Deswik.CAD
Design & Solids Modeling

A powerful design platform
with superior data handling

Deswik®

The next generation of 3D design tools for mining

Industry-leading solids modeling for unprecedented precision and visualization

Deswik.CAD is designed by mining engineers for mining engineers. Effectively a spatial database, Deswik.CAD combines the visual power of a modern CAD engine with the efficient data management of a fully featured database, giving you the ability to visualize, analyze and report your data as you need to.

Designed as a fully featured CAD platform, Deswik.CAD is both a powerful general design tool and the foundation that connects our extensive suite of mine design tools, developed for specific applications across all mining sectors. Given it's design and integration capabilities, Deswik.CAD is driving mining efficiency globally.

New problems demand new solutions

Leveraging decades of professional software development experience and a proven history of building technical mining applications, Deswik provides industry-leading tools to ensure that mine plans are robust, transparent and achievable. Our software is developed to take advantage of the latest high performance technologies and cutting-edge computing algorithms, all accessed through a flexible, intuitive interface.

By avoiding the legacy issues faced by other older packages, coupled with our outstanding customer support, we provide complete solutions to meet the demands of modern mining. Deswik is committed to delivering comprehensive tools and quality support for all mining sectors.

Delivering more value through effective mine planning

- » Handle large mining datasets with excellent graphics performance.
- » Generate solids, slice and run Boolean commands without errors.
- » Bring GIS-style capabilities to 3D mining data with superior attribute and metadata handling.
- » Perform superior analysis with complex calculations directly in the design environment rather than in an external spreadsheet.
- » Run advanced design and editing tools within a simple, modern, and intuitive interface.
- » Handle all mining sectors, open cut or underground, coal or metals.

- » Manipulate information using a powerful formula builder, instead of scripting.
- » Add structure to the planning process using graphical workflows tied into the entire Deswik.CAD toolset.
- » Rapidly and intuitively plot using the WYSIWYG principle.
- » Use custom filters and legend overlays for superior graphical reporting.
- » Integrate easily with most mining and CAD packages.
- » Customize and manipulate data using plugins and scripting.

# Fully-featured CAD Engine

Mine design from a different angle
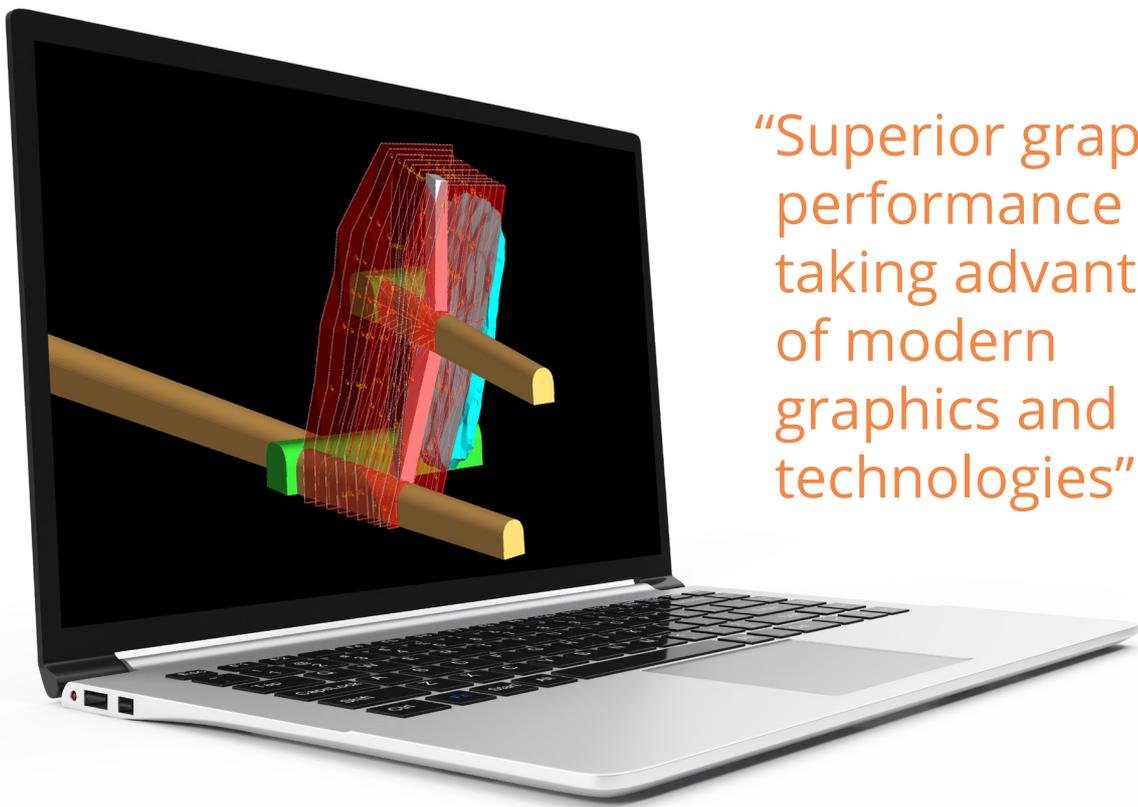
» Support for all standard CAD objects as well as mining-specific objects, such as:
  – Irregular stopes and tunnels
  – Drill holes
  – Gridded seam and block models.
» Superior graphics performance taking advantage of modern graphics card technologies.
» A robust Boolean engine for generating solids and polygons.
» Automatic repair for invalid solids imported from other mining systems.

Integrated Data Management

Superior Data Manipulation and Analysis

» Reporting based on Boolean intersections similar to GIS systems.
» Advanced spreadsheet-style formulas for data calculations:
  – 3D spatial lookup formulas
  – Interrogation of solids for volume, area and intersections.
» Support for a broad variety of data sources:
  – Global constants and parameter tables
  – Curve and value surface interpolation.
» Interactive and rules-based filtering from attribute values.
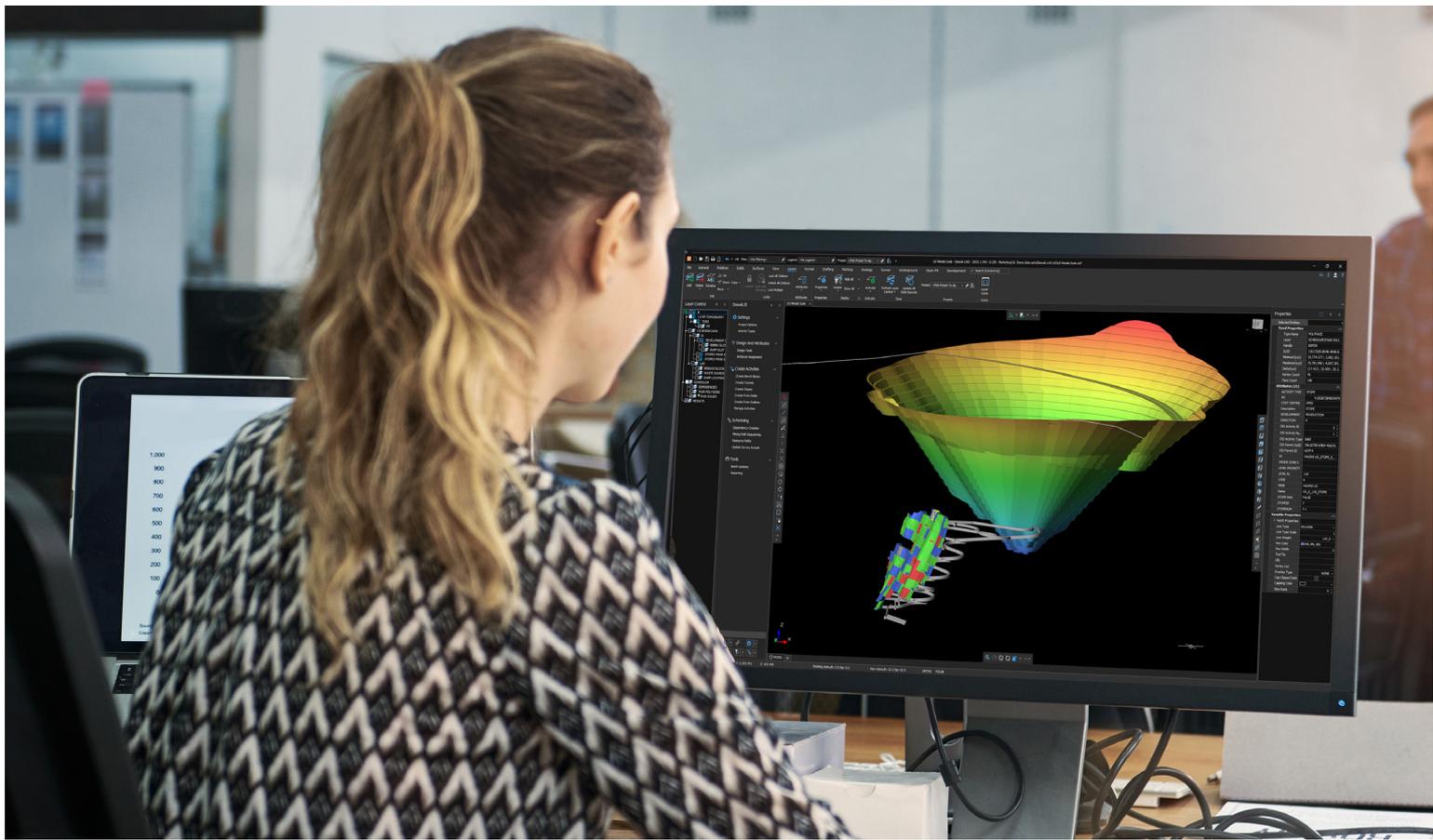
Open, Integrated and Customizable

Never script again, unless you want to

» Deswik.CAD easily integrates with most other mining and CAD packages.

» Scripting in an Integrated Development Environment:

- Plugins can be developed in VB.NET or C# and easily introduced into the application

- Powerful object model that allows full access to all properties and methods

- In-built development environment with full access to the entire .NET framework.

"A powerful design platform with superior data handling"
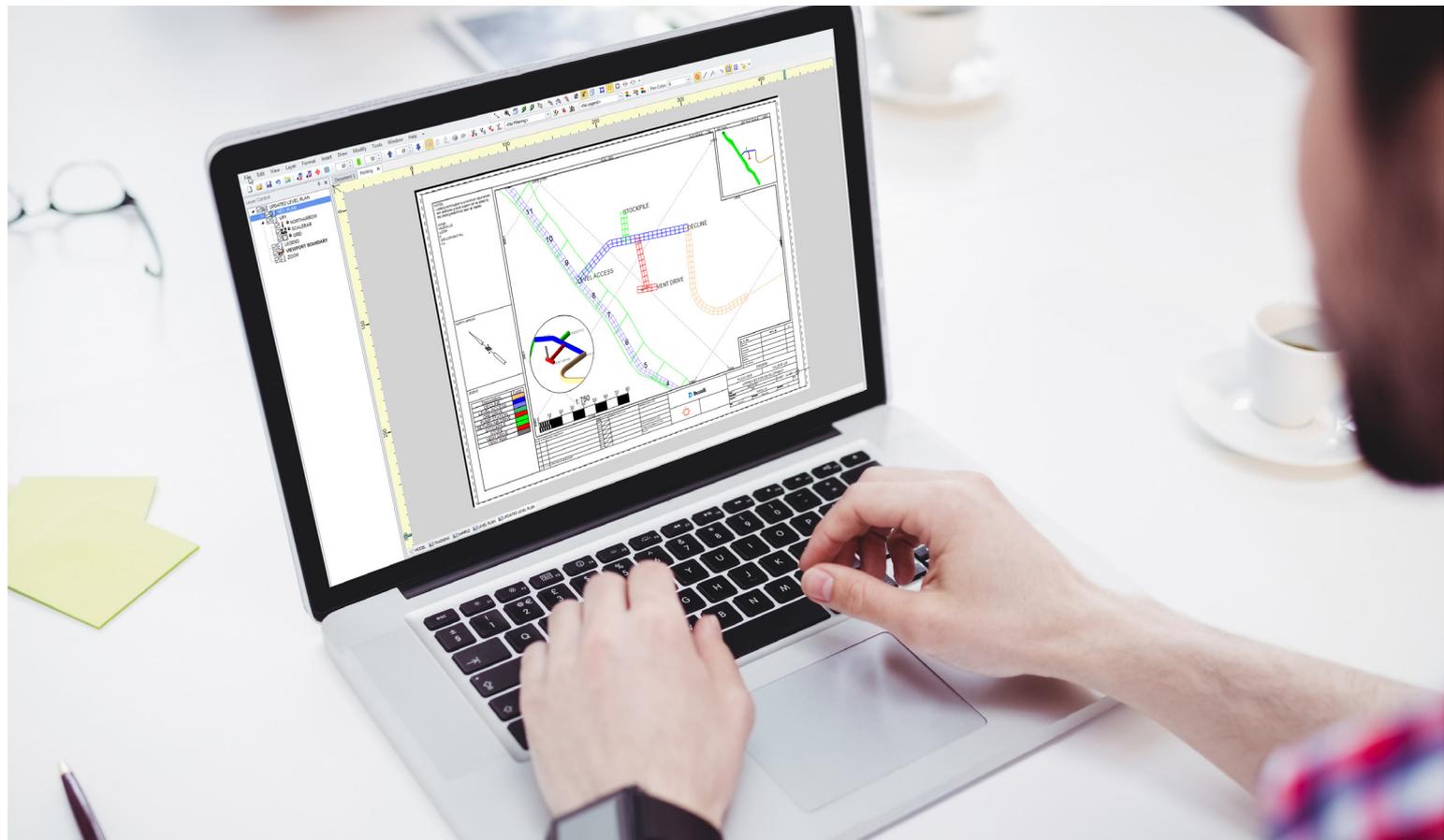
Auditability and Consistency

Transparency and reliability in your results

» Wizard and rules-based tools provide data manipulation transparency.
» Customizable workflow macro builder which removes confusion for unfamiliar users:
  – Repeatable design and data transformations
  – Standardized planning process mapped to internal processes.

Powerful Reporting

Better communication for greater understanding

» Flexible data queries generated on demand:
  – Volumes, areas, attributes and properties
  – Data histograms.
» Familiar plotting functionality mirroring most other CAD systems:
  – Unlimited, independent viewports for each plot
  – Title block text with intelligent attributes including date and username
  – Spreadsheet-style table editing, with tables easily placed into 3D space or on plots.
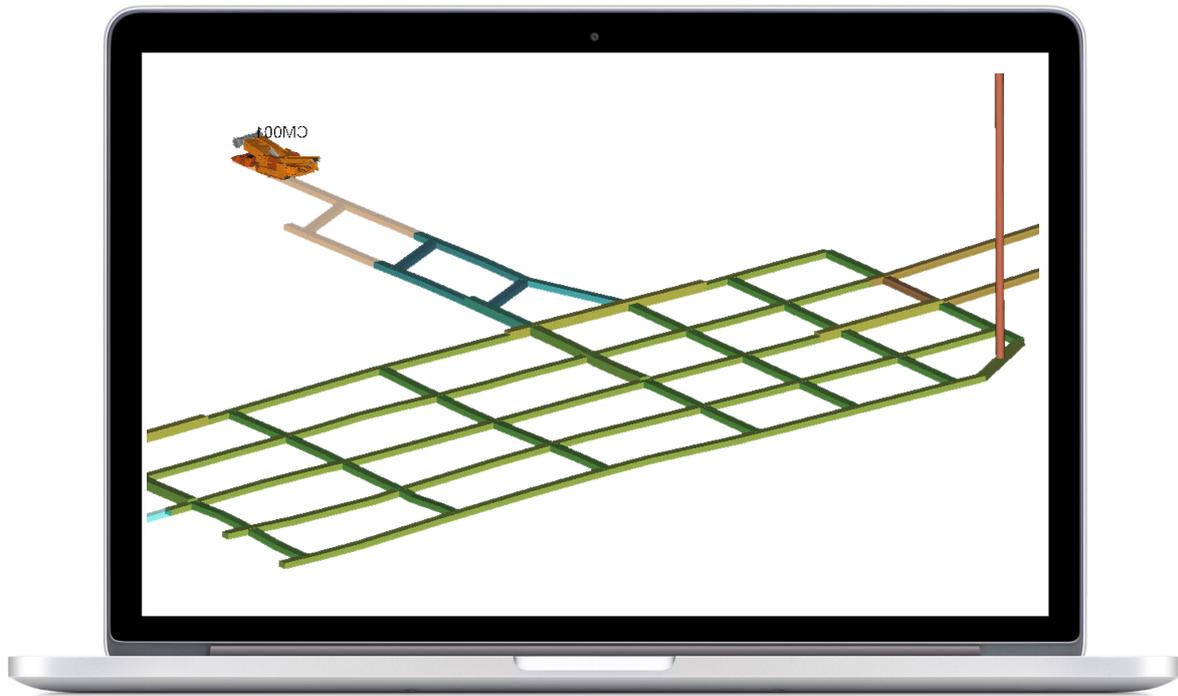
Comprehensive Mining Design Tools

Accelerate your design process

» Universal applications handling all mining sectors, open cut or underground, coal or metals.

» Rules-based mine design engine for designs, allowing for scenario and alternative design analysis.

» Solids and surface generation using a multitude of methods:
  – Projection – strip or pit (open cut reserving)
  – Cross-section along polyline (tunnels)
  – Manual or batch linking (stopes)
  – Tessellation (LIDAR data processing or DTM creation).

"Universal applications handling all mining sectors, open cut or underground, coal or metals"

Our industry leading software solutions include

⊹ Deswik.CAD
Design & Solids Modeling
A powerful design platform with superior data handling – the next generation of planning tools for mining.

Deswik.AdvSurvey
Advanced Survey
Fast, efficient point cloud handling.

Deswik.Agg
Coal Seam Aggregation
Simplifying complex aggregation processes to create fit for purpose Run-of-Mine reserves.

Deswik.ASD
Auto Stope Designer
Automatically create mineable stopes for narrow-vein vertical mining methods.

Deswik.DD
Dragline & Dozer Section Designer
Automated dragline section design tool with direct integration into Deswik's mine design, scheduling and data management tools.

Deswik.DO
Dig Optimizer
Design of optimum dig lines for open pit grade control.

Deswik.OPDB
Open Pit Drill & Blast
Fast, efficient drill and blast design for surface mining methods.

Deswik.SO
Stope Optimizer
Underground stope shape optimization using the latest version of industry leading SSO.

Deswik.UGDB
Underground Drill & Blast
Fast, efficient drill and blast design for underground mining methods.

Deswik.Sched
Gantt Chart Scheduling
A powerful Gantt chart scheduler specifically designed to handle the challenges of mine planning.

Deswik.OPS
Operations Planning and Control
Collaborative short-term planning and shift execution tool for monitoring and managing compliance to plan.

Deswik.Blend
Material Flow Modeling
Optimize your product value with material flow modeling for both coal and metals.

Deswik.SOT
Schedule Optimization Tool
Realize more value from your resource with an NPV optimized schedule.

Deswik.IS
Interactive Scheduler
Bridging the planning gap between designing and scheduling.

Deswik.LHS
Landform & Haulage
Understand material movement like never before with scenario-based modeling and analysis.

Deswik.OPSTS
Open Pit Short-Term Scheduling
Short-range ore control modeling and design tool.

Deswik.MDM
Mining Data Management
A spatial database and process workflow management tool.

Deswik.Mapping
Mapping app
Perform geological mapping on-the-go.

Deswik Advanced Modules
Advanced functionality tailored to the specialized demands of the specific mining sectors.

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