PINPOINT

POINT CLOUD REGISTRATION AND MODELLING SOFTWARE

RELEASE NOTES

Software version 4.1 – November 12th, 2025.

We are pleased to announce the release of PinPoint version 4.1.

This document contains important information about the desktop software PinPoint version 4.1.

You can now download the new software installer from myWorld Customer Portal:
https://myworld-portal.leica-geosystems.com

and PinPoint website:
https://leica-geosystems.com/products/laser-scanners/software/pinpoint

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WHAT'S NEW

Version 4.1 of PinPoint supports the following features:

- New support of BLK2GO and BLK ARC scanners, point and image data
  - Direct connection to BLK2GO and BLK ARC
  - BLK ARC static scan support
  - Trajectory split
  - Visual blend of pano-images and point cloud
  - Detail camera image support for BLK2GO and BLK ARC
  - User requested panoramic image support for BLK2GO and BLK ARC
- New support of Jobs and Geotags from Cyclone Field 360 for BLK and RTC360 scanners
- New support of external spherical images for panorama creation, registration and colorization
- Improved Colorizer
- New Language support: Korean (KO)
- New Navigation with gizmo
- Render Option to show intensities of point cloud
- Extended support of Leica format files
- Revised CLM Integration to use established floating license workflows

A detailed description of the features and improvements follows.

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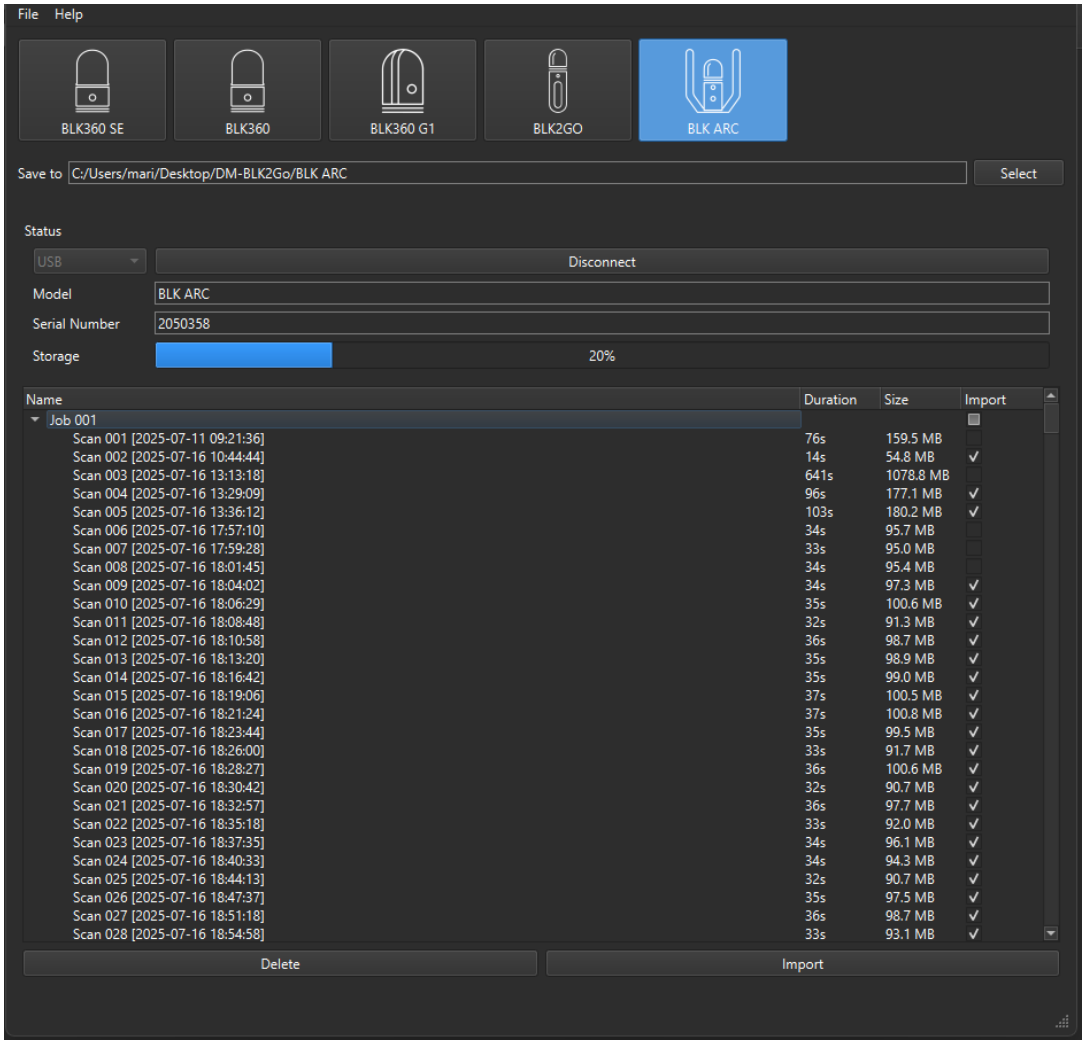
PinPoint v4.1 reinforces the value of being a reality capture software by bringing the full support of scanners and scans from the BLK2GO and BLK ARC to provide a complete experience with specialized functionalities.

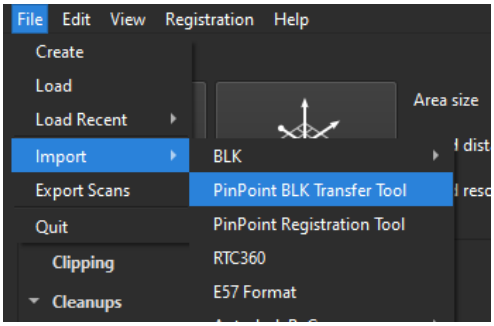
- *Direct Connection to BLK2GO and BLK ARC scanners*

  Now, you can directly connect to your BLK2GO and BLK ARC scanner by means of USB-C Cable or Wi-Fi using PinPoint BLK Transfer Tool or Registration Tool. From PinPoint BLK Transfer Tool:

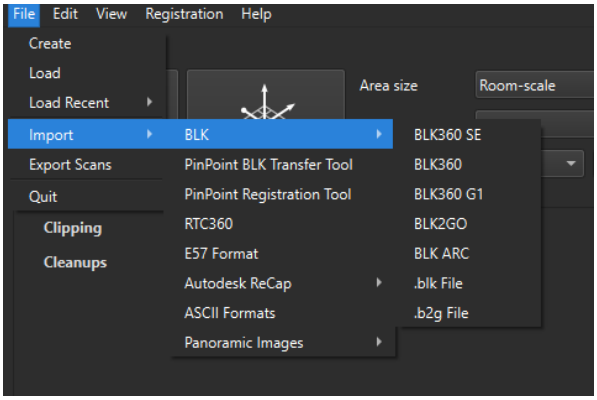


The PinPoint BLK Transfer Tool can connect and download scans. By default, all the scans are checked to be imported. In addition, BLK Transfer Tool keeps

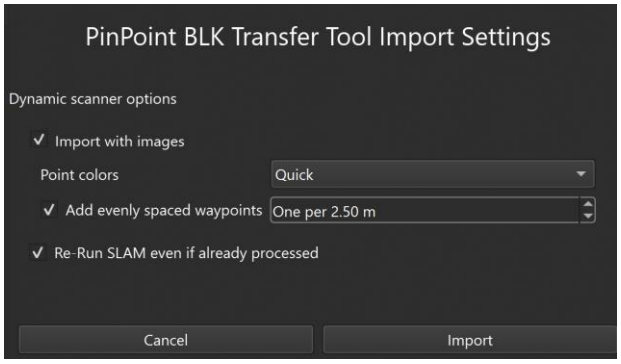
memory of scans that have been already downloaded; so, when connecting a later time to the scanner, the scans will be automatically unticked.
The download from **any** BLK scanners (dynamic or static) results in .saf file that contains jobs, geotags (and VIS info in case of BLK360 only) and information about the capturing scanner of each selected scan. For each scan, a .saf file is stored on your PC and can be used as back-up file of your scan.
Later, the .saf file can be imported in Registration Tool to generate a 3D scene, using File→ Import→ PinPoint BLK Transfer Tool:



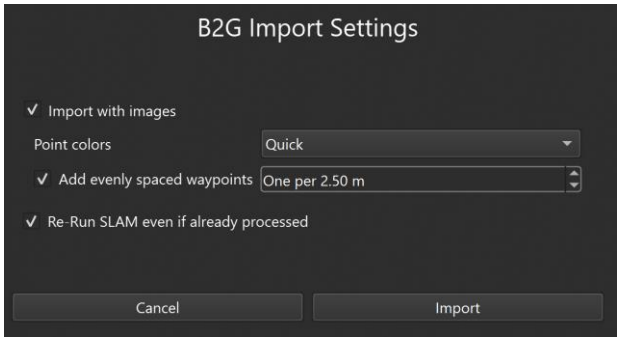
Direct connection to scanner can be achieved also in Registration Tool by using File → Import → BLK → Select from the list your scanner:



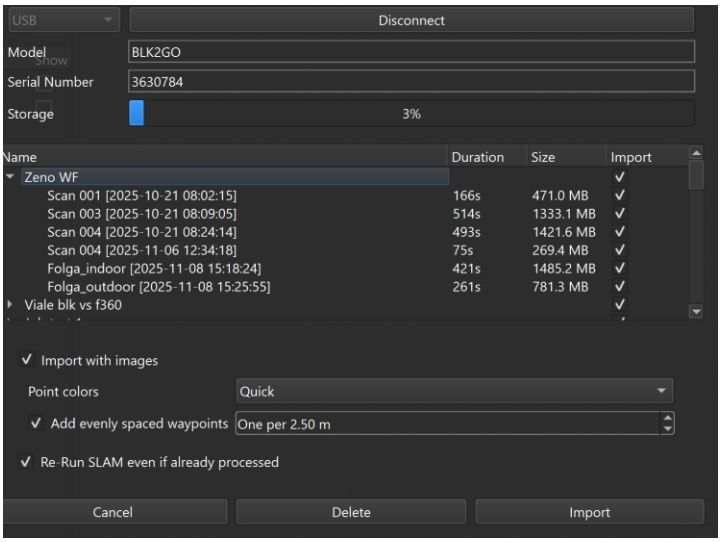
If you choose to import .saf files in the Registration Tool you are prompted to the PinPoint BLK Transfer Tool Import Settings:



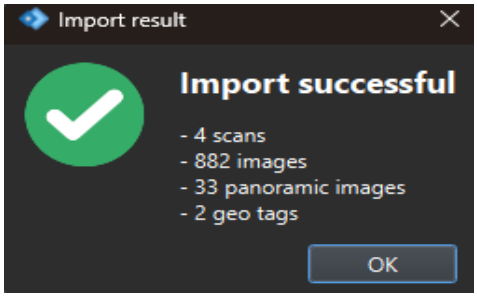
If you choose to import .b2g files in the Registration Tool, you are prompted to the B2G Import Settings:



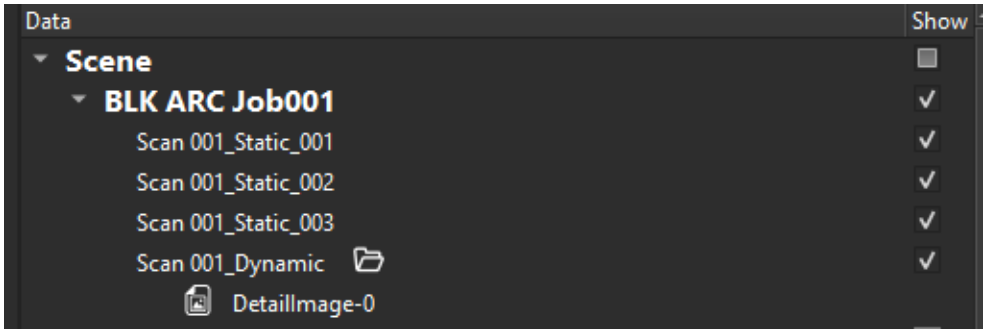
Instead, if you choose to direct connect to your BLK2GO or BLK ARC scanner using the Registration Tool, you will be prompted to this import window, in this case direct connection to BLK2GO:



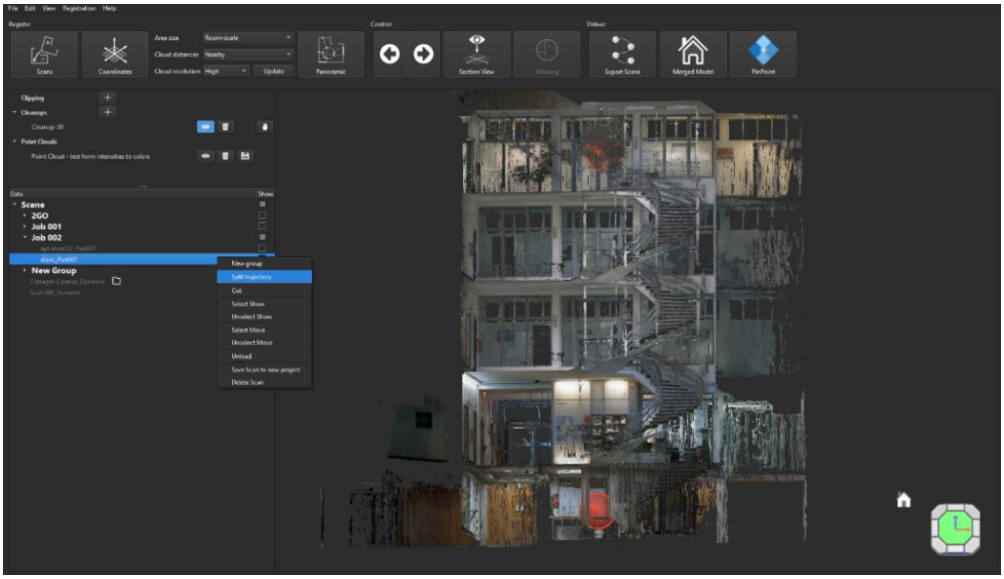
By default, all the jobs and scans stored into the scanner are selected to be imported. On this window, you can unselect/select, delete scans and set the import settings.
The import options of PinPoint BLK Transfer Tool Import Settings, B2G Import Settings and direct connection are the same. These are settings about import images to create panoramic images at the waypoints and colorize the pointcloud. If *Import with images* is ticked, pointcloud can be colorized by *Quick* or *Optimal* colorizer otherwise intensity values are used. The Quick colorizer option is faster circa x2 times than the *Optimal* colorizer. The waypoints can be created at an even distance that can be specified. Re-SLAM computation can be skipped if the file is already processed.
After importing, you will get notified about the result as an example here:



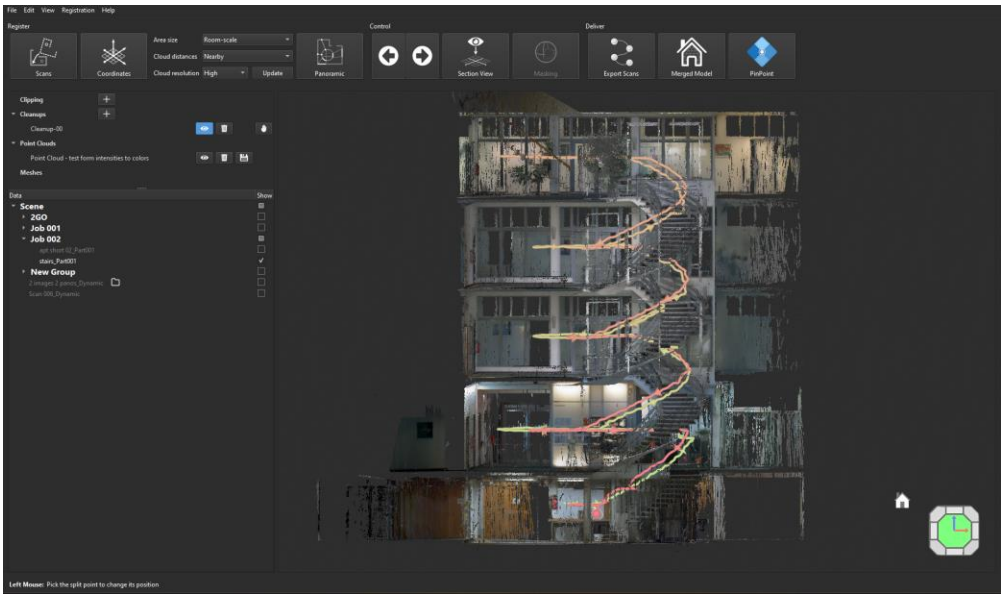
- *Static scan support for BLK ARC data*
  PinPoint can distinguish Dynamic from Static poses within a scan from BLK ARC data. BLK ARC scans are grouped in the navigation panel to have layers for any of the collected static scans and one unique layer for the dynamic scan. Geotags are associated according to the scans they belong to.



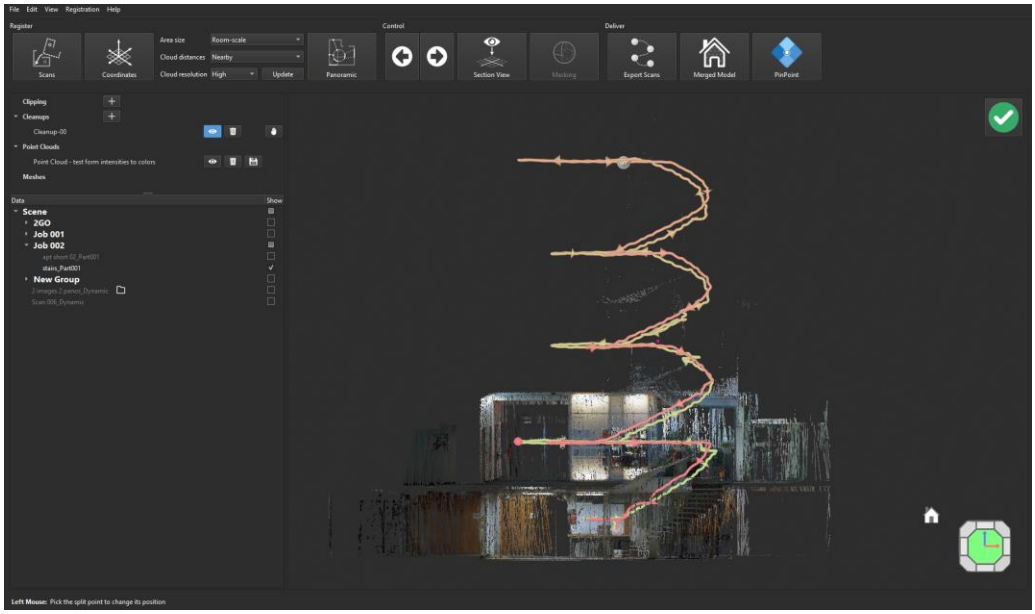
- *Trajectory split*
  BLK mobile scanner data can be split according to the selection. The benefit is to be able to trim pointcloud based on area of interest (i.e. multi-store building) or for excluding SLAM drift. It is applicable to dynamic scan layers only.
  Select the scan from the navigation panel, right click and select Split Trajectory.



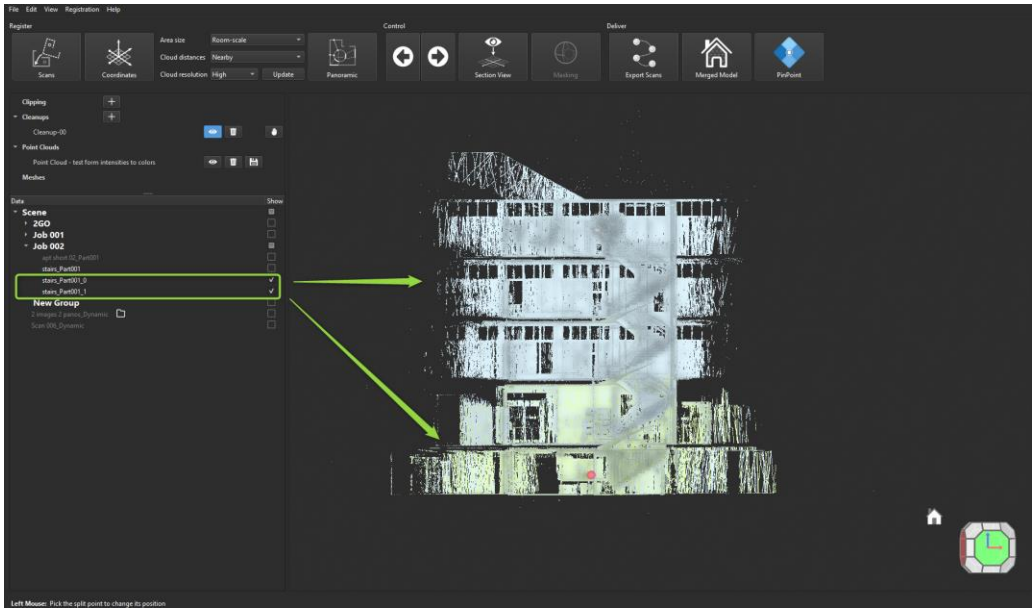
The split is possible by moving the small red sphere along the trajectory colored by timestamp.



Follow instructions at the bottom left and then confirm your selection with the green check to validate.

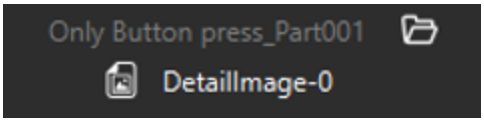


Finally, two new additional layers will be created as result of the split. Both new layers can be visualized, moved and exported.



- *Visual blend of pano-images and point cloud*
  Upon import, even distributed waypoints are set. In the 3D scene, these waypoints can be accessed by right clicking on the spheres; if you hold right click and move the mouse, you see nice transition between the pano-image on the waypoint and the point cloud.

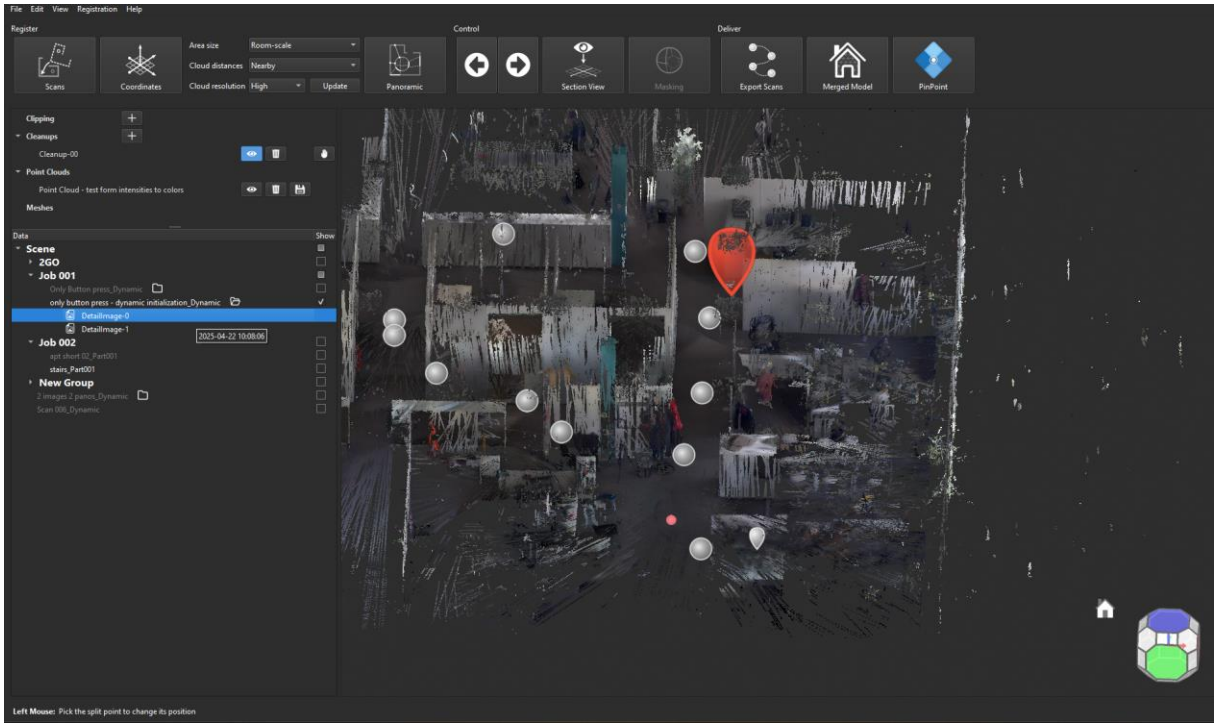
- *Detail camera image support for BLK2GO and BLK ARC*
  Each detail image captured during the scan via push button or field app is shown in the navigation panel as an item belonging to the scan. It can be accessed by right clicking. The detailed camera images are not rectified.



- *User requested panoramic image support for BLK2GO and BLK ARC*
  Each user requested panoramic image captured during the scan via push button or field app is imported by creating a waypoint in the 3D scene.

- *Jobs and Geotags from Cyclone Field 360 for BLK and RTC360 scanners*
  Jobs and geotags are important pieces of information that enriches the capture of the scene with some context. PinPoint is now capable of making use of this information for any BLK scanner supported and RTC360 data, keeping the same structure and information set during the collection of the data.

The job structure from the field app is preserved in your PinPoint project to better handle your scans and information. In the navigation panel, job is the container of all the scans belonging to it.
The geotags captured using field apps attached to 3D points in 3D scene are visualized by means of a pin. The geotags is accessible by right clicking in the scene or by selecting the layer in the navigation panel and then right clicking to open it. Hovering on the geotag layer in the navigation panel shows timestamp information and notes. Depending on the file type, geotags are shown using the default app assigned by the windows systems; for instance, image file opens by Image viewer, .pdf file opens using Foxit Reader, etc.…
Geotags are not exported from the Registration Tool.

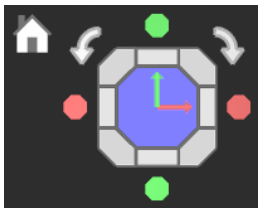


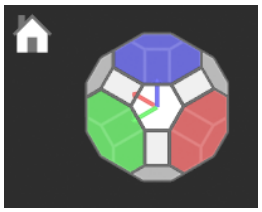
- *Render Option to show Intensities of point cloud*
  PinPoint Registration Tool and Modeler can show the pointcloud by intensity.
  View→ Point Cloud Colors → Intensities or using the shortcut from keyboard pressing F4.

- *New Navigation in Registration Tool and Modeler*
  The new navigation orientation gizmo helps the usability of the software and consists of:

- Home button
- Cube with faces and arrow

Every component can be accessed by right click of the mouse to navigate and apply the rotation/translation.



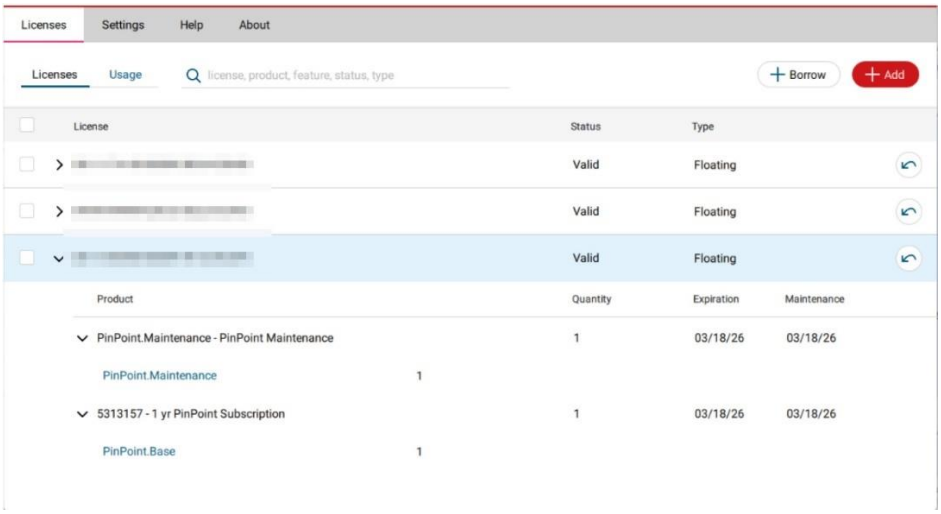


- *Language support extension*

  PinPoint is now available in Korean (KO).

- *Revised CLM Integration*

  The type of PinPoint license is Floating, and the status is Valid and not anymore Borrowed, as in the following image:



  In case of CLM version < 2.26, the status of the license is still shown as Borrowed. You need to upgrade to 2.26 and restart the application.

- *Extended logging of PinPoint and CLM*

  From Help → Show Logs → Download Logs, PinPoint + CLM logs are stored together for better customer support experience in case of technical issues.

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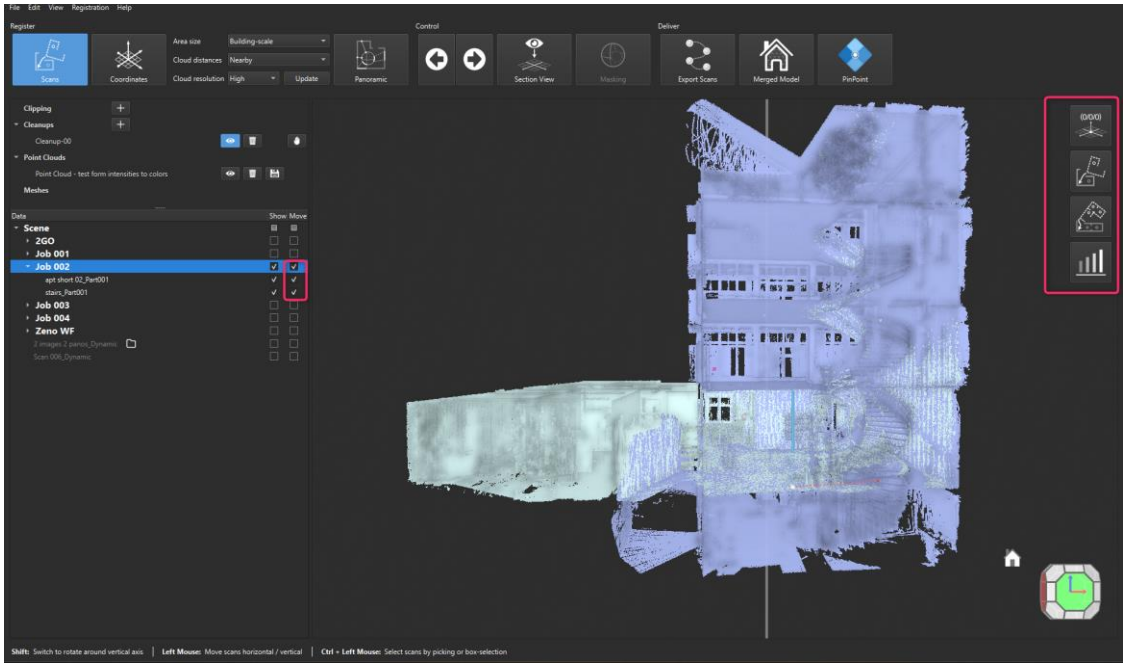
REGISTRATION TOOL

WHAT'S NEW

- New Colorizer: Best visual performance using the "*Optimal*" settings (processing time = 5x scan time); "*Quick*" settings with comparable visual quality, but 3x faster (processing time = 1.4x scan time).
- New revised UI of the Registration Tool that brings additional functionalities and usability to the software.
  Under Register section *Snap* and *Panoramic* buttons are added.

Snap button initiates the registration of any scans.

Pressing it will enable to *Move* scans in the navigation panel and use the commands *Snap Scans*, *Snap Group*, *Reset Transformation* and *Statistics* at the top right in the 3D scene, as on the image below:



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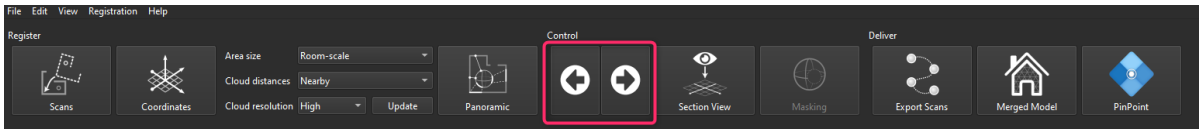
- New support for importing, registering, editing, and using external spherical panoramas (e.g. Insta360) for point cloud colorization and registration.

  - External spherical panoramas can be imported to Registration Tool
  - Automatic registration based on image features

(switching between panorama image on the left and point cloud on the right)

  - New interface for easy manual registration based on point correspondence
  - Panoramas can be used as input for point cloud and mesh colorization

- Under Control section, an easier way of navigating between scans or panorama images is made available by using the arrow left and right to go the previous or following scan/image respectively.



- Extended support of Leica format files in Registration Tool.
  Knowing the extended use of .blk format files downloaded from BLK Data Manager app or Webpage, PinPoint is now supporting this format file to enable new workflows of the BLK360 scanner family. The format file .blk can be imported using File → Import → BLK → .blk file

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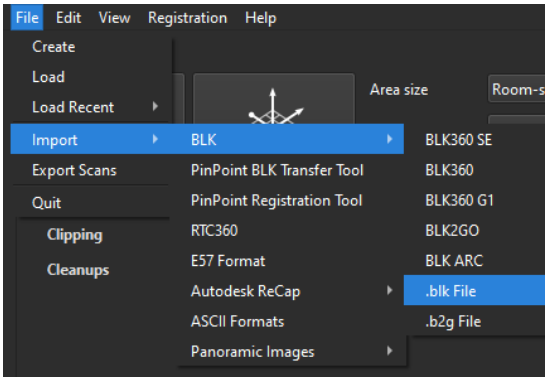

IMPROVEMENTS & BUG FIXES

- Improved memory usage and computation time of the colorizer
- Improved importer and renderer performance

MODELER

IMPROVEMENTS & BUG FIXES

- Fixed handling of long coordinate system
- Improved coordinate precision for geo-referenced exports (e.g., DXF files)

SOFTWARE COMPATIBILITY

Compatibility with:

- Client License Manager (CLM) version 2.26.0 or higher
- Leica BLK360 / BLK360 SE firmware 3.0.0 or higher
- Leica BLK2GO firmware 4.3.0 or higher
- Leica BLK360 G1 firmware 2.1.1
- Leica RTC360 firmware 7.0 or higher
- Cyclone Field 360 App 6.1 or higher

SYSTEM REQUIREMENTS

Operating System:

- Microsoft® Windows® 10 (64-bit) or higher

Minimum Hardware Specification:

- CPU: 6 cores: Intel i5-8th Gen, AMD Ryzen 5 2600 or higher

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- RAM: 16GB
- GPU: NVIDIA GTX 1660 (6GB VRAM), OpenGL® 4.3 or higher
- Storage: 256GB SSD with at least 1GB of space for installation

Recommended Hardware Specification:

- CPU: 12 cores: Intel i7-12th Gen
- RAM: 64GB
- GPU: NVIDIA RTX 3070 (8GB VRAM), OpenGL® 4.3 or higher
- Storage: 1TB NVMe SSD with at least 1GB of space for installation

USAGE

Data import formats: e57, blk, b2g, rtc360, pts, ptx, xyz, rcp, saf, srf, smf

Data export formats: e57, pts, ptx, ply, rcp, jpg, png, dxf, obj, off, stl, svg, saf

RECOMMENDATIONS

You must have administrative privileges on your computer to correctly install and license PinPoint.

To ensure optimal performance, it is required to configure the graphics card to high performance for each PinPoint module.

Please refer to the PinPoint User Manual (User Manual).

CONTACT SUPPORT

In need of help? Get in contact with the technical support team of your region using the contact support form available at BLK Support website here.

For more information about PinPoint please refer to the User Manual (User Manual) and the PinPoint website: https://leica-geosystems.com/products/laser-scanners/software/pinpoint.

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