GEOVIA Stope Optimizer generates optimum stope designs for a range of underground mining methods and produces stope inventories from a block model that spatially represents the location of the mineralization. Surpac 2020 sees additional functionality added to Stope Optimizer with a focus on improving the users ability to run What-If Analysis.

**Key Features:**
- Allows users to quickly generate multiple Stope Optimization scenario files.
- Provides the ability to run several Stope Optimization scenario files at one time.
- Gives the user access to Surpac while the Stope Optimizer runs in the background.
- Improves the connection between Surpac and MineSched allowing the power of Surpac’s SDM Metadata information to be quickly utilized in MineSched reducing the time taken to get up and scheduling.

**STOPE SLICING**

The stop slicing capability of the stop design tools in Surpac 2020 brings improvements to slicing multiple solids, use of SDM 2.0 to have typed attributes and export of attributes such as density.

**Key Features:**
- Improvements to slicing multiple solids.
- Use of SDM 2.0 to have typed attributes.
- Improved export of attributes such as density.
- Improved native integration with MineSched when slicing mining shapes for rings. Attribute naming methodology aligned with MineSched requirements.

**POINT CLOUD**

With the new point cloud capabilities in Surpac 2020 you can work with only the point cloud data you need through the use of point cloud classifications. Quickly generate solids without unwanted noise such as equipment or vegetation through the use of lexicographic meshing.
GEOVIA Surpac’s offers native point cloud support reducing the number of solutions you need to use and maintain.

**Key Features:**

**New meshing algorithm and classification support**
- New Lexicographic meshing algorithm to simplify the generation of solids.
- Utilize Point Cloud classification within Surpac to ensure you are working only on the data you need.
- New Point Cloud menu to aid in user workflow.

**Lexicographic Meshing**
- The lexicographic sorting algorithm effectively chooses the best path for the triangulation and will ignore structural features such as people, vehicles and pipeworks that are commonly seen in underground laser scans.
- The user decides which features to include or exclude using a dynamic creation of spheres.
- Additionally the data density (and performance) can be controlled using a 3D deviation analysis option.

**Classification**
- The ability to hide unwanted points using classifications improves usability.
- Display sub-sets of point clouds using assigned classifications, e.g. remove vegetation from displayed data.
- Generate mesh’s using only the data you need, e.g. remove buildings, equipment.

**SDM FILES SUPPORT**

This release allows users to sort SDM files by metadata, reclassify and colour data based on different criteria, adding great flexibility.

**Key Features:**
- Classify SDM’s based on attributes, greater user control is enabled opening many additional workflows and supported operations.
- Connect grade attributes from the GEOVIA Stope Optimizer or Stope Slicer to downstream operations.
- Supports typed metadata making real and character data easy to manage.

**OTHER ENHANCEMENTS**

Additional enhancements or defect fixes that improve work performance include:
- Improvements to 3DPDF support.
- DGN plugin support.
- AutoCAD 2018 support.
- Extended Vulcan block models with nulls in numeric attributes now correctly displayed.
- ODBC performance fix for SQL.
- acQuire upgrade and connection issues resolved.
- New fonts supported for UI font editor.
- Save file was not retaining active file name.
- Create DTM with boundary has been fixed.

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