- when it has to be **right**

Product: **iCON office**

Date: 05.21.2021

From: Torgny Israelsson

iCON office release of version 2021.2.3

We are pleased to announce the release of iCON office 2021.2 with a lot of new functionality and improvements. All users with a valid subscription will be able to install and run this new version.

If you are extracting data from dwg/dxf files, you will appreciate improvements in the workflow and the faster rendering of AutoCAD files. All COGO tools, and some other functions, are now available in the 3D window.

A tool to cut models based on a road line, makes it easy to cut big road models before exporting them to the machine. TIN surfaces, road lines and coordinate data can easily be exported to Agtek SmartDirt app and visualized in the field.

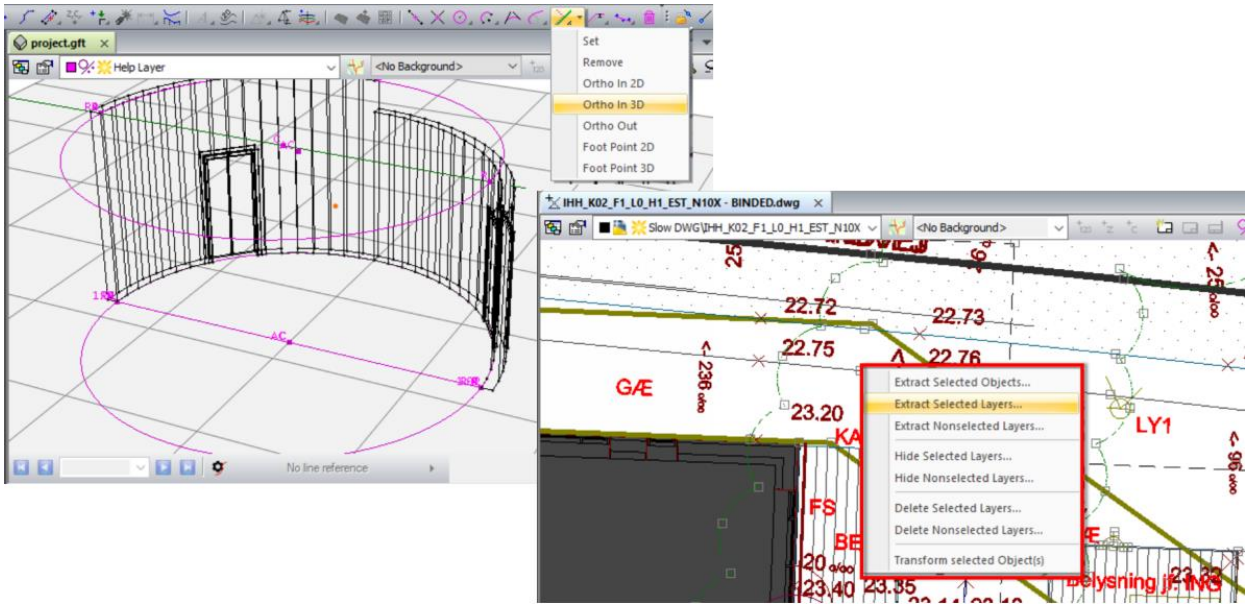


Table of Contents

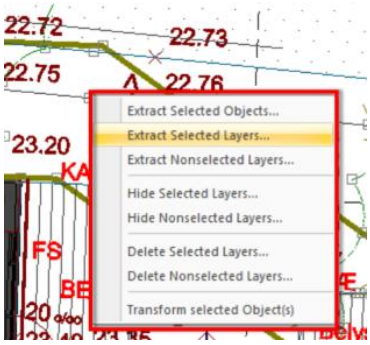
1 New Functions and Improvements

1.1 *Improved Import of Data from AutoCAD Files*

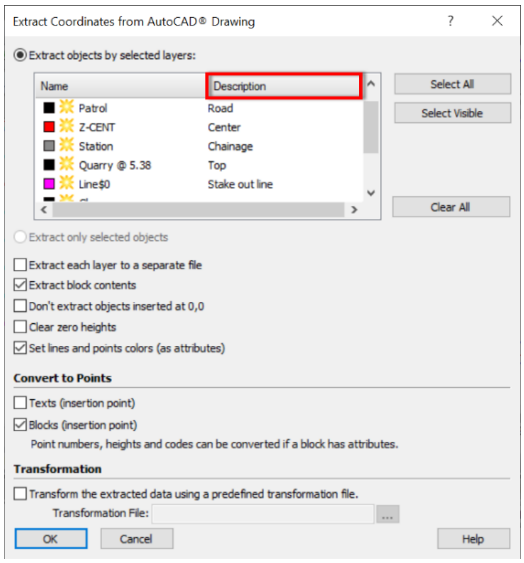
The rendering of dwg/dxf files has been improved and is considerably faster, especially when you are zooming and panning. In the graphics the user can select dwg objects and make use of the new options in the right click context menu to extract data or turn layers on/off.

New menu options:

- Extract selected objects
- Extract selected layers
- Extract non-selected layers
- Hide selected layers
- Hide non-selected layers
- Delete Selected Layers (locked layers are not deleted)
- Delete Non-selected Layers (locked layers are not deleted)

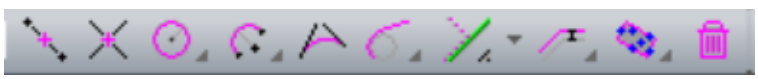


- A description column is added to the dialogs used for extracting coordinates or 3D faces from AutoCAD files, which makes it easier to identify the layers to be selected.
- When the option, Extract each layer to a separate file, is selected, a mapping is listed in the Input/Output window, with a count of features extracted from each layer.

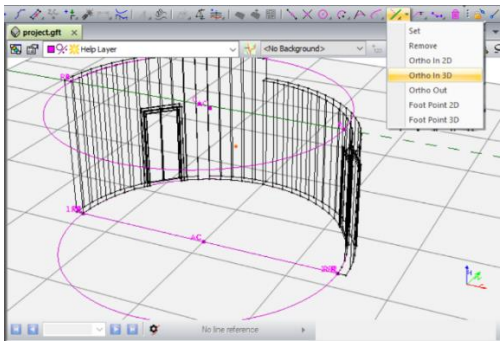


1.2 *3D Graphics*

The Help layer is now visualized in 3D window and possible to toggle on/off. All COGO tools are implemented in 3D window with the same functionality as in 2D window.



- Midpoint
- Intersection point
- Draw circle
- Draw arc
- Tangent point tools
- Draw spiral
- Base line tools
- Parallel line
- Fit 2D line/3D line/arc/sloping plane

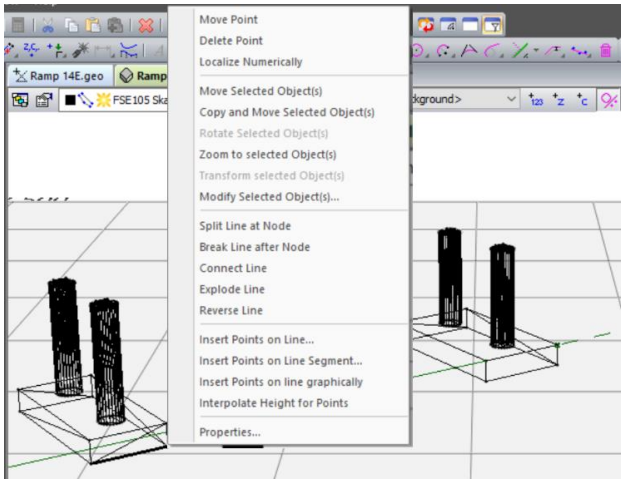


Other tools available in 3D window are:

- 2D area tool
- Polygonal selection
- Copy point/element and line
- Object info

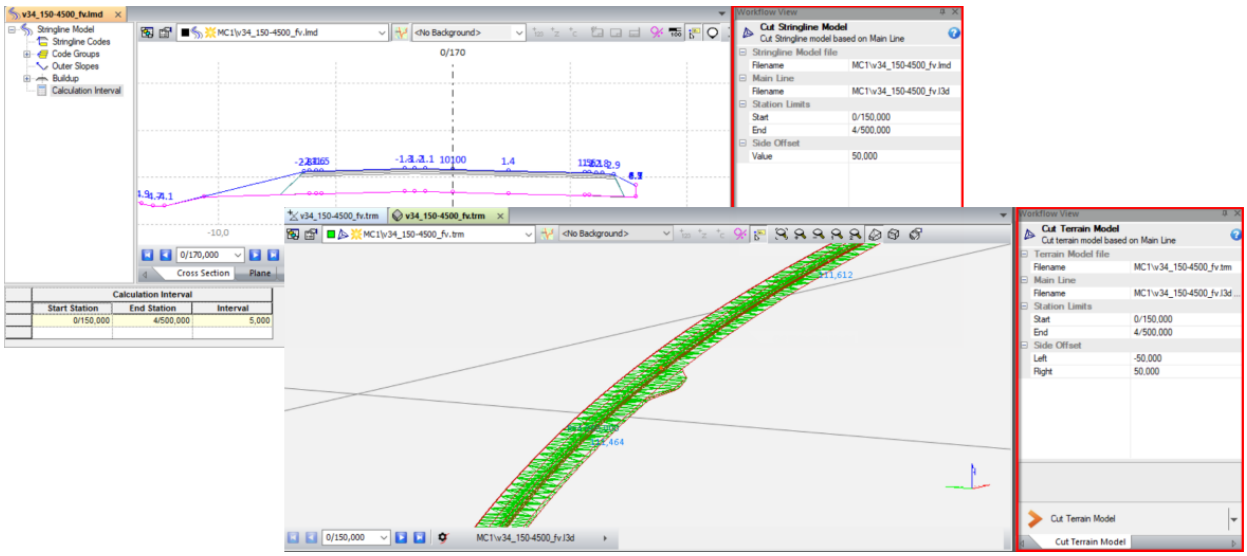
The following functions in the right click menu for selected object are implemented in 3D:

- Move point
- Delete point
- Localize numerically
- Move selected object(s)
- Zoom to selected object(s)
- Split line at node
- Break line after node
- Connect line
- Explode line
- Reverse line
- Insert points on line
- Insert points on line segment
- Insert points on line graphically
- Interpolate heights for points
- Properties



1.3 *Cut Models*

If you have big models and would like to cut them based on a road line before export the data to the field, a new tool is available. In the Data menu for terrain models, stringline models or volume description models the function can be selected. The workflow view, to the right in iCON Office, is used and based on station input, start and end, the model is cut.



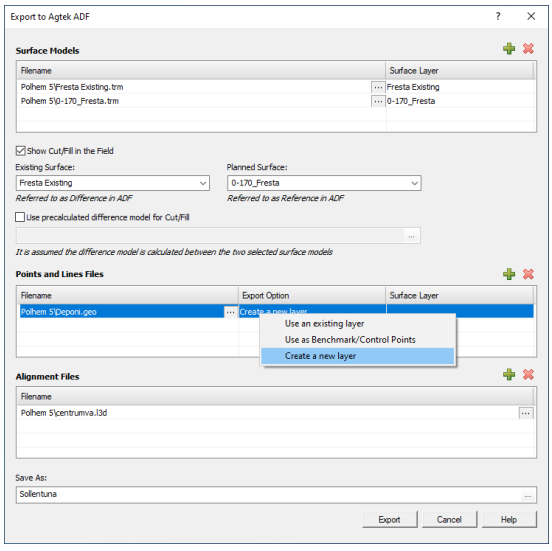
If the road model is built up by associated files, all files are cut according to the user input and saved with new names. The start and end limits are added as suffix to the original names.

Models that can be cut are:

- Terrain models (trm)
- Stringline models (lmd)
- Volume description models (mbs)

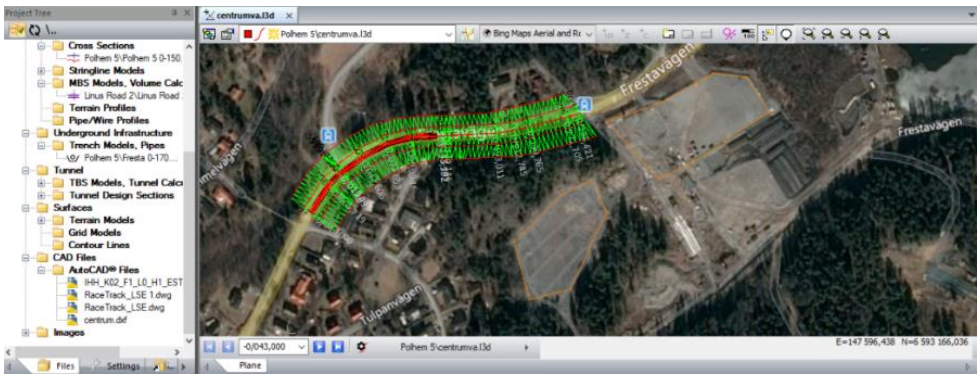
1.4 *Export to Agtek SmartDirt*

In this version is possible to export to the Agtek SmartDirt app. Just open the models you would like to visualize in the app and select Import/Export > Agtek ADF.

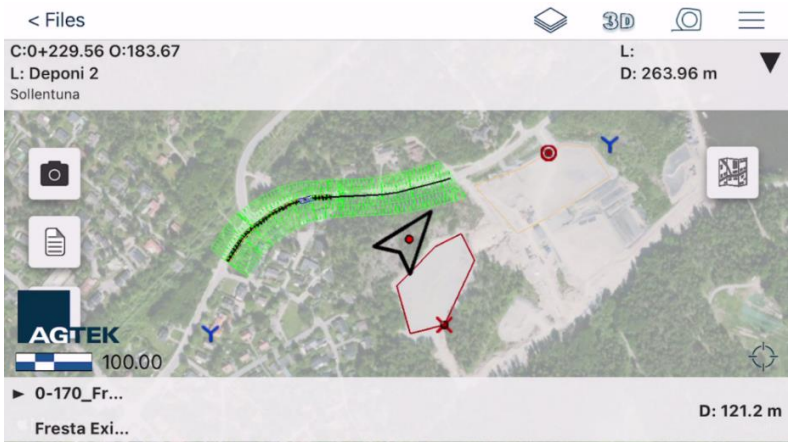


Supported file types that can be exported to SmartDirt are:

- Terrain models (trm)
- Road lines (l3d)
- Point and lines (geo)



iCON Office

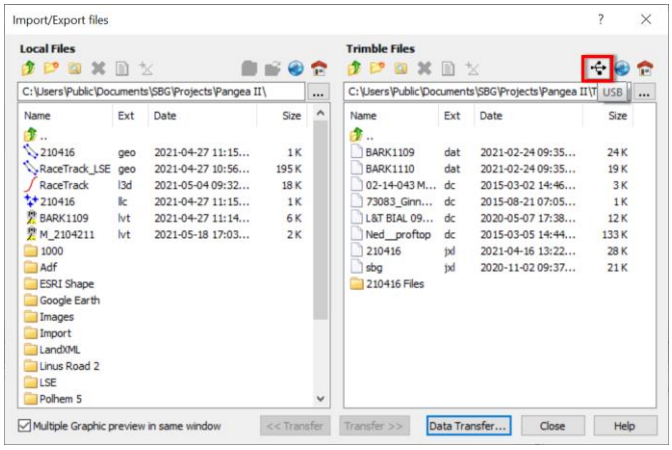


SmartDirt

1.5 *Import / Export*

The USB export of files to Leica MC1, iCON 3D and iCON site are now merged below a new To Field option. The required folder structure for the different applications is created automatically if it's not available.

The general import/export dialog has been improved with an option to select USB drives on the right side in all import/export dialogues.



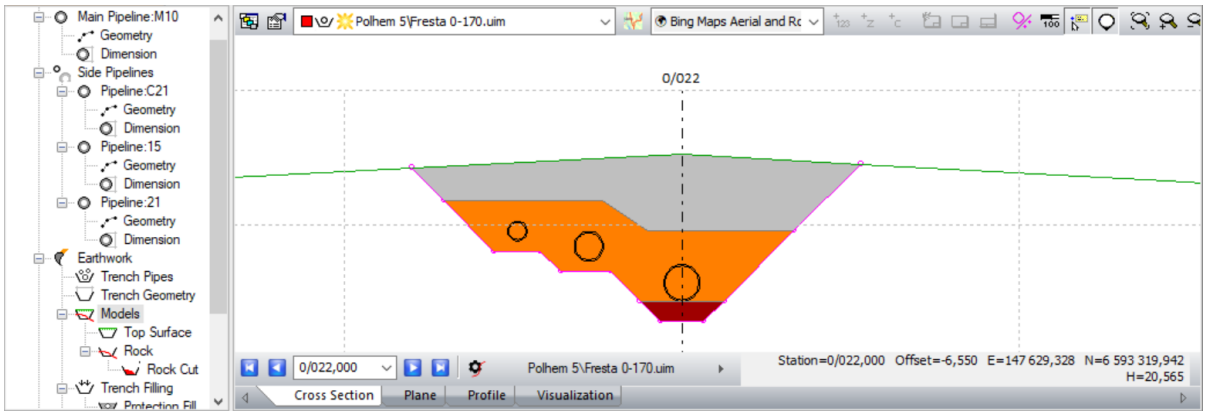
In addition, some new formats have been added:

- Topcon points (pt3) and lines (ln3), both import and export.
- Google, kml/kmz import is added, earlier only export was supported.
- Export of coordinate system (*.lok) to Trimble DC.

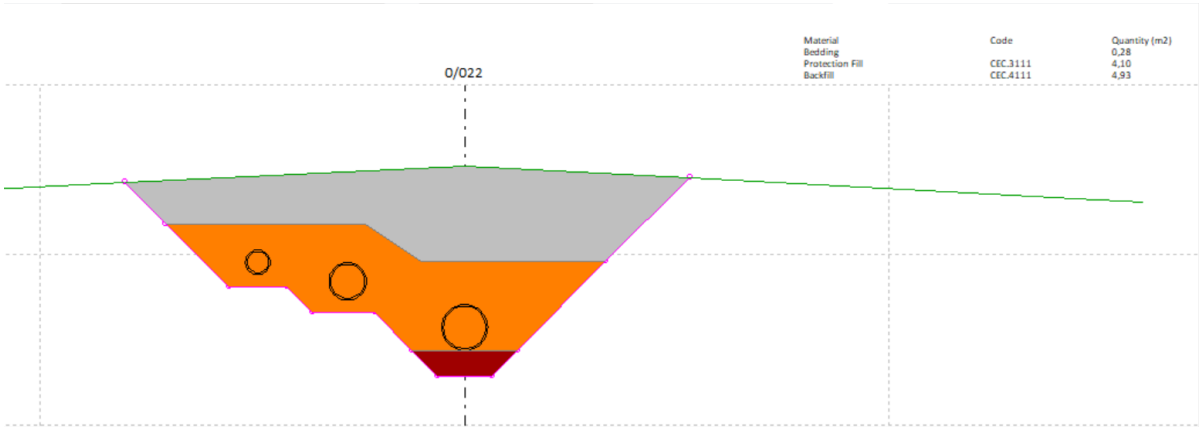
Trimble import of Trimble DC, JobXML and levelling data is merged to the same dialog.

1.6 *Trench*

The different material layers can be visualized in the cross section view of trench models. The layers and their properties are automatically exported to cross section files generated from trench models.



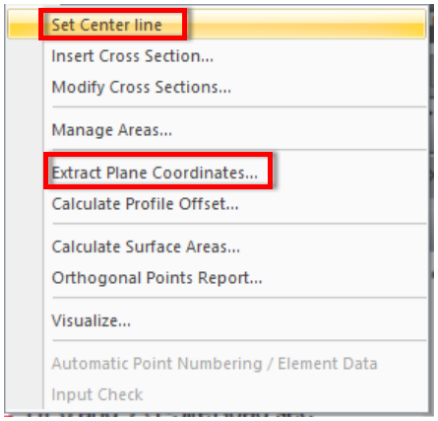
Trench model (uim)



Cross section file (sec)

1.7 *Cross Section Format*

- Placement and color of the quantity list in cross section files can now be user defined.
- A new option, Set Center Line, is added in the Data menu for cross section files, so the user can define to which road line the cross sections are assigned to. Which means that it will be possible to generate coordinates from a cross section file, by using Extract Plan Coordinates.

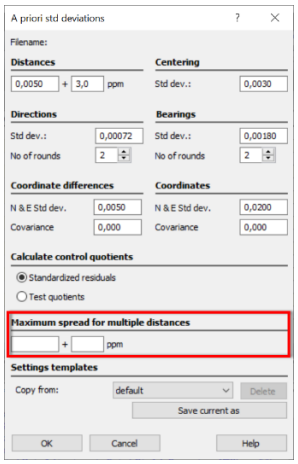


1.8 *Tunnel*

- Possible to select a DWG as tunnel design in the TBS wizard.
- Both volume and cross section creation is moved to the workflow view.
- Material layers can be visualized in TBS cross section view.
- The cross-section line is made thicker i.e., more visible in TBS with point cloud.
- The max/min distances between design and measured surfaces are highlighted in tunnel sections, so the extremes easily can be identified.
- The theoretic cross sections (tun) are now drawn in 3D view, at the start stations.

1.9 *Net Adjustments*

- Excluded observations are listed, with strikethrough, in the report.
- Possibility to create a report for lengths that have been measured twice in a net adjustment.
- Updated settings dialog, A Priori Standard Deviations, with new option for tolerance of multiple distances.



1.10 *Bug Fixes and Maintenance*

- Side pipes were not visible in cross section view of trench models, if the line had opposite direction. Fixed
- Clean for Field and Purge didn't work for DWG. Fixed
- Not possible to use graphical selection for IFC files. Fixed
- Problem to change text font in drawings. Fixed
- The layer colors didn’t always follow from sec-files to drawings. Fixed
- Problem to calculate intersection line in some special cases. Fixed
- Save Help Layer to coordinate file didn’t work with line element. Fixed
- Drawings with circle was drawn with bad precision in paper view. Fixed.

- The search fields when inserting coordinate list in drawing didn't change name input names properly. Fixed
- The tooltip info for Help Layer objects did have the wrong labels in cross section view. Fixed
- Graphical transformation of selected objects didn't work with auto snap. Fixed

2 iCON office modules

- 797955 CSW301 **Core Module** – Import/Export and basic functionality

Add-On modules:

- 797956 CSW302 **Road** – Advanced road line calculations
- 797957 CSW303 **Terrain** - Volume calculation model to model
- 906348 **Trench** – Underground utilities module (requires Terrain module)
- 797958 CSW304 **Volume** - Volume calculation by sections
- 797959 CSW305 **Tunnel** – Tunnel functionality
- 797580 CSW306 **Net Adjustment** - Network adjustment and calculations
- 832546 CSW313 **Point Cloud** – Import and filtering of scanning data

Available packages:

- 6007380 iCON office Core package, includes installation package, Core
- 6007381 iCON office Terrain package, includes installation package, Core, Road, Terrain
- 6007382 iCON office Volume package, includes installation package, Core, Road, Terrain, Volume
- 6007383 iCON office Tunnel package, includes installation package, Core, Road, Tunnel

3 **Update Service** (Subscriptions)

- 849563, iCON office Update Service (subscription) 1 year
- 849565, iCON office Update Service (subscription) 2 years
- 868774, iCON office Update Service (subscription) 3 years
- 868776, iCON office subscription revival
  This revival option should be used when subscription expired more than two years ago. The new subscription will be valid one year ahead from the date of purchase.

Provide serial number of the license or the hardware lock ID, when you order an extension of license (update service). Use Dongle Tool to update the USB hardware lock with the license.

4 Leica myWorld

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

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

- If it is a new iCON office installation the HASP driver must be installed so the computer can recognize the USB hardware lock.
- Point cloud utility is the point cloud engine and must only be installed if the point cloud module is purchased.

5 Dongle Tool

Use **Dongle Tool** to update the hardware lock with extended subscription for Leica iCON office or to unlock new modules purchased for the license.

Place an order using your normal order channels and when the logistics has processed your order, you can run Dongle Tool and update the USB hardware lock.

1. Insert the HASP hardware lock into the USB port.
2. Start Dongle Tool.
3. To change the subscription date or to add/remove modules it is first necessary to check in the current license to the license server. This is done by pressing **Check In**.
4. Switch to the **License Server** tab. Select the modules open for use and then press **Check Out**.

This will give the hardware lock a new certificate containing the updated license information.