Simulink Verification and Validation Product Update

September 2017

R2017b

New! Simulink Requirements
Work with requirements and design together

- Author, edit, and organize requirements

Requirements Perspective

New! Simulink Requirements
Work with requirements and design together

- Author, edit, and organize requirements

- View and link requirements within the Simulink graphical editor

#7: Cancel Switch Detection
If Cancel switch is pressed, it should be recognized.

SET+

CANC   RES

IMPLEMENTS

#3: Avoid repeating commands
If the following switch operations are repeated, it should send NoRequest at 2nd time and after as long as the same switch is enabled:
- Cancel
- Cruise
- Set
- Resume

IMPLEMENTS

reqMode.Cancel

reqDrInv   reqDrv

1
reqDrv

doNot Repeat

Mode.Cruise
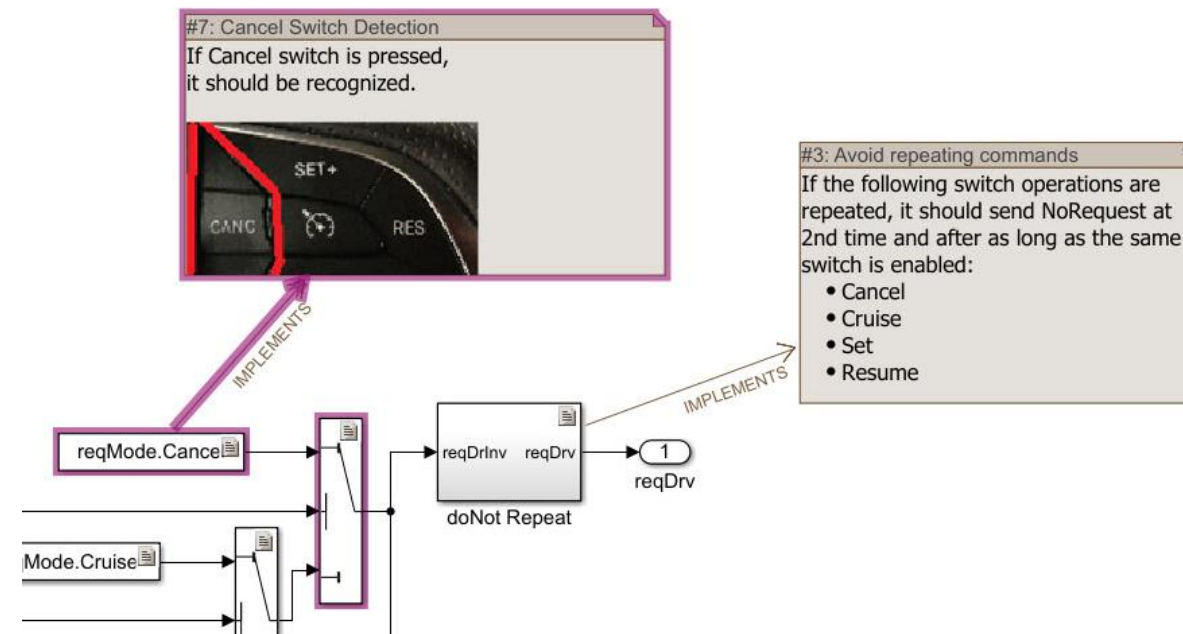
Requirement Badges and Annotations on Diagram

New! Simulink Requirements
Work with requirements and design together

- Author, edit, and organize requirements

- View and link requirements within the Simulink graphical editor

- Track status and manage requirement changes

Implementation and Verification Status

Notification of Requirement Changes

New! Simulink Requirements
Work with requirements and design together

- Author, edit, and organize requirements

- View and link requirements within the Simulink graphical editor

- Track status and manage requirement changes

- Trace requirements to models, generated code, and test cases

Generated Code

Tests and Test Results

New! Simulink Requirements
Work with requirements and design together

R2017b

- Author, edit, and organize requirements

- View and link requirements within the Simulink graphical editor

- Track status and manage requirement changes

- Trace requirements to models, generated code, and test cases

Requirements Perspective

New Verification and Validation Products

R2017**b**

R2017**a** and earlier

Simulink
Verification and Validation

Simulink Requirements

Simulink Coverage
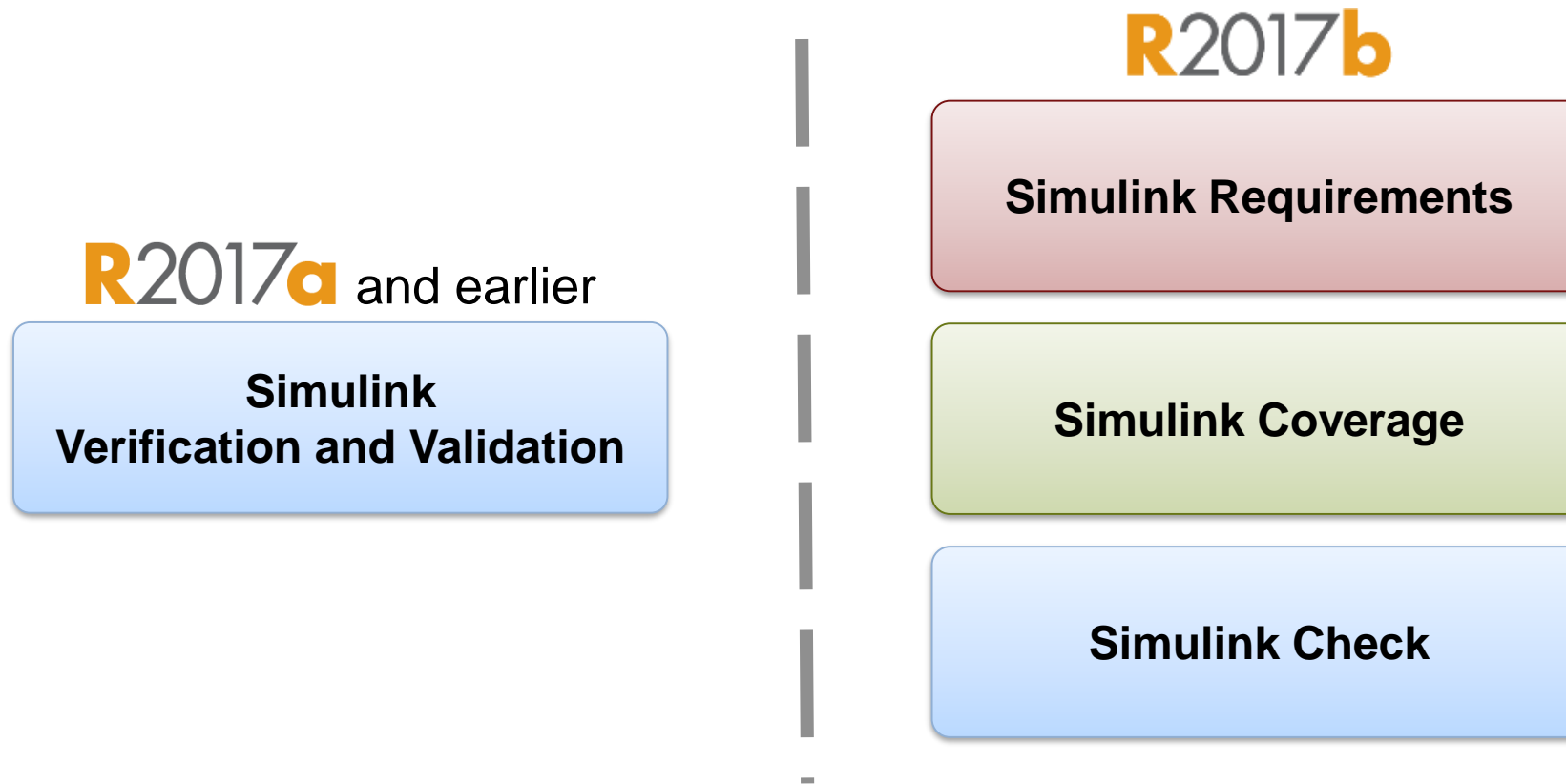
Simulink Check

- Simulink Requirements – requirements authoring, editing, trace, management
- Simulink Coverage – model and code coverage analysis
- Simulink Check – static checking, metrics, clone detection

Simulink Coverage
Measure test coverage in models and generated code

- ### Model coverage analysis
  - Including C/C++ S-functions

- ### Generated code coverage analysis
  - C/C++ generated by Embedded Coder

- ### Comprehensive coverage metrics
  - Decision, condition, MC/DC, relational boundary, signal range, function call, and more

- ### Model highlighting and coverage reports
  - Locate where test coverage is missing

- ### Tool qualification support
  - DO Qualification and IEC Certification Kits
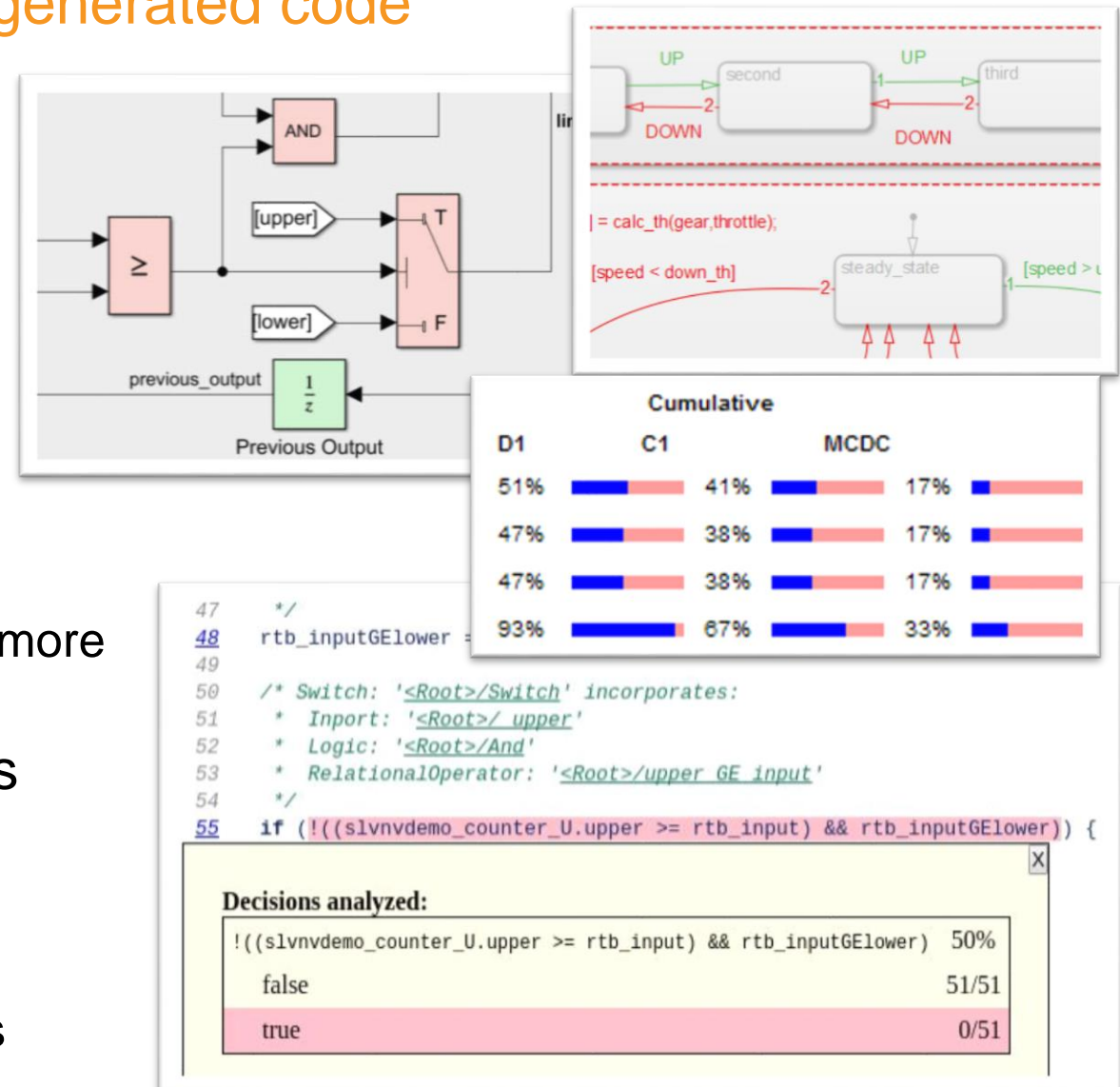
Simulink Check

Verify compliance with guidelines and standards

- Compliance checking for industry and security standards
  - DO-178, ISO 26262, IEC 61508, IEC 62304, MAAB, MISRA
  - Security: CERT C, CWE, ISO/IEC TS 17961

- Edit-time checking to fix violations earlier

- Metrics dashboard to assess design quality

- Refactoring of model clones and model transformations

- Tool qualification support with DO Qualification and IEC Certification Kits
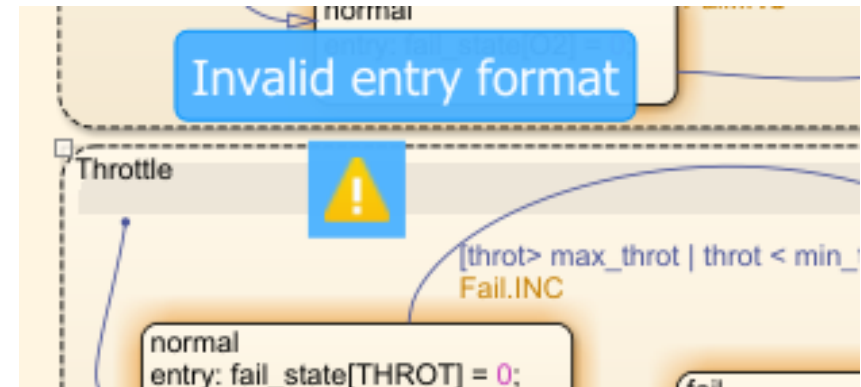
Edit-Time Checks
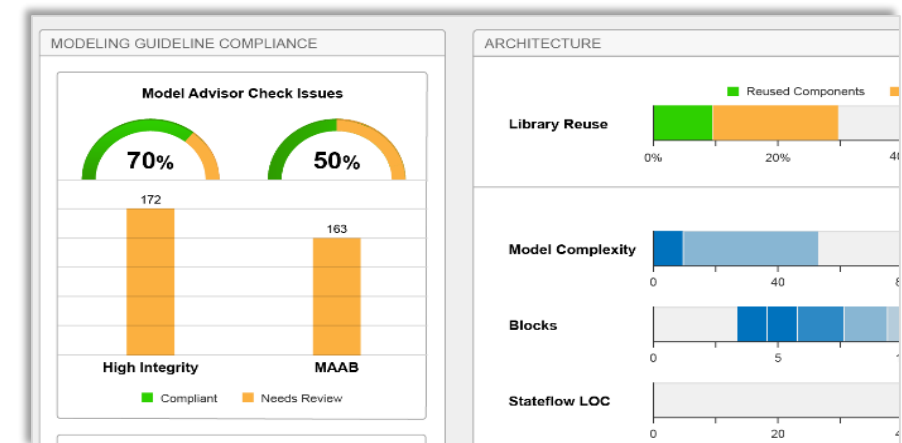
Metrics Dashboard

Flexibility to Align Products Based on Usage

R2017a
and earlier

Simulink Verification and Validation

Requirements Traceability User

Coverage User

Guideline Check User

Blocked from using feature

R2017b

Simulink Requirements

Simulink Coverage

Simulink Check

Features available for all users
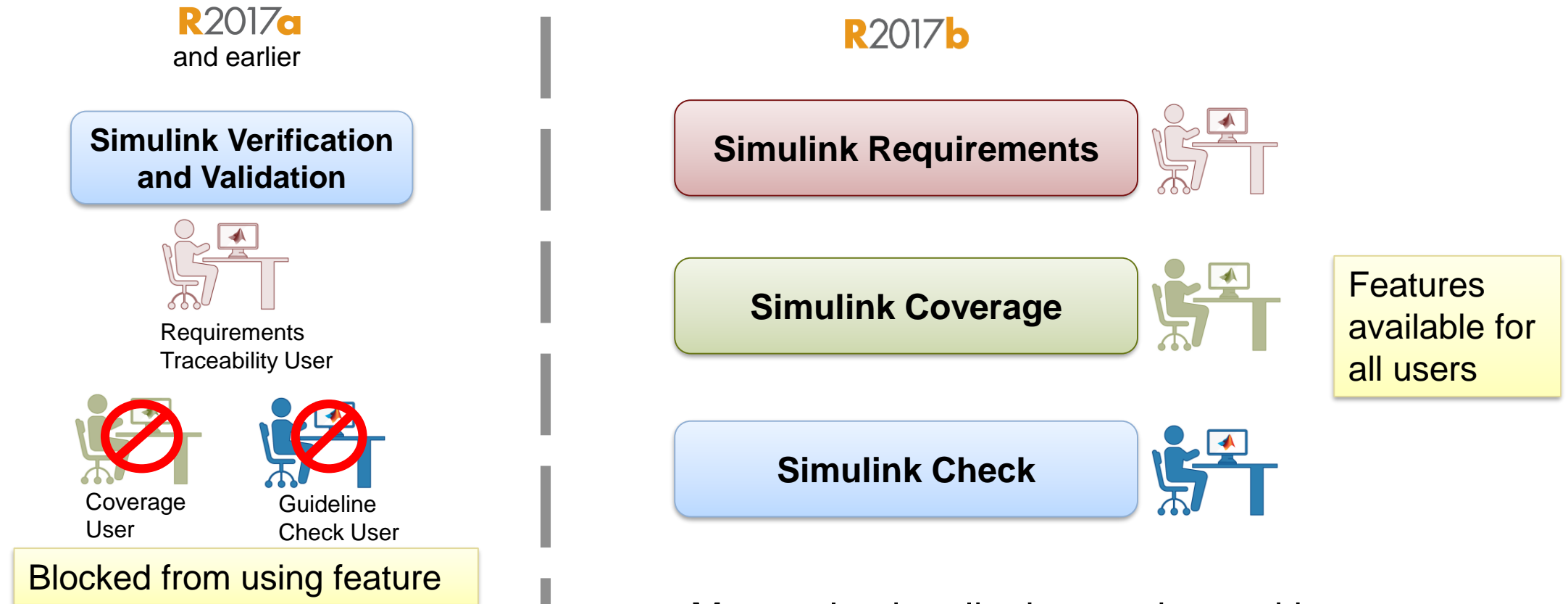
- More value by aligning products with usage

- Easier to understand focus of products

License Information for Existing Users
Effective as of R2017b

- Licenses of Simulink Verification and Validation automatically updated at no initial cost with:
  - Simulink Requirements
  - Simulink Coverage
  - Simulink Check

- New products each require MATLAB and Simulink
  - No dependencies on each other

- Simulink Design Verifier requires *Simulink Check* and *Simulink Coverage*

- Simulink Check provides license key for usage of R2017a or earlier releases

Learn More - New Product Web Pages

mathworks.com/products

Simulink Requirements

Simulink Requirements
NEW PRODUCT

Overview | Features

Author, manage, and trace requirements to models, generated code, and test cases

Simulink Requirements™ lets you author, analyze, and manage requirements within Simulink®. You can create rich text requirements with custom attributes and link them to designs, code, and te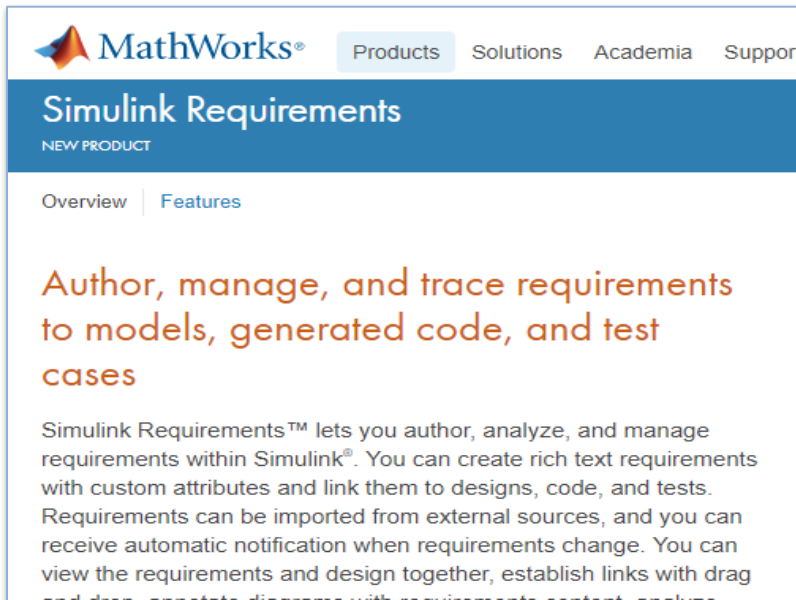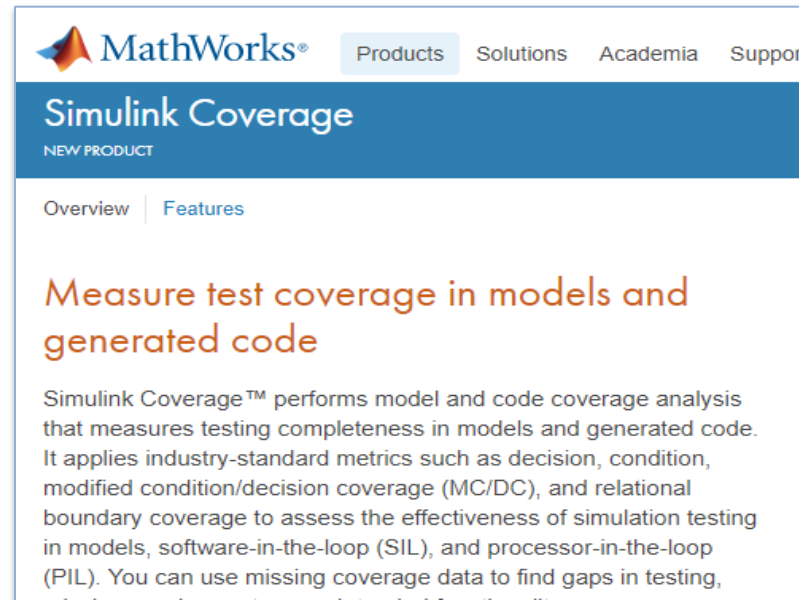sts. Requirements can be imported from external sources, and you can receive automatic notification when requirements change. You can view the requirements and design together, establish links with drag and drop, annotate diagrams with requirements content, analyze...

Simulink Coverage

Simulink Coverage
NEW PRODUCT

Overview | Features

Measure test coverage in models and generated code

Simulink Coverage™ performs model and code coverage analysis that measures testing completeness in models and generated code. It applies industry-standard metrics such as decision, condition, modified condition/decision coverage (MC/DC), and relational boundary coverage to assess the effectiveness of simulation testing in models, software-in-the-loop (SIL), and processor-in-the-loop (PIL). You can use missing coverage data to find gaps in testing,...

Simulink Check

Simulink Check
NEW PRODUCT

Overview | Features | Model Examples | Videos | Webinars | What's New |

Verify compliance with style guidelines and modeling standards

Simulink Check™ provides industry-recognized checks and metrics that identify standard and guideline violations during development. Supported high-integrity software development standards include DO-178, ISO 26262, IEC 61508, IEC 62304, and MathWorks Automotive Advisory Board (MAAB) Style Guidelines. Edit-time checks identify compliance issues as you edit. You can create custom checks to comply with your own standards or guidelines.

Learn More

See License Related Changes link at mathworks.com/release

If you are:	
Subscribed to Software Maintenance Service as of R2017b for Simulink Verification and Validation	License(s) will be updated to include the following products at no initial cost: Simulink Check Simulink Coverage Simulink Requirements They will appear on future Software Maintenance Service renewal invoices.
Not subscribed to Software Maintenance Service as of R2017b for Simulink Verification and Validation	License(s) will be updated to include the following products at no initial cost: Simulink Check Simulink Coverage Simulink Requirements You will need to renew your Software Maintenance Service subscription to access the updated products.