Simulink® Control Design Release Notes
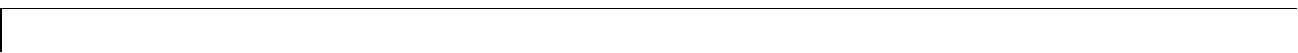
The "Simulink® Control Design 1.0 Release Notes" on page 1-1 discuss the following topics:

- "Introduction to Simulink Control Design" on page 1-2
- "Known Software and Documentation Problems" on page 1-4

Printing the Release Notes

If you would like to print the Release Notes, you can link to a PDF version.

Contents

Simulink® Control Design 1.0 Release Notes

1

i

Simulink® Control Design 1.0 Release Notes

Introduction to Simulink Control Design

This section provides a brief overview of Simulink Control Design, which is being introduced in Release 14.

About Simulink Control Design

Simulink Control Design provides tools for the linearization of control systems and physical models in Simulink. A Graphical User Interface (GUI) simplifies the tasks of specifying operating conditions, linearizing the model, and analyzing the results. Linearized Simulink models often facilitate system analysis and compensator design. This is useful in many industries and applications, including

- Aerospace: flight control, guidance, navigation
- Automotive: cruise control, emissions control, transmission
- Equipment manufacturing: motors, disk drives, servos

Simulink Control Design improves upon previous Simulink linearization tools by providing more options for computing operating conditions, allowing open loop analysis without the removal of feedback loops, and including a linearization inspector and debugger. Linearization projects are easier to manage with the new Control and Estimation Tools Manager. Furthermore, Control System Toolbox features, such as the LTI Viewer, are integrated with the Control Designer to improve control system analysis and design.

Features

Key features of Simulink Control Design include the ability to

- Specify linearization input, output, and open loop analysis points using right-click menus
- Perform open loop analysis without deleting feedback loops
- Extract operating conditions from a simulation
- Compute operating conditions by optimization (trimming)
- Create output constraints for trim analysis
- Linearize individual blocks using context menus
- Inspect and debug results of the linearization

- Identify blocks in a model that contribute to a linearization
- Export results to the MATLAB workspace
- Manage linearization projects, compute operating conditions, and perform linearization with a Graphical User Interface (GUI)
- Use improved functions at the command line for linearization and trim analysis

Known Software and Documentation Problems

This section includes a link to a description of known software and documentation problems in Version 1.0.

If you are viewing these Release Notes in PDF form, please refer to the HTML form of the Release Notes, using either the Help browser or the MathWorks Web site and use the link provided.