

An Important Word about the 2010 Software & Drawing Compatibility

AutoCAD® drawing format changes occur about every three releases. Autodesk changes the drawing formats to improve performance and reduce file size, among other things. **The 2010 version of AutoCAD®-based products has a different drawing format than releases 2007-2009.** What does this mean to you?

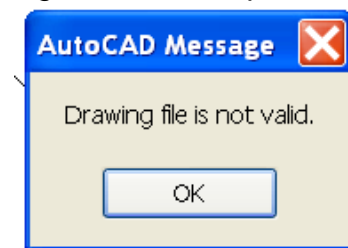
Drawing compatibility can become a challenge. Luckily, in some circumstances, you can save a drawing created with the current release of the program in a format compatible with previous versions. That's good news. However, in other circumstances, some compatibility issues will still exist. Being aware of these compatibility issues as well as your specific workflow will help you make correct decisions about how to share drawings.

One compatibility issue is as follows: Intelligent drawings are drawings created in AutoCAD® Architecture, AutoCAD® MEP, AutoCAD® Civil, or AutoCAD® Civil 3D®. Intelligent drawings from previous releases that are opened and saved in the 2010 version are essentially rendered unusable in 2009 and earlier release intelligent software. Even a Save As to a previous release will only allow you to open the drawing. It WILL NOT allow the earlier version user to manipulate intelligent objects as the 2010 version user was able to do. (Why? The intelligent objects were not actually converted to the earlier release.)

If you want to avoid this drawing compatibility issue in your office, please do not save any 2009 or earlier release **intelligent** drawings in the 2010 version unless you're either (1) checking out the new software in a TEST drawing or (2) you're ready to convert your whole project over to the 2010 release. And **please**, review the following additional compatibility information.

To understand this and other drawing compatibility problems more fully, we have included the following, more in depth information:

- A. Drawing Compatibility – Two issues can cause drawing compatibility problems: Drawing file format differences and software differences (opening drawings in AutoCAD® that have been created in different or more intelligent software).
 - i File Format Differences - AutoCAD® drawing formats occur about every three years. As stated before, Autodesk changes the drawing formats to improve performance and reduce file size, among other things. What's important to understand is that a 2010 file format drawing cannot be opened by an AutoCAD® program of any previous release – meaning, a drawing saved in 2010 (without using Save As) cannot be opened in an AutoCAD® 2009 or earlier-based program. If you try to open a 2010 drawing in 2009, you'll get an AutoCAD® Message that states that the Drawing file is not valid.



If you need to open a drawing in an earlier file format of the software, you must use 'Save As' as follows:

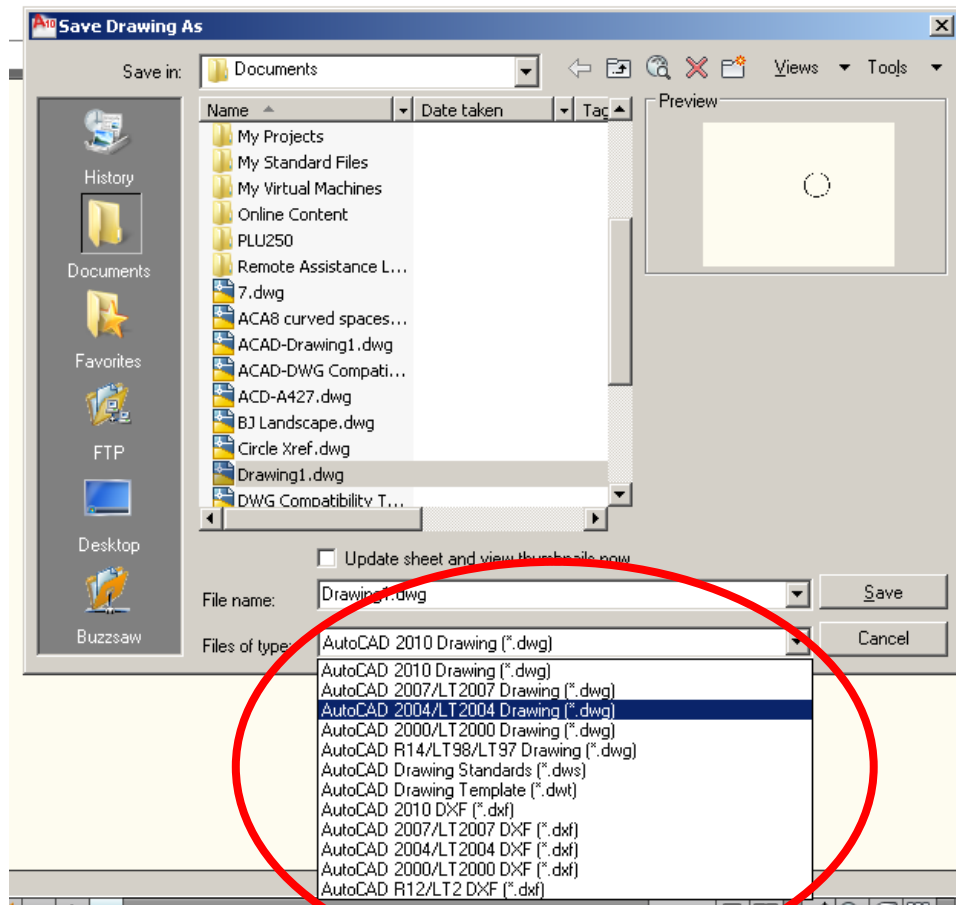
To open in:

2010
2007, 2008 or 2009
2004, 2005 or 2006
2000, 2000i or 2002
Release 14

Save As:

File Format 2010
File Format 2007
File Format 2004
File Format 2000
File Format R14

From this list you can see that there are 5 different file formats since Release 12. If you have to save a drawing back for someone that uses 2002, then you'd select the 'save as' option and change the 'Files of Type' to AutoCAD® 2000/LT 2000 Drawing (*.dwg). See figure below. **PLEASE BE ADVISED THAT WORKFLOWS OF INTELLIGENT SOFTWARE TO INTELLIGENT SOFTWARE DO NOT NECESSARILY BENEFIT FROM THIS SAVEAS OPTION** because intelligent objects became smarter in later releases and smarter objects cannot be converted back to a previous release even through the Save As process.



- ii Software Differences - Basic AutoCAD® versus More Intelligent Autodesk Products – When trying to understand drawing compatibility, it's important to understand how drawings created with basic AutoCAD® behave differently than those created using AutoCAD® Architecture, AutoCAD® MEP, AutoCAD® Civil, or AutoCAD® Civil 3D®. It's also important to understand your workflow. We'll review three different workflows. Workflow 1 is the simplest: someone sending an AutoCAD® 2010 drawing to someone using AutoCAD® 2008.

Workflow 1

No Intelligent Software Difference but
File Format Difference

AutoCAD 2010 to AutoCAD 2008

If you want to open and use a drawing in 2008 that was previously saved in AutoCAD 2010, the 2010 user must SAVE AS to a File of Type: **AutoCAD 2007/LT 2007 Drawing (*.dwg)**
TIP: Change the name of the file to include Save As information

Workflow 2 is someone sending a Civil 3D 2010 drawing to someone that uses AutoCAD® 2008.

Workflow 2

File Format Difference **AND**
an Intelligent Software Difference

C3D 2010 to AutoCAD 2008

If you want to open a drawing in AutoCAD 2008 that was previously saved in C3D 2010, the 2010 user must use the EXPORT command in lieu of a SAVE AS...

Use of the EXPORT command explodes ALL intelligent objects into AutoCAD entities such as lines, arcs, circles, and 3D Faces. It also prompts you to choose a file format (e.g.: 2010, 2007, 2004, 2000, or R14).

The Lesson to learn in this workflow is:
**Intelligent Software to AutoCAD Requires
an Export to AutoCAD**

Workflow 3 is someone sending an AutoCAD® Architecture (ACA) 2010 drawing to someone that uses AutoCAD® Architecture 2008.

Workflow 3

File Format Difference **AND**

Intelligent Object Compatibility

ACA 2010 to ACA 2008

When a 2008 drawing has been saved in 2010, the ability to manipulate intelligent objects in prior releases becomes compromised. When an ACA 2008 drawing has been opened and saved in ACA 2010, **all intelligent objects in the drawing are converted to the later release (2010) and cannot be reverted back to the earlier release (2008)**. Performing a SAVE AS will only allow an earlier release user to open a drawing and to see the intelligent objects (how they are seen is based on certain system variables). Even after a Save As, editing of those objects is still compromised.

The Lesson to learn in this workflow is:
Intelligent Software is not downward compatible.

What allows you to see a 2010 intelligent object in a previous release? Proxygraphics. **What are Proxygraphics?** When the more intelligent application that saved or created intelligent objects will not be used to open the drawing, proxy objects can be saved in the original drawing to represent these intelligent objects. Proxy objects have significantly reduced capabilities compared to their corresponding intelligent objects. The extent to which proxy objects can be edited is determined by the parent ObjectARX application. For example, operations such as erasing and moving an object, or changing object properties, may or may not be possible on a proxy object, depending on the application that created it.

What system variables control proxygraphics creation and visibility? Proxygraphics & Proxyshow. If you're using a 2010 intelligent application program and you want to save proxygraphics representations of intelligent objects such that a user of a different application program (or a previous release of the same application program) can see and minimally manipulate these representations, you must set the system variable, PROXYGRAPHICS, to 1.

PROXYGRAPHICS

Concept

Quick Reference

Type: Integer
Saved in: Drawing
Initial value: 1

Specifies whether images of proxy objects are saved in the drawing.

0	Does not save image with the drawing; a bounding box is displayed instead
1	Saves image with the drawing

To control how proxygraphics in a drawing are displayed, set the system variable, PROXYSHOW. You can set proxygraphics to not display at all (0), to display as graphical representations of the original intelligent objects (1), or to display simply as boxes in place of the original intelligent objects (2).

PROXYSHOW

Concept

Quick Reference

Type: Integer
Saved in: Registry
Initial value: 1

Controls the display of proxy objects in a drawing.

0	Proxy objects are not displayed
1	Graphic images are displayed for all proxy objects
2	Only the bounding box is displayed for all proxy objects

If you have further questions on drawing compatibility, please contact us.

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