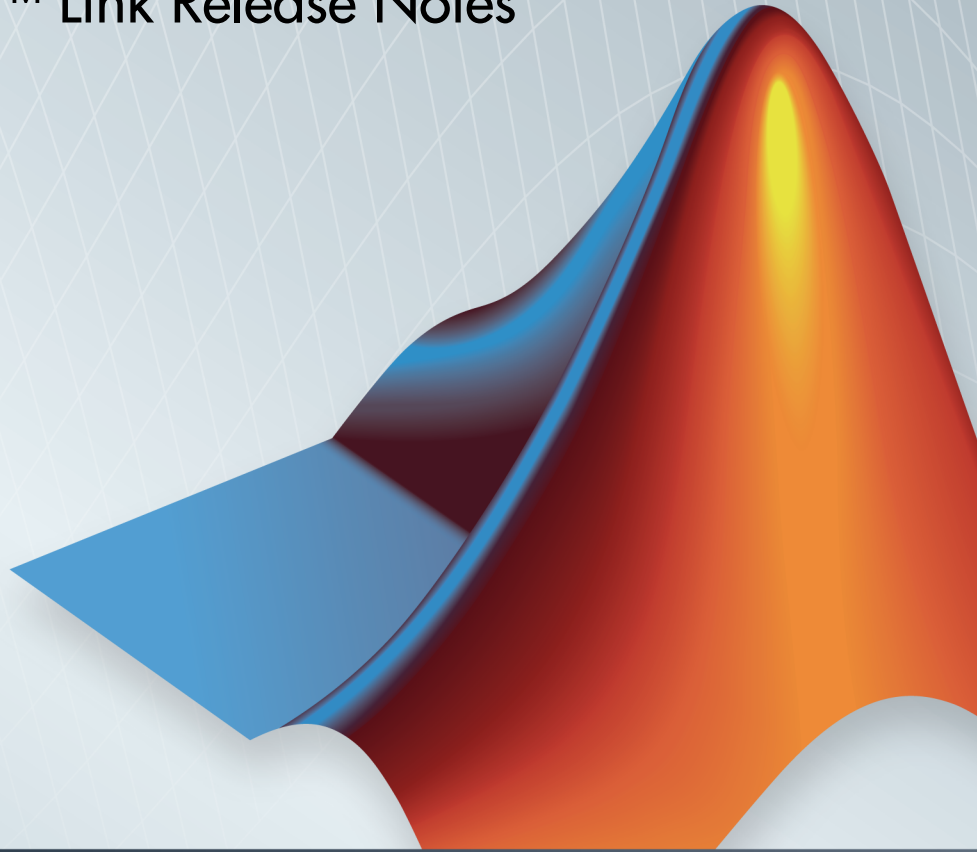
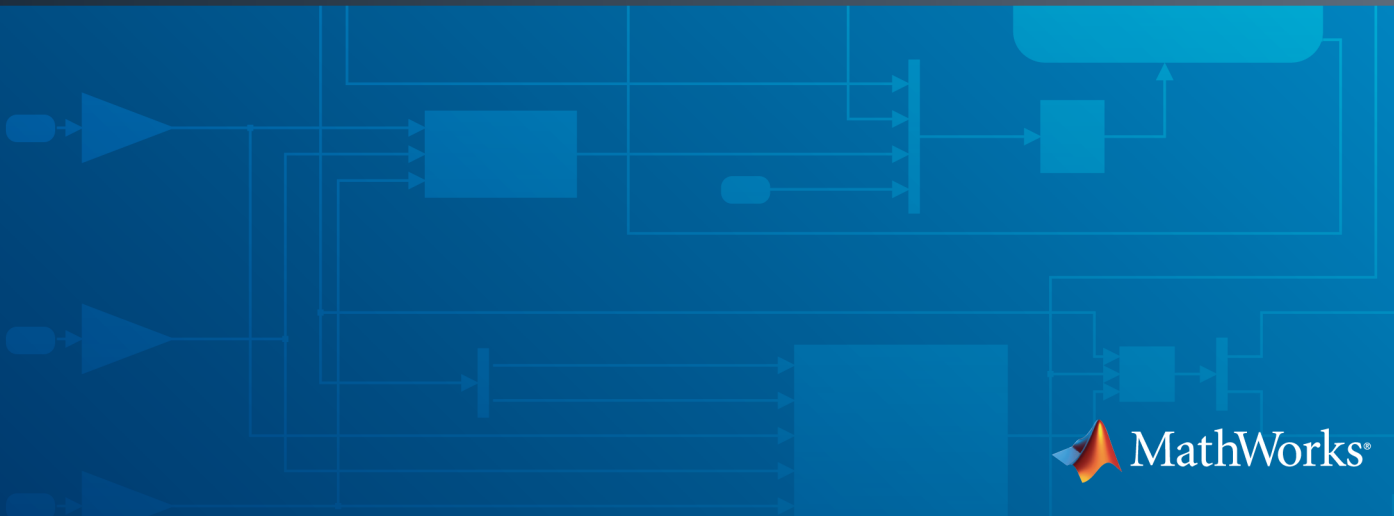


# SimMechanics™ Link Release Notes



# MATLAB®



## How to Contact MathWorks



Latest news: [www.mathworks.com](http://www.mathworks.com)  
Sales and services: [www.mathworks.com/sales\\_and\\_services](http://www.mathworks.com/sales_and_services)  
User community: [www.mathworks.com/matlabcentral](http://www.mathworks.com/matlabcentral)  
Technical support: [www.mathworks.com/support/contact\\_us](http://www.mathworks.com/support/contact_us)



Phone: 508-647-7000



The MathWorks, Inc.  
3 Apple Hill Drive  
Natick, MA 01760-2098

*SimMechanics™ Link Release Notes*

© COPYRIGHT 2008–2014 by The MathWorks, Inc.

The software described in this document is furnished under a license agreement. The software may be used or copied only under the terms of the license agreement. No part of this manual may be photocopied or reproduced in any form without prior written consent from The MathWorks, Inc.

**FEDERAL ACQUISITION:** This provision applies to all acquisitions of the Program and Documentation by, for, or through the federal government of the United States. By accepting delivery of the Program or Documentation, the government hereby agrees that this software or documentation qualifies as commercial computer software or commercial computer software documentation as such terms are used or defined in FAR 12.212, DFARS Part 227.72, and DFARS 252.227-7014. Accordingly, the terms and conditions of this Agreement and only those rights specified in this Agreement, shall pertain to and govern the use, modification, reproduction, release, performance, display, and disclosure of the Program and Documentation by the federal government (or other entity acquiring for or through the federal government) and shall supersede any conflicting contractual terms or conditions. If this License fails to meet the government's needs or is inconsistent in any respect with federal procurement law, the government agrees to return the Program and Documentation, unused, to The MathWorks, Inc.

### **Trademarks**

MATLAB and Simulink are registered trademarks of The MathWorks, Inc. See [www.mathworks.com/trademarks](http://www.mathworks.com/trademarks) for a list of additional trademarks. Other product or brand names may be trademarks or registered trademarks of their respective holders.

### **Patents**

MathWorks products are protected by one or more U.S. patents. Please see [www.mathworks.com/patents](http://www.mathworks.com/patents) for more information.

**R2014b**

---

**Bug Fixes**

**R2014a**

---

**No New Features or Changes**

**R2013b**

---

**No New Features or Changes**

**R2013a**

---

**No New Features or Changes**

**R2012b**

---

**CAD export into SimMechanics second-generation models . 5-2**

**R2012a**

---

**No New Features or Changes**

**R2011b**

---

**No New Features or Changes**

**R2011a**

---

**No New Features or Changes**

**R2010b**

---

**No New Features or Changes**

## R2010a

<b>Export of Reference Coordinate Systems from Supported CAD Assemblies</b> .....	10-2
<b>New Example</b> .....	10-2
Exporting Reference Coordinate Systems from CAD Assemblies .....	10-2

## R2009b

<b>Improved and Expanded Documentation</b> .....	11-2
Installation and Linking Documentation .....	11-2
Application Programming Interface Documentation .....	11-2

## R2009a

<b>Autodesk Inventor CAD Platform Now Supported</b> .....	12-2
<b>Pro/ENGINEER CAD Translation Now Supported on 64-Bit Windows</b> .....	12-2
<b>Web Video Example Now Available</b> .....	12-2
<b>Pro/ENGINEER CAD Translation Case Study</b> .....	12-2

---

<b>Introduction to SimMechanics Link Utility</b> .....	<b>13-2</b>
SimMechanics Link Version Numbers .....	<b>13-2</b>
<b>SimMechanics Link Operating System and CAD Platform Support</b> .....	<b>13-2</b>
Custom Interfaces for Combinations Not Directly Supported .....	<b>13-2</b>
<b>Using SimMechanics Link Utility with SimMechanics Software</b> .....	<b>13-2</b>
<b>Relationship of SimMechanics Link Utility and CAD-to-SimMechanics Translators</b> .....	<b>13-3</b>

# R2014b

Version: 4.5

Bug Fixes





# R2014a

Version: 4.4

No New Features or Changes



# R2013b

Version: 4.3

No New Features or Changes



# **R2013a**

**Version: 4.2**

**No New Features or Changes**



# R2012b

**Version: 4.1**

**New Features**

## **CAD export into SimMechanics second-generation models**

SimMechanics Link™ introduces CAD export for SimMechanics™ second-generation models. SimMechanics Link generates a SimMechanics Import XML file that contains CAD assembly structure and parameters in SimMechanics second-generation format. You can choose between SimMechanics first- and second-generation formats.

SimMechanics Link supports CAD export in SimMechanics second-generation format from the following CAD platforms:

- Autodesk Inventor®
- Creo® (Pro/Engineer®)
- SolidWorks®



# **R2012a**

**Version: 4.0**

**No New Features or Changes**



# R2011b

Version: 3.2.3

No New Features or Changes



# R2011a

Version: 3.2.2

No New Features or Changes



# R2010b

Version: 3.2.1

No New Features or Changes





# **R2010a**

**Version: 3.2**

**New Features**

## 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.

---

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

---

## New Example

### Exporting Reference Coordinate Systems from CAD Assemblies

The example User Added Coordinate Systems explains how to export optional reference coordinate systems from a CAD assembly that represents a gear set. The example assembly requires SolidWorks.

# R2009b

Version: 3.1.1

New Features

## **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.

# R2009a

Version: 3.1

New Features

## 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 Example 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.

# R2008b

**Version: 3.0**

**New Features**

**Compatibility Considerations**

## Introduction to SimMechanics Link Utility

The new SimMechanics Link utility requires only MATLAB<sup>®</sup>, but is intended for use with SimMechanics software. Separate product documentation and examples 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 reads Physical Modeling XML files mech\_import generated by the SimMechanics Link utility to generate SimMechanics models of machines with externally specified data.



---

Consult the SimMechanics documentation 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.

