

Leica Geosystems Release Notes

Product Leica Cyclone FIELDWORX 2021
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From HDS Software Product Management

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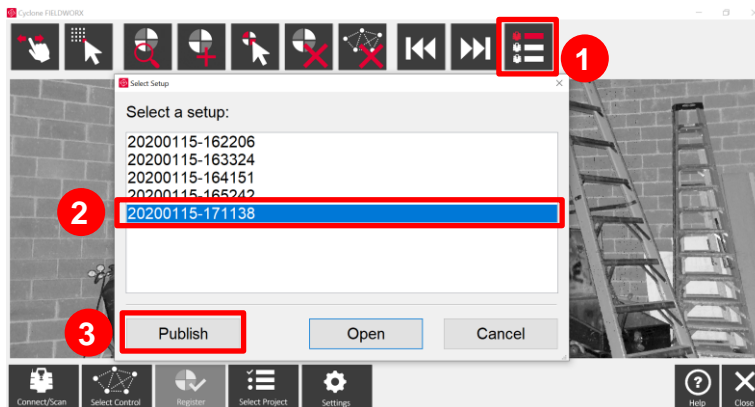
What's New

This is a major release to add new features in Cyclone FIELDWORX and provide bug fixes.

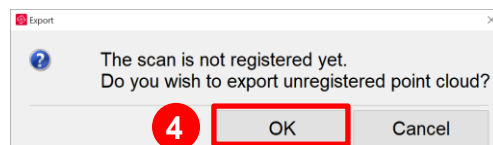
Publish to E57/PTS without registration

Cyclone FIELDWORX 2021 allows publishing to E57 and PTS even if the Setup is not registered. To publish unregistered Setups:

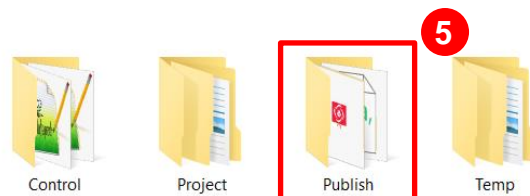
1. Go to Setup Explorer
2. Choose desired Setup to Publish
3. Click "Publish"



4. If the Setup is not registered, a warning message will be prompted, stating that the Setup is not registered.



5. If the user chooses to publish, the point cloud will be exported with the pre-defined format (i.e., E57 or PTS) into the Publish Directory.







6. The unregistered PTS or E57 will contain a "Not_Registered" flag in the name for identification.

Name	Date modified	Type	Size
20200526-200917.pts	7/26/2021 1:15 PM	Cyclone3DR	232,681 KB
20200526-200917.csv	7/26/2021 1:15 PM	Microsoft Excel Co...	1 KB
20200115-171138_NotRegistered.pts	8/10/2021 1:41 PM	Cyclone3DR	208,775 KB
20200115-171138_NotRegistered.csv	8/10/2021 1:41 PM	Microsoft Excel Co...	1 KB

Publish coordinates of extracted targets

Cyclone FIELDWORX 2021 stores the scan coordinates of the extracted Targets in a CSV file in the Publish Directory. The CSV file is the same name as the Setup deliverable. These coordinate values allow registering the Setups in other applications other than Cyclone FIELDWORX, such as Cyclone REGISTER and REGISTER 360.

Name	Date modified	Type	Size
 20200526-200917.pts	7/26/2021 1:15 PM	Cyclone3DR	232,681 KB
 20200526-200917.csv	7/26/2021 1:15 PM	Microsoft Excel Co...	1 KB
 2020015-171138_NotRegistered.pts	8/10/2021 1:41 PM	Cyclone3DR	208,775 KB
 2020015-171138_NotRegistered.csv	8/10/2021 1:41 PM	Microsoft Excel Co...	1 KB

Target_ID	X0	Y0	Z0	X	Y	Z	Error
<1781>	-3.42365	7.12268	-0.06567	-	-	-	-
<1795>	-14.829	1.03094	0.991915	-	-	-	-
<179F>	-14.8014	0.990922	0.777295	-	-	-	-
<17A9>	-14.8302	1.02781	0.516232	-	-	-	-
<171A>	-14.7915	0.974177	0.240507	-	-	-	-
<182B>	-6.45874	10.7354	-0.14287	-	-	-	-
<163B>	3.15083	13.114	0.541498	-	-	-	-
Mean_Error	-	-	-	-	-	-	-

Generate Registration Report

When publishing is completed for a Setup, Cyclone FIELDWORX stores a CSV file that contains the registration error metric as well as target coordinates and their matching control coordinates. The registration report is stored in the Publish Directory with same name as the E57 or PTS deliverable.

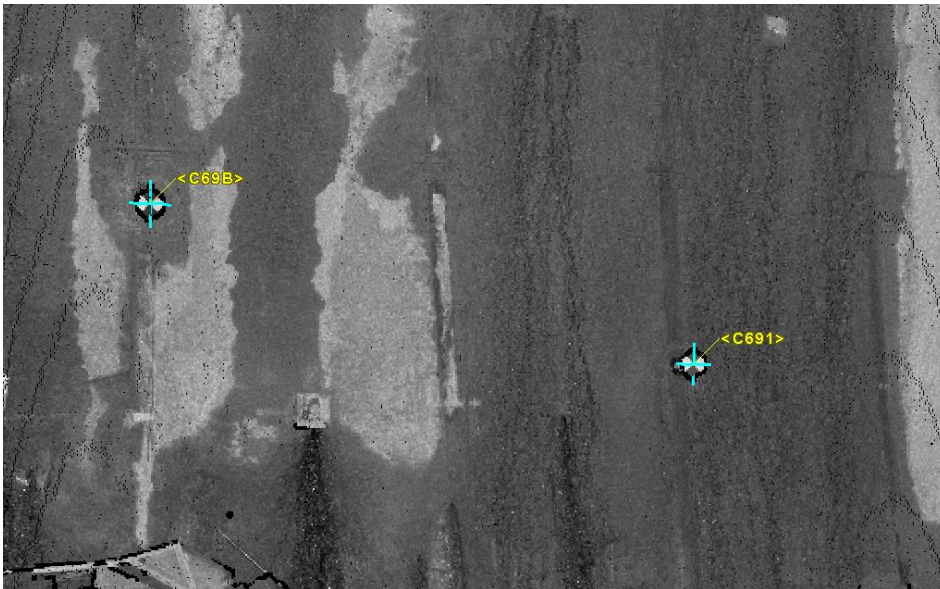
Target_ID	X0	Y0	Z0	X	Y	Z	Error
<1781>	-3.42365	7.12268	-0.06567	-	-	-	-
<1795>	-14.829	1.03094	0.991915	-	-	-	-
<179F>	-14.8014	0.990922	0.777295	-	-	-	-
<17A9>	-14.8302	1.02781	0.516232	-	-	-	-
Office_01	-14.7915	0.974177	0.240507	89.012	40.089	0.692	6.25E-14
Office_07	-6.45874	10.7354	-0.14287	87.592	52.833	0.031	4.75E-14
Office_09	3.15083	13.114	0.541498	92.393	61.489	0.734	6.14E-14
Mean_Error	-	-	-	-	-	-	5.71E-14

Connecting to Cyclone FIELDWORX project backups

Cyclone FIELDWORX now allows making backups of the Projects and reconnecting them if they are copied into the Project Directory. Cyclone FIELDWORX detects the restored Projects and allows opening them in Cyclone FIELDWORX.

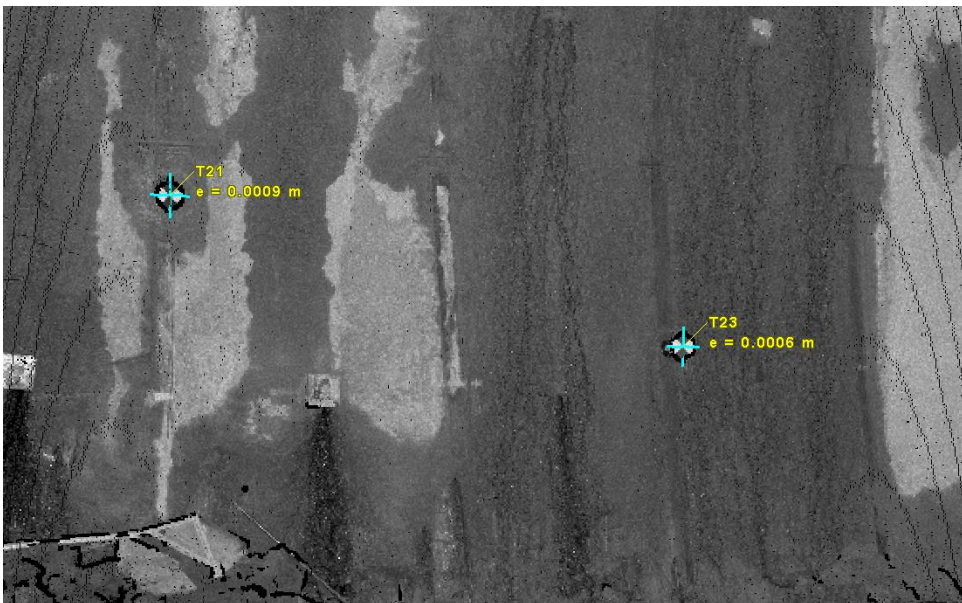
New Target Labeling Schema

In the new release of products all targets are labeled, including the targets that are not used for registration. All extracted targets get unique random name as <UID>. If the target is matched with control coordinates, it will get the Target label, e.g., T01. This allows easier identification of extracted targets also for registration workflows outside Cyclone FIELDWORX.



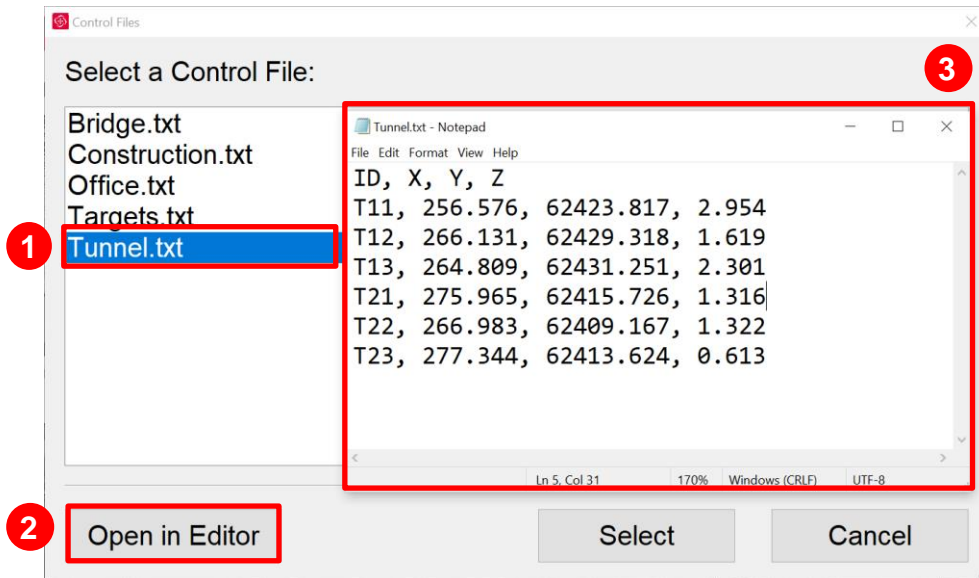
Visualization of registration error metrics

For the targets that are matched to the control the error value is valued e.g., $e = 0.0009$ m. This allows real-time, on-site assessment of registration quality to identify the mismatched targets or cases that cause issue.



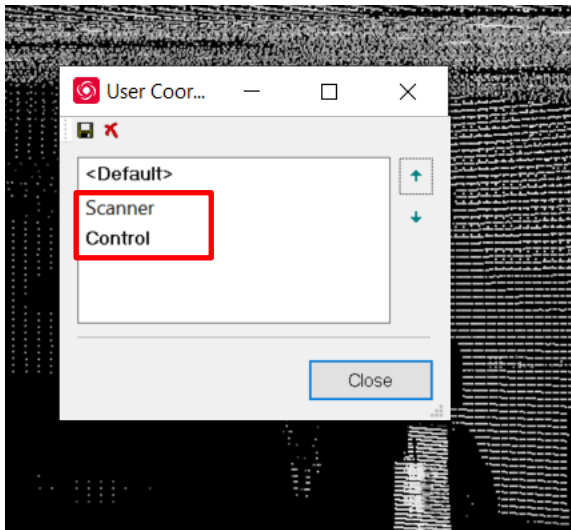
Allow editing Control File within Cyclone FIELDWORX

In many cases, user mistakes in properly formatting the control file created issues for registration. Resolving it required finding the relevant Text file from Control Directory and modifying it. Now, Cyclone FIELDWORX allows opening, reviewing, and modifying the control file within the program.



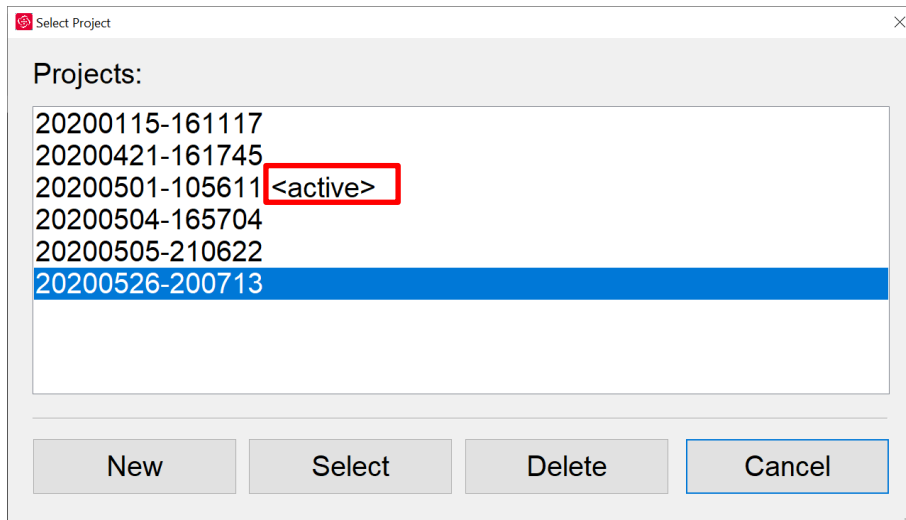
Proper naming of UCSs in IMP database

The new version of Cyclone FIELDWORX names the UCSs in the IMP database based as Control and Scanner. The coordinates resulted identify transformation is stored as Scanner UCS, and coordinates resulted from registration is stored with Control UCS.



Active Project indicator in the Project list

New release of Cyclone FIELDWORX adds features to improve the user-friendliness and user experience. A new indicator is added to Project list that show the Project that currently open. Such Project are marked with <active> label. Also, the Delete button is disable when selecting the active button. Previously, the delete command was allowed but it ended with an error message. Now, the error message is avoided.



Improve New Pxx API

Cyclone FIELDWORX now supports the latest Pxx API, i.e., v3.0.153 of the Pxx 3D API.

Bug Fixes

- Fixed the issue when scan and import failed after fresh installation of Cyclone FIELDWORX, if Project folder contained older Projects