

# MicroSurvey CAD 2016 SP1

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## *Features and Benefits*

MicroSurvey CAD 2016 marks an unprecedented leap forward in usability and productivity, including a streamlined interface and a point cloud engine running on Cyclone. MicroSurvey CAD 2016 Service Pack 1 is a maintenance release that provides further improvements.

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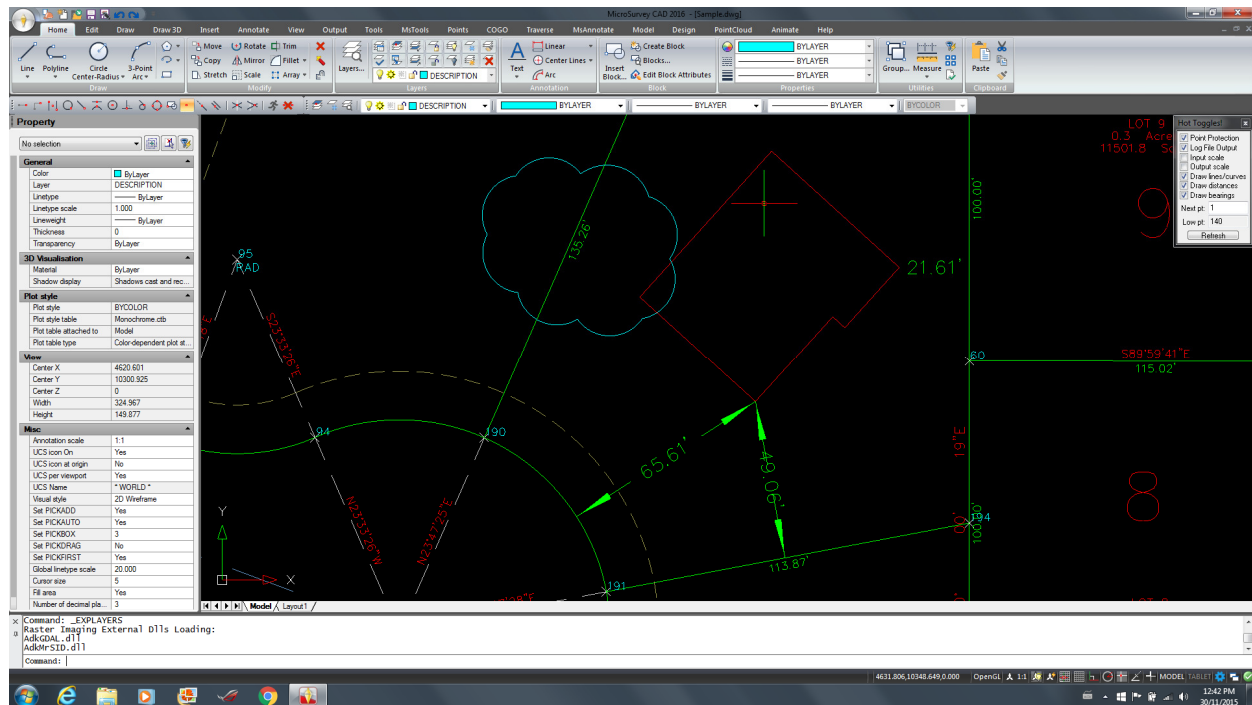
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## MicroSurvey CAD 2016

Release Date: November 30, 2015

### New: IntelliCAD 8.1

Upgrade Tour Movie: [click here](#)

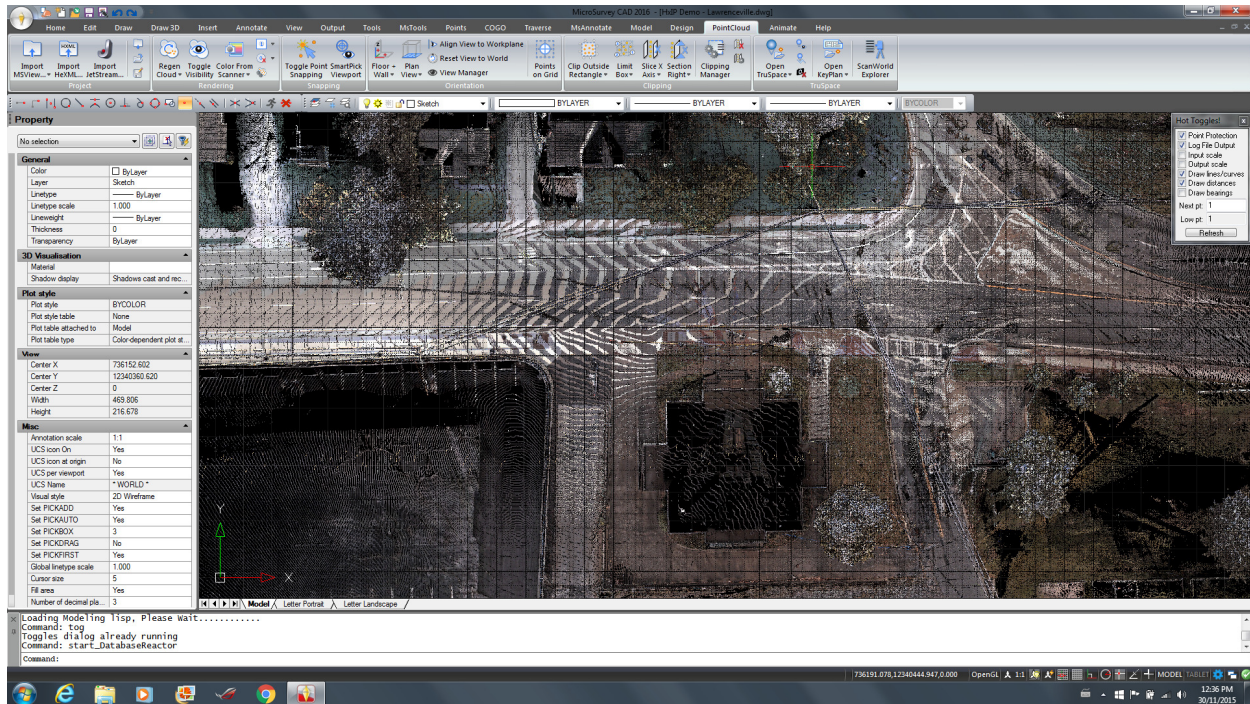


Feature	Benefit
Ribbon Interface	Ribbon interface, with high-resolution icons, provides intuitive and efficient access to all commands and controls, in a modern interface with a similar look-and-feel to other major CAD products.
Multiple Workspaces	The supplied Default and Legacy workspaces provide flexibility and choice between the new ribbon interface or the old menus-and-toolbars interface similar to previous versions.
DWG 2013 support	Read and write the latest 2013 format .dwg files from AutoCAD 2013-2016.
DGN Support	Attach DGN files as an underlay, Import DGN files to a drawing, and Export drawings to DGN.
New commands	Draw revision cloud, draw helix, xplode blocks, convert text to mtext, use annotation scaling, edit blocks and xrefs in place, attach/import/export DGN files, publish multiple drawings and sheets, print to DWF/DWfX files, Match Properties dialog, Set ByLayer, and more.
Autocomplete Commands	Initiating commands, aliases, system variables and more at the command line is faster and easier.



## New: Point Cloud Module

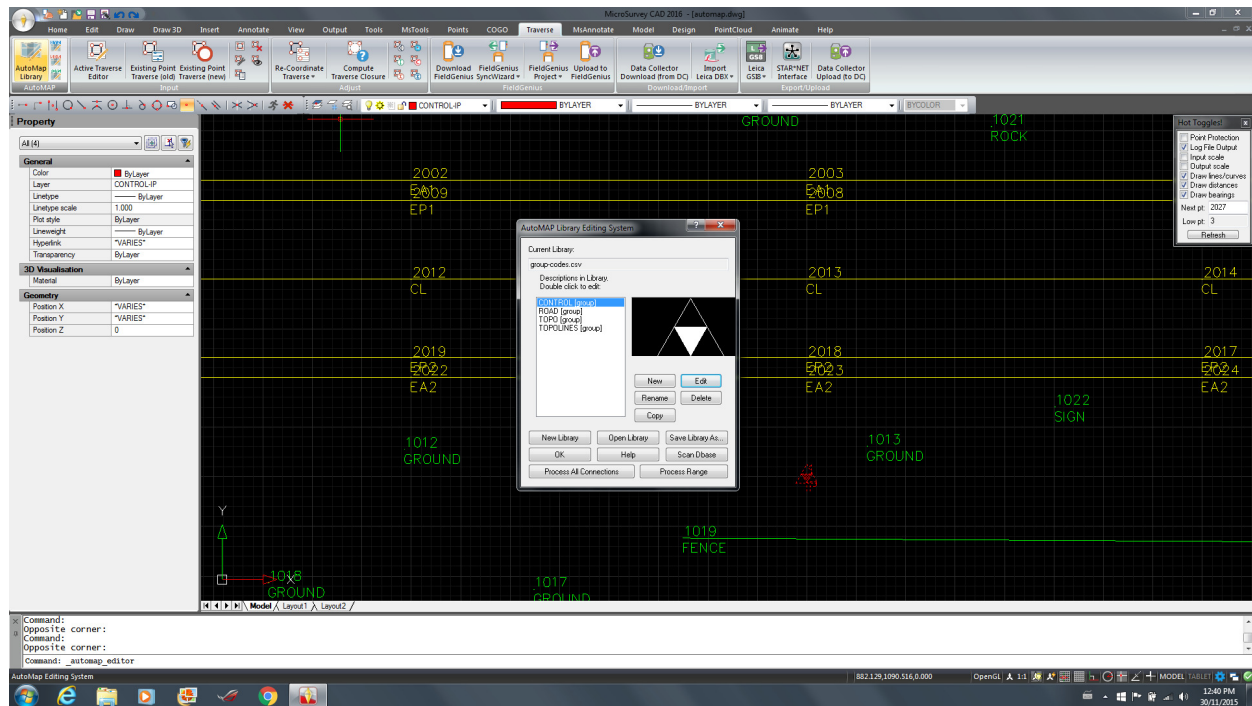
Upgrade Tour Movie: [click here](#)



Feature	Benefit
Point Cloud in CAD Model Space	Point Cloud data is now displayed directly within your CAD model space, and you can snap to the point cloud points using standard CAD tools.
New Point Cloud Tools	Dozens of new point cloud tools are now available for working with your point cloud data.
Leica EpcA engine	MicroSurvey CAD Ultimate is powered by Leica EpcA (Embedded Point Cloud for Applications), which is the same point cloud engine that powers other Leica Cyclone and Leica CloudWorx.
Compatible with Leica Cyclone	MicroSurvey CAD Ultimate uses Leica Cyclone as its native point cloud database, providing a streamlined workflow. Leica ScanStation users are no longer required to export their Cyclone databases to a .pci file, and non-Leica users are no longer required to convert their scan files to a .pci file for use with MicroSurvey CAD.
Compatible with Leica JetStream (requires Leica JetStream license)	For best performance, Cyclone databases can be upgraded to JetStream, providing fast, realtime point reloads with unlimited points.
Compatible with 3 <sup>rd</sup> party formats	Point cloud data in various formats from other manufacturers can be imported into a Cyclone database, including exchange formats include LAS, E57, XYZ, PTS, TXT, and more, as well as third-party formats from FARO, Riegl, and Z+F.



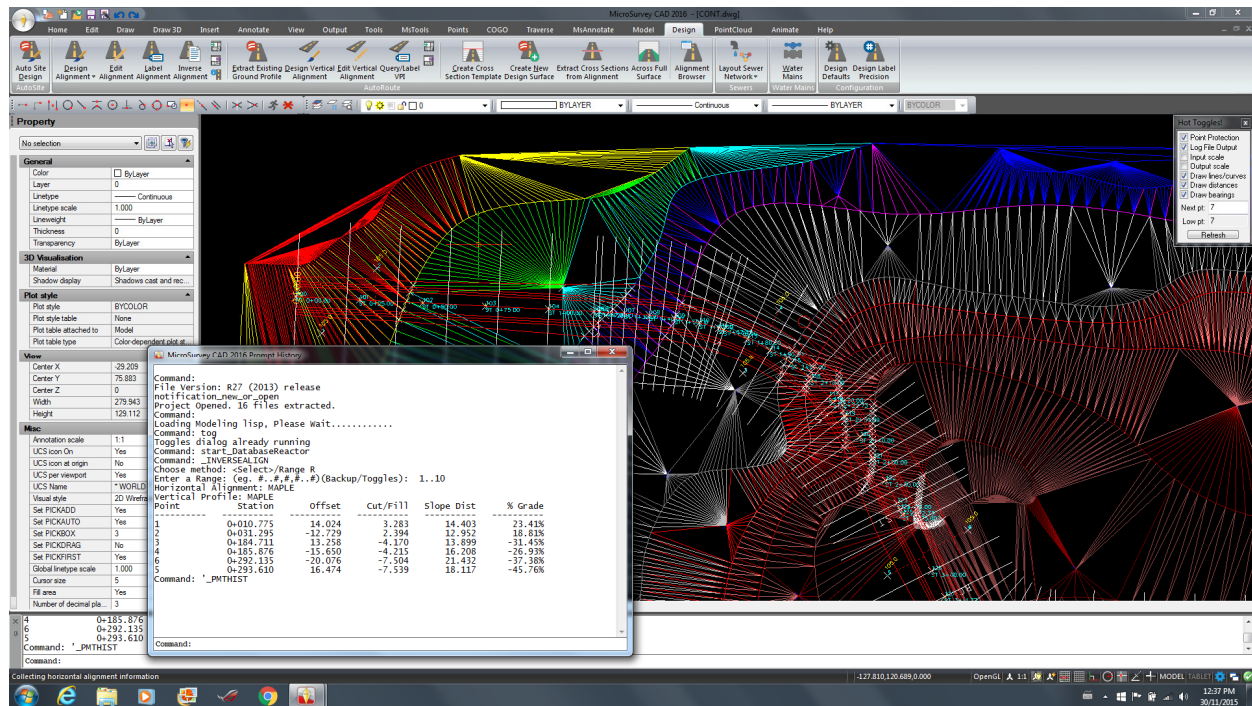
Upgrade Tour Movie: [click here](#)



Feature	Benefit
Group Codes	Use the new Group Codes option to use a single AutoMAP Library entry for multiple, related point descriptions. For example, use a CONTROL group for all your control-related field codes like IP,OIP,PIN,POST,MON, a TOPO group for topographic-related field codes like GND,ROCK,TREE, and ROADING group code for all your roading-related field codes like CL,EP,EG,EA. Control how the points in each group are drawn, including their Layer, Color, Symbol, Linework and much more.
Group Range	Use the new Group Range option to use a single AutoMAP Library entry for all points in a specified range. For example use a CONTROL group for all points in to 1..999 range, a TOPO group for all points in the 1000..1999 range, and a ROADING group for all points in the 2000..2999 range, etc, regardless of their actual field code. Control how the points in each group are drawn, including their Layer, Color, Symbol, Linework and much more.

## New: Inverse Points to Alignment

Upgrade Tour Movie: [click here](#)



### Feature

Inverse Points to Alignment

### Benefit

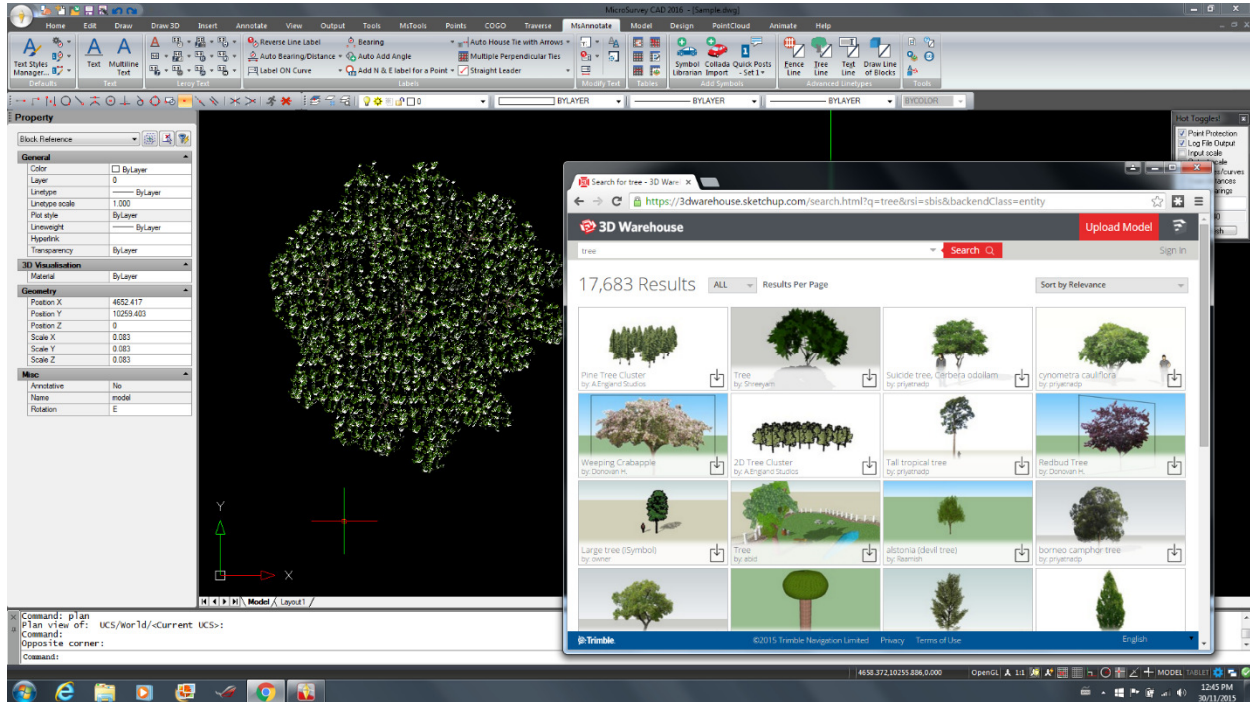
You can now quickly inverse a range or selection of points to a specified road alignment, including both its horizontal and vertical components.

Inverse Report

Quickly tabulate the station, offset, cut/fill (delta Z), slope distance, and slope grade.

## New: Import Collada Models

Upgrade Tour Movie: [click here](#)



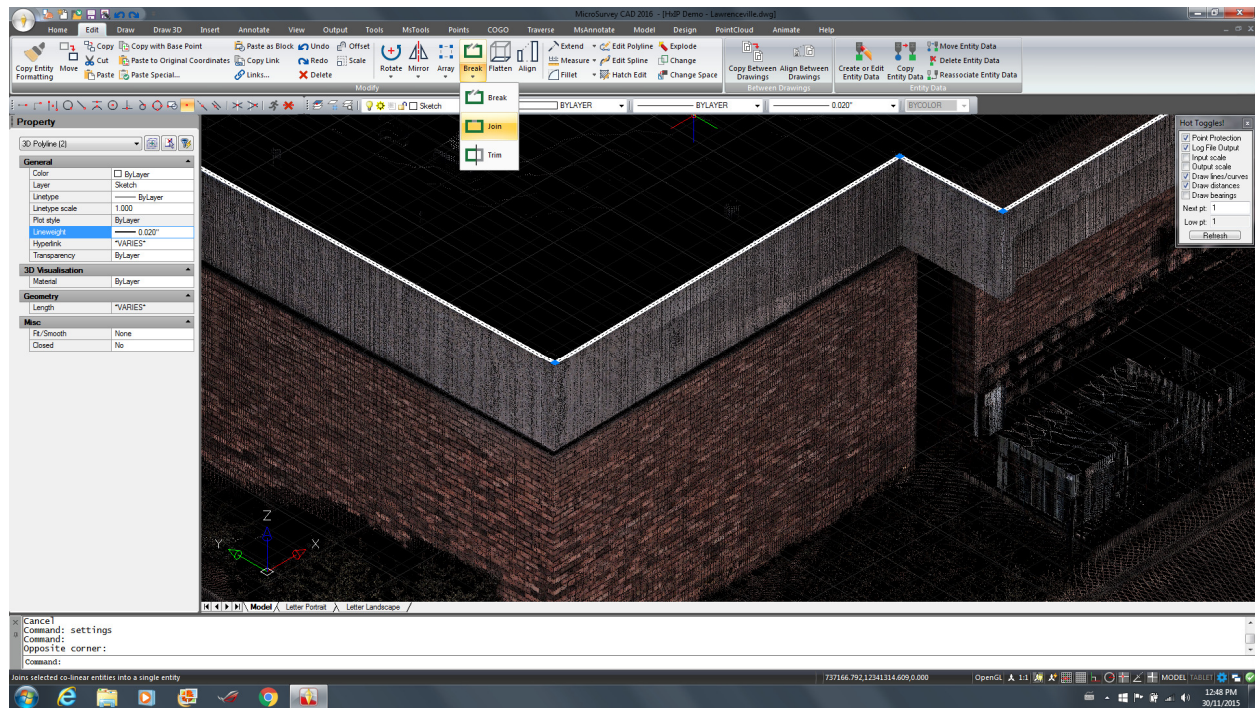
Feature	Benefit
SketchUp™ 3D Warehouse™ Support	Import .kmz or .dae models downloaded from the <a href="#">SketchUp 3D Warehouse</a> , an online repository containing millions of 3D symbols.
Add 3D models to Symbol Library	Imported models are automatically added to your Symbol Library so they can be reused easily in other drawings.

SketchUp and 3D Warehouse are trademarks of Trimble Navigation Limited.



## New: Join 3D Polylines

Upgrade Tour Movie: [click here](#)



### Feature

3DPolyline support in Join command

3DPolyline support in Edit Polyline command

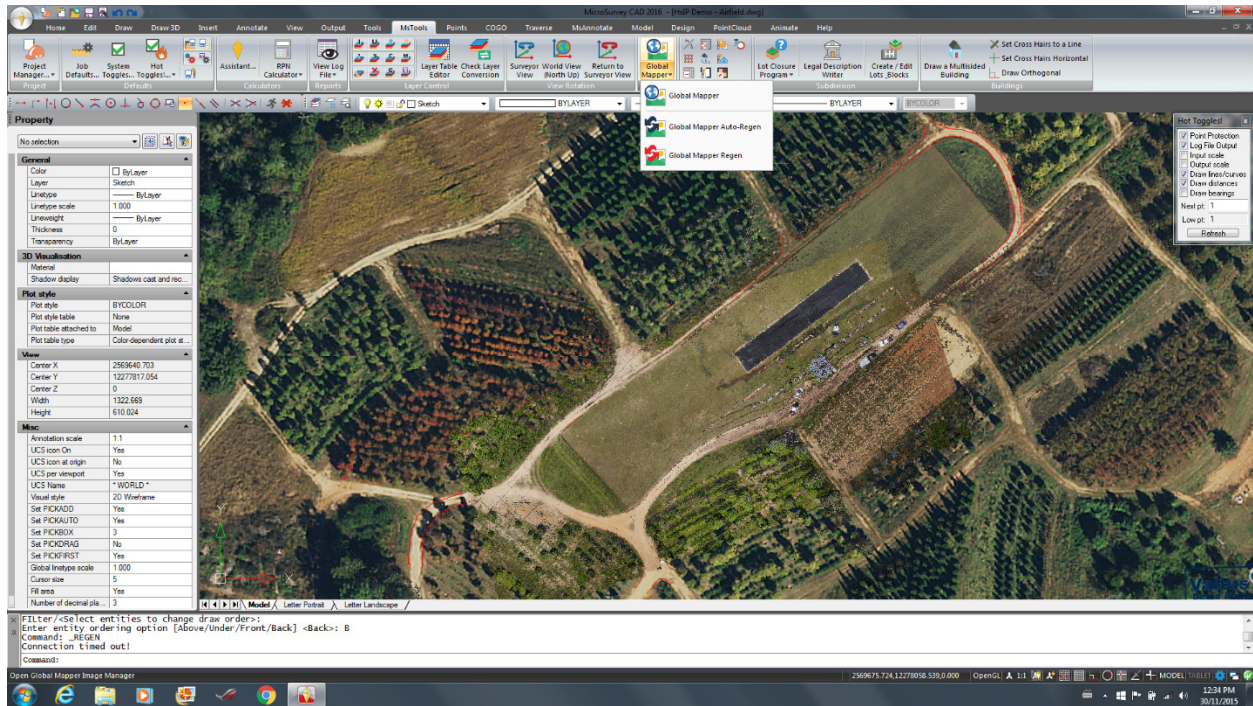
### Benefit

Easily join 3DPolylines with the JOIN command, which previously only supported Lines, Arcs, and 2D Polylines.

Easily join 3DPolylines with the Join option in the EDITPOLY command, which previously only supported Lines, Arcs, and 2D Polylines.

## Enhanced: Global Mapper Imagery

Upgrade Tour Movie: [click here](#)



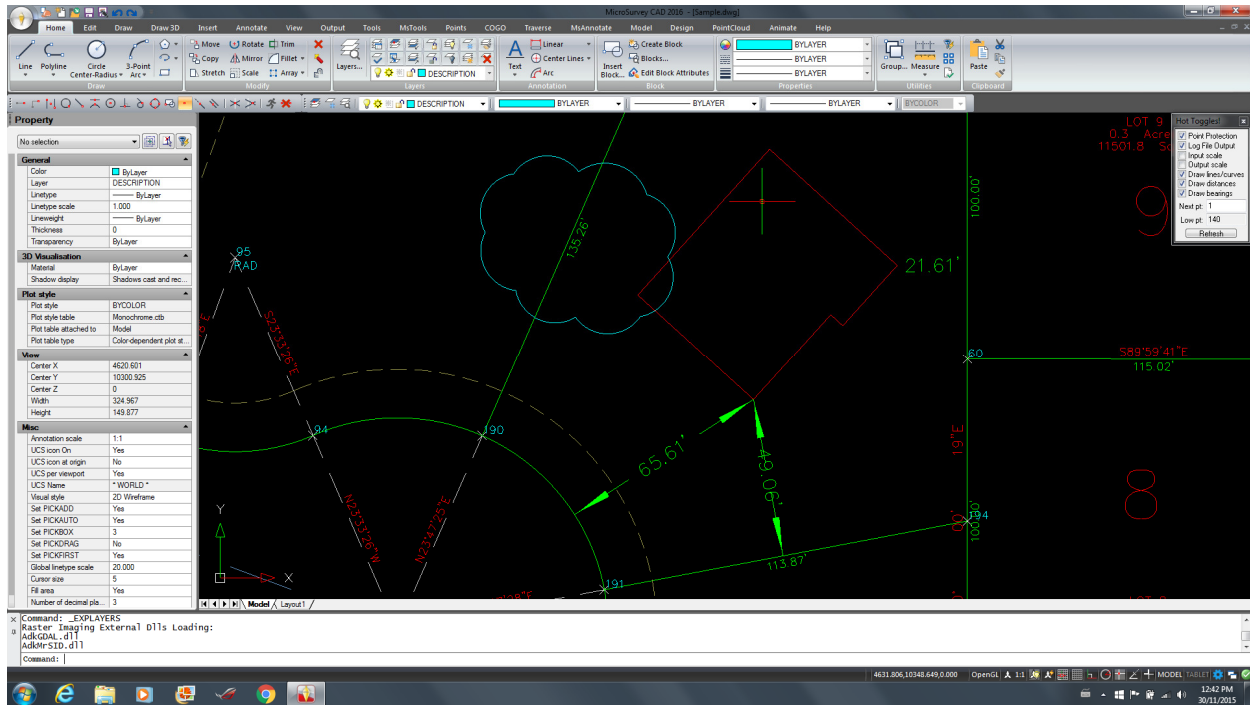
Feature	Benefit
General Improvements	Many improvements to the global mapper command, including performance improvements, support for more coordinate systems, and bug fixes.
Print Imagery	Global Mapper Imagery can now be printed via the PRINT command like other drawing elements, for permanent archival and record.
Imagery Regeneration Modes	Automatic regeneration of imagery from online sources can be disabled and the imagery can be regenerated manually, for improved performance.
Hexagon Imagery Program (HxIP)	HxIP has been added to the default list of online data sources for easier access to Hexagon Imagery Program. (An HxIP trial or subscription account is required for access.)

## MicroSurvey CAD 2016 SP1

Release Date: May 31, 2016

### New: IntelliCAD 8.1b

Upgrade Tour Movie: n/a

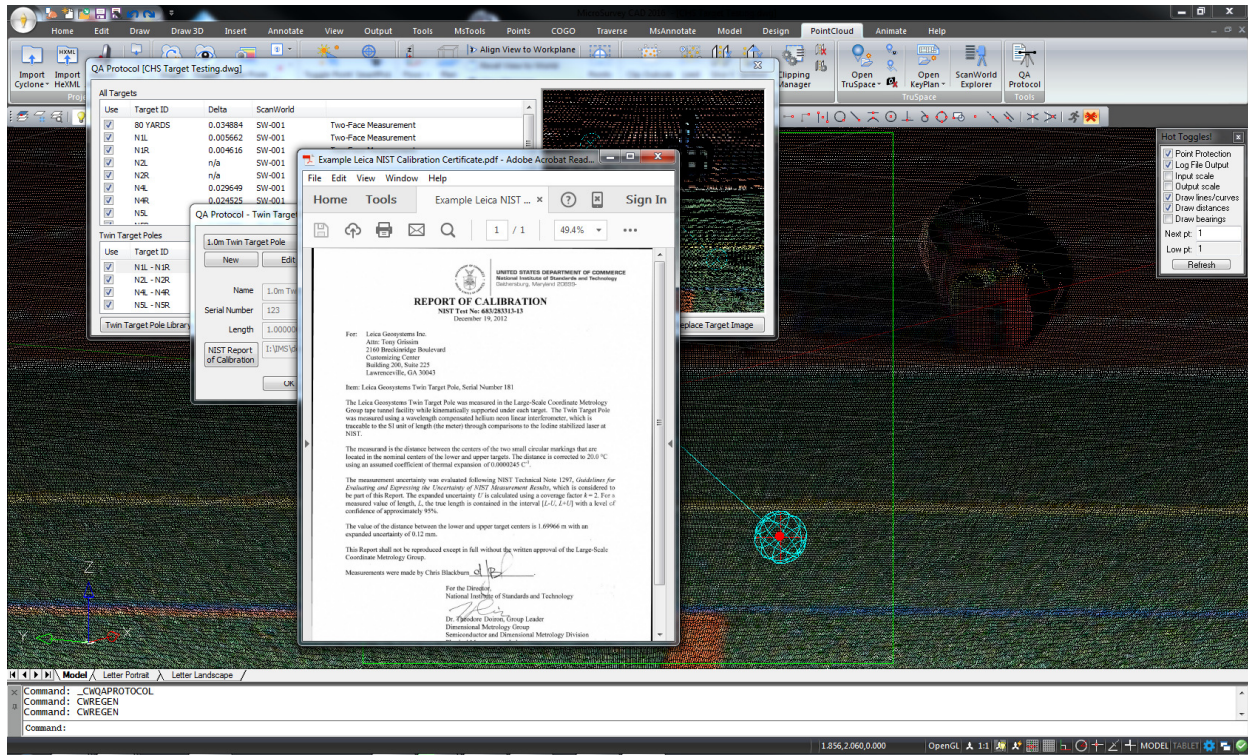


Feature	Benefit
Maintenance Release	IntelliCAD 8.1b is a maintenance release which includes over 140+ fixes since the IntelliCAD 8.1a release which powered MicroSurvey CAD 2016.
Automatic workspace saving	Your workspace (including customizations to your menus, toolbars, and ribbons) is now automatically saved when you exit the program. Toolbar placements, changes to the ribbon, and so on will be retained the next time you open the program.
NVidia Quadro stability	Stability with various NVidia Quadro video cards has been improved, so turning off Hardware Acceleration is no longer required in most cases.



## New: Scanner QA Report

Upgrade Tour Movie: n/a



### Feature

### Benefit

#### Two-Face Scan Report

Two-Face Scans – that is, a target that is scanned with both the direct and reverse face of the ScanStation – can be used to generate a QA report that validates the functionality of the scanner and the accuracy of the resulting scan, by comparing the small differences between the registered position of the target as determined for each face. (Cyclone 9.1.3 or newer is required for importing the two-face target data.)

#### Dual-Target Report

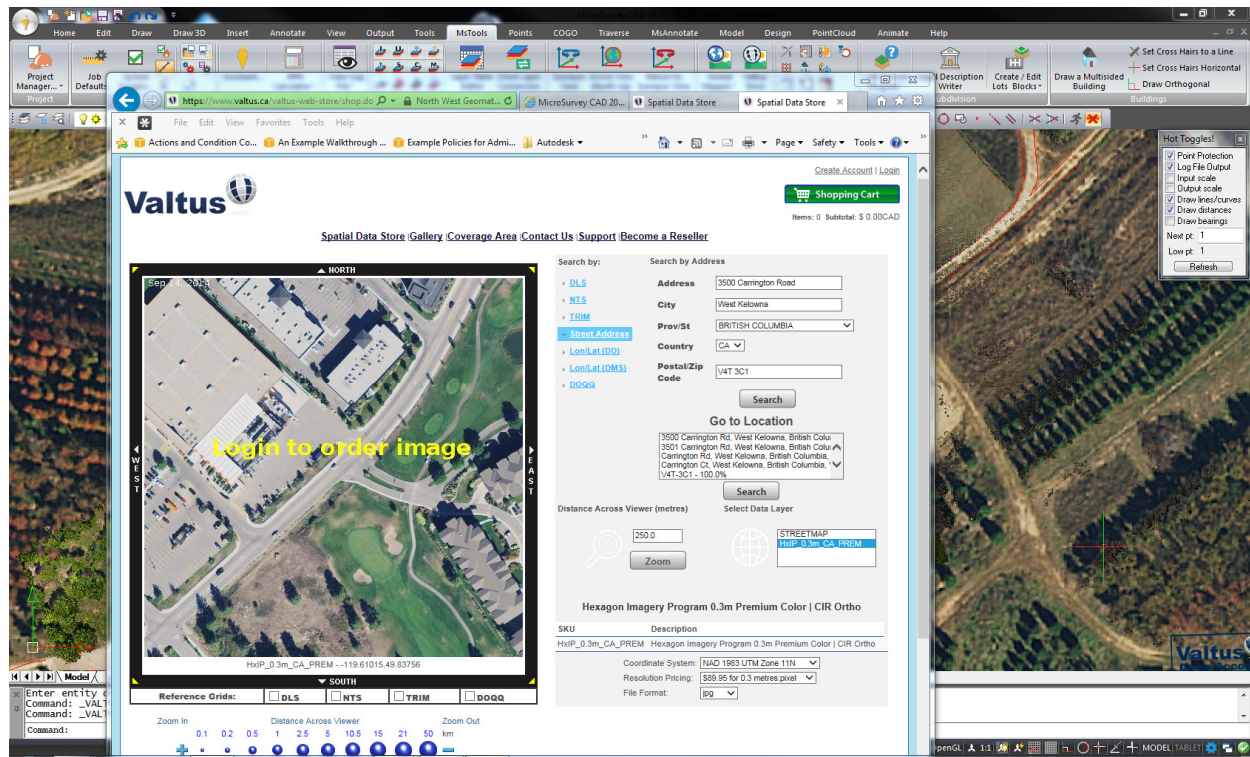
Scanned Leica Geosystems Dual-Target Poles – that is, two targets fixed on an assembly that has been independently measured by the National Institute of Standards and Technology (NIST) – can be used to generate a QA report that validates the functionality of the scanner and the accuracy of the scan, by comparing the small differences between inter-target distance as scanned and as measured by NIST.

#### PDF Output

The QA reports are generated in PDF format for easy archival, and includes a screenshots of the scanned targets for easy interpretation.

## New: Valtus Store

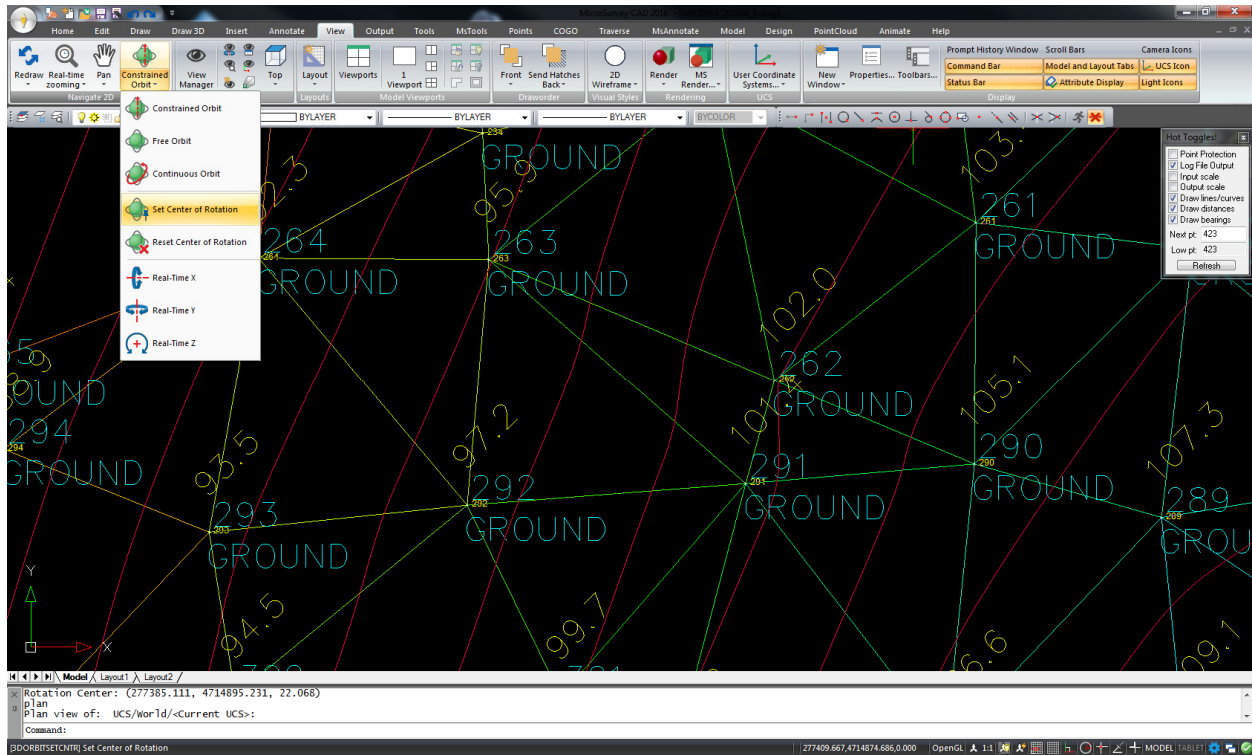
Upgrade Tour Movie: n/a



Feature	Benefit
Valtus Store	Easily access and purchase high-resolution aerial imagery from the Valtus Online Store.
Official Partner	Valtus is a Hexagon Geosystems company and MicroSurvey is an authorized Valtus and HxIP (Hexagon Imagery Program) reseller.

## Enhanced: 3D Orbit

Upgrade Tour Movie: n/a

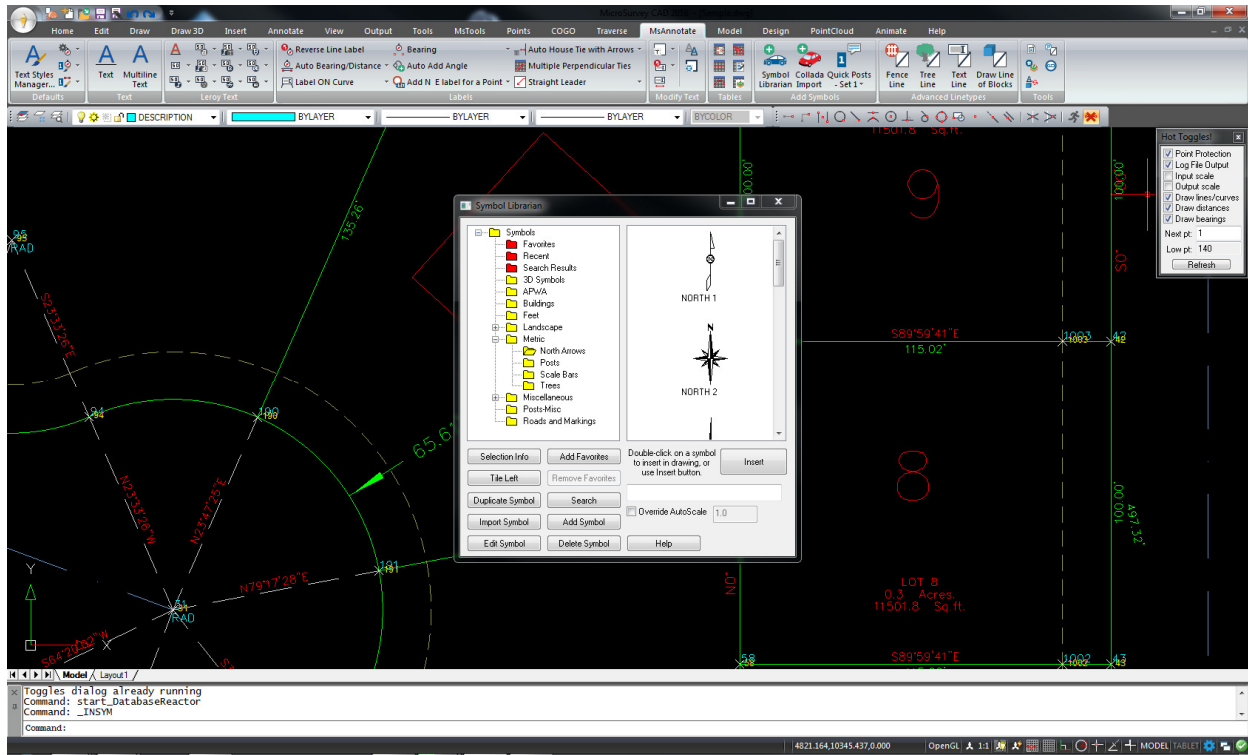


Feature	Benefit
Improved dynamic orbit	The algorithm used to automatically determine the center of rotation has been improved to ignore objects that are outside the current view. This makes dynamic orbiting (ctrl + drag left mouse button) more intuitive and predictable.
Set center of rotation	Set a specific point to use as the center of rotation.
Retain center of rotation	A point that is set as the center of rotation is retained until it is changed or reset, instead of having to manually Set it again in each 3D Orbit operation.
Reset center of rotation	Reset a previously set point and revert to using an automatically determined center of rotation based on the current view.



## Enhanced: Symbol Librarian

Upgrade Tour Movie: n/a



Feature	Benefit
Add Symbol	Create a new symbol directly into the selected folder in the symbol library.
Import Symbol	Import an existing drawing file into the selected folder in the symbol library.
Edit Symbol	Open and edit the selected symbol in the symbol library.
Duplicate Symbol	Duplicate the selected symbol in the symbol library with a new name.
Delete Symbol	Delete the selected symbol from the symbol library.