

Surpac 2021

Enhancements

Configuration

- **Restructuring of Surpac menus**

The following changes have been made to the Surpac **View** and **Database** menus, which you can use to manage **Sections** and **Viewing planes**:

- In the **Database** menu, the **Sections** menu has been renamed **Grade Calculation**. This new sub-menu contains two options: **Digitised segment grade** and **Digitised string grade**.
- In the **View** menu, the options in the **Viewing planes** sub-menu have been renamed:
 - SLICING PLANES is now the **Create graphical sections** option
 - VIEWING PLANES BACKWARD is now the **Previous section** option
 - VIEWING PLANES FORWARD is now the **Next section** option
 - REVERSE VIEW is now the **Reverse view direction** option
 - ZOOM SECTION is now the **Zoom plane** option
 - SAVE DH SECTIONS TO STRINGS is now the **Save sections to string files** option
 - LAST SECTION is now the **Restore last section** option
 - OFF SECTION DRILLHOLE STYLES is now the **Off section drillholes styles** option
 - DELETE CUTTING PLANES is now the **Remove viewing / cutting planes** option

Now, when sections are not loaded, the warning message **Please select a plane** is displayed in the **Message** window.

- **Lower values permitted in Max. frame distance field (View along a string form)**

You can now set values as low as 0.001 in the **Max. frame distance** field (on the *View > Data view options > View along a string > View along a string* form). Smaller values improve clarity of strings viewed in **Graphics**, by increasing the number of frames.

- **New DSLS-compatible SCL commands and sub-functions**

The following SCL commands and sub-functions are now compatible with DSLS:

- SCL commands:
 - **scIDSLsIdentifierId**: Returns the DSLS Identifier ID (Computer ID).
 - **scIlsRoleEnabled**: Checks if any roles are active with the license. It returns 1 if a role is enabled and 0 if the role is disabled.
- Sub-function of SclLicenseManager:
 - **getDsIlsIdentifierCode**: It returns the DSLS Identifier ID. The functionality is the same as command ScIDSLsIdentifierId.
 - **isRoleEnabled**: Checks if any roles are active with the license. This sub-function works same as command ScIlsRoleEnabled.

- **Warning messages for connecting to DSLS licensing remotely were not displayed**

When you use Surpac remotely and try to update the DSLS licensing, a warning message is now displayed in the **Message** window.

Geology

● Enhancements to Structural suite module

The following enhancements have been made to the **Structural suite** module:

- By default, the **Open file in Dips** checkbox is cleared on both the *Export selected data to Rocscience Dips* and *Export data inside a solid to Rocscience Dips* forms.
- The *Export to Dips* form does not appear unless 3 or more points have been digitized.
- You can now enter up to three decimal values in the **Description field values** column, on the *Edit description values* form.

● DTM information retained by MESH CONDITIONING REMOVE SMALL TRIANGLES function

If the output file is saved as a new layer, the MESH CONDITIONING REMOVE SMALL TRIANGLES function now retains **.dtm** file information:

- **.dtm** Description values
- **.dtm** Trisolation name
- **.dtm** Triobject name

● Use the Refresh button to apply color range changes

You can now apply changes to color range values by using the **Refresh** button, in the **Colour Transition** section on the BLOCK COLOURS form.

● Create a solid from block model metadata

You can now use the new BM CODE SOLIDS function to create a solid, using metadata from a block model opened in the **Graphics** window.

● Classifying large solids needed long processing times

Now, processing and output are faster when classifying large SDM files with the CLASSIFY SDM function.

● Modifying an SDM attribute function caused issues

The SDM ATTRIBUTES and SDM FILE ATTRIBUTES functions now support:

- TCL script recording.
- Real values validation, in the decimal value field.

Tools

● STRINGS OVER DTM function now validates SDM files prior to use

The STRINGS OVER DTM function now validates an **.sdm** file before you perform an operation. If the **.sdm** file does not contain any triangles, then a warning message is displayed in the **Message** box.

● Delete .sdm attribute metadata with a new SCL command

You can use the new **SciDeleteAttribute** function to delete the attribute metadata from any **.sdm** file.

● New SCL functions to set and get SDM file attribute information

You can use new SCL functions to set and get SDM file attribute value type and number of decimals:

- **SciAddAttributeValuesAndDetails** function: sets the attribute value type and the number of decimals
- **SciGetAttributeDetails** function: gets the attribute value type and the number of decimals

These new SCL commands will not work with prior versions of Surpac.

- **Setting an upper limit for the SDM classification output gave incorrect results**

Upper limit values are now correctly defined, and correct defined range is shown in the output, when you classify a **.sdm** file and enter the upper limit in the **To** column (in the **Output** section on the *Solids > Solids tools > Classify SDM > SDM* classification form).

- **Update SDM file user attributes with the new SDM ATTRIBUTES function**

You can use the new SDM ATTRIBUTES function to update SDM file user attributes, and to display the SDM in **Graphics**.

- **Choose and apply .ssi styles file from the OPEN FILE form**

You can now choose and apply a **.ssi** styles file from the *Open file* form. Access the *Open file* form from the OPEN FILE function or the **File > Open > String/DTM** command.

The styles file can be specified in the **Drawing styles file** textbox under the **Data loading options** segment.

- **Enhancements in the Properties form for Select tool**

The following enhancements have been made to the Select tool:

- On the *Properties* form, the format is now consistent for all value fields
- The label **Triobject** has been renamed as **Object** on the *Properties* form.

- **Save attribute information in the SDM**

You can now save linked block model attributes in an SDM file. When you select the **Save attributes to SDM** checkbox on the *Block model report* form, the SDM file is updated using attribute information you select from the table.

Engineering

- **Export metadata for solid volume reports in tabular format**

For all solid volume reports, you can now export metadata of trisolations to a table. The metadata is downloaded in a **.csv** file format.

Miscellaneous

- **Select dates to take DSLS licenses offline**

Use the new date-picker field to select and validate the dates to take DSLS licenses offline.

Surveying

- **Updated version of Geocentric Datum of Australia**

You can update Surpac's projection for Australia with Geocentric Datum of Australia 2020 (GDA2020). To apply GDA2020 in Surpac, use either the **File tools > Transformations > Lat/Long to traverse mercator** or **Traverse mercator to lat/long** function in the **TM Map** list.

Issues Fixed

Configuration

- **Tool-tips for GUIDO buttons were not displayed**

Now, on all Surpac forms, you can display GUIDO button tool tips by hovering your cursor over them.

- **Points and segments below a block model could not be selected**

Use the SEGMENT MOVE function to select or move the points and segments displayed below a block model.

- **Updated software in Surpac**

The following software has been updated:

- The VS2017 for the Surpac build compiler.
- Newer versions of Teigha, CATPolyhedralOper, GDAL, and Boost libraries are now integrated into Surpac.

- **No warning message when updating license without a server connection**

A warning message is now displayed in the **Message** window if you use the Update License (UL) command while the server connection is lost. The message prompts you to save your work before the license is revoked.

- **Selecting direction of maximum continuity on Variogram map displayed old direction footprints**

When you set a new angle of continuity direction for the variogram map, the variogram map now displays only the latest selected direction footprint (instead of all older footprints).

You can set the new angle of continuity for the variogram map on one of the following forms:

- *Enter direction of maximum continuity* form under **Select direction of maximum continuity** menu on the Variogram map window
- *Enter direction of maximum continuity* form under **Select direction of maximum continuity** menu on the Indicator Variogram map window.

- **Dassault Systèmes licensing form title incorrectly displayed when system local set to Russian**

Now, when the system locale is set to Russian, the **Dassault Systèmes licensing** form title displays correctly .

- **Loading invalid .lic or .licz license files caused Surpac to exit unexpectedly**

Surpac no longer exits when you load an invalid **.lic** or **.licz** file as a **tokens.ssi** file. Surpac runs a validation check, and notifies you if the file contents are not valid.

- **Network license could be acquired from another server when role taken offline**

DSLS has the following functionality improvements:

- Now, you cannot take a role offline and simultaneously use both the offline license and a network/nodelock license.
- If the offline role's server is unavailable, the **Return online** button is disabled until the server is online.
- When you take a license offline, you will not be able to take any other network licenses offline until the first offline license is returned.

- **Erasing a single triangle did not refresh the static model**

Updated objects now display correctly after you erase a single triangle, regardless of whether the static model has been set as the default setting.

- **Files containing Turkish characters did not open**

You can now open file names containing Turkish characters, if you are using Turkish locale.

- **File operations cause unexpected exit when Surpac installed on Windows 10 version 2004**

When installed on Windows 10 version 2004, Surpac no longer exits unexpectedly when you run basic file operations in the navigator window.

- **Editing database styles with the SQL ODBC connector displayed incorrect results**

When editing drillhole styles while using the SQL ODBC connector, drillhole styles now display correctly and are no longer corrupted.

- **Some field contents in various Surpac forms were displayed in bold format**

The content in all Surpac form fields are now displayed in the correct font.

- **Some titles in the Compositing Options form were displayed incorrectly**

When you use the COMPOSITING OPTIONS function, on the **Composite fields** and **Display options** tab, column names in both **Composite fields** and **Composite field display options** tables are now displayed correctly.

Tools

- **Using AUTO PLOT function more than once on .dtm files caused display issues**

Now, when you use the AUTO PLOT function to plot any .dtm file more than once, the plotting band is displayed correctly in **Graphics** and the DTM edges are not activated.

- **TCL scripts failed to fill Numeric range for a form for BM VOL TON REPORT function**

Now, when you use the BM VOL TON REPORT function, the TCL scripts successfully fill the Numeric range for Grouping attributes in *Define string groups* form.

- **OBJ files containing spaces were not loading**

You can now load an OBJ file that references to material files that contain spaces.

- **Style information for SDM files were not retained properly**

Now, when you use the STYLES STRING function for .sdm files, previously used string style values are retained.

- **Saving large SDM files as DTM files caused Surpac to exit immediately**

Surpac can now load and save large SDM files as a DTM file, which can contain lines longer than 1024 characters.

- **Files were saved in an incorrect format for SDM plugin preference**

Output files are now generated in correct format, when you use the SAVE SECTION TO STRING FILE and SAVE PLANE GROUP TO STRING FILES functions to set .sdm as your default file extension.

- **Using certain plotting folder and setting parameters with the PROCESS MAP function caused Surpac to exit unexpectedly**

Surpac no longer exits unexpectedly when you open the app with certain .ssi plotting folders, and then use the PROCESS MAP function to set parameters.

- **SciGetAttributeDetails displayed an informational message as an output**

Now, when you use the **SciGetAttributeDetails** command, an output list suitable for parsing is generated and an information message is no longer displayed.

- **SDM file formats were not supported for the SciSwaSaveDtmFile function**

Now, when you use the **SciSwaSaveDtmFile** function, you can use the SDM file format for the output.

- **The Move tool did not function properly**

When using the **Move tool** to pan through a segment, you can now select the plane indicator and the move tool operates properly along the selected plane.

Engineering

- **Expanding a segment by berm width changed the ramp width in Pit Design**

When you use the EXPAND SEGMENT BY BERM WIDTH function, you can now use the new **Keep ramp width constant** checkbox to maintain the ramp width as a constant while expanding a string or a segment by berm width.

- **Adding more than 10 rows on the SDM Classification form displayed an error message**

The *SDM classification* form now displays more than 10 rows, when you use the CLASSIFY SDM function to classify an SDM containing more than 10 rows of attributes.

Geology

- **Redundant points displayed after removing small triangles**

Now, when using the MESH CONDITIONING REMOVE SMALL TRIANGLES function to remove small triangles from a .dtm file, the redundant points are removed before output is displayed in **Graphics**.
- **Recalculating point cloud deviation displayed incorrect deviation mesh**

Deviation mesh is now correctly displayed in **Graphics**, when using the CLOUD DEVIATION function to recalculate point cloud deviation on the *Point Cloud Deviation Analysis* form.
- **Incorrect import report generated when importing data in new database**

Correct import reports are now generated when you import data into a new database, using the **Import Data** option in the **Database > Database > Open/New** form.
- **Triangulate shape tool's Triobject field only editable if New triobject checkbox cleared**

Now, when using the the **Tool properties** panel in the TRIANGULATE SHAPE TOOL, you can only edit the **Triobject** field if the **New triobject** checkbox is cleared.
- **Surpac no longer exits unexpectedly when you delete some block model attributes, then edit remaining attributes**

Surpac no longer exits unexpectedly if you delete some block model attributes, then try to edit the remaining attributes.
- **Cutoff values now refreshed in secondary map variogram charts**

Cutoff values are now refreshed and correctly displayed in secondary map variogram charts, after changing indicator cutoffs in the **IK Variogram modelling** window, on the *Indicator variogram map calculation* form.
- **IK Variogram Modelling window no longer exits when switching between variograms**

The **IK Variogram Modelling** window no longer exits unexpectedly when you switch between primary and secondary variogram maps.
- **Surpac no longer exits when opening large files**

Surpac no longer exits unexpectedly when you open large files.
- **Corrected Point cloud classification label**

The first **Classification name** has been renamed to **Never classified**, on the *Solid > Mesh tools > Point cloud classification > Classifications list* form.
- **Correct attribute color range now displayed**

When saving a style file with an attribute color range, using the BM GRAPHICS ATTRIBUTE COLOUR function, correct values are now displayed in the **Ranges for colour selection** field.
- **Using the TRIANGLE DELETE function now longer displays incorrect results**

Correct data is now displayed in the **Graphics** window when you use the TRIANGLE DELETE function, including when the static model option is selected.
- **Correct data in collar table now displayed when using ODBC to connect database**

When you connect to the Surpac database using ODBC, correct data is now displayed in all columns of the **Collar** table. The issues with the **float**, **date**, and **integer** types have now been resolved.
- **Warning message no longer displayed when saving multiple opened and modified SDMs**

Now, when you open multiple SDMs in a single layer, delete some points, and save them again, no warning message is displayed when the output file is saved.

- **Block Model attribute lists no longer empty on INIT STOPE and STOPE SLICER forms**

Now, for both INIT STOPE and the STOPE SLICER functions, attributes for linked block models are now correctly displayed in the **Attribute** list under the **Block Model** tab.
- **Error message no longer displayed when using SOLID SLICER function**

Now, no error message is displayed when opening the *Solid slicer* form.
- **Using the BM CODE SOLIDS function no longer results in faulty aggregate values**

Correct aggregate values are now generated and displayed when you select a value from the **ore/rock type attribute for classification** menu, on the *Code solid from block model* form, in the BM CODE SOLIDS function.
- **Correct styles information now displayed when saving a string file as DXF or DWG**

Correct styles information is now displayed for all string numbers in a string file, when saving as either a DXF or DWG file.
- **Object name not functional, though mandatory in Classify SDM**
 - Object name is not mandatory. Users can leave that blank.
 - The object name is functional now. The object's name saves inside sdm/dtm file.
- **Informing user if input geometry is invalid**

User would be informed if input SDM of DTM contains invalid geometry data.

Miscellaneous

- **Turn off automatic translation for all GUIDO form fields**

The `-no_mlt` switch now switches off automatic translation for all GUIDO form fields and controls.
- **Appended plots now displayed correctly**

Now, plots appended on the **Plotting window** are displayed correctly.
- **DSLS update license forms now use consistent themes**

The *Surpac Licensing Server* and *Dassault Systemes Licencing* forms are now themed consistently for all light and dark display modes.
- **Move tool now functions correctly when moving a digitized segment on the coordinate axis**

Now, when you hover over the coordinate axis of a digitized segment, the axis is highlighted in yellow, and you can drag the point to move the segment along the coordinate axis.
- **Upgrading to HOOPS version 2410 caused unstable Graphics performance**

The HOOPS library has been reverted to version 2210 for better performance and stability of operations in the **Graphics** window.