



- when it has to be **right**



Product: iCON office
Date: 06th July 2023
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iCON office release of version 2023.2.1

We are pleased to announce a new release of iCON office, **version 2023.2.1**. This release includes new functionality that will speed up some common workflows. A new quick tool to compare a point cloud to a surface and a similar function to compare a surface to a target surface.



Some other examples of new features are:

- GeoTIFF elevation data import
- Improved dialog to create user defined cut and fill templates.
- Support for Bricsys 24/7
- Multiple layers of background maps

And as always, we are continuously improving the import/export options in iCON office. Please, read the release notes for more information.

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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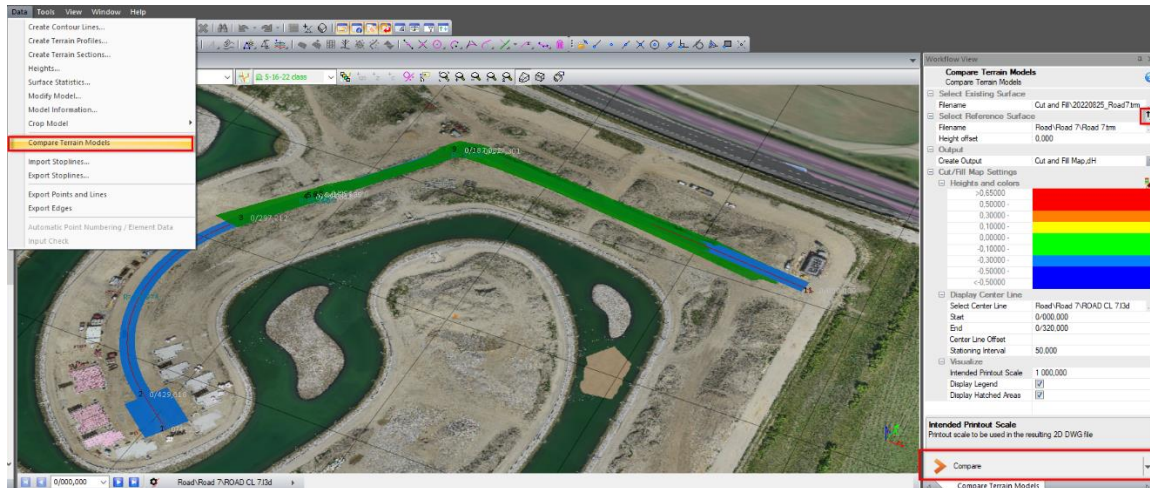
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1 New Functions and Improvements

1.1 Compare Terrain Models

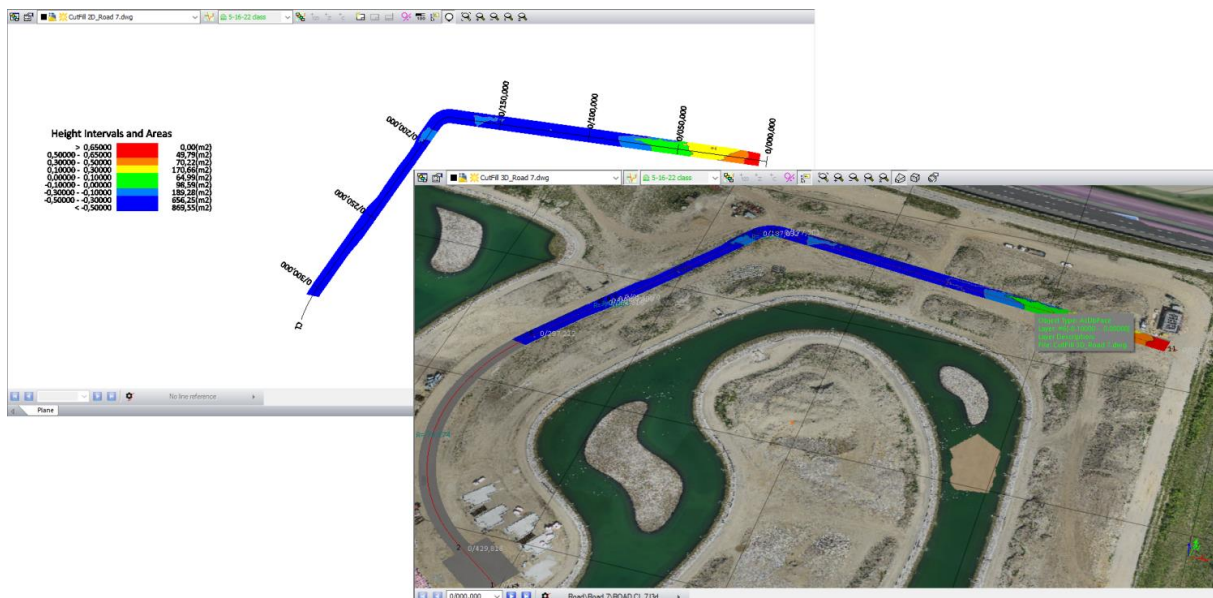
If you just want to compare two surfaces and get a colored result, based on height differences, there is no longer needed to do a volume calculation as a first step.

- Compare Terrain Model – A new function, available in the Data menu for terrain models, to compare two surfaces and generate a cut and fill map/heat map as a dwg or difference model.
- Option to add a height offset to the target surface.
- A new control to easily switch the order of the input models.



Hit compare, and the following output can be created:

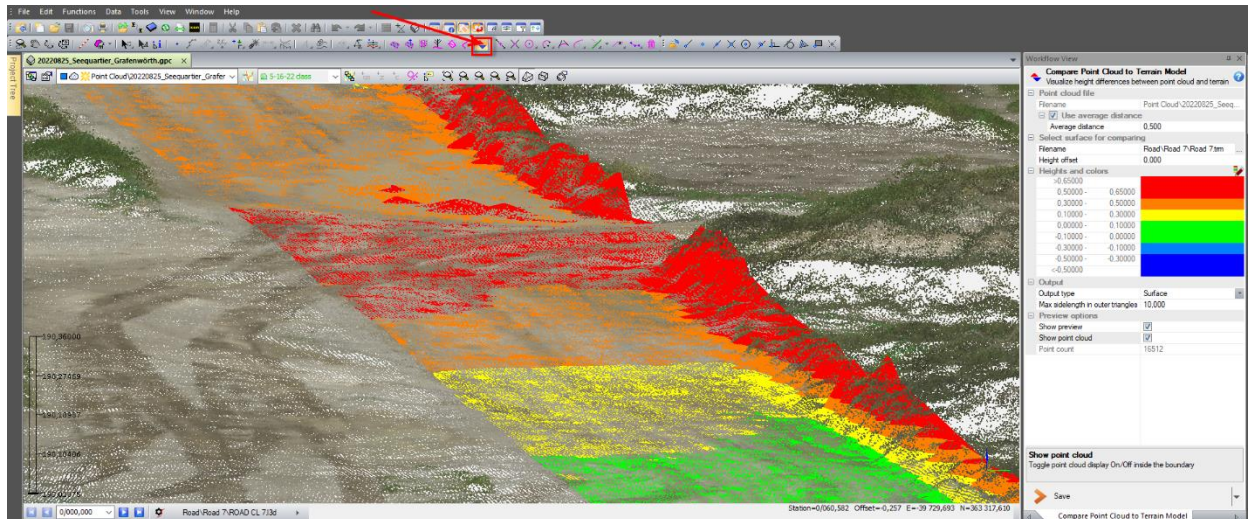
- A colored, based on height differences between the two surfaces, dwg with a legend.
- A 3D dwg, colored according to the height differences, but with orthometric height (absolute height).
- A difference model (*.dfm)



1.2 Compare Point Cloud to Terrain Model

A new quick tool, Compare Point Cloud to Terrain Model, to visualize a point cloud in relation to a reference surface.

- Visualized as colored points or as a surface.
- User defined colors and height intervals can be used.
- The quick compare result can be saved as a colorized dwg.



Quick compare of a point cloud towards a surface.

1.3 Cut and Fill Map Templates

An improved and updated dialog to create user defined height and color templates to be used when creating colorized AutoCAD dwg-files, as cut and fill or heat maps. The same dialog is used in:

- Terrain Models > Data menu > Compare Terrain Models
- Point Cloud > Tools > Compare Point Cloud to Terrain Model
- Difference Model > Data menu > Create Cut and Fill Map
- Tunnel > Data menu > Compare Survey to Design

The user defined templates can be given an arbitrary name and saved for later use.

The 'Height Intervals and Colors' dialog box is shown. It has the following sections:

- Add input parameters for new templates:** A color bar, 'Invert colors' button, 'Limit min' (-2,50000), 'Limit max' (3,00000), 'Number of intervals' (10), and 'Fill heights and colors' button.
- Select and edit templates:** A table with columns 'Heights', 'Intervals and colors', and 'Color'.
- Templates:** A list of templates with names like '-0.5 to 0.5', '-0.5 to 0.03', etc.
- Buttons:** Insert..., Delete, Reset, Save as Template..., Use Template, Delete, OK, Cancel, Help.

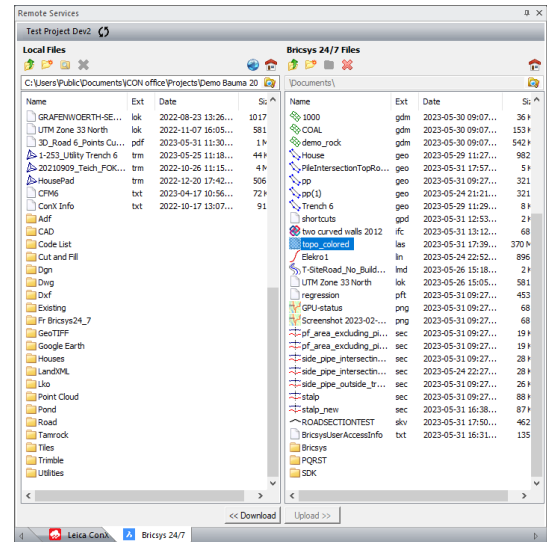
Heights	From height	To height	Color
0,65000	>0,65000	0,65000	Red
0,50000	0,50000	0,50000	Orange
0,30000	0,30000	0,50000	Yellow
0,10000	0,10000	0,30000	Green
0,00000	0,00000	0,10000	Light Green
-0,10000	-0,10000	0,00000	Dark Green
-0,30000	-0,30000	-0,10000	Blue
-0,50000	-0,50000	-0,30000	Dark Blue
<-0,50000	<-0,50000		Blue

1.4 Cloud Service - Bricsys 24/7

Support for Bricsys 24/7, a cloud-based data environment for document management, iCON office users can connect and get access to Bricsys 24/7 projects and files.

Go to tab, Settings, at the bottom of the project tree in iCON office, to find the login for Bricsys 24/7. The remote service view is used for file transfer.

- The same login as for the web-portal is used.
- Possible to see the folder structure used on Bricsys 24/7.
- Upload and download
- Delete files/folders
- Create new folders



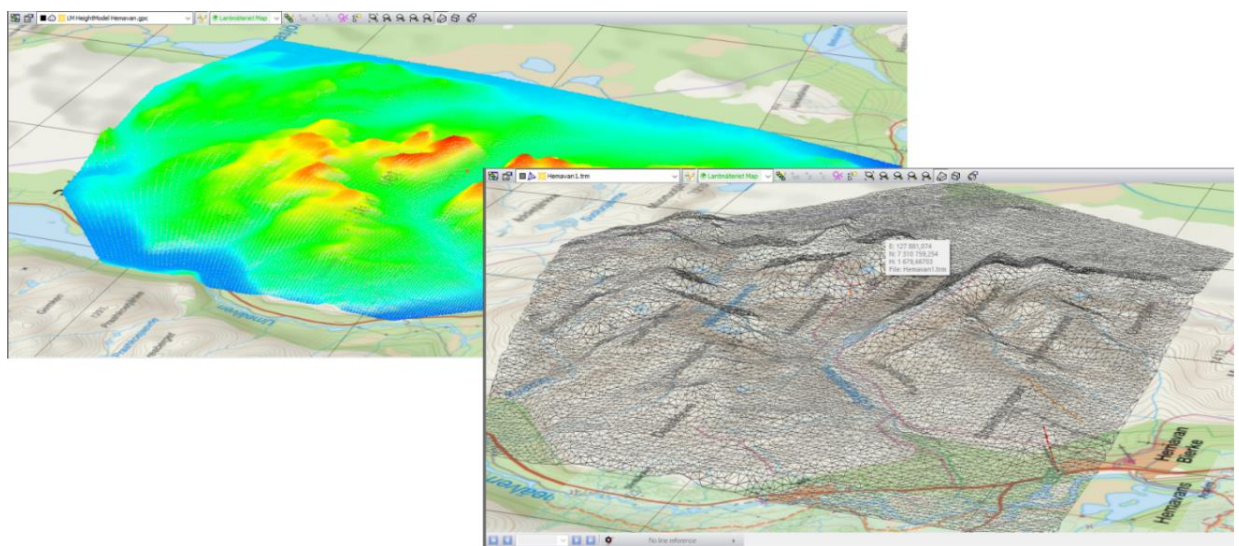
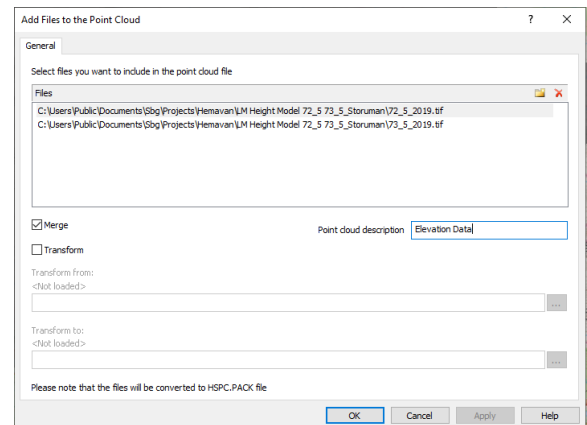
Double dialog in the remote service view.

1.5 GeoTIFF Height Model Import

GeoTIFF with elevation data can be imported as point cloud. In many countries national height models are available as GeoTIFF, and this data can now be processed in iCON office.

All point cloud tools and filters can be used, and with the “Create Surface Tool”, a triangulated surface can easily be extracted.

If it's a smaller data set and the user doesn't have the point cloud license, a GeoTIFF with elevation data can also be imported to a coordinate file for further processing.

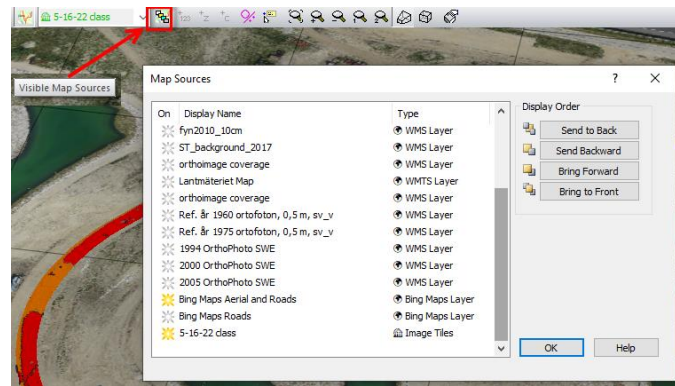


Elevation GeoTIFF imported to a point cloud and a TIN surface is created.

1.6 Multiple Layers of Background Maps

Now it's possible to visualize multiple layers of map sources as background in iCON office. One use case is, if you have a local orthomosaic generated from a GeoTIFF from a drone flight (Functions > Create Tiled Image) and want to combine that with a map service covering a larger area.

- Improved UI to add multiple layers of map sources.
- New option to change order of used map layer.
- Active map sources are indicated in the drop-down list.

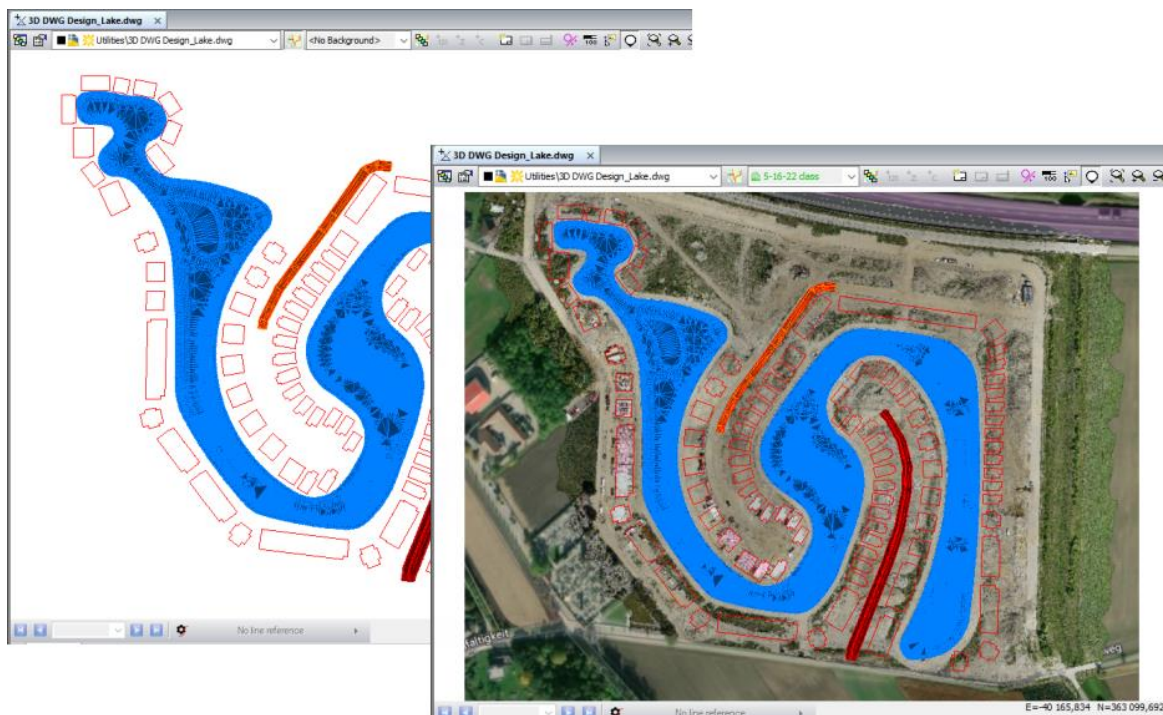


Dialog to turn layers on/off and change display order.

1.7 AutoCAD – Insert Background Image

New function to insert the used background image to active dwg drawing as an image reference.

- The new option is available in the data menu for AutoCAD files (Data > Insert Background Map).
- The function works for both static and map services.
 - If a map service is used, a snapshot of the currently visible extent is added as background image.
- Possible to add multiple images, for example over different areas of a project.

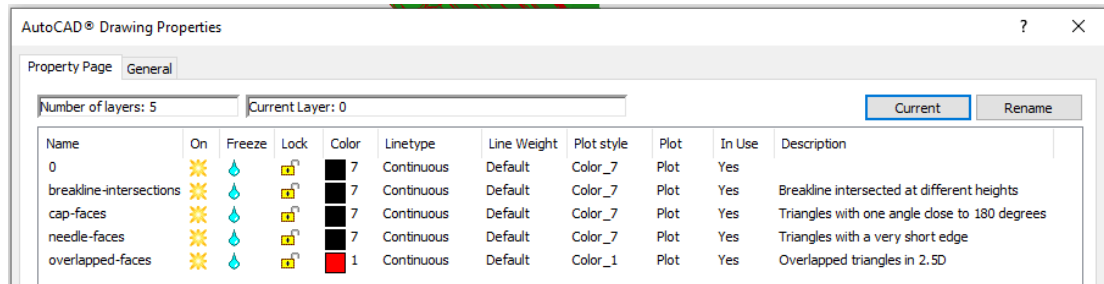


A screen shot of a tiled GeoTIFF image and Bing Map is added to the dwg.

1.8 Validate Surface

The function to validate TIN models is improved and more warnings and errors can be found in the validated surface (Functions > Validate Surface).

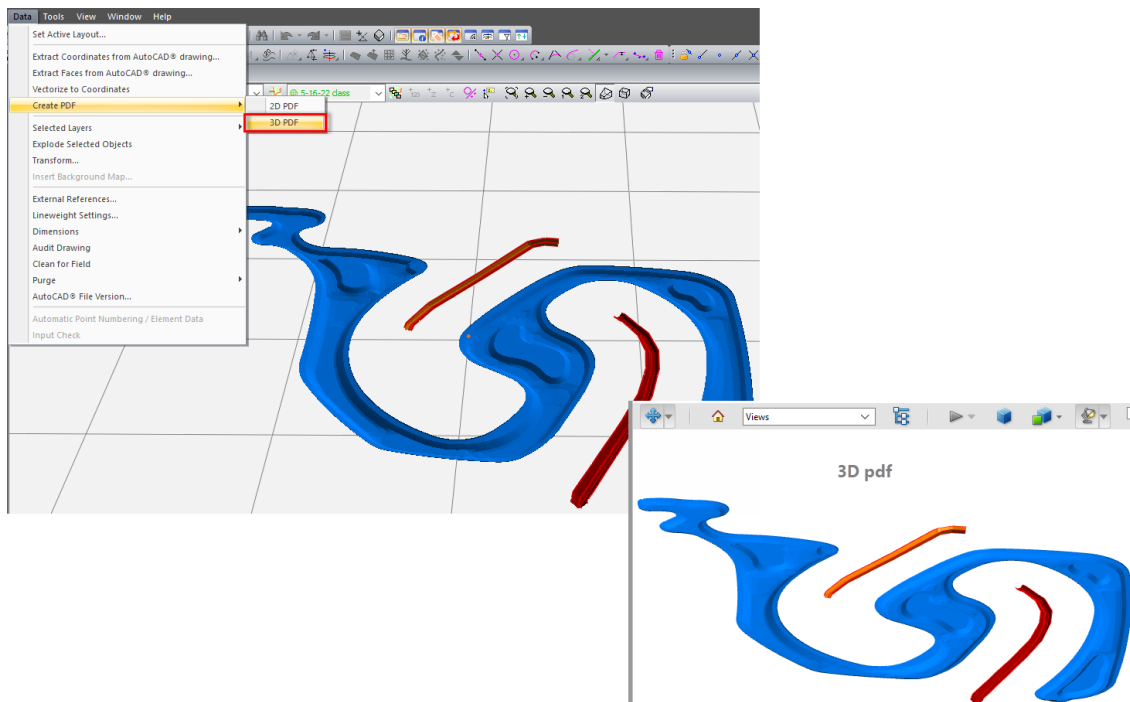
- New option to create a dwg-file with information about warnings and errors found in the surface.
 - All found issues are saved in different layers, so they are easy to identify.



- More warnings and errors can be fixed in the corrected surface.

1.9 Import/Export

- Point Cloud – Support for LAZ
- LandXML
 - Alignments with “UnsymParaCurve” in the vertical profile can now be imported.
 - The object "sideshot", a detail outside the leveling run, is now imported to the leveling file (*.lvt).
- 3D pdf export from AutoCAD dwg
 - Data > Create PDF > 3D PDF and a pdf is created.

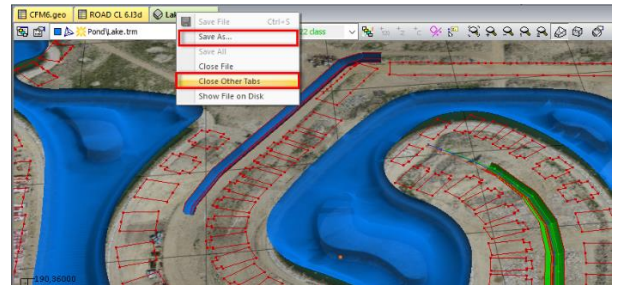


3D models in a dwg file are exported to a 3D pdf.

1.10 File Handling

When right clicking on the tab name of a window there are two new useful options:

- Close Other Tabs
 - All other windows are closed.
- Save as...



1.11 Bug Fixes and Maintenance

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

- The image format, *.tif, is back in the list of formats, which can be used as static background image.
- DWG - To regenerate the view automatically didn't work after using the explode tool. Fixed
- Point cloud - Not possible to generate a new preview surface after changing parameters. Fixed
- Point cloud - Import of Leica point cloud format *.sdb did not work. Fixed
- Point cloud - It took a long time to generate a point cloud file (gpc), if the transformation option was selected and then de-selected. Fixed
- ConX - kmz files were not listed and available for download. Fixed
- Insert point on line graphically, did not work if line had duplicated points. Fixed
- Background map was not shown initially when opening a new window. The user had to zoom or pan before. Fixed
- Trench - When creating archive from a trench model including a calculation border, the polygon file was missing. Fixed
- Topcon export - If a single coordinate file is exported, now both the internal description and the file name will match the exported file.
- Create tiled image - Failed to create an orthomosaic of a GeoTIFF if the output path contained UNICODE characters. Fixed
- MBS - Low/high rock in combination with calculation border gave negative volume. Fixed
- Tunnel - The function to extract design file, *.tun, from dwg was broken. Fixed
- Tunnel - The legend for cross sections listed wrong area, if calculation border was used. Fixed
- Tunnel - When changing the printout scale in the function Compare Survey to Design, the application crashed. Fixed

2 iCON office Licensing

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2.1 Important Changes - New License Model

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.

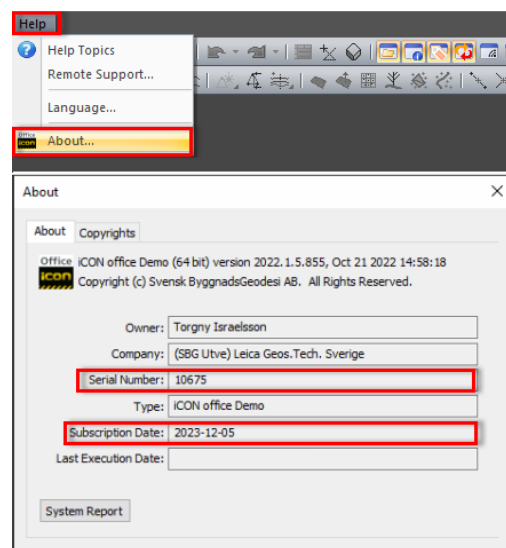
- iCON office is delivered as EID license.
 - Licensing of EIDs is managed through CLM.
 - Floating license – All iCON office licenses are floating licenses.
 - Physical delivery of USB dongles is no longer supported.
- iCON office version 2023 can also start with a USB dongle with a valid maintenance.
 - 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.

2.2 Migration

All existing iCON office customers with a valid maintenance contract (subscription), can migrate to EID license model from the same date.

To check serial number and maintenance date of used license go to:

- Help > About



2.2.1 Migration with active Maintenance

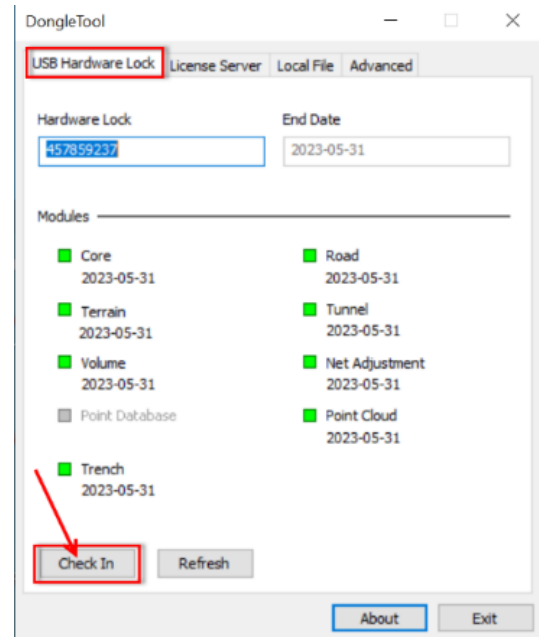
- All customers with active maintenance can migrate with article **971913** and will be issued a new EID to replace the dongle. This EID will honor the product(s) and maintenance date of their existing dongles.
 - Provide **serial number** (4- or 5-digit number) or dongle ID, available on the plastic 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.

2.2.2 Migration without active Maintenance

- All customers without active maintenance must purchase a new maintenance (CCP) contract at the time of migration (1yr, 2yr or 3yr iCON office CCP)
 - Provide **serial number** or dongle ID when ordering CCP 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.

2.2.3 Dongle Tool – How to Check in License

1. Insert the USB dongle in the computer.
2. Start Dongle Tool
3. Make sure the USB hardware tab is selected.
4. Press [Check In] and the license is checked in to the server.
5. [Exit]



2.3 New 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 Leica myWorld

Please use Leica myWorld to find the latest version of iCON office. Access Leica myWorld by using the following link:

<https://myworld.leica-geosystems.com/>