DATAMINE

STUDIO RM

Advanced Modelling & Evaluation: Studio RM, Advanced Estimation & Supervisor

STUDIO RM

Release Notes

Studio RM 2.1

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Contents

Overview 4

Further Information 4

Studio RM 2.1 Release Notes 5

Key Improvements 5

Implicit Modelling Improvements 5

Advanced Estimation Improvements 5

Drillhole Importer Improvements 6

Generate a 2D Grid 6

Legends Manager Overhaul 7

Plotting Enhancements 7

New and improved commands 8

All Improvements 9

Commands & Processes 9

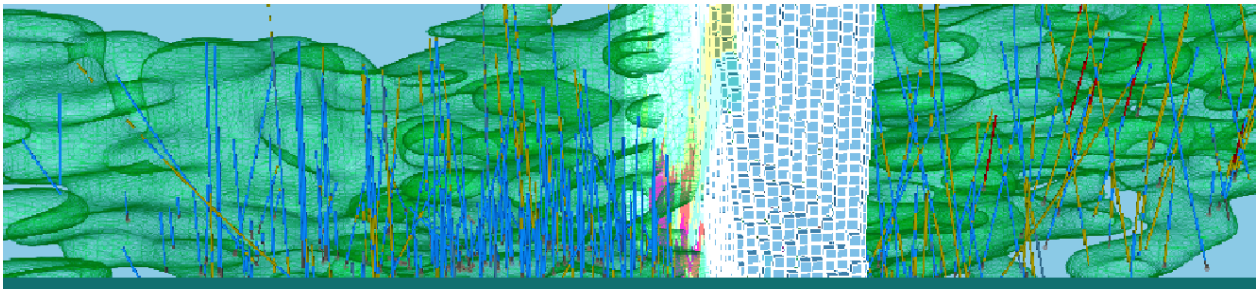
User Experience 12

Utilities & Supporting Services 12

Documentation and Product Support 12

Additional Defect Fixes 14

Overview



Studio RM is the world's leading integrated software package for the natural resource industries. Typical uses are in data capture and analysis, exploration, geology, geochemistry, rock mechanics and orebody modelling. It has been chosen for commodities as diverse as iron ore, gold, nickel, phosphates, diamonds, copper, bauxite, coal, lignite, platinum, petroleum, and industrial minerals.

Studio RM is one of several products in the Studio product family, which includes:

- **Studio EM** for exploration data analysis and modeling.
- **Studio Geo** for structural modeling.
- **Studio Mapper** for geological face mapping and reporting.
- **Studio NPVS** for strategic open pit optimization, design and scheduling.
- **Studio OP** for open pit design and operational scheduling.
- **Studio RM** for mine geology, reserve modeling and resource estimation.
- **Studio Survey** for open pit and underground mine surveying and reporting.
- **Studio UG** for underground mine design and scheduling.

Further Information

Release notes for other versions of Studio RM are available via the Datamine Customer Support website. For more details, see https://www.dataminesoftware.com/support/.

For the complete Studio RM documentation, see https://docs.dataminesoftware.com/StudioRM.

Studio RM 2.1 Release Notes

Key Improvements

Implicit Modelling Improvements

- Creating contact surfaces with large data is now *much* quicker (up to 200x).
- Choose from either per-value or global settings when performing a batch vein modelling run.
- You can now select either points or string data to generate additional points for the **Vein** or **Contact surface** modelling task.
- You can now retain existing visual formatting when updating previous implicit modelling output.
- You can now update existing implicit models via the **Categorical** and **Grade Shells** tasks.
- **Contact surface** values now show their corresponding legend colour in the chronology lists.
- The **Vein** and **Categorical** modelling commands also display an associated legend colour alongside potential values when setting the data context.
- In implicit modelling, the number of points that are beyond the specified **maximum snapping distance** (and thus are not used to snap the resulting surface) is reported in the output window following surface computation.
- It is now possible to generate a vein or categorical surface using only additional points.

Advanced Estimation Improvements

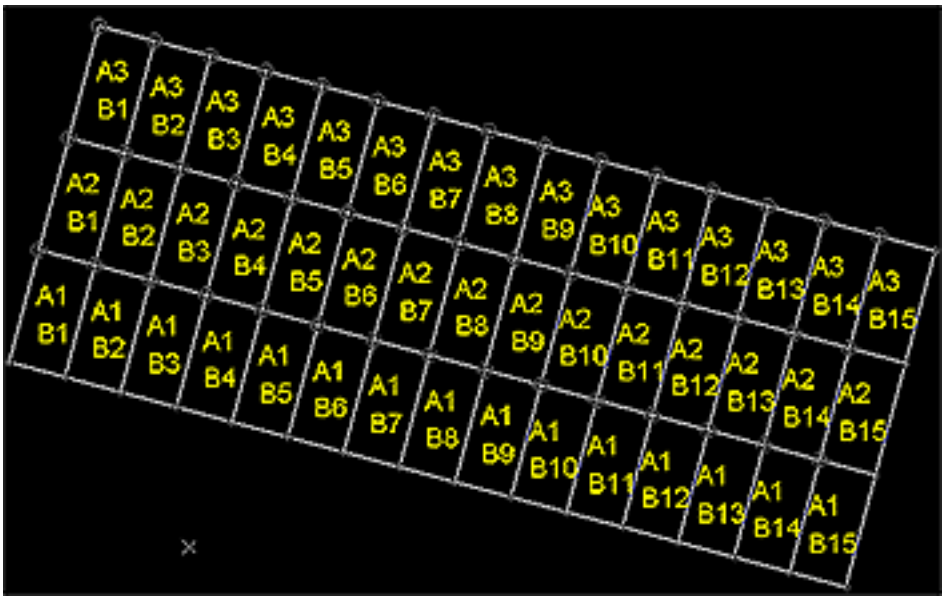
- **ANISOANG** now uses the modelled variogram to ensure that the rotation convention of the DA angles in the block model are consistent with all angles in the variogram/search.
- When defining search volumes for advanced estimation, you can now perform **axis-specific capping**, setting per-axis distances rather than a single, global value.

- Transformed minimum distance (**TMINDIST**) and transformed average distance (**TAVEDIST**) are now calculated by **COKRIG**, and output to the fields table.
- You can now select if an estimation contributes to a **SAMPOUT** file or not.
- 3rd angle values (derived from the search volume or variogram) can now be written back to the block model when only 2 angles are used in Dynamic Anisotropy.

Drillhole Importer Improvements

- You can now quickly enable or disable data columns of imported drillhole component files.

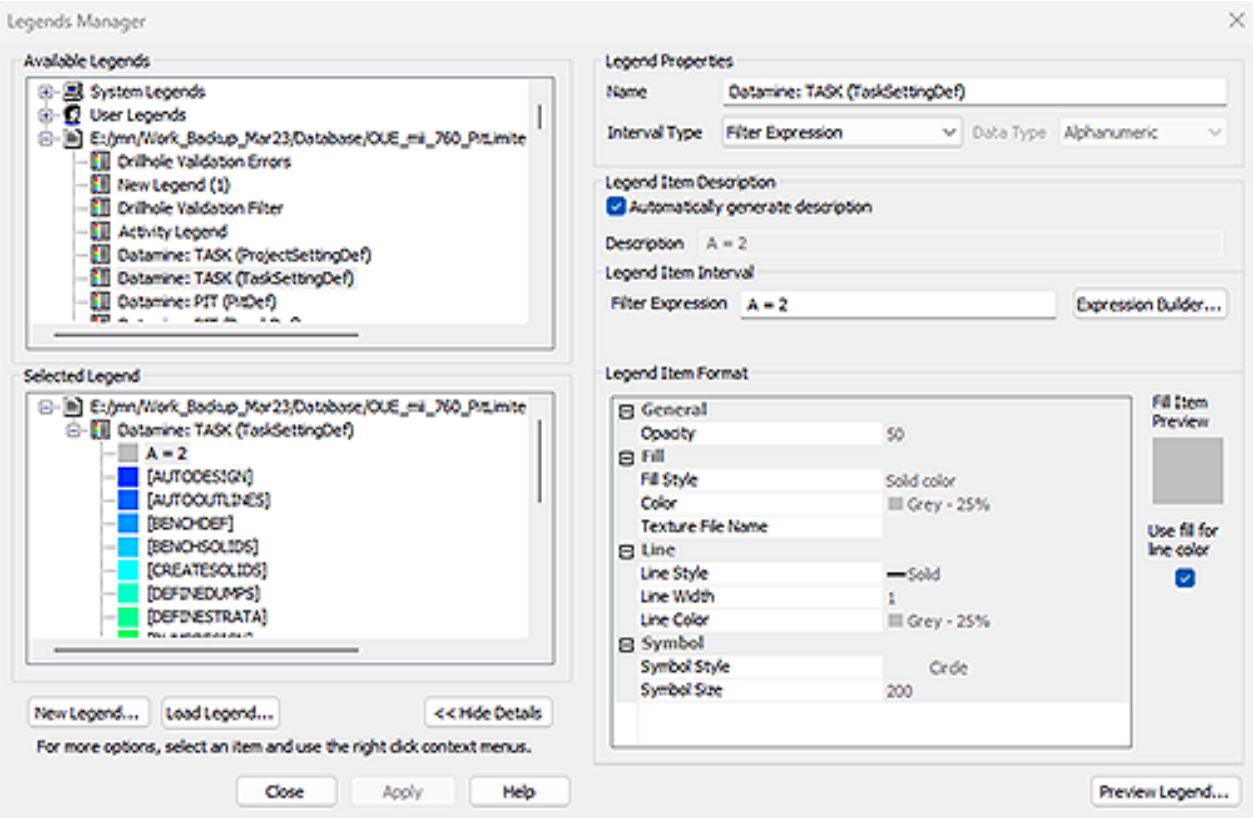
Generate a 2D Grid



Use **create-grid-perimeter** to generate a 2D grid anywhere in 3D space, with optional grid reference attribution.

Define any origin and azimuth, and design a grid on a 2D plane of any orientation. Each grid cell can be attributed automatically to quickly set up grid reference attributes.

Legends Manager Overhaul



The **Legends Manager** has been overhauled to make it easier to use; Legends and intervals are now in separate lists. This also allows larger legends to be created.

Plotting Enhancements

- You can now use **Quick Filter** and Format ribbon filtering options whilst using the **Plots** window.
- Use the "za" quick key combination to automatically zoom the contents of a target projection to fit the available space.
- Navigate active projections or plot sheets by zooming in or out using the mouse wheel, similar to the 3D window behaviour.
- Use the "zx" quick key combination in a Plots projection to activate zoom-by-area mode.
- Deselect any active projection using <CTRL> and a left click.

New and improved commands

- A new command - **add-zintersect-to-string** - lets you inject string points at a specified elevation.
- A new command - **clip-strings-to-perimeters** - lets you clip any string data with one or more selected perimeters.
- **extend-string-to-string** can now be used to extend any string segment.
- **extend-segment-virtual-intersect**: Extend a string segment to virtually intersect a second segment of another selected string (new command).
- **fillet-single-string-point** can now be performed on strings not in the XY plane.
- **filter-point-off**: Prevent the display of point data without removing it from memory.
- **hide-non-selected-points**: Disable the display of all non-selected point data.
- Several string **linking** commands now honour the 'Maximum Segment Length' value (if greater than 0) to limit the segment length of wireframes triangles.
- **Macro path lengths** can now be up to 256 characters (the previous limit was 72 characters).
- **move-string-to-view** projects string data without retaining the original data.
- You can now **restore** previously used **retrieval criteria**.
- **switch-wireframe-edge**: interactively swap the arrangement of internal edges in a two-triangle pair.
- The maximum number of unique values for the ZONE field in **TRIVAL** has increased from 40 to 2000. The amount of text being written to the command text output window has been significantly reduced and a better progress indicator added to the status bar.
- **write-selected-points**: Save selected points to an external file.

All Improvements

Commands & Processes

- **Case: STUDIO-6973** 3rd angle values (derived from the search volume or variogram) can now be written back to the block model when only 2 angles are used in Dynamic Anisotropy.
- **Case: STUDIO-6843** Creating contact surfaces with large data is now much quicker (up to 200x).
- **Case: STUDIO-6825** The **attributes-from-perimeters** command can be accessed from the Data and Digitize ribbons.
- **Case: STUDIO-6817** When processing **COKRIG** or **ESTIMA**, warnings have been added when the dynamic anisotropy (in variogram or in search parameter file) is only partially defined.
- **Case: STUDIO-6798** Studio RM's Advanced Estimation module can now recieve data from Supervisor v9.
- **Case: STUDIO-6763** In implicit modelling, the number of points that are beyond the specified **maximum snapping distance** (and thus are not used to snap the resulting surface) is reported in the output window following surface computation.
- **Case: STUDIO-6706** It is now possible to generate a categorical surface using only additional points.
- **Case: STUDIO-6687** It is now possible to generate a vein surface using only additional points.
- **Case: STUDIO-6678** You can now update existing implicit models via the Categorical and Grade Shells tasks.
- **Case: STUDIO-6623** You can now select either points or string data to generate additional points for the vein or contact surface modelling task.
- **Case: STUDIO-6572** A batch vein modelling run now creates all expected outputs.
- **Case: STUDIO-6532** The **Vein** and **Categorical** modelling commands also display an associated legend colour alongside potential values when setting the data context.
- **Case: STUDIO-6452** When defining search volumes for advanced estimation, you can now perform **axis-specific capping**, setting per-axis distances rather than a single, global value.

- **Case: STUDIO-6352** Clear all custom estimation zones at once using a new **Clear list** option.
- **Case: STUDIO-5965 ANISOANG** now uses the modelled variogram to ensure that the rotation convention of the DA angles in the block model are consistent with all angles in the variogram/search.
- **Case: STUDIO-5754** You can now select if an estimation contributes to a **SAMPOUT** file or not.
- **Case: STUDIO-5342** Choose from either per-value or global settings when performing a batch vein modelling run.
- **Case: CORE-8153** The User License Logging template spreadsheet has been updated to meeting Windows 11 requirements.
- **Case: CORE-8060 write-selected-points** has been added to the 3D window context menu (Save >> Selected Points).
- **Case: CORE-8051** Datamine License Services is now supported in networks utilizing the TLS (Transport Layer Security) protocol versions 1.2 and 1.3.
- **Case: CORE-7917** A new **SELWF** parameter - FIXNORM - can be used to detect and rectify common wireframe problems before processing.
- **Case: CORE-7855** The performance of commands that involve moving points has been improved when a lot of visual data is loaded and displayed in a 3D window.
- **Case: CORE-7804** The command **link-multiple-strings** ("lms") now uses the 'Maximum Segment Length' value (if greater than 0) to limit the segment length of wireframes triangles.
- **Case: CORE-7803** The command **link-selected-strings-attrib** ("lma") now uses the 'Maximum Segment Length' value (if greater than 0) to limit the segment length of wireframes triangles.
- **Case: CORE-7802** The command **link-selected-strings-plane** ("lmpl") now uses the 'Maximum Segment Length' value (if greater than 0) to limit the segment length of wireframes triangles.
- **Case: CORE-7800**The command **end-link-boundary** (elb) now uses the 'Maximum Segment Length' value (if greater than 0) to limit the segment length of wireframes triangles.
- **Case:CORE-7799** The command **end-link** (eli) now uses the 'Maximum Segment Length' value (if greater than 0) to limit the segment length of wireframes triangles.
- **Case:CORE-7792** Link-strings now honours the **Maximum Segment Length** wireframe linking setting.
- **Case: CORE-7780** You can now pan plot views using the cursor as expected.

- **Case: CORE-7778** A new command - **write-selected-points** - lets you save selected points to an external file.
- **Case: CORE-7670 Macro path lengths** can now be up to 256 characters (the previous limit was 72 characters).
- **Case: CORE-7644** Use the "za" quick key combination to automatically zoom the contents of a target projection to fit the available space.
- **Case: CORE-7643** Use the "zx" quick key combination in a Plots projection to activate zoom-by-area mode.
- **Case: CORE-7641** You can now use **Quick Filter** and Format ribbon filtering options whilst using the **Plots** window.
- **Case: CORE-7592** Deselect any active projection using <CTRL> and a left click.
- **Case: CORE-7398 move-string-to-view** projects string data without retaining the original data.
- **Case: CORE-7397 extend-string-to-string** can now be used to extend any string segment.
- **Case: CORE-7396 extend-segment-virtual-intersect**: Extend a string segment to virtually intersect a second segment of another selected string.
- **Case: CORE-7395** A new command - **add-zintersect-to-string** - lets you inject string points at a specified elevation.
- **Case: CORE-7361** An issue causing incorrect icons to be displayed for Data options in the Loaded Data/Sheets context menu has been resolved.
- **Case: CORE-7310** The **Legends Manager** has been overhauled to make it easier to use
- **Case: CORE-7152** A new command - **clip-strings-to-perimeters** - lets you clip any string data with one or more selected perimeters.
- **Case: CORE-6934** You can now **restore** previously used **retrieval criteria**.
- **Case: CORE-6705** When clipping perimeters to other perimeters, interacting with the Quick Filter bar now persists the previous selection.
- **Case: CORE-6388** Use **create-grid-perimeter** to generate a 2D grid anywhere in 3D space, with optional grid reference attribution.
- **Case: CORE-5284 filter-point-off** and **show-non-selected-points** commands have been created.
- **Case: CORE-4438fillet-single-string-point** can now be performed on strings not in the XY plane.

- **Case: CORE-3974** Define an upper limit for **triangle edge length** during string linking via the Project Settings screen. This can also be set using the reinstated dtm-new-point-separation command.
- **Case: CORE-3957** A new command - **switch-wireframe-edge**, lets you quickly adjust the internal organization of wireframe triangles in a quadrilateral.

User Experience

- **Case: STUDIO-6930** You can now access the **dtm-new-point-separation** command on the Explicit ribbon.
- **Case: STUDIO-6696** Your Start page will update immediately to reflect the colours of the current Look and Feel mode.
- **Case: STUDIO-6679**Vein from Samples task computation buttons have been relabeled for consistency.
- **Case: CORE-7702** An issue causing the degrees symbol to be displayed incorrectly in various parts of the application has been resolved.
- **Case: CORE-7658** The **Find Command** dialog now reacts to visual theme changes.
- **Case: CORE-7574**The **Wireframe Decimate** screen now displays the latest visual themes.
- **Case: CORE-7568** The **Wireframe Verify** screen now displays the latest visual themes.
- **Case: CORE-7534** The **Wireframe Smooth** dialog is now supported by extended visual themes.

Utilities & Supporting Services

- **Case: CORE-7662** Swapping from online to offline mode (or vice versa) now automatically reloads the current Start page content.

Documentation and Product Support

- **Case: STUDIO-6963** Documentation on Grade Shells command automation has been updated.
- **Case: STUDIO-6941** Documentation for COKRIG has been updated to reference the SAMPOUT field in the EPAR file.

- **Case: STUDIO-6890** The COKRIG help file's references to VAR and VARZSTR have been updated for clarity.
- **Case: CORE-7840** Documentation on macro limits has been updated.

Additional Defect Fixes

- **Case: STUDIO-7853** The Drillhole Importer's validation table is no longer editable.
- **Case: STUDIO-7851** Drillhole Importer now correctly updates Duplicate AT errors during revalidation.
- **Case: STUDIO-7853** You can now model scissor faults as expected when a prototype model is used as a boundary object.
- **Case: STUDIO-6960**An issue causing unexpected ellipsoid inversion in COKRIG has been resolved.
- **Case: STUDIO-6894** The Studio RM Start Page no longer references unavailable functionality in offline mode.
- **Case: STUDIO-6766** The ESTIMA help file now states the correct ANISO fields for IPD and NN estimation methods.
- **Case: STUDIO-6750** Incorrect information has been removed from the COKRIG help file relating to SDYNAISO=0.
- **Case: STUDIO-6750** During advanced estimation, merged estimation runs now retain their ID in the SAMPOUT file.
- **Case: STUDIO-6722** When investigating anisotropy via the 3D variogram window, orientating anisotropy in the Horizontal, Angle 1 no longer incorrectly flips to -180 when in the fourth quadrant.
- **Case: STUDIO-6722** Your help file now correctly states that IPD method parameters can be imported from ESTIMA into COKRIG.
- **Case: STUDIO-6714** The COKRIG help file now correctly states that VREFNUM is not required in the estimation parameter file if using the IPD method.
- **Case: STUDIO-6693** An issue causing Nearest Neighbour estimates for two grade fields to differ between ESTIMA and COKRIG has been resolved.
- **Case: STUDIO-6538** The list of custom zones in Advanced Estimation no longer inverts unexpectedly after updating.
- **Case: STUDIO-6406** You can now remove erroneous zones when defining an advanced estimations.
- **Case: STUDIO-6237** Data generated by the categorical and grade shell commands now appears correctly in the Data Object Manager.
- **Case: STUDIO-5842** COKRIG now responds correctly if consecutive SVOLFACi values are identical.
- **Case: GEO-234** Drillhole Importer has new 'quick fix' options to handle misaligned collar EOH and interval length values.

- **Case: GEO-232** In Drillhole Importer, overlapping samples are no longer incorrectly reported as 'small' if they are not trivial overlaps.
- **Case: CORE-7998** An issue causing system shutdown when creating a legend for a recently modified drillhole has been resolved.
- **Case: CORE-7839 SWATHPLT** now processes data where a ZONEFLD contains more than 40 records.
- **Case: CORE-7788** An issue causing potential system instability when sorting by Date Modified in the Project Browser has been resolved.
- **Case: CORE-7723** You can now update the License Services product name registration database more than once.
- **Case: CORE-7722** In some circumstances in models with a large number of fields including alphanumeric fields, **PROMOD** volume calculations were incorrect. This is now resolved.
- **Case: CORE-7618** Selecting and deselecting individual drillholes or segments is now significantly faster.
- **Case: CORE-7530** An issue causing an unexpected system restart after a product installation has been resolved.
- **Case: CORE-7435** DXF wireframes can now be saved via script as expected.
- **Case: CORE-7310** The **Legends Manager** has been overhauled to make it easier to use
- **Case: CORE-6872** When using **SELPER**, If the perimeter file contains DPLUS and DMINUS fields and the values are zero a small tolerance is applied internally to avoid numerical comparison errors. This is now consistent with the methodology used for the DPLUS and DMINUS parameter values when either of them is zero.
- **Case: CORE-6862** Contact snapping now creates expected results for contacts with constrained ends.
- **Case: CORE-6787** An error in **SWATHPLT** when **ALLZONES** was set to 1 has been resolved.

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