

MATLAB EXPO 2017

What's New in Simulink R2017a and R2017b

Kate Thorne

Release Notes

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Text Filter

Simulink.Parameter

Release Range

R2016a ▼ to R2017a ▼

Compatibility Considerations ⚠

Incompatibilities Only

By Category:

- Simulation Analysis and Performance
- Simulink Editor
- Component-Based Modeling
- Project and File Management
- Data Management
- Block Enhancements
- Connection to Hardware
- MATLAB Function Blocks
- S-Functions

Simulink Release Notes

[Bug Reports](#) | [Bug Fixes](#)

[expand all in page](#)

YOUR SELECTIONS Simulink.Parameter x

Found 6 notes | Release Range: R2016a to R2017a

Sort by: Release: Latest to Earliest ▼

- Release: Latest to Earliest
- Release: Earliest to Latest
- Category (default order)
- Category (alphabetical)

▼ R2017a

Data Management

- ▶ More accurate comparison of nondouble data to specified minimum and maximum values ⚠
- ▶ Deep copy of handle objects by `Simulink.ModelWorkspace.assignin`

▼ R2016b

Data Management

- ▼ Improved display of large arrays by Model Explorer and `Simulink.Parameter` property dialog boxes

Before R2016b, for numeric MATLAB variables and `Simulink.Parameter` objects, the Model Explorer **Value** column displayed large arrays as read-only text, such as `<3x5x3 double>`. The property dialog box for `Simulink.Parameter` objects also used this read-only text.

In R2016b, the Model Explorer and property dialog boxes display the entire value of large arrays. To modify the elements in the array, you can edit the displayed text.

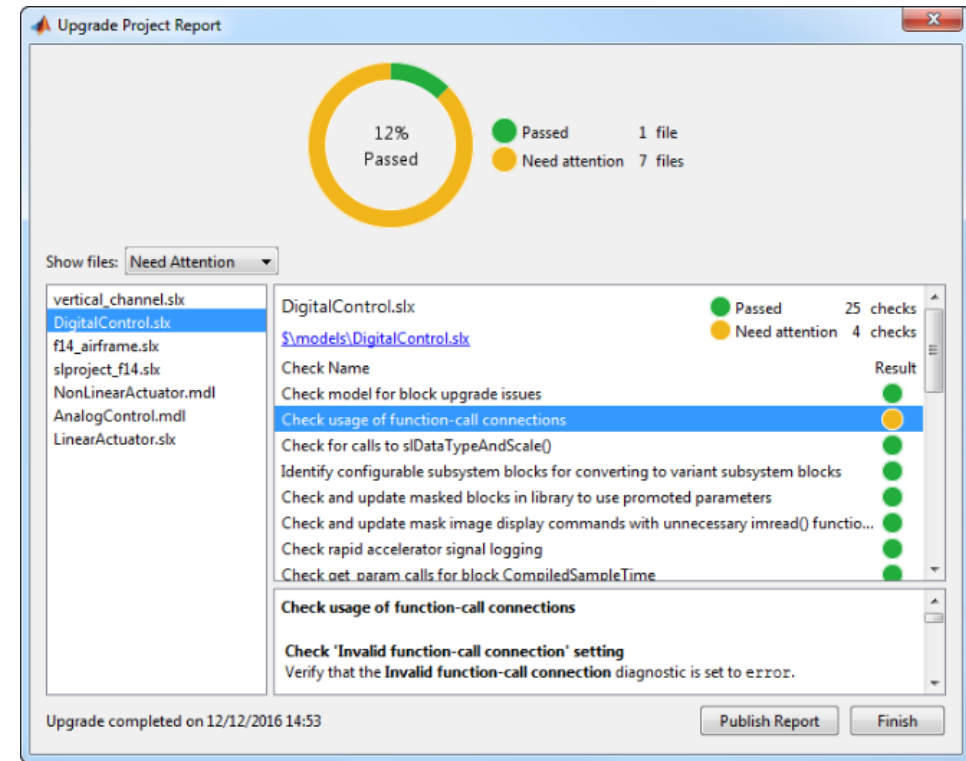
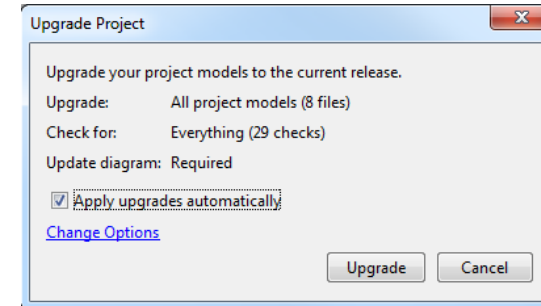
Arrays with three or more dimensions appear as an expression that contains a call to the `reshape` function. To edit the values in the array, modify the arguments of this `reshape` call.

[collapse all](#)

Simulink Project Upgrade

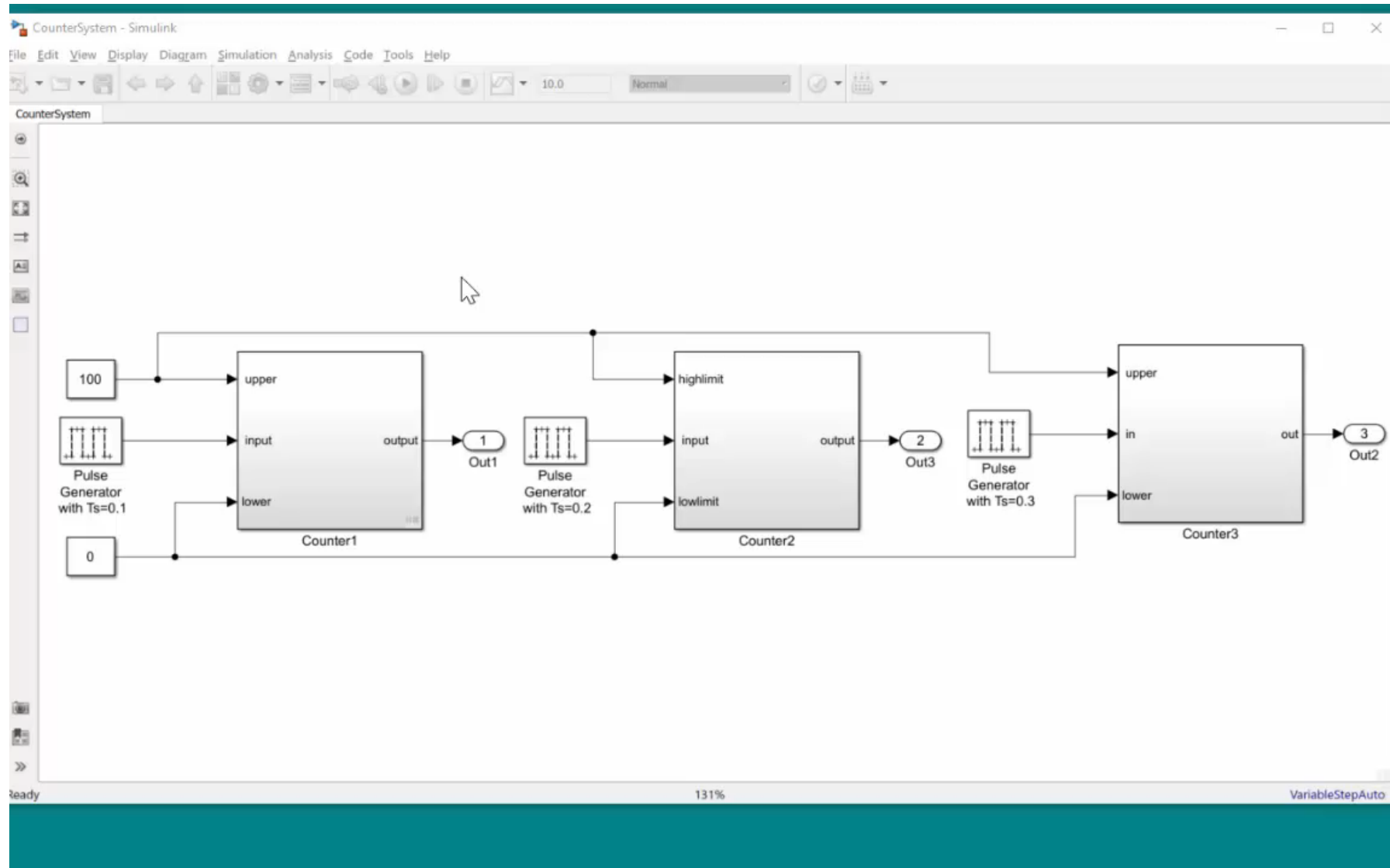
Easily update all the models in your Simulink Project to the latest release

- Avoid the manual process of upgrading one model at a time
- Simulink Project upgrade is an easy to use UI to automate the upgrade process of all the models in a Simulink project
- Fixes are automatically applied and a report gets generated

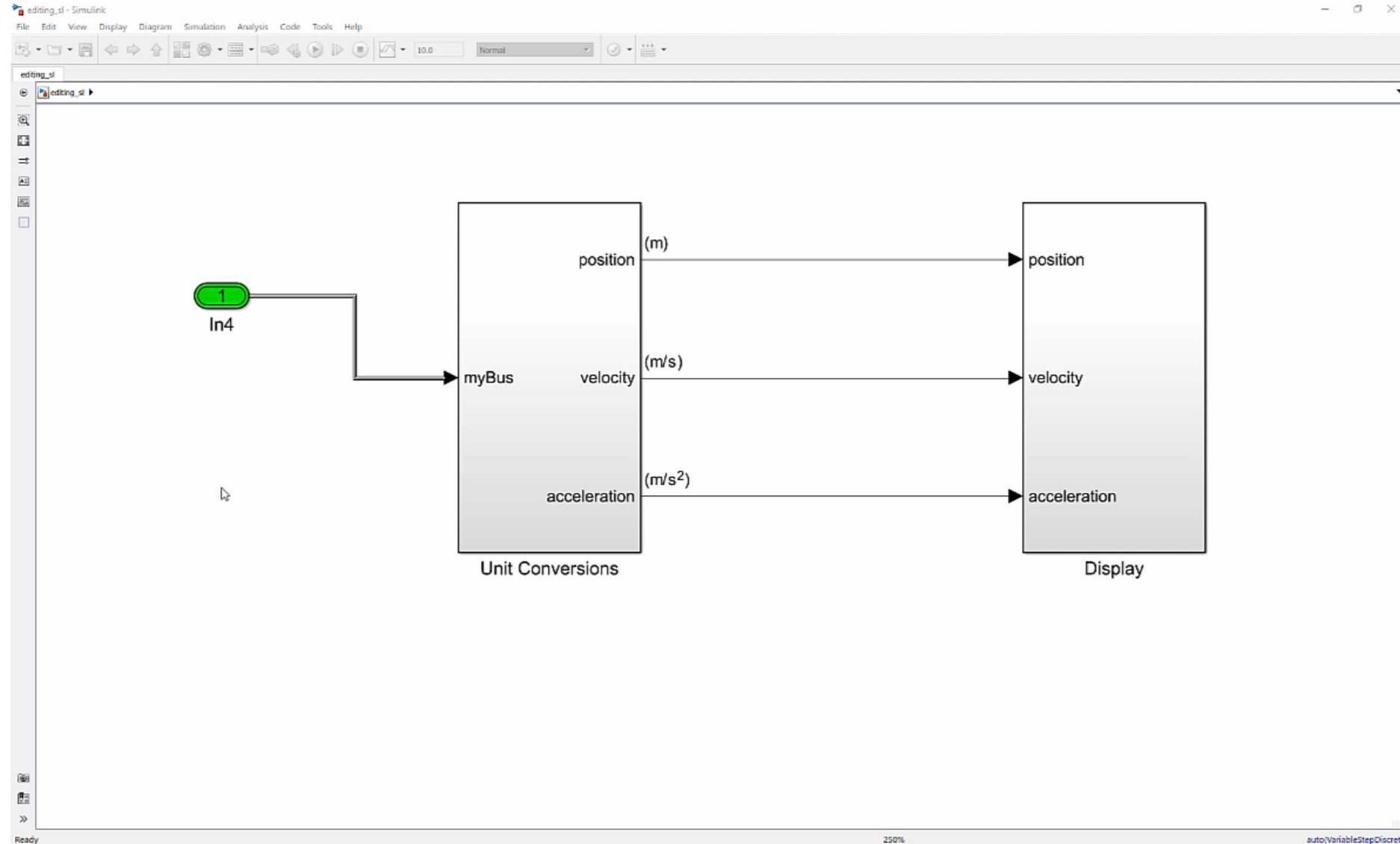


Learn more at this session:
Team-Based Collaboration
in Simulink

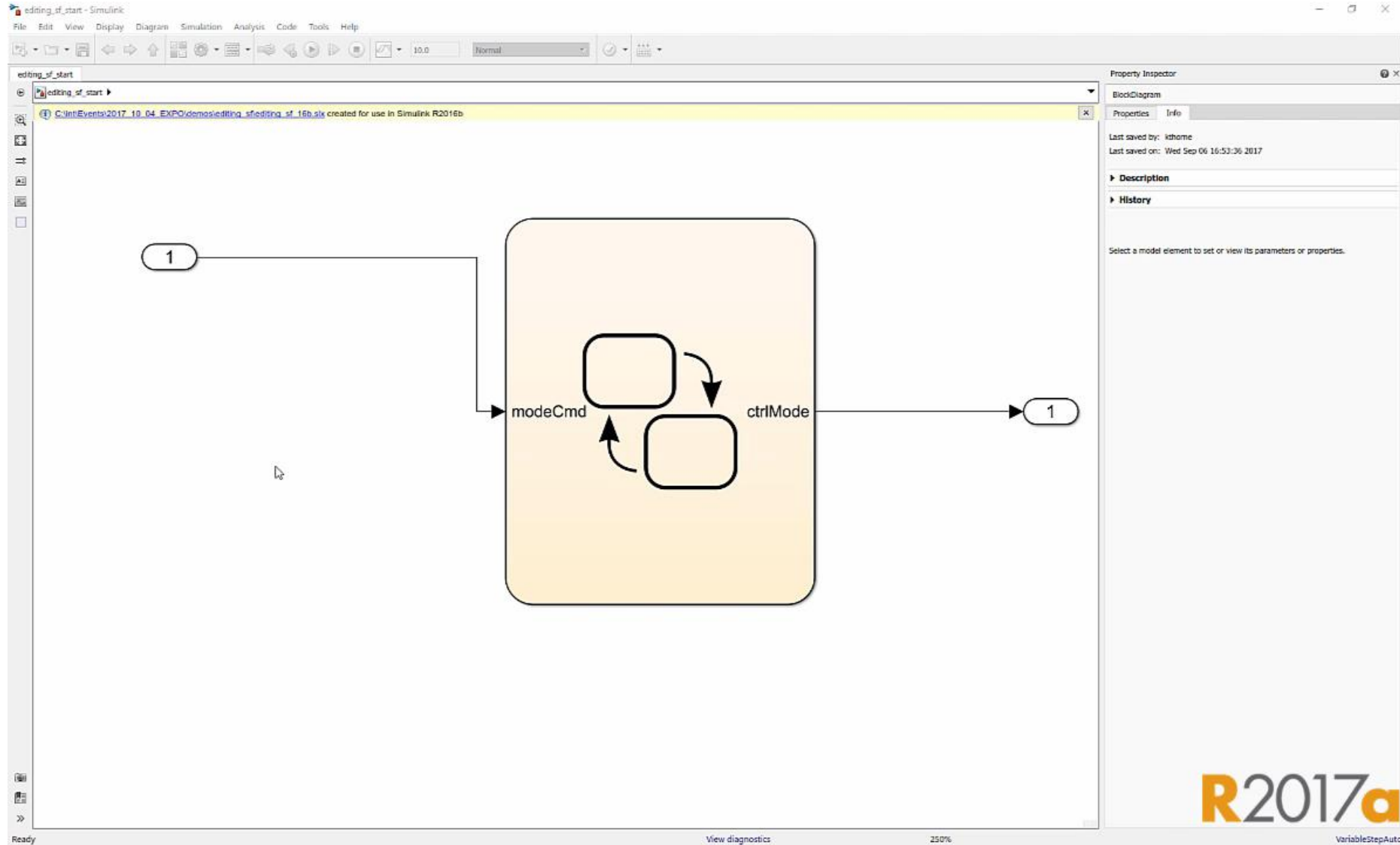
Clone Detection



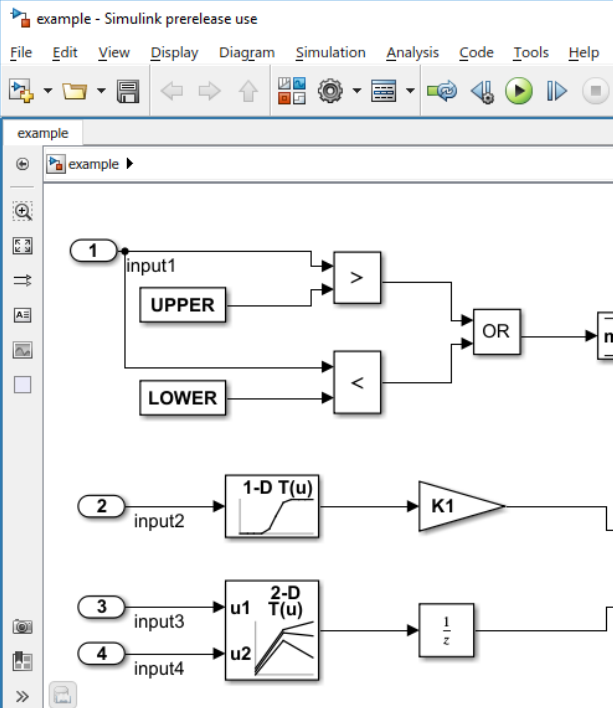
Edit at the Speed of Thought



Intuitive Stateflow



Restore Missing Variables



example - Simulink prerelease use

example

Model Data

Source	#	Signal Name	Data Type	Min	Max
In1	1	input1	MYTYPE	0	20
In2	2	input2	MYTYPE	-5	5
In3	3	input3	uint8	0	3
In4	4	input4	uint8	0	3
Out1	1	output	MYTYPE	[]	[]

Ready

Diagnostic Viewer

example

Invalid setting in '[example/In2](#)' for parameter '`OutDataTypeStr`'.

Caused by:

- Error evaluating parameter '`OutDataTypeStr`' in '[example/In2](#)'
 - Undefined function or variable '`MYTYPE`'.
 - Variable '`MYTYPE`' has been renamed to '`SignalType`' in '`example.slidd`'.

Suggested Actions

- Create a new variable named '`MYTYPE`' as a copy of '`SignalType`'. Fix

Component: Simulink | Category: Model error

Invalid setting in '[Stateflow](#)' for parameter '`K2`'

Caused by:

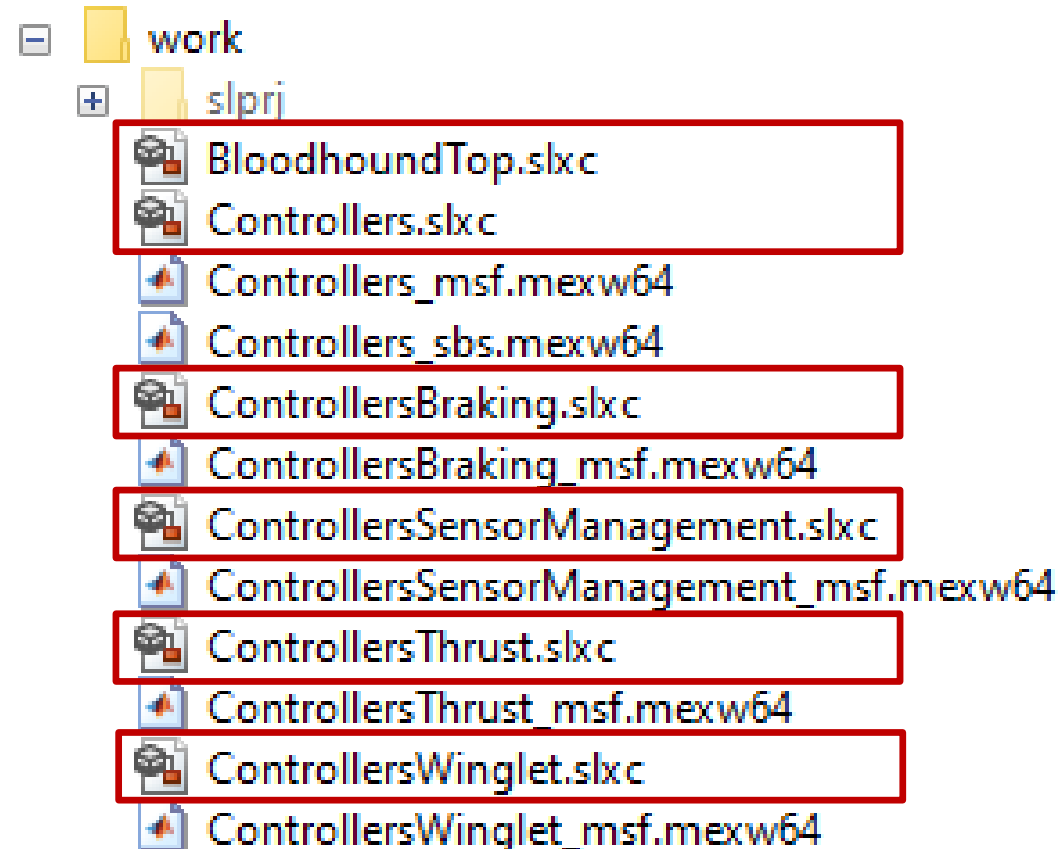
- Error evaluating Stateflow parameter data '`K2`' in its parent workspace.
 - Undefined function or variable '`K2`'.
 - Variable '`K2`' has been deleted from '`Model Workspace`'.

Suggested Actions

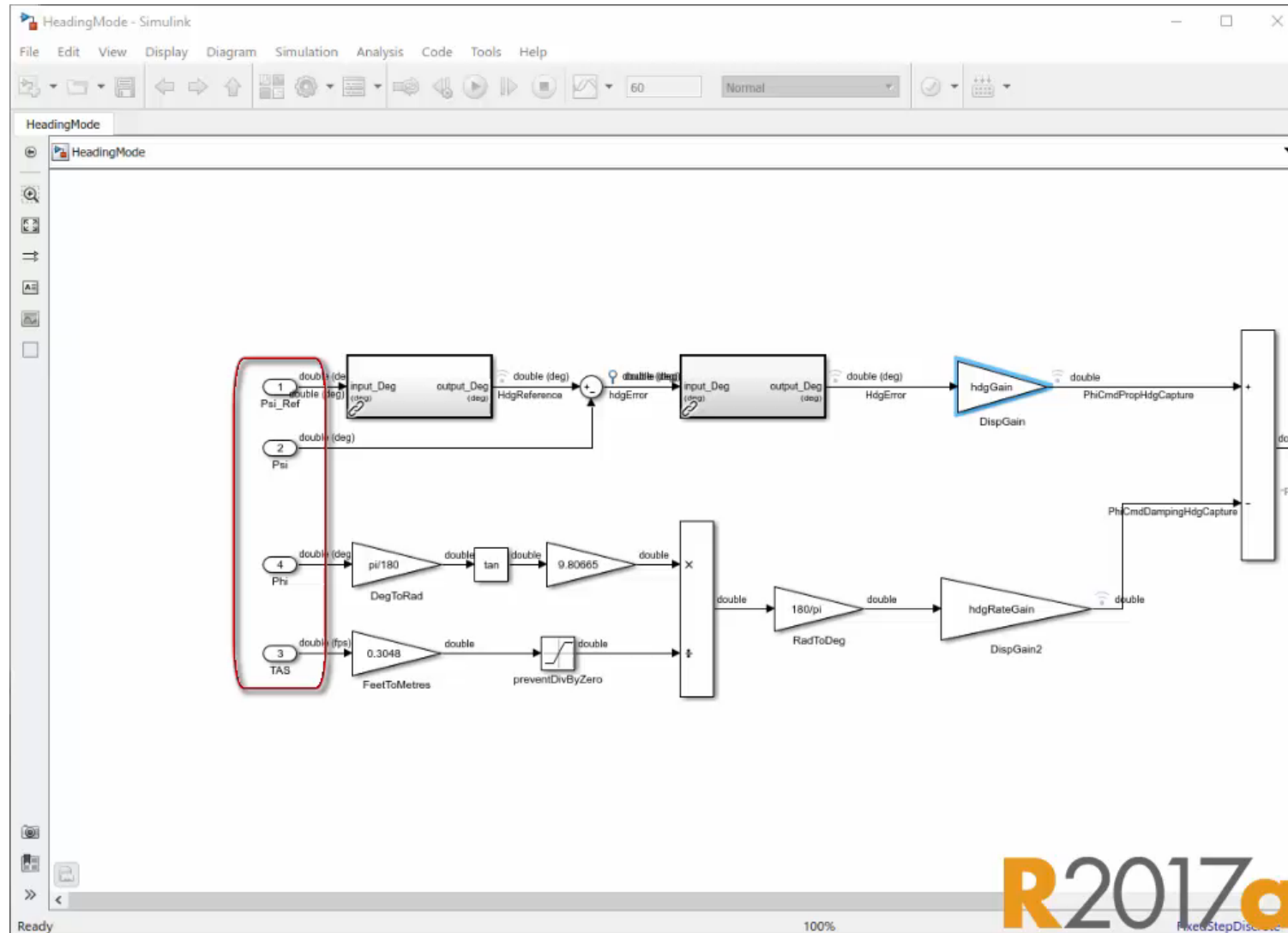
- Undo the deletion.

Fixed : Deletion of '`K2`' has been reverted.

Simulink Cache



Simulation Input



Monitor Your Parallel Simulations

The screenshot shows the MATLAB R2017b Simulation Manager interface. The main window displays the following simulation statistics:

Total Simulations	200
Elapsed Time	00:00:40
Number of Active Workers	pending
Estimated Time Remaining	pending

Below the statistics, a legend indicates the status of the simulation pool:

- Errors/Aborted (0)
- Completed (0)
- Active (0)
- Queued (200)

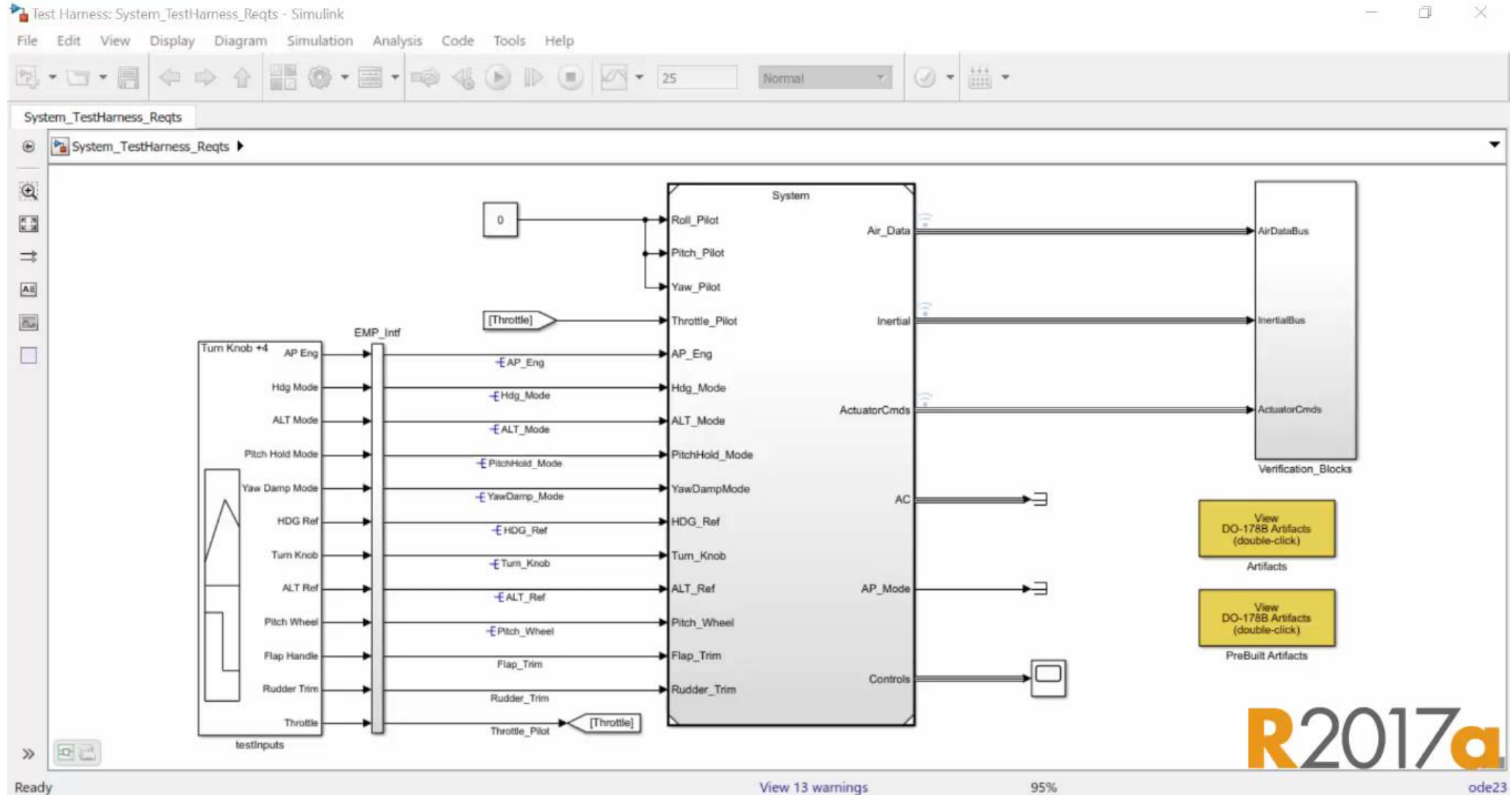
A status dialog box is open in the center of the screen, showing:

Status

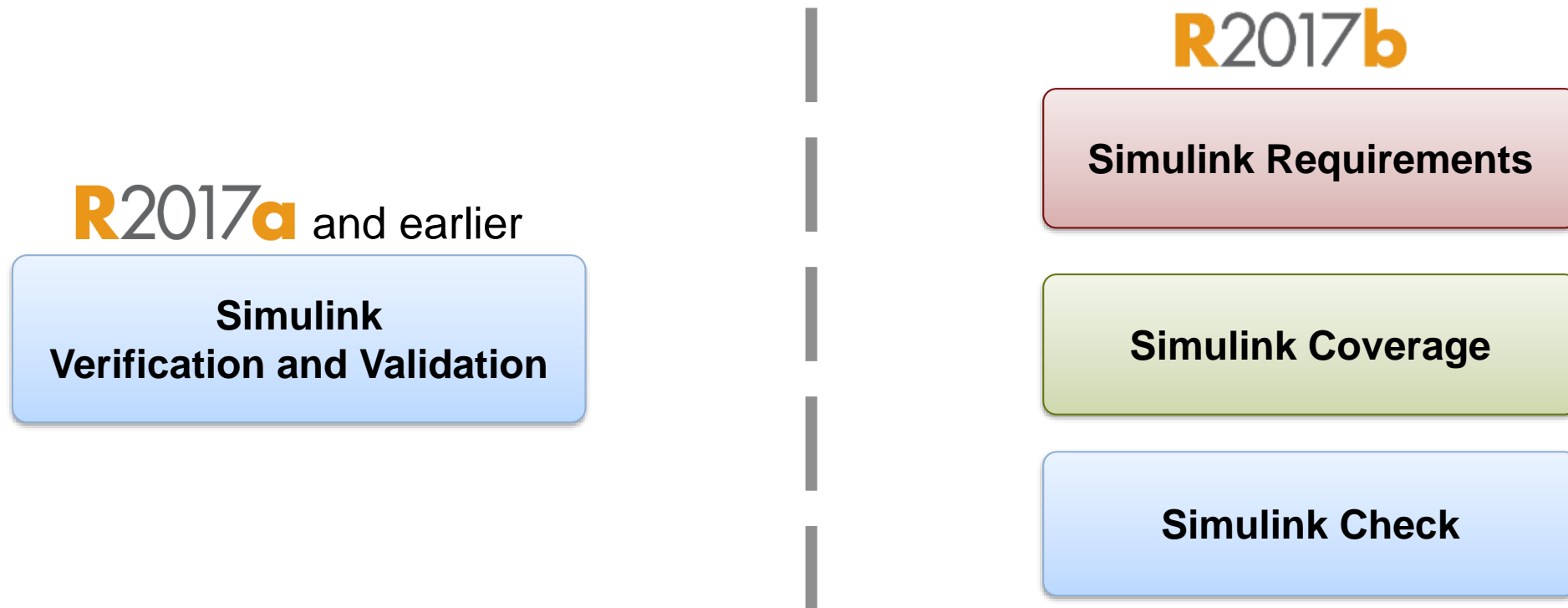
Checking for availability of parallel pool...

The dialog box includes a progress bar that is approximately 25% full.

Simulation Output



New Verification and Validation Products



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

Automated Driving System Toolbox: Simulink Support

R2017b

- Simulink support for tracking and sensor fusion
 - Closed-loop ACC example

The screenshot displays the Simulink environment. On the left, the Simulink Library Browser is open, showing the 'Automated Driving System Toolbox' expanded. The toolbox contains several sub-blocks: 'Detection Concatenation', 'Multi-Object Tracker', 'Radar Detection Generator', and 'Vision Detection Generator'. The main workspace shows a Simulink model titled 'Adaptive Cruise Control Using Sensor Fusion Test Bench'. The model consists of several interconnected blocks: 'ACCWithSensorFusion', 'Vehicle and Environment', and 'Bird's-Eye Plot'. The 'ACCWithSensorFusion' block receives inputs for Vision, Radar, Prediction Time, Longitudinal Velocity, and Curvature (1/R). It outputs Acceleration, Tracks, and MIO Track. The 'Vehicle and Environment' block receives Acceleration and outputs Actors, Vision, Radar, Roads, Prediction Time, Longitudinal Velocity, and Curvature. The 'Bird's-Eye Plot' block receives Actors, Vision, Radar, Roads, Tracks, and MIO Track. A status bar at the bottom indicates 'Ready' and '116%' zoom.

Learn more at this demo station:
 New for 2017: Automated Driving System Toolbox and Powertrain Blockset

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Thank You

