

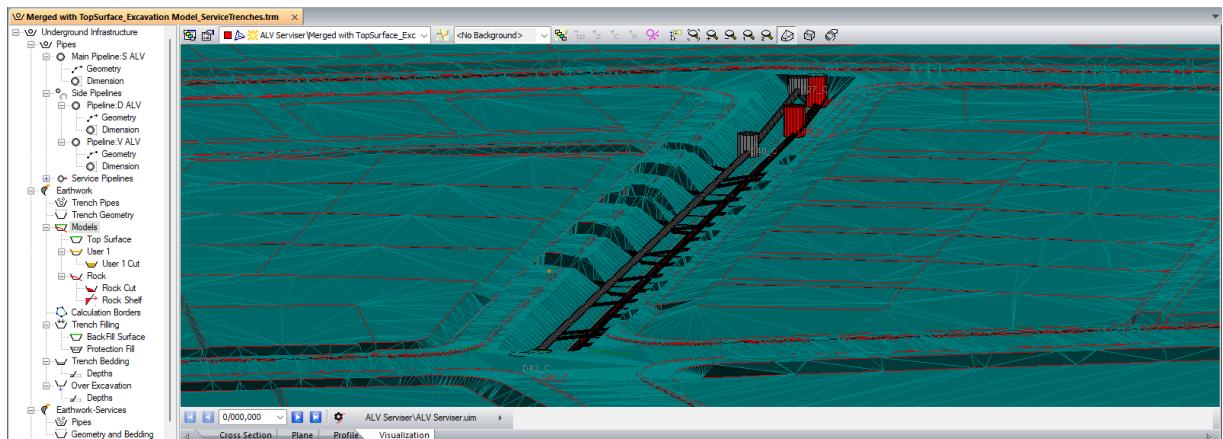
# Leica Geosystems Release Notes

**Product:** iCON office  
**Date:** 2<sup>nd</sup> of July 2024  
**From:** Torgny Israelsson



## Release of iCON office version 2024.2.1

We are pleased to announce the release of iCON office, **version 2024.2.1**. The workflow when working with underground facilities is improved, both in the data preparation phase and when creating output like excavation models, cross sections, or volume reports. The new graphic tools for data preparation can of course be used in many different workflows. Please read the release notes for details.



3D visualization of TIN models is further improved with support for both solid color and wireframe at the same time, to get a better 3D experience. The document property dialog for terrain models is updated and 2D and 3D are using the same dialog. New option to save defined colors for TIN models to file.

All users with a valid maintenance will be able to install and run this new version and migrate to Leica EID licensing.

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# 1 New Functions and Improvements

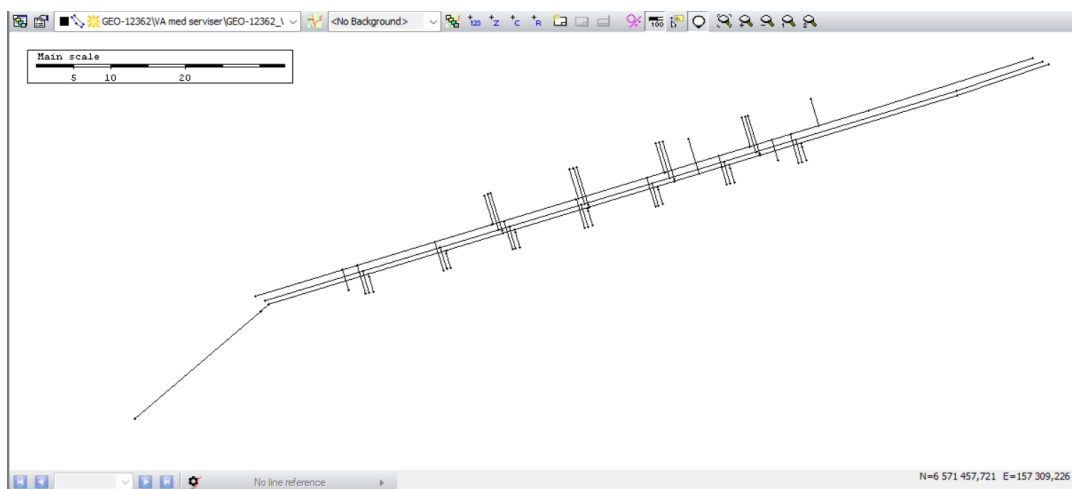
## 1.1 Trench (UIM)

### 1.1.1 Service Trenches

Improved workflow when there is a main trench with underground utilities and multiple service trenches connecting to different properties.

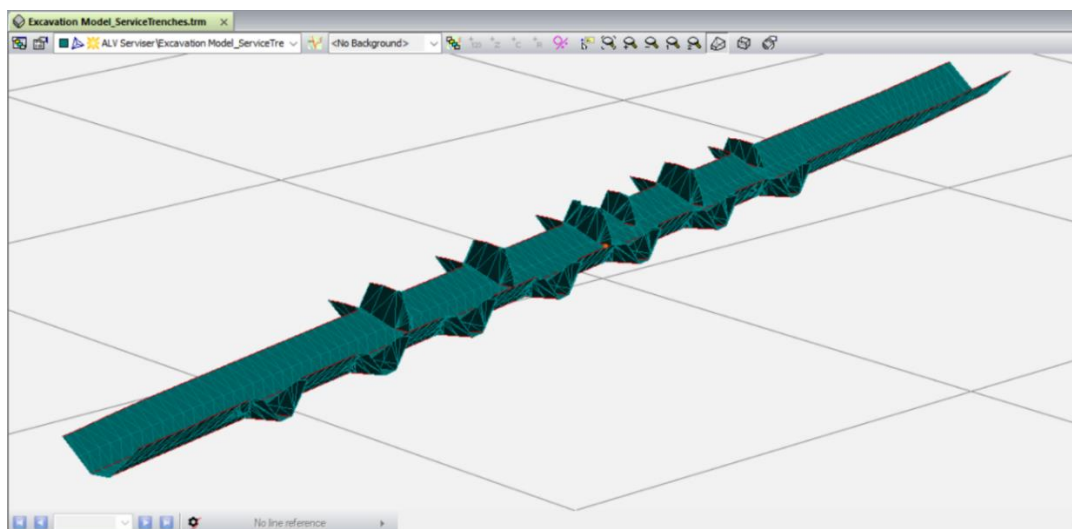
- Add Service Pipes – A new option in the Data menu for trench models (UIM).
  - Imported service pipes are listed at the new tree node called Service Pipelines.
- Earthwork-Services – A new node where the settings for service trenches can be found and added.

Input data for service pipes is a coordinate file with 3D lines for the different pipe profiles. It's worth doing some data preparation using attributes to save time when importing all service pipes to the trench model.



Pipe profiles.

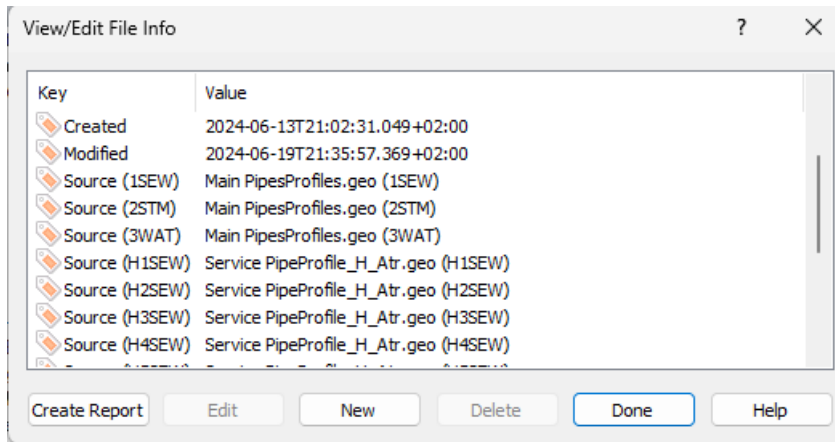
- Output from a trench model with service trenches:
  - Excavation model – Merged model with all service trenches and the main trench.
  - Separate volume reports for all service trenches.
  - Separate cross section files for all service trenches.



Merged excavation model – main and service trenches.

### 1.1.2 Improved Traceability

Improved traceability - Information about used source files for the pipes imported to the trench model is available in File > View/Edit File Info.



### 1.1.3 Improved Excavation Model

Data > Create Excavation Model - In the workflow pane for excavation models there is a new option called, Include Models.

- If the option is selected the active models e.g., top surface and rock, and the defined calculation intervals, in the trench model, are used when the excavation model is created. A more detailed but heavier TIN model is created.
- If not selected, the active models are not used, instead the user defined trench depth values are defining at which level the trench walls should stop. A very light weight theoretic TIN model is created.




### 1.1.4 Flexible Rock Shelf

Settings for rock shelf, when the trench is cutting through a rock layer, used to be global for the whole trench model but now the user can define the shelf different at different stations along the trench.

- It possible to specify the stations where rock shelf should be used.
- Difference widths can be defined.

## 1.2 Data Preparation

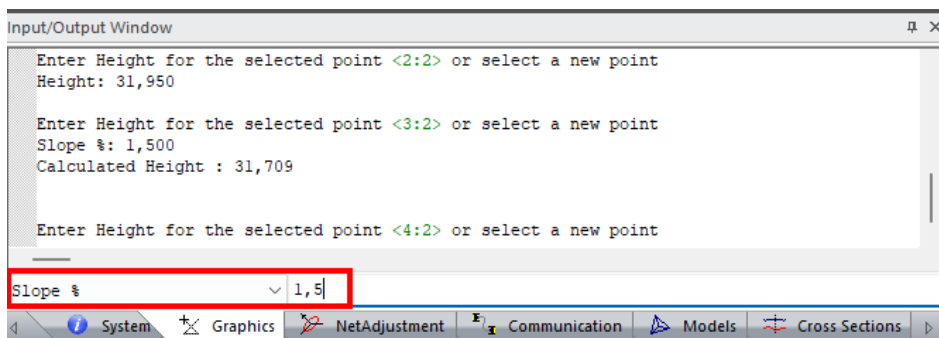
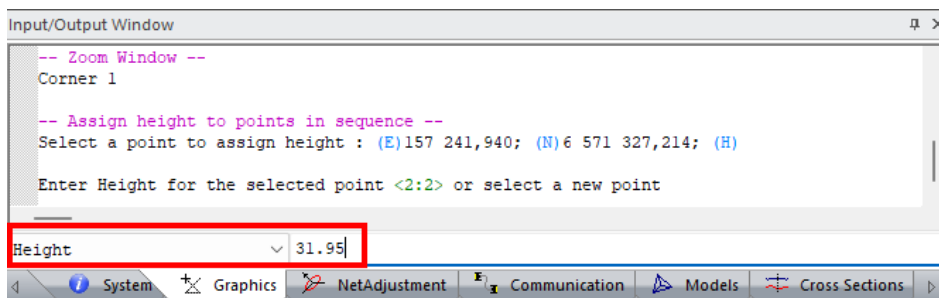
To speed up the process to add height and attributes to point and lines, there are two new tools and one improved graphic tool to make use of.

-  Add Height in Sequence
  - A new graphic tool to add height to points and lines by selecting one of the two options, Height or Slope %, in the drop-down list.
-  Pick Height from Text
  - Like a snap tool, it can grab a text height value from a DWG and add the height a coordinate file.
-  Set Point/Line Information
  - Two attributes selected from the active attribute list can be set to points and lines.

### 1.2.1 Add Height in Sequence

Use this tool to add height to multiple points in a coordinate file. If the height should be fetched from Text or MText in a DWG, the tool could be used in combination with the snap tool, Pick Height from Text.

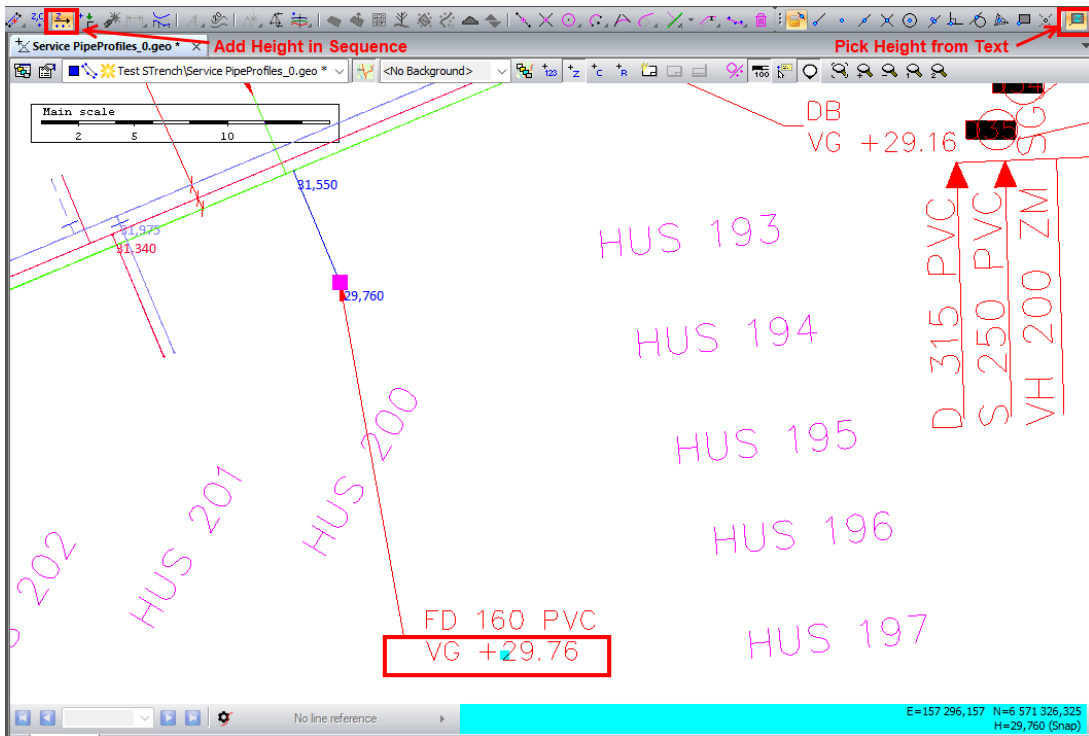
1. Select the tool and information in the Input/output window says what to do next.
2. Select a point to assign height to.
3. Add height to the selected point by selecting one of the options Height, or Slope %, in the drop-down list.
  - a. Height - Type in a height value and confirm with [Enter].
  - b. Slope % - Add a percent value and confirm with [Enter], this option only works if the point before has a height value. The slope percent is used to calculate the height of the selected point.
4. The next point in the line or next single point in the file, without height, is automatically selected and a height value can be added.



### 1.2.2 Pick Height from Text

This tool works similar as a snap tool, but it can pick a height value from Text or MText in a CAD file. It can be used in combination with Draw Point, Draw Line or Add Height in Sequence.

1. Select, Pick Height from Text, and it make sense to activate multiple snap as well.
2. Select a tool e.g. Add Height in Sequence
3. Select a point.
4. Pick/snap to a height from a Text or MText in a CAD file, confirm with a mouse click and the height is directly added to the point.
5. The Add Height in Sequence tool automatically finds the next point in the line without height and another height can be picked from a Text/MText.

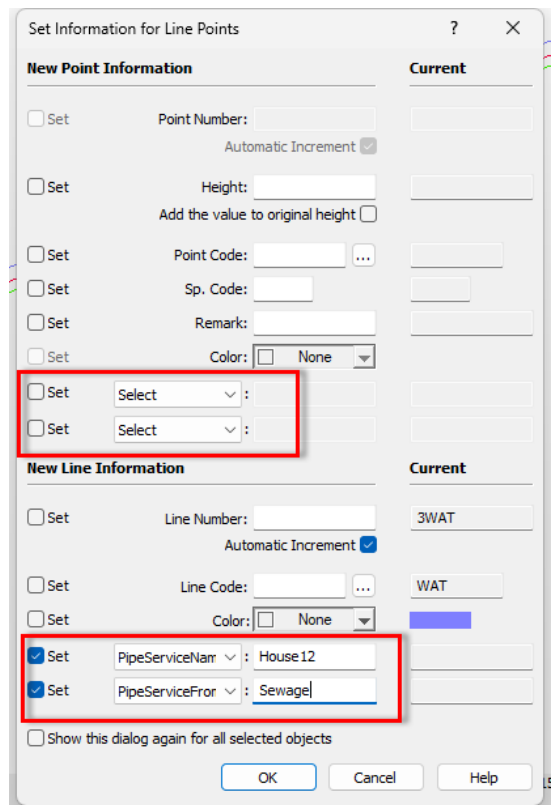


Pick Height from Text is fetching the height value 29.76 from the DWG and adding it to the selected point in the blue line.

### 1.2.3 Set Point/Line Information

Multiple points/lines can be edited in a sequence. If you have an active attribute list, it's possible to select attributes to add to points or lines in a coordinate file by using this tool.

1. Select the tool, Set Point/Line Info.
2. Select a line representing a pipe.
3. If an attribute file is defined (Edit> Preferences> Attributes) two attributes can be added to a line.
  - a. "PipeServiceName" - Name of a service trench. If used, a service trench with this name is created during import and the service pipe is added to that trench.
  - b. "PipeServiceFrom" - From which pipe in the main trench, the service pipe is connected to. If used, it's possible to insert e.g. all water pipes to all service trenches with their specific settings at once.
4. **[OK]** and click on the lines that should be updated with the new information.



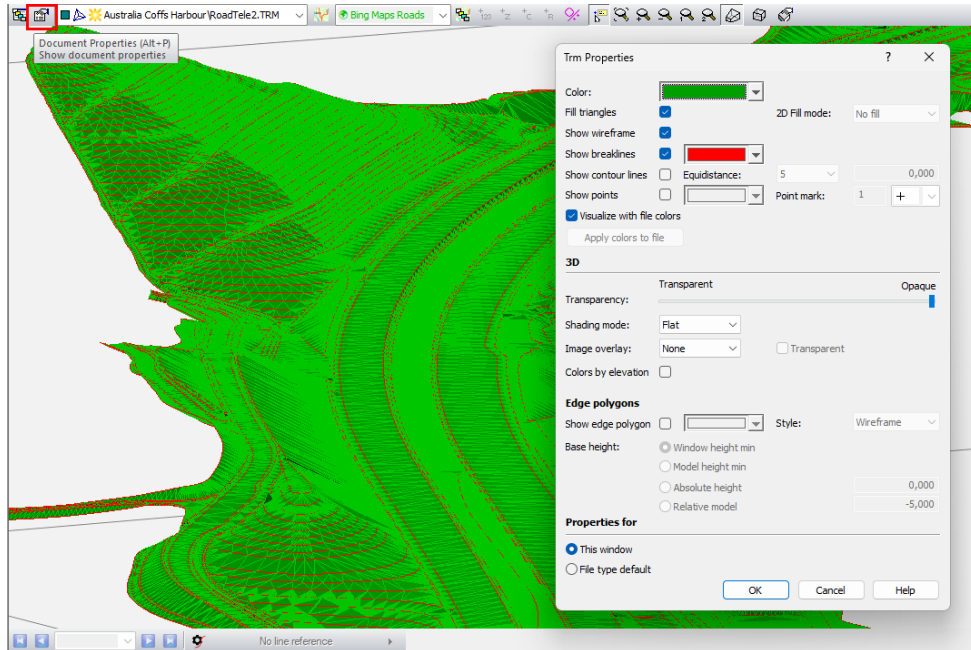
Select the tool again or use Alt+C to open the dialog again and change input.

## 1.3 Terrain Models

### 1.3.1 Improved 3D Visualization and Updated Property Dialog

The 3D visualization of terrain models is improved.

- Support for both solid color and wireframe at the same time, which will improve the 3D experience.
- Contour lines can now be visualized in 3D window.
- Support for point visualization in 3D window.



- Updated property dialog – 2D and 3D settings are merged to the same dialog.

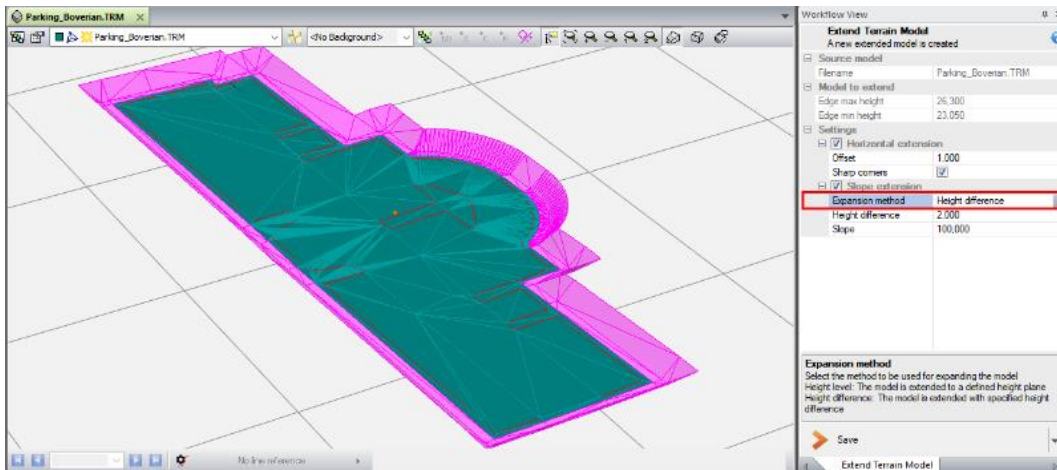
### 1.3.2 Save Colors to File

Color support for terrain models - The selected colors can be saved to file, so the same set of colors are used next time the model opens in graphics.

### 1.3.3 Extend Model with a Slope and Height Difference

A new alternative, Height difference, to extend a terrain model is added to Data > Extend Model.

- Required input is:
  - Height difference
  - Slope
- The model is extended with the define slope until the height difference is achieved.

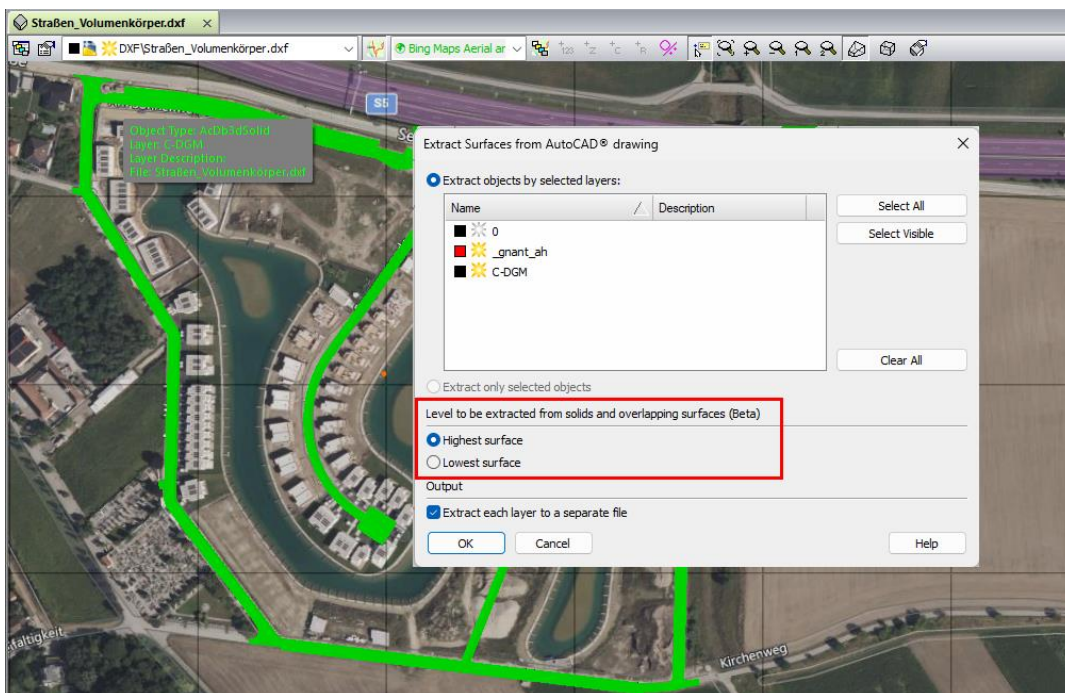


Preview of extended model with 1m horizontal offset, and a 1/1 slope until a height difference of 2m is reached.

## 1.4 AutoCAD

In addition to the new tool, Pick Height from Text, to fetch a height from Text or MText in a CAD file there is a new option to extract surfaces from solids.

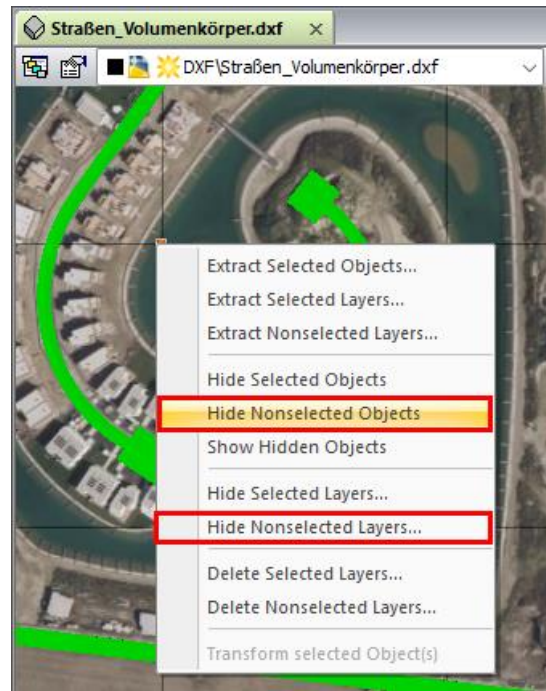
- In Data > Extract Surfaces from AutoCAD there is a new option to select if the highest or lowest level of a solid should be extracted as a surface, if a solid is a part of your selection.
- A terrain model (TRM) is created.
- The surface extraction from solids requires the terrain license.



Tip!

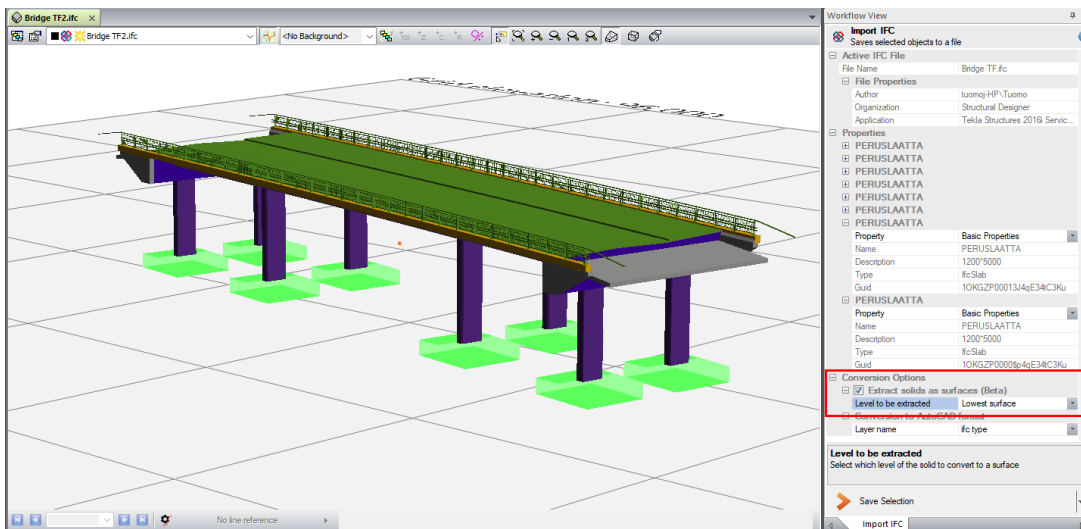
To make it easier to import the solid object you are interested in, use options the graphical right click menu for CAD files.

- Select the object of interest in the DWG/DXF.
- Hover over the grip and right click, to list the options.
- Use for example:
  - **Hide Nonselected Layers**, if the object is in a separate layer.
  - **Hide Nonselected Objects**, if there are many objects in the same layer and you only want to import e.g. a specific layer of road buildup solid.
- Go to Data > Extract Surfaces from AutoCAD drawing use the option **[Select Visible]**, to only extract the lowest or highest level of the visible object or objects.

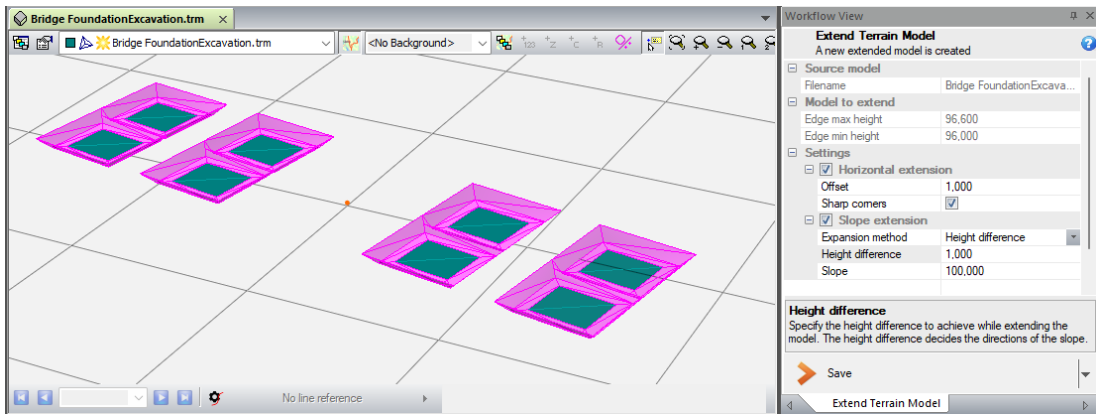


## 1.5 IFC

- New option in the workflow view for IFC models, Extract solids as surfaces.
  - If selected, objects can be saved as a surface instead as points and lines.
- The user defines if the highest or lowest level should be saved as a terrain model (TRM).
- Requires the terrain license.



Bridge foundations are selected for import and lowest level is defined in the settings.



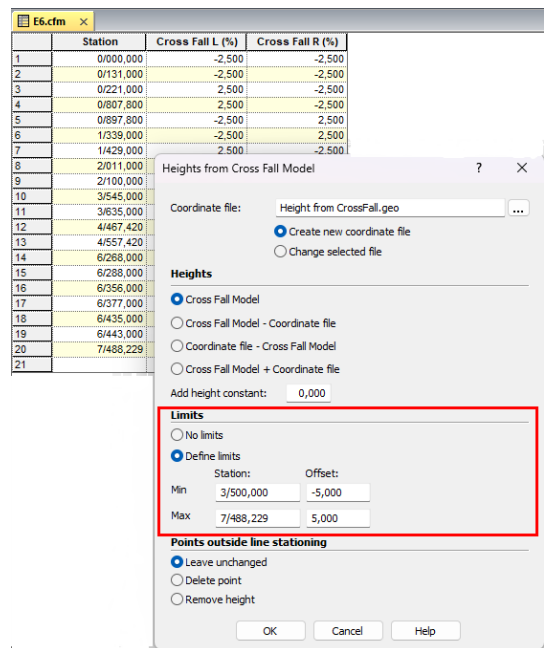
The bridge foundation surfaces as TRM and extended with an offset, slope and height difference.

## 1.6 Height from Cross Fall Model

The function to update points with height values from a theoretic cross fall model (CFM) is updated with two options to limit points from being updated based on:

- Start and end stations.
- Side offset from center line (CL), left and right.
  - Negative values to the left of the CL.
  - Positive values to the right of the CL

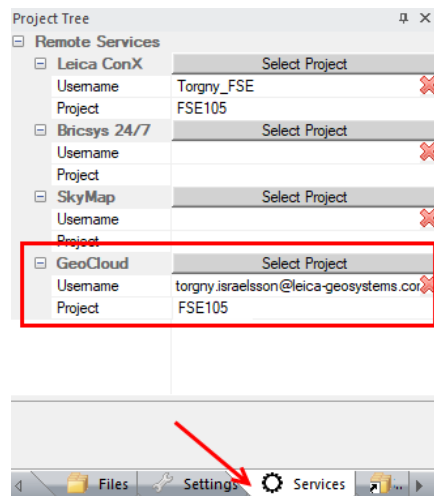
➔ Points outside the limits don't get updated height values from the CFM.



## 1.7 GeoCloud

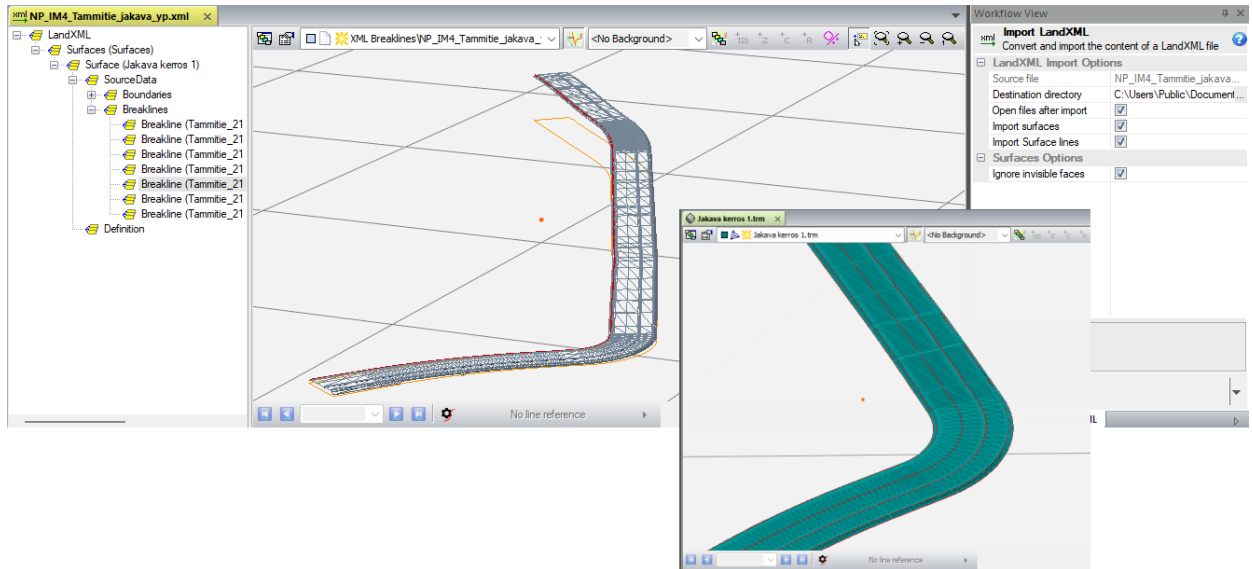
Support for a cloud storage, GeoCloud, featuring data transfer, creating folders etc.

- The login can be found in the tab **Services**.
- The Remote Service view is used for the upload/download of data.



## 1.8 LandXML

- Support for LandXML surface with the color label, “M\_Color”. The surface is visualized with color in the LandXML viewer and if imported, the terrain model will get the corresponding color.
- Surfaces with breaklines in LandXML - The breaklines will be included in the created surface after import to TRM.



LandXML viewer – Surface with breaklines and the imported TIN surface with breaklines.

## 2 Bug Fixes and Maintenance

In addition, a lot of annoying bugs have been solved and maintenance improvements done.

- Updated attribute files with attributes regarding trench model workflows.
- PDF - In some cases when a PDF file was opened by drag and drop from project tree, the application could crash. Fixed
- Point cloud imported from Leica \*.xcf (MS60) lost intensity values. Fixed
- Crash when selecting active file from the drop-down list of open files. Fixed
- Trench - Selected calculation intervals in the workflow view was ignored when calculating pipe bedding.
- Modify Selected Objects - Close button is renamed to Cancel and Modify is set as default.
- Data>Modify Points - When creating filter, it didn't work to use Enter to add a value to the filter. Fixed
- In document properties for coordinate files there is a special setting for number of decimals for height values that overrides the project setting, that didn't update properly when changes. Fixed

### 3 iCON office Licensing

#### 3.1 Articles

iCON office starts with **Core**, which enables import/export of data, 3D visualization, COGO calculations, coordinate system handling, visualization in Google Earth and generating of drawings etc.

| Base Software |                                      |  |
|---------------|--------------------------------------|--|
| 971847        | iCON office Core                     | It features import/export and COGO functionality and can be upgraded with various options. |
| Options       |                                      |  |
| 971848        | iCON office Road                     | iCON office Core is required for upgrading.  |
| 971849        | iCON office Terrain                  | iCON office Core is required for upgrading.  |
| 971854        | iCON office Trench                   | iCON office Core and Terrain are required for upgrading.                                   |
| 971853        | iCON office Point Cloud              | iCON office Core and Terrain are required for upgrading.                                   |
| 971850        | iCON office Volume                   | iCON office Core, Road and Terrain are required for upgrading.                             |
| 971851        | iCON office Tunnel                   | iCON office Core, Road and Terrain are required for upgrading.                             |
| 971852        | iCON office Net Adjustment           | iCON office Core is required for upgrading.  |
| CCP           |                                      |  |
| 6017858       | 1yr iCON office CCP                  | iCON office CCP extended one year  |
| 6017859       | 2yr iCON office CCP                  | iCON office CCP extended two years   |
| 6017860       | 3yr iCON office CCP                  | iCON office CCP extended three years   |
| Migration     |                                      |  |
| 971913        | iCON office Migration                | Migration from dongle to EIDs. Valid CCP is required.                                      |
| Re-activation |                                      |  |
| 5311599       | Re-activation Fee iCON office (>1yr) | Re-activation Fee iCON office (>1yr) applied if maintenance expired for +365days           |

#### 3.2 New License Model since 2023

Since the release of iCON office 2023, iCON office is delivered using the EID license model and no physical delivery of USB dongles is required. The licensing is aligned and work in a similar way as for other software products from Leica Geosystems.

- iCON office is delivered as EID license.
  - Licensing of EIDs is managed through CLM.
  - Floating license – All iCON office licenses are floating licenses.
  - Physical delivery of USB dongles is no longer supported.
- iCON office version 2023 can also start with a USB dongle with a valid maintenance.
  - But it will not be possible to update or add new license options to a dongle-based license without first migrate to EID license.
  - It's recommended to migrate to EID license.

### 3.3 Migration with active Maintenance

- All customers with active maintenance can migrate with article **971913** and will be issued a new EID to replace the dongle. This EID will honor the product(s) and maintenance date of their existing dongles.
  - Provide **serial number** (4- or 5-digit number) or dongle ID, available on the plastic tag, when ordering migration.
- Customers are responsible for running Dongle Tool and check in the license to the license server, after delivery of their new EID.
  - The dongle must not be returned to Leica Geosystems
- If a customer wants to upgrade with more license options, this must be done in a second step.

### 3.4 Migration without active Maintenance

- All customers without active maintenance must order **5311599**, Re-activation Fee iCON office (>1yr),
  - Provide **serial number** or dongle ID when ordering re-activation and migration.
- Customers are responsible for running Dongle Tool and check in the license to the license server, after delivery of their new EID.
  - The dongle must not be returned to Leica Geosystems.
- If a customer wants to upgrade with more license options, this must be done in a second step.

## 4 Leica myWorld

Please use Leica myWorld to find the latest version of iCON office.

- myWorld >> my Downloads >> iCON >> iCON office) by using the following link:
  - <https://myworld.leica-geosystems.com/>