create polygons and solids to represent an ore drive, using centerlines and polygons defining the ore limit outline.
- » Automatically or manually assign grouping or graphic attributes to your design entities before, during, or after task creation with a number of attribute assignment tools.

SEQUENCE VISUALIZATION

- » Innovative graphical interface with a flexible, rules-based approach delivers repeatable and auditable creation of complex mining sequences.
- » Graphically set resource paths for greater control of equipment sequencing.
- » Graphical dependency tool provides visual representation of every single task dependency in the linked schedule.
- » Intuitive manual linking between design graphics based on polygon, centroid or solid selection.
- » Build comprehensive sets of automatic dependency rules that can be re-run for new or updated designs as required:
 - Link directly on task metadata (attributes)
 - Spatial linking based on solid centroid
 - Vertical overlap and face angle.
- » Dependencies are automatically updated to the schedule in real time as they are created.
- » Access animation mode while creating dependencies to immediately visualize changes to the mining sequence.
- » Option to assign schedule resources to tasks graphically as part of the dependency creation process.

UPDATE AND INTEGRATE

- » Effortless transfer of data to bring schedule information such as resourcing onto the design solids.
- » Update mine plans against survey data, cutting solids and re-proportioning schedule tasks to the survey date.
- » Automates update of existing schedules from surface or underground mine surveys, cutting and re-proportioning tasks and rescheduling from the survey date forward:
 - Cut open pit mining reserves against survey surfaces or polygons, with linked schedule tasks adjusted to the remaining amount.
 - Updates face positions for underground development against survey pickups updating the schedule as required.
- » Automatic and on demand batch update functions transfers information from your design to your schedule and back again within the software – no need to save out files to load into different modules.

POWERFUL COMMUNICATION TOOL

- » Superb graphic reporting such as period progress plots, legend coloration and 3D animations.
- » Project merge facilitates multi-user planning of different mine areas or timeframes for true integration across a project.
- » Set a mining direction for your overall design; define specific dates and then cut the task solids to indicate the face positions.
- » Create stage plans that represent snapshots of the surface of your mining and dump faces at different times throughout the life of your mine.
- » Cut tunnels and outlines based on the meters scheduled to be mined across a range of periods that you define.
- » Manage different files related to the one mine plan by merging multiple base projects into one master project:
 - Build the master schedule from all tasks contained in the original base schedules.
 - Vary master schedule as required and then write changes back to the base projects to keep them updated.
 - Dependent tasks in the master schedule are incorporated into the base schedule as non-editable external tasks.