

Leica Geosystems Release Notes

- when it has to be **right**

Leica
Geosystems

Product Leica Infinity
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From Kevin Hanson



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1 WELCOME TO INFINITY V3.2

We are very pleased to announce Infinity v3.2! Each Infinity release contains many enhancements and improvements throughout the application. Please read the following chapters carefully to learn more about what is new.

OVERVIEW:

WHAT'S NEW

- Connect to Bricsys 24/7 BIM Project Collaboration service
- Traverse adjustment by Least Squares method
- Create and download VRS reference data from HxGN SmartNet
- Determine Transformation includes Quick Ground method from Captivate
- Compute project coordinates using Quick Ground method for base point
- Reduce size of point clouds with sampling options
- Added point cloud clipping plane options
- Use digital elevation model data for base maps and orthophotos
- Time to process image orientation improvements
- And many more improvements listed in following chapters



2 INSTALLATION DETAILS

INSTALLATION INFORMATION

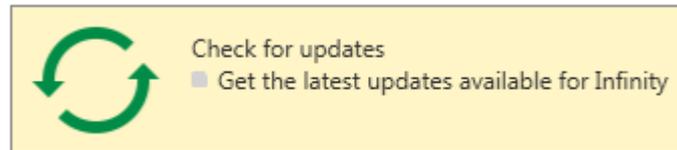
Leica Infinity v3.2.0	Build	Maintenance end date:
	3293	March 1 st 2019
<i>Infinity is available as a Windows 64bit only application</i>		

With an active CCP the users will be able to download and install this new version. Check that the maintenance end data is on or after the date listed above.

New users should download the latest version from the Leica myWorld support website.

CHECK FOR UPDATES

From Help & About choose **Check for updates**. When a new version is available you will be notified that the update can be downloaded from myWorld



OPERATING SYSTEM REQUIREMENTS

The following Microsoft® Windows™ operating system editions are supported:

- Windows 7
- Windows 8
- Windows 10 (recommended)

Note: you must have administrative privileges on your computer to successfully install Leica Infinity.

MINIMUM HARDWARE

- Display: 1024 * 768
- Input: Keyboard and mouse with wheel
- Processor: Dual-Core 1.8 GHz
- RAM: 8 GB
- Disk storage: 128 GB
- Graphics: DirectX9 compatible with 512 MB memory

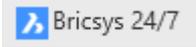
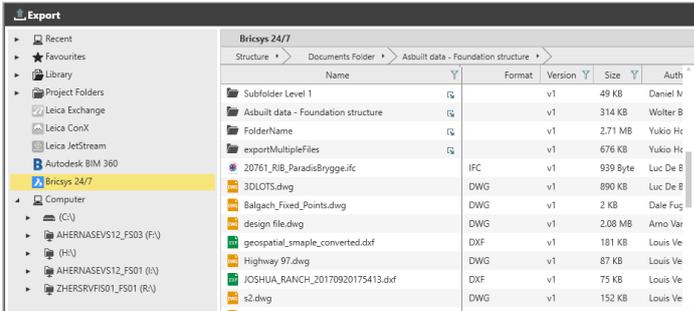
RECOMMENDED HARDWARE

- Dual Display: 1920 * 1280
- Input: Keyboard and mouse with wheel
- Processor: Multi-Core 2.4 GHz or greater
- RAM: 16 GB or greater
- Disk storage: 1 TB or greater
- Graphics: DirectX11 compatible 2 GB memory or greater

RECOMMENDED HARDWARE UAS PROCESSING

- Dual Display: 1920 * 1280
- Input: Keyboard and mouse with wheel
- Processor: Multi-Core (i7, i9, Xeon recommended)
- RAM: 32 GB or greater
- Disk storage: 1 TB or greater
- Graphics: DirectX11 compatible 2 GB memory or greater

3 BRICSYS 24/7 BIM PROJECT COLLABORATION SERVICE

<p><i>SERVICES</i></p> 	<p>For users having Bricsys 24/7 user access they can now log in and connect to the cloud service directly from Infinity. This gives users easy access to their projects and the data they need to prepare for field campaigns. Being connected also simplifies providing processed data and data deliverables to the project by uploading directly from Infinity.</p>
<p><i>IMPORT EXPORT</i></p> 	<p>Once connected to the service users can navigate the folders and data within the projects directly from the Import / Export windows.</p> 

4 TRAVERSE ADJUSTMENT

<p><i>LEAST SQUARES METHOD</i></p> 	<p>An additional method is available for traverse adjustment, it is now possible to adjust a traverse by Least Squares Method. This option is available for users having a Network Adjustments license.</p> <p>The default settings are taken from the Network Adjustment project settings, but the user can define them as required for each traverse within the Traverse Wizard.</p>
<p><i>REPORTS</i></p>	<p>The Traverse report has been updated to include the additional information supporting the adjustment by least squares.</p>

5 DOWNLOAD VRS REFERENCE DATA

<p><i>CREATE VRS</i></p> 	<p>For user having a HxGN SmartNet account its possible to download GNSS reference interval data defined by VRS technique. VRS is based on the principle of more precise modeling of distance-dependent systematic errors utilizing the reference network to compute corrections which minimize the tropospheric and ionospheric effects. Users can benefit by using this data to support their post processing campaigns.</p> <p>The user can decide if many VRS reference stations are created, for each rover, or to average rover positions and create a single VRS.</p>
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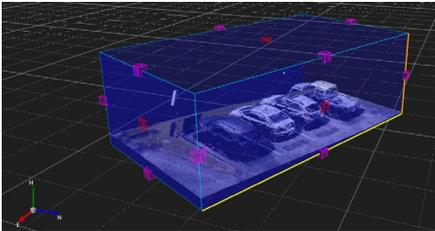
6 DETERMINE COORDINATE SYSTEM

<p><i>QUICK GROUND</i></p> 	<p>The Captivate field application Quick Ground has been added to the Determine Coordinate System wizard. Users can now easily create a local transformation in Infinity using this same method. Quick Ground lets the user move from a geodetic or grid coordinate to ground from a single point by either computing or entering the combined average scale value.</p>
<p><i>ONE POINT TRANSFORMATION</i></p>	<p>Users can now compute all transformation parameters using a single point, as is possible in Captivate. This includes using a single point in the One Step method. Refer to the Infinity Help for more details</p>

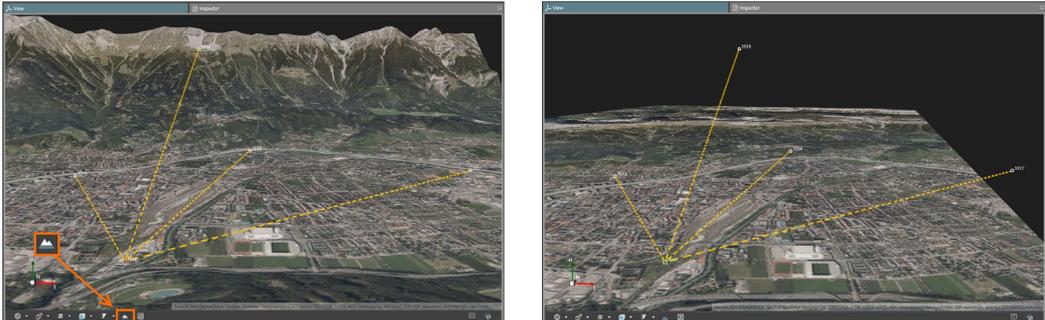
7 PROJECT COORDINATES

<p><i>BASE POINT METHOD</i></p> 	<p>Project Coordinates allow a user to apply a combined scale factor, and shift values, to arrive at local project coordinates. The project coordinates exist within a project without changing the master coordinate system.</p> <p>When using the Base Point method, the computation is using the Quick Ground method. This now keeps the selected point as the point to scale from as well as the point to compute the combined scale value.</p>
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8 POINT CLOUDS

<p><i>REDUCE POINT CLOUD</i></p> 	<p>The size of point clouds can be reduced by limiting the number of points. This can help users to work on smaller data sets without losing details.</p> <p>By selecting a point cloud or a point cloud group the user can reduce using three different sampling methods:</p> <table border="1" data-bbox="437 801 671 952"> <tr> <td></td> <td>By Percentage</td> <td>- Keep a percentage of points</td> </tr> <tr> <td></td> <td>By Count</td> <td>- Define the maximum number of points to keep</td> </tr> <tr> <td></td> <td>By Distance</td> <td>- Use an average minimum distance between points</td> </tr> </table>		By Percentage	- Keep a percentage of points		By Count	- Define the maximum number of points to keep		By Distance	- Use an average minimum distance between points
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	By Count	- Define the maximum number of points to keep								
	By Distance	- Use an average minimum distance between points								
<p><i>CLIPPING PLANES</i></p>	<p>General improvements have been made to how the user selects the points to define the clips and the drawing planes for easier navigation in the point clouds</p>									
<p><i>CLIPPING PLANES:</i></p> <p><i>BOX</i></p> 	<p>New method is added Fixed to Ground. This allows the user to create a clip box holding the elevation from the first selected point making it easier to define the box along the ground.</p> 									

9 USE DIGITAL ELEVATION MODEL DATA WITH BASE MAPS AND ORTHOPHOTOS

<p><i>3D TERRAIN</i></p> 	<p>Enable the 3D Terrain mode in the graphic view to visualize elevation differences when using background images. Images provided by map services or from georeferenced orthophotos will be draped to digital elevation model data. This feature can be very useful for reviewing project work or for planning field campaigns. This feature currently works only when connected to internet.</p> 
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10 POINT CLOUDS FROM IMAGES – ORIENTATION PROCESSING IMPROVEMENTS

<p><i>ORIENTATION</i></p>  <p>Orientate</p>	<p>Several improvements have been made to the Orientation of Images routine. The general robustness of the orientation processing has been improved to handle larger number of images and different camera parameters. As well, the processing times for orientation of images is improved respective to the number of images being processed. Users will see the time to orientate is reduced specifically when working with larger number of images.</p>
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11 IMPORT DATA

<i>TIFF</i>	Import TIFF or TIFF + TFW image files to the project for use as background image or to link to feature data.
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12 EXPORT DATA

<i>GSI</i>	Level Lines have been added to the GSI Export settings
<i>HEXML</i>	Level Lines will be included in the HeXML exports (v1.9) when level data exists in the project.
<i>ASCII</i>	Export convergence angle
<i>ASCII</i>	All scale values can be exported to 12 decimals
<i>JETSTREAM</i>	The JetStream service is removed for this release. We have found an issue on the pushing of data to the service and work to have the solution available for the next release.

13 GENERAL APPLICATION IMPROVEMENTS

<i>REPORTS</i>	Its now possible to launch a report for a feature or data processing event direct from the context menu and not just from the ribbon bar.
<i>REPORTS</i>	The 3D Classical Transformation report now includes residuals along with the points used.
<i>REPORTS</i>	Included in the Network Adjustments report are the local grid coordinates along with the WGS84 geodetic values when a coordinate system is set to the project.
<i>FILTERING</i>	Additional filter options have been added to the Inspector tables and grids that let the user filter by date or by several conditions such as less than / greater than
<i>POINTS</i>	Convergence angle is now an option to show in the points list
<i>POINT CLOUDS TO IMAGES LICENSE</i>	Fixed for users working with a single user floating license, its no longer needed to check out the Point Cloud from Images license to process images.
<i>REGIONAL SETTINGS</i>	Fixed several cases where specific characters used for decimal were ignored on export
<i>INSPECTOR</i>	Fixed is when having the Layers window open and docked, that the general Inspector content could disappear.