

# Map360 Release Notes

October 12, 2018

---

## Release History

[Map360 2.1 Release \(v2.1.1.8205\) – October 12, 2018](#)

[Map360 2.0 Release \(v2.0.1.7502\) – May 8, 2018](#)

[IMS Map360 1.3.1 Release \(v1.3.1.6288\) - September 29, 2017](#)

[IMS Map360 1.2 Release \(v1.2.1.4823\) - December 30, 2016](#)

[IMS Map360 1.1 Release \(v1.1.5.3753\) - May 13, 2016](#)

[IMS Map360 1.0a Release \(v1.0.4.2759\) - October 6, 2015](#)

[IMS Map360 1.0 Release \(v1.0.3.2659\) - September 14, 2015](#)

---

## Notes

[Online instructions for activating your USB dongle](#)

[Important information about IMS Map360, including system and software requirements](#)

[Online resources, support and help](#)

[Online movies](#)

[Point cloud module requirements](#)

---

## Map360 2.1

*Release Date: October 12, 2018*

[Online movies reviewing the new features](#)

### Important Announcement

Effective August 2018 MicroSurvey Software Inc. will no longer produce a 32-bit version of Map360.

We will continue to distribute both 32-bit and 64-bit versions of current and legacy Map360 releases through the IMS Helpdesk. MicroSurvey Software Inc. will continue to provide technical support to any customer with a current Annual Maintenance Subscription contract for both 32-bit and 64-bit versions of its current and supported legacy releases. If you have any questions or concerns, please contact MicroSurvey Software Inc. at 1-800-668-3312 or +1-250-707-0000.

### New Features

Dynamic labeling

- Label Horizontal (Azimuth) angle - between 0 and 180 degrees, except for between lines
- Label Vertical (Elevation) angle – between 0 and 90 degrees, measured from the horizon
- Labels include drawing elements such as text masking, end markers, angle arc, and plane
- Labels automatically update to face the camera when moving within the scene
- The labeling components are set to a default SKETCH – LABELS layer
- Create a new layer for your labels by typing the name directly in the dialog
- The point cloud options are grayed out if a point cloud is not present

### Seek

- The seek function allows users to define a target point for the camera to rotate around
- Replicated from Cyclone
- Pressing “s” on your keyboard executes this command also
- Automatically turns on node and end point snaps

### \*.LGS Import

- Support for the new \*.lgs file format that is published by Cyclone Publisher Pro.
- It is a local read-only file that can be opened locally on the user's computer
- High speed rendering of point cloud data
- LGS does not require Cyclone or a Jetstream server to be installed

### Essentials Tab

- A tab has been added with a custom ribbon that contains the essential tools for importing data and creating a diagram

## Enhanced Features

### Advanced Linetypes

- Improvements and bug fixes to the Advanced Linetypes feature
- Ability to draw in large coordinates
- Customize the Advanced Linetypes properties in the dialog or properties panel
- Convert existing polylines to an Advanced Linetype in the dialog or properties panel
- The edit commands work with Advanced Linetypes

### Label Distance

- The labels are now dynamic and will update to always face the user after they have been drawn
- A text masking has been added as an option to ensure the label is visible
- Improvements to the dialog including adding tabs to the dialog for horizontal and vertical angle labels
- Feature name has changed to Dynamic Labeling

### Bullet Path Reconstruction

- Included a simple jogger to adjust the start position of the trajectory rod
- If a point cloud is not present, a message will now appear
- Trajectory cones and lines will be set to the default SKETCH – CONES layer

### Workplane mode

- When the workplane mode is enabled, lines will be forced to draw to the workplane, which is always the current XY plane

### Evidence Markers

- The user is now able to organize the order of the evidence markers in the legend and report
- The legend is inserted as a group instead of individual entities

### Symbol Librarian

- Metric scale bars have been added to the library (5m, 10m, 20m, 25m)

#### **Draw Order**

- Front and back draw order have been added to the options when you right click on an entity

#### **Point Cloud Engine Update**

- Updated to latest Leica EpcA API 3.2
- Support for latest Leica Geosystems Cyclone 9.3. Older versions also still supported
- Support for latest Leica Geosystems JetStream 1.5. Older versions also still supported
- Support for latest Leica Geosystems Cyclone Register360 1.5
- Support for Leica Geosystems new \*.LGS file format
- JetStream no longer requires Cyclone to be installed to import a point cloud
- Auto regeneration of Cyclone point clouds

#### **Important Fixes**

- [D9323] – The QA Report no longer has the version number duplicated in the footer
- [D9466] – Label Distance now works if a UCS other than world is set
- [D9501] – Selecting Draw on the Dynamic Label dialog will also update to include any changes made
- [D9419] – The point cloud is regenerating smoothly when orbiting in large coordinates
- [D9519] – Automatic regeneration of Cyclone point cloud points has been added
- [D9520] – Perspective mode is showing the correct view
- [D9265] – A new prompt has been added to change the model name when importing a Collada model if the name already exists.
- [D9457] – Program no longer crashes after bullet-path recon wizard is run and closed
- [D9464] – Point snap is enabled when selecting fit points for bullet path reconstruction
- [D9517] – Modeless dialogs no longer crash when you close during a command
- [D9538] – The Insert Picture dialog opens when you select the icon with grips turned off
- [D9520] – Perspective mode works in local and large coordinates and the camera view is accurate
- [D9531] – Arcs are drawn correctly for vertical angles
- [D9709] – An Evidence Recorder project with scans will import without the Point Cloud extension without needing to make a connection to Cyclone first.
- [T2211] – Toolbars with flyouts are now visible if you hold down on the arrow
- [T2219] – Submit Bug Report links to the Submit Ticket page in the IMS Helpdesk

## Known Issues

This is a list of known issues that we are addressing.

- There is a perspective issues with Cyclone point clouds, which affects rendering animations. The workaround for this issue is to use the new button within the Import Cyclone drop down called Import Cyclone Legacy. You will also have to purge your point cloud and save before closing then reimport when you open the scene.
  - Animations with a JetStream or LGS point cloud do not render smoothly.
  - Exporting PDF with certain imagery will sometimes produce an empty \*.\$\$\$ file
  - Rendering 3D faces in large coordinates needs a manual REGEN
  - “Clip Inside Rectangle, Circle, Polygon” hides points behind the clipped area
  - Entering height and width for walls with a point cloud gives an error.
  - Gridlines appear over some point clouds in large coordinates (UTM). Setting the point size > 1 (3 is usually best) improves the appearance of the point cloud and “fills in” the gridlines.
  - Setting the point size >1 improves the appearance of the point cloud and is better suited for visualization however there is a lag when drawing entities.
- 

## Map360 2.0

*Release Date: May 8, 2018*

[Online movies reviewing the new features](#)

### Important Changes

#### Branding

- IMS has been removed from the product name IMS Map360. It will now be Map360.
- The Map360 logo has changed to match new branding of Leica Geosystems products.

### New Features

#### Advanced Linetypes

- Draw a variety of Advanced Linetypes such as roadway line markings, barriers, guard rails, fences, curbing, etc.
- As easy as drawing a polyline.
- Intuitive dialog that allows you to preview the linetypes and choose the color and layer.

#### Label Distance

- Labels distance between two points or to obtain the perpendicular wall distance in point clouds.
- Dialog check box allows you to choose to display the vertical, horizontal, and slope distances.
- A plane can be drawn behind the chosen points in the point cloud.

#### COE Import/Export

- Support for import and export of Cyclone COE file.
- Allows entities drawn in Cyclone to be imported to Map360.
- Also allows for the reverse, entities from Map360 to Cyclone to TruView.

### Enhanced Features

#### Vehicle Specifications Database

- The vehicle specifications database has been updated to version 2018.1.
- The vehicle specifications database is compiled annually by the Collision Investigation and Research Division of Transport Canada.

## Powered by IntelliCAD 8.4a

- Map360 2.0 is built on the latest IntelliCAD engine, IntelliCAD 8.4a.
- See below for additional details about what's new and fixed in IntelliCAD 8.4 and 8.4a.

## Point Cloud Engine Update

- Updated to latest Leica EpcA API 3.1.
- Support for latest Leica Geosystems Cyclone 9.2.1. Older versions also still supported.
- Support for latest Leica Geosystems JetStream 1.4.1. Older versions also still supported.

## Selectable Evidence Markers

- Selecting the Evidence marker opens the evidence marker dialog for that corresponding point when the grips are turned off.

## Toggles

- On the Point Cloud ribbon, the buttons for “Toggle Visibility” and “Toggle Point Snapping” will highlight when active.

## Evidence Report – Coordinate information

- Included a checkbox on the evidence report dialog to include coordinate information

## QuickMap Import

- QuickMap Import now processes a closed polyline

## Other new features

- [F3039] – Automatically highlight the scene name when creating a new scene
- [F3411] – Added the License Manger shortcut to the Help tab ribbon
- [F3447] – Added support for multiple versions of Map360 to be installed
- [F3455] – Added a link on the Welcome screen to a Resources article in the Helpdesk
- [F3535] – The “Use Template” option on the New Scene Dialog is persistent
- [F3538] – The template files will have a version number with each release

## Important Fixes

- [D8207] - Drawing preview image now displays
- [D8451] - Remote JetStream server over internet shows all points
- [D8532] - Export EVR creates a DXF but doesn't include complex entities
- [D8849] - The evidence marker dialog will prompt for appropriate file types when selecting audio or photo
- [D8851] - A prompt was added when using “include a drawing snapshot” option for EVM Report
- [D8854] - Wall command now accepts orthogonal input
- [D8932] - Allows user to run new and old versions.
- [D8940] - JetStream no longer continuously flashes the redraw progress bar
- [D8984] - Wall routine uses appropriate justification
- [D8985] - Removed “Mirror Text” checkbox on the Evidence Marker Dialog
- [D9081] - Evidence markers are correctly placed with a UCS defined
- [D9094] - Using the DBXIn command, the point clouds collected with MS50 will import
- [D9103] - QA Protocol no longer crashes with a JetStream Point Cloud
- [D9138] - QA Protocol report includes all instrument information

- [D9154] - Crash would occur when closing a drawing after a move of a smart object
- [D9184] - The Geodetic Point Editing dialog was mixing up the X and Y coordinates
- [D9192] – The Smart Pick Viewport was crashing
- [D9187] - Symbols were not properly rendering in UTM coordinates
- [D9333] – Entities on a light background no longer appear faded
- [D9180] – Stretching a grip no longer snaps in space
- [D9125] - Custom viewports no longer reset when switching to model space and back
- [D9274] – Added a message regarding Bing Maps subscription
- [D9319] – The Scene Folder saves the last used location
- [D9341] – “Generate Registration Text File” no longer gives an error message
- [D9374] – Autop does not process fitted polylines or blocks
- [D9385] – The linetype drop down was showing layers in the AutoMap editor
- [D9397] – AutoMap fixes regarding inserting a block
- [T2186] – When changing the color of a block, the object’s color is set without changing the layer color
- [T2117] – New Help topics have been linked to the dialog help button
- [T2184] – Templates have been updated
- [T2194] – Import ASCII defaults to comma
- [T2196] – Speed improvements

## New Features in IntelliCAD 8.4

### Performance

- Improved entity snap performance in drawings with underlays.
- Improved redraw performance when creating and updating entities in a drawing that has a large number of existing entities.

### Working with files

- Attach IFC underlays (for versions of IntelliCAD that support working with BIM files). IFC (Industry Foundation Classes) format files include building and construction data. Once the .ifc underlay is attached, you can explode it, snap to it, and use the IFCPANE command to open a Categories pane to control visibility.
- For IntelliCAD versions that support markup for .dgn files in their native format, several new features are available such as loading blocks from .cel files, Array command, Fillet command, and more.
- Use the new Drawing Properties command to display properties for a drawing, some of which can be modified such as keywords and comments.

### User interface

- Running IntelliCAD on a 4K monitor and switching between monitors with high resolutions is greatly improved.
- A new Customize dialog box allows for easier customization of the user interface. Use it to customize menus; the ribbon, application button, and quick access toolbar (for IntelliCAD versions that support a ribbon); toolbars;

keyboard shortcuts; and aliases. You can also easily manage .cui customization files and share settings between files.

### Creating entities

- Draw a polyline that has a breakline symbol using the new Break Line command.
- Draw leaders using the new Quick Leader command, or draw multileaders using the new Multileader command. You can edit, align, and collect multileaders. You can also create and assign styles to multileaders, which help control the layout and appearance of multileaders.
- Use the new Multiline Styles command allows you to create and modify multiline styles, which help control the layout and appearance of multilines.

### Selecting and modifying entities

- Search for entities that match properties of other entities using the new Select Similar command. The entities with properties that match are then added to the selection set.
- The new Explode Attributes command ungroups blocks, creating separate entities for each element and converting attributes to text.
- The new Get Selection command selects all entities in a drawing that match both the layer of an entity you select and the type of an entity you select.

### Text

- The in-place Multiline Text editor now supports line spacing, lists, and paragraph justification.
- Use the new Explode Text command to break multiline text and single-line text into polylines.
- The new Auto Number command adds numbering to text, multiline text, multileaders, or block attributes.

### More features

- New Filter option for the -LAYER command.
- New hatch patterns are available.
- New linetypes are available.

### System variables

- Added or updated: BLIPSIZE, IFCOSNAP, MLEADERSCALE, SELECTSIMILARMODE, SNAPSIZ, UOSNAP.

## Important fixes in IntelliCAD 8.4a

The following list details some of the 225+ fixes that were implemented since the 8.4 release on 7/14/2017.

### Performance

- Fixed performance issues when copying entities and selecting entities in a drawing with groups.

### Working with files

- Version 2018 .dwg files are opened and converted to version 2013 .dwg files.
- For versions of IntelliCAD that support working with BIM files, fixed issue with copying an IFC underlay.
- For versions of IntelliCAD that support opening and saving .dgn files natively, several improvements were made: OFFSET, WBLOCK, -BOUNDARY, and -XREF command support; SNAPANG and INSBASE system variable support; Layer Manager loads layers from .dgnlib files; and more.
- Fixed several issues when exporting to .bmp files.

### Editing and selecting entities

- New CYCLE command (Ctrl+W) toggles selection cycling on and off. When turned on, left-click overlapping entities to cycle through overlapping entities under the cursor. When turned off, CTRL + left-click cycles the selection.
- New PROPS alias added for the ENTPROP command.
- Fixed the display of the Properties pane when selecting multiple custom entities.

### Text

- Improved multiline text, including: vertical spacing, bullet lists, semi-transparency for mtext editor background, and more.
- Fixed single-line text when the rotation angle was not correct.

### User Interface

- Now you can reset to default customization settings or restore settings from a backup using the Customize command. Click >> in the Customization area of the Customize User Interface dialog box.
- Using the Customize command, customization is better supported for the Application button, Quick Access toolbar, and Ribbon Tab selectors.
- Define the color and linetype of the rubberband. To change the color, use the RUBBERBANDCOLOR system variable, or using the Options command, click the Display tab, click Color Scheme, and for 2D model space, select the Rubberband item. To change the linetype, use the RUBBERBANDLT system variable.
- Simplified Chinese and Serbian localizations, improvements to Russian and French localizations, and a new Dutch translation.

### System Variables

- LISP AUTOREDRAWFREQ added: Sets the frequency of automatic view update during LISP operations [Hz]. Default value is 0.333. If LISP AUTOREDRAWFREQ is zero, auto update is disabled.
- RUBBERBANDCOLOR added: Sets the color of the rubberband. Default color is RGB:248,153,30 (orange).
- RUBBERBANDLT added: Sets the linetype of the rubberband. Default linetype name is "Continuous".
- WSUPDATEALL added. Set to 1 to update all workspaces with an imported customization (e.g. when using the MENULOAD command); set to 0 to update the active workspace only. Default value is 1.
- Fixed SELECTIONANNODISPLAY.

### APIs

- Fixed the LISP Setfunhelp function.
- Fixed issue with the origin when using -HATCH via LISP and SDS.
- Fixed issue when auto-loading .NET plugins using the registry.

### More fixes

- Fixed linetype selection in the Multiline Styles Manager.
- Fixed issue when using grips to change the scale of a helix.
- Fixed several issues for working with the REFEDIT command.
- Improvements to the Paste Special command.
- Fixed issue when using the ETRANSMIT command.
- Fixed specific display issue for image transparency.
- Fixed selection of entities on locked layers.
- Fixed issue with dimension styles when editing an external reference.
- Fixed issues related to the MLEADERCOLLECT command.
- Fixed QSELECT issues when specifying by color and Boolean values.
- Several issues fixed for working with blocks.

---

## IMS Map360 1.3

*Release Date: September 29, 2017*

### New Features

[Online movies reviewing the new features](#)

### Evidence Markers

- Insert Evidence Markers with a variety of customizable styles.
- Optionally attach photographs or other images, audio notes, and other files to the evidence marker.



## Evidence Legend

- Insert a legend describing all Evidence Markers in your scene.

## Evidence Marker Report

- Export a report detailing all Evidence Markers in your scene to a PDF file, with embedded copies of all attached files and diagrams.

## Room Drawing Tools

- Easily build an indoor crime scene by drawing walls with doors, windows and openings.
- Walls are automatically trimmed for you as you draw.
- Grips allow you to dynamically move, edit, and resize objects with ease.

## Attach Bing® Imagery

- Instantly download and attach imagery from Bing® Maps as a raster image file.
- Specify the area of interest by Point ID, Current View, Lat/Long, or Street Address.
- Specify the image type (Aerial, Road or Hybrid), coverage area, and resolution.
- *To use this command, please contact MicroSurvey. A license for the Bing Maps module will be provided to interested users at no cost.*

## Block Recolor Wizard

- Easily recolor blocks that have been inserted into your scene.
- Change the inserted block definition, or duplicate the block with a new name and change its definition.
- For example: change the color of vehicle bodies, peoples clothing, and more.

## Block Resize Wizard

- Resize any blocks inserted into your scene by entering the desired final dimensions, without having to calculate any scale factors.
- For example: Insert a block of a vehicle then set it to known length, width, and height dimensions.

## Enhanced Features

### Vehicle Specifications Database

- The vehicle specifications database has been updated to version 2017.2 which contains 2017 models and updates to some 2012-2016 models.
- The vehicle specifications database is compiled annually by the Collision Investigation and Research Division of Transport Canada.

### Independent Point Numbers

- The IPN system has been revamped to provide better performance and display quality of the IPN, IPD, and IPE labels.

### Point Cloud Engine Update

- Updated to latest Leica EpcA API 2.3.
- Support for latest Leica Geosystems Cyclone 9.1.6. Older versions also still supported.
- Support for latest Leica Geosystems JetStream 1.3.2. Older versions also still supported.

### Geoid Support

- [F3374] - Enabled ability to define a geoid file so elevations imported from Evidence Recorder can be transformed between ground and ellipsoid. Vertical systems is now an option on the General Configuration Options dialog.
- Enabled vertical systems on the ASCII import and export dialog.
- Enabled vertical systems on the Transform Database command.
- Enabled vertical systems on the Manual Coordinate Conversion command.
- Enabled ability to show both ground and ellipsoid heights in the Evidence Log.

### Other new features

- [F3319] - Adjusted minimum speed formula to conform to industry standards.
- [F3304] - The MEASUREMENT variable is now set automatically to match scene defaults units.
- [F3289] - Default Drawing Scale is now set to 10 for imperial (feet) projects.
- [F3165] - Timestamp with date now included automatically in the QA Protocol Report.
- [F3040] - When existing the Animation Designer, perspective mode is automatically turned off.

## Important Fixes

- [D8036] - Home Ribbon, view options could reset the UCS when executed. This has been updates so UCS is never reset when pre-defined views are executed.
- [D8232] - Help button in Animation Designer now opens up the help file.
- [D8257] - Cosmetic fixes to the Shift Coordinate dialog.
- [D8279] - Cosmetic fixes to the CAD Lines dialog.
- [D8362] - Extra text could sometimes appear in the instrument information field in the QA Report.
- [D8426] - Drawing polylines with a UCS defined and Orthomode on, would cause inconsistent line drawing.
- [D8604] - Foreign text (characters) could be displayed in windows explorer browser when running "Transfer Points Between Scenes."
- [D8763] - Missing Vertical or Horizontal pixels could appear when rendering a point cloud.
- [D8764] - Camaro was misspelled in the symbol library.
- [D8830] - Sometimes the program could crash when moving your mouse pointer quickly over point cloud points with point snap on.
- [D8860] - Switching over to the Legacy mode workspace would always close the menu bar.
- [D8891] - License Manager button in Help ribbon did not execute anything.

---

## IMS Map360 1.2

*Release Date: December 30, 2016*

### New Features

#### Powered by IntelliCAD 8.2a

- IMS Map360 1.2 is built on the latest IntelliCAD engine, IntelliCAD 8.2a.
- IntelliCAD 8.2 is a major release that includes more options added to existing features that export 2D .pdf files, export .bmp files, and attach underlays; new in-place multiline text editor; new support for maximizing and minimizing viewports; and various other new commands such as BCOUNT, IMAGEFRAMEMODE, FIELD, and TEXTTOFRONT. IntelliCAD 8.2 also includes improved performance when working with complex blocks, panning and zooming, exporting to .pdf files, and more.
- IntelliCAD 8.2a is a maintenance release that contains over 125 improvements and fixes since the IntelliCAD 8.2 release. Improvements in IntelliCAD 8.2a include various fixes for external references, the user interface, and many more, as well as small additions such as new RIBBON and RIBBONCLOSE commands and a new FILTERS command.
- In addition, more than 975+ issues have been resolved during the IntelliCAD 8.2 and 8.2a product development cycles.

- See below for additional details about what's new and fixed in IntelliCAD 8.2 and 8.2a.

### Animation Extension

- Animations and Scene Flythroughs are now previewed and recorded directly within your CAD display.
- Animations and Scene Flythroughs now include all data displayed in the drawing, including point clouds, aerial photographs, and more.
- The external Animation Player window which was used in MapScenes Forensic CAD is no longer available.

### HemoSpat Bloodstain Pattern Analysis

- HemoSpat bloodstain pattern analysis software is used to calculate the area of origin for impact patterns at crime scenes. HemoSpat is available at [www.hemospat.com](http://www.hemospat.com).
- Two new commands have been added to IMS Map360 that streamlines and simplifies the dataflow between IMS Map360 and HemoSpat. HemoSpat version 1.10.0 or newer is required.
- The new "Export HemoSpat Exchange" command writes transformation parameters for walls that were scanned or measured in the current drawing file, for use in HemoSpat for exporting georeferenced vectors.
- The new "Import HemoSpat Vectors" command reads and accurately inserts vectors that were exported from HemoSpat as a .dxf or .dae file.

### Cloud Storage Support

- Dropbox, Microsoft OneDrive, Google Drive, and other cloud storage and synchronization services are now supported.
- Open and save your drawings directly in your favourite third-party cloud storage service's folder.
- A subscription to a third-party service(s) is required, it is not provided by or through MicroSurvey in any way.

### Important Fixes

- [D7952,D7994] Adjust Symbol - The Adjust Symbol command does not correctly position the adjusted symbol.
- [D7839] Adjust Symbol - The Adjust Symbol dialog did not display with the correct background color.
- [D7858] Animation Extension - After recording an .avi file, it is now opened in your default media player.
- [D7860] Animation Extension - Telemetry text did not appear in a recorded .avi file.
- [D7859] Animation Extension - The Playback View indicator did not change from Static to the selected camera.
- [D8038,D8042] Animation Extension - Overwriting an .avi file that is in use could cause the program to terminate unexpectedly.
- [D8037] Animation Extension - While recording an animation, the progress dialog showed the incorrect total number of frames.
- [D8031] Animation Extension - Clarified a confusing message when recording a flythrough animation with no moving symbols.
- [D7863] Baseline/Offset - If the drawing file is renamed the previous measurements file will no longer open.
- [D8169] Evidence Log - Locking a point clears the History flag in the Evidence Log.
- [D8029] Hexagon Imagery Program - Corrected a typo in the GM\_SAVEIMAGE command for saving HxIP Imagery to a file.
- [D8089] Evidence Recorder - "Error: Invalid input. Please try again." and "Error vertical scene NR7 unable to open raw database file"
- [D7997] Insert Picture - Clarified the scale factor setting by adding a % label after the input field.
- [D7959] LTI QuickMap 3D - Added support for importing 2D files that do not contain any elevation data.
- [D8072] LTI QuickMap 3D - Added support for importing vehicle line coding.

- [D8072] LTI QuickMap 3D - Added support for F and M unit settings in addition to the previous FG,FD,MG,MD unit settings.
- [D8072] LTI QuickMap 3D - Now reads the "Note" and "Name" fields for the imported point's description and note respectively. These were previously reversed.
- [D8052] LTI QuickMap 3D - After import the Zoom Extents no longer causes an "Unable to recognize entry" error message.
- [D7925] Point Cloud Extension - The QA Protocol Report incorrectly lists the Face1-Face2 dX,dY,dZ deltas for any Two-Face Scans as the Face1 X,Y,Z coordinate values.
- [D3087] Point Cloud Extension - The QA Protocol Report has received various improvements.
- [D7926] Point Cloud Extension - The QA Protocol Report now honours the "Use XYZ Notation" and "List E,N(X,Y) Format" system toggles.
- [D7928] Point Cloud Extension - Clipping Inside a Rectangle or Polygon at large coordinates in a Cyclone database does not work correctly.
- [D8130] Point Cloud Extension - Some points could be missing from the display, resulting in subtle shadows around or behind scanned objects.
- [D7800] Point Cloud Extension - A purged point cloud may not immediately disappear if the drawing is in a non-plan view.
- [D7794] Point Cloud Extension - Some commandline options presented in the CWORKPLANE command were not recognized.
- [D8212] Point Cloud Extension - The POINTCLOUD layer is no longer locked automatically so the the points are displayed with full brightness instead of being partially faded.
- [D7965] Ribbon - Surface Color Settings command was missing from the Surfaces ribbon in Advanced mode.
- [D8168] Ribbon - Replaced the Arc Dimension button with Radius Dimension in Sketch mode.
- [D8036] Ribbon - A Dynamic View Control button was added to the View ribbon in Sketch mode.
- [D7864] Triangulation - Filenames shown as gibberish in command line error message.
- [D8048] Multilanguage - The workspace names Sketch, Advanced and Legacy could not be translated.

## New Features in IntelliCAD 8.2

### Working with files

- Export to a 2D .pdf file now includes new compression modes, image clipping, and gradient hatches.
- For .pdf, .dwg, and .dgn underlays, new support includes monochrome, fade, background color adjust, show, and show clipped properties.
- Export to a .bmp file now supports visual styles.

### Performance enhancements

- Increased performance when working with many external references.
- Increased performance for PDF creation and reduction of resulting .pdf file size.
- Increased selection performance in drawings with complex blocks.
- Improved pan and zoom speed for very large drawing files.
- New CACHEFILES will externally cache layout data to enhance layout switching performance and memory usage.

### Text

- New multiline text editor allows you to edit multiline text in place. However, not all multiline text features are implemented in the new editor. To switch to the older dialog box version of the multiline text editor, set the MTEXTED system variable to "oldeditor".
- New Field command allows you to create a field as multiline text.

### Working with entities

- New dialog box for the REFEDIT command and new -REFEDIT command.
- New dialog box for the ARRAY command and new -ARRAY command.
- New TEXTTOFRONT command moves text, dimensions, and leaders to the front of other entities.

### Viewing and rendering drawings

- Users who previously used Ctrl + Left mouse click and drag to orbit the drawing should now use Shift + Middle mouse (or wheel) click and drag to orbit. Ctrl + Left mouse click and drag now supports the standard Windows copy selected entities feature. Simply Ctrl + Left mouse click and drag a selection to make a copy.
- New commands VPMAX and VPMIN allow you to maximize and minimize viewports.

### More features

- The Properties pane now supports more entities and additional properties, such as light entities and light properties, material properties, etc.
- The ribbon now includes context sensitive menus, menu groups, panel expanders, CUI versioning support, ability to show/hide panels and tabs, and can be customized using the CUSTOMIZE command.
- Entity snapping for underlays are now accessible using the Options command.
- New BCOUNT command counts the number of blocks in a selection set.
- New IMAGEFRAMEMODE command controls whether image frames are visible and printed.
- New command line version commands: -MENU and -MENULOAD.

### System variables

- Added or updated: ARTISANLICENSE, AUDIONOTETOOLTIP, BLOCKCACHE, CACHEFILES, CACHEMAXFILES, CACHEMAXTOTALSIZE, DGNOSNAP, DRAWINGTYPE, DTEXTED, DWFOSNAP, HYPERLINKBASE, LAYLOCKFADECTL, ORBITPREVIEWDELAY, PDFOSNAP, RENDERPLANARENTS, SHOWGRIPMENUS, SKETCHMODE, UNDERLAYFADEDEFAULT, WNDCUSDLGPOS, WNDCUSDLGSIZE, WSAUTOSAVE, XDWGFADECTL, XFADECTL.
- Removed: AUDIONOTE, CTRLMOUSE, and HYPERLINKICON.

## Important fixes in IntelliCAD 8.2

The following list details some of the 850+ fixes that were implemented since the 8.1b release.

### Working with files

- Fix for exporting a file that contains large images to PDF.

### Display

- Several fixes for 3D orbiting.
- Polar tracking fixed when rotating the view and UCS.

### Editing entities

- Fix for stretching thick lines.
- Fixes for offsetting entities, including specific issues with offsetting polylines.
- **Entity snaps**
- Fixed incorrect snap being detected when using certain combination of snaps.
- Fixed Parallel snap not being detected in some cases.
- Fixed selection after grip dragging and using a snap typed in the command line.

### Printing

- Fixed incorrect printing of borders for wipeouts and raster images.
- Fixed issue when printing to a file or a .pc3 file and applying print settings to a layout.
- Fixed issue with \$DATE\$ in print stamps.

- Fixed units issue when printing to legal size on specific printers.
- Several fixes for the Publish command.

#### More fixes

- Many fixes in the Customize dialog box.
- Several fixes for annotative entities.
- Several fixes for the HYPERLINK command.
- Several fixes for working with images, including a fix for changing the scale of an image using the ENTPROP command.
- Fix for matching properties of leaders.
- Ribbon and toolbars now support .png images.
- Fade property can now be set for underlays, blocks, and locked layers.
- Several fixes for Tip of the Day.
- Fix for BROWSER command.
- Fixed display of nested external references in the Xref Manager.
- Fixed prompts for the REVCLOUD command.
- Fix for displaying Chinese text.
- Several fixes for grip editing, including the grip option "Convert to arc", grips for polylines, and grips for dynamic blocks.
- Fixed issue when creating a polar array using a region.
- Fixes for Select All command.

### Important fixes in IntelliCAD 8.2a

The following list details some of the new 125+ fixes that were implemented since the 8.2 release.

#### Editing entities

- Dimscale for leaders is now editable in Properties pane.
- Fixed ability to select all entities for a cutting point when trimming hatch entities.

#### Entity snapping

- Fixed snapping issue to zero-length polyline.
- Fixed snapping to point nodes when PDMODE!=0.
- Fixed display of entity snaps after a layer freeze.

#### Text

- In certain scenarios multiline text disappeared while editing. This issue has been fixed.
- Revised the format of the panel layout for multiline text.

#### Printing

- Fixed Apply to Layout option when using Print Preview.
- Fixed issue with missing text during printing and print preview.
- Fixed viewport content that was previously printed at the wrong scale.

#### External references and blocks

- Fixed issue with nested xrefs.
- You can now double-click a block or external reference to run the REFEDIT command.
- Fixed a display issue with user defined dimension arrows in an external reference.

#### More fixes

- New Direct Distance Entry feature allows you to enter a distance in the direction of your cursor when specifying the next point.
- Implemented RIBBON and RIBBONCLOSE commands.
- The UNDO and -PAN commands are fixed while using a maximized viewport (VPMAX command).
- MVIEW scale and view location are fixed while using the VPMAX and VPMIN commands.

- Fixed DDEDIT command for editing the format of dimension text.
- Fixed issue with the TIME command.
- Fixed how IntelliCAD Explorer updates the list of layers when filtering layers.
- Fixed CTRL+J and CTRL+M to repeat the previous command.
- Implemented the FILTERS command.
- Fixed issue with display of Korean fonts.

---

## IMS Map360 1.1

*Release Date: May 13, 2016*

### New Features

#### Powered by IntelliCAD 8.1b

- IMS Map360 is built on the latest IntelliCAD engine, IntelliCAD 8.1b
- IntelliCAD 8.1a and 8.1b collectively include over 240+ fixes since the IntelliCAD 8.1 release which powered IMS Map360 v1.0.
- See below for additional details about what's new in IntelliCAD 8.1b.

#### Scanner QA Protocol Reports

- A QA Protocol Report that validates that your Leica ScanStation scanner is operating correctly can be generated.
- Two-face scans performed on a Leica Target will result in a report showing the difference between the target coordinates as computed on each face.
- Scans performed on a Leica Twin Target will result in a report showing the differences between the target dimensions as scanned and the target dimensions as independently calibrated by the National Institute of Standards and Technology (NIST).

### Enhanced Features

#### 3D Orbit

- Set a specific point to use as the center of rotation.
- Reset a previously Set point to use an automatically determined center of rotation based on the current view.
- The center of rotation that is automatically determined has been improved to ignore objects that are outside the current view.
- A point that is set as the center of rotation is retained until it is changed or reset, instead of having to be Set again in each 3D Orbit operation.

#### Global Mapper / HxIP

- Automatic regeneration of imagery streamed from a WMS or other online server can be toggled off to improve performance via the new Global Mapper Auto-Regen toggle.
- Manual regeneration of imagery streamed from a WMS or other online server can be triggered via the new Global Mapper Regen command.

#### Symbol Librarian

- Add a new symbol directly into the selected folder in the symbol library.
- Import an existing drawing file into the selected folder in the symbol library.
- Edit the selected symbol in the symbol library.
- Delete the selected symbol from the symbol library.
- Duplicate the selected symbol in the symbol library.

#### Collada Import

- Now supports importing zipped Google Earth / Collada files (\*.zip).
- Default file filter now shows all supported filetypes (\*.dae;\*.kmz;\*.zip).

## LTI QuickMap 3D Import

- Now supports AutoMap Library to control the layer/color/etc for imported points and linework.

## Scene Analysis

- Vehicle Specifications Database has been updated to v2016.2 which includes 2016 and some 2017 models.

## Valtus Store

- Easy access to purchase aerial imagery from the Valtus Online Store has been added.

## Insert Picture

- Added a new option to insert pictures with a numbered bubble icon.

## Important Fixes

- [D7715] Crash Recovery Wizard - Unloading an Xref unexpectedly causes the Crash Recovery Wizard window to be displayed.
- [D6844] Crash Recovery Wizard - Importing a .dwf file unexpectedly causes the Crash Recovery Wizard window to be displayed.
- [D7716] DBX Manage - The DBXMANAGE (Manage Imported Databases) command could cause the program to terminate unexpectedly.
- [D7734] Global Mapper / HxIP - Coordinate Systems defined with a datum of "None" were not supported.
- [T2000] Insert Camera - The camera block has been modified such that the filename attribute is now hidden.
- [D7706] Licensing - A disconnected USB license key cannot be reconnected without restarting the program.
- [D7665] Licensing - A locally installed USB Network License Server causes the number of available licenses to be displayed incorrectly.
- [D7666] Licensing - A network license that becomes unavailable during program startup can cause the program to launch abnormally.
- [D2392] Linework - Trimming or Breaking a Smart Line does not correctly remove the EED data from all remaining segments.
- [D7695] Linework - Objects that are selected during various commands such as the CAD Lines Dialog, CAD Curves Dialog, Single Point Editor, and other commands are not automatically unselected on completion.
- [D7674] Linework - Lines and Arcs could be inadvertently deleted by clicking and holding the mouse down on them such that it performs a zero-length drag-and-drop.
- [D7573] Point Cloud Extension - The List command is interrupted if the selection set includes an EpcAEntity object.
- [D7575] Point Cloud Extension - Applying a Clipping Fence in a JetStream database at large coordinates does not work correctly.
- [D7688] Point Cloud Extension - Purging a point cloud from the drawing does not remove the now-empty point cloud entity.
- [D7745] Ribbon - Point Cloud and Animation commands are now hidden from the ribbon/menus/toolbars if they are not licensed.

## Important fixes in IntelliCAD 8.1a

The following list details some of the new 100+ fixes that were implemented since the 8.1 release.

### Working with drawing files

- Fixed reported cases where files could not be opened properly.



- Fixed several issues for working with .dgn files.

#### **User interface**

- Fixed toolbar appearance and text display at high display resolutions.
- Several fixes for working with the ribbon.
- Fixed resizing of floating toolbars.

#### **Hatches**

- Fixed display issue when using UNDO after a hatch grip edit.
- Fixed associative boundary hatches when a boundary is a polyline.
- Corrected hatch boundary associativity when dragging a hatch, using a grip point, and canceling changes.
- Several more hatch fixes.

#### **More fixes**

- Fixed display issue when inserting external references.
- EXPLODE command enhanced.
- Fixed reported crashes for difference scenarios when using the EXPLODE, PLOT,
- Enhancements made to working with workspaces.
- Fixed OLEBKGCOLOR.
- Fixed group designation for the -TOOLBAR command.
- Fixes for grip editing.
- Fixed display of viewport properties in the Properties pane.
- Fixed the default option for the PYRAMID command.
- Fixed PASTEORIG when working with multiple layouts.
- Fixed Zoom Extents when displaying multiline text.

### **Important fixes in IntelliCAD IntelliCAD 8.1b**

The following list details some of the new 140+ fixes that were implemented since the 8.1a release.

#### **Working with drawing files**

- Fixed reported cases where files could not be opened or saved properly.
- Fixed several issues for working with .dgn files.
- Fixed lineweights issue when exporting to a .pdf file.

#### **User interface**

- Several fixes for working with the ribbon, including: ribbon display, ribbon color when TBCOLOR=0, combobox controls, and more.
- Fixed display of user interface elements when using a large display resolution.
- Several fixes for toolbars and separators.
- XPLODE command was added to the menu, toolbar, and ribbon.

#### **Selection**

- Fixed reported issues with grips, including: grip points in PERSPECTIVE drawings, hatch grips, and working in the command bar while grip editing.
- Fixed issue with entity snapping in perspective view.

#### **More fixes**

- Fixed issue when using SCALELISTEDIT.
- Fixed use of Reset All in Customize dialog box.
- Fixed use of Reset on the Options > Profiles tab.
- Fixed issue with workspaces after importing a .cui file.
- Fixed the setting of different locations for an annotation block in different annotation scales.
- New BCOUNT command was added.
- Fixed printing images with different Brightness settings.

- Fixes for XPLODE command.
  - Fixes for Match Properties.
  - New CORK, STARS, HONEY, and HOUND hatch patterns were added.
- 

## IMS Map360 1.0a Update (v1.0.4)

*Release Date: October 6, 2015*

### Important Fixes

- [D7527] Point Cloud Extension - Cannot do a Window or Crossing Selection within the extents of a point cloud.
- [D7528] Point Cloud Extension - After updating the point cloud display, the wait cursor (hourglass) may not go away until the mouse is moved.
- [D7529] Point Cloud Extension - Snapping to points is slow in large clouds.
- [D7539] Point Cloud Extension - CWREGEN command should only update the current view.
- [D7540] Point Cloud Extension - The entire cloud may disappear after a dynamic view change while running another command.
- [D7543] Point Cloud Extension - A check for Cyclone 9.1.1 (or newer) was added, and notifies the user of potential compatibility issues with older versions.
- [D7556] Point Cloud Extension - Cannot snap to points within an active layout viewport.
- [D7571] Point Cloud Extension - Erasing the point cloud entity could cause the program to terminate unexpectedly. The POINTCLOUD layer is now kept locked to prevent selection.
- [D7572] Point Cloud Extension - Copying the point cloud entity could cause the performance issues when snapping. The POINTCLOUD layer is now kept locked to prevent selection.
- [T1960] Point Cloud Extension - Modified the Regen Cloud command to run invisibly while inside another command.
- [D6989] Global Mapper / HxIP - Drawing Extents are incorrect when a drawing containing a globalmapper object is first opened.
- [D7046] Global Mapper / HxIP - Drawing Cleanup Wizard can cause the program to crash when drawing contains globalmapper imagery.
- [D7554] Global Mapper / HxIP - An error message can occur when adding a data source, after all data sources have been deleted.
- [F2820] Global Mapper / HxIP - An option has been added to the image layer manager, to specify whether a Zoom Extents should be done when adding new imagery.
- [D7555] Google Earth Export - The IMS Map360 website link was incorrect in an exported .kml file.
- [D7557] New Scene - When creating a new drawing, the option to select a template file did not work.
- [D7551] Symbol Librarian - Search notifies you that 7333 matching symbols were found (although the actual search results are correct).
- [D7542] Witness Viewpoints - Precision of witness and view positions was insufficient for use with large UTM/SPCS coordinates.
- [D7549] Witness Viewpoints - A crash can occur when loading views that were created with the View Manager.

---

# IMS Map360 1.0

Release Date: September 14, 2015

## Initial Product Release

IMS Map360 is an all-new product; it is not a direct upgrade from MapScenes Forensic CAD. Please visit the [Leica Incident Mapping Suite](#) website for a detailed description of IMS Map360.

For former MapScenes users, the following information details what has changed since MapScenes Forensic CAD 2013.

## New Features

### Powered by IntelliCAD 8.1

- IMS Map360 is built on the latest IntelliCAD engine, IntelliCAD 8.1. IntelliCAD 8 is a major release and includes 2015 .dwg file format support for both 32-bit and native 64-bit platforms. New features include layer states, layer filters with search, quick select, 3D orbit, additional grid capabilities, Collada (.dae) file import, MrSID MG4 compressed raster image support, and more.
- More than 2500 issues have been resolved since the IntelliCAD 7.2d release which powered MapScenes Forensic CAD 2013. These include performance enhancements and improvements to the user interface, printing, text, dimensions, entity snapping and tracking, and more.
- See below for additional details about what's new in IntelliCAD 8.1.

### Sketch, Advanced, and Legacy Modes

- IMS Map360 comes with three flexible and customizable workspaces, specially designed for the varying needs of different users.
- Sketch mode provides a modern ribbon interface, with everything you need to import or enter forensic data and create a simple 2D or 3D diagram.
- Advanced mode provides a modern ribbon interface with a fully-featured CAD program along with hundreds of additional forensic mapping tools.
- Legacy mode provides an older style menus-and-toolbars interface that will be familiar to previous MapScenes Forensic CAD users.

### Powered by Leica EpcA

- IMS Map360's Point Cloud extension is built on the latest Leica EpcA engine , and is compatible with Leica Cyclone 9.1.1 and Leica JetStream 1.0.1.
- Leica EpcA is the same point cloud engine that powers other Leica applications including Cyclone and CloudWorx.
- Point cloud data in various formats from other manufacturers can be imported.

### Point Cloud in CAD

- Point Cloud data is now displayed directly within your CAD display, and you can snapped to the point cloud points using standard CAD tools.
- Dozens of new point cloud tools are now available for working with your point cloud data.
- The external Point Cloud Line Work window which was used in MapScenes Forensic CAD is no longer available.

### Interactive Drawing Templates

- Interactive templates allow you to easily visualize your printed diagram before you print compelling documents.

### Import Collada Models

- Import .kmz or .dae models downloaded from the [SketchUp 3D Warehouse](#), an online repository containing millions of 3D symbols.

## Trajectory Cones

- Draw 3D bullet trajectory cones from your measured trajectory rods, with a specified error tolerance and customizable layer and color properties.

## Bullet Path Reconstruction

- Reconstruct 3D bullet paths and draw trajectory lines and error cones, with a specified error tolerance and customizable layer and color properties, from a point cloud containing scanned trajectory rods.

## Witness Viewpoints

- Configure views of your 3D scene to corroborate or disprove witness statements about what they could or could not see during the incident.

## Import LTI QuickMap 3D

- Import .csv files from LTI QuickMap 3D, including coordinates and line connectivity informations.

## Enhanced Features

### AutoMAP Plotted Descriptions

- *ASCII Export:*
- A new "Use Plotted Description" option has been added to the Export ASCII commands which will write out the AutoMAP Plotted Descriptions in place of the Descriptions.
- Type ASCII\_OUT at the command line, or in the menu select MsPoints > Export ASCII Points or Lat Long File.
- *Active Coordinate Editor:*
- An optional "Plotted Description" column can now be enabled in the Active Coordinate Editor.
- Type COORDEDIT at the command line, or in the menu select MsPoints > Active Coordinate Editor.
- *Single Point Editor:*
- A new "Plotted Description" field has been added to the Single Point Editor dialogs.
- Type EDITP at the command line, or in the menu select MsPoints > Store & Edit Points, or with your grips off click on a point node or label.

### AutoMAP Substitution Codes

- Access field-coded parameters directly from your point descriptions and use them to control the Layer, Symbol, and other fields. (Previously available only in the Plotted Description field.)
- Substitution codes use the same syntax as introduced in MicroSurvey CAD 2013 for the Plotted Description field, and include \$0 to substitute the code, \$1-\$9 to substitute the first through ninth space-delimited parameter following the code, \$+ to substitute all parameters following the code, \$\* to substitute the entire description including the code plus all parameters, and \$\$ to substitute a literal "\$" character.
- For example, specify a Layer name like \$1 and a block name like TREE\_\$1.DWG in AutoMap to dynamically place TREE points like TREE OAK and TREE ELM on OAK and ELM layers with TREE\_OAK.DWG and TREE\_ELM.DWG symbols.
- Type AUTOMAP\_EDITOR at the command line, or in the menu select MsTraverse > AutoMAP System > AutoMAP Library.

### Google Earth KML Export

- Additional details are available in the Point and Line/Curve details, including point coordinates and line and curve information.
- New style options are available for specifying the point icon, icon size, and label size.
- Type WRITEKML at the command line, or in the menu select MsPoints > Export to Google Earth.

### Leica DBX Import

- Import Leica Codelists, and add its contents to your AutoMAP library.
- Import "Ghost Point" setups, where the project starts with a setup that was established in a different project.
- Type DBXIN at the command line, or in the menu select MsTraverse > Read Collector Files In > Leica DBX > Import Leica DBX.

## Line Tables

- Use point IDs to specify which lines you want to added to a Line Table.
- Type LINE\_TABLE at the command line, or in the menus select MsAnnotate > Add Tables > Add Lines to Table.

### Vehicle Specifications Database

- Scene Analysis tool contains the most recent vehicle specifications database (v2015.1), which includes all 1971-2015 models.
- The vehicle specifications database is compiled by the Collision Investigation and Research Division of Transport Canada.
- Type ANALYSIS at the command line, or in the menus select MsTools > Scene Analysis.

### Important Fixes

- [D6374] Active Coordinate Editor - When switching drawings in CAD, the Active Coordinate Editor may not switch to that of the current drawing.
- [D6773] Active Coordinate Editor - When saving a drawing as a new name, the Active Coordinate Editor may not switch to that of the new drawing.
- [D6726] Animation - When using the Record Movie button, the Browse dialog's title bar text text is not displayed correctly.
- [D6852] Best Fit Line/Curve - The Updatedb, Move option does not work with alphanumeric point IDs.
- [D6963] CAD Lines Dialog - Clicking on a line while viewing a drawing from along the X or Y axis can cause the program to crash.
- [D7139] CAD Lines Dialog - The Angle field has been relabeled as Azimuth or Bearing depending on your unit settings.
- [D6826] Database - The .msz database file can be created with an incorrect path offset for the temporary .msj database folder, which can cause various errors when reading data from an .msz file.
- [D7090] Database - Creating a new drawing, when an .msj folder of the same name already exists, causes the new drawing and database to be out of sync.
- [D6492] Drawing Refresh - The screen does not always update when using the Zoom buttons on the Single Point Editor, or when drawing lines from the CAD Lines or CAD Curves dialogs.
- [D6889] Help Files - The Microsoft Translator widget used in the Help files started generating script errors and has therefore been removed.
- [D6509] Import Leica DBX - "Ghost Point" setups (where the setup was established in a previous project) are not imported.
- [D5909] Independent Point Numbers - IPN labels not displayed when in a UCS.
- [D5522] Polylines - The Delete option in the PEDIT (Edit Polyline) command does not appear at the command line.
- [D5676] Polylines - Selecting a polyline can cause the program to stop responding.
- [D6892] Surface Modeling - Drawing a Grid can cause the program to crash.
- [D7279] Triangulation - Descriptions entered for triangulated points are not maintained.

### New Features in IntelliCAD 8.0

#### Working with Files

- Open, save, and work with .dwg files of version 2014.
- Import Collada (.dae files).
- Improved support for DGN overlays, Civil3D, ADT, and mechanical object enablers.

- Attach MrSID MG4 compressed raster images.

### Performance Enhancements

- IntelliCAD is available in 64-bit in addition to 32-bit.
- Increased cursor speed.
- Improved PDF export performance and reduced resulting file size.
- Improved performance for multiple sessions on multi-core machines.
- Improved Print Preview zoom performance.

### Viewing Drawings

- The grid can be drawn as lines or dots, can display beyond the drawing extents, and can be adaptive, which includes automatic resizing and subdivision based on the zoom level.
- The Dynamic Viewpoint command was enhanced to include multiple ways of selecting a point from which to view three-dimensional entities.
- The 3D Orbit command allows you to orbit a drawing, that is, rotate the view. Commands includes Constrained Orbit, Free Orbit, Continuous Orbit, Constrained X Orbit, Constrained Y Orbit, and Constrained Z Orbit.

### Layers

- Manage layers with layer states.
- Search for layers by name.
- Filter layers.
- Layer properties include Transparency and Viewport Freeze.
- New Layer Tools menu and toolbar.

### Rendering

- Rendering interface redesigned and enhanced.
- Complete rendering features are now available.

### More New Features

- CUI menu files supported.
- Many user interface enhancement features, including more efficient menu and toolbar organization, slimming of toolbars to create more drawing space, and more.
- Many improvements to paperspace, such as UCS icon changes, ease in which model space viewports are created, and more.
- All color assignments for screen items, such as background color, icon color, etc., can now be made by choosing Tools > Options > Display tab, then clicking Color Scheme.
- New Quick Select command.
- Tip of the Day now displays as an event in the corner of the main window when IntelliCAD starts.
- Improved grip editing for dynamic blocks.
- Image Attach command supports embedded world file data in MrSID image files.
- New PRINTOPTIONS command for easy accessibility to Print Options.
- New XOPEN command to allow quick editing of attached xref files.
- New Draw Order options to quickly push back or bring forward annotation and hatches.
- Enhanced CUSTOMIZE command eases menu and toolbar customization.

### System Variables

- Added or updated: 3DORBITMODE, CUSTOMICONSPATH, EXPLAYERFILTERWIDTH, FACETRES, GRIDCOLORMAJOR, GRIDCOLORMINOR, GRIDDISPLAY, GRIDMAJOR, GRIDMODE, GRIDPOINTSMAX, GRIDSTYLE, LAYERINVERTFILTER, LAYOUTCREATEVIEWPORT (which replaced and deprecated PSPACEVIEW), LISPPATH, ORBITCOLOR, PRINTTILESIZE, PSICONCOLOR, QSELECTLISTVALUES, TEXTLIBPATH, TRIMALLMAXNESTEDBLOCKLEVEL, UITHEME.
- All color-related system variables were changed to support RGB and index color values: APERTURECOLOR, AUDIOICONCOLOR, AUTOTRACKCOLOR, BKGCOLOR, BLIPCOLOR, COLORX, COLORY, COLORZ, DZOOMECOLOR, DZOOMSCOLOR, DZOOMVCOLOR, HIGHLIGHTCOLOR, HYPERLINKICONCOLOR, MODELTOOLTIPCOLOR,

MODELTOOLTIPBKGCOLOR, OLEBKGCOLOR, PICKBOXCOLOR, PSPACEBCOLOR, PSPACEMCOLOR, PSPACEPCOLOR, SELCROSSINGAREACOLOR, SELCROSSINGFRAMECOLOR, SELWINDOWAREACOLOR, SELWINDOWFRAMECOLOR, SNAPCOLOR, VIEWPORTLOCKBORDERCOLOR.

## New Features in IntelliCAD 8.1

### Working with files

- Open, save, and work with .dwg files of version 2015.
- Open .dgn files by converting them to .dwg files.
- Attach point cloud files.
- IntelliConvert command added.
- Export .dgn files.

### Performance enhancements

- Multi-core support for opening and regenerating files, which provides 1.5 to 3 times performance improvement on multi-core computers.
- ACIS In is now available in IntelliCAD Standard versions.

### User interface

- New ribbon interface that can be used with or without the menus.
- New icons throughout IntelliCAD.
- Updated status bar, including ability to single-click (instead of double-click ) status bar items.
- Autocomplete commands when typing at the command line.
- Updated Properties pane.
- Support for workspaces.
- Color schemes are now available.

### Printing

- New Publish command.
- New ability to print to DWF/DWFX files.
- New ability to print to PNG and JPG files.
- Advanced options added for print stamps.

### Viewing drawings

- New support for annotation scaling.

### Working with entities

- New Helix command.
- New Revision Cloud command.
- New XPLODE command.
- Tab through commands when hovering over a grip.
- New Z-axis orthomode support.
- New Match Properties Options dialog box.
- New Text to Multiline Text command.
- New dialog box for the BLOCK command.
- New Set to ByLayer command.

### System variables

- Added or updated: ANNNOALLVISIBLE, ANNNOSCALELIMIT, AUTOCOMPLETEFILTER, AUTOCOMPLETEMODE, AUTOCOMPLETEOPTIONS, AUTOCOMPLETEDELAY, AUTOCOMPLETETRANSP, AUTOCOMPTEXTLEN, CANNOSCALE, CANNOSCALEVALUE, CURRENTAFFINITYMASK, DIMANNO, HPANNOTATIVE, LOCALROOTPREFIX, LOFTANG1, LOFTANG2, LOFTMAG1, LOFTMAG2, LOFTNORMALS, LOFTPARAM, MSLTSCALE, MTMODE, MULTICORE, PICKFIRSTFLAGS, PRINTTRANSPARENCY, PSLTSCALE, PSOLHEIGHT, PSOLWIDTH, SELECTIONANNODISPLAY, SETBYLAYERMODE, STATBARSTYLE, and SURFACEMODELINGMODE.

## Important fixes in IntelliCAD 8.0

The following list details some of the 1100+ fixes that were implemented since the 7.2d release.

### Open and save files

- Audit command fixed for redundant text entities.

### Display

- Several fixes to prevent leftover screen pixels or empty screen portions during zooming and dragging.
- Display of hatches improved.
- Several fixes to cursor display in different scenarios.
- Several fixes for Zoom Extents.
- Several fixes for display issues when zooming in.
- Improvements to 3D solids display.
- Full Render fixed when using with a UCS different from WCS.

### Selection and entity editing

- Fixed node snapping in xref drawings when PDMODE is non-zero.
- Fixed grip editing for splines created from polylines.
- Polar tracking guides fixed for new drawings.

### Hatches

- Improved speed and accuracy for hatching while using Select Area.
- Fixed calculation of hatch lines enclosed by a circular arc.
- Fixes for calculating hatch areas and boundary hatches in different cases.
- Fixed hatching of visually closed polylines.
- Fixed boundary detection for boundaries off screen.

### Text and multiline text

- Fixes for multiline text positioning.
- Several fixes for the Find command.

### Printing

- Improvements to TrueType Font selection for printing.
- Fixed issue when printed dashed area did not match print preview.

### More fixes

- Fixed ability to toggle wipeout frames for wipeouts that are part of blocks.
- LIST command fixed for vertices of 2D and 3D polylines.
- Flatten command fixed for 3D polylines (converting to 2D polylines) and for misplacing entities on the current layer.
- Shape names from SHX files are no longer case-sensitive.
- RGB colors fixed during PDF Export.
- Offsetting fixed for spline entities.
- Fillet command fixed for polylines with arc segments.
- Fixed MATCHPROP for dimensions and viewports.
- Draw order fixed for copied entities.
- Fixed lineweight "adjust display scale".
- Fixed MIRROR3D when using in NWUCS.
- Scale accuracy fixed when inserting an image and using a positioning file.

## Important fixes in IntelliCAD 8.0a

The following list details some of the 100+ fixes that were implemented since the 8.0 release.

### Working with drawing files



- Fixed reported cases where files could not be opened properly.
- Issues with exporting to DWF format fixed.

### **Text**

- Fixed cases when extra lines were added while using the Text command.
- Fixed issues with outputted multiline text.
- Improvements to Multiline Text editor, including ruler display and cursor starting point.

### **Modifying entities**

- Fixes during move and dragging operations.
- Flatten command improvements.
- Fillet command fixed when using for non-convex polylines and also when FILLETRAD is greater than an arc's possible radius.

### **More fixes**

- Point clouds are now supported.
- LIST command fixes for point cloud entities.
- Quick Select dialog improvements.
- Several fixes for layer filters.
- -PURGE command includes regapp option.
- Fixed crash scenario when switching to 3d hidden, realistic, or conceptual view in large drawings.
- Fixed image display in some cases when FASTIMAGEDRAW is set to 0.
- Customization added to Tools > Options > Paths/Files tab for placing script locations that are to be used during startup.
- Fixes for working with .cui menu files.
- APPLOAD dialog contain .NET plug-in filter.
- ETRACK fixed when working in NWUCS.
- Color setting in .pc3 files fixed.
- Angular dimensions fixed for non-coplanar lines.
- Zooming fixed for PDF OLE objects.

## **Important fixes in IntelliCAD 8.1**

The following list details some of the 1300+ fixes that were implemented since the 8.0a release.

### **Display**

- In the View Manager, fixed restoring a view after using Edit Boundaries.
- Several issues fixed for working with a grid.

### **Hatches**

- Fixed hatch result for dynamic blocks
- Shape of hatch fixed when exploding and copying
- Fixed crash when selecting complex hatch areas in some cases.

### **Text and multiline text**

- Fixed errors with Korean fonts.
- Fixed issues with MTEXT that was missing underlined text in some cases.
- Fixed editing MTEXT with European keyboard layout.
- Fix for %% codes.

### **Printing**

- Print configuration is fixed when extracting from a .pc3 file.
- Fixed various issues with printing certain entities, including hatch transparency, oblique text, and hidden paperspace entities.
- Fixed issue for irregular viewports that cause large increase in print size.

## More fixes

- Fixed issue with LAYFRZ for blocks.
- Fixed dimension associativity after copying.
- Extend and Trim commands now properly work with blocks using the ALL option.
- Fixed specified angle usage for VIEWCTL.
- Incorrect attribution data after exploding a block is fixed.
- Several fixes for working with customized .mnu files.
- Several fixes for filleting when working with splines, polylines, and two circles.
- Fixed perpendicular snapping when working with requested angles.
- Fixed the use of snapping when using Zoom > Window.
- Fixed issue with changing 3D polyline vertices using grips.
- Fixed using From Entity Snap in layouts.

---

## Important Notes

### Activating or Updating your USB License Key

If you are licensing IMS Map360 for the first time you will need to activate your new USB License Key using the USB License Manager program on a computer with internet access.

If you are upgrading from a previous version of IMS Map360, you will need to update your existing USB License Key using the USB License Manager program on a computer with internet access.

If you are upgrading to IMS Map360 from MapScenes 2008 or newer, you will need to update your existing USB License Key using the USB License Manager program on a computer with internet access.

If you are upgrading to IMS Map360 from MapScenes 2006 or previous, you will need to activate your new USB License Key using the USB License Manager program on a computer with internet access.

A copy of the USB License Manager program is automatically installed with IMS Map360, or it can be [downloaded](#) from our online Helpdesk system and installed separately onto another computer which has internet access.

Please refer to the [following topic](#) for detailed instructions about activating or updating your key.

You may or may not be required to update your USB key to run certain service pack updates. For a detailed explanation of the Customer Care Package (CCP) and how we use product version numbers and USB keys, you can refer to the following [online article](#).

If your Customer Care Package has not yet expired, you can use the USB License Manager to update your key to work with the most current version. You can confirm the expiry date for the CCP by going to the About screen found in the Help menu. Each USB License Key has its own Customer Care Package, so if you have multiple keys it is possible that they may each have a different expiry date.

**If your Customer Care Package has expired, you can phone us at 1-888-632-8285 to renew it. Without a current Customer Care Package, you will not be able to update your key to work with the latest version.**

### MicroSurvey Transfer Program for Evidence Recorder Users

Evidence Recorder users need to download a copy of the MicroSurvey Transfer program to simplify the process of transferring Evidence Recorder projects between your data collector and MapScenes.

If you have a copy of MicroSurvey Transfer already installed from use with MapScenes 2010 or previous, you will need to update it to recognize IMS Map360. Previous versions of MicroSurvey Transfer will NOT show IMS Map360 as a sync option in the Options screen.

MicroSurvey Transfer can be [downloaded](#) from our online Helpdesk system.

**Note:** A copy of Microsoft ActiveSync (for Windows XP or earlier) or Microsoft Windows Mobile Device Center (for Windows Vista or newer) must be installed before MicroSurvey Transfer can be installed. Both can be downloaded free from Microsoft or from the [MicroSurvey helpdesk](#).

### MicroSurvey License Server for Network License Users

Users who have purchased a network license will need to install a copy of the MicroSurvey Network License software.

If you have purchased a Network License and are setting it up for the first time, you can [download](#) the Network License Server application from our online Helpdesk system.

The MicroSurvey Network License Server program has not changed significantly since the release of MapScenes 2008. This is only necessary for users who are setting up a network license for the first time.

**Note:** You will be required to enter a password in order to install the Network License Server.

## System Requirements

IMS Map360 is compatible with 32-bit and 64-bit versions of Microsoft Windows 7, Windows 8/8.1, and Windows 10.

IMS Map360 does not have any hardware requirements above and beyond what is required by your version of Microsoft Windows, aside from a compatible video card for the 3D rendering and animation engines.

Please refer to [this online article](#) for a list of compatible video cards.

## Point Cloud Module Requirements

IMS Map360 Point Cloud extension requires that the following prerequisite software packages be installed:

1. Required: Leica Cyclone 9.1.1 (or newer) for opening Cyclone Point Clouds
2. Required: Leica JetStream 1.4.1 (or newer) for opening JetStream Point Clouds
3. Leica LGS Point Clouds do not need Cyclone or Jetstream installed
4. Optional: Leica Client License Manager (CLM) 1.4 (or newer)

Please [visit](#) this page to download **Cyclone** products.

Please [visit](#) this page to download **JetStream** products.

Leica Cyclone and JetStream do not have to be licensed. IMS Map360 will be fully functional with an unlicensed version of Cyclone or JetStream.

Leica Cyclone and Leica JetStream are licensed independently from IMS Map360, by entering an entitlement certificate ID into the Leica CLM application.

## Windows XP Notes

### Windows XP End of Support

Microsoft has announced that support for Windows XP will end on April 8, 2014. According to Microsoft, "After April 8, 2014, there will be no new security updates, non-security hotfixes, free or paid assisted support options or online technical content updates. Running Windows XP SP3 ... in your environment after their end of support dates may expose your company to potential risks" as detailed on their website [here](#) and [here](#).

Until April 8, 2014, MicroSurvey Software Inc. will continue to develop, test, and support all of our products for Windows XP, providing that all third-party components still support Windows XP.

After April 8, 2014, MicroSurvey Software Inc. will no longer use the Windows XP operating system for any development, testing, or technical support. After this date, Windows XP will be completely unsupported. While our products may or may not continue to operate without issue beyond this date, using an unsupported operating system is not recommended and any issues that are specific to an unsupported operating system will not be addressed.

## Windows Vista Notes

As of January 1, 2016, Windows Vista is no longer supported.

Installation of IMS Map360 v1.1 or newer requires Windows 7 or newer.

## Windows 7, Windows 8/8.1 and Windows 10 Notes

### Run as Administrator

You **must** run the program at least once elevated with "Run as administrator" access, even if you are already logged in with an "Administrator" account on the computer.

After this is done, it can be run by any user on the computer, including those who don't have administrative accounts.

To accomplish this, once the program is finished installing do the following:

1. Right click on the IMS Map360 icon.
2. Choose "Run as administrator".
3. Select "Yes" on the "User Account Control" dialog when prompted to allow the program to make changes to your computer.

### **What's This? Help**

If you wish to use the "What's This? Help" feature, you may need to download and install an update from Microsoft. Please refer to the following [Microsoft Knowledge Base](#) article for more information.

Please note that the main Help files will work without this update.

---

## **Online Resources**

### **Release Notes**

For a current version of this document, please visit the [Leica Incident Mapping Suite Helpdesk](#).

### **Technical Support**

Leica Geosystems provides free 24x7 self-support to all users via the [Leica Incident Mapping Suite Helpdesk](#) where you can find knowledgebase articles, downloads, and a troubleshooter. This is a good starting point for any problems that are not answered in your Help file and Manuals.

For technical support, please visit the [Leica Incident Mapping Suite Helpdesk](#) to submit a helpdesk ticket to our technical support staff. If you do not have internet access you can phone our office at 1-888-632-8285 and a ticket can be entered for you.

Technical Support is provided free of charge for 90-days following the purchase of your Incident Mapping Suite product. Following this introductory period, additional technical support is available via your [Customer Care Package \(CCP\)](#).

To purchase or renew your CCP, please phone 1-888-632-8285 or visit our online store at <http://ims.leica-geosystems.com>.