

## Surpac 2021 Refresh 2

### Enhancements

#### Geology

- **Support for exporting block model**

You can now export a block model having more than 999 parcels in a block from Surpac to Whittle model, when you use the BM OUTPUT WHITTLE function. For this, you can group sub cells of the same rock code and coordinates into one parcel to reduce the total number of parcels in a block. This action updates the **Min** and **Max** grade of a block as expected on the **Export to Whittle four-x** form.

- **Point cloud file mesher form updated with two new tabs**

While using the CLOUD FILE MESH function, you can now view two new tabs on the *Point cloud file mesher* form named **Classification** and **Cloud density reduction**. You can use the **Classification** tab to apply classification to point cloud data and the **Cloud density reduction** tab to reduce cloud density by applying density reduction methods like **Sub-sampling** and **Deviation**.

- **BM VOL TON REPORT (BMVTR) allows complex surfaces for Geometric Grouping Between DTMs**

BM VOL TON REPORT (BMVTR) function now supports complex surfaces to process for Geometric Grouping Between DTMs operation. Complex surfaces resembles two surfaces which are intersecting or of different sizes, overhang surfaces.

#### Tools

- **Support for SDM files**

You can now use import and export .sdm files when using the STRING MATHS function. You can save the output as an SDM file when you:

- specify the output file name with a .sdm extension
- select the **Set .sdm as default file extension** check box on the **Customize > Plugin Preferences > GEOVIA-SDM** tab in the *Plugin Defaults* form.

- **Display SDM objects using metadata filter**

You can now use the **DRAW SDM** function to filter and display segments or trisolations based on the values of the metadata stored against segments or trisolations (available in the *Display SDM using metadata* form). Based on the type of attributes, the **DRAW SDM** function compares amongst exact character string, an integer range, or a real range. Optionally, DRAW SDM can display attribute values.

- **Support for block model estimation commands in SDM files with string input**

Now, the following block model estimation commands are added to support SDM files with string input formats:

- BM FILL OK
- BM FILL SK
- BM FILL INVERSE DISTANCE
- BM ASSIGN FROM STRING

- **The Trisolation Statistics function has been enhanced to optionally select a trisolation graphically**

The Trisolation Statistics function has been enhanced to optionally select a trisolation graphically.

- **DRAW SDM function constraint extension upgraded**

**DRAW SDM** function now supports constraint file name with **.scon** extension.

- **Improve current functionality to apply cumulative constraints**

When you now use the **DRAW SDM** function for a file, you can view a new check box **Apply cumulative constraint** in the **Filter** tab of the *Display SDM using metadata* form. When you select the check box, Surpac applies previously and the currently defined constraints.

- **Improvement in applying filter while using Draw SDM functions**

When you use **DRAW SDM** function for a file, you can now use wildcard character (\*, [, !, -, and ?) in the **Value** column of the **Filter** tab in *Display SDM using metadata* form for text attributes.

- **New option Hide SDM metadata added under Display menu**

You can now view a new option **Hide SDM metadata** under **Display** menu which erases all the metadata displayed in graphics at the segment and trisolation level.

## Applications

- **Support for adding multiple files under one document in a single command**

When you now log in to 3DEXPERIENCE server using Surpac, you can upload multiple files in the Enovia Collaboration Space under an existing document or create a new document and add files.

- **New Revision Tree Panel in Surpac**

When you right-click on a file in the Enterprise collaboration tree, you can view a new option **All Revisions**. When you click on the option, the **Revision tree** in the left pane is populated with the previous versions and the files in the respective versions.

You can use the **View**, **Download**, and **Display** options accordingly for the files present in the active Enterprise Collaboration Bookmark Folder.

## Issues Fixed

### Tools

- **Option to switch between algorithms used for Boolean operation of surfaces added**

On the **Customize > Default preferences** tab, a new field **Use legacy algorithm** is available under **Boolean operation algorithm** option. "no" is the default value to enforce carve algorithm. Selecting "yes" enforces legacy algorithm.

- **Plotting window exited unexpectedly when plotting was done**

On the **Plotting > Autoplot** tab, when you now plot any **.str** file or **.dtm** file, Surpac no longer exits unexpectedly as the **Graphics display driver** in **Customize > Default preferences > Graphics > Hardware settings** has been changed to **DX11**.

- **Microstation DGN data displayed curve, line and width incorrectly**

When you now import and display microstation **.dgn** file format data in the graphics display, the curves, lines, and width display correctly.

- **Metadata format in table header same as Properties window**

When you now display an **.sdm** file in the graphics display, use **OBJECT REPORT** function, and generate the **.csv** file, the format of the table header is identical to the **Properties** window for any segment / trisolation selected in the graphical canvas.

- **Upgraded functions to support SDM files**

You can now use the **SECTION MULTIPLE DTMS** and **CLASSIFY DTM TRIANGLES** functions to import and export an **.sdm** file. If you do not specify an output data type, the output is generated as per the default extension defined in the *Plugin Defaults* form.

- **Split connected triangles into trisolations did not support SDM file format**

On **Solids > Edit trisolation** tab, **Split connected triangles into trisolation** option now supports the import and export of an **.sdm** file format when you select **Set .sdm as default file extension** check box in **Customize > Plugin preferences > GEOVIA SDM** tab.

### Configuration

- **Block model was not estimated correctly**

All block models are now estimated correctly while running the Sequential Gaussian Simulation at step 2d\_12d in the Geostatistics tutorial.

- **'Log a request' did not provide required support experience**

When you click **Help > Log a Request** option, you are now redirected to the 3DEXPERIENCE 3DSupport web page.

- **Dialogs now take focus on keyboard apply and default management has been improved.**

[1] Dialogs are now applied when Enter or F2 key is pressed while the focus is somewhere else.

[2] The defaults\_management clause has been implemented for various Guido Objects (GuidoCheckBox, GuidoComboBox, GuidoField, GuidoFileBrowserField, GuidoRadioButton and GuidoSlider).

- **EXTRACT CONTOUR (CONE) launch issue fixed**

EXTRACT CONTOUR (CONE) function is working fine now with both GEOVIA and DSLS licensing.

### Geology

- **Angle of max continuity now ranges between 0 and 360 when selecting manually in Variogram Modelling window**

On the Variogram Modelling window, when you click **Variogram map > Select direction of maximum continuity** and change the angle manually, the angle now appears in the range between 0 and 360.

- **Block models merging displayed a warning message**

When you now use **Block Model Merge** function to merge block models having different max extent values:

- a warning message is no longer displayed, and
- block models merge correctly

- **Displaying rotated datamine model caused Surpac to exit unexpectedly**

You now display rotated Datamine model correctly on the Graphics without causing Surpac to exit unexpectedly.

- **Saving block model as free block model displays inaccurate results**

When you now save a Surpac block model (.mdl) from **File > Save > Block model as as Surpac Free Block Model 2.0**, the blocks in the new model are displayed correctly on the Graphics when the saved model (.fbm) is displayed.

- **Addition of SURPAC RELINQUISH MEMORY and SHOW MEMORY PAGE INFO functions**

You can now use the following two new functions:

- **SURPAC RELINQUISH MEMORY:** The function removes as many pages as possible from the working set of surpac2.exe causing a portion of the memory to free for other applications to work smoothly. But using the function several times causes high Page Fault Frequency, thus reducing the performance as the OS spends most of the time addressing page faults (called thrashing) and less time running Surpac process.
- **SHOW MEMORY PAGE INFO:** The function reports information about Memory Page Faulting including parameters like **PageFault** (the number of page faults), **Pagefile** (the Commit Charge value in pages for this process. Commit Charge is the total amount of memory committed by the memory manager for a running process), and **WorkingSet** (the current working set size in pages).

A working set of a process is a set of memory pages (in the virtual address space of a process) that reside in the physical memory. The pages are available for an application to use without causing a page fault. The working set contains only pageable memory allocations. When a process references pageable memory that is not currently in its working set, a page fault occurs. The system page fault handler attempts to resolve the page fault and if it succeeds, the page is added to the working set.

### Applications

- **Surpac shows list of workspaces in collab space for all available tenants**

Surpac is able to list all available workspaces in collab space for selected tenant.