

Autodesk®

NavisWorks® 2009

Object Enablers

S Subscription

Autodesk

Autodesk NavisWorks 2009 Solutions

This document answers general questions pertaining to Object Enablers and specifically their use with Autodesk® NavisWorks® 2009 solutions (including Autodesk® NavisWorks® Review, Autodesk® NavisWorks® Simulate and Autodesk® NavisWorks® Manage).

Version 1.1

June 2008

© 2008 Autodesk, Inc. All rights reserved. Except as otherwise permitted by Autodesk, Inc., this publication, or parts thereof, may not be reproduced in any form, by any method, for any purpose.

Autodesk, AutoCAD, Civil 3D, RealDWG and NavisWorks are registered trademarks or trademarks of Autodesk, Inc., in the USA and other countries. All other brand names, product names, or trademarks belong to their respective holders. Autodesk reserves the right to alter product offerings and specifications at any time without notice, and is not responsible for typographical or graphical errors that may appear in this document.

Disclaimer

THIS PUBLICATION AND THE INFORMATION CONTAINED HEREIN IS MADE AVAILABLE BY AUTODESK, INC. "AS IS." AUTODESK, INC. DISCLAIMS ALL WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE REGARDING THESE MATERIALS

Contents

Object Enablers and their use with Autodesk NavisWorks	4
What is an Object Enabler?	4
What is a custom object?	5
When is an Object Enabler required?.....	5
How do I know if I need to use an Object Enabler with NavisWorks?	5
Where can I obtain Object Enablers from?	5
Are there different types of Object Enabler?	6
Are there instances when an Object Enabler is not required?.....	6
Which versions of Object Enablers can be used with NavisWorks?.....	6
How do I install an Object Enabler for use with NavisWorks?	6
How do I use an Object Enabler once it is installed?.....	7
Troubleshooting	9
You're only seeing wireframe geometry in NavisWorks	9
Object Enablers not reported as missing in Scene Statistics, but still only seeing wireframe geometry.....	9

Object Enablers and their use with Autodesk NavisWorks

What is an Object Enabler?

Object Enablers (OEs) can be thought of as a ‘translator’ for custom objects. Applications based on the AutoCAD® platform, (including Autodesk products like AutoCAD® Architecture, and non-Autodesk products like Bentley AutoPlant) generate custom objects that are saved into the DWG file format. Many applications have the ability to read these DWG files, however outside of the authoring application these custom objects generally cannot be interpreted, by default. DWG file readers will therefore tend to display these custom objects as proxy graphics (wireframe geometry), Fig. 1.

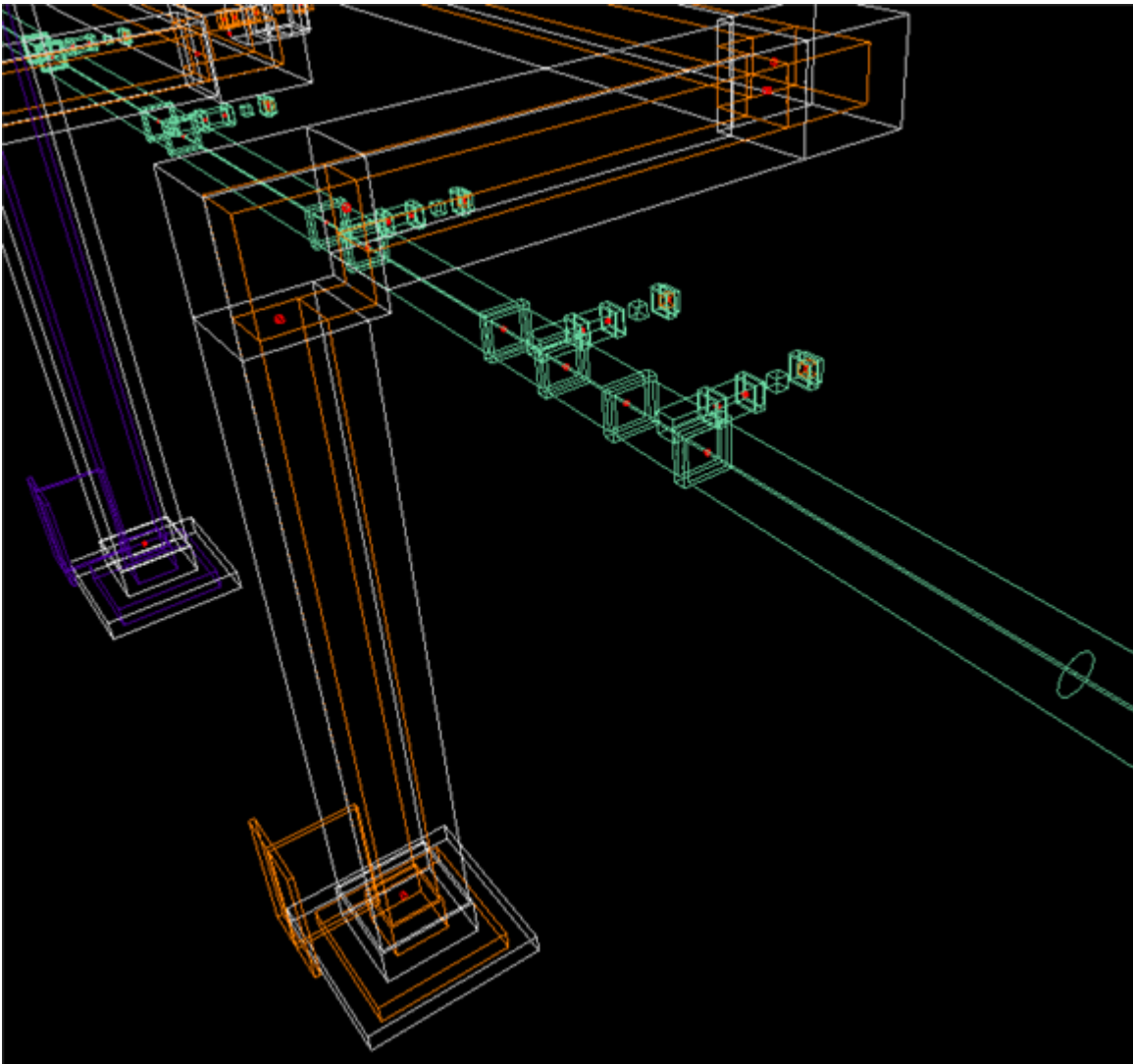


Fig. 1 Proxy graphics

In order for custom objects to be displayed correctly outside of the authoring application, the OE is installed on the machine reading the DWG file, and this ‘translates’ the custom objects into a language that it understands.

What is a custom object?

In this instance, a custom object generally refers to an object that can be selected and inserted into a file from within an AutoCAD-based application, for example, a door, a duct, a pipe, a structural member, and so on. These custom objects are typically found in content libraries that are built into these applications.

When is an Object Enabler required?

An OE will generally be required whenever there is a need to read a DWG file containing custom objects, in an application other than the authoring application.

How do I know if I need to use an Object Enabler with NavisWorks?

When a DWG file is opened in NavisWorks, if the objects are displayed as proxy graphics (as shown in Fig. 1) this could be symptomatic of a missing OE. Go to,

View > Scene Statistics.

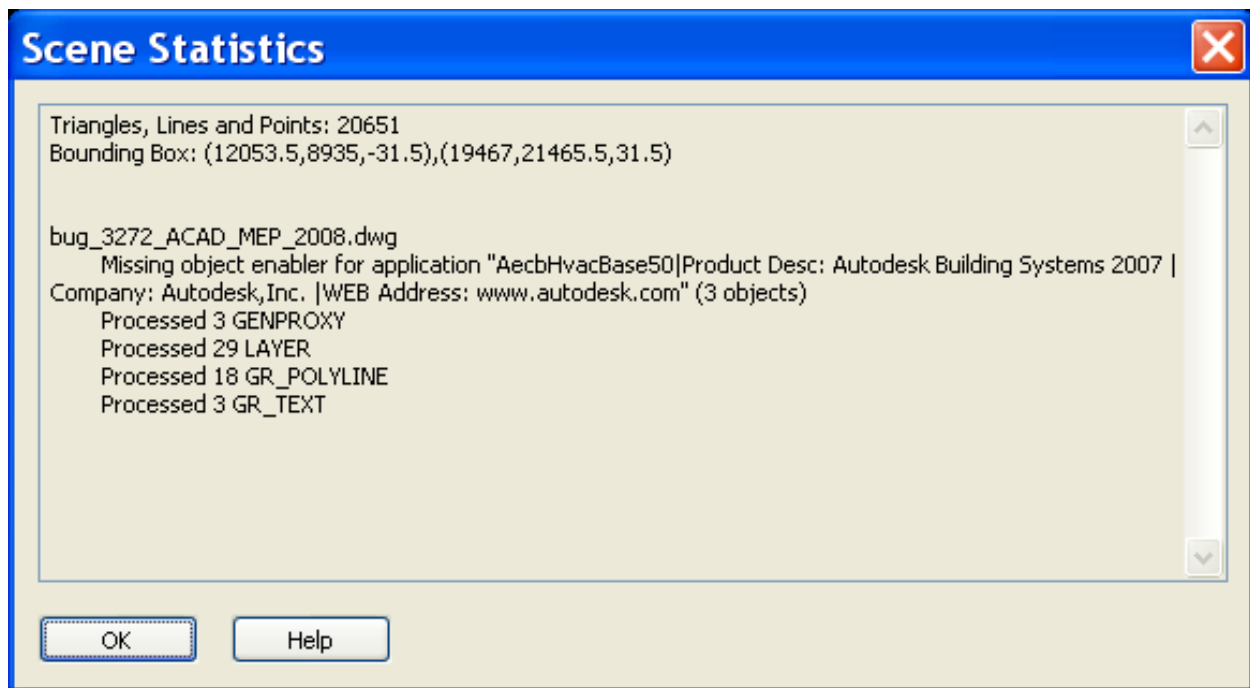


Fig. 2 Scene Statistics: Missing Object Enabler for Autodesk® Building Systems 2007

Amongst other information, the Scene Statistics (Fig. 2) will report any missing, or failed to load OEs. If these messages are received, it confirms that an OE is required to open the file correctly. The relevant OE will need to be installed. If the OE has already been installed and these messages are still received, refer to the Troubleshooting section at the end of this document.

Where can I obtain Object Enablers from?

It is recommended that OEs are obtained from the person(s) authoring the DWG file(s), as this ensures that the correct version OE is being used. OEs will generally be found on the product CD of the authoring application.

Many OEs may also be found on the vendor websites of the authoring applications. For example, Autodesk Object Enablers can be found here:

<http://www.autodesk.com/oe>

Are there different types of Object Enabler?

There are two types of OE. Firstly there are 'shared' OEs that require no configuration. These are based on the older OE model and when installed on a machine they are specified in the registry for use with all applications that need to use it. Secondly there are application specific, or 'unshared' OEs. These are based on the modern OE model and need to be configured for each application that will use it. These OE files are installed locally to each configured application and therefore avoid conflicts. The new model can be found with applications like AutoCAD Architecture from 2007 onwards.

Are there instances when an Object Enabler is not required?

With the older style OEs, the shared files and registry settings were often installed along with the authoring application. If, therefore, the authoring application (e.g. Autodesk® Architectural Desktop) was installed on the same machine as the other application used to open the DWG file (e.g. NavisWorks) then it was not necessary to install the OE.

Which versions of Object Enablers can be used with NavisWorks?

Autodesk NavisWorks Review 2009, Autodesk NavisWorks Simulate 2009 and Autodesk NavisWorks Manage 2009 contain versions of RealDWG™ for 2007, 2008 and 2009. This means that any 2007, 2008 or 2009 version OE can be used with NavisWorks.

OE's older than 2007 can therefore NOT be used with NavisWorks 2009 products; however OE's are backwards compatible, therefore installing a later OE should allow for the reading of older version DWG files.

How do I install an Object Enabler for use with NavisWorks?

Run the installer for the OE and if/when prompted to configure the OE, select the relevant NavisWorks product(s), Fig. 3.

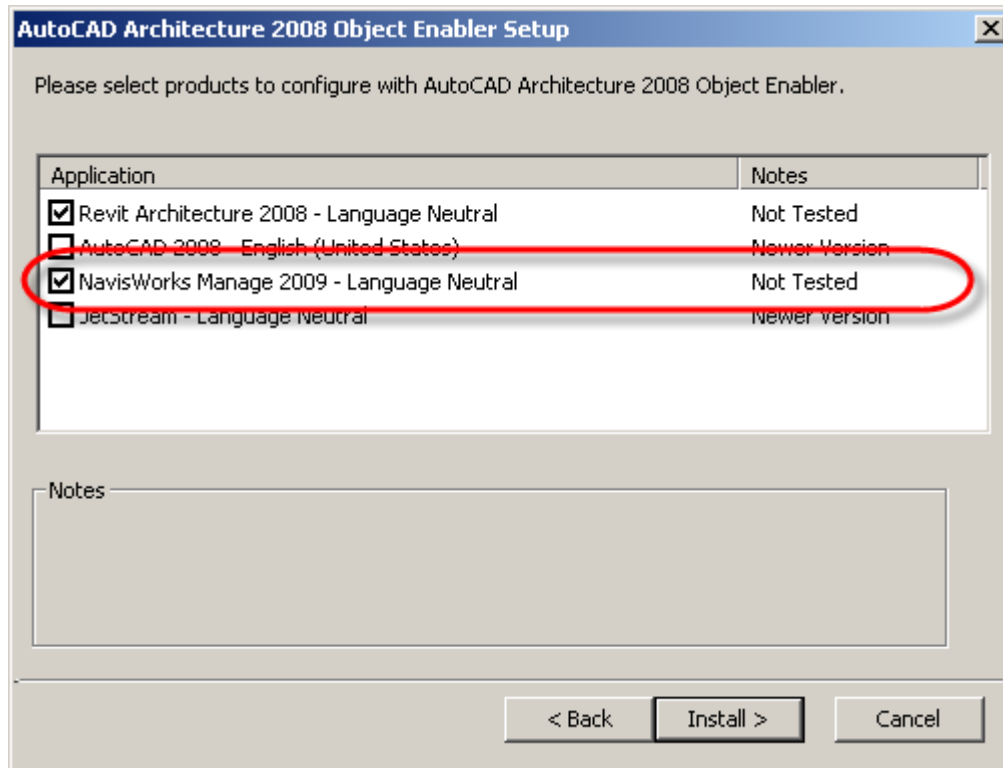


Fig. 3 Configuring the AutoCAD Architecture Object Enabler for NavisWorks Mange 2009

NOTE Some Object Enablers have dependencies on other OEs, and therefore they need to be installed in a specific order. For example, the AutoCAD® MEP 2009 OE has a dependency on the AutoCAD Architecture 2009 OE. The AutoCAD MEP 2009 OE can therefore not be installed until the AutoCAD Architecture OE is installed first.

How do I use an Object Enabler once it is installed?

As mentioned earlier in this document, NavisWorks uses RealDWG technology, supporting versions 2007, 2008 and 2009. These are identified by the **DWG Loader Version** option found in,

Tools > Global Options > File Readers > DWG/DXF/SAT.

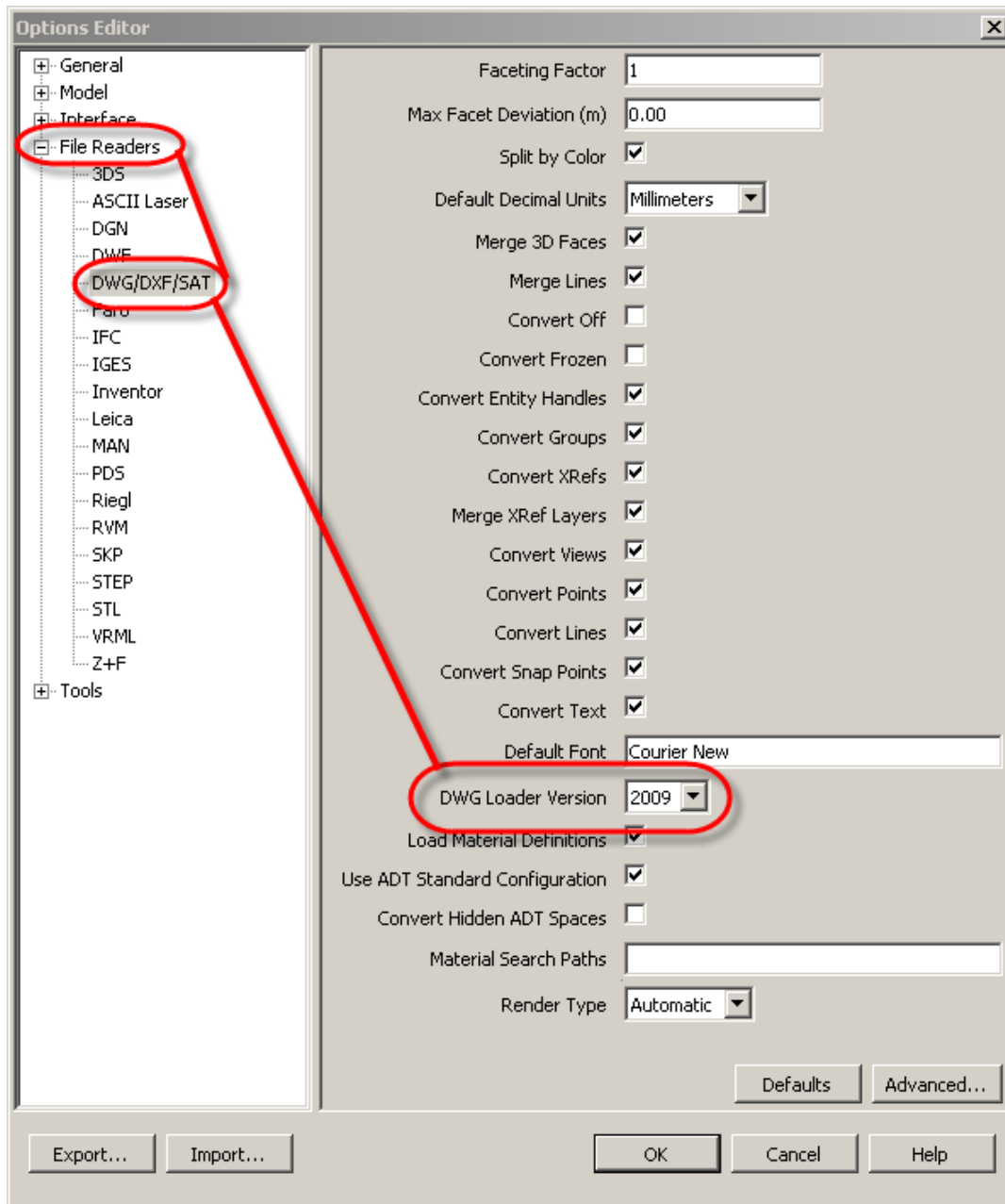


Fig. 4 DWG Loader Version option in Global Options

Ensure that the DWG Loader Version that corresponds to the OE is set in the NavisWorks Global Options, Fig. 4. Opening a DWG file in NavisWorks will then use the selected DWG Loader Version and automatically use the OE.

Example: DWG file is created in AutoCAD Architecture 2007. To open the file in NavisWorks, install the AutoCAD Architecture 2007 OE, configuring it for the relevant NavisWorks application, and set the DWG Loader Version to 2007.

If the objects are still displayed as proxy graphics, or the Scene Statistics report missing OE messages, refer to the Troubleshooting section at the end of this document.

Troubleshooting

You're only seeing wireframe geometry in NavisWorks

1. Look in **View > Scene Statistics** to see if there are reports of any missing Object Enablers.
2. If OEs are reported as missing, obtain the relevant version OE, install and configure it to the relevant NavisWorks application.
3. Go to **Tools > Global Options > File Readers > DWG/DXF/SAT** and set the **DWG Loader Version** to the corresponding year.

NOTE Be aware that some OEs may not be correctly authored to work with non-AutoCAD-based applications, like NavisWorks. In these instances the OE may install, but still be reported as missing in the Scene Statistics, or cause the application to crash when used.

Object Enablers not reported as missing in Scene Statistics, but still only seeing wireframe geometry

1. Go to, **Tools > Global Options > File Readers > DWG/DXF/SAT** and try turning **Render Style** from **Automatic** to **Shaded**. Go to, **File > New** and then open the DWG file again.
2. If the OE is based on the new Object Modeling Framework (OMF), (like AutoCAD Architecture, AutoCAD MEP, AutoCAD® Civil3D®, and others based on these) be aware that by default, geometry in NavisWorks depends on the display configuration in use when the DWG file was saved, i.e. if saved in a wireframe view in the AutoCAD-based application, it will appear as wireframe in NavisWorks. To change this behavior go to, **Tools > Global Options > File Readers > DWG/DXF/SAT** and tick the option to **Use ADT Standard Configuration**. Go to, **File > New** and then open the DWG file again.
3. NavisWorks Cache files (.NWC) are created by default when a native CAD file, like DWG, is opened. If you first open a DWG whilst experiencing OE issues, then the NWC file will contain wireframe geometry. If the OE issue is resolved and the DWG file opened again, NavisWorks may not recognize any change and therefore use the NWC file. If this occurs, you will continue to see wireframe graphics. Try deleting the corresponding NWC file(s), go to **File > New** and then open the DWG file(s) again.

NOTE NWC files will be automatically re-cached if changes are made to the Global Options prior to opening the native CAD file again.
