

# **Simulink<sup>®</sup> Verification and Validation<sup>™</sup> Release Notes**

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*Simulink® Verification and Validation™ 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 2.

<b>Version (Release)</b>	<b>New Features and Changes</b>	<b>Version Compatibility Considerations</b>	<b>Fixed Bugs and Known Problems</b>	<b>Related Documentation at Web Site</b>
<b>Latest Version V2.7 (R2010a)</b>	Yes Details	Yes Summary	Bug Reports Includes fixes	Printable Release Notes: PDF  Current product documentation
V2.6 (R2009b)	Yes Details	Yes Summary	Bug Reports Includes fixes	No
V2.5 (R2009a)	Yes Details	No	Bug Reports Includes fixes	No
V2.4 (R2008b)	Yes Details	No	Bug Reports Includes fixes	No
V2.3.1 (R2008a+)	No	No	Bug Reports Includes fixes	No
V2.3 (R2008a)	Yes Details	No	Bug Reports Includes fixes	No
V2.2.1 (R2007b+)	No	No	Bug Reports Includes fixes	No
V2.2 (R2007b)	Yes Details	No	Bug Reports Includes fixes	No
V2.1.1 (R2007a+)	No	No	Bug Reports Includes fixes	No
V2.1 (R2007a)	No	No	Bug Reports Includes fixes	No

<b>Version (Release)</b>	<b>New Features and Changes</b>	<b>Version Compatibility Considerations</b>	<b>Fixed Bugs and Known Problems</b>	<b>Related Documentation at Web Site</b>
V2.0 (R2006b)	Yes Details	No	Bug Reports Includes fixes	No
V1.1.2 (R2006a)	No	No	Bug Reports at Web site	No

## 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**

The 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.

## Version 2.7 (R2010a) Simulink Verification and Validation Software

This table summarizes what's new in Version 2.7 (R2010a):

<b>New Features and Changes</b>	<b>Version Compatibility Considerations</b>	<b>Fixed Bugs and Known Problems</b>	<b>Related Documentation at Web Site</b>
Yes Details below	Yes—Details labeled as <b>Compatibility Considerations</b> , below. See also Summary.	Bug Reports Includes fixes	Printable Release Notes: PDF  Current product documentation

New features and changes introduced in this version are:

- “Coverage Support for Dead Zone Block ” on page 4
- “Coverage Support for the Simulink® Design Verifier Functions in Embedded MATLAB Function Blocks” on page 5
- “Coverage Support for Trigger Ports in Model Blocks” on page 5
- “Requirements Support for MuPAD Documents” on page 5
- “Improved Reports About Requirements Links in Models ” on page 5
- “New Capability to Tag and Filter Model Requirements” on page 5
- “Improved IBM Rational DOORS Synchronization” on page 6
- “Function rminav Removed” on page 6
- “New and Enhanced Model Advisor Checks” on page 6
- “Modeling Guidelines Documentation Moved into Simulink Documentation” on page 8

### Coverage Support for Dead Zone Block

The Simulink® Verification and Validation™ software now records coverage for the Dead Zone block.



## Coverage Support for the Simulink Design Verifier Functions in Embedded MATLAB Function Blocks

The Simulink Verification and Validation software now records coverage for the following Simulink® Design Verifier™ functions in Embedded MATLAB Function blocks:

- `sldv.assume`
- `sldv.condition`
- `sldv.prove`
- `sldv.test`

## Coverage Support for Trigger Ports in Model Blocks

The Simulink Verification and Validation software records coverage for a triggered Model block.

## Requirements Support for MuPAD Documents

The Requirements Management Interface (RMI) now allows you to create requirements links from Simulink model objects to link targets in MuPAD® notebooks.

## Improved Reports About Requirements Links in Models

In the requirements reports, the Requirements Management Interface (RMI) reporting capability includes the following improvements:

- Navigation to Simulink model objects with requirements
- Improved table design in requirements reports to accommodate additional detail about requirements

## New Capability to Tag and Filter Model Requirements

The Requirements Management Interface (RMI) now allows filtered highlighting and reporting through the user tag attribute. Use this feature to review links with certain associated user tags. You can configure your

settings to automatically apply specified tags when using selection-based linking. Manage these user tags with the new `rmitag` function.

## Improved IBM Rational DOORS Synchronization

The Requirements Management Interface (RMI) synchronization of Simulink models with the IBM® Rational® DOORS® software now provides control of change propagation for requirements links created in DOORS or Simulink. You can configure the synchronization to remove outdated links in DOORS whose corresponding links you have already deleted from Simulink. You can also configure the synchronization to remove outdated links in Simulink whose corresponding links you have already deleted from DOORS. When you delete objects with requirements from your Simulink model, you can automatically remove links in DOORS.

## Function `rminav` Removed

The Simulink Verification and Validation software no longer supports the `rminav` function. To view model requirements, open the Model Explorer by selecting **View > Model Explorer** or entering the `daexplr` command. In the Model Explorer, click the **Highlight items with requirements on model** icon.

## Compatibility Consideration

In R2009b, the `rminav` command opened the Model Explorer.

## New and Enhanced Model Advisor Checks

The Simulink Model Advisor includes new and updated verification and validation checks.

### DO-178B Checks

The **DO-178B Check** subfolder now includes:

- “Check state machine type of Stateflow charts”
- “Check Stateflow charts for ordering of states and transitions”
- “Check Stateflow debugging settings”

The checks in the **DO-178B Checks** subfolder are reformatted for consistency in the results format.

For more information, see “DO-178B Checks” in the *Simulink Verification and Validation User’s Guide*.

### **IEC 61508 Checks**

The **IEC 61508 Checks** subfolder now includes “Check state machine type of Stateflow charts”.

For more information, see “IEC 61508 Checks” in the *Simulink Verification and Validation User’s Guide*.

### **MathWorks Automotive Advisory Board Checks**

The **MathWorks Automotive Advisory Board** subfolder now includes:

- “Check usage of return values from a graphical function in Stateflow charts”
- “Check for pointers in Stateflow charts”
- “Check for event broadcasts in Stateflow charts”
- “Check for MATLAB expressions in Stateflow charts”
- “Check for bitwise operations in Stateflow charts”
- “Check for comparison operations in Stateflow charts”
- “Check for unary minus operations on unsigned integers in Stateflow charts”
- “Check for equality operations between floating-point expressions in Stateflow charts”

The checks in the **MathWorks Automotive Advisory Board** subfolder are reformatted for consistency in the results format.

For more information, see “MathWorks Automotive Advisory Board Checks” in the *Simulink Verification and Validation User’s Guide*.

## **Modeling Guidelines Documentation Moved into Simulink Documentation**

The *Modeling Guidelines for High-Integrity Systems* and *MathWorks Automotive Advisory Board Control Algorithm Modeling Guidelines Using MATLAB, Simulink, and Stateflow®* documentation is now in the Simulink documentation.

For more information, see *Modeling Guidelines* in the Simulink documentation.

## Version 2.6 (R2009b) Simulink Verification and Validation Software

This table summarizes what's new in Version 2.6 (R2009b):

<b>New Features and Changes</b>	<b>Version Compatibility Considerations</b>	<b>Fixed Bugs and Known Problems</b>	<b>Related Documentation at Web Site</b>
Yes Details below	Yes—Details labeled as <b>Compatibility Considerations</b> , below. See also Summary.	Bug Reports Includes fixes	Printable Release Notes: PDF  Current product documentation

New features and changes introduced in this version are:

- “New Coverage Reporting for Variable-Size Signals” on page 9
- “Model Coverage for Simulink® Design Verifier Blocks” on page 10
- “Force Block Reduction Off During Simulation” on page 10
- “Improved RMI Highlighting and Reporting” on page 11
- “Create Custom Configurations Using the Model Advisor Configuration Editor” on page 11
- “Licensing Revised for the Model Advisor” on page 12
- “New and Enhanced Model Advisor Checks” on page 12
- “Modeling Guidelines for High-Integrity Systems” on page 13

### **New Coverage Reporting for Variable-Size Signals**

In R2009b, signal sizes in Simulink models can change during execution to facilitate modeling systems with varying environments, resources, and constraints. The Simulink Verification and Validation software can report the minimum, maximum, and allocated space for all variable-size signals in a model, as recorded during simulation.

To enable this feature, in the Coverage Settings dialog box, on the **Coverage** tab, select the **Signal Size** option.

## **Model Coverage for Simulink Design Verifier Blocks**

The Simulink Verification and Validation model coverage tool can collect model coverage data for Simulink Design Verifier blocks. Using this feature during simulation, you can verify Simulink Design Verifier generated test harnesses and user-defined requirements. The model coverage tool collects model coverage data for the following Simulink Design Verifier blocks:

- Proof Assumption
- Proof Objective
- Test Condition
- Test Objective

To enable this feature, in the Coverage Settings dialog box, on the **Coverage** tab, select **Simulink Design Verifier**.

## **Force Block Reduction Off During Simulation**

The Simulink Verification and Validation software can override the value of the Simulink **Block reduction** parameter. When you set this option, the simulation records coverage for all blocks in the model.

To enable this feature, in the Coverage Settings dialog box, on the **Options** tab, select **Force block reduction off**.

## **Compatibility Considerations**

Previously, model coverage ignored the value of the Simulink **Block reduction** parameter, creating incompatibilities between the model coverage data and the generated code coverage data. In R2009b, you can select **Force block reduction off** to override the **Block reduction** parameter and collect coverage for all blocks in the model.

## Improved RMI Highlighting and Reporting

The Requirements Management Interface (RMI) has the following improvements to its highlighting and reporting capabilities:

- Differential highlighting of blocks and subsystems to easily locate model objects with requirements links
- Real-time update of highlighted view to reflect the current state of the model requirements links
- Improved requirements report that includes a document summary, and details about signal group requirements and objects with missing requirements
- New interface for modifying settings for the requirements report generation that is available to users who do not have a Simulink® Report Generator™ license
- IBM Rational DOORS module paths stored with the requirements information for easier review. For requirement links created before R2009b, the module path information is still saved only in the DOORS module.

## Create Custom Configurations Using the Model Advisor Configuration Editor

The Model Advisor Configuration Editor expedites creating and deploying custom configurations of the Model Advisor. The Configuration Editor assists with:

- Adding MathWorks and custom checks to your custom configuration with drag and drop.
- Creating new folders in your custom configuration from a toolbar icon.
- Deploying custom configurations in a MAT file.

For more information, see “Organizing Checks and Folders Using the Model Advisor Configuration Editor” and “How to Deploy Custom Configurations” in the *Simulink Verification and Validation User’s Guide*.

## Licensing Revised for the Model Advisor

Previously, the Model Advisor populated the list of checks and folders based on the licenses available to you. When you ran checks, the software did not require a license checkout. In R2009b, the Model Advisor performs a checkout of the Simulink Verification and Validation license when you run Simulink Verification and Validation checks. For a list of Simulink Verification and Validation checks, see “Model Advisor Checks” in the Simulink Verification and Validation documentation.

## Compatibility Considerations

The Model Advisor performs a checkout of a Simulink Verification and Validation license when you run:

- Checks in the Simulink Verification and Validation folder
- Custom checks

If you do not have a Simulink Verification and Validation license available, when you run the check, you see an error message that the required license is not available.

## New and Enhanced Model Advisor Checks

The Simulink Model Advisor includes new and updated verification and validation checks.

### DO-178B Checks

The **DO-178B Check** subfolder now includes “Check safety-related diagnostic settings for model initialization”.

The checks in the **DO-178B Checks** subfolder are reformatted for a consistent look and feel to the results.

For more information, see “DO-178B Checks” in the *Simulink Verification and Validation User’s Guide*.



## **IEC 61508 Checks**

The **IEC 61508 Checks** subfolder now includes “Check for model objects that do not link to requirements”.

For more information, see “IEC 61508 Checks” in the *Simulink Verification and Validation User’s Guide*.

## **Modeling Guidelines for High-Integrity Systems**

The MathWorks intends this document for engineers developing models and generating code for high-integrity systems using Model-Based Design with MathWorks products. This document describes creating Simulink models that are complete, unambiguous, statistically deterministic, robust, and verifiable. The document focus is on model settings, block usage, and block parameters that impact simulation behavior or code generated by the Real-Time Workshop® Embedded Coder™ product.

These guidelines do not assume that you use a particular safety or certification standard. The guidelines reference some safety standards where applicable, including DO-178B, IEC 61508, and MISRA C®.

You can use the Model Advisor to support adhering to these guidelines. Each guideline lists the checks that are applicable to that guideline.

For more information, see “Modeling Guidelines for High-Integrity Systems” in the Simulink Verification and Validation documentation.

## Version 2.5 (R2009a) Simulink Verification and Validation Software

This table summarizes what's new in Version 2.5 (R2009a):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems	Related Documentation at Web Site
Yes Details below	No	Bug Reports Includes fixes	Printable Release Notes: PDF  Current product documentation

New features and changes introduced in this version are:

- “Recording Coverage for External Embedded MATLAB Files” on page 14
- “API for Customizing Model Advisor Results” on page 15
- “New and Enhanced Model Advisor Checks” on page 15
- “MathWorks Automotive Advisory Board Control Algorithm Modeling Guidelines Using MATLAB, Simulink, and Stateflow Included in Help” on page 16

### Recording Coverage for External Embedded MATLAB Files

Embedded MATLAB Function blocks and functions can call external program files. The Model Coverage Tool extends the model coverage capabilities to record coverage for these files. By default, this option is disabled; coverage is not collected for external program files.

Enable this option if you want the software to collect and report coverage for all program files associated with the Embedded MATLAB Function blocks. To enable this option, in the Coverage Settings dialog box, select **Coverage for External Embedded MATLAB files**.

## API for Customizing Model Advisor Results

In R2009a, there is a new API to customize the results of the Model Advisor for a common look and feel for all of your customized checks. The API includes templates for you to organize the results in tables or lists. For more information, see “Customizing the Model Advisor” in the *Simulink Verification and Validation User’s Guide*.

## New and Enhanced Model Advisor Checks

The Simulink Model Advisor includes new and updated verification and validation checks.

### DO-178B Checks

The **DO-178B Check** subcategory includes the following new checks:

- Check for blocks that do not link to requirements
- Check for proper usage of Math blocks

For more information, see “DO-178B Checks” in the *Simulink Verification and Validation User’s Guide*.

### IEC 61508 Checks

The checks in the **IEC 61508 Checks** subfolder are reformatted for a consistent look and feel to the results. For more information, see “IEC 61508 Checks” in the *Simulink Verification and Validation User’s Guide*.

### Modeling Standards for MAAB Checks

There is a new **Modeling Standards for MAAB** subfolder in the **By Task** folder of the Model Advisor, which includes subfolders that organize the MAAB checks so you can more easily determine which checks you want to run.

## **MathWorks Automotive Advisory Board Control Algorithm Modeling Guidelines Using MATLAB, Simulink, and Stateflow Included in Help**

The MathWorks Automotive Advisory Board (MAAB) involves major automotive original equipment manufacturers (OEMs) and suppliers in the process of evolving MathWorks controls, simulation, and code generation products, including the Simulink, Stateflow, and Real-Time Workshop® products. An important result of the MAAB has been the “MathWorks Automotive Advisory Board Control Algorithm Modeling Guidelines Using MATLAB, Simulink, and Stateflow.” Help for the Simulink Verification and Validation product now includes these guidelines. The MAAB guidelines link to relevant Model Advisor MAAB check help and MAAB check help links to relevant MAAB guidelines.

For more information on the MAAB guidelines, see “MathWorks Automotive Advisory Board Control Algorithm Modeling Guidelines Using MATLAB, Simulink, and Stateflow”. For information on the Model Advisor MAAB checks, see “MathWorks Automotive Advisory Board Checks.”

## Version 2.4 (R2008b) Simulink Verification and Validation Software

This table summarizes what's new in Version 2.4 (R2008b):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems	Related Documentation at Web Site
Yes Details below	No	Bug Reports Includes fixes	Printable Release Notes: PDF  Current product documentation

New features and changes introduced in this version are:

- “New and Enhanced Model Advisor Checks” on page 17
- “Improved Selection-Based Linking” on page 19
- “Enhanced Model Coverage Report” on page 19

### New and Enhanced Model Advisor Checks

Context-sensitive help is now available for all Model Advisor checks.

#### DO-178B Checks

The **DO-178B Check** subcategory includes these new and enhanced checks:

- Check safety-related diagnostic settings for saving — This new check helps enforce and document adherence to coding standards for DO-178B, Software Considerations in Airborne Systems and Equipment Certification.
- Check safety-related diagnostic settings for signal data — This check now checks whether the parameter `SignalRangeChecking` is set to error.
- New Action box for the following checks that you can use to automatically fix failures:
  - Check safety-related optimization settings

- Check safety-related diagnostic settings for solvers
- Check safety-related code generation settings
- Check safety-related diagnostic settings for compatibility
- Check safety-related diagnostic settings for bus connectivity
- Check safety-related diagnostic settings for signal connectivity
- Check safety-related diagnostic settings for data store memory
- Check safety-related diagnostic settings for data used for debugging
- Check safety-related diagnostic settings for parameters
- Check safety-related diagnostic settings for signal data
- Check safety-related diagnostic settings that apply to function-call connectivity
- Check safety-related diagnostic settings for model referencing
- Check safety-related model referencing settings
- Check safety-related diagnostic settings for sample time
- Check safety-related diagnostic settings for type conversions
- Check safety-related diagnostic settings for saving

For more information, see “DO-178B Checks” in the Simulink Verification and Validation documentation.

### **IEC 61508 Checks**

The **IEC 61508 Checks** subcategory includes a new check, Check usage of Stateflow, that helps enforce and document compliance with coding standards for functional safety in electrical, electronic, and programmable electronic systems, as the IEC 61508 standard outlines.

For more information, see “IEC 61508 Checks” in the Simulink Verification and Validation documentation.

## **MathWorks Automotive Advisory Board Checks**

The **MathWorks Automotive Advisory Board Checks** subcategory includes new checks that have been implemented to support the MathWorks Automotive Advisory Board (MAAB) 2.0 rules:

- Check for difference in font and font sizes
- Check Transition orientations in Flowcharts
- Check for display of non-default block attributes
- Check for proper labeling on Signal lines
- Check for propagated labels on Signal lines
- Check default Transition placement on Stateflow Charts
- Check setting Stateflow Graphical Function return value
- Check for proper use of Switch Blocks
- Check for proper use of Signal Busses and Mux block usage

For more information, see “MathWorks Automotive Advisory Board Checks” in the Simulink Verification and Validation documentation.

## **Improved Selection-Based Linking**

To create links between a model and a Microsoft® Word or Microsoft® Excel® file, you can open the file from within both the model and the requirements document. The Requirements Management Interface (RMI) establishes communication with the appropriate application when you initiate selection-based linking.

For more information, see “Creating and Managing Requirements Links” in the Simulink Verification and Validation documentation.

## **Enhanced Model Coverage Report**

The Model Coverage report now includes information about:

- Model being analyzed
- Simulation optimization options

- Model coverage options

For more information, see in the Simulink Verification and Validation documentation.



## Version 2.3 (R2008a) Simulink Verification and Validation Software

This table summarizes what's new in Version 2.3 (R2008a):

<b>New Features and Changes</b>	<b>Version Compatibility Considerations</b>	<b>Fixed Bugs and Known Problems</b>	<b>Related Documentation at Web Site</b>
Yes Details below	No	Bug Reports Includes fixes	Printable Release Notes: PDF  Current product documentation

New features and changes introduced in this version are

- “Enhanced Coverage Support for Referenced Models” on page 21
- “New Requirements Submenu in Model Explorer” on page 22
- “Model Advisor Checks for Modeling Standards Enhanced” on page 22
- “API for Customizing Model Advisor Enhanced” on page 23

### Enhanced Coverage Support for Referenced Models

The previous release introduced coverage support for referenced models, but only by means of functions that you invoke programmatically. This release includes the following enhancements to coverage support for referenced models:

- Redesigned Coverage Settings dialog box now includes controls that allow you to enable coverage for referenced models graphically (see “Coverage Settings Dialog Box” in the *Simulink Verification and Validation User’s Guide*).
- New Coverage by Model summary that allows you to navigate easily to coverage reports associated with referenced models in a hierarchy (see “Types of Coverage Reports” in the *Simulink Verification and Validation User’s Guide*).

## New Requirements Submenu in Model Explorer

Full access to the Requirements Management Interface is now available from within the Model Explorer. In this release, a **Requirements** submenu replaces the **Edit requirements** item that appears in Model Explorer context menus. This new submenu provides several options for adding requirements to model elements and specifying link preferences. This same submenu is available by right-clicking objects in a Simulink model or a Stateflow chart.

## Model Advisor Checks for Modeling Standards Enhanced

The Simulink Model Advisor has been enhanced with new and updated verification and validation checks.

- In the Task Hierarchy tree, the check category **By Product > Simulink Verification and Validation > Modeling Standards** includes the new subcategory **IEC 61508 Checks**.
- The **IEC 61508 Checks** subcategory includes new checks that help enforce and document adherence to coding standards for functional safety in electrical, electronic, and programmable electronic systems, as the IEC 61508 standard outlines. For descriptions of the IEC 61508 checks, see “Model Advisor Checks” in the Simulink Verification and Validation documentation.
- The IEC 61508 checks also appear under the new category **By Task > Model-Based Design for IEC 61508**.
- Some **MathWorks Automotive Advisory Board Checks** have been updated.

<b>For Information on How To...</b>	<b>See...</b>
Develop models and code that comply with industry standards and guidelines, such as the IEC 61508 standard and MathWorks Automotive Advisory Board (MAAB) guidelines	“Developing Models and Code That Comply with Industry Standards and Guidelines” in the Real-Time Workshop Embedded Coder documentation
Use the Model Advisor	“Consulting the Model Advisor” in <i>Simulink User’s Guide</i>
Customize the Model Advisor with your own tasks and checks	“Customizing the Model Advisor” in the <i>Simulink Verification and Validation User’s Guide</i>

## API for Customizing Model Advisor Enhanced

R2008a provides an enhanced API that allows you to customize the behavior of the Model Advisor for checking and reporting on how well your Simulink models are optimized for simulation and code generation. The API provides classes and functions for defining custom checks and tasks, and writing your own callback functions. For more information, see “Customizing the Model Advisor” in the *Simulink Verification and Validation User’s Guide*.

## Version 2.2 (R2007b) Simulink Verification and Validation Software

This table summarizes what's new in Version 2.2 (R2007b):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems	Related Documentation at Web Site
Yes Details below	No	Bug Reports Includes fixes	No

New features and changes introduced in this version are

- “Model Coverage Support for Referenced Models” on page 24
- “Model Advisor Checks for Modeling Standards Enhanced” on page 24
- “API for Customizing Model Advisor HTML Reports ” on page 26

### Model Coverage Support for Referenced Models

This release introduces model coverage support for referenced models that operate in Normal mode. That is, you can now record coverage for Model blocks whose **Simulation mode** parameter specifies Normal. Toward that end, this release provides three new functions:

- `cvsimref`
- `cv.cvdatagroup`
- `cv.cvtestgroup`

For more information, see “Using Model Coverage Commands for Referenced Models” in the *Simulink Verification and Validation User's Guide*.

### Model Advisor Checks for Modeling Standards Enhanced

The Simulink Model Advisor has been enhanced with new and updated verification and validation checks.

- In the Task Hierarchy tree, the check category **By Product > Simulink Verification and Validation > Modeling Standards** includes two new subcategories: **DO-178B Checks** and **MathWorks Automotive Advisory Board Checks**.
- The **DO-178B Checks** subcategory includes new checks that help enforce and document adherence to coding standards for DO-178B, Software Considerations in Airborne Systems and Equipment Certification. If a piece of software will be flying on a commercial aircraft, the development and verification process must comply with DO-178B. For descriptions of the DO-178B checks, see “Model Advisor Checks” in the *Simulink Verification and Validation User’s Guide*.
- The DO-178B checks also appear under the new category **By Task > Safety Critical for DO-178B**.
- Checks listed under **By Product > Simulink Verification and Validation > Modeling Standards** in earlier releases, appear under the new subcategory **MathWorks Automotive Advisory Board Checks**. These checks ensure that Simulink block diagrams adhere to style guidelines published by the MathWorks Automotive Advisory Board (MAAB).
- Some **MathWorks Automotive Advisory Board Checks** have been updated. For example, the check for “hd\_0001, Prohibited Simulink Sink and Data Store blocks” was modified to allow Data Store Memory, Data Store Read, and Data Store Write blocks and the check for “db\_0146, Triggered or enabled subsystems” was modified to include For Iterator, While Iterator, and Case blocks.

For Information on How To...	See...
Use the Model Advisor	“Consulting the Model Advisor” in <i>Simulink User’s Guide</i>
Customize the Model Advisor with your own tasks and checks	“Customizing the Model Advisor” in the <i>Simulink Verification and Validation User’s Guide</i>

## **API for Customizing Model Advisor HTML Reports**

This release provides a new API that allows you to customize Model Advisor HTML reports. The API provides classes and methods for formatting custom HTML reports, making it easier to create, understand, and maintain Model Advisor HTML reports. See “Formatting Model Advisor Results” in the *Simulink Verification and Validation User’s Guide*.

## Version 2.1 (R2007a) Simulink Verification and Validation Software

This table summarizes what's new in Version 2.1 (R2007a):

<b>New Features and Changes</b>	<b>Version Compatibility Considerations</b>	<b>Fixed Bugs and Known Problems</b>	<b>Related Documentation at Web Site</b>
No	No	Bug Reports Includes fixes	No

## Version 2.0 (R2006b) Simulink Verification and Validation Software

This table summarizes what's new in Version 2.0 (R2006b):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems	Related Documentation at Web Site
Yes Details below	No	Bug Reports Includes fixes	No

New features and changes introduced in this version are

- “Requirement Links Checking” on page 28
- “Modeling Standards Checking” on page 28

### Requirement Links Checking

This release introduces Model Advisor tasks for ensuring the consistency and validity of requirement links in a Simulink block diagram. These checks enable you to identify and fix the following situations:

- The requirements document is missing.
- The location (e.g., bookmark, line number, anchor) specified within the requirements document is invalid.
- The description of a selection-based link does not match its requirements document text.
- The requirements document path does not match your preferred path type (i.e., absolute or relative).

See “Consulting the Model Advisor” in *Simulink User’s Guide* for more information about using Model Advisor.

### Modeling Standards Checking

This release introduces Model Advisor tasks for ensuring that a Simulink block diagram adheres to the style guidelines published by the MathWorks



Automotive Advisory Board (MAAB). See “Consulting the Model Advisor” in *Simulink User’s Guide* for more information about using Model Advisor. For information about the MAAB modeling style guidelines, see <http://www.mathworks.com/industries/auto/maab.html>.

## Version 1.1.2 (R2006a) Simulink Verification and Validation Software

This table summarizes what's new in Version 1.1.2 (R2006a):

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

## Compatibility Summary for Simulink Verification and Validation 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.

Version (Release)	New Features and Changes with Version Compatibility Impact
Latest Version V2.7 (R2010a)	See the <b>Compatibility Considerations</b> subheading for this new feature or change: <ul style="list-style-type: none"> <li>• “Function rminav Removed” on page 6</li> </ul>
V2.6 (R2009b)	See the <b>Compatibility Considerations</b> subheading for each of these new features or changes: <ul style="list-style-type: none"> <li>• “Force Block Reduction Off During Simulation” on page 10</li> <li>• “Licensing Revised for the Model Advisor” on page 12</li> </ul>
V2.5 (R2009a)	None
V2.4 (R2008b)	None
V2.3 (R2008a)	None
V2.2 (R2007b)	None
V2.1 (R2007a)	None
V2.0 (R2006b)	None
V1.1.2 (R2006a)	None
V1.1.1 (R14SP3)	None

<b>Version (Release)</b>	<b>New Features and Changes with Version Compatibility Impact</b>
V1.1 (R14SP2+)	None
V1.0.2 (R14SP2)	None
V1.0.1 (R14SP1)	None
V1.0 (R14)	None