

# **SimMechanics™ Link Release Notes**

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*SimMechanics™ Link Release Notes*

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## Summary by Version

This table provides quick access to what's new in each version. For clarification, see "Using Release Notes" on page 1.

<b>Version (Release)</b>	<b>New Features and Changes</b>	<b>Version Compatibility Considerations</b>	<b>Fixed Bugs and Known Problems</b>
<b>Latest Version V3.2.2 (R2011a)</b>	No	No	Bug Reports Includes fixes
V3.2.1 (R2010b)	No	No	Bug Reports Includes fixes
V3.2 (R2010a)	Yes Details	No	Bug Reports Includes fixes
V3.1.1 (R2009b)	No	No	Bug Reports Includes fixes
V3.1 (R2009a)	Yes Details	No	Bug Reports Includes fixes
V3.0 (R2008b)	Yes Details	Yes Summary	Bug Reports Includes fixes

### Using Release Notes

Use release notes when upgrading to a newer version to learn about:

- New features
- Changes
- Potential impact on your existing files and practices

Review the release notes for other MathWorks® products required for this product (for example, MATLAB® or Simulink®). Determine if enhancements, bugs, or compatibility considerations in other products impact you.

If you are upgrading from a software version other than the most recent one, review the current release notes and all interim versions. For example, when you upgrade from V1.0 to V1.2, review the release notes for V1.1 and V1.2.

## **What Is in the Release Notes**

### **New Features and Changes**

- New functionality
- Changes to existing functionality

### **Version Compatibility Considerations**

When a new feature or change introduces a reported incompatibility between versions, the **Compatibility Considerations** subsection explains the impact.

Compatibility issues reported after the product release appear under Bug Reports at the MathWorks Web site. Bug fixes can sometimes result in incompatibilities, so review the fixed bugs in Bug Reports for any compatibility impact.

### **Fixed Bugs and Known Problems**

MathWorks offers a user-searchable Bug Reports database so you can view Bug Reports. The development team updates this database at release time and as more information becomes available. Bug Reports include provisions for any known workarounds or file replacements. Information is available for bugs existing in or fixed in Release 14SP2 or later. Information is not available for all bugs in earlier releases.

Access Bug Reports using your MathWorks Account.

## **Documentation on the MathWorks Web Site**

Related documentation is available on [mathworks.com](http://mathworks.com) for the latest release and for previous releases:

- Latest product documentation

- Archived documentation

## Version 3.2.2 (R2011a) SimMechanics Link Software

This table summarizes what's new in Version 3.2.2 (R2011a):

<b>New Features and Changes</b>	<b>Version Compatibility Considerations</b>	<b>Fixed Bugs and Known Problems</b>
No	No	Bug Reports at Web site



## Version 3.2.1 (R2010b) SimMechanics Link Software

This table summarizes what's new in Version 3.2.1 (R2010b):

<b>New Features and Changes</b>	<b>Version Compatibility Considerations</b>	<b>Fixed Bugs and Known Problems</b>
No	No	Bug Reports at Web site

## Version 3.2 (R2010a) SimMechanics Link Software

This table summarizes what's new in Version 3.2 (R2010a):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes	No	Bug Reports at Web site

- “Export of Reference Coordinate Systems from Supported CAD Assemblies” on page 6
- “New Demo” on page 6

### Export of Reference Coordinate Systems from Supported CAD Assemblies

You can now export reference coordinate systems that you insert and define in your CAD assemblies into Physical Modeling XML. When you import this XML file into a generated SimMechanics™ model, these coordinate systems appear on the corresponding Body blocks.

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**Note** Export of reference coordinate system is not supported for all CAD platforms supported by SimMechanics Link software. See the *SimMechanics Link Reference*.

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### New Demo

#### Exporting Reference Coordinate Systems from CAD Assemblies

The new demo page explains how to export optional reference coordinate systems from a CAD assembly that represents a gear set. The demo assembly requires SolidWorks®.

## Version 3.1.1 (R2009b) SimMechanics Link Software

This table summarizes what's new in Version 3.1.1 (R2009b):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
No	No	Bug Reports at Web site

### Improved and Expanded Documentation

#### Installation and Linking Documentation

The documentation for downloading, installing, and linking SimMechanics Link software has been expanded and improved. See “Installing and Linking SimMechanics Link Software”.

#### Application Programming Interface Documentation

The documentation for the SimMechanics Link application programming interface (API) has been expanded and improved. You use the API to create custom links from SimMechanics Link software to external applications. This documentation includes:

- The API tutorial chapter, “Custom Linking to CAD and Other External Applications”
- The “API Reference”, which contains reference information on every function, data type, and object handle class in the API.

## Version 3.1 (R2009a) SimMechanics Link Software

This table summarizes what's new in Version 3.1 (R2009a):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes	No	Bug Reports at Web site

New features introduced in this version are

- “Autodesk Inventor CAD Platform Now Supported” on page 8
- “Pro/ENGINEER CAD Translation Now Supported on 64-Bit Windows” on page 8
- “Web Video Demo Now Available” on page 9
- “Pro/ENGINEER CAD Translation Case Study” on page 9

### Autodesk Inventor CAD Platform Now Supported

SimMechanics Link now directly supports the Autodesk® Inventor® CAD platform for exporting assemblies into Physical Modeling XML. See the “Linking and Using the Autodesk Inventor Add-In” reference chapter.

### Pro/ENGINEER CAD Translation Now Supported on 64-Bit Windows

Direct SimMechanics Link support for these CAD platforms and operating systems has expanded.

CAD Platform	Operating Systems
Autodesk Inventor	Windows® 32-bit and 64-bit
Pro/ENGINEER®	Windows 32-bit and 64-bit
SolidWorks	Windows 32-bit and 64-bit

## **Web Video Demo Now Available**

A new Web-based video demonstrates how to translate and retranslate CAD assemblies into SimMechanics models, using SimMechanics Link software. See “Watching a Demo”.

## **Pro/ENGINEER CAD Translation Case Study**

The CAD translation chapter now contains a case study demonstrating assembly export and re-export, along with model import and update. The study uses SimMechanics and SimMechanics Link software, together with Pro/ENGINEER, and models a double pendulum, subsequently modified to a triple pendulum. The study illustrates how you can update an existing generated CAD-based model with successive changes to the original CAD assembly.

## Version 3.0 (R2008b) SimMechanics Link Software

This table summarizes what's new in Version 3.0 (R2008b):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes	Yes—Details labeled as <b>Compatibility Considerations</b> , below. See also Summary.	Bug Reports at Web site

Important items and points related to this new utility are

- “Introduction to SimMechanics Link Utility” on page 10
- “SimMechanics Link Operating System and CAD Platform Support” on page 11
- “Using SimMechanics Link Utility with SimMechanics Software” on page 11
- “Relationship of SimMechanics Link Utility and CAD-to-SimMechanics Translators” on page 11

### Introduction to SimMechanics Link Utility

The new SimMechanics Link utility requires only MATLAB, but is intended for use with SimMechanics software. Separate product documentation and demos are provided for this utility.

The SimMechanics Link utility generates Physical Modeling XML files from external applications such as computer-aided design (CAD) platforms. These Physical Modeling XML files can be used with SimMechanics software to generate SimMechanics models representing mechanical systems.

### SimMechanics Link Version Numbers

The SimMechanics Link version numbers are identical, for each MATLAB release, to the parallel SimMechanics version numbers. The versions begin with 3.0.

## SimMechanics Link Operating System and CAD Platform Support

The SimMechanics Link utility directly supports these CAD platforms on these operating systems.

CAD Platform	Operating Systems
Pro/ENGINEER	Windows 32-bit
SolidWorks	Windows 32-bit and 64-bit

### Custom Interfaces for Combinations Not Directly Supported

For all other combinations of operating systems and CAD platforms (or other external applications), you must write a custom interface to connect to the SimMechanics Link utility. Such custom interfaces are supported on all operating systems that support MATLAB.

See “Custom Linking to CAD and Other External Applications” in the *SimMechanics Link User’s Guide*.

### Using SimMechanics Link Utility with SimMechanics Software

The SimMechanics command `mech_import` reads Physical Modeling XML files generated by the SimMechanics Link utility to generate SimMechanics models of machines with externally specified data.

Consult the SimMechanics documentation and the *SimMechanics Visualization and Import Guide* for more about SimMechanics models and model generation.

### Relationship of SimMechanics Link Utility and CAD-to-SimMechanics Translators

The SimMechanics Link utility replaces the obsolete CAD-to-SimMechanics translators, continuing to support those CAD platforms already supported, Pro/ENGINEER and SolidWorks.

### **Compatibility Considerations**

The SimMechanics Link utility cannot update SimMechanics models that were generated from the old CAD-to-SimMechanics translators. The simplest workaround is to start with the original CAD assembly, export a new Physical Modeling XML file, and import it to generate a new model.



## Compatibility Summary for SimMechanics Link Software

This table summarizes new features and changes that might cause incompatibilities when you upgrade from an earlier version, or when you use files on multiple versions. Details are provided in the description of the new feature or change.

<b>Version (Release)</b>	<b>New Features and Changes with Version Compatibility Impact</b>
<b>Latest Version V3.2.2 (R2011a)</b>	No
V3.2.1 (R2010b)	No
V3.2 (R2010a)	No
V3.1.1 (R2009b)	No
V3.1 (R2009a)	No
V3.0 (R2008b)	See the <b>Compatibility Considerations</b> subheading for this new feature: <ul style="list-style-type: none"> <li>• “Relationship of SimMechanics Link Utility and CAD-to-SimMechanics Translators” on page 11</li> </ul>