

Simulink® Report Generator™ Release Notes



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Simulink® Report Generator™ Release Notes

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R2018b

Version: 5.5

New Features

Bug Fixes

Truth Table Reporter: Report on Simulink Truth Table blocks and Stateflow Truth Table functions

You can use the `TruthTable` reporter to format and include Simulink Truth Table blocks and Stateflow® Truth Table functions. For a given Truth Table, the reporter generates:

- A table listing the conditions of the Truth Table
- A table listing the actions that occur when a matching condition occurs

Element Diagram Reporter: Include a snapshot of a Simulink or Stateflow element in a report

You can use the `ElementDiagram` reporter to include a captioned snapshot of a block diagram or chart element in a report.

Diagram reporter method added to DiagramElementResult and BlockResult finders

A `getDiagramReporter` method has been added to the `DiagramElementResult` and `BlockResult` classes. If the result is a graphical element, this method returns an `ElementDiagram` reporter for the Diagram Element Result or a `Diagram` reporter for the Block Result. You use the result to include a snapshot of the element in a report.

R2018a

Version: 5.4

New Features

Bug Fixes

MATLAB Function Reporter: Report on Simulink MATLAB Function block and Stateflow MATLAB Function object

You can use the `slreportgen.report.MATLABFunction` reporter to report on MATLAB Function blocks and Stateflow MATLAB[®] Function objects. The reporter reports this information:

- Properties
- Summary of input and output argument properties
- Details of input and output argument properties
- Function script
- Function symbol data
- Supporting functions

See `slreportgen.report.MATLABFunction` for a detail about each of these information types, which you can include in your report.

Lookup Table Reporter: Report on Simulink Lookup Table block

You can use the `slreportgen.report.LookupTable` reporter to report information on Simulink blocks that use lookup tables to compute their outputs from their inputs. The Lookup Table reporter includes tabular and graphical representations of the lookup table data. These Simulink blocks are supported:

- 1-D Lookup Table
- 2-D Lookup Table
- n-D Lookup Table
- Direct Lookup Table (n-D)
- Lookup Table Dynamic
- Interpolation Using Prelookup

Simulink Web View Goto and Data Store Memory Support: Navigate between related blocks

Simulink Web views now include navigation between Goto and From blocks, and between Data Store Memory, Data Store Read, and Data Store Write blocks. When you select one

of these blocks in a Web view, a link to the corresponding block appears. Click the link to navigate to the corresponding block.

Batch Web View Export: Export all models in a folder to Web views

`slwebview` now supports exporting Simulink models in a folder and, optionally, its subfolders, to Web views. To export a folder of models to Web views, specify the path to that folder. For example, use `myWebView = slwebview('myModels')` to create a Web view for each model in the `myModels` folder. To include subfolders in the export operation, use the `RecurseFolder` property, for example, `myWebView = slwebview('myModels', 'RecurseFolder', true)`.

R2017b

Version: 5.3

New Features

Bug Fixes

Simulink Reporters: Use MATLAB report objects to generate object property tables, diagram snapshots, and other Simulink report elements

You can use the Report API to create MATLAB programs to generate reports. This API simplifies creating reports by providing objects for common report elements, such as Simulink property tables and diagram snapshots. You can use both Report API and DOM API objects in the same program. Using DOM API objects, you can customize the formatting of the provided Report API elements and add additional elements to your report.

When you create a report program, you can use the following Report API objects to generate diagram snapshots and object property tables.

- `slreportgen.report.Diagram` generates a diagram snapshot with an optional caption. A diagram is a Simulink block diagram or a Stateflow chart.
- `slreportgen.report.SimulinkObjectProperties` generates a table of properties for Simulink models, blocks, and annotations.
- `slreportgen.report.StateflowObjectProperties` generates a table of properties for charts, transitions, junctions, and other Stateflow objects.
- `slreportgen.report.Report` contains the report.

Simulink Finders: Use MATLAB report objects to find diagrams, blocks, charts, states, and other model objects

You can use Simulink finders to find Simulink model and Stateflow chart elements to include in your report. Simulink finders are part of the Report API. Finders return results as Report API objects that you can add directly to a report.

When you create a report program, you can use the following Report API objects to find Simulink elements.

- `slreportgen.finder.DiagramFinder` finds Simulink systems, Stateflow charts, and model references
- `slreportgen.finder.SystemDiagramFinder` finds Simulink block diagrams
- `slreportgen.finder.DiagramElementFinder` finds all graphical elements of a diagram, where a diagram is a Simulink block diagram or a Stateflow chart. Graphical Simulink elements include blocks, annotations, and lines. Stateflow graphical elements

include annotations, transitions, junctions, states, boxes, truth tables, functions, Simulink functions, and embedded MATLAB functions.

- `slreportgen.finder.BlockFinder` finds all blocks in a Simulink block diagram
- `slreportgen.finder.AnnotationFinder` finds all annotation elements in a Simulink block diagram
- `slreportgen.finder.ChartDiagramFinder` finds Stateflow charts.
- `slreportgen.finder.StateflowDiagramElementFinder` finds graphical elements in a Stateflow chart. Graphical elements include annotations, transitions, junctions, states, boxes, truth tables, functions, Simulink functions, and embedded MATLAB functions.
- `slreportgen.finder.StateFinder` finds all states in a Stateflow chart.
- `slreportgen.finder.DiagramResult` holds `DiagramFinder`, `SystemDiagramFinder`, or `ChartFinder` results to add to a report document.
- `slreportgen.finder.DiagramFinder` holds `AnnotationFinder`, `BlockFinder`, `DiagramElementFinder`, `StateFinder`, or `StateflowObjectFinder` results to add to a report document.
- `slreportgen.finder.BlockResult` holds `BlockFinder` results to add to a report document.
- `slreportgen.finder.DiagramElementResult` holds diagram element results to add to a report document.

Compare and Merge

As of R2017b, the compare and merge feature in Simulink Report Generator has moved into Simulink. See [Model Comparison \(Simulink\)](#).

R2017a

Version: 5.2

New Features

Bug Fixes

Embedded Web View: Generate HTML report containing interactive view of a Simulink model

You can use `slreportgen.webview.webviewdocument` methods to embed interactive Simulink Web Views of models into HTML reports. The default Embedded Web View contains an autogenerated table of contents (TOC), a document panel, and the Web View. You can define your report content in the document panel and create two-way links between the document and the Web View. You can use the Embedded Web View report generator to create HTML reports, such as interactive model-based calibration guides and traceability reports for code and requirements.

Rich Annotation Component: Preserve model annotation formatting in generated reports

Generated reports now preserve Simulink model annotation formatting. Annotations that contain rich text content (text with HTML markup) and LaTeX equations now use the same format as the model annotations. Previously, annotations in reports appeared only as plain text.

R2016b

Version: 5.1

New Features

Bug Fixes

Compatibility Considerations

Searchable Diagrams: Search for parameters and properties in a PDF report

You can now search for Simulink model parameters and properties in a direct to PDF report. Use a System Snapshot component and set the snapshot format to `Automatic SL format` (Scalable Vector Graphics) to enable searching in the resulting report.

See the System Design Description report for an example. In a Simulink model, select **File > Reports > System Design Description**. Generate the report with the file format set to `Direct PDF (from template)`. To view the System Snapshot component, in the System Design Description dialog box, click **Customize Content** and locate the component in the report setup.

Hyperlinked Diagrams: Navigate by clicking block diagrams in PDF reports

In Simulink PDF reports, blocks in diagrams created using the System Snapshot component link to information about the associated block. To enable these links, in the System Snapshot component, use the `Automatic SL format` (Scalable Vector Graphics) format.

See the System Design Description report for an example. In a Simulink model, select **File > Reports > System Design Description**. Generate the report with the file format set to `Direct PDF (from template)`. To view the System Snapshot component, in the System Design Description dialog box, click **Customize Content** and locate the component in the report setup.

Numbering Template: Number sections in Simulink Design Description reports

When you generate a report from the Simulink Editor using **Reports > System Design Description**, you can now select a new template when your file output format is one of the `from template` options. The template `Default` numbers chapters and subsections of the report. The default template numbers only chapters. When you use this template, the subsections have numbers like 1.1, 1.2, and 1.1.1.

Diff and Merge: Reuse open MATLAB sessions for diff and merge from external source control tools

Save time by using open MATLAB sessions for XML comparison and merge of Simulink models from your external source control client.

Compatibility Considerations

In previous releases, you could use the `fileComparisonDriver` function to customize external source control tools, but you could not reuse open MATLAB sessions. The `fileComparisonDriver` will be removed in a future release.

For current instructions, see: [Customize External Source Control to Use MATLAB for Diff and Merge](#).

R2016a

Version: 5.0

New Features

Bug Fixes

Scalable Report Generation: Generate PDF reports as big as 10,000 pages

In previous releases, the DOM API used Microsoft® Word to generate PDF documents from Word documents. In R2016a, the DOM API generates PDF documents directly. The direct-to-PDF capability allows you to programmatically generate large PDF documents on all platforms supported by MATLAB. This release also adds a new output type to Report Explorer, `Direct PDF (from template)`, based on the direct-to-PDF capability. The new output type speeds up PDF generation and expands and simplifies PDF formatting.

Direct-to-PDF allows you to use an HTML template to specify the fixed content and format of a report and holes for inserting generated content. The template can use a predefined set of HTML tags to specify a report's page layout, table of contents location, and the content of page headers and footers. You can also programmatically specify page layout, table of contents location, and page headers and footers. The DOM API automatically generates table of contents and page numbers. See [Create an HTML or PDF Template](#).

See these new classes associated with the new PDF capability in the DOM API:

- `mlreportgen.dom.StyleRef`

Use this class to create running page headers and footers in Word and PDF documents. See [Create Running Page Headers and Footers](#)

- `mlreportgen.dom.PDFPageLayout`
- `mlreportgen.dom.PDFPageHeader`
- `mlreportgen.dom.PDFPageFooter`
- `mlreportgen.dom.Page`
- `mlreportgen.dom.NumPages`
- `mlreportgen.dom.CSSProperty`
- `mlreportgen.dom.CSSProperties`
- `mlreportgen.dom.FOProperty`
- `mlreportgen.dom.FOProperties`
- `mlreportgen.dom.PageRef`
- `mlreportgen.dom.Heading1`
- `mlreportgen.dom.PageBreak`

-
- `mlreportgen.dom.Leader`
 - `mlreportgen.dom.ListStyleType`

Three-Way Model Merge: Resolve conflicts between revisions and ancestor models using Simulink projects

In a Simulink project under source control, if your changes in a model conflict with another user, you can open the Three-Way Model Merge tool to resolve the conflicts. You can examine your local file compared to the conflicting revision and the base ancestor file, and decide which changes to keep. You can resolve the conflict and submit your changes.

For details, see Merge Simulink Models from the Comparison Report.

Table of Contents: Add TOCs programmatically

In R2016a, you can create a placeholder for a table of contents in your DOM API report program. Use the `mlreportgen.dom.TOC` class to create the placeholder. For more information on creating a table of contents, see Create a Table of Contents.

Page Numbers: Create page number placeholders programmatically

In R2016a, you can create page number placeholders programmatically in Word and PDF reports. Previously you used only a template to create the placeholders. Updating a Word document replaces the placeholders with automatically generated page numbers. Closing a PDF DOM document similarly replaces the placeholders with automatically generated page numbers. For more information, see the `mlreportgen.dom.Page` class.

HTML Text Component: Convert HTML to Word or PDF

The new HTML Text component allows you to include HTML markup in a Report Explorer report. If you specify Word or PDF as the report output type, the included HTML text is converted to Word or PDF. The conversion preserves the text's HTML-specified format. You can enter the HTML text in the component or specify a file or workspace variable that contains the text.

pptview Function: Open PowerPoint presentation or convert it to PDF

The `pptview` function opens a PPT presentation in PowerPoint® on Windows® or Apache OpenOffice™ on Linux. If you have Microsoft Office installed, you can also use this function to convert a PowerPoint presentation to PDF format.

Test Sequence Options: Include description, action, transition table, and requirements in report

The Test Sequence component now includes options to include the description, action, transition table, and requirements in the report, or a combination of these elements.

Cross-Platform PDF Viewer: View PDF with built-in viewer

Previously, the Report Generator displayed PDF reports in Adobe® Acrobat® on Windows and in the PDF viewer you specified on other platforms. Now the Report Generator displays PDF reports in the same built-in viewer on all platforms. This change avoids the need for you to interact with a new Acrobat security dialog box on Windows every time you display a report. You also do not need to set up a viewer on Linux® and Macintosh systems.

Note The new PDF viewer does not display a report's bookmarks.

Functionality Being Removed or Changed

Functionality	Result	Use Instead	Compatibility Considerations
<code>m\reportgen.dom.DOCXPageMargins</code> class	Still works for Microsoft Word output	<code>m\reportgen.dom.PageMargins</code>	To prevent your code from being output dependent, replace instances of <code>DOCXPageMargins</code> with <code>PageMargins</code> .

Functionality	Result	Use Instead	Compatibility Considerations
<code>m\reportgen.dom.DOCXPageSize</code> class	Still works for Word output	<code>m\reportgen.dom.PageSize</code>	Replace instances of <code>DOCXPageSize</code> with <code>PageSize</code> .
<code>m\reportgen.dom.DOCXRawFormat</code> class	Still works for Word output	<code>m\reportgen.dom.PageRawFormat</code>	Replace instances of <code>DOCXRawFormat</code> with <code>PageRawFormat</code> .
<code>m\reportgen.dom.DOCXSection</code> class	Still works for Word output	<code>m\reportgen.dom.DOCXPageLayout</code> or <code>m\reportgen.dom.PDFPageLayout</code>	Replace instances of <code>DOCXSection</code> with <code>DOCXPageLayout</code> . If appropriate, add a <code>PDFPageLayout</code> object.
<code>CurrentDOCXSection</code> property	Still works for Word output	<code>CurrentPageLayout</code>	Replace instances of <code>CurrentDOCXSection</code> property with <code>CurrentPageLayout</code> property.

R2015aSP1

Version: 4.1.1

Bug Fixes

R2015b

Version: 4.2

New Features

Bug Fixes

Web view search

You can perform a search in a Web View of a model. You can:

- Enter the same kinds of search strings as you can in most other Simulink search dialog boxes. For example, you can specify criteria for the search, such as restricting the search to block types.
- View the matched results in the model viewer.
- Navigate from search results to systems containing matched results.
- Sort search results based on name or path.

For details, see [Search a Web View](#).

Programmatic interface for adding content to PowerPoint presentations

You can use the PPT (PowerPoint) API to add generated content to an existing PowerPoint presentation or to create a complete PowerPoint presentation programmatically. Your presentation can capture dynamic information from a MATLAB program without you making manual updates to the presentation. Use templates, slide masters, and styles to format your presentation. To format the layout and general look of your presentation, use template slide masters, style layouts, and styles. To format specific presentation content, you can use the PPT API format objects and properties.

For examples of PPT API code, see:

- [Update Presentation Content Programmatically](#)
- [Create a Presentation Programmatically](#)

Simulink data dictionary report component

You can use the Simulink Data Dictionary Loop and Simulink Data Dictionary components to include data from Simulink data dictionaries in a report.

Test Sequence block support

You can use the Test Sequence component to include data from Simulink Test™ Test Sequence blocks in a report.

Several times faster model comparison analysis

Performance improvements in model comparisons result in typical comparisons running 2-3 times faster.

DOM API object display options

For Microsoft Word reports, you can use an `mlreportgen.dom.Display` object to specify whether to display an `mlreportgen.dom.Text` object. For HTML reports, you can use a `Display` object to specify the how to display DOM objects such as text, paragraphs, images, list items. For HTML reports, some display options are:

- Display as an inline or block element.
- Display the element similar to a table column, table caption, list element, or a few other elements.
- Suppress the display of the object.

For details, see `mlreportgen.dom.Display`.

DOM API horizontal rule

You can use an `mlreportgen.dom.HorizontalRule` object to specify a horizontal line to visually divide report content.

For details, see `mlreportgen.dom.HorizontalRule`.

R2015a

Version: 4.1

New Features

Bug Fixes

Support for appending HTML string or file to a Word or PDF report generated by the Document Object Model (DOM) API

You can append HTML markup or the contents of a whole HTML file to a programmatic report written with the Document Object Model (DOM) API to:

- Convert an existing HTML report to a Microsoft Word or PDF report.

You can append the HTML markup for a report to a DOM report, which you can then generate in Word or PDF format. For example, you can use a MATLAB `printf` statement to generate an HTML report file, and then append that HTML file to a DOM report to generate a PDF or Word version of the report. Another example is to convert a report generated by Model Advisor from HTML to Word or PDF.

- Add content based on HTML markup.

You can append the HTML code for a report to a DOM report, using the HTML code as a building block in a DOM report that includes other report elements.

Perform these steps to append HTML to a DOM report.

- 1 Ensure that the HTML code complies with HTML standards, such as including beginning and end tags (for example, `<p>` and `</p>`). Consider using a utility such as HTML Tidy.
- 2 In a DOM report, use `addHTML` to append HTML code or `addHTMLFile` to append an HTML file to a document or document part.

For example, this DOM code creates a Word report that displays Hello World, based on the HTML code that you append to the report.

```
import mlreportgen.com.*;
d = Document('MyReport', 'docx');
addHTML(d, '<p style="color:blue"><b>Hello World</b></p>');
```

For information about using the `addHTML` or `addHTMLFile` methods, see `mlreportgen.dom.Document.addHTML` or `mlreportgen.dom.Document.addHTMLFile`.

Single-file output option for HTML reports generated by DOM API

To simplify display of an HTML report, you can specify that the DOM API generate the report as a single HTML file that includes the report images.

Specify 'html - file' for the type input argument for a `Document` or `DocumentPart` constructor. For details, see the `mlreportgen.dom.Document` reference page.

Simplified table formatting with DOM API

In R2015a, the DOM API includes several enhancements to simplify creating and formatting tables.

- You can use an `mlreportgen.dom.ResizeToFitContents` format object in the `Style` property for `mlreportgen.dom.Table` or `mlreportgen.dom.FormatTable` objects. The `ResizeToFitContents` specifies whether to resize columns to fit the widest content in a column.
- You can specify an `mlreportgen.dom.Height` format object in the `Style` property of an `mlreportgen.dom.TableEntry` object. The height of a row is the tallest height specified for a table entry in that row. If no entries in the row specify a height, then the row height is specified by the `Height` property of the `TableRow` object.
- Table entries can now inherit the border formatting specified in a `TableEntriesStyle` property of `mlreportgen.dom.Table` or `mlreportgen.dom.Table` objects.

Container for generating high-level HTML elements

You can use the `mlreportgen.dom.Container` class to create high-level HTML elements not otherwise supported by the DOM API, such as `div`, `section`, or `article`.

You can also use a `Container` object to simulate format inheritance in Word reports.

For details, see `mlreportgen.dom.Container`.

Function symbol data for MATLAB Function component

You can use the MATLAB Function component property **Include function symbol data** to generate a table with MATLAB function symbol data. The table includes information on

the user-defined and (optionally) built-in MATLAB variables and functions invoked by the MATLAB function that computes the block outputs.

Images and text for DOM report links

You can append text and images to `mlreportgen.dom.ExternalLink` and `mlreportgen.dom.InternalLink` objects.

For details, see `mlreportgen.dom.ExternalLink.append`.

R2014b

Version: 4.0

New Features

Bug Fixes

Report formatting based on Word and HTML templates

You can use Microsoft Word or HTML templates for reports that you create using:

- The Report Explorer. For details, see [Generate a Report Using a Template](#).
- MATLAB report objects. See [Document Object Model](#).

MATLAB report objects for creating report scripts

You can use the DOM (Document Object Model) API to create MATLAB programs to generate reports. The DOM API provides a set of objects for creating text, paragraphs, tables, images, lists, and other kinds of report content. When you create a report program, you can:

- Produce Microsoft Word, HTML, and PDF output using the same code.
- Specify formatting for report objects, such as color and bold for text objects.
- Use format objects (for example, `Bold` and `FontFamily`) to format report objects.
- Add MATLAB data directly to report objects (for example, a char array to a `Text` object).
- Use formatting and fixed content that is defined in a Word or HTML template.
- Create form-based reports that contain fixed and generated content.
- Modularize a report into parts for generation of reports that have repetitive elements of the same format.

For information about how to create report programs, see [Document Object Model](#).

Fast file converter with reduced memory requirements

Generate template-driven reports much faster than in previous releases, without using Java memory.

To take advantage of these performance advantages, use one of these **File format** report options:

- HTML (from template)
- PDF (from template)
- Word (from template)

For details, see Report Generation Using Templates.

Fill-in-the-blanks Word and HTML forms for generating reports

You can use the DOM (Document Object Model) report objects in a MATLAB program along with Word and HTML fill-in-the-blanks templates that contain fixed and holes to include generated content. The report program uses report objects to generate the variable information. See Form-Based Reporting.

Color settings preferences in Simulink XML comparisons

You can now change and save your diff color preferences for the MATLAB Comparison Tool. Apply your color preferences when comparing model files, text files, MAT-files, variables, or zip files or folders.

For details, see Change Color Preferences.

Optional Web views for model coverage and requirements

If you have Simulink Verification and Validation™ installed, you can include model coverage and requirements information in a Web view. In the Web View dialog box, open the **Optional Views** tab and select **Model Coverage** or **Requirements** or both.

To view the model coverage or requirements optional Web view information in a Web view, you must have Simulink Verification and Validation installed. To view the information, in the Web view click a highlighted block (for example, blocks with an orange border have requirements information). The information for that block appears in the **Informer** pane below the model.

For more information, see Optional Web Views.

Improved performance for code generation report creation

When you use `codegen.rpt` to create code generation reports with Simulink Report Generator, in the Report Options dialog box on the **Properties** pane, the **Compile model to report on compiled information** check box is selected by default. With this option,

the software updates a model only once when creating the report. You get much faster report generation, especially for models with many atomic subsystems.

R2014a

Version: 3.16

New Features

Bug Fixes

Compatibility Considerations

Object Inspector in Web view to view block parameter and signal property values

When exploring a Web view, you can view click a block or signal to view block parameter and signal property values in a separate pane. For details, see View Block Parameters and Signal Properties.

Options for name, location, and packaging of Web view files

Specify the file name and folder to use for storing the exported Web view. You can also specify whether to package the Web view files a zip file, in a folder, or in both a zip file and a folder. For details, see Web View Files.

Enhanced Web view export dialog, with context-sensitive help

The Web View export dialog box has been enhanced to make it easier to specify export options. To get detailed information about an option, right-click the option and select "What's This?" For details, see Export Models to Web View Files.

Extended and simplified slwebview command

The `slwebview` command, which you can use to export a Web view, includes an option for specifying whether to export MathWorks® built-in library blocks.

The interface for whether to export masked subsystems has been simplified.

Compatibility Considerations

The default for the `FollowLinks` argument has been changed to `Off`.

The syntax for specifying whether to export masked subsystems has been simplified. The following argument values relating to masked subsystems are supported for compatibility with releases before R2014a. Use `false` or `true`.

Previous 'LookUnderMasks' Argument Value	Meaning
None	Equivalent to <code>false</code>

Previous 'LookUnderMasks' Argument Value	Meaning
Graphical (Default)	Equivalent to true
Functional	Equivalent to true
All	Equivalent to true

R2013b

Version: 3.15

New Features

Bug Fixes

Merge capability for MATLAB Function blocks from XML comparison report

From the XML comparison report, you can compare the contents of MATLAB Function blocks. You can now merge selected changes in the block code. This enables you to merge changes made by developers in different parts of the MATLAB Function block code without leaving the Simulink environment.

In the XML comparison report of the parent model, click **Compare** next to the MATLAB Function block to open a new text comparison report showing the differences in the code inside the blocks. Use the merge controls on the Comparison tab to merge selected differences.

For details, see Merge Simulink Models from the Comparison Report.

Protected model Web view

You can view a Web view of a protected model. For details, see Protected Web View.

R2013a

Version: 3.14

New Features

Bug Fixes

Toolbar that replaces menus and toolbars in XML Comparison Tool

The Comparison Tool is redesigned for more efficient workflow and access to tools. The toolbar contains components that were previously available in menus and toolbars. Tools are unified across different comparison types such as text, MAT, variable, and Simulink XML, to make it easier to find controls for displaying, filtering, and navigating differences.

For details, see [Explore the XML Comparison Report for Simulink Models](#).

Scope Snapshot display of additional scopes

The Scope Snapshot component, in addition to inserting images of the Simulink library Scope and XY Graph blocks, now supports:

- Spectrum Analyzer and Time Scope blocks (DSP System Toolbox™)
- Video Viewer (Computer Vision System Toolbox™)
- Blocks in the Simulink Control Design™ Linear Analysis Plots library (for example, the Bode Plot block)

R2012b

Version: 3.13

New Features

Bug Fixes

Inclusion or exclusion of model references from System Design Description reports

The System Design Description dialog box provides an option for you to include or exclude model references from a System Design Description report. Prior to R2012b, model references were always included. In R2012b, by default reports include model references, but you can choose to exclude them.

Simulink functions in reports

R2012b provides enhanced Stateflow reporting capabilities for Simulink functions:

- The System Loop component provides an option to exclude from a report a subsystem that implements a Simulink function.
- The new Simulink Function System Loop component provides information on the function-call subsystem hierarchy that implements a Simulink function.

R2012a

Version: 3.12

New Features

Bug Fixes

XML Comparison of Configuration Parameters

In R2012a, you can view changes in Configuration Parameters dialog box options in the Simulink XML Comparison report.

After comparing XML text files exported from Simulink models, you can use the report to explore differences in the Configuration Parameters. Click report items to view changed options in the Parameters pane of the report. The Parameters pane displays the label text from the dialog controls and the parameter values. If you have reverse annotation on, the report also displays the appropriate root node pane of both Configuration Parameters dialog boxes.

For details, see *Display Items in Original Models* in the Simulink Report Generator User's Guide.

Print Filtered XML Comparison Results

In R2012a, the printable XML Comparison report has improved speed and filtered results. If you set filters, you can now create a printable report containing the filtered results only.

For details, see *Filter Out Differences* in the Simulink Report Generator User's Guide.

R2011b

Version: 3.11

New Features

Bug Fixes

Use Full Page Option for PDF Reports

To display full-page images in PDF reports, set the **Paper orientation** property to the new **Full page image (PDF only)** option. The following components provide this new option:

- Look-Up Table
- Scope Snapshot
- Stateflow Snapshot
- System Snapshot
- To Workspace Plot

Filter Systems for the System Filter Component

You can use the new Custom filtering MATLAB code property of the **System Filter** component to extend the system filtering criteria beyond the existing **System Filter** properties (for example, the **Report only if system has at least N blocks** property).

Filter Properties for the Simulink Workspace Variable Component

You can define a filter for selecting the variable properties that the **Simulink Workspace Variable** component displays. You can choose from a set of properties for a class, or you can define a custom MATLAB function to specify a filter.

R2011a

Version: 3.10

New Features

Bug Fixes

Merge Simulink Models From Comparison Report

You can now merge Simulink models from the XML text comparison report. You can merge individual parameters, blocks, or entire subsystems. This feature enables you to merge two versions of a design modeled in Simulink.

You can merge from the left (or base) model to the right (or edited) model using the XML text files. If necessary, you can swap sides. Click **Undo** to revert all merge operations.

For details, see *Merge Simulink Models From the Comparison Report* in the Simulink Report Generator User's Guide.

Export XML Comparison Results to the Workspace

You can now export XML comparison results to the MATLAB base workspace. You can use the results data for tasks such as further analysis or incorporating into different reports.

For details, see *Export Results to the Workspace* in the Simulink Report Generator User's Guide.

Improved PDF Images of Models and Charts

The Simulink Report Generator includes Simulink models and Stateflow charts in PDF reports as Scalable Vector Graphics (SVG) images. SVG images substantially improve the readability of Simulink models and Stateflow diagrams.

R2010b

Version: 3.9

New Features

Bug Fixes

Simulink Workspace Variable and Simulink Workspace Variable Loop Components Added

The new Simulink Workspace Variable and Simulink Workspace Variable Loop components report on Simulink workspace variable objects.

MATLAB Function Component Added

The new MATLAB Function component inserts information about MATLAB Function blocks into a report.

Model Configuration Set Component Added

The new Model Configuration Set component inserts the active configuration set of a model into a report.

System Design Description Report Enhancements

The System Design Description report, which you can generate from the Simulink Model Editor, includes additional information about these elements of a model:

- Simulink workspace variables
- Configuration sets
- MATLAB Function blocks
- Truth tables

The System Design Description dialog box includes a new stylesheet option, for specifying the report output format. Customizing the System Design Description report is simpler.

For details, see [Generate System Design Description Reports](#).

Transposable Columns for Summary Table Components

For the Fixed Point Summary Table, Stateflow Summary Table, and Requirements Summary Table components, use the new **Transpose table** check box to change the summary table rows into columns in the generated report. Specifying this option puts the property names in the first column and the values in the other columns.

Improved XML Comparison Report

Reports for comparisons of XML files exported from Simulink models have a new faster user interface, with changed parameters displayed in a separate panel for easier review. The enhanced report now has color highlighting for new and changed items. The report provides additional filter options, allowing you to filter categories of changes, such as nonfunctional changes (such as position or font), line changes, and changes in block parameter defaults.

For details, see [Explore the XML Comparison Report in the Simulink Report Generator User's Guide](#).

R2010a

Version: 3.8

New Features

Bug Fixes

Model Reference Support for Model Loop Component

The Model Loop component has a new Model Reference option for automatically reporting on referenced models.

Improved XML Comparisons for Files with the Same Name

Comparisons of XML files exported from Simulink models with the same name now only contain information about user changes to the files. In previous releases, the comparison process introduced confusing artificial changes to both files, such as file name changes. Comparing the XML exported from two versions of the same file is a common workflow when using Configuration Management tools. The XML comparison now produces better results for this workflow.

R2009b

Version: 3.7

New Features

Bug Fixes

Compatibility Considerations

System Design Description Report

From the Simulink Model Editor, you can access a new System Design Description report. The report provides summary or detailed information about the system design represented by a model. You can specify report options using the report dialog box, or you can create a customized version of the report using the Report Explorer. For details, see [Generate System Design Description Reports](#).

Blocks Sortable by Model and Chart Layout

For looping components, you can sort blocks based on how the blocks are arranged in the model or chart. The two new **sort blocks** options are: **By layout (left to right)** and **By layout (top to bottom)**. These options reflect the model or chart layout horizontally across rows or vertically down columns.

The components with these new block sorting options are:

- Block Loop
- Chart Loop
- Fixed Point Block Loop
- Fixed Point Summary Table
- Missing Requirements Block Loop
- Requirements Block Loop
- Requirements Summary Table
- Simulink Summary Table
- Stateflow Summary Table

Reporting Compiled Simulink Model Data

The new **Compile model to report on compiled information** report output option ensures that a report reflects compiled values for Simulink parameters. For details, see [Report Explorer Report Options](#) in the Simulink Report Generator documentation.

New Components for the Requirements Management Interface

New components that support the Requirements Management Interface are:

-
- Missing Requirements Block Loop — Apply all child components to blocks that do not have requirements
 - Missing Requirements System Loop — Loop only on systems and subsystems that do not have associated requirements
 - Requirements Documents Table — Insert table of linked requirements documents
 - Requirements Signal Loop — Run child components for each signal with requirements in current system, model, or block

Goto and From Block Information Added to Simulink Summary Table

The Simulink Summary Table component now reports additional information about Goto and From blocks.

For Goto block properties, the new columns are:

- **From Blk** — Name of the From block connected to the Goto block; this name links to that block's properties information in the report
- **From Blk Location** — Path to From block location in the model

For From block properties, the new columns are:

- **Goto Blk Name** — Name of the Goto block connected to the From block; this name links to that block's properties information in the report
- **Goto Blk Location** — Path to Goto block location in the model

If a Goto or From block is not connected to a corresponding From or Goto block, you see "Unconnected" in the Goto or From block name and location columns.

Improved Images in Word and RTF Reports on Windows Platforms

To provide better graphics quality in reports using the Word document format or RTF (Rich Text format) on Windows platforms, the default format for Handle Graphics®, Simulink, and Stateflow images is now Windows metafile format (the default was black and white TIFF).

You can control the image format using the MATLAB preferences or the Simulink Report Generator Preferences, or from snapshot components such as the Axes Snapshot component.

Compatibility Considerations

To change the image format back to the previous default of black and white TIFF, change the preferences.

Required Products Information for MATLAB/Toolbox Version Number Component

The MATLAB/Toolbox Version Number component now supports options to display information based on whether a Simulink model or Stateflow chart requires a MathWorks product.

Block Summary Table Link to Data Object Property Information

For Simulink data object variables, in the Block Summary table, the block variables column (third column) now provides a link from the variable name to the Simulink Functions and Variables table row for that variable. The Model Variables table includes information about the data object, such as the data type and the minimum and maximum values.

Adobe Illustrator Image File Format No Longer Supported

Compatibility Considerations

The **Image file format** options for these components no longer include Adobe Illustrator:

- Look-Up Table
- Scope Snapshot
- Stateflow Dialog Snapshot
- Stateflow Snapshot
- System Snapshot

-
- To Workspace Plot

If you wish to integrate a Simulink Report Generator image into Adobe Illustrator, specify a image file format supported by Adobe Illustrator, such as PDF, and then open the image file in Adobe Illustrator.

Navigation Controls for XML Comparison Report

The XML comparison report has new navigation controls to step through differences in the report. You can use the toolbar buttons or the **XML** menu to move to the next or previous group of changes. As you step through selected changes in the report, Simulink Report Generator can highlight the corresponding items in the original models.

Other usability improvements in the report include:

- Enhanced XML comparison algorithm with reduced memory consumption
- Improved matching results for many types of Simulink blocks and Stateflow elements
- Ability to filter out nonfunctional differences in the comparison result
- Simplified toolbar and **XML** menu

For details, see Explore the XML Comparison Report in the Simulink Report Generator User's Guide.

R2009a

Version: 3.6

New Features

Bug Fixes

New XML Comparison Example

The following new example shows you how to use Simulink Report Generator to export XML text files from two Simulink models and perform an XML comparison on the exported files:

```
s$xml_eml_radar
```

Print a Sample Time Legend

Version 3.4 introduced the Sample Time Legend to the Simulink Report Generator. With Version 3.6 you can easily print a Sample Time Legend.

R2008b+

Version: 3.5

New Features

Bug Fixes

Comparison of XML Files Exported From Simulink Models

New comparison report for pairs of XML files, including an option to compare XML files exported from Simulink models.

XML comparison report can display highlighted results in the original models.

For details, see [Comparing XML Files Exported from Simulink Models](#) in the Simulink Report Generator documentation.

See also the following new examples:

- `sxml_sfcar`
- `sxml_truthtables`

R2008b

Version: 3.4

New Features

Bug Fixes

Simulink Web View Support for MATLAB Function Blocks in Stateflow

Web views support Stateflow MATLAB Function blocks, enabling the display of Stateflow MATLAB Function block code in Web views.

Simulink Web View Support for Simulink Functions in Stateflow

Web views support Stateflow Simulink functions, allowing display of function contents in Web views.

R2008a+

Version: 3.3.1

Bug Fixes

R2008a

Version: 3.3

New Features

Bug Fixes

Simulink Web View Enhancements

Performance and Scalability Enhancements

- The Simulink Report Generator software now loads only visible systems into Web views, resulting in a faster viewing experience for Web views of large Simulink models.
- Clicking the **Show All Layers** button in a Web view now displays all layers as thumbnail images in png format, resulting in faster loading of the Show All Layers view.

DocBlock Support

You can now export information contained in DocBlock blocks from Simulink models to Web views.

For more information on DocBlock blocks, see the DocBlock reference page in the Simulink documentation.

Support for Embedded URLs in Simulink Annotations

You can now specify the MATLAB web command in the format:

```
web('http://[url]')
```

as the callback function in a Simulink annotation. When you click on the annotation in the model's Web view, the Simulink Report Generator software launches the Web page with the specified URL.

For more information about specifying functions in annotations, see Annotation Callback Functions in the Simulink documentation.

MATLAB Function Block Support

You can place your cursor over a MATLAB Function block in a Web view to display the MATLAB code contained in the block.

For more information on MATLAB Function blocks, see the MATLAB Function reference page in the Simulink documentation.

R2007b

Version: 3.2.1

Bug Fixes

R2007a

Version: 3.2

New Features

Bug Fixes

Simulink Web View Enhancements

Support for hierarchical Web view navigation, which provides you with:

- Easy navigation through layers of your Web view
- Visual indications of what context you are in when you navigate through your Web view

Adobe Scalable Vector Graphics (SVG) Format Support in System Snapshot and Stateflow Snapshot Components

The System Snapshot and Stateflow Snapshot components now support Adobe Scalable Vector Graphics (SVG) format, providing enhanced graphics resolution in HTML reports.

R2006b

Version: 3.1

New Features

Bug Fixes

New Real-Time Workshop Components

Two new components report on code generated by the Real-Time Workshop® product:

Code Generation Summary

Produces version information, a list of the generated files, code generation configuration information, and, if the model includes subsystems, a subsystem map.

Import Generated Code

Imports source and header (include) files generated by Simulink Coder™ software. Also imports custom files you specify as part of your model.

R2006a+

Version: 3.0.1

Bug Fixes

R2006a

Version: 3.0

New Features

Bug Fixes

Simulink Models Can Be Exported as Web Views

You can now create a Web view of a Simulink model or Stateflow chart. A Web view is an interactive rendition of the model or chart that you can view in a Web browser. A Web view uses Scalable Vector Graphics (SVG) to render and navigate a model.

Creating a Web view requires the Simulink Report Generator product. Using a Web view in a Web browser requires SVG support in the browser, implemented natively or through a plug-in, but it does not require MathWorks products to be installed.

Because they require only Web browsers with widely available SVG support, Web views are useful for presenting models to audiences and for sharing models with colleagues who do not have MathWorks products installed.

For details, see *Export Simulink Models to Web Views* in the Simulink Report Generator documentation.

Browser Requirements and Limitations

Web views in V3.0 (R2006a) are supported only in these Web browsers:

- Firefox Version 1.5 or later, which has native support for Scalable Vector Graphics (SVG). To obtain the Firefox browser, visit <https://www.mozilla.com/>.
- Microsoft Internet Explorer® with the Adobe SVG Viewer plug-in. To obtain the SVG Viewer plug-in, visit <https://www.adobe.com/svg/>.

Web views have these limitations in Firefox:

- There is no shortcut menu.
- When you move the mouse over exported systems and diagrams, they are not highlighted, but the cursor changes.
- Fonts may be too large in some circumstances.
- Compressed SVG files are not supported.

Web views have these limitations in Internet Explorer with the SVG Viewer plug-in:

- In panning mode, the cursor does not change.
- On a Japanese Microsoft Windows system, you must edit the Windows registry to obtain Japanese text in menus. Define this key:

```
HKEY_CURRENT_USER\Software\Adobe\Adobe SVG Viewer\version\Locale
```

substituting the version of your Adobe SVG Viewer plug-in for *version*. For example, if the plug-in version is 3.03, define this key:

```
HKEY_CURRENT_USER\Software\Adobe\Adobe SVG Viewer\3.03\Locale
```

Then, define a string value for this key. The value name is `systemLanguage`, and the value data is `ja`.

Model Loop Component Reports on Libraries

The Model Loop component can now report on libraries. The Model Loop attribute pane in Report Explorer specifies which libraries to include in the report.

Model Advisor Results Reported by New Component

A new Model Advisor Report component runs Model Advisor and includes its report in the report you are generating.

User Interface and Performance Enhanced

The Report Explorer interface has a number of enhancements. The **View** menu has commands to increase and decrease font size and to show the message window if it is not displayed.

Simulink Report Generator performance has improved. Reports are often generated more rapidly and with less chance of running out of memory.

Empty Columns Removed from Summary Tables

Simulink Summary Table components now have an option to remove empty columns from the report. The option is selected by default.

R14SP3

Version: 2.3.1

Bug Fixes

R14SP2+

Version: 2.3

New Features

Bug Fixes

Table Cell Spanning

You can create advanced table layouts for Simulink and Stateflow property tables. The advanced layouts include cells that span multiple rows or columns.

Dialog Snapshot Components

You can take screen captures of Simulink and Stateflow editor dialog boxes. You can choose to display the current settings associated with an object, or document the appearance of your custom mask dialog boxes.

See Simulink Dialog Snapshot and Stateflow Dialog Snapshot in the Simulink Report Generator documentation.

Annotation Loop Component

You can include Simulink annotations in your reports. A Simulink annotation is a text field that you can edit directly in the block diagram. You typically use an annotation to display brief information about a subsystem.

For more details, see Annotation Loop in the Simulink Report Generator documentation.

Improved Graphical User Interface

The following changes and improvements have been made to the graphical user interface:

- There is an improved user interface for searching according to property/value pairs in Simulink System Loop and Block Loop components.