

AutoCAD 2014 Preview Guide



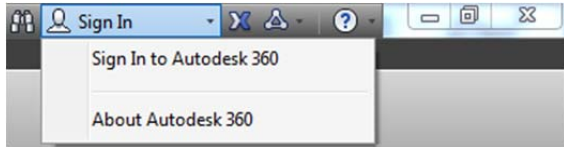
Design and shape the world around you with the powerful, connected design tools found in Autodesk® AutoCAD® software, one of the world's leading 2D and 3D design applications. With robust 3D tools that can create almost any shape imaginable, AutoCAD helps you intuitively create stunning designs. It offers innovations that can help increase design efficiency and speed documentation, and enables you to more securely, accurately, and smoothly share those designs with colleagues. Connect with the cloud to collaborate on designs and access them from your mobile device. With these capabilities and more, AutoCAD delivers the power and flexibility you need to take documentation and design further.

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Introduction

AutoCAD software continues its transformation into a connected design application accessing the power of cloud, social, and mobile. With AutoCAD 2014 you can work smoothly across platforms, collaborate with project stakeholders, and bring the power of AutoCAD with you wherever you go. Sign into your Autodesk account to share and access documents online.



If you do not yet have an Autodesk account, choose Need an Autodesk ID from the Sign In dialog box and provide the necessary information. It's free*!



Take further advantage of the power of connection with access to command line Internet search, Live Map Data, integrated Design Feed, and Exchange apps.

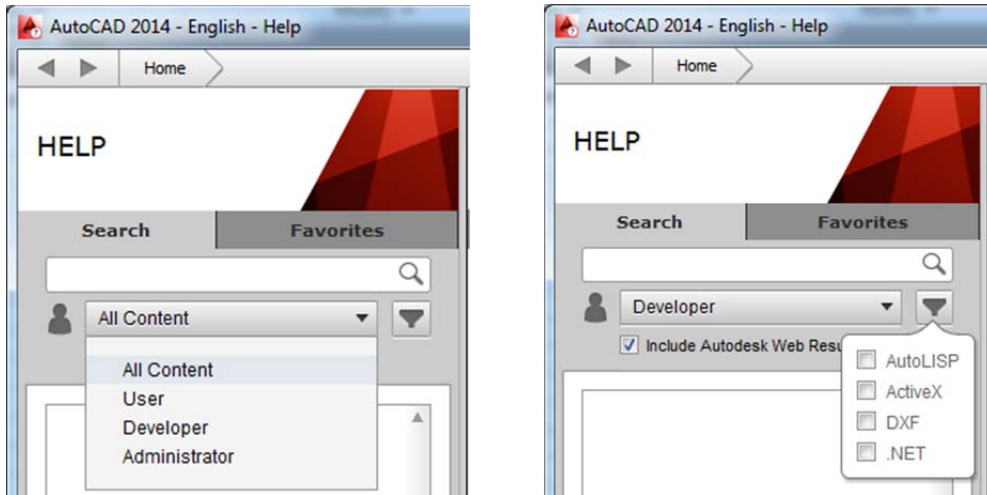
User interaction

Help system

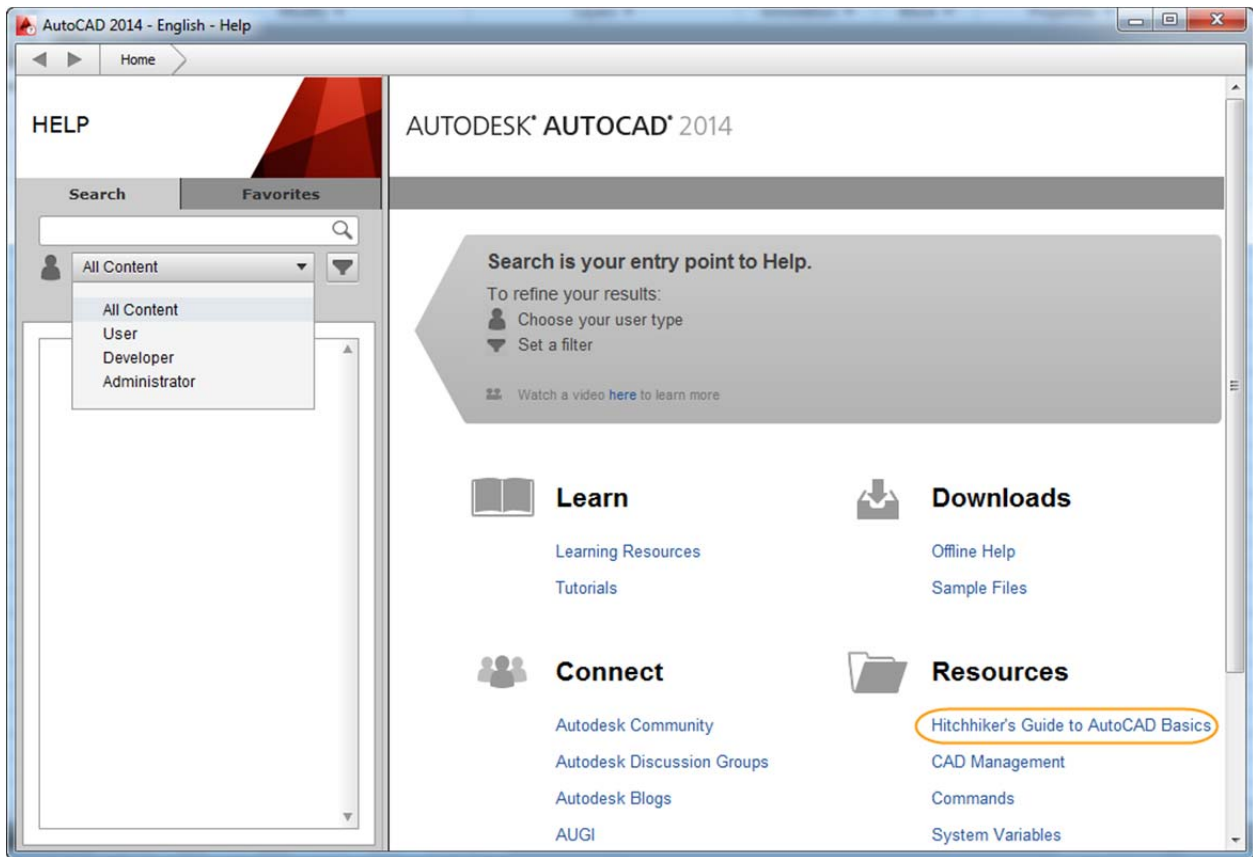
AutoCAD 2014 software includes enhancements to the AutoCAD Help system.

New search filters enable you to narrow your search results based on the type of user. For example, if you choose User, you can filter on commands and system variables. If you choose Developer, your filters include AutoLISP®, ActiveX, DXF™, and .Net. The Administrator option includes Installing, Migrating, Customizing, and Administrating. You can choose All Content to filter on any combination of content.

* Free products and services are subject to the terms and conditions of the end-user license and services agreement that accompanies them.



The Hitchhiker's Guide to AutoCAD Basics is included in the Resources section and has been updated for AutoCAD 2014.



The AutoCAD 2014 Help System also offers improved access to online Help, particularly when using proxy servers.

Command line

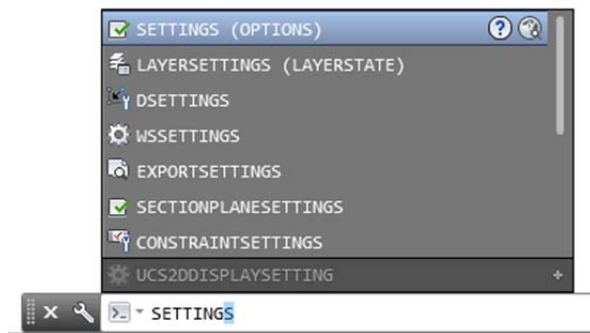
The command line interface is enhanced in AutoCAD 2014 to provide smarter, more efficient access to commands and system variables. And you can use the command line to find other content such as hatch patterns, visual styles, and Internet help.

AutoCorrect

The command line in AutoCAD 2014 supports AutoCorrect. If you mistype a command, instead of responding with “Unknown command,” AutoCAD autocorrects to the most relevant and valid AutoCAD command. For example, if you accidentally type TABEL, the TABLE command is automatically launched.

AutoComplete

AutoComplete command entry is enhanced in AutoCAD 2014 to support mid-string search. For example, if you type SETTING on the command line, the suggestion list displays commands containing the word SETTING anywhere within it, not just at the beginning.



Adaptive suggestions

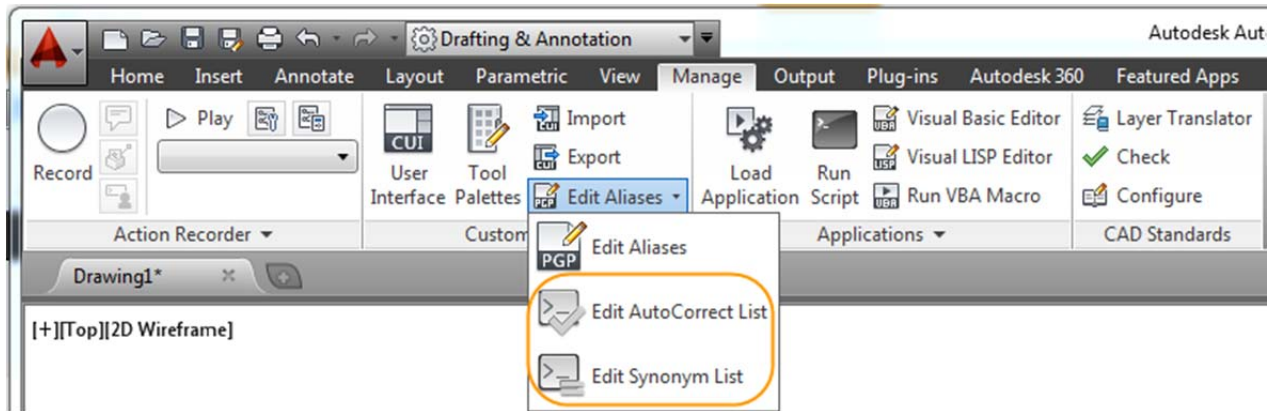
Commands in the suggestion list are initially displayed in the order of their usage based on general customer data. As you continue to use AutoCAD 2014, the order of commands in the suggestion list will adapt to your own usage habits. The command usage data is stored in the profile and adapts to each user.

Synonym suggestions

The command line has a built in synonym list. Enter a word at the command line and it will return a command if a match is found in the synonym list. For example, if you enter Symbol, AutoCAD finds the INSERT command so you can insert a block. Or if you enter Round, AutoCAD finds the FILLET command so you can add a fillet to a corner.

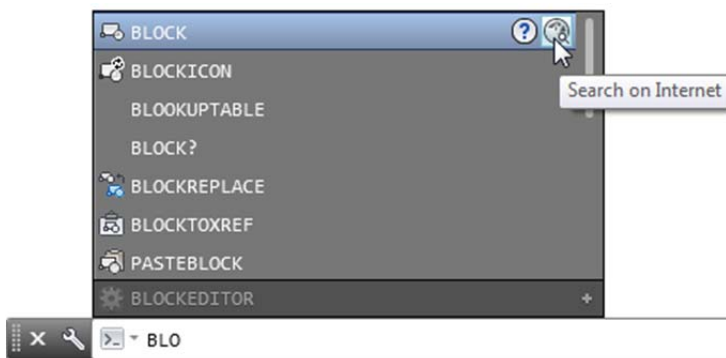


You can add your own words to the AutoCorrect and Synonym lists using the Edit Aliases tool from the Manage ribbon tab.



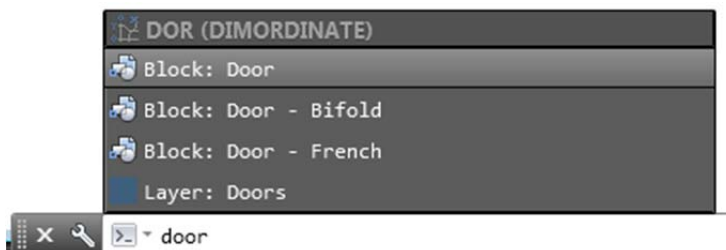
Internet search

In AutoCAD 2014, you can quickly search for more information on a command or system variable in the suggestion list. Move the cursor over the command or system variable in the list and choose the Help or Internet icons to search for relevant information. The term AutoCAD is automatically prepended to the current term for searching the Internet.



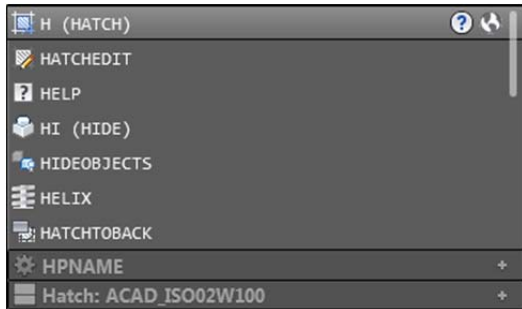
Content

In AutoCAD 2014, you can use the command line to access layers, blocks, hatch patterns/gradients, text styles, dimension styles, and visual styles. For example, if you enter Door at the command line and the current drawing has a block definition with the name Door, you can quickly insert it right from the suggestion list.



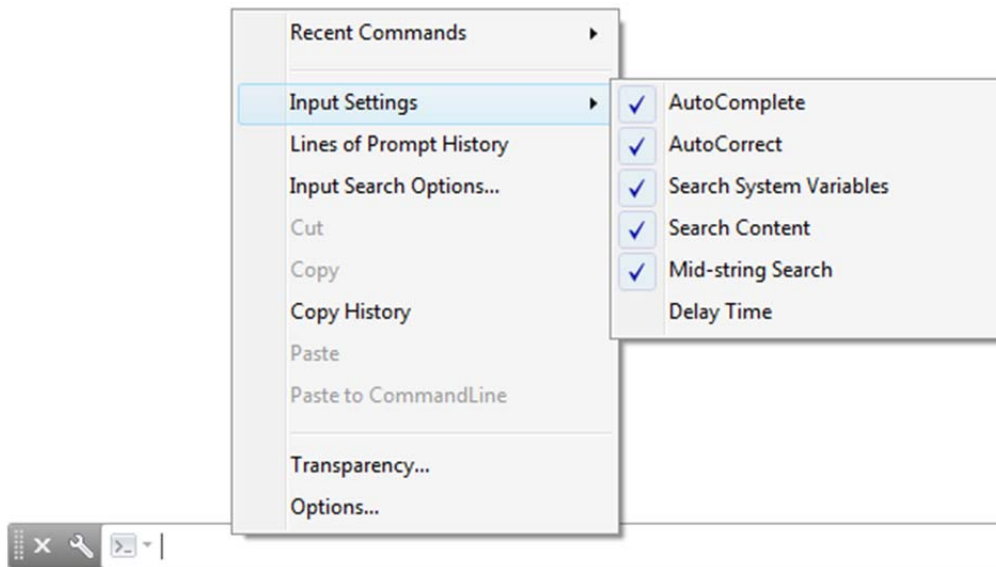
Categories

To make the suggestion list easier to navigate, system variables and other content are organized into expandable categories. You can expand a category to see the results or press the Tab key to cycle through each category.

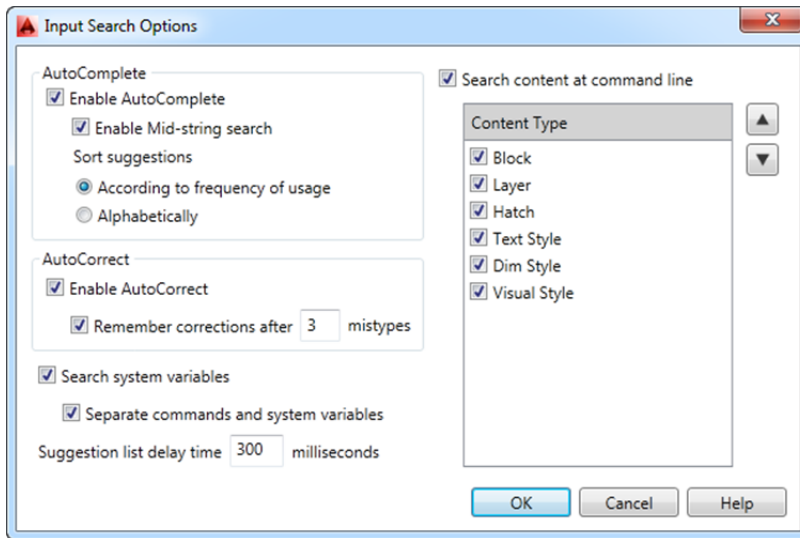


Input settings

You can customize the behavior of the command line using controls in the Input Settings menu when you right-click on the command line. In addition to the previous options to enable AutoComplete and search for system variables, you can enable AutoCorrect, Search Content, and Mid-string Search. All of these options are turned on by default.



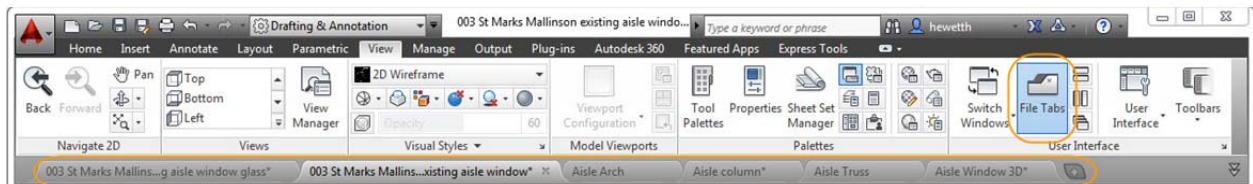
Another right-click option provides access to the new Input Search Options dialog box.



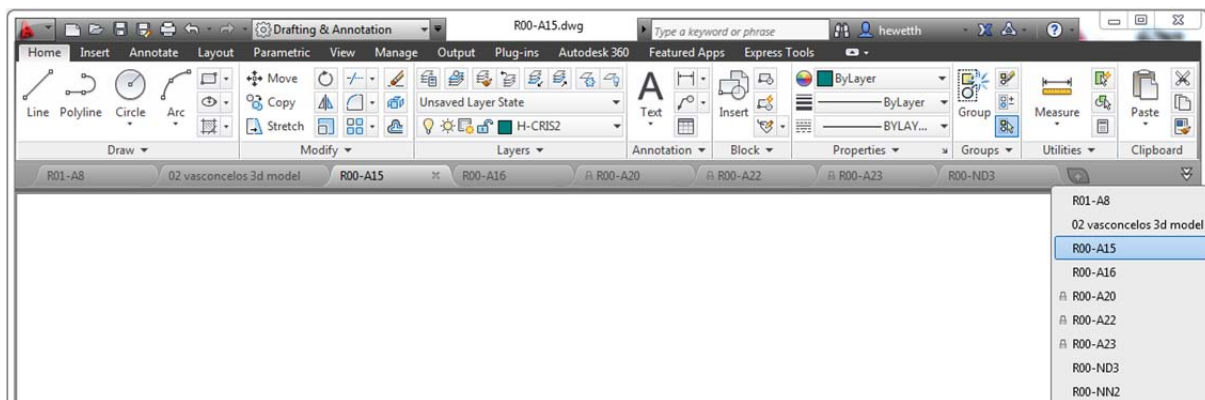
Much of the new command line functionality, including AutoCorrect, mid-string search, and adaptive suggestions, is also available using dynamic input.

File tabs

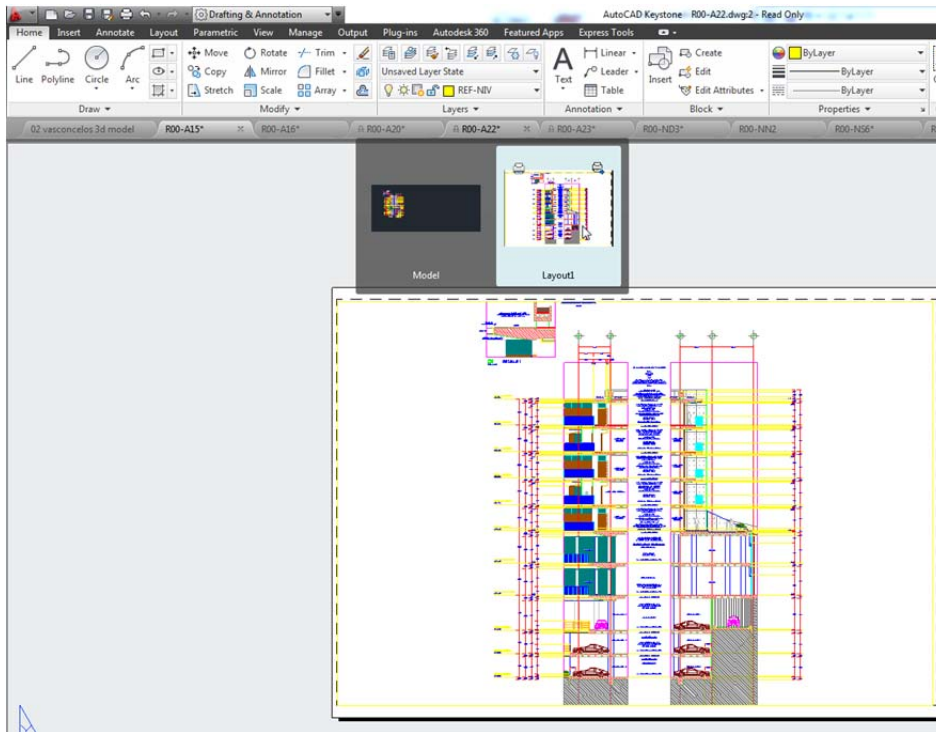
The AutoCAD 2014 release offers drawing tabs as a fast and visual way to switch between open drawings or to create new ones. You can turn the file tabs bar on or off using the File Tabs control on the View ribbon tab. When file tabs are turned on, a tab for each open drawing is displayed at the top of the drawing area.



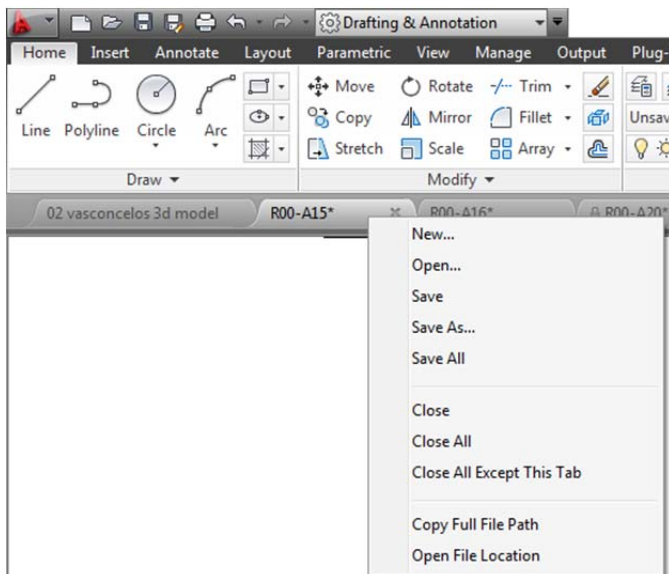
File tabs are displayed in the order they were opened. You can drag tabs to change their order. If there is not enough room for all the file tabs to display across the area, an overflow menu at the right end of the file tabs bar provides access to the additional files.



A lock icon on a tab indicates that the file is open as read-only and an asterisk indicates if the file has been modified since its last save. When you pass the cursor over a file tab, preview images of the model and layouts are displayed. If you pass the cursor over one of the preview images, the corresponding model or layout is temporarily displayed in the drawing area and Plot and Publish tools are accessible from the preview image.



The right-click menu for file tabs enables you to create, open, save, and close files, including the ability to close all open files except the one on which you right-clicked. You can also copy the full file path to the clipboard or open the file location in Windows® Internet Explorer.



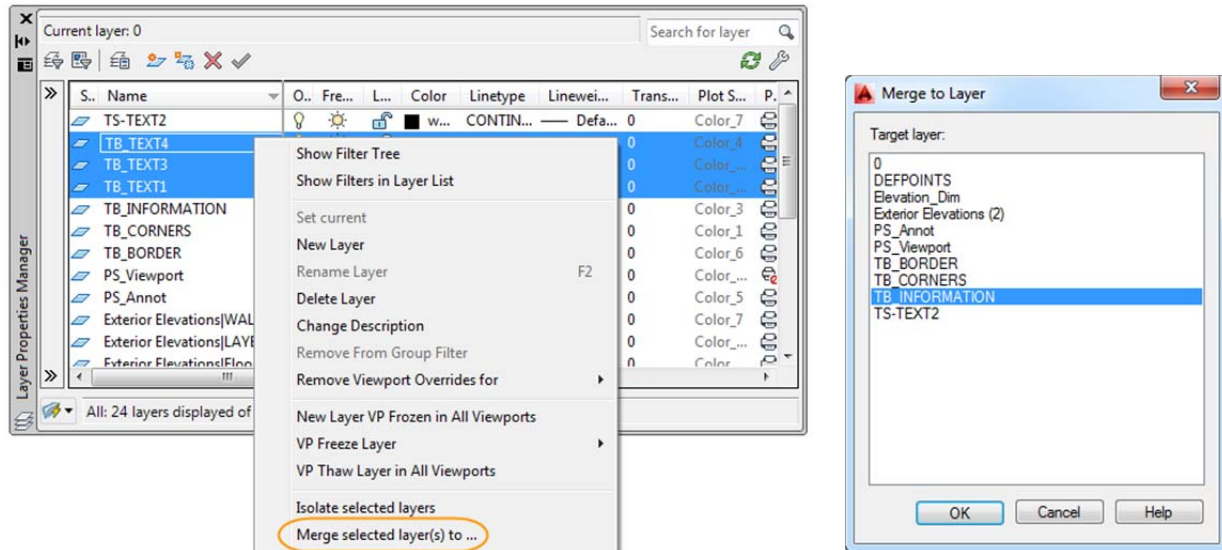
A Plus (+) icon to the right of the drawing tabs enables you to easily create new drawings, automatically adding their tabs as they're created.



Layer management

The number of layers displayed on the ribbon has been increased. Layers are now displayed using natural ordered sort. For example, the layer names 1, 4, 25, 6, 21, 2, 10 are sorted as 1, 2, 4, 6, 10, 21, 25 instead of 1, 10, 2, 25, 21, 4, 6.

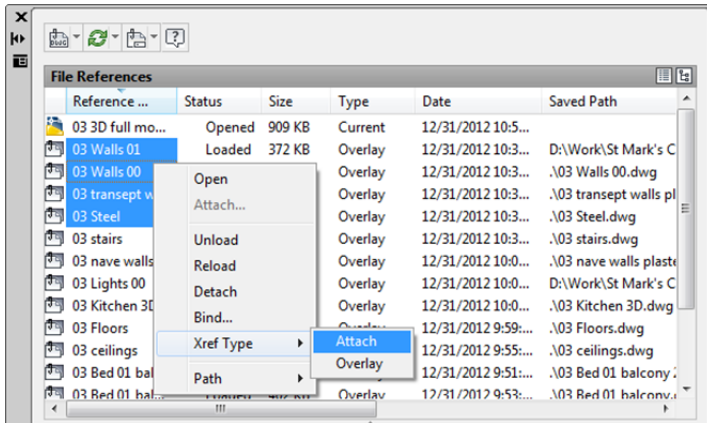
A new Merge option in the Layer Manager enables you to select one or more layers from the layer list and merge the objects from those layers onto a different layer. The original layers are automatically purged from the drawing.



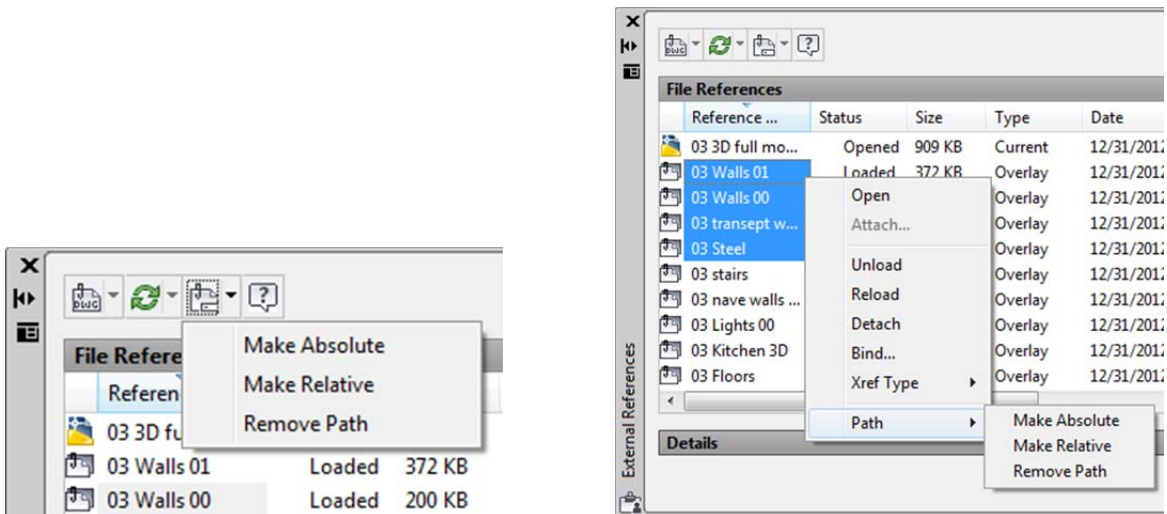
Xref enhancements

The display of linetypes and layers from externally referenced drawings is enhanced in AutoCAD 2014. Xref linetypes are not displayed in the linetype list of the ribbon or Properties palette. Xref layers are still displayed in the ribbon so you can control their visibility but they are not displayed in the Properties palette.

You can easily change the attachment type for an xref between Attach and Overlay by double-clicking in the Type column. A new option in the right-click menu enables you to change the xref type for multiple selected xrefs at the same time.



The External References palette includes new tools to easily change the path of selected xrefs between Absolute and Relative. You can also remove the path completely. The –XREF command includes a new PATHTYPE option enabling you to automate these path changes through scripting.



Design exploration

Reality capture

Reality Capture enables you to take a 3D laser scan of an object, topography, a building, or even an entire town and attach it to an AutoCAD drawing as point cloud data. You can then use it as a real-world reference for your design work. This point cloud data is stored as thousands, even millions, of points in 3D space.

Autodesk ReCap

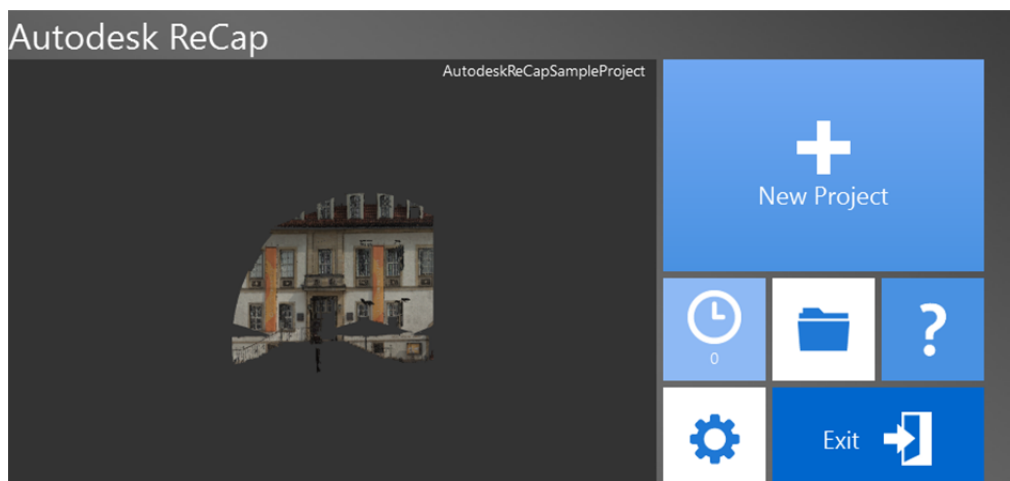
Autodesk® ReCap software is a separate application that enables you to create a point cloud project file (RCP) that references multiple indexed scan files (RCS). It is installed with AutoCAD 2014 by default and you can launch it from the Windows Start menu or from the Autodesk ReCap desktop icon.



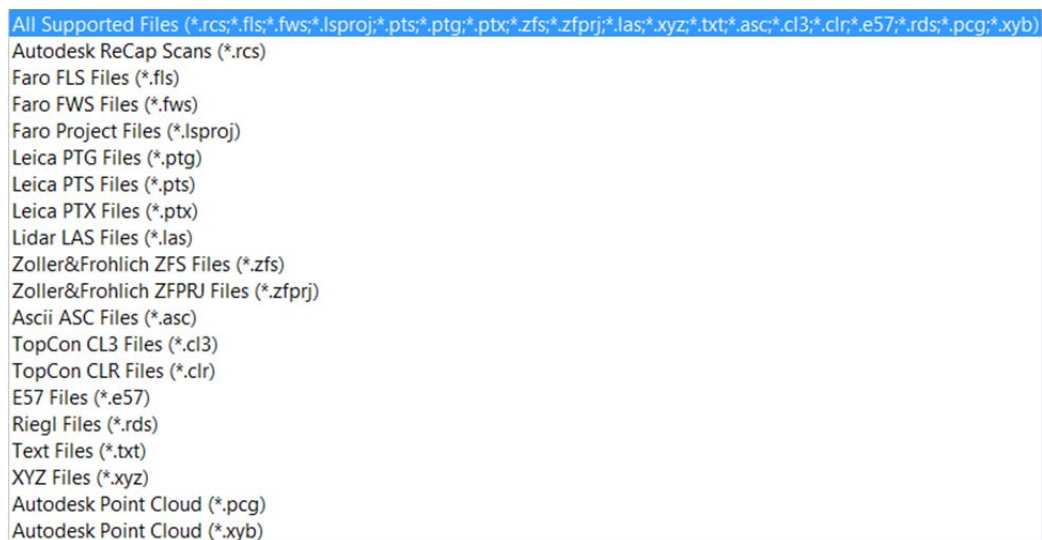
Autodesk
ReCap

You can use Autodesk ReCap to convert scan file data to a point cloud format that can be viewed and edited in other products. Autodesk ReCap processes massive datasets, enabling you to aggregate scan files and clean, section, spatially sort, compress, measure, and visualize them. The resulting high-speed formats can then be used by AutoCAD and other Autodesk applications, including Autodesk® Revit® and Autodesk® Inventor® software.

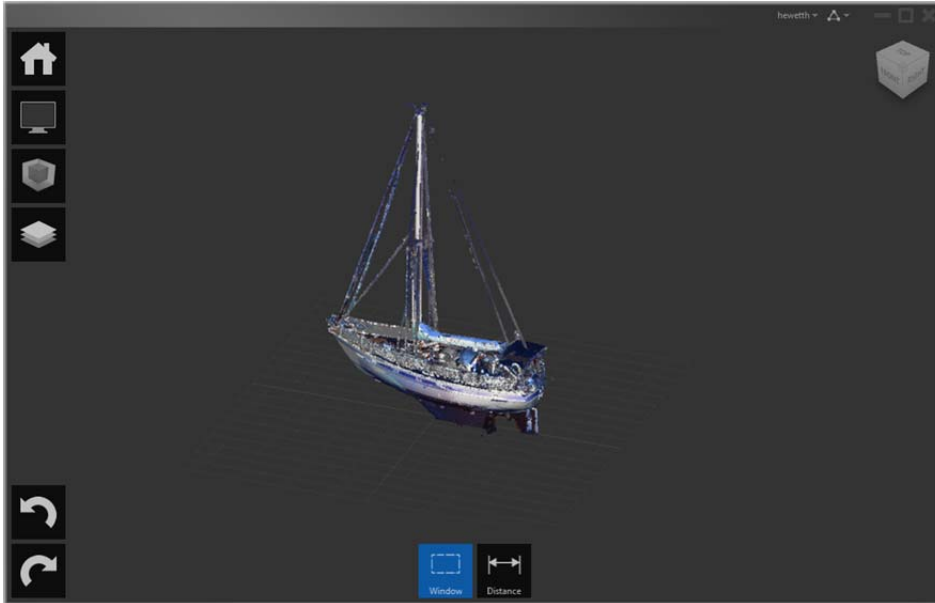
In Autodesk ReCap, you can create a new project by selecting the scan files to import.



It supports scan data files from many popular formats, including Faro, Leica, and Lidar just to name a few.



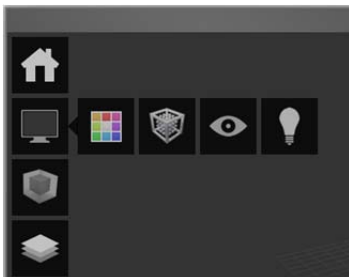
After selecting scan files to import, you can adjust import settings that affect the size and appearance of the point cloud. The imported files are displayed on the project screen where you can use a variety of tools to work with scan files.



The Home tile menu provides access to a variety of project-related activities. You can save the current project as a point cloud project file (RCP) or export it to a point cloud scan file (RCS), both of which can be attached to AutoCAD drawings. You can import additional scan files into the current project or open a different project. A Preferences tool enables you to modify project settings and the Help tool provides detailed information about working with Autodesk ReCap.



The Display Tools tile menu provides tools for analyzing the point cloud, changing its appearance, modifying the display of components in the work area, and specifying lighting options.



The Limit Box tile menu provides tools for working with limit boxes to define different volumes within the scene.



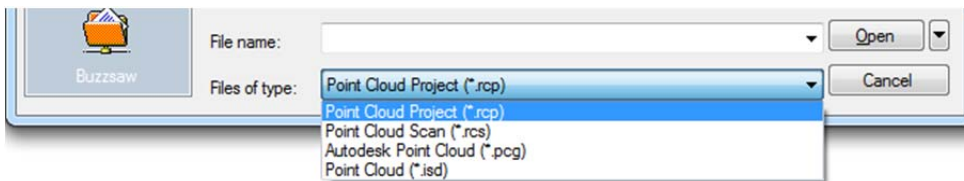
The Project Navigator tile menu provides one-stop access to scan regions and individual scan files. The Project Navigator can remain attached to the Project tile menu so that it opens only when you hover over it or work within it. If you want to keep it open as you work, detach it from the tile menu and move it to a location on or off the program work area.



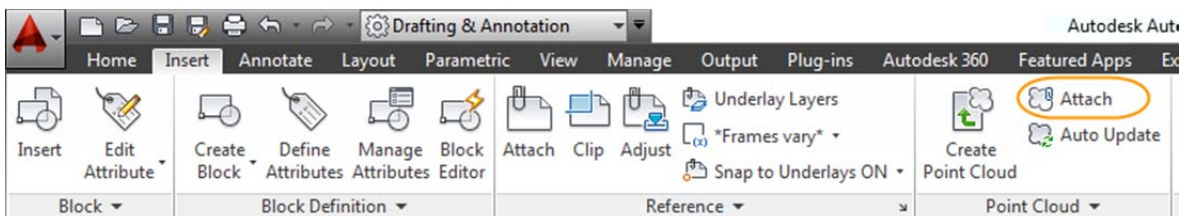
After producing point cloud files Autodesk ReCap, or if you've received files from someone else, you can attach them to your AutoCAD drawings.

AutoCAD point cloud support

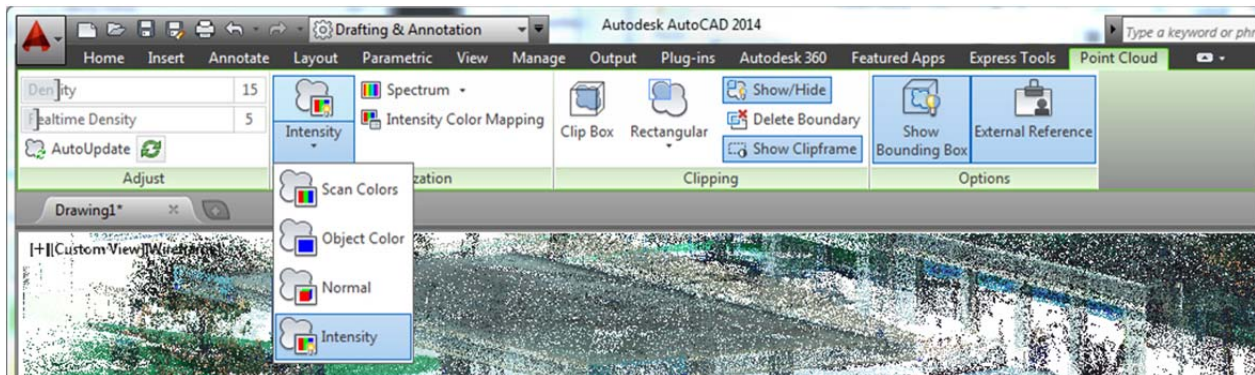
Point cloud functionality is enhanced in AutoCAD 2014 to support inserting of point cloud project (RCP) and scan (RCS) files produced by Autodesk ReCap in addition to the previously supported PCG and ISD formats.



You can select point cloud files using the Attach tool from the Point Cloud panel of the Insert ribbon tab.



After a point cloud is attached, the contextual tab that is displayed when the point cloud is selected is enhanced to make it easier to work with point clouds. You can now change the stylization (colorization) of point clouds to colorize the point cloud based on scan colors (colors captured by the scanner), object color (color assigned to object), normal (colorize based on the normal direction of point), or intensity (reflectivity value of points). If normal or intensity data was not captured with the scan, those stylizations are disabled. In addition, more clipping tools are displayed on the ribbon to make it easier to clip the point cloud.



AutoUpdate is turned off by default, preventing the point clouds from automatically updating every time the view is changed and improving performance when working with large point clouds. You can use the refresh button to manually update the point clouds.

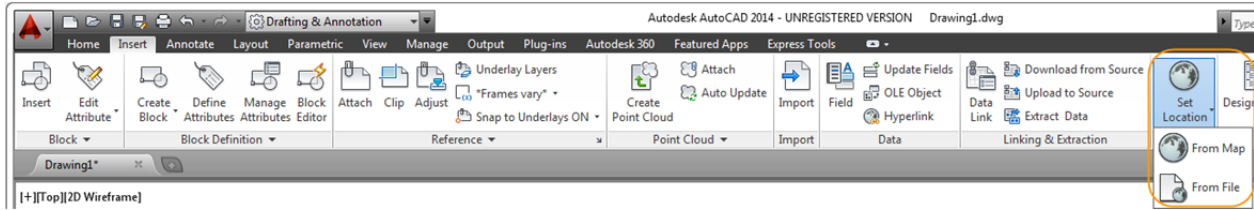
Documentation

Geographic location

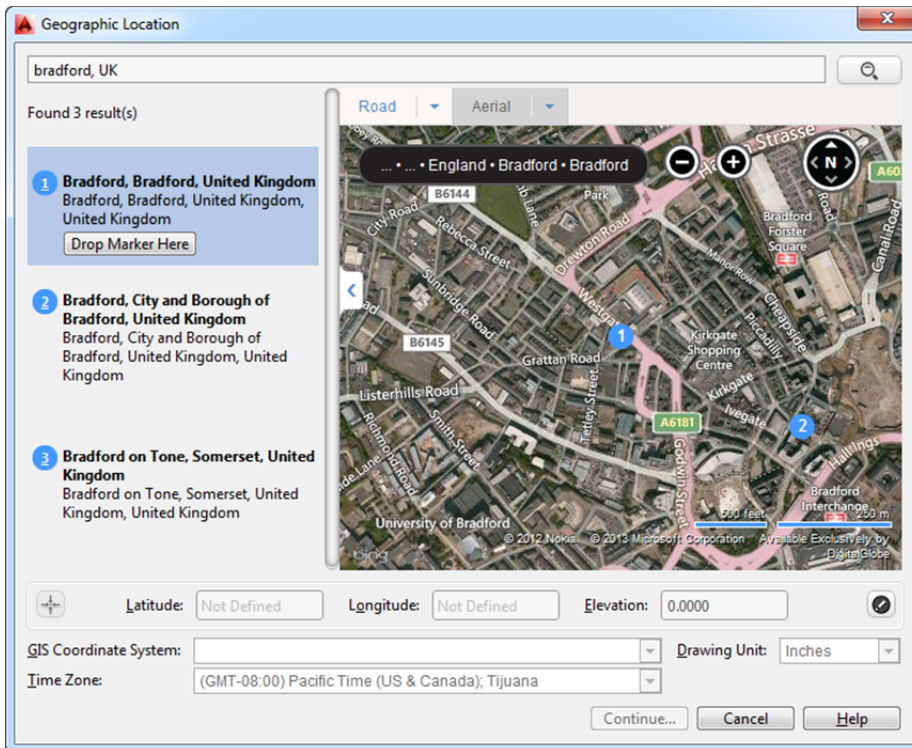
Support for geographic locations has been significantly enhanced in AutoCAD 2014. It includes the same Coordinate System Library as Autodesk® AutoCAD® Map 3D software and the Live Map Data tool.

There are many benefits to defining a location in your drawing. When you import geolocated data into a geolocated drawing, AutoCAD transforms the data based on the drawing's geographic location. You can see your design within the context of its location and if you render the model, it will have the correct sun angle. If you export the drawing to a map service like Google® Earth, it will automatically display at the correct location. When you insert georeferenced images or blocks into your georeferenced drawing, they are automatically placed in the correct location and at the correct scale. For example, imagine large projects that have multiple designers working separately on the same design, such as a housing project. If each designer uses the same coordinate system, all the drawings will insert at their appropriate locations when combined into a single file. You can mark specific point of interest in your drawings, knowing that those points correspond to logical geographic locations. And, if you have a GPS device enabled on your computer, you can see your current position in the drawing and you can even mark positions as you walk around. For example, landscape architects can visit the site and take notes about the surroundings by marking them on the drawing.

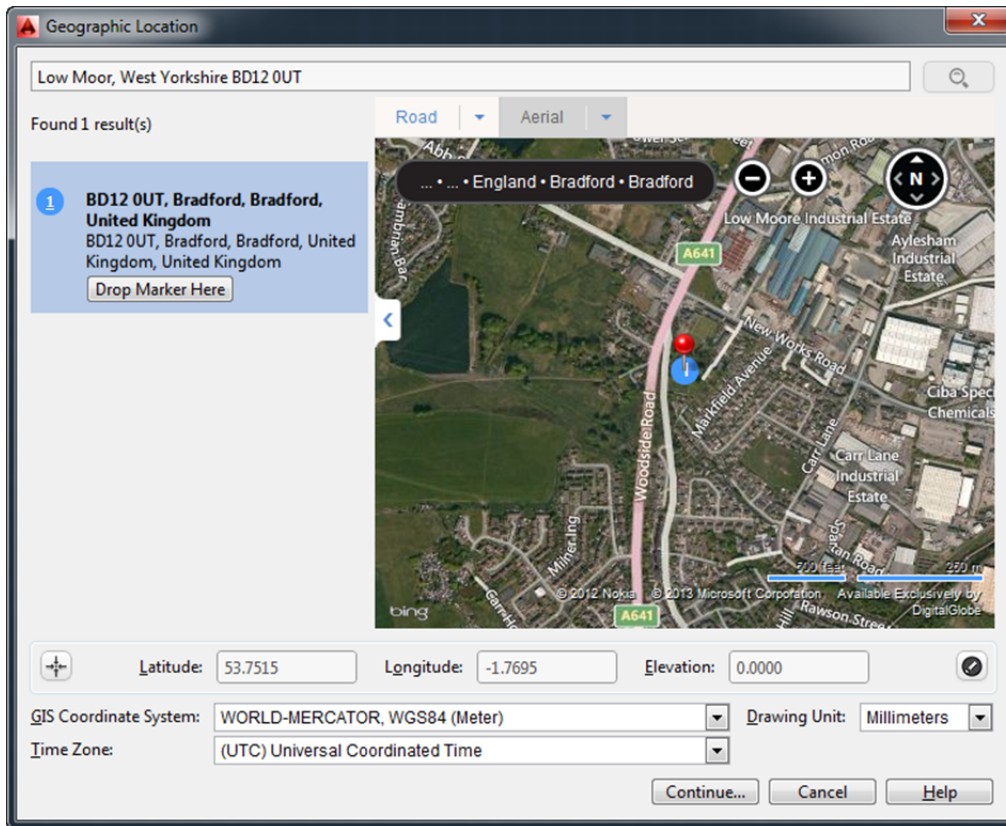
You can set a geographic location in your drawing using the Set Location tool on the Insert ribbon tab. Choose to set the location from a map or by selecting a KML or KMZ file.



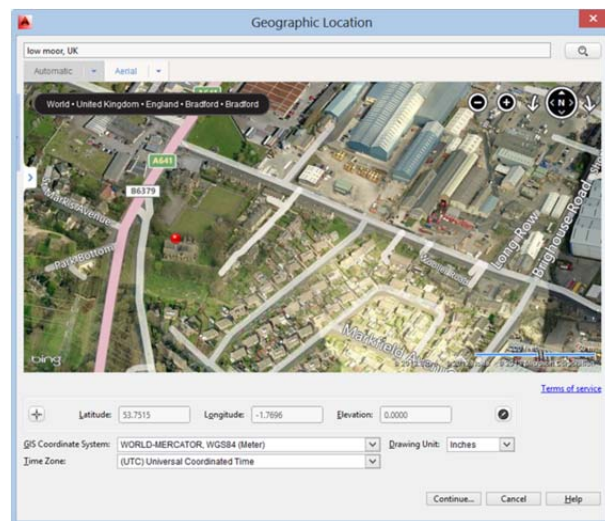
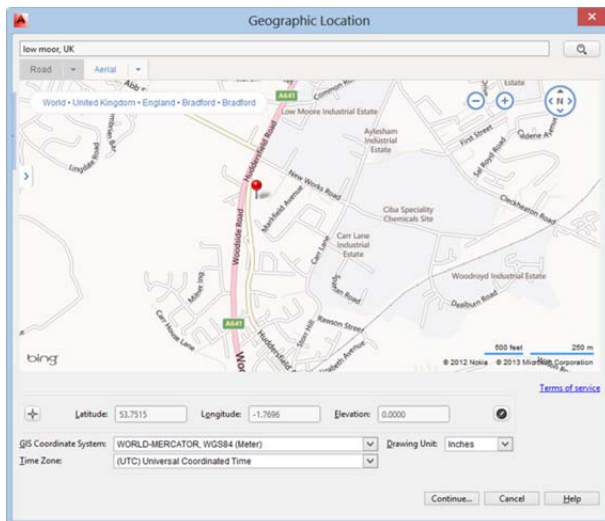
Live Map Data is automatically available from AutoCAD 2014 when you are signed into your Autodesk account. When specifying a geographic location from a map, you can search for an address or latitude and longitude. If multiple results are found, you can click on each one in the results list to view the corresponding map, and you can display the map as road or aerial data.



When you find the correct location, you can drop a marker to select it. A pin is placed on the map and corresponding latitude, longitude, and time zone are automatically applied. You can move the pin, updating the latitude and longitude automatically. An icon to the right of the elevation unlocks the latitude and longitude for manual editing.

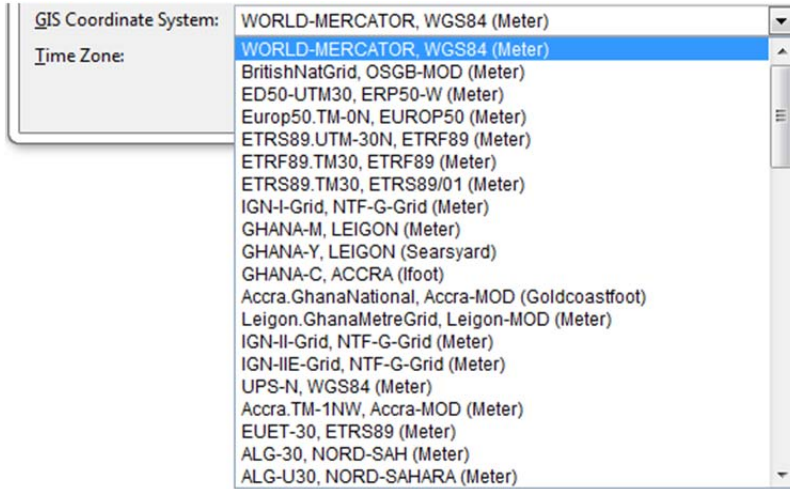


Collapse the Results panel to maximize the map. You can display a standard road map or automatically display the best map style as you zoom.

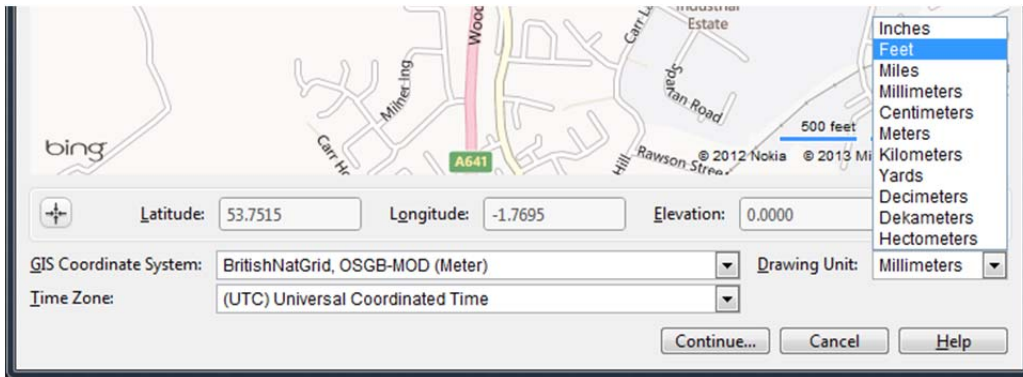


AutoCAD 2014 assigns World-Mercator as the default coordinate system, or you can choose from the list of filtered coordinate systems. The coordinate system list is filtered based on the entered latitude and longitude. So it only displays the coordinate systems relevant to the specified area. To get more accurate results, it is always recommended to use a local coordinate system rather than a global coordinate

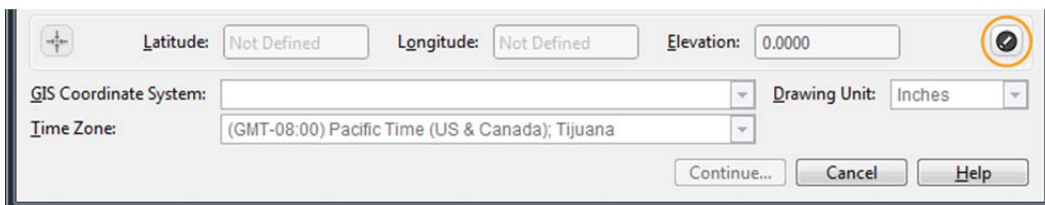
system. Local coordinate systems are considered more accurate because they align more closely with the earth's surface in that locality, in comparison to an earth-centric datum, for example, World Mercator. Often, more than one coordinate system may cover the location you are interested in. As a general rule of thumb, the coordinate system with its datum closest to that location is considered to be the most accurate.



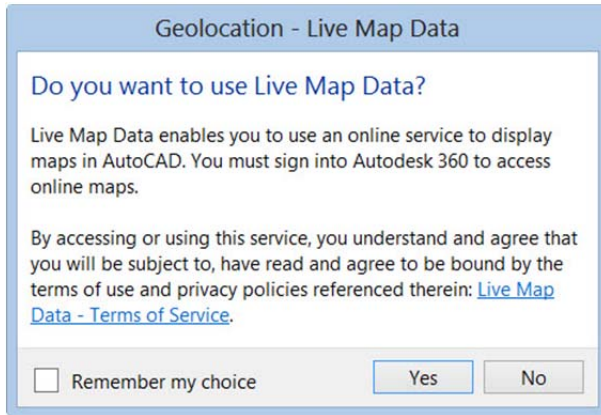
The coordinate system defines the scale of the map. The current drawing unit is automatically displayed in the Geographic Location dialog box, or you can choose from a list of standard units. The inserted map is automatically scaled appropriately for the specified drawing units.



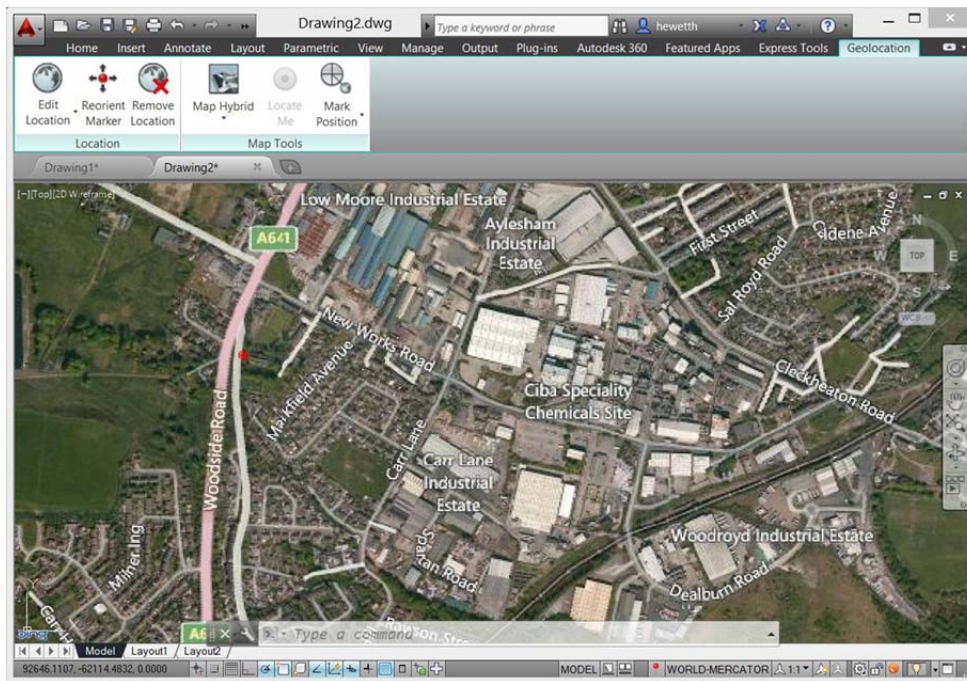
Live Map Data is only available when you are working online. If you are working offline or choose not to use Live Map Data, no map is displayed, but you can manually enter the latitude and longitude by unlocking them for editing. After you accept the latitude and longitude, the relevant coordinate systems are automatically filtered.



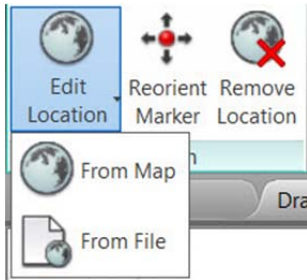
If you choose not to use Live Map Data, it will no longer be available to you in the current session of AutoCAD. If you close AutoCAD and begin a new session, you can, once again, choose to use Live Map Data.



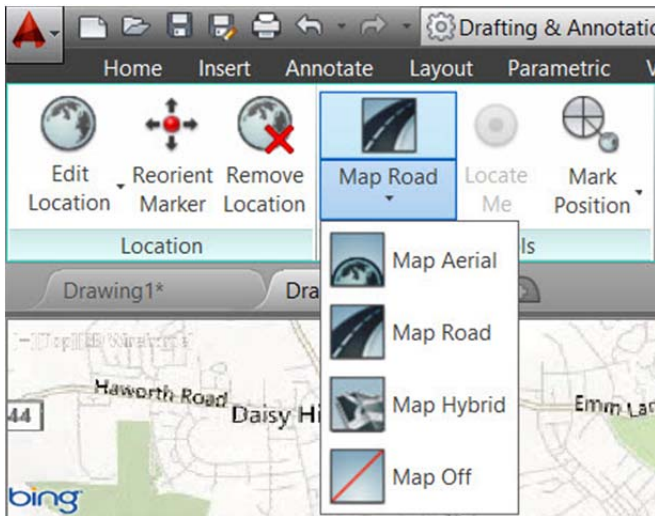
When a map is applied to a drawing it is always displayed below drawing geometry. Whether you apply a geographic location using a map, entering latitude and longitude, or selecting a KML/KMZ file, the geolocation marker is displayed in the drawing at a point you specify and a new Geolocation tab is added to the ribbon.



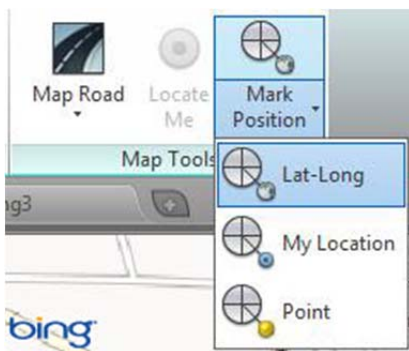
The Geolocation ribbon tab includes tools for modifying the geolocation and map display. You can specify a different location using Live Map Data or by selecting a KML or KMZ file. Pick a new location and north direction to reorient the geographic marker. Or, completely remove the location data and assigned coordinate system from the drawing.



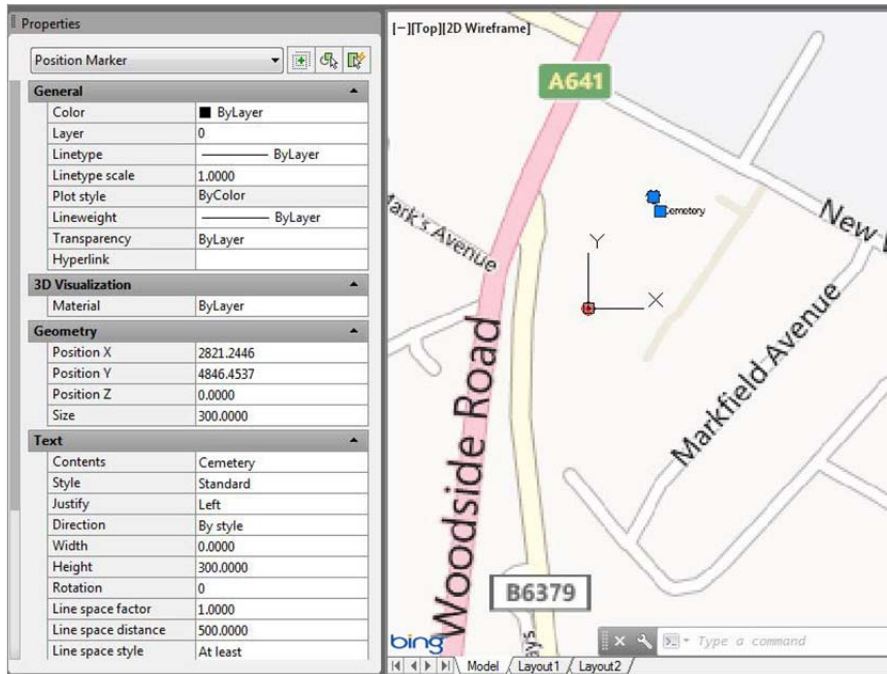
Easily switch between an aerial, road, or hybrid map or turn off the map display while still maintaining the geographic location and coordinate system data.



If you are working on a GPS-enabled laptop, you can use the Locate Me tool to identify your current location in the map. You can mark positions in the drawing by entering lat-long data, using your current location (for GPS enabled devices), or by picking points.



For each position, you can enter text to describe the position. The new GEOMARKPOSITIONSIZE system variable controls the initial size of the marker. You can modify the size, contents, and other properties of selected position markers using the Properties palette.



Drawing enhancements

AutoCAD 2014 includes a variety of drawing enhancements to help you produce drawings more efficiently.

Arcs

Easily draw an arc in either direction by holding the Ctrl key to switch directions as you draw.

Polylines

The #11 AUGI wishlist request for the ability to fillet a polyline to itself, creating a closed polyline, is implemented in AutoCAD 2014.

Sheet sets

When creating a new sheet in a sheet set, the CreateDate field stored in the associated template (.dwt) displays the creation date of the new sheet rather than the creation date of the template file.

Plot styles

The CONVERTPSTYLES command enables you to convert the current drawing to either named or color-dependent plot styles. In AutoCAD 2014 it is enhanced to support style names with spaces.

Annotation enhancements

Attributes

The default behavior for inserting blocks with attributes displays the dialog box. ATTDIA is set to 1.

Text

Single line text is enhanced to maintain the last justification setting until it's changed.

Dimensions

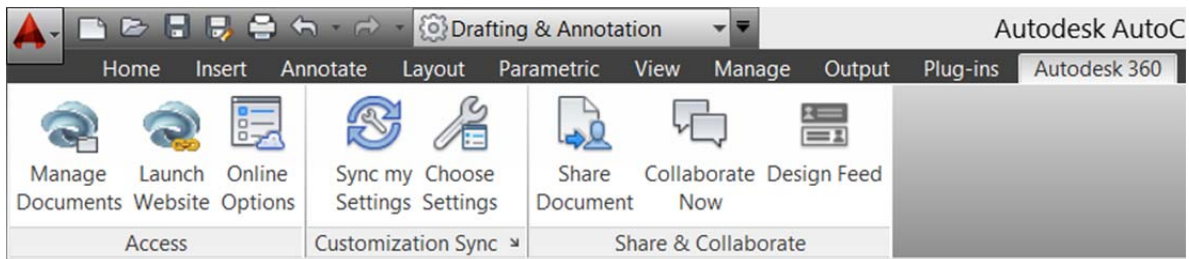
The new DIMCONTINUEMODE system variable provides you with more control when creating continued and baseline dimensions. When DIMCONTINUEMODE is set to 0, the DIMCONTINUE and DIMBASELINE commands create dimensions based on the current dimension style. When set to 1, they apply the dimension style of the selected dimension.

Hatch

The Hatch tool on the ribbon maintains the previous method for selecting objects to hatch: Pick internal point or Select objects. The Undo option is added to the command line.

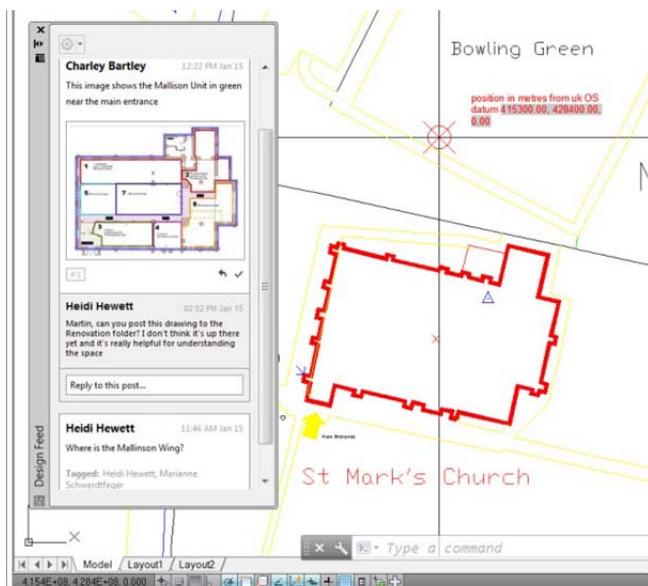
Connection

In AutoCAD 2014 the Online ribbon tab is renamed Autodesk 360. It includes a new Manage Documents tool for easy access to the Autodesk® 360 folder on your local machine and the new Design Feed enables you to enter posts and images for a drawing that can be shared online.

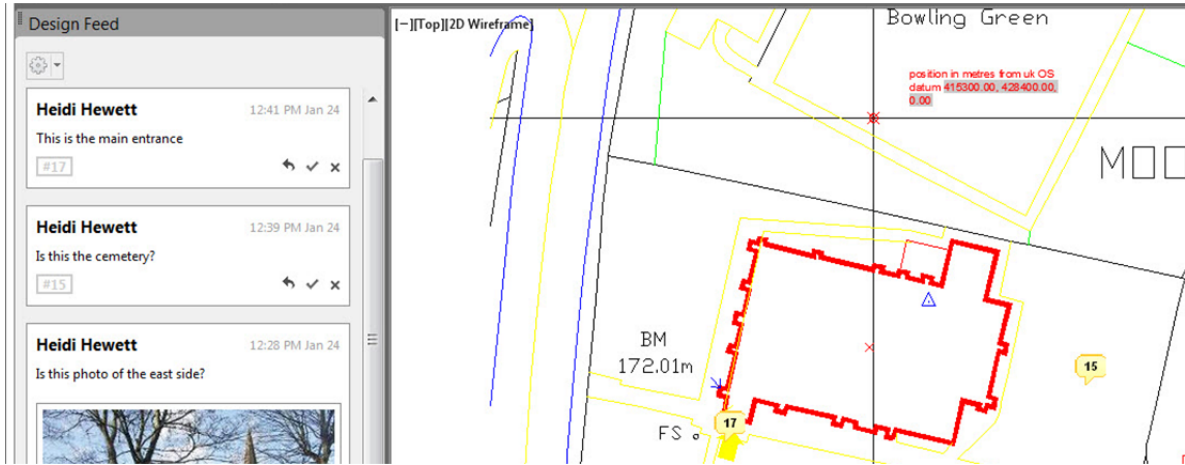


Design Feed

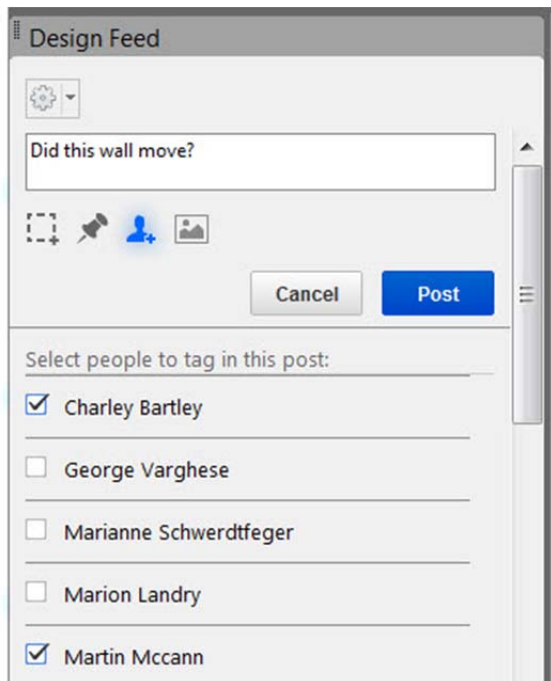
Design Feed, accessible from the Autodesk 360 ribbon tab, displays a palette in which you can enter text messages and attach images to be shared online with colleagues, clients, and consultants through Autodesk 360. Posts appear with related drawings on the desktop, on the web, and across mobile devices. Turn on Design Feed from the Autodesk 360 ribbon tab.



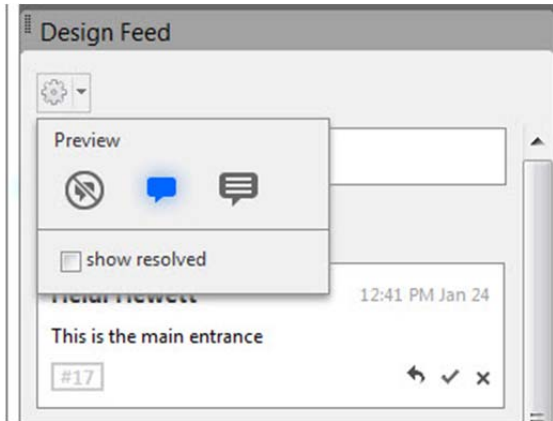
If you associate your message with a location or area within the drawing, a corresponding bubble is displayed. When you select a post in Design Feed, AutoCAD zooms to the corresponding part of the drawing. If you select a bubble in the drawing, the corresponding post is selected in Design Feed. The settings button on the Design Feed palette lets you control the display of the bubbles.



You can tag colleagues, clients, and consultants to notify them of your post; notifications will be sent to them by email and will also appear within AutoCAD.



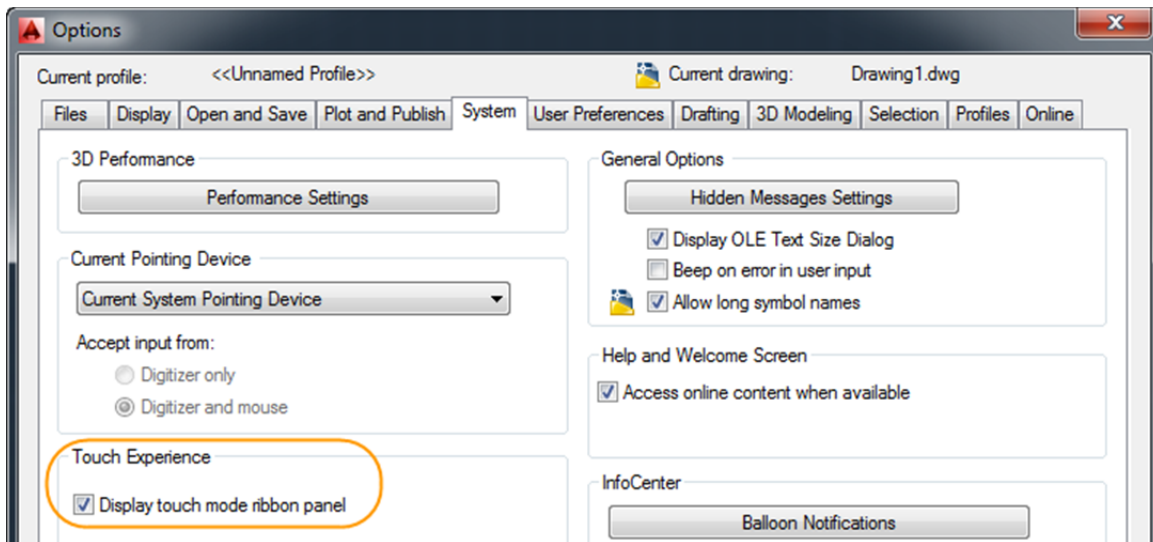
After you finish creating a post, it is saved to your Autodesk account with the drawing, along with any images that you attached. Using Autodesk 360, the people that you have authorized can view the drawing and its associated posts, and the people that you have tagged can post replies. When the questions in a post and its replies are no longer active, you can resolve the thread to hide it in the Design Feed palette.



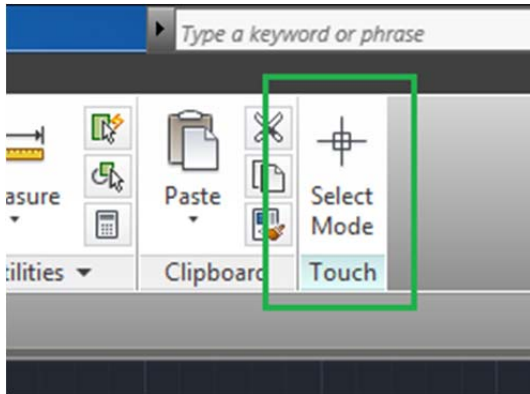
Customization

Operating systems

AutoCAD 2014 supports Windows® 8, Windows 7, and Windows XP. If you are using a Windows 8 touch-enabled device, you can benefit from smoother pan and zoom performance. A new control on the System tab of the Options dialog box displays a touch mode ribbon panel when a touch screen device is detected.



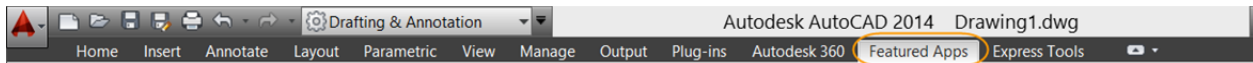
The Touch ribbon panel enables you to cancel the current command and returns you to the Select/Command prompt.



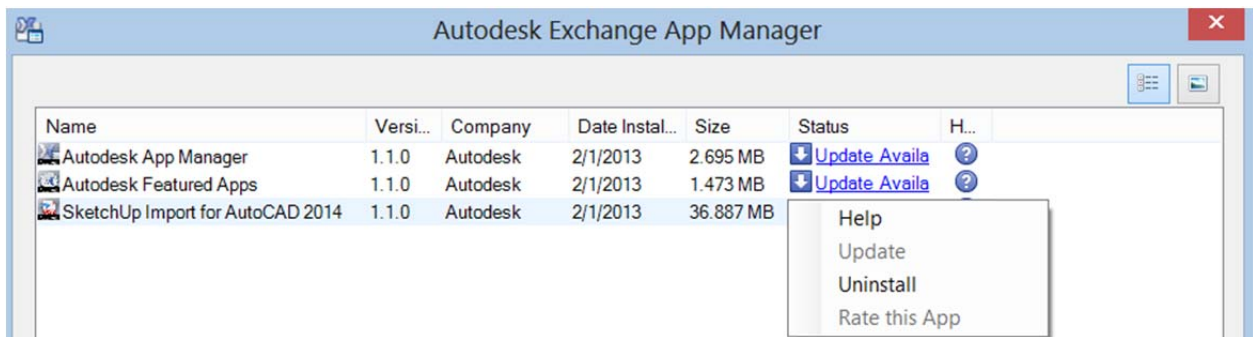
Exchange apps

A default installation of AutoCAD 2014 adds several valuable apps from Autodesk Exchange, including the Featured Apps ribbon tab, the Exchange App Manager, and the SketchUp Import for AutoCAD 2014 tool.

The Featured Apps ribbon tab provides easy access to the Exchange site where you can browse and download AutoCAD apps; some for free and some for purchase. It also includes a selection of featured apps that you can select and download directly from the Featured Apps tab without browsing through the entire Exchange site.



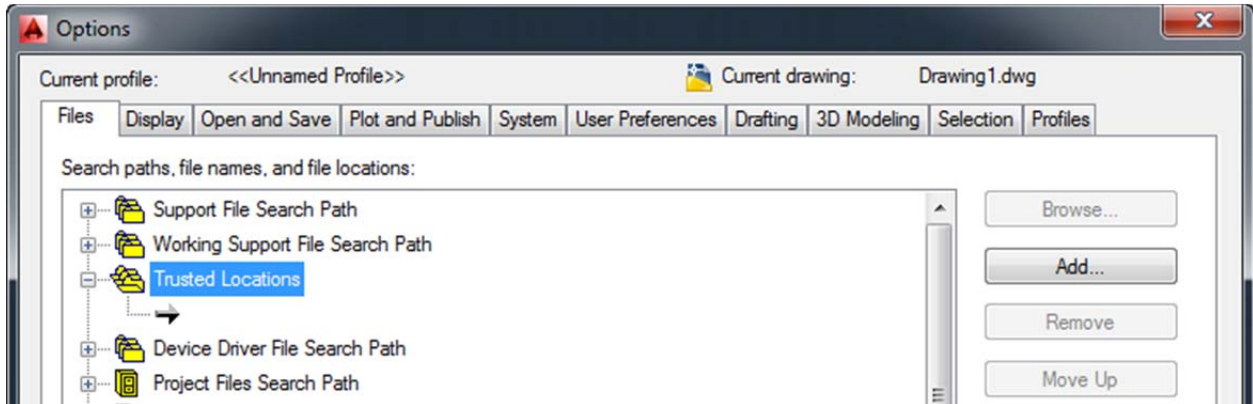
The Exchange App Manager and the SketchUp Import for AutoCAD 2014 tool are accessible from the Plug-ins ribbon tab. Use the Exchange Apps Manager to easily view and update installed apps. Double-click on an app or choose Help from the right-click menu to learn more about it. Just as easily uninstall or rate the app using the right-click menu options. Use the Sketchup Import for AutoCAD 2014 app to convert a SketchUp file, stored in a local or shared folder, and insert the model into the current drawing.



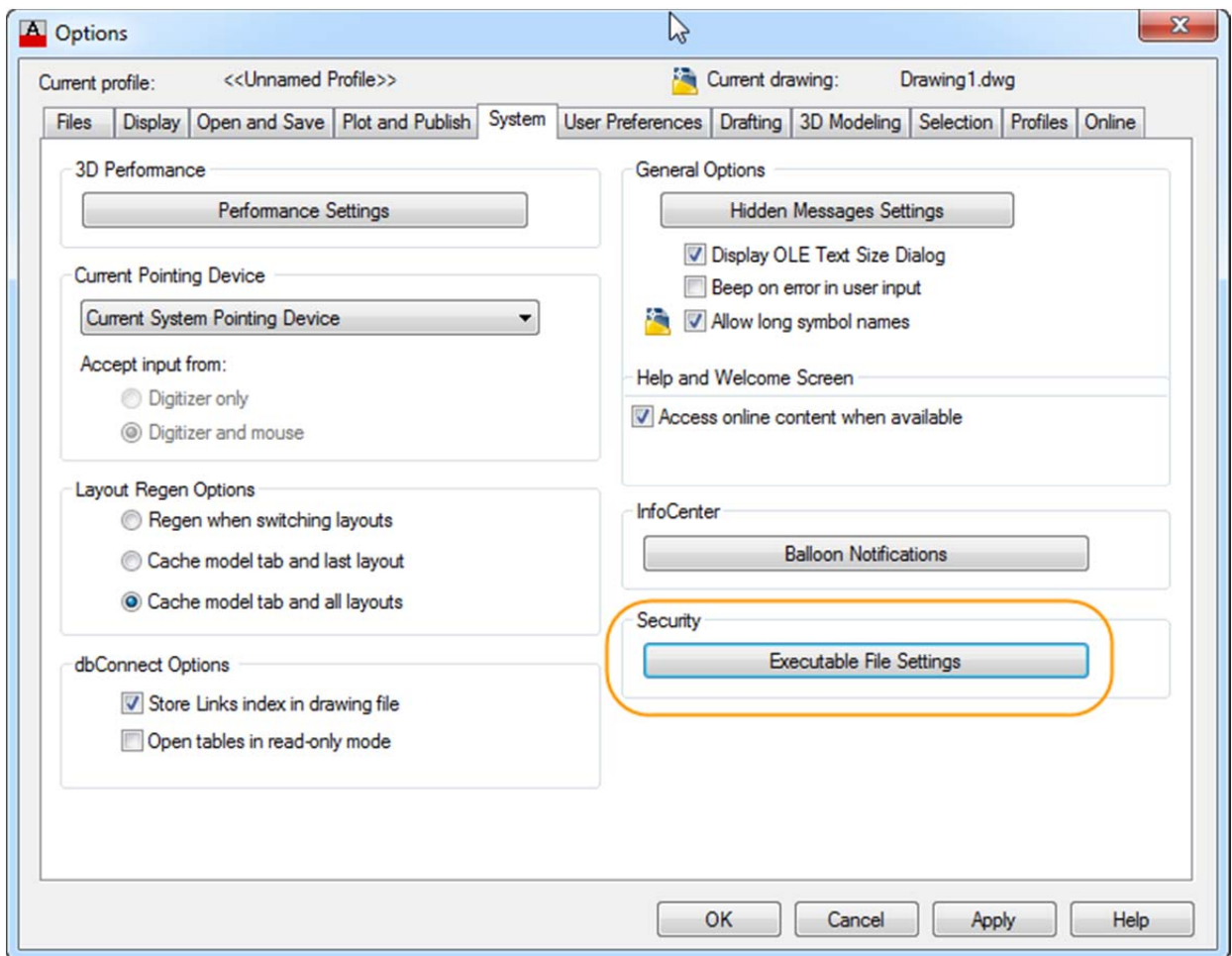
Secureload

AutoCAD 2014 offers new security controls to help protect your drawings from unauthorized or malicious execution of files such as scripts, AutoLISP, and VBA applications within AutoCAD.

The Files tab of the Options dialog box includes Trusted File Search Path. You can also access these controls using the new TRUSTEDPATHS and TRUSTEDDOMAINS system variables.

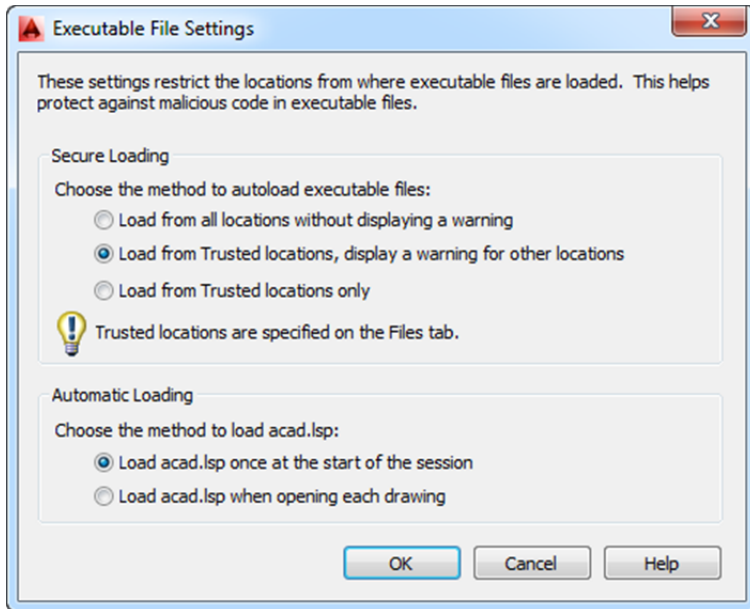


A security control on the System tab of the Options dialog box provides access to new executable file settings.



You can allow executable files to be loaded from all search paths or only from the trusted locations specified on the Files tab. And you can choose to display a warning before loading executable files

outside the trusted locations. These options are applied to the new SECURELOAD system variable. Similar options have been added to the Deployment Wizard that enable you to apply Secureload functionality to network deployments.



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