Report Generator 2.3 Release Notes

This document describes the changes introduced in the latest version of Report Generator.

This document includes the following information about previous releases:

- Chapter 2, "MATLAB and Simulink Report Generator 2.2 Release Notes"
- Chapter 3, "MATLAB and Simulink Report Generator 2.1 Release Notes"
- Chapter 4, "MATLAB and Simulink Report Generator 2.0 Release Notes"
- Chapter 5, "MATLAB and Simulink Report Generator 1.3 Release Notes"
- Chapter 6, "MATLAB and Simulink Report Generator 1.2 Release Notes"
- Chapter 7, "MATLAB and Simulink Report Generator 1.1 Release Notes"

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New Features in the Release

The following features are introduced in this release.

- "Stylesheet Editor" on page 1-1
- "Table Cell Spanning" on page 1-2
- "Generating Microsoft Word Documents as .doc Files" on page 1-2
- "Dialog Snapshot Components" on page 1-3
- "Annotation Loop Component" on page 1-3
- "Improved Graphical User Interface" on page 1-3

Stylesheet Editor

You can use the Stylesheet Editor to customize the formatting of your HTML, PDF, and Word documents. For example, you can specify fonts, paper layout, table presentation, as well as other characteristics of your final report.

Customizing reports by editing stylesheets gives you the flexibility to create reports that conform to corporate style guidelines and requirements.

To open the Stylesheet Editor, right-click **Report Generator->Edit stylesheet** in the Outline panel of the Report Explorer as shown:
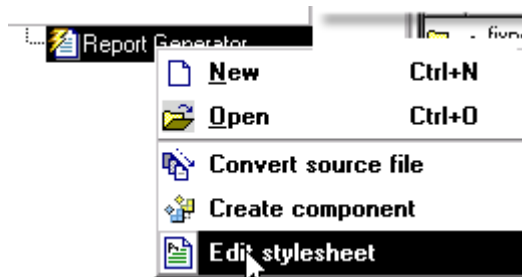
For more information about using the Stylesheet Editor, see "Creating and Using Customized Styles".

Table Cell Spanning

You can use Report Generator to create advanced table layouts for MATLAB, Simulink, Stateflow, and Handle Graphics property tables. The advanced layouts include cells that span multiple rows or columns.

Generating Microsoft Word Documents as .doc Files

You can use Report Generator to generate reports that are saved as Microsoft Word documents with the .doc extension. You can also convert XML source files that are generated by Report Generator to .doc files.

The reports you create are easier to distribute via email, to share with others, and to manage.

You must have Microsoft Word installed to use this feature, and you must be using Report Generator on a PC system.

To use this feature select **Word Document** from the **Stylesheet** dropdown menu in the **Convert Source File** dialog, as shown:

Convert Source File

The Source File Converter transforms DocBook XML source files created by the Report Generator into a formatted document, such as HTML, RTF, or PDF.

┌─ Conversion Options ───┐

Source file: | H:\tempfile.xml | Browse...

File format: | web (HTML)   ▼ |
              | Acrobat (PDF) |
Stylesheet: | Rich Text Format |
☑ View re | web (HTML) |
              | Word Document |
Convert

Dialog Snapshot Components

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

See Simulink Dialog Snapshot and Stateflow Dialog Snapshot for more details.

Annotation Loop Component

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

See Annotation Loop for more details.

Improved Graphical User Interface

This version of the Report Generator has the following changes and improvements to the graphical user interface:

- The File Converter has a **Source File** dropdown menu. Click **Browse** to navigate to a directory to select a source file. The default directory is the current directory.

- In the File Converter, you can select a stylesheet from the dropdown menu and click **Edit** to open the Stylesheet Editor.

- Report Generator has an improved mechanism for detecting and displaying errors that occur when you attempt to add a component that makes the style hierarchy invalid. Users of earlier versions may notice that Report

Generator issues warnings for components that had no problems in earlier versions. In this release, warning messages contain instructions about how to fix the problem.

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

- The Figure Screen Capture component has been improved to capture window decorations such as menus, title bars, and toolbars.

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MATLAB and Simulink Report Generator 2.2 Release Notes

New Features

This section summarizes the new features and enhancements introduced in the Report Generator 2.2 since Version 2.1. This section applies to Simulink Report Generator and MATLAB Report Generator.

Component Creator

Report Generator Version 2.2 provides the Component Creator, a tool which allows you to create custom components. The Component Creator had previously been available in Report Generator Version 1, and is now being introduced in Version 2 of the product.

With the Component Creator you create a "skeleton" object, that is, the Component Creator sets up just the raw structure of the component. You create additional required executable M-code by editing one or more files that the Component Creator produces. A picture of the Component Creator, showing its three panels, appears below.

New Platform Supported

Report Generator now supports 64-bit Linux platforms.

Upgrading from an Earlier Release

Components created with Report Generator Version 1 can be imported and used in Version 2. If you want to derive a component from an existing Version 1 component, the Report Explorer presents you with a list of components from which you can choose a component to modify. The list of components is similar to the one shown below:

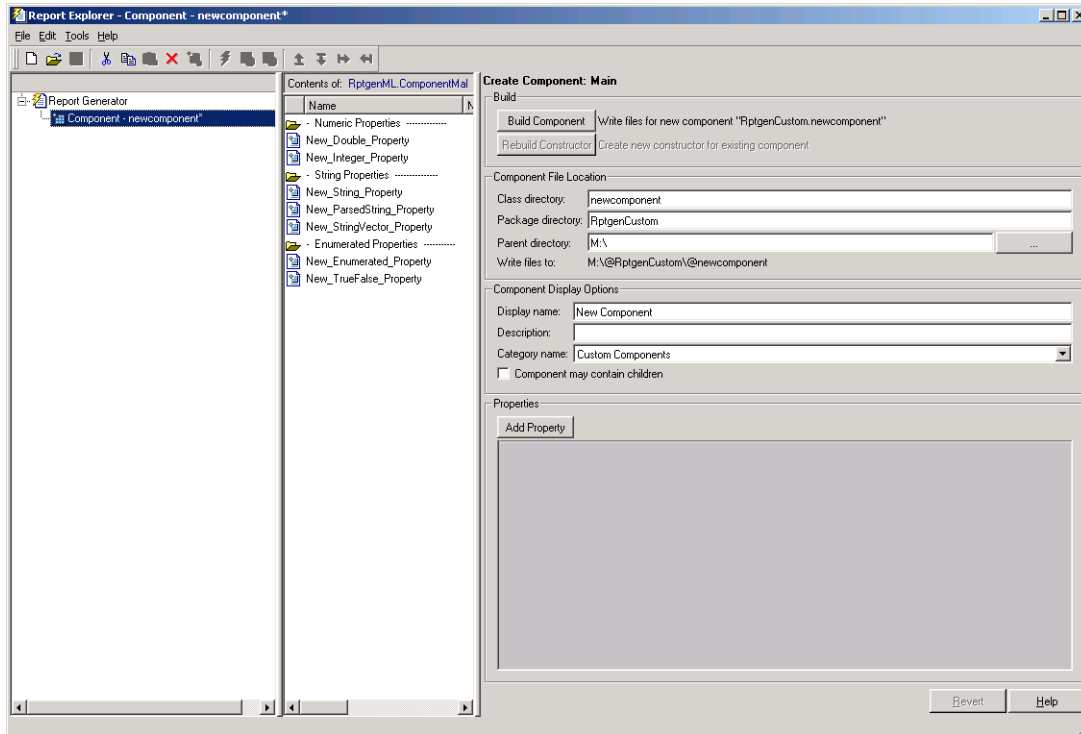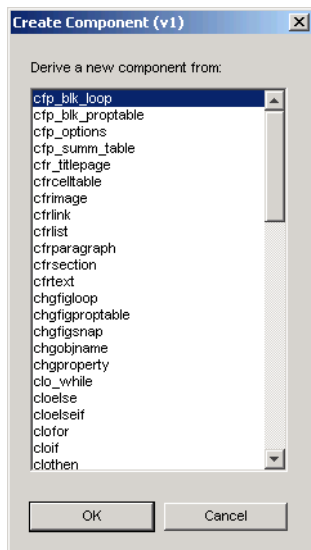# MATLAB and Simulink Report Generator 2.1 Release Notes

New Features

This section summarizes the new features and enhancements introduced in the Report Generator 2.1 since Version 2.0. This section applies to Simulink Report Generator and MATLAB Report Generator.

For more information, see the following sections:

- "MATLAB Report Generator New Features" on page 3-2
- "Simulink Report Generator New Features" on page 3-2

MATLAB Report Generator New Features

MATLAB Report Generator offers the following new features

- PDF support
  - PDF stylesheet support for custom page headers and footers
  - PDF title page stylesheet customization
- Better support for Japanese and non-English systems
- Scaling and alignment control for high-quality bitmap Handle Graphics images
- Documents without chapters can use full title page information

Simulink Report Generator New Features

Simulink Report Generator offers the following new features

- PDF support
  - PDF stylesheet support for custom page headers and footers
  - PDF title page stylesheet customization
- Better support for Japanese and non-English systems
- Scaling and alignment control for high-quality bitmap Handle Graphics images
- Better integration between the Report Explorer and Simulink
- New Simulink Library Information component

- Reports on referenced Simulink libraries in the current model, block, or system
- Merge repeated rows in the generated table to save space
- Improved Model Change Log component
  - Control over sort order and date format
- Property for displaying destination and source of a signal
- To provide greater control over report generation, new commands are available to set the model, system, block, or signal reported on by a Simulink component:

```
RptgenSL.getReportedBlock
RptgenSL.getReportedSystem
RptgenSL.getReportedModel
RptgenSL.getReportedSignal

RptgenSL.setReportedBlock(blkName)
RptgenSL.setReportedSystem(sysName)
RptgenSL.setReportedModel(mdlName)
RptgenSL.setReportedSignal(sigHandle)
```

You can use the set commands inside an Evaluate MATLAB Expression component. In an Evaluate MATLAB Expression component, you could enter:

```
RptgenSL.setReportedSystem('f14/Controller')
```

You can use the get commands inside any component that supports %<> notation. For example, in a Paragraph component, you could enter:

```
%<RptgenSL.getReportedBlock>
```

When getting or setting a block, system, or model, the object is identified by its full path string. When setting or getting the signal, the signal is identified by the source block's numeric outport handle. Note that none of the set methods set the current reporting context like a loop.

Note If you are upgrading from a release earlier than Version 2.1, then you should see "New Features" on page 4-2 in the MATLAB and Simulink Report Generator 2.0 Release Notes.

Upgrading from an Earlier Release

This section describes these issues involved in upgrading from the Report Generator 1.3 to Version 2.1.

Version 2.0 of Report Generator offered a new interface that encompasses all Report Generator functionality. For more information on using the new interface, see the Report Generator documentation.

The original version of Report Generator is still available and can be accessed via the MATLAB command line. To open the previous version of the Report Generator interface, enter `RptgenML.v1mode(true)` at the command line. To use the new version of the Report Generator interface, enter `RptgenML.v1mode(false)` at the command line.

The previous version switch is session-dependent. To always use the previous version of Report Generator, add `RptgenML.v1mode(true)` to your startup.m file.

Note If you have already installed this web release of Report Generator and you install a previous service pack release of MATLAB or Simulink, you must reinstall this web release of Report Generator.

Generating PDF Reports in Japanese

For Japanese PDF support, you must register the file location of a Japanese language font with the Report Generator. If generated PDF documents contain unrecognizable characters, you must register that font. To register a font, use the setPref function:

```
RptgenML.setPref('rptgen.body.font.family.fontfile','c:\winnt\fo
nts\msgothic.ttf');
```

This preference setting persists between sessions and only needs to be set once. If the preference is not set, a warning displays during PDF generation that the font must be set.

MATLAB and Simulink Report Generator 2.0 Release Notes

New Features

This section summarizes the new features and enhancements introduced in the Report Generator 2.0 since Version 1.3. This section applies to Simulink Report Generator and MATLAB Report Generator.

For more information, see the following sections:

- "MATLAB Report Generator New Features" on page 4-2
- "Simulink Report Generator New Features" on page 4-3

MATLAB Report Generator New Features

MATLAB Report Generator 2.0 offers the following new features

- Updated user interface in which you can
  - View, create, and edit setup files
  - Generate reports
  - Convert XML source files to various outputs, including HTML and RTF
- The `%<<varname>>` notation imports text with no collapsed representation
- Looping components intrinsically create sections and anchors
- Handle Graphics Property and MATLAB Variable components provide increased control over output formatting
- All summary tables support manual property names and column widths
- Chapter/Subsection can manually set chapter number
- Image component supports captions
- Table component can overrride collapsed representation
- Title Page component can be used without Chapter components
- New components
  - Axes Loop
  - Axes Snapshot
  - Handle Graphics Object Anchor

- Handle Graphics Summary Table
- Object Loop
- MATLAB Property Table
- Figure Snapshot component supports titles and captions
- Nest Setup File component can import multiple files by name

Simulink Report Generator New Features

Simulink Report Generator offers the following new features

- Updated user interface in which you can
  - View, create, and edit setup files
  - Generate reports
  - Convert XML source files to various outputs, including HTML and RTF
- The `%<<varname>>` notation imports text with no collapsed representation
- Looping components intrinsically create sections and anchors
- Handle Graphics Property and MATLAB Variable components provide increased control over output formatting
- Simulink Parameter and Stateflow Property components provide increased control over output formatting
- Stateflow Hierarchy Loop component allows searching by property/value pairs
- Model Change Log component can limit revisions by date
- Model Loop component can mix current model looping with specified model names
- Simulink Functions and Variables component (formerly two separate components) can have system or block level scope
- System Loop component can search by property/value pairs
- Documentation component can import HTML and RTF doc
- New components
  - To Workspace Block

- Requirements Table
- Stateflow Machine Loop
- Stateflow Object Loop
- Stateflow State Loop
- Stateflow Auto Tabl
- Stateflow Hierarchy
- Stateflow Property

Note If you are upgrading from a release earlier than Version 1.3, then you should see "New Features" on page 5-2 in the MATLAB and Simulink Report Generator 1.3 Release Notes.

Upgrading from an Earlier Release

This section describes these issues involved in upgrading from the Report Generator 1.3 to Version 2.0.

Version 2.0 of Report Generator offers a new interface that encompasses all Report Generator functionality. For more information on using the new interface, see the Report Generator documentation.

The original version of Report Generator is still available and can be accessed via the MATLAB command line. To open the previous version of the Report Generator interface, enter `RptgenML.v1mode(true)` at the command line. To use the new version of the Report Generator interface, enter `RptgenML.v1mode(false)` at the command line.

Note If you are upgrading from the Report Generator 1.0 to the Report Generator 2.0, then you should see "Upgrading from an Earlier Release" on page 7-7 in the MATLAB and Simulink Report Generator 1.1 Release Notes.

Known Software Problems

Editing Workspace Variable Names in List Component

When editing the workspace variable names in the List component, you must enclose the workspace variable name in single quotes. (216777)

Script Generation Fails for Property Tables

The Generate M-File... option in the Report Explorer creates a script that causes an error if the setup file contains any property table components. The scripts are valid, but the code libraries which they call are broken. (217678)

Report Explorer Appears Blank

While using Report Generator, the Report Explorer might appear blank with no visible content. If this happens, create a new setup file. The list of components or setup files should appear in the Options palette. (210869)

MATLAB and Simulink Report Generator 1.3 Release Notes

New Features

Note These Release Notes document both the MATLAB Report Generator 1.3 and the Simulink Report Generator 1.3.

This section summarizes the new features and enhancements introduced in the Report Generator 1.3.

If you are upgrading from a release earlier than Release 12.1, then you should see "New Features" on page 6-2 in the MATLAB and Simulink Report Generator 1.2 Release Notes.

MATLAB Report Generator New Features

Enhancements to Formatting Components

Component	Purpose
Cell Table	You can now specify table column widths.

Enhancements to Report Generator Components

Component	Purpose
Import File	You can now import formatted text from RTF and HTML source files.

Simulink Report Generator New Features

Report Generator now supports Stateflow Notes.

New Simulink Component

Component	Purpose
Block Type: Documentation	Inserts text extracted from Doc Blocks in Simulink models

Enhancements to Simulink Components

Component	Enhancement
Block Type: Scope Snapshot	Improved viewing of multiple black and white traces
System Snapshot	You can now specify titles for the diagrams. You can now specify the size of the diagrams.
Block Type: Look-Up Table	You can now report on the Pre-Lookup table.

Enhancements to Stateflow Components

Component	Enhancement
Stateflow Snapshot (chart)	You can now specify titles for the diagrams.

Upgrading from an Earlier Release

There are no upgrade issues moving from the Report Generator 1.2 to the Report Generator 1.3.

If you are upgrading from the Report Generator 1.0 to the Report Generator 1.3, then you should see "Upgrading from an Earlier Release" on page 7-7 in the MATLAB and Simulink Report Generator 1.1 Release Notes.

MATLAB and Simulink Report Generator 1.2 Release Notes

New Features

Note These Release Notes document both the MATLAB Report Generator 1.2 and the Simulink Report Generator 1.2.

This section introduces the new features and enhancements added in the Report Generator 1.2 since the Report Generator 1.1 (Release 12.0).

Simulink Report Generator New Features

Block Type: Look-Up Table Component Reports on N-D Look-Up Tables

The Simulink Report Generator 1.2 component Block Type: Look-Up Table allows you to report on the following N-D Simulink look-up tables, in addition to the Look-Up Table and Look-Up Table (2-D) that were supported in earlier releases:

- Look-Up Table (n-D)
- Direct Look-Up Table (n-D)

Note that the table created for the N-D data is a 2-D slice through the N-D data.

Real-Time Workshop Requirement Removed for Some Components

The **By simulation order** option for sorting blocks no longer requires having the Real-Time Workshop product installed. The components affected by the removal of the Real-Time Workshop requirement for this option are:

- Block Loop
- Chart Loop
- Fixed-Point Block Loop
- Object Summary Table

Also, the Block Execution Order component no longer requires Real-Time Workshop.

Image Titles for Snapshot Components

You can add titles to images for the System Snapshot and Stateflow Snapshot (chart) components. This is in addition to the caption option that was available in earlier releases.

Upgrading from an Earlier Release

There are no upgrade issues moving from the Report Generator 1.2 to the Report Generator 1.3.

If you are upgrading from the Report Generator 1.0 to the Report Generator 1.3, then you should see "Upgrading from an Earlier Release" on page 7-7 in the MATLAB and Simulink Report Generator 1.1 Release Notes..

MATLAB and Simulink Report Generator 1.1 Release Notes

New Features

> **Note** These Release Notes document both the MATLAB Report Generator 1.1 and the Simulink Report Generator 1.1.

This section introduces the new features and enhancements added in the MATLAB Report Generator 1.1 since the MATLAB Report Generator 1.0 (Release 11.0).

MATLAB Report Generator New Features

New MATLAB Components

The MATLAB Report Generator 1.1 includes the following three new components.

Component	Purpose
Comment	Inserts a comment into the SGML source file created by the report generation process
MATLAB/Toolbox Version Number	Creates and inserts a table that shows the version number, release number, and/or release date of any MathWorks software you are currently using
Stop Report Generation	Halts report generation

Enhancements to MATLAB Components

The following components have been enhanced for Release 12:

- You can now put an image on a title page. See the Title Page component reference section for details.

- The Nest Setup File component now has a recursion limit.

- The For Loop component now allows a vector of indices.

Property Table Enhancement

For all property tables, you can now use a context menu to add rows above or below the current cell and add columns to the left or right of the current cell.

Summary Table Enhancement

For all summary tables, you can now use embedded looping components for table item generation.

Using MATLAB Variables with Components

You can enter `%<VariableName>` in any component field where the text appears blue to include the value of a variable from the MATLAB workspace. You cannot enter more than one variable in the `%<>`. If you enter an invalid variable name, then the report will contain `%<VariableName>` instead of the value of the variable.

This `%<VariableName>` syntax is supported for the following components:

- Image
- Link
- Report Options
- Text
- Variable Table

Example. If you enter the following

```
I have a %<ObjName> and it has %<NumLeaves> leaves. The word
'%<ObjName>' has %<size(ObjName)> letters.
```

and if `ObjName='plant'` and `NumLeaves=3` in the MATLAB workspace,

then the report will contain the following.

```
I have a plant and it has 3 leaves. The word 'plant' has 5 letters.
```

Simulink Report Generator New Features

New Simulink Components

The Simulink Report Generator 1.1 includes the following new Simulink components.

Component	Purpose
`Block Automatic Property Table`	Creates a two-column property name/property value table
`Block Type: Bus`	Creates a list of all signals exiting from a Bus Selector block
`Block Type:  Look-Up Table`	Reports on one-dimensional and two-dimensional look-up table blocks
`Model Change Log`	Uses a reported model's `ModifiedHistory` parameter to construct a model history table that displays information about each logged revision to the model

New Stateflow Components

The Simulink Report Generator 1.1 includes the following new Stateflow components.

Component	Purpose
Chart Loop	Runs its children for each Stateflow chart that you choose
Stateflow Linking Anchor	Designates a location to which other links point (for use with Stateflow)
Stateflow Name (Chart)	Inserts the name of the Stateflow object specified by its parent component into the report

New Fixed-Point Components

The following components have been added to the Simulink Report Generator 1.1 to support the Fixed-Point Blockset 3.0.

Component	Purpose
`Fixed-Point Block Loop`	Runs its children for the Simulink model, system, or signal defined by its parent component; for example, if the Fixed-Point Block Loop is parented by the Simulink Model Loop, it will run its children for all fixed-point blocks in the Simulink model.
`Fixed-Point Logging Options`	Sets fixed-point options similar to those set in the Fixed-Point Blockset Interface GUI
`Fixed-Point Property Table`	Inserts a property name/property value table for a fixed-point block
`Fixed-Point Summary Table`	Shows properties or parameters of the selected fixed-point blocks in a table

Enhancements to Simulink Components

The following components have been enhanced for Release 12.

Component	Enhancement
`Block Loop`	You can create a loop list manually.
Object Report	New box object added
Block Type: `Scope Snapshot`	You can add captions.
`Signal Loop`	You can remove input/output/internal signals from a loop.
`Stateflow Snapshot (chart)`	You can turn off callouts.

Component	Enhancement
System Hierarchy	New list style (bulleted or numbered) control added
System Loop	You can loop on a manually created list of systems
System Snapshot	You can add captions.

Upgrading from an Earlier Release

This section describes the upgrade issues involved in moving from the Report Generator 1.0 to later versions of the Report Generator.

Use of Existing SGML Files

If you generated a report using the MATLAB Report Generator 1.0 and saved the report file as an SGML file, and then you try to convert that SGML file using the Report Generator 1.3 rptconvert program, the conversion fails.

In such cases, you need to regenerate the SGML file using the Report Generator 1.3.