ENTERPRISE OPTIMIZATION

Whole of Business Technical and Mining Optimization

MineRP

MineRP

> *MineRP and IBM introduce the ability to generate fast, accurate and feasible Mine Designs and Optimised Master Business Schedules allowing mines to create optimal business plans that can be monitored and adjusted on the fly as market conditions change.*

Optimizing the Enterprise for Agile, Responsive Operations

What are your business objectives?

Do they relate to NPV, cash flow, production volumes, specific products, constrained resources or other such realities?

With MineRP and IBM's mining optimization solutions built on the MineRP mining technical integration platform, you are free to combine any and all your objectives and constraints for consideration in the optimization exercise of your choice

You have the multi-disciplinary planning personnel who understand your mining operations and projects. Give them the tools they need to analyze, simulate and optimize your business to finally exceed your objectives.

60^{sec}

The time it takes to create a completely unique extraction scenario

5 - 30%

The average improvement achieved for an Underground Mining Extraction Plan

Mines are subjected to vast levels of **Variability and Optionality** in each phase of the mining process…

Internal Business Demands

- Effective Planning
- Efficiency in Execution
- Accuracy and timeliness of Decision Making

External Business Demands

- Commodity Price and Demand
- Global Exchange Rates
- Availability of Capital

Multiple Automated Mine Design Scenarios

Delivering Optionality and Variability in Mine Design

MineRP's Template Aided Design solution will have you creating entire mine design scenarios for immediate evaluation and optimization in minutes rather than weeks.

A recent project at a major platinum producer demonstrated an 8 week current process to generate a feasible mine design reduced to minutes!

Leverage descriptive, spatial visualization to inspect, analyse and animate each scenario to verify feasibility – with the ability to share options over the web!

MineRP Template Aided Design

Multiple, feasible mine designs in minutes!

Fully template driven, with no CAD Solutions required to deliver your designs.

Optimised Enterprise Business Schedule

Delivering Optionality and Variability in Mine Scheduling

Baseline, Unconstrained and Constrained Scenario Building is achieved through introducing real-world constraints to the baseline schedule and allowing the MineRP / IBM optimization engine to develop candidate scenarios for evaluation and spatial verification.

Some business factors and constraints considered included:

- Shaft hoisting capacity
- Tramming capacity
- # Panels per raise line
- # Raise lines per half level
- Extraction %
- Reef Density
- Geo structure/grade models
- Densities & stoping widths
- Metal recovery profiles
- Commodity price forecasts
- Exchange rates & inflation forecasts

Optimization with IBM CPlex and iLog

Scenario Analysis in MineRP SpatialAnalyzer

Spatially compare and analyze competing scenarios in 3D over the web.
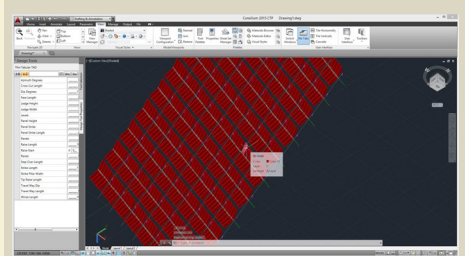
Spatial Scenario Analysis & Evaluation

Fully optimised extraction strategy per economic unit   (Level / Shaft / Pit / Operation / Portfolio...)

Detailed visibility of Available Ore Reserves with Crew / Equipment / Services allocated, and full recognition of internal and external business constraints
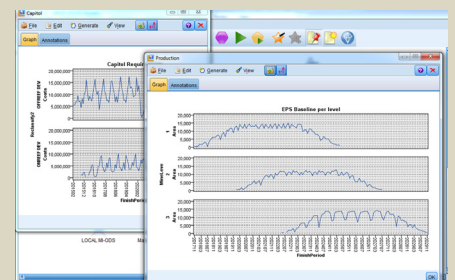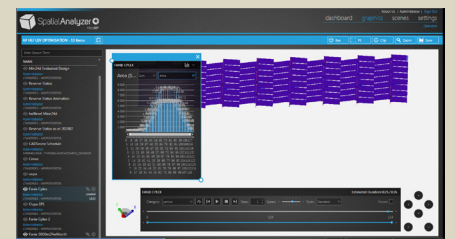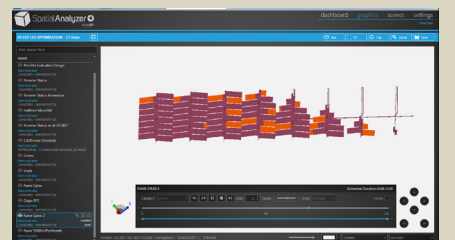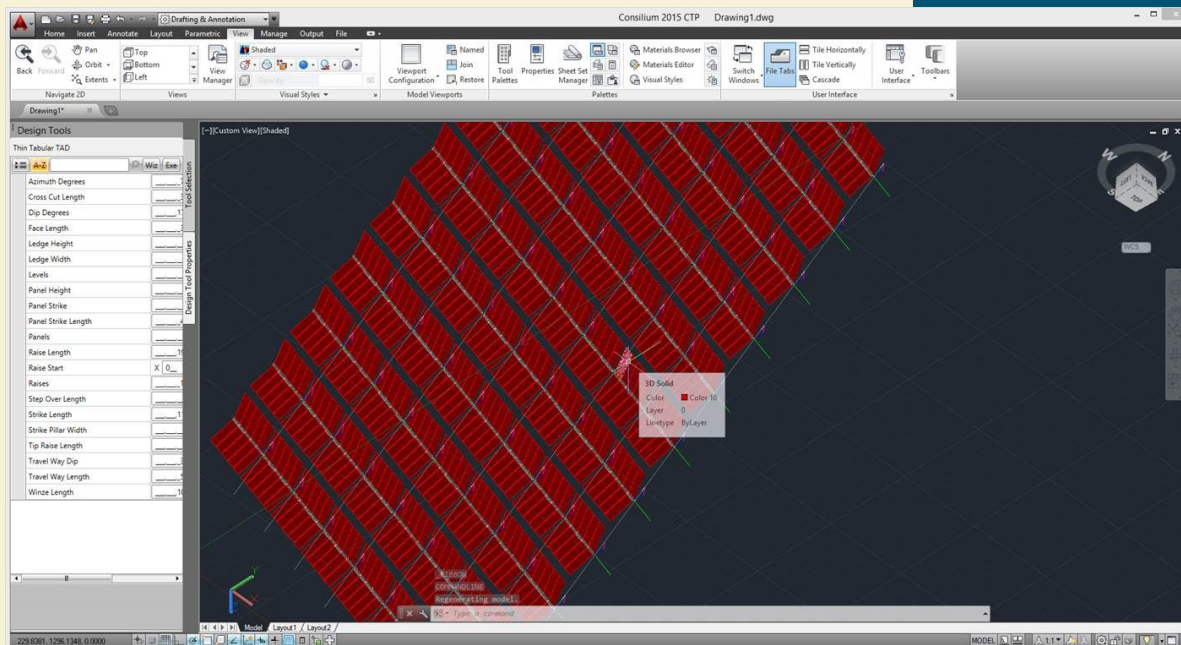
Accurate, yet flexible operational strategies that can be updated on-demand whenever real-world circumstances dictate.

Scenario Analysis in MineRP SpatialAnalyzer

Verify engineering feasibility of mathematical schedules in MineRP SpatialAnalyzer.

MineRP Planner TAD, a mine planner is able to:

- Rapidly generate a complete mine design, with sequence
- Create multiple scheduling scenarios just as fast,
- Confirm the feasibility of that plan through web-based visualization and animation software.
- Publish a complete chart of accounts detailing activity based costing and revenue forecasts at your desired level of granularity.

MineRP Planner is a new generation Mining Enterprise Planning System (MEPS) developed by the company who brought you industry leading mine planning systems such as Mine2-4D and CADSmine.

Its ability to create multiple design layouts automatically lends itself to true optimisation with integration to analytical tools, ultimately increasing the value of mining projects.

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