What's New in Simulink

Ruth-Anne Marchant
Senior Application Engineer

2,611

SIMULINK®

Test and Verify

Share and Deploy

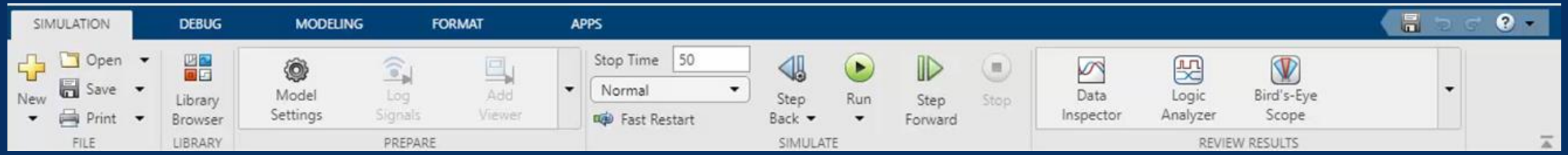
SIMULINK®

Test and Verify

Share and Deploy

Enable any engineer at any level to model any system

User interfaces



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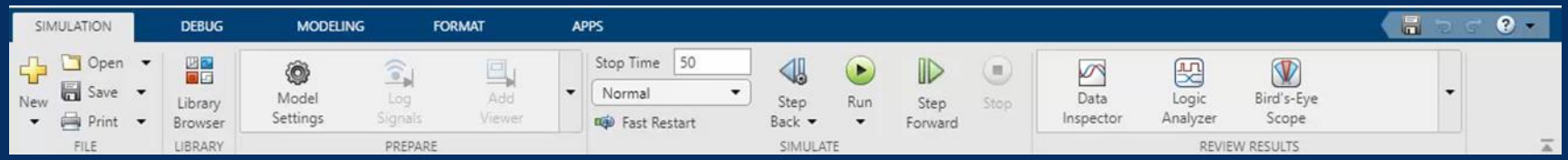
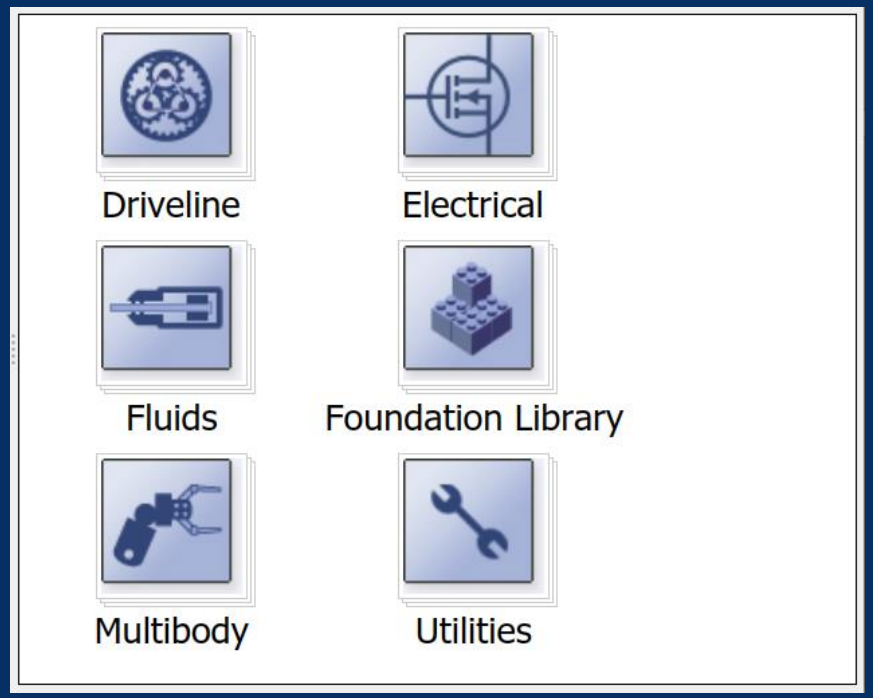
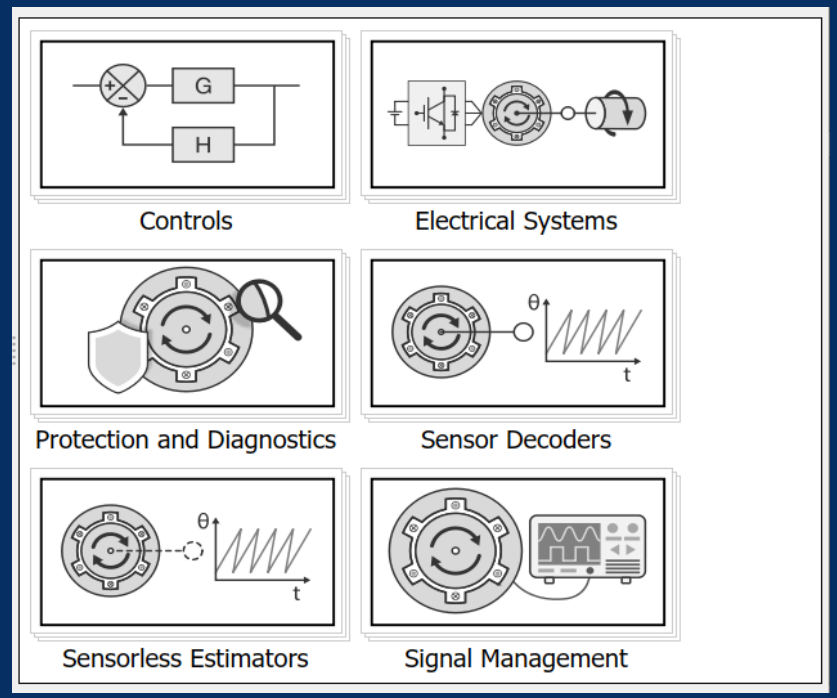


Libraries





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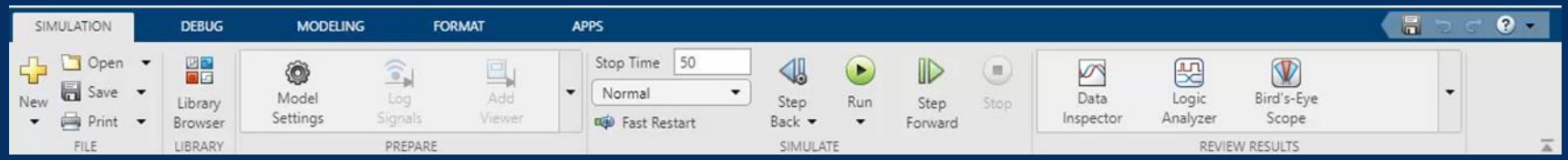
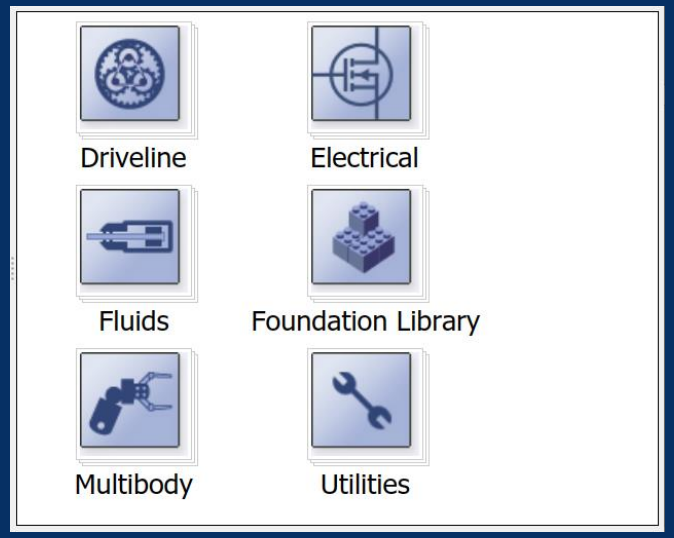
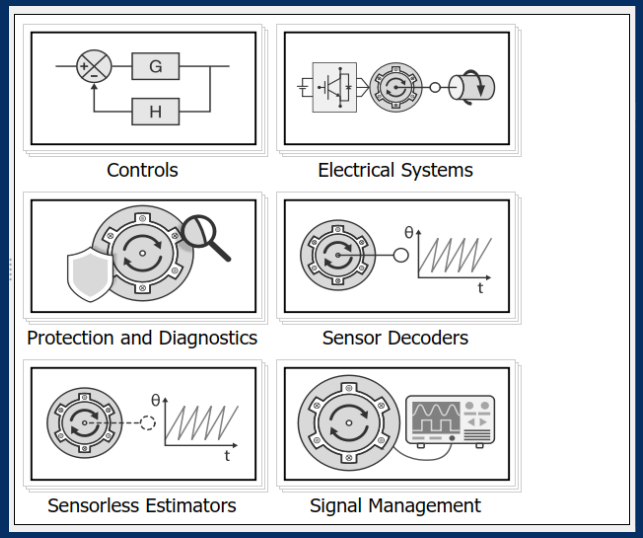
User interfaces

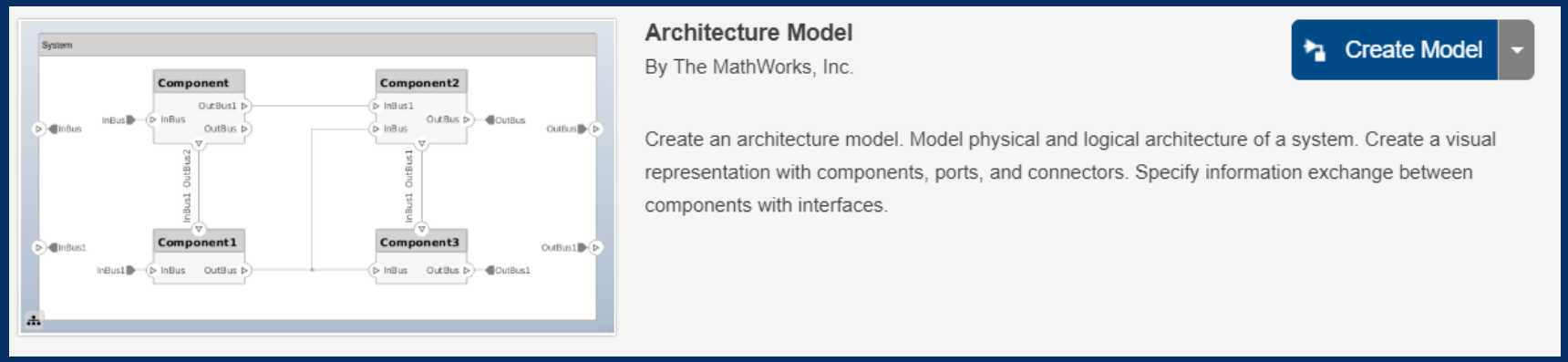
Libraries

Systems engineering









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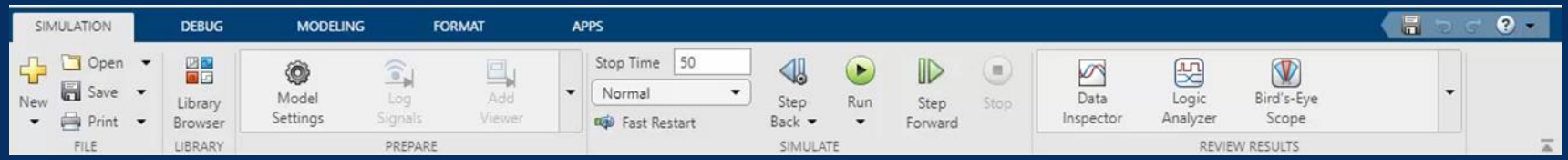

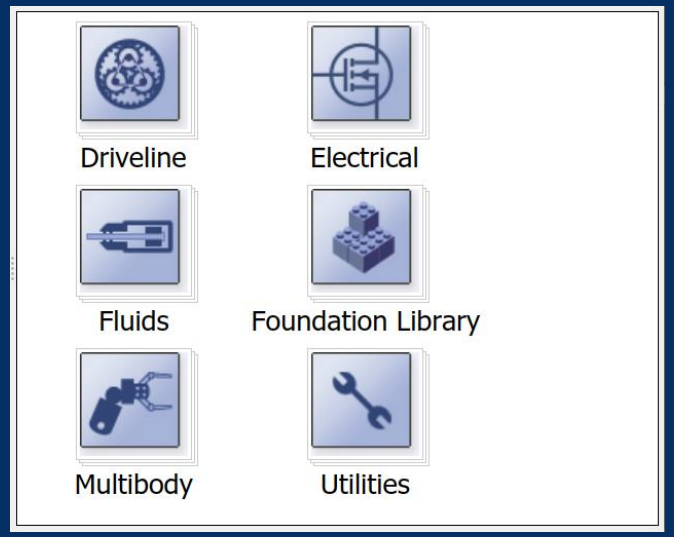

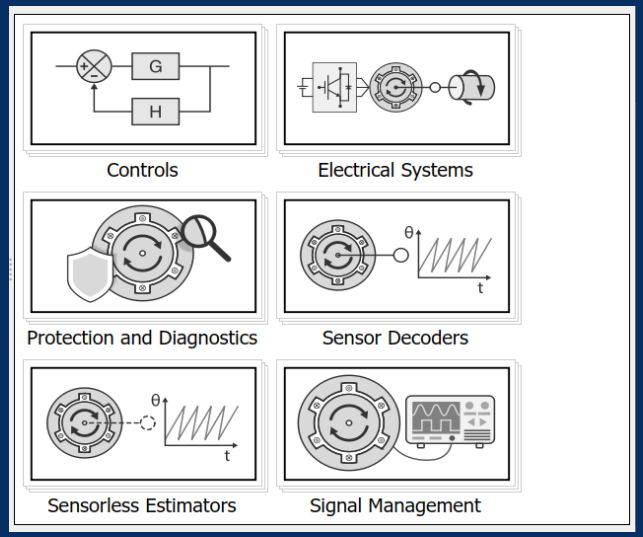

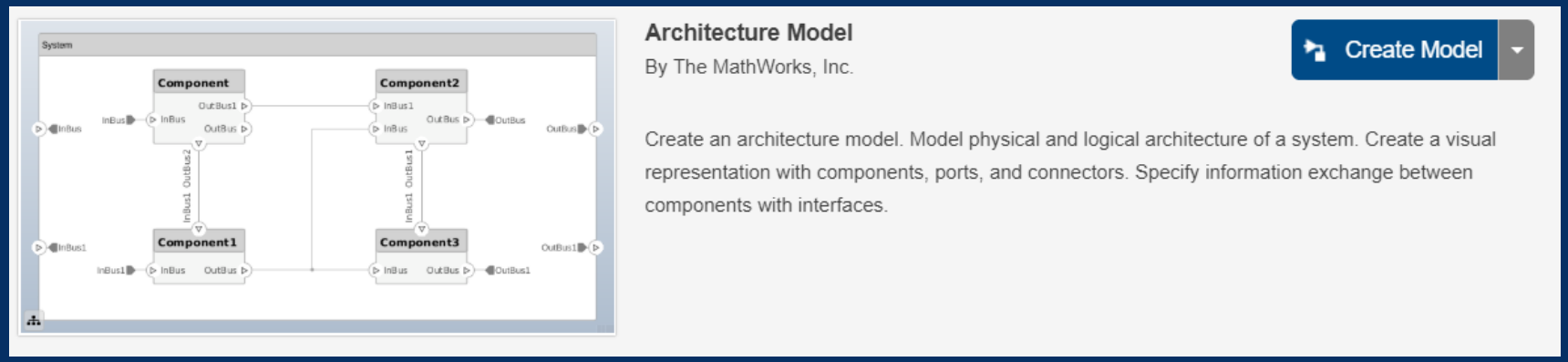

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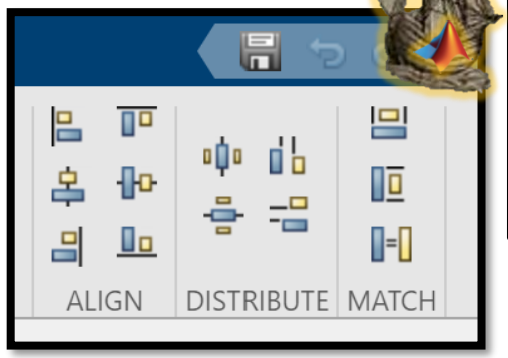
Now it's time to show you a little of what's old…

Well…



R2008a

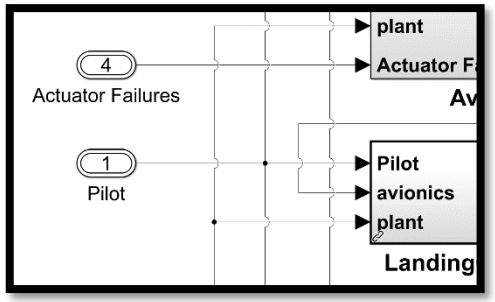
Why do we have to navigate out of a subystem just see its interface?

We spend too much time formatting blocks!

We need tools …locks.

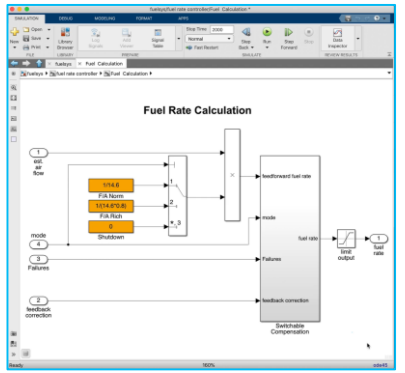
…sical

You bet



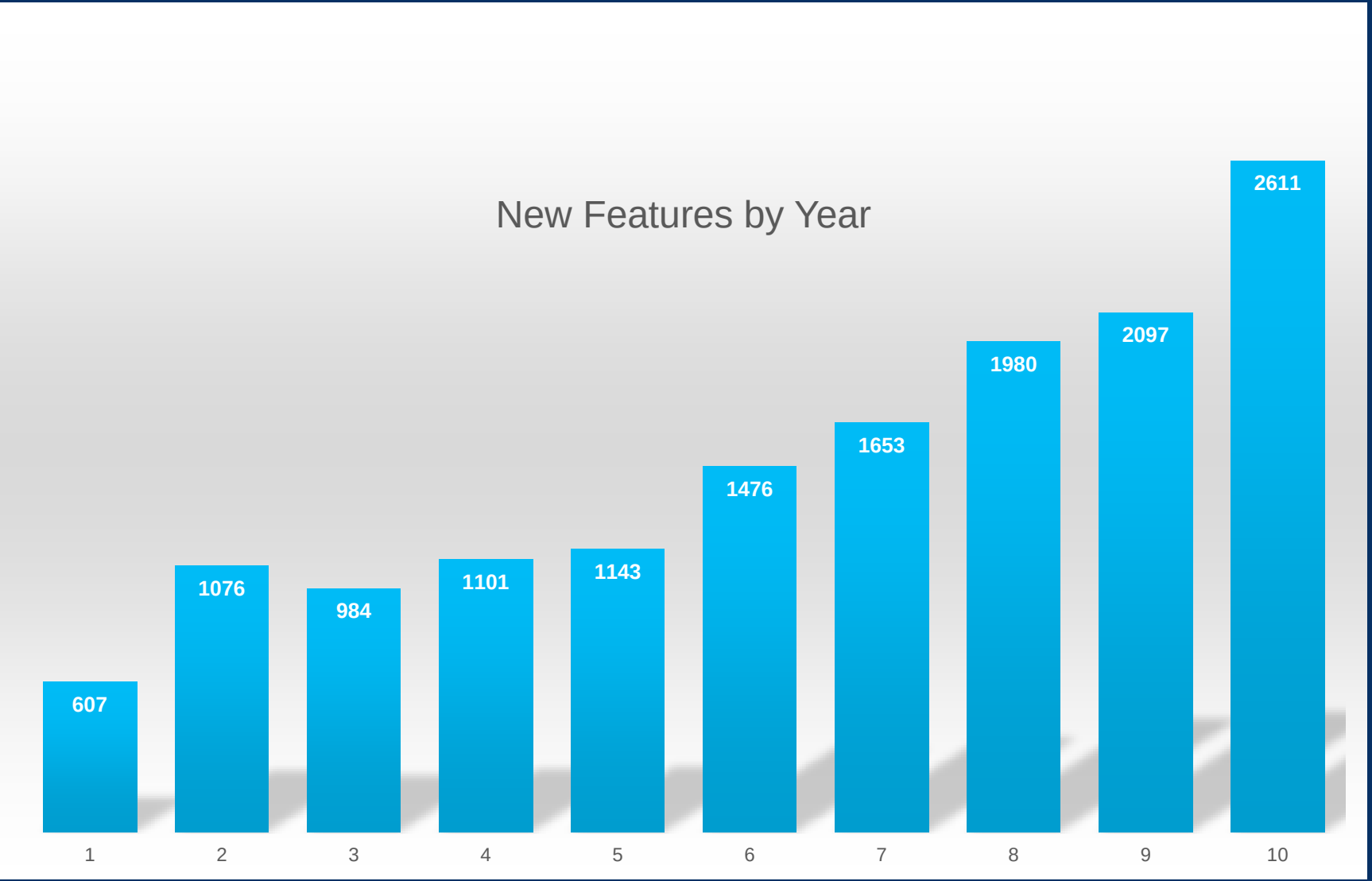
R2012b

Interface View



R2014b

It’s not your fault!



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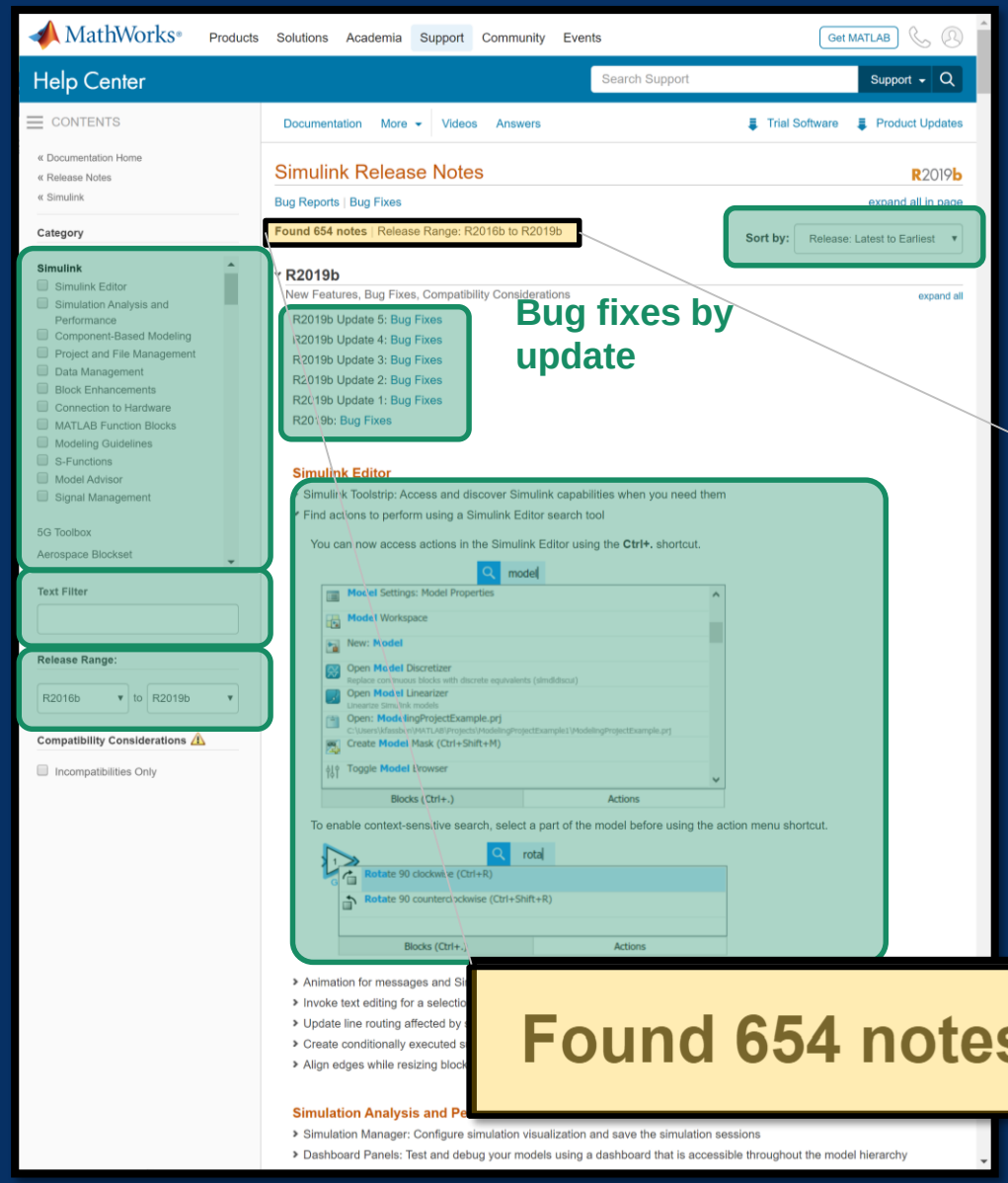
Our Online Release Notes are interactive



Filter by product or category

Filter by text

Filter by release range

Bug fixes by update

Sort by release or topic

So what's the problem?

Expandable feature bullets with graphics

Found 654 notes | Release Range: R2016b to R2019b

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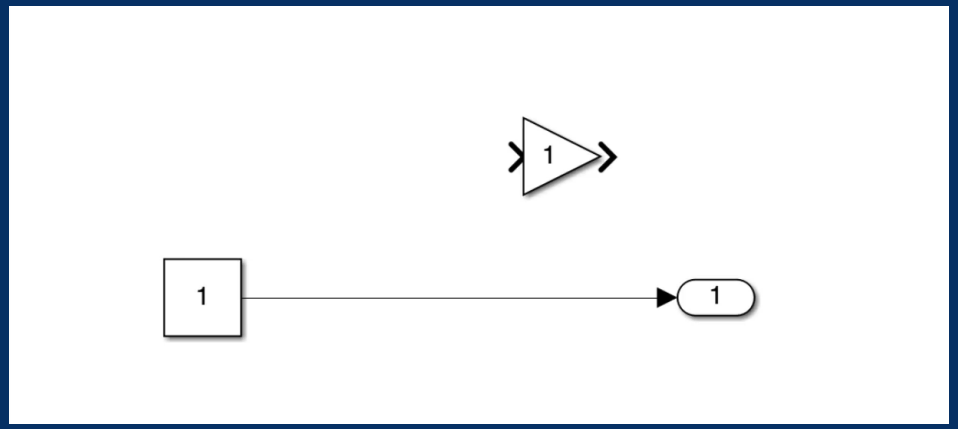
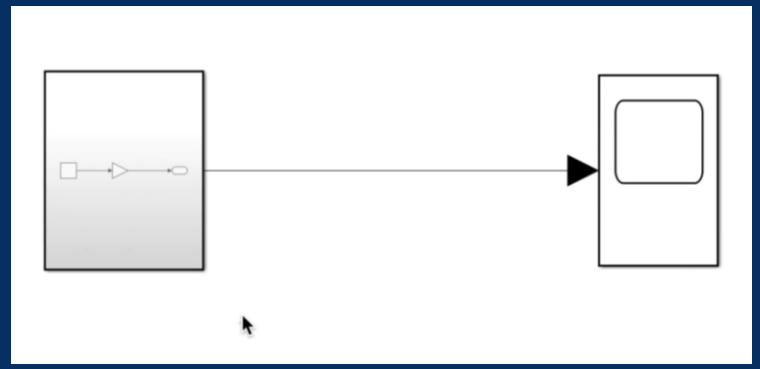
It's our job to bring forward the tools and techniques you need when you need them



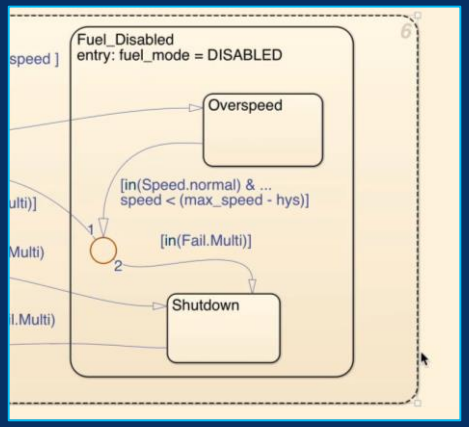
Even Spacing Guides

R2019a



Automatic Port Creation

R2018b



State Drag Regions

R2012b

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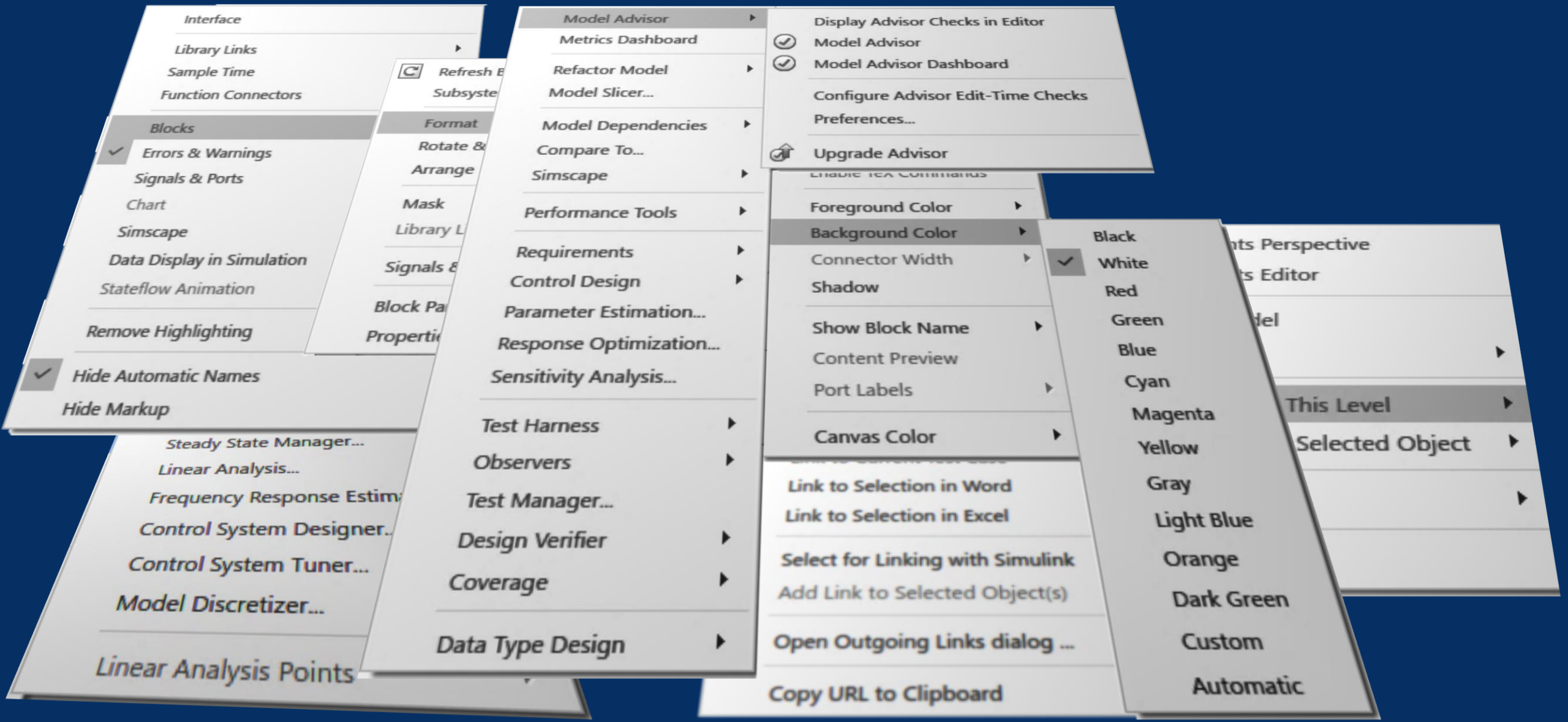
Simulink menus have been around for a long time



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How many unique menu actions do Simulink products have?

A + B + C

251 392 644

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How many unique menu actions do Simulink products have?

1,285 actions

and counting

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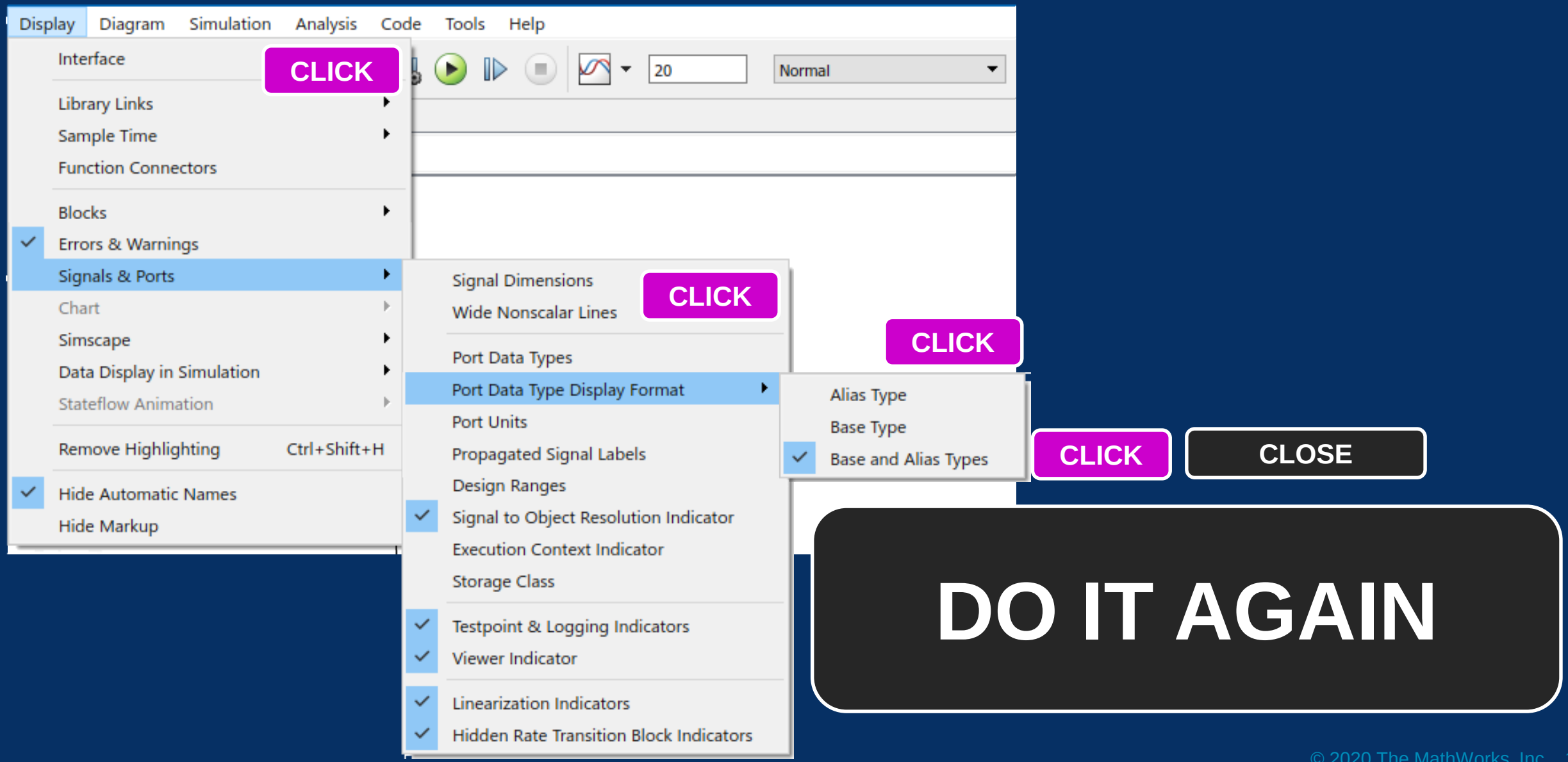
Long menus are inefficient



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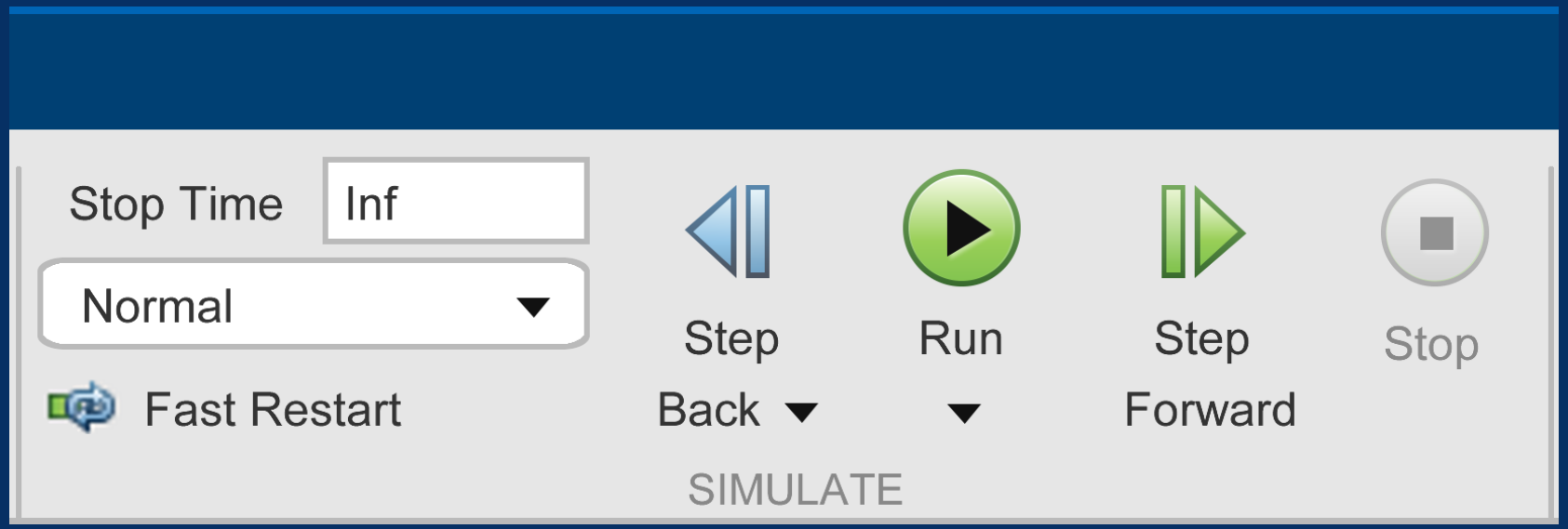
New toolstrip improves discoverability and access to Simulink functionality



R2019b

Discover & Access

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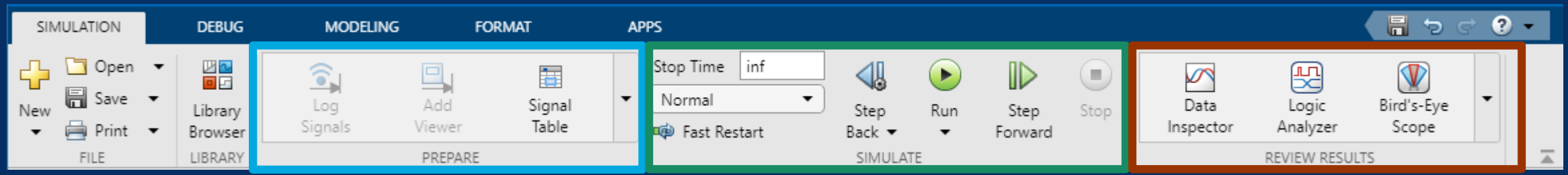
Toolstrip supports workflows in clearly organized steps

Simulation Workflow



1. **PREPARE**
2. **'DO IT'**
3. **REVIEW RESULTS**

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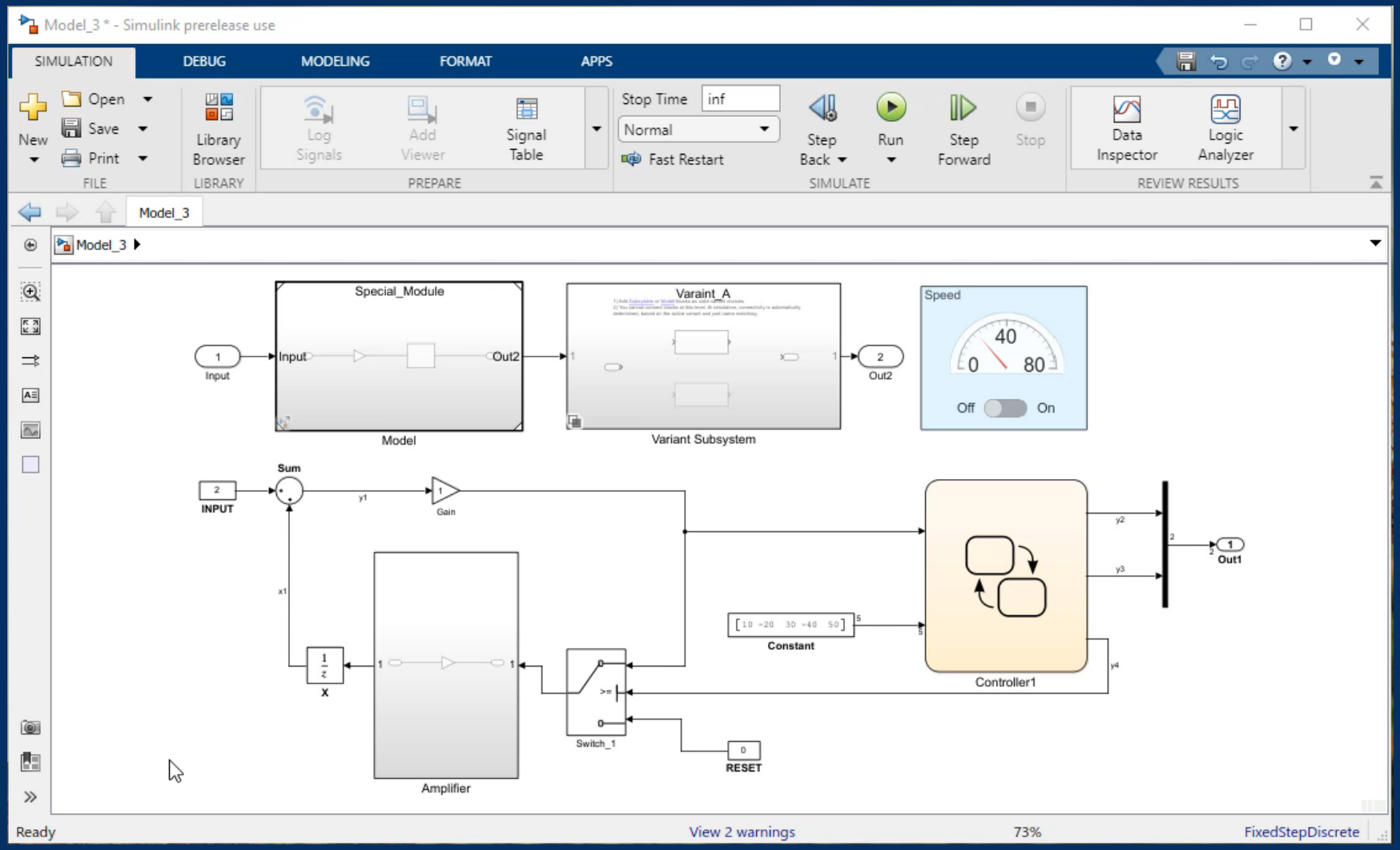
Prepare and Results galleries support simulation workflow



VIDEO

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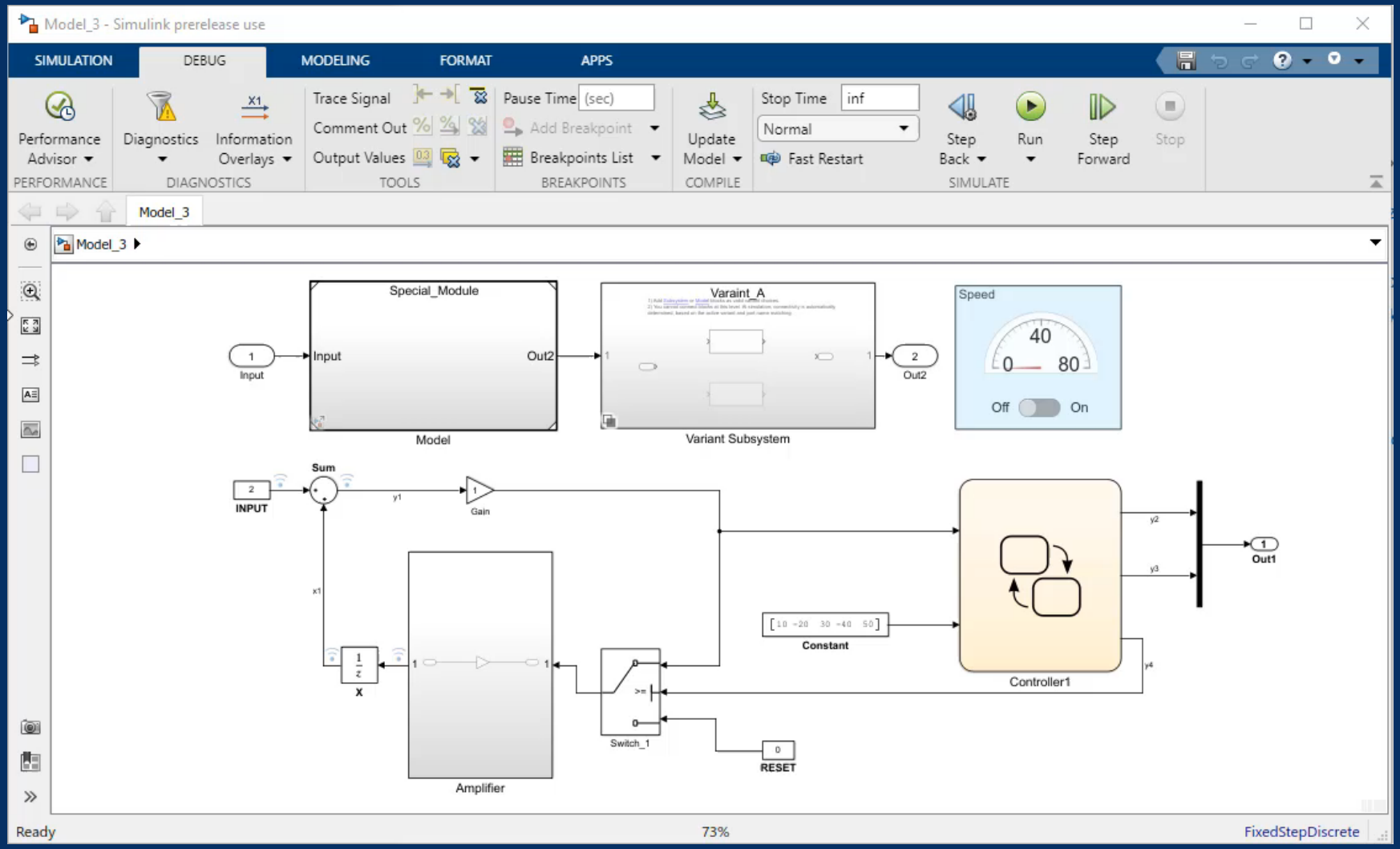
Debugging tools work together



VIDEO

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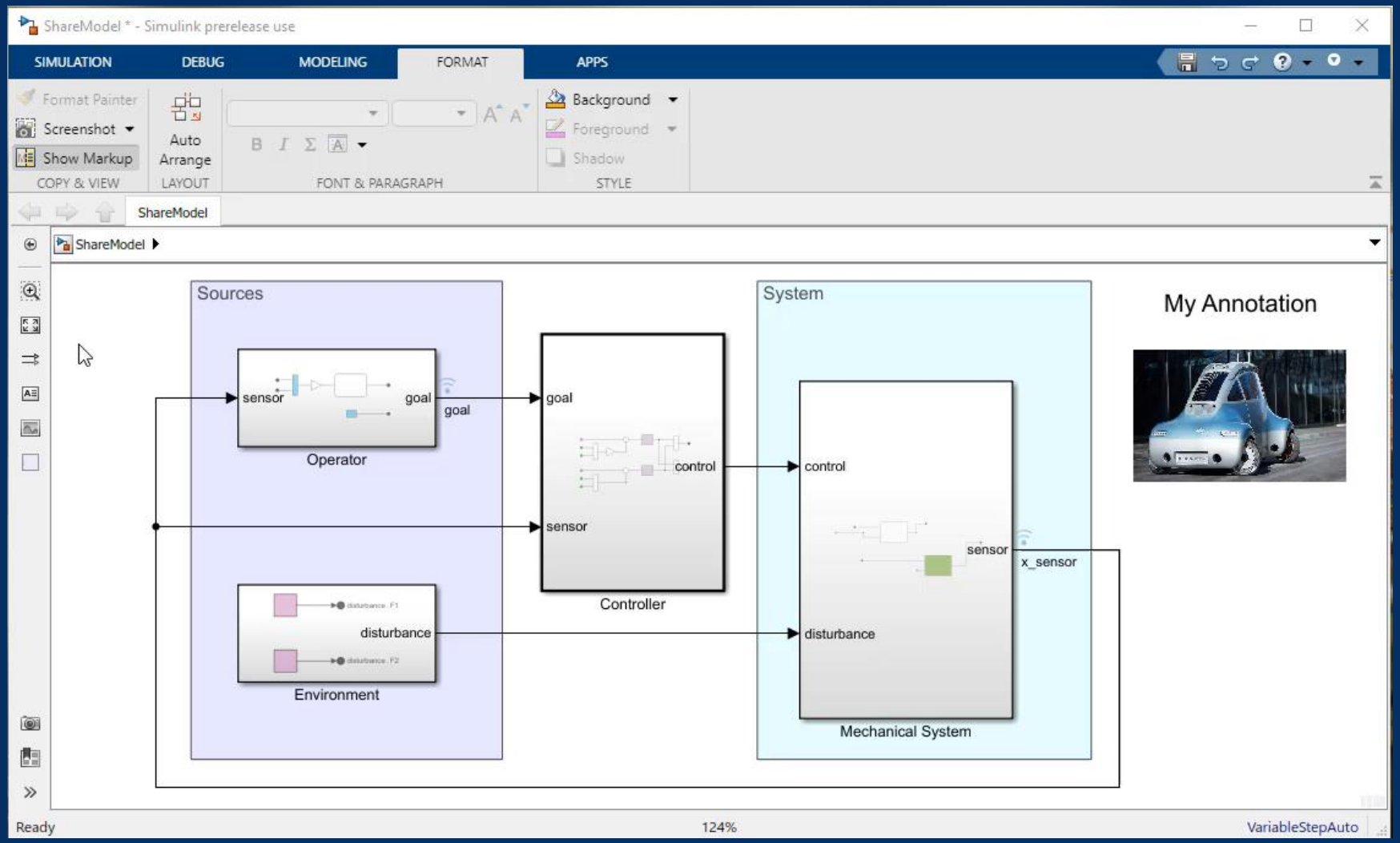
Format tab makes your ideas ready for sharing



VIDEO

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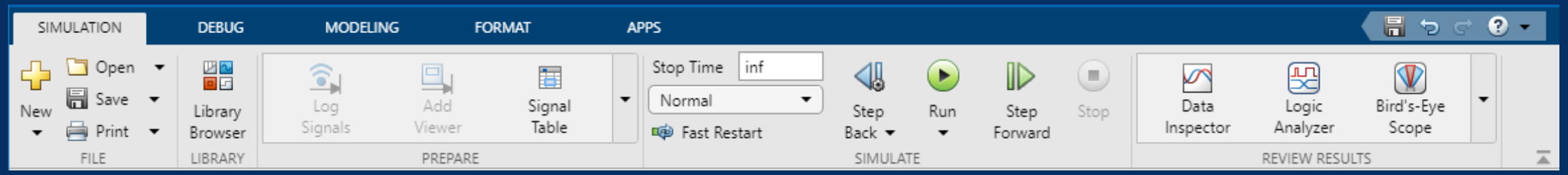
In summary, new Simulink toolstrip improves discoverability and access to long-existing functionality



Discover & Access

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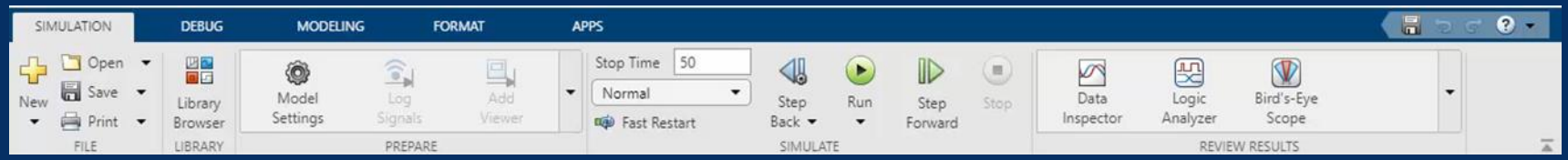
Access and discover Simulink capabilities when you need them

User interfaces

Libraries

Systems engineering



Simulink Toolstrip

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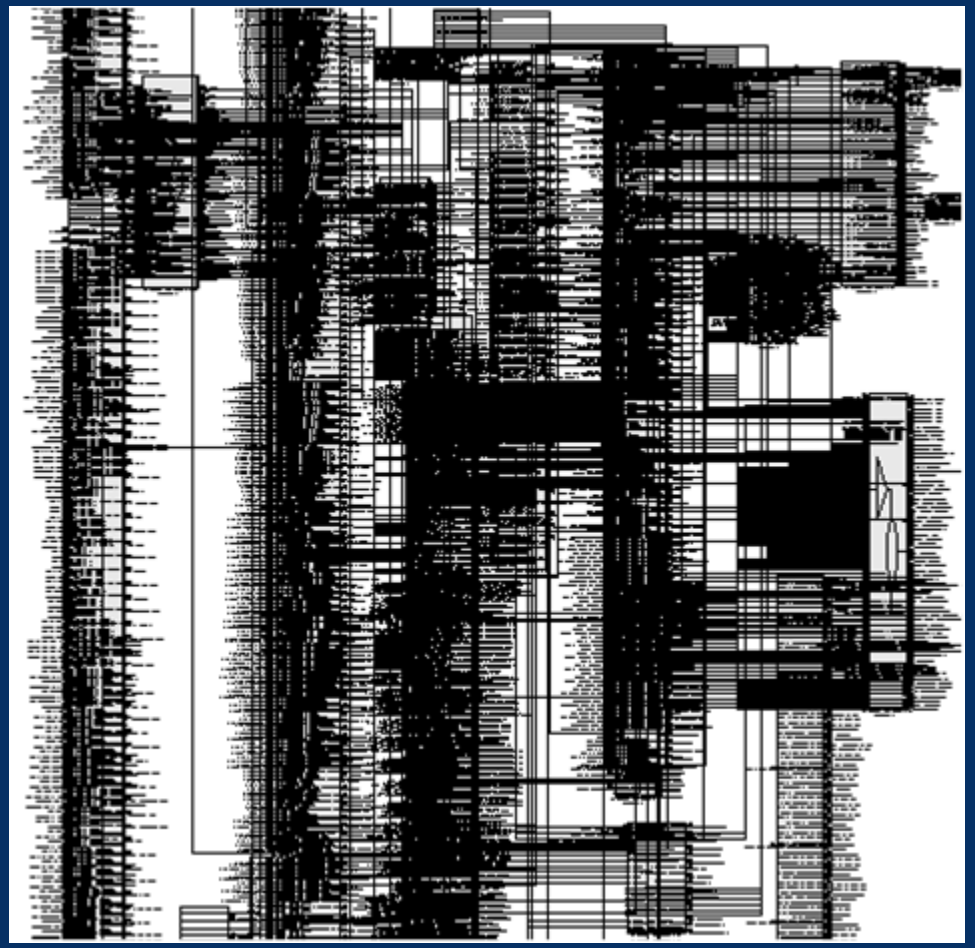
Real Simulink models can get messy



How many of you have a model like this?

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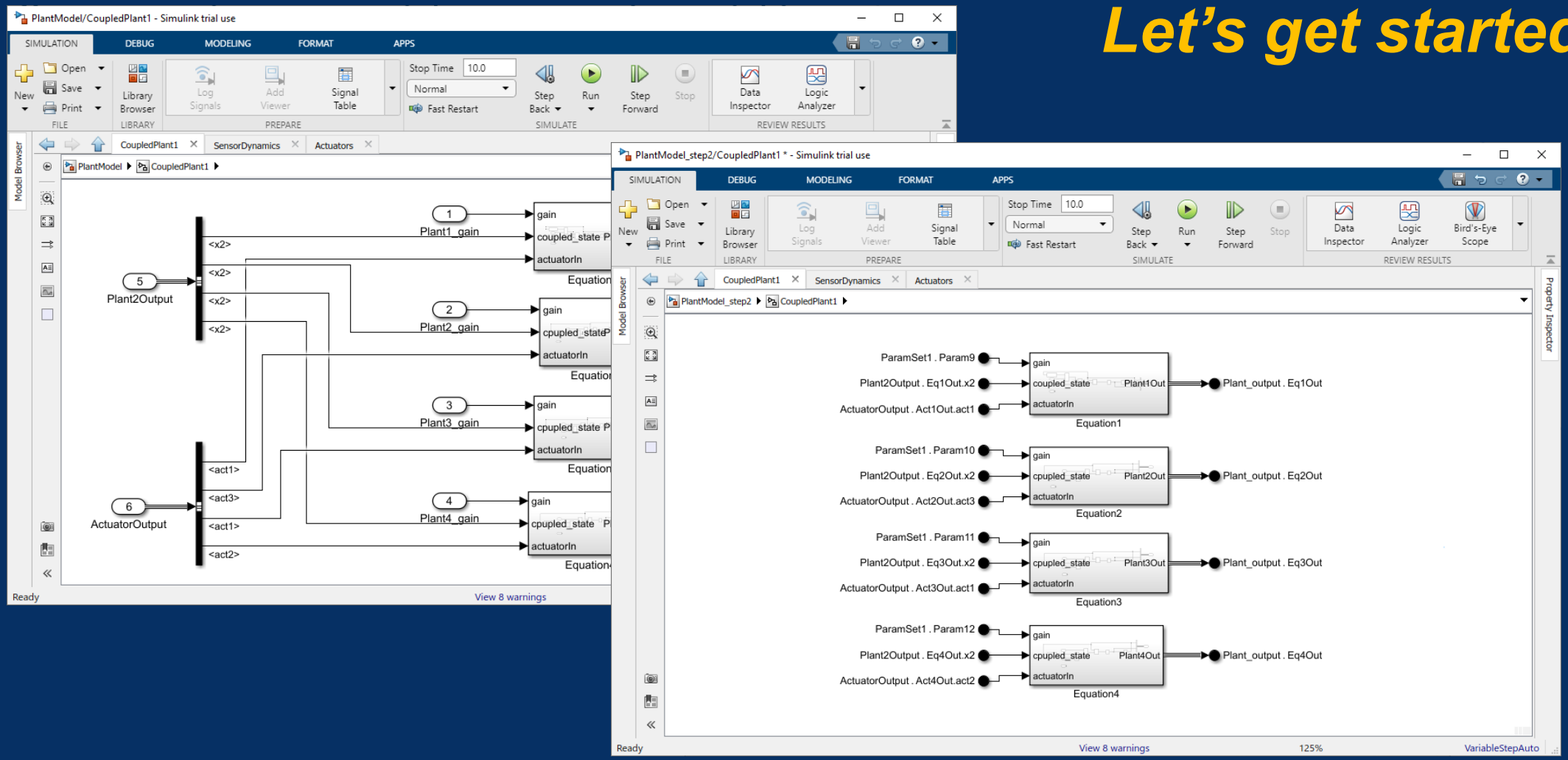
You can make your models more easily readable and editable



Let's get started!

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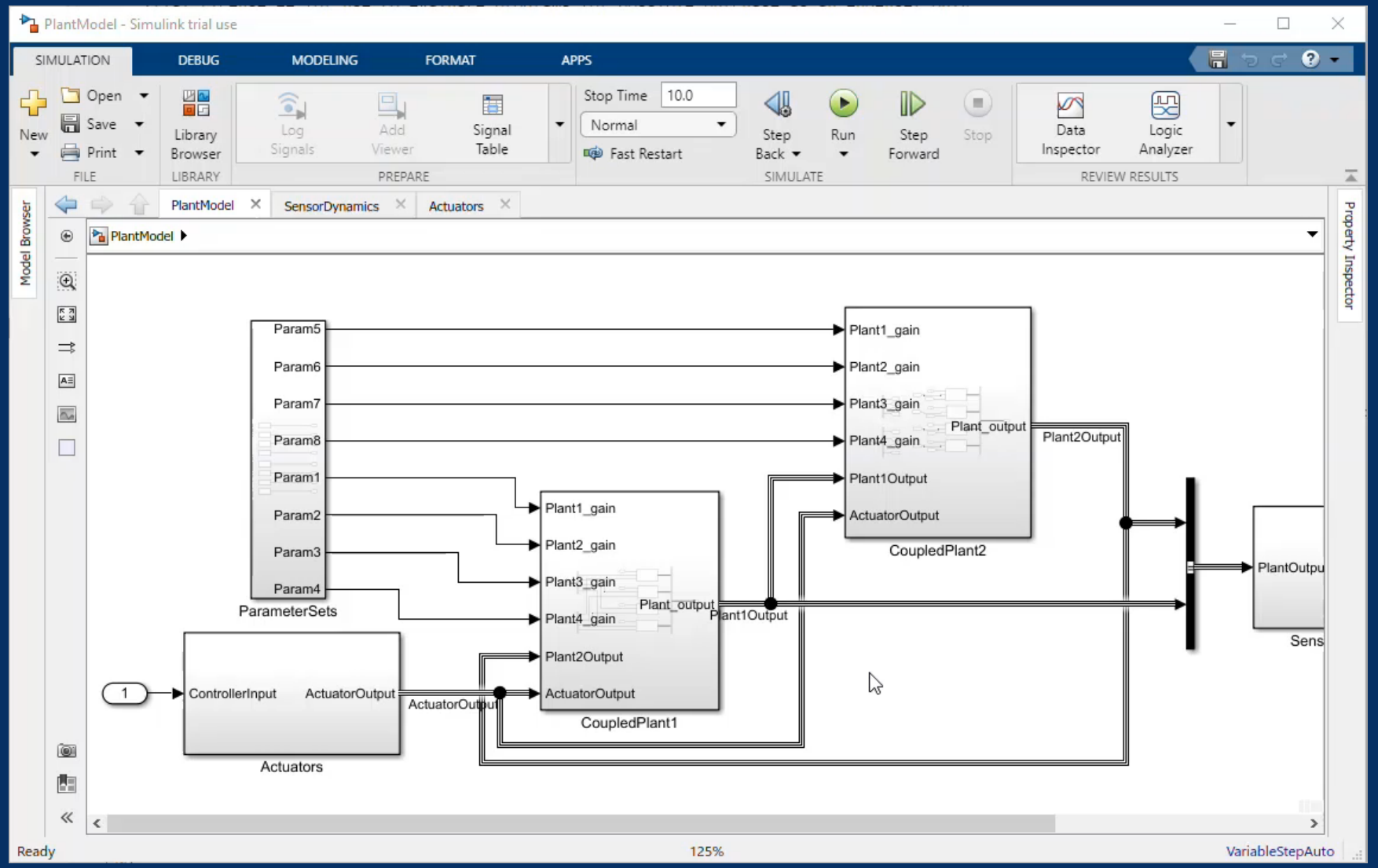
You can get started with buses easily



R2018a

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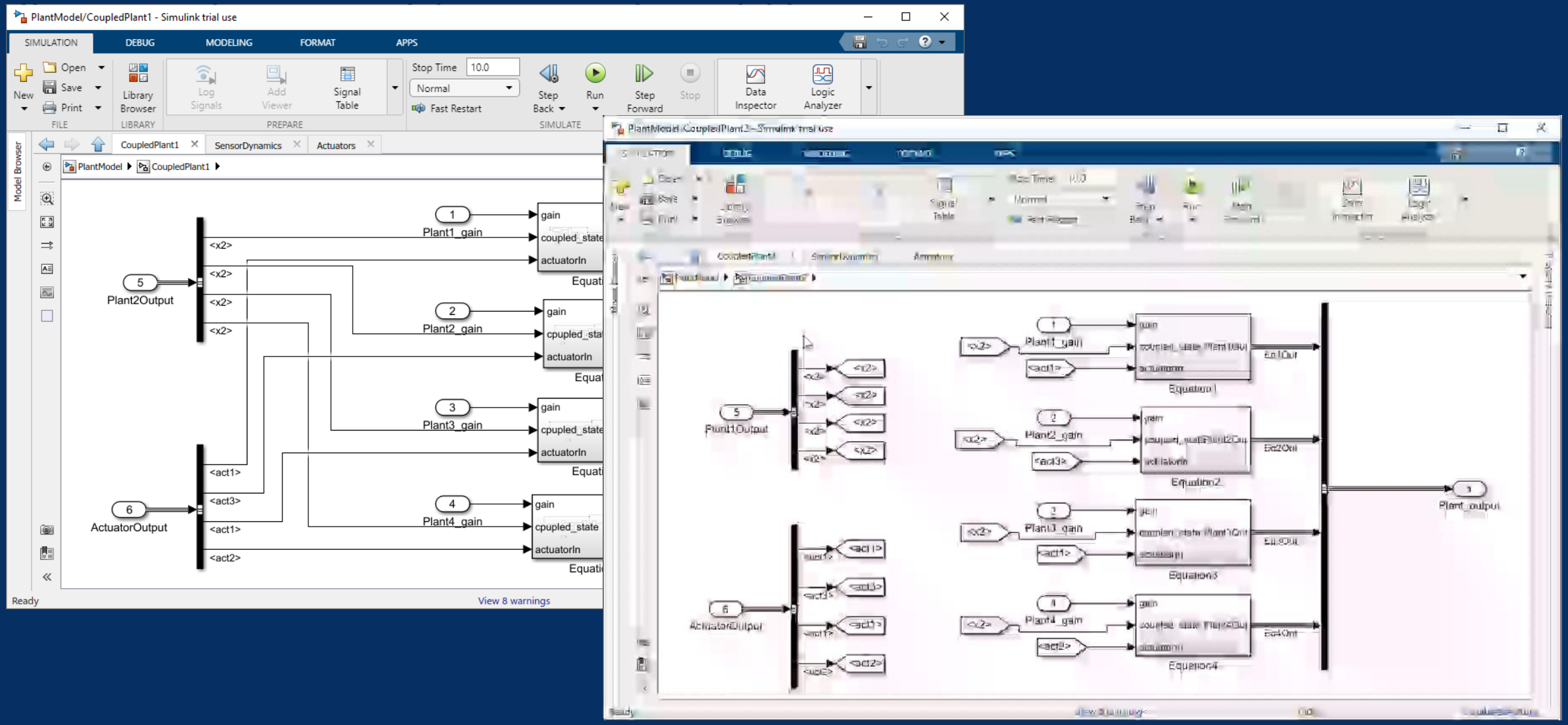
It’s useful to be able to see the port near where it gets used



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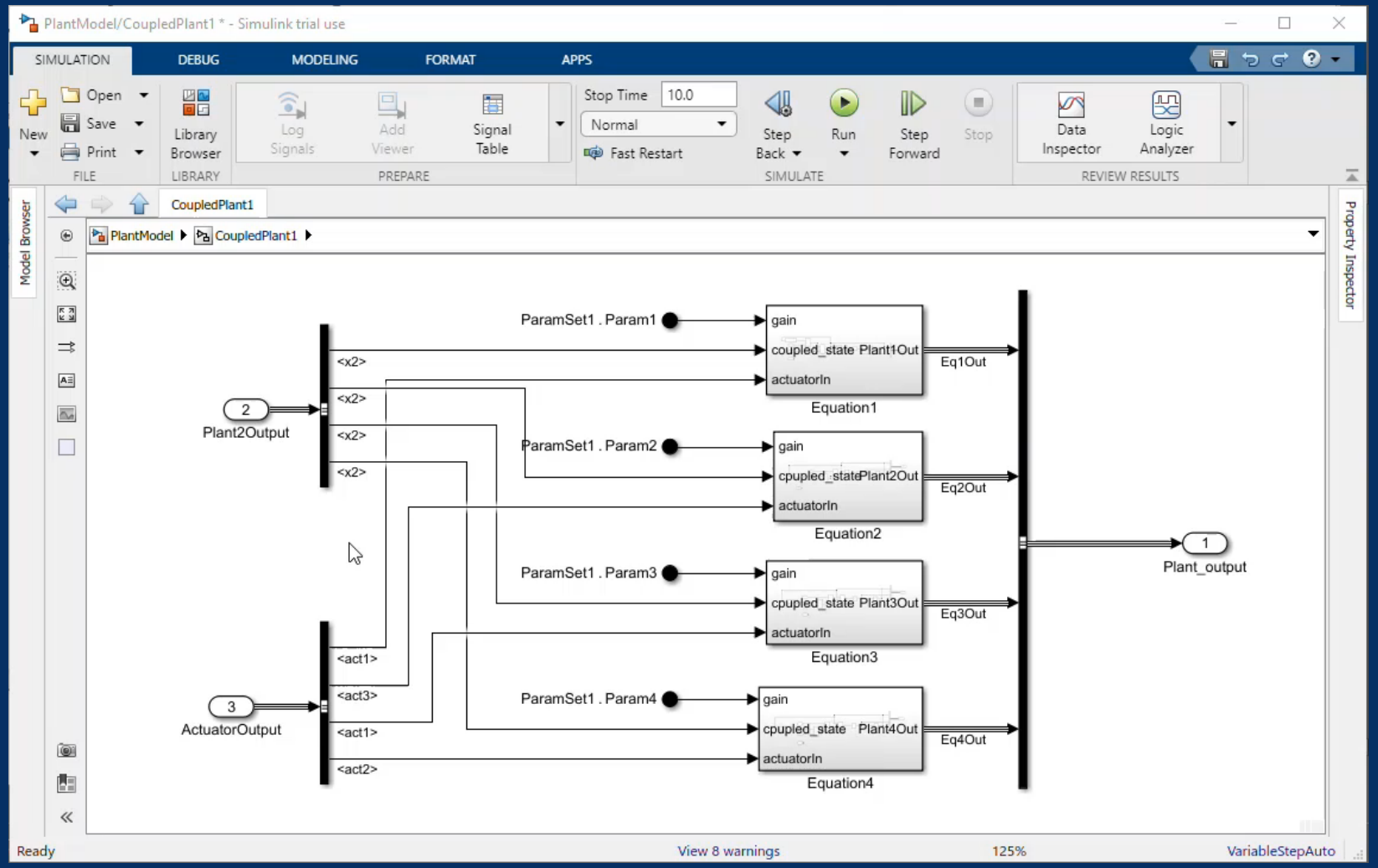
Bus element ports allow you to see bus structure and put the port where the data gets used.



R2017a

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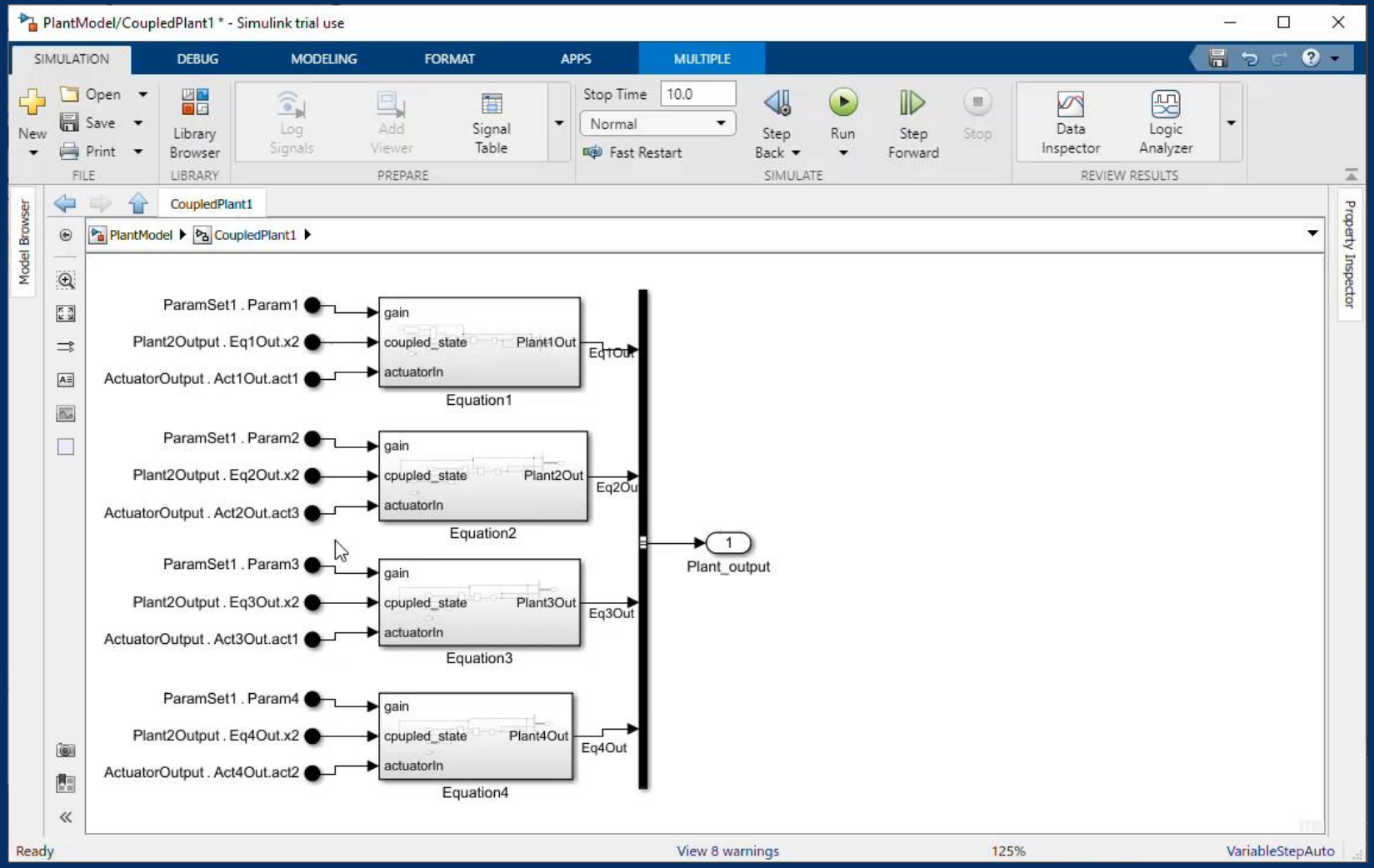
Bus element ports allow you to see bus structure and put the port where the data gets used.



R2017a

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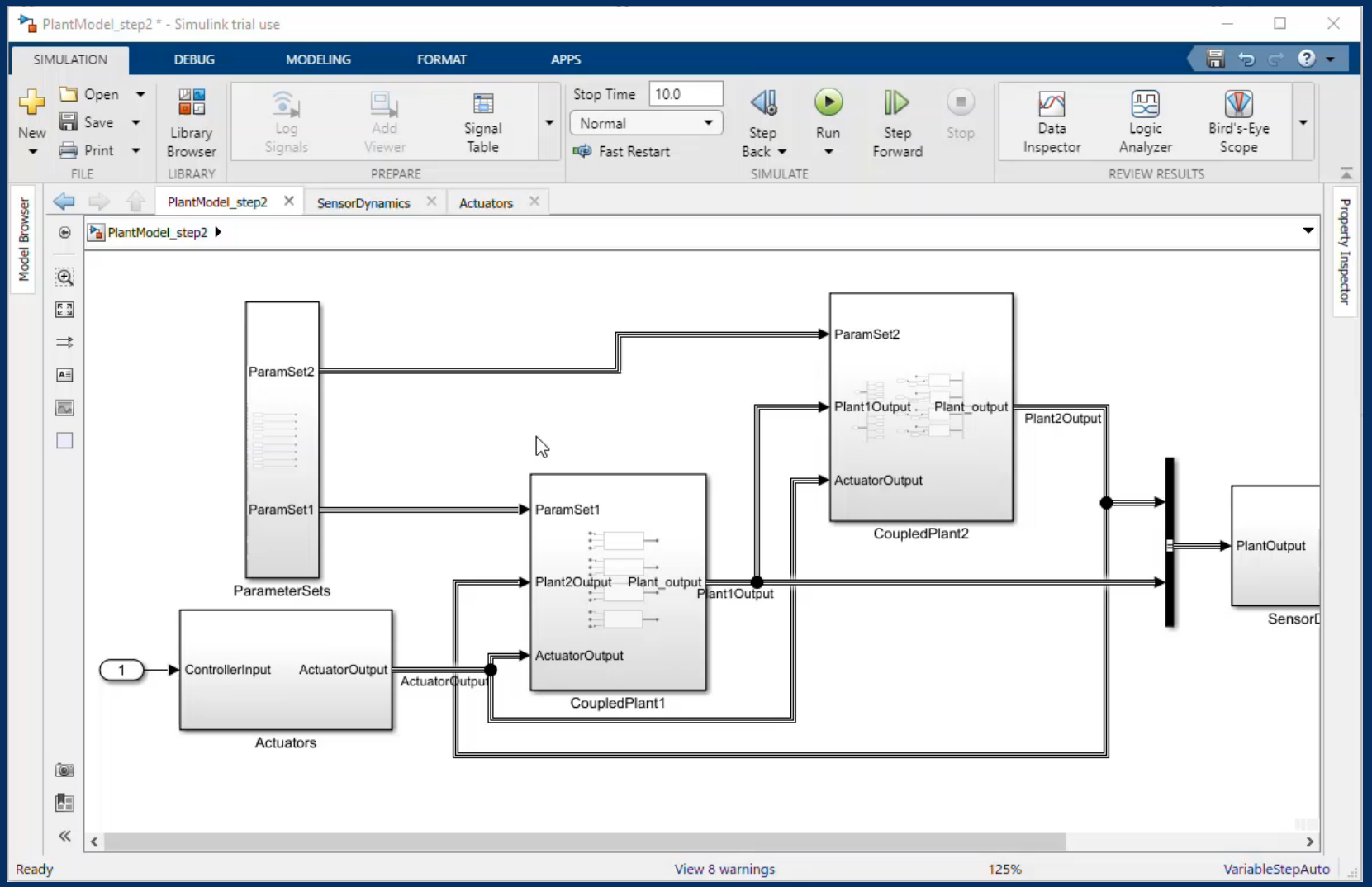
Bus element ports allow you to easily modify signals in your buses



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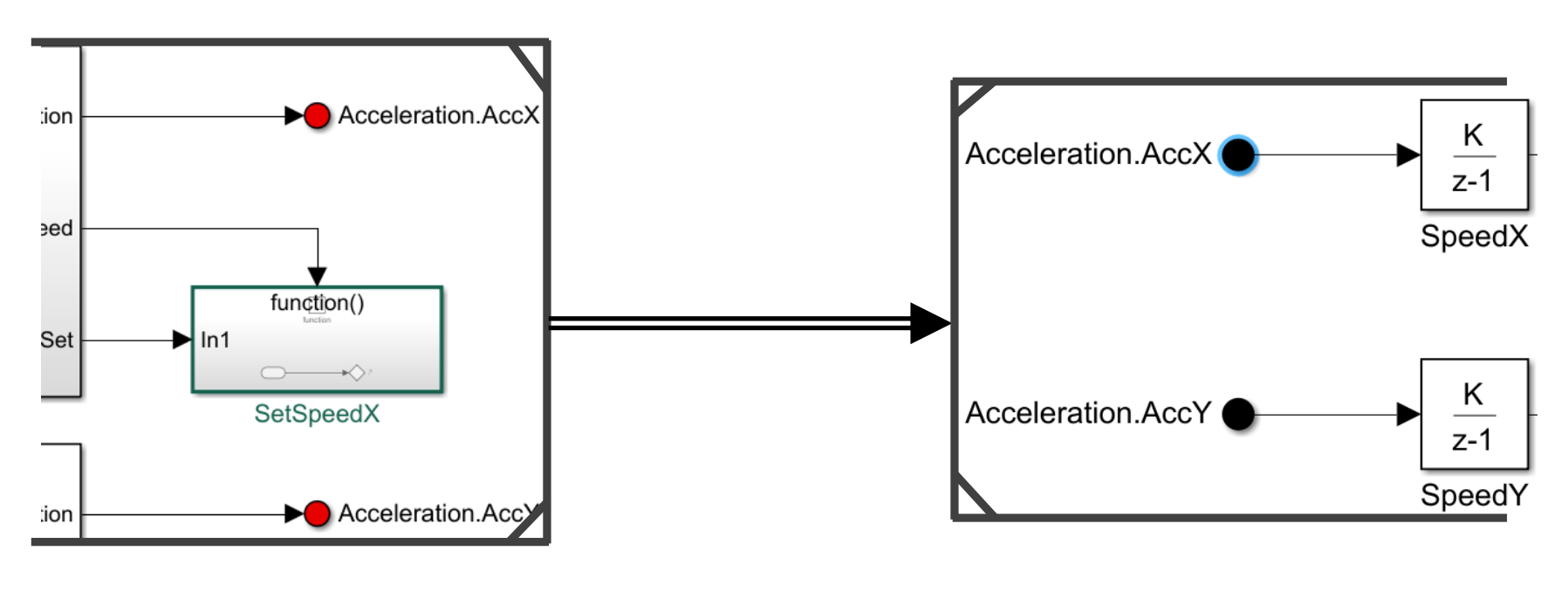
Bus objects are no longer necessary when passing bus signals across Model blocks



R2019a

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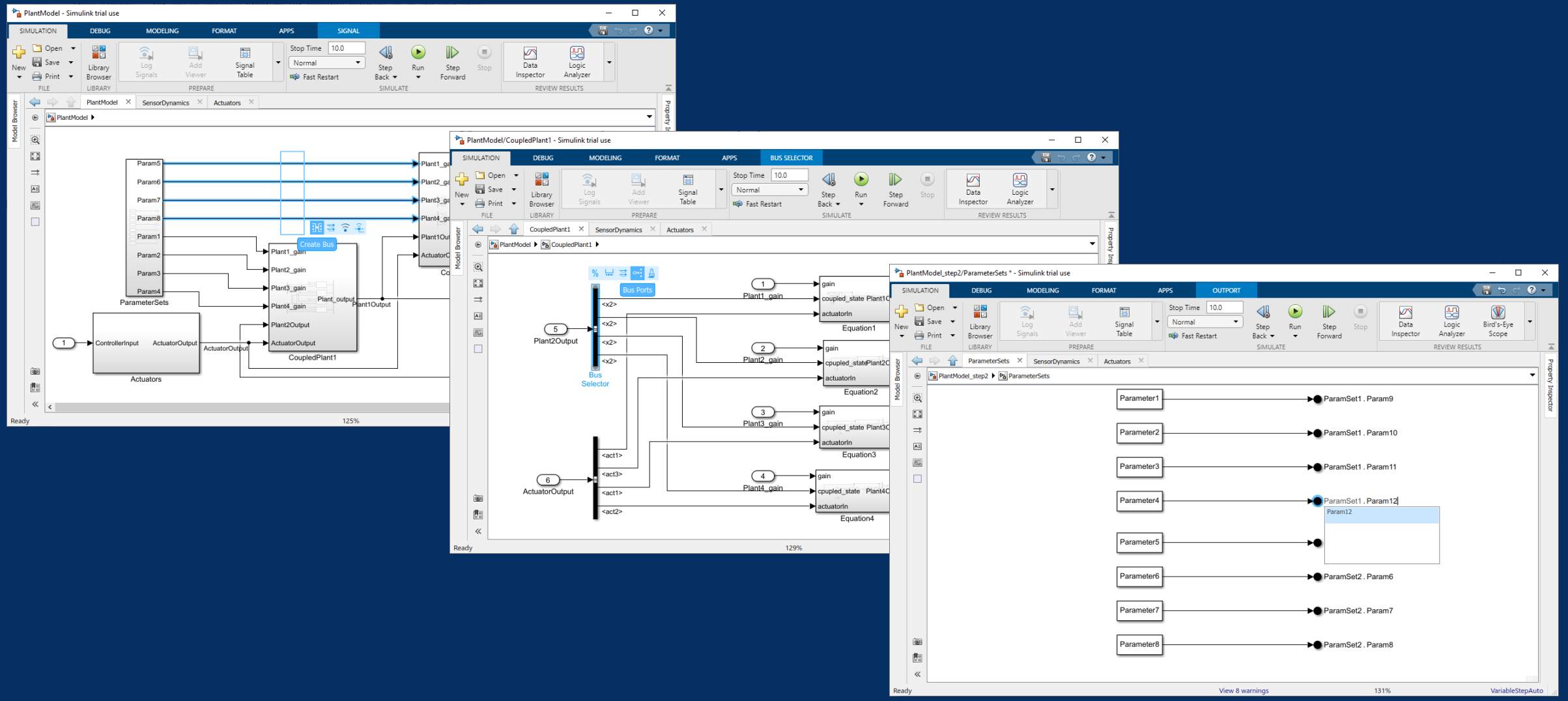
You can make your model more easily readable and editable with buses and bus element ports



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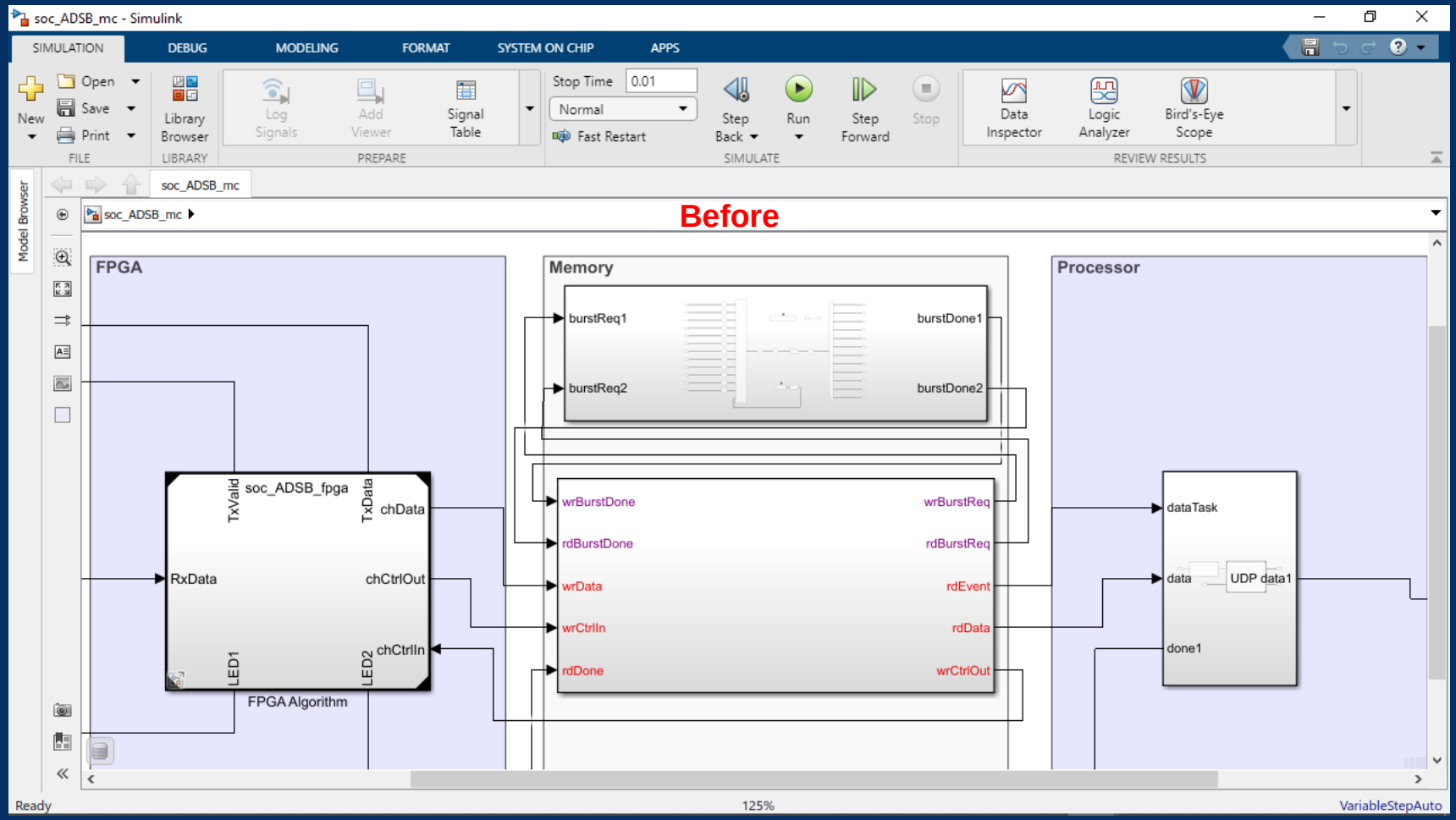
Edit at the speed of thought

User interfaces

Libraries

Systems engineering



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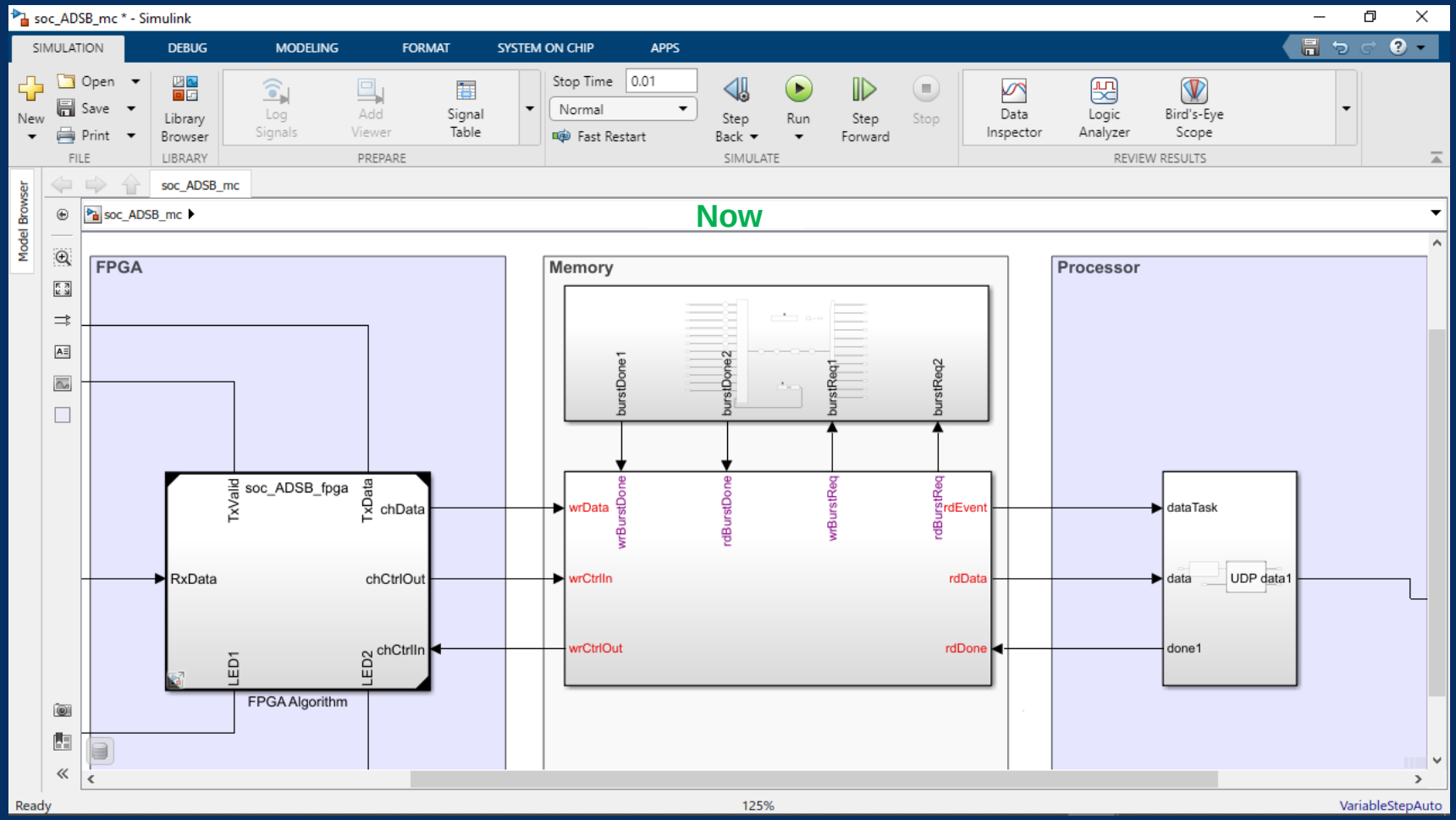

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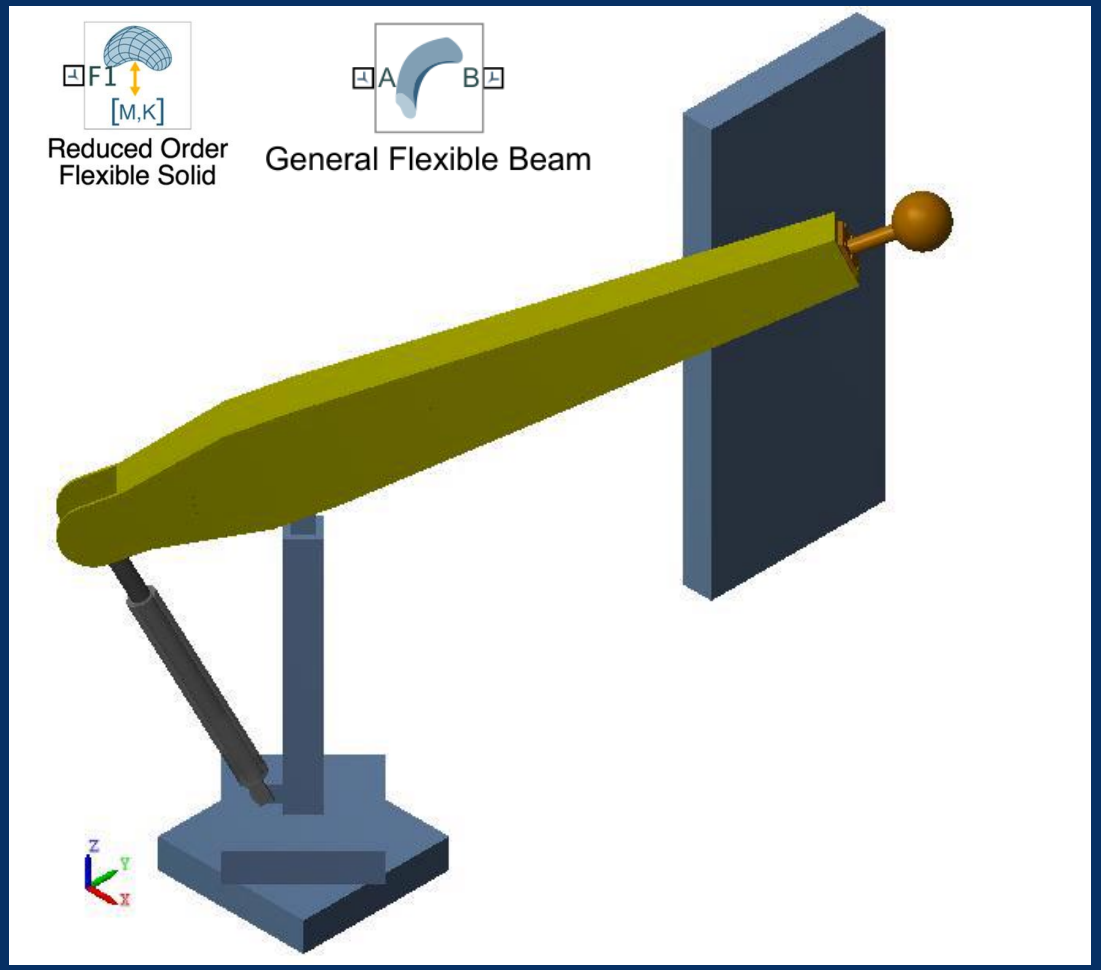
Model deformations and contact between bodies

User interfaces

Libraries – Physical modeling

Systems engineering



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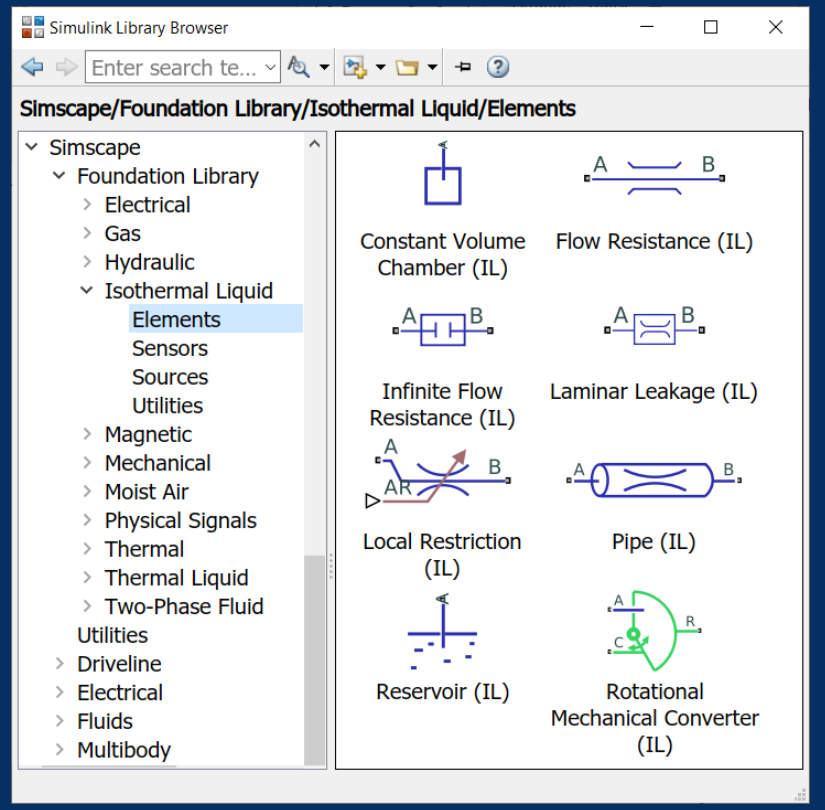
Model fluid power and transport applications

User interfaces

Libraries – Physical modeling

Systems engineering



Simscape

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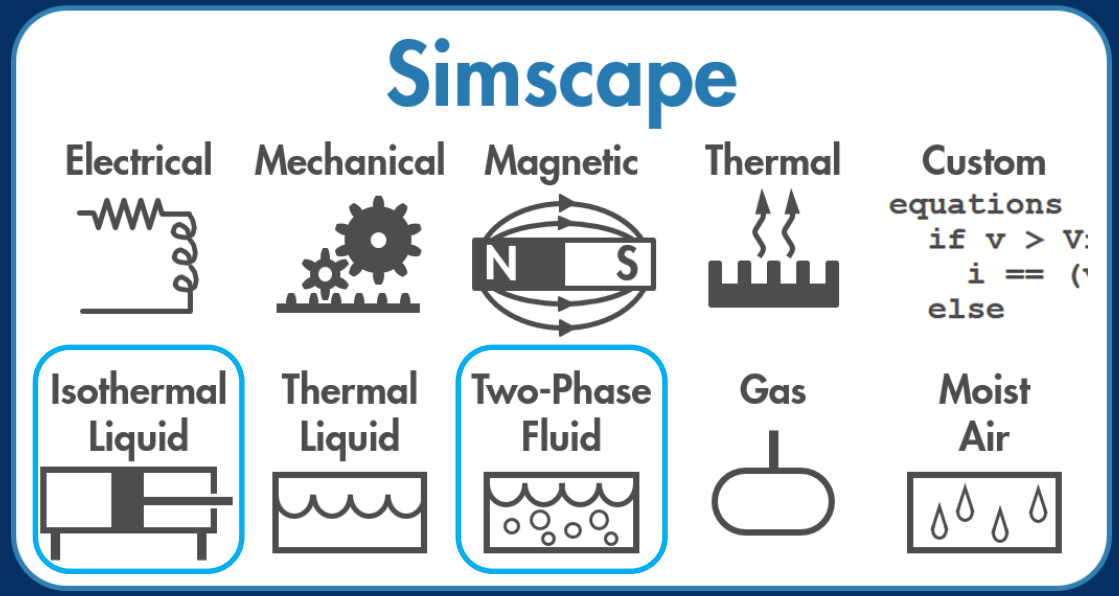
Model fluid power and transport applications

User interfaces

Libraries – Physical modeling

Systems engineering



Simscape

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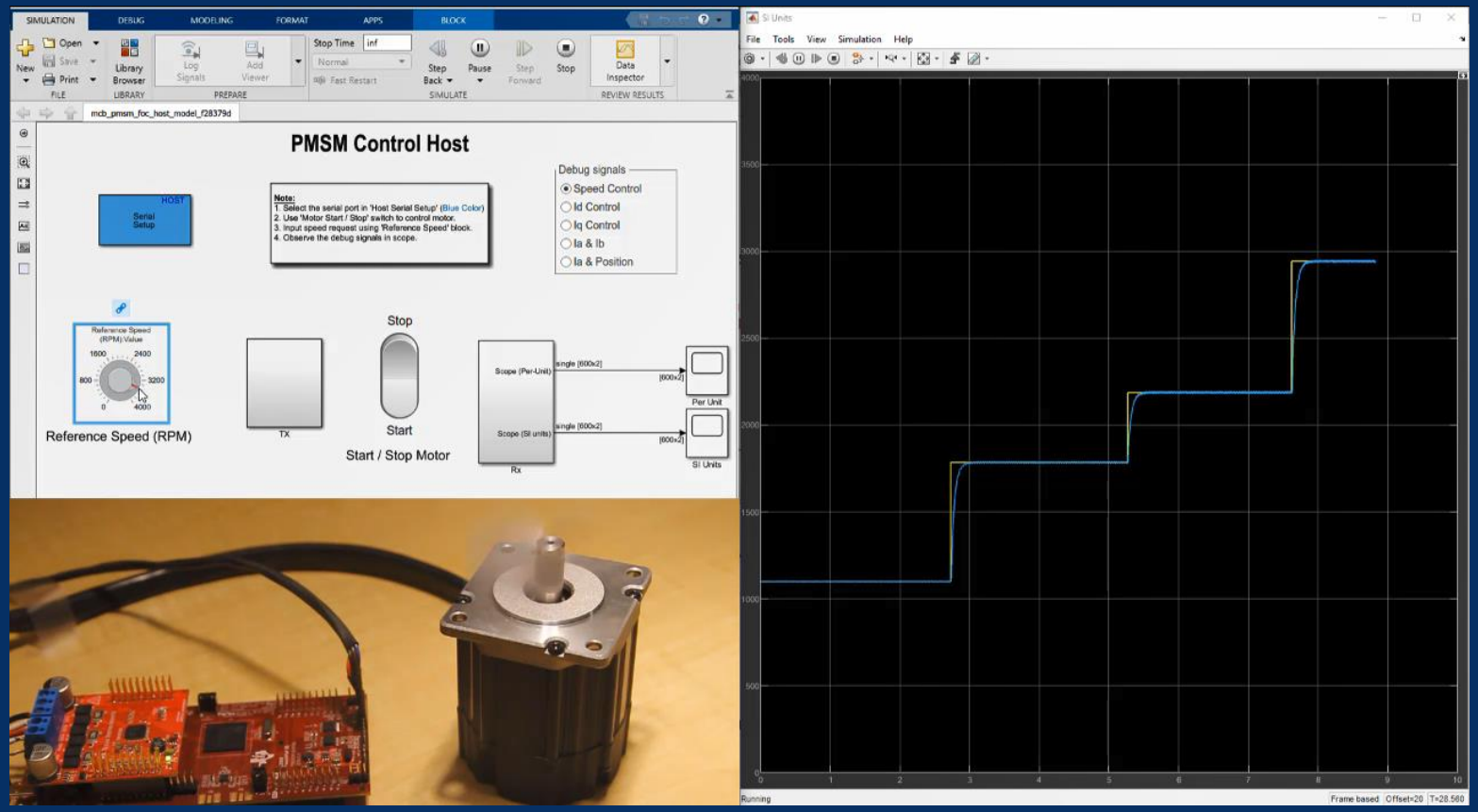
Generate motor control software with just a few clicks

User interfaces

Libraries – Motor control

Systems engineering



Motor Control Blockset **NEW PRODUCT**

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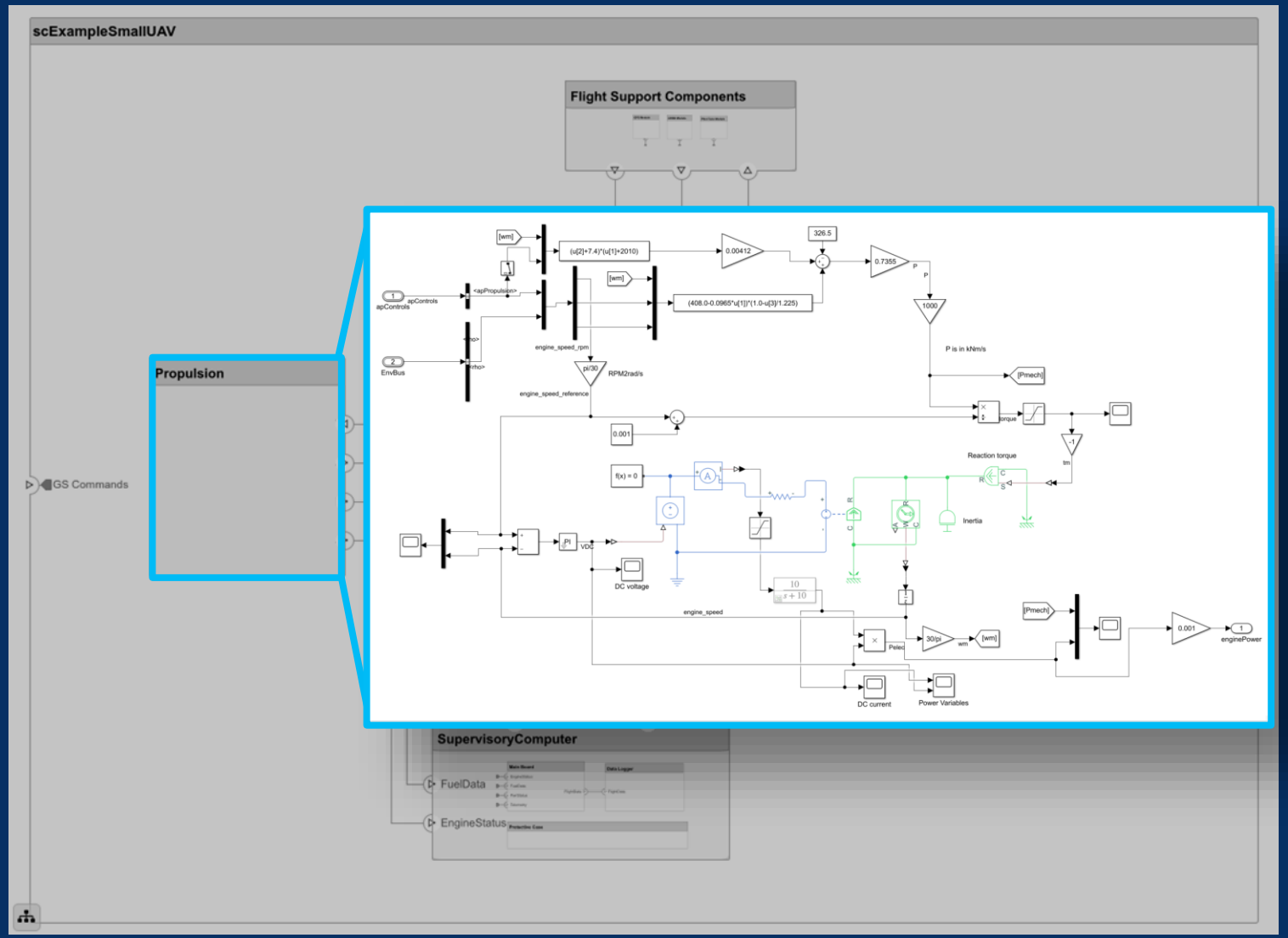
Design and analyze complex system and software architectures

User interfaces

Libraries

Systems engineering



System Composer

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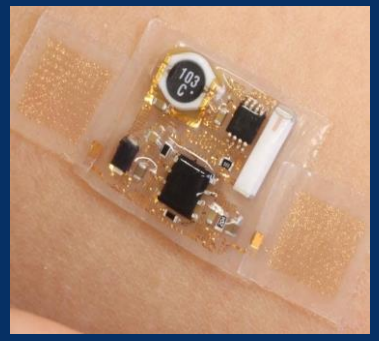
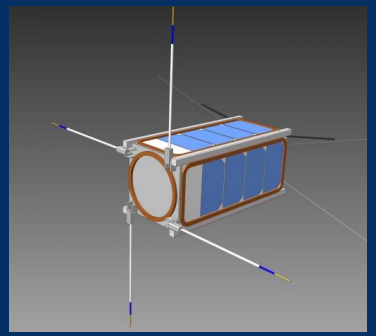
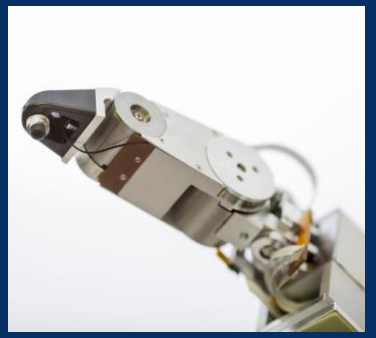
Simulink



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Simulink is the simulation integration platform

Simulink

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Simulink is the simulation integration platform

C/C++ | OpenCV | FMI/FMU | IPG AUTOMOTIVE | GT

Simulink

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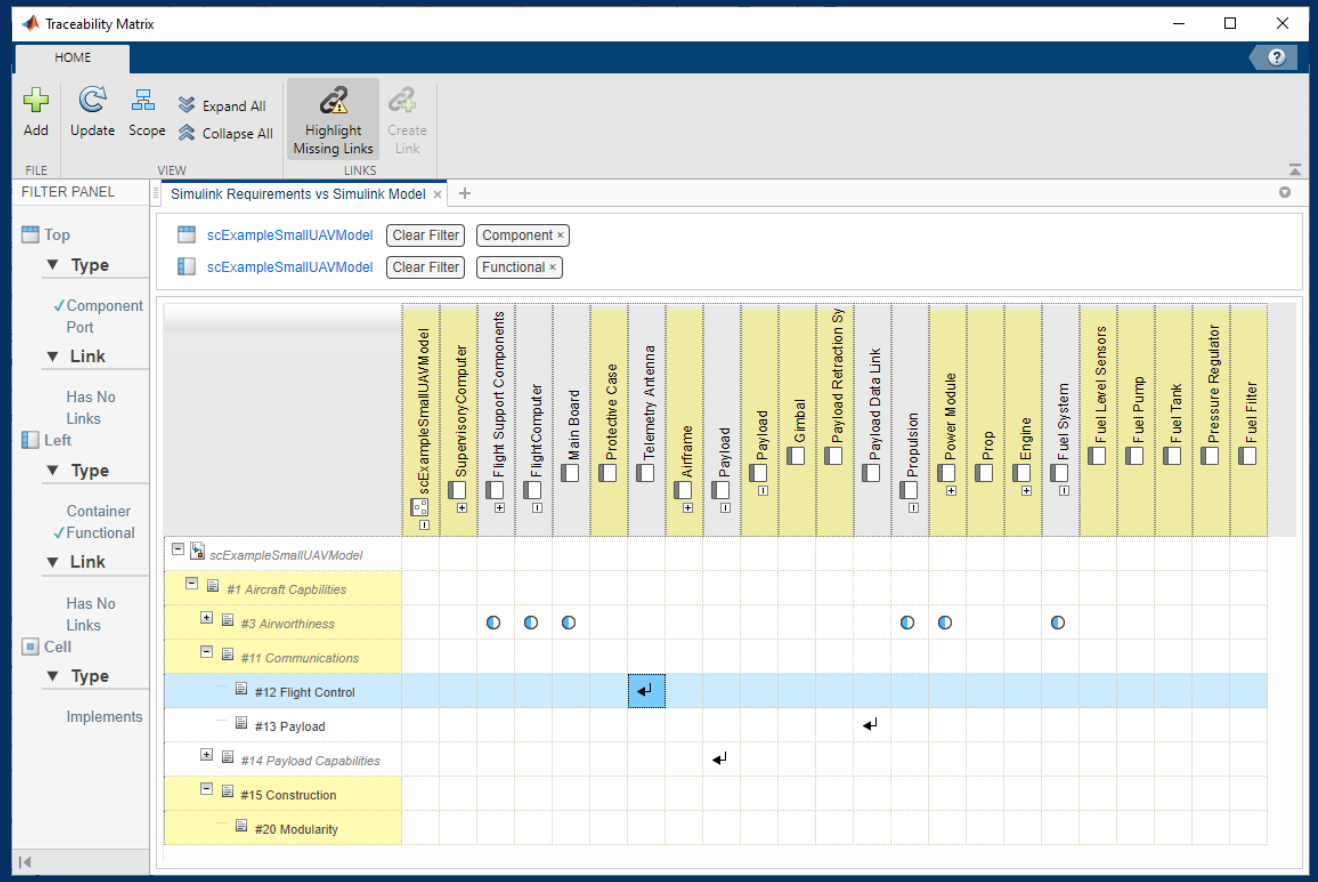
SIMULINK®

Test and Verify

Share and Deploy

Test and verify your design

Review and analyze traceability between artifacts in one interface



Traceability Matrix

Simulink Requirements

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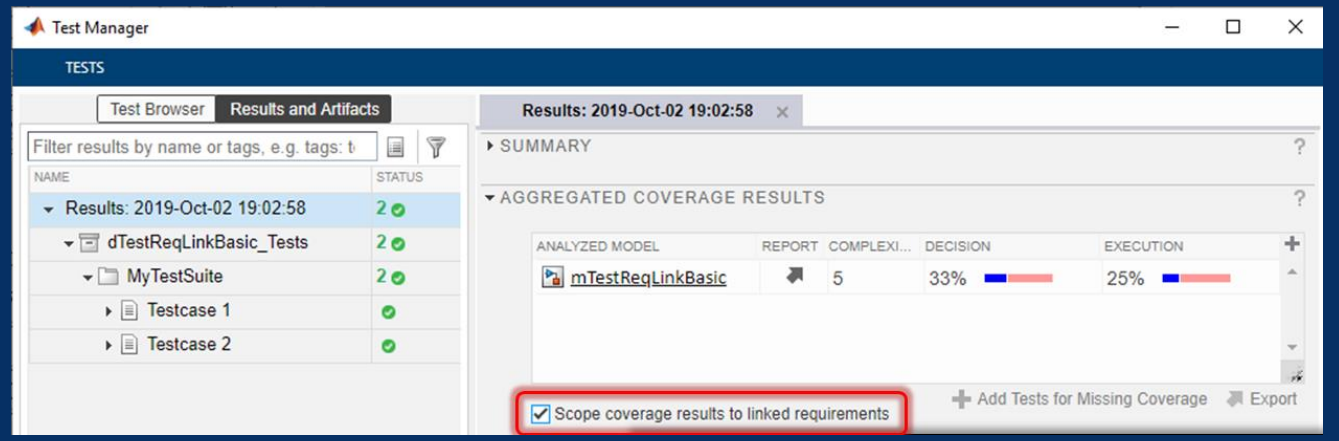
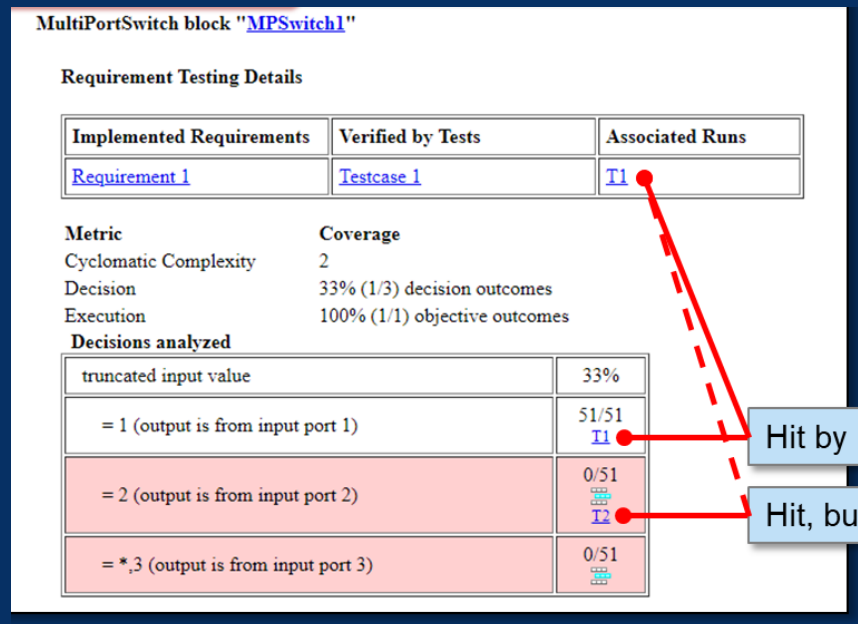
Test and verify your design

Review and analyze traceability between artifacts in one interface

Scope model coverage to requirements-based tests (RBT)





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Use Jenkins servers to automatically run and test your project

Install MATLAB Plugin for Jenkins directly from the Jenkins Plugin Manager

Simulink Test
Simulink
MATLAB

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SIMULINK®

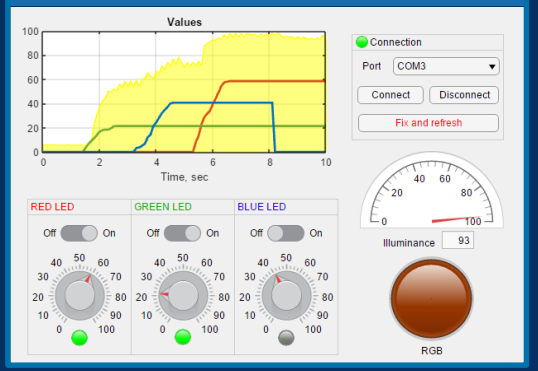
Test and Verify

Share and Deploy

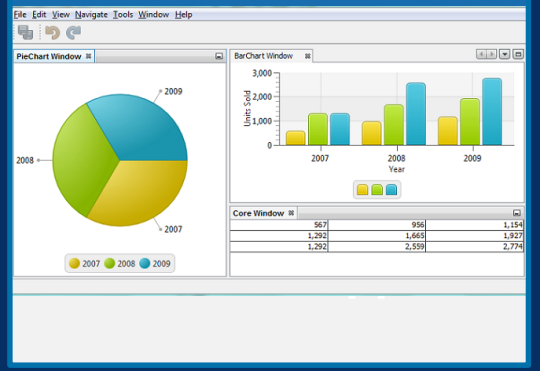
Share Simulink simulations – *where Simulink is not available*

Package a compiled Simulink model with MATLAB code

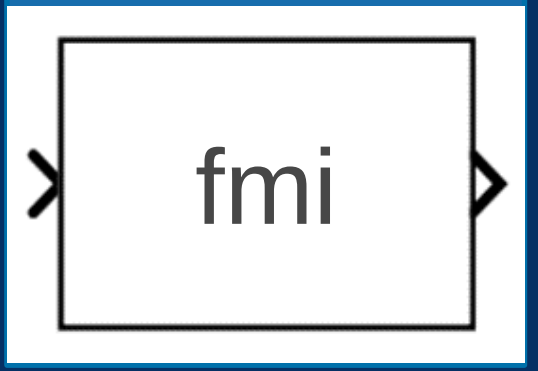
Standalone Apps



Web Apps



Standalone FMUs



Simulink Compiler

NEW PRODUCT

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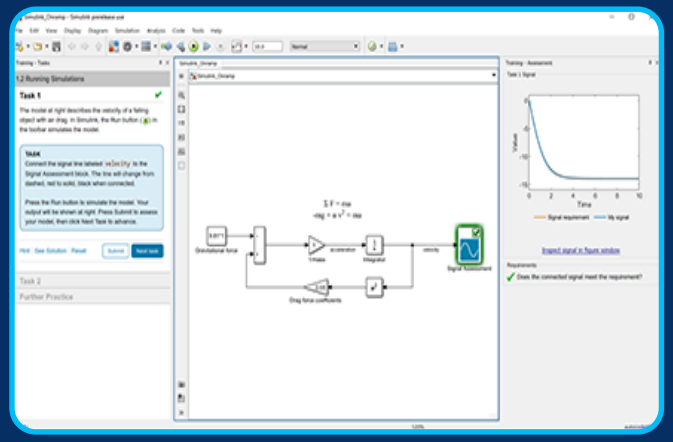
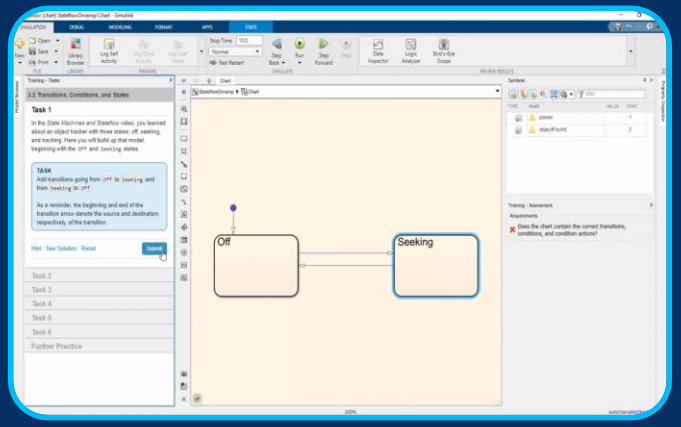
Test and Verify

Share and Deploy

Quickly learn the basics with free Onramp courses



Simulink Onramp



Stateflow Onramp

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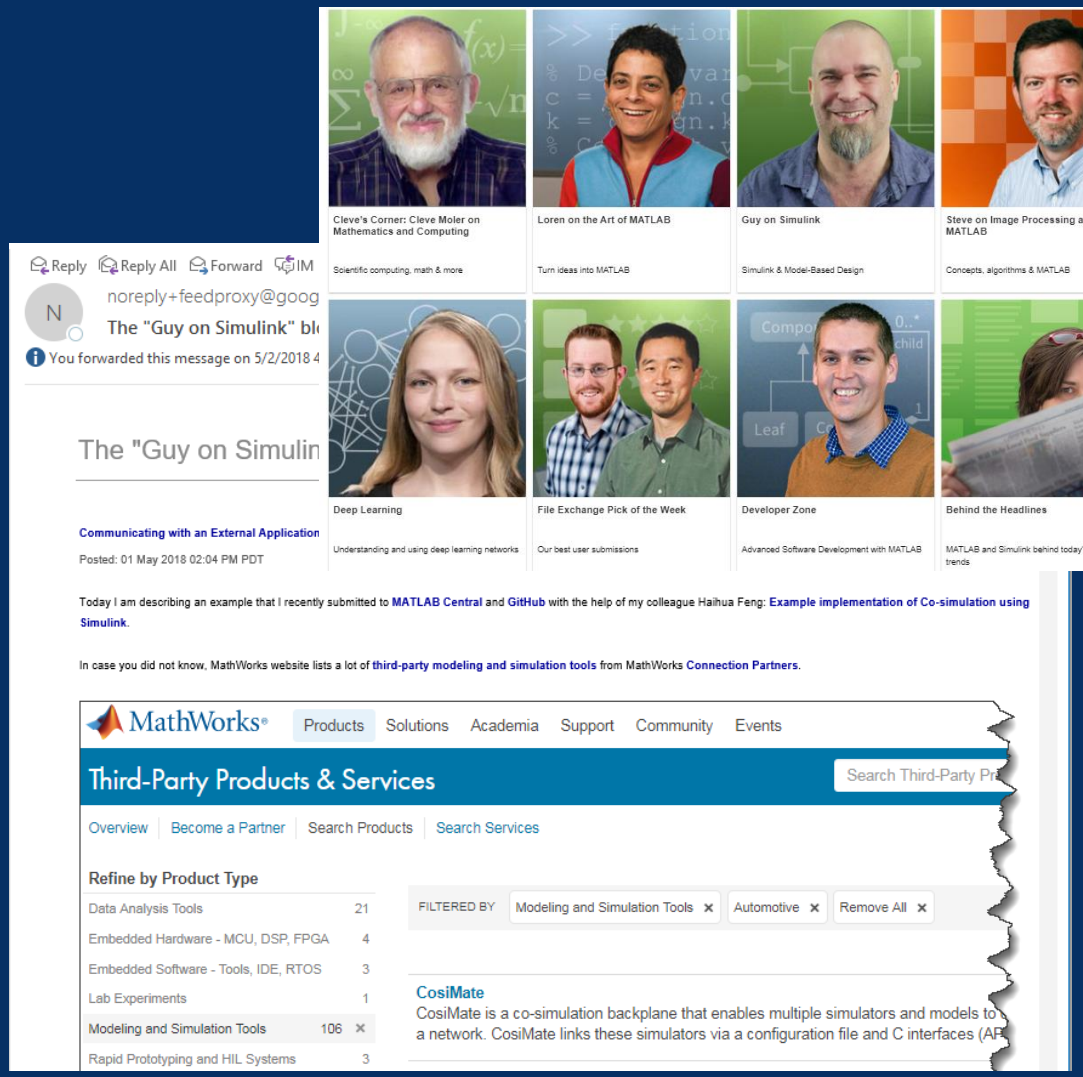

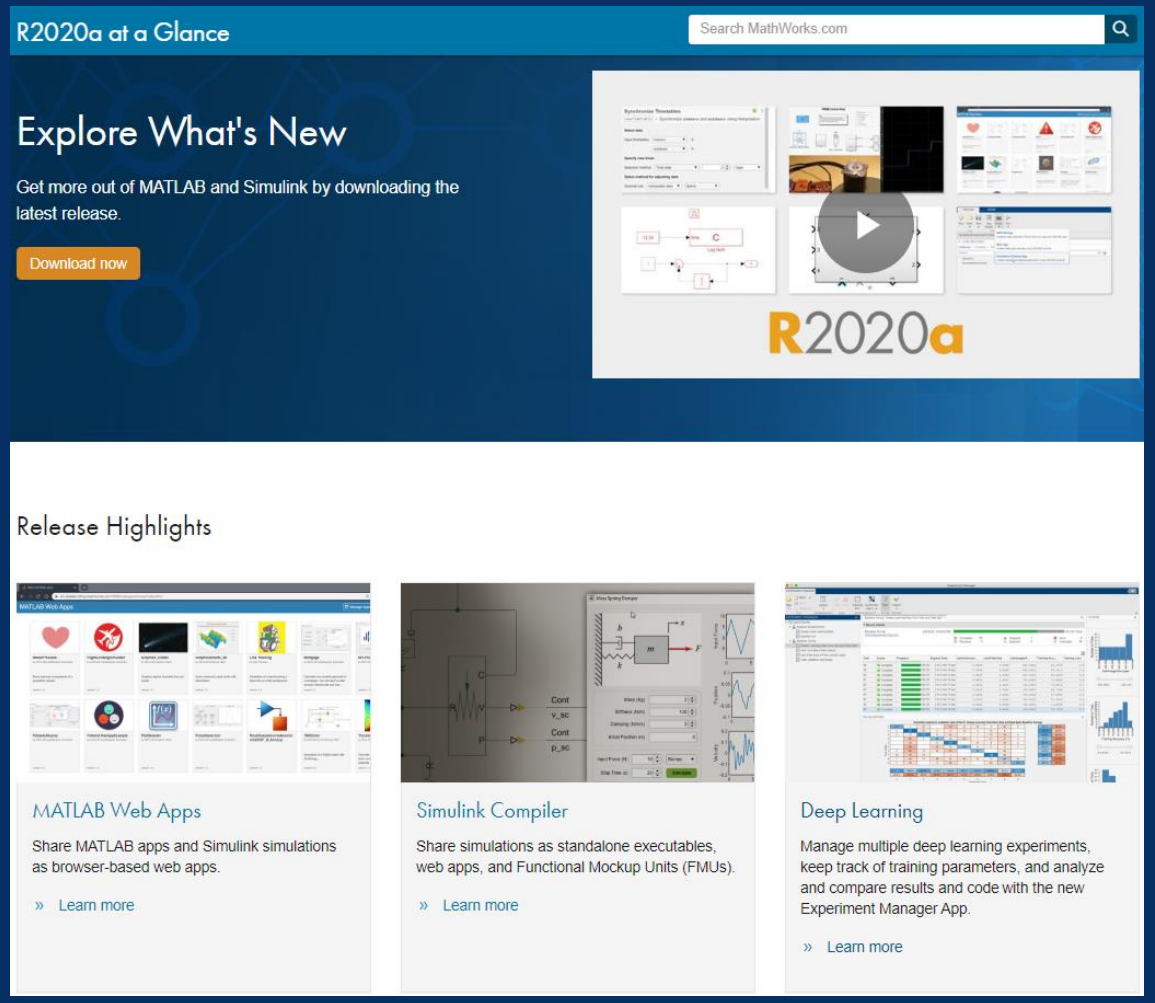

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MATLAB EXPO