



## Question:

**How to couple COSYM V2.2 with a Simulink® model?**



## Answer:

**COSYM supports tool coupling with MATLAB®/Simulink®, for SiL ATS simulations.**

A.) Registering COSYM toolcoupling blocks to MATLAB®/Simulink® once is necessary:

- Open the C:\Program Files (x86)\esse\1.2.6.0\cosym\simulink\AddCosymCommunicationsLib.m file in MATLAB®.
- Click Run on the toolbar to run the AddCosymCommunicationsLib.m script. This m-script registers the COSYM toolcoupling blocks to MATLAB/Simulink.

B.) Workflow

1. Prepare the system in COSYM

1.1. Create a C-Code module in COSYM using the context menu in Library "Create tool coupler", with name e.g. "ToolCoupler":

**\*ToolCoupler**

<b>Model Name</b>	ToolCoupler
<b>Model Path</b>	Library\Environment
<b>Type</b>	ccode
<b>Modeling Tool</b>	COSYM C-Code Template Generator.toolConnect
<b>Simulink Model Path</b>	C:\ETAS\ETASData\COSYM2.2\Samples\SiL\ <input type="button" value="Browse"/> <input type="button" value="Open"/>
<b>Supported Matlab Version</b>	R2016b <input type="button" value="C:\ETAS\ETASData\COSYM2.2\Samples\SiL\COSTMTCEX\SL\Sine.slx"/>
<b>M Script</b>	<input type="button" value="Browse"/>

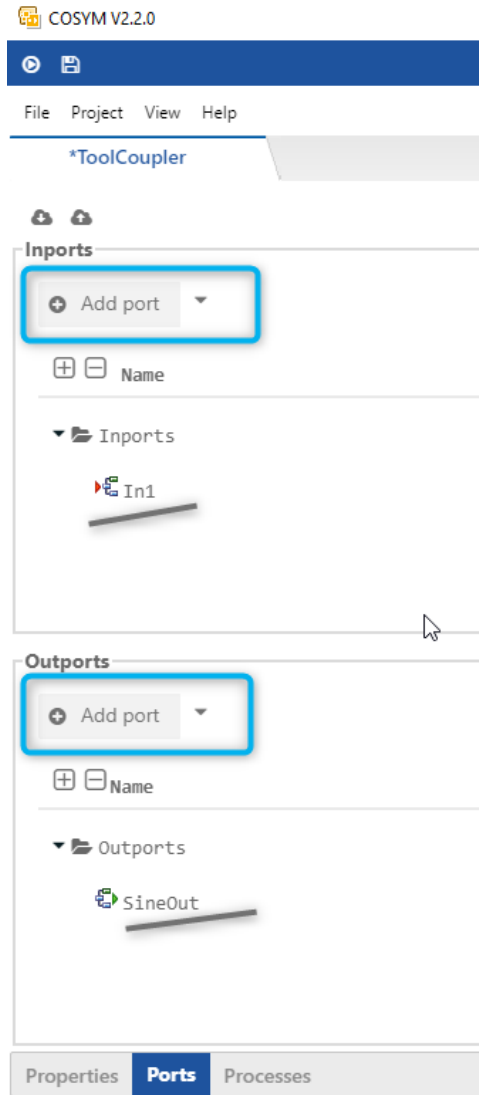
**Description**

B I U ☒ ” ☰ ☷ x<sub>2</sub> x<sup>2</sup> ☰ ☷ ↕ Normal ⌵  
Normal ⌵ A ☒ Sans Serif ⌵ ☰ I<sub>x</sub>

insert content...

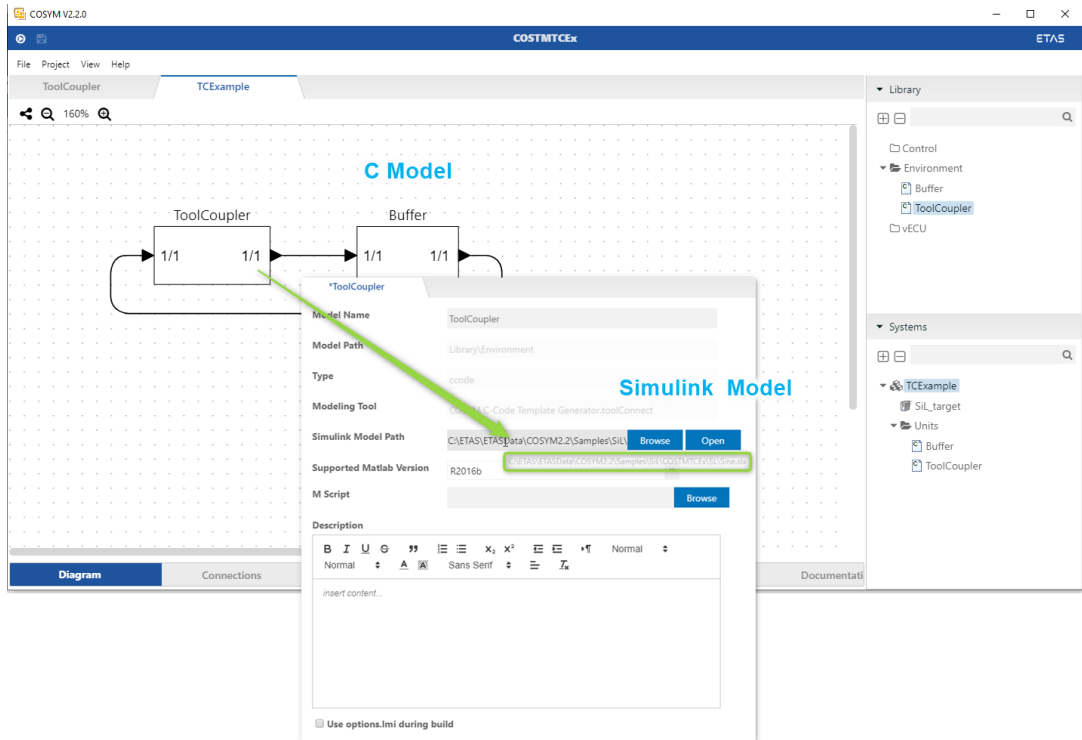
Use options.lmi during build

1.2. Add input and output ports:

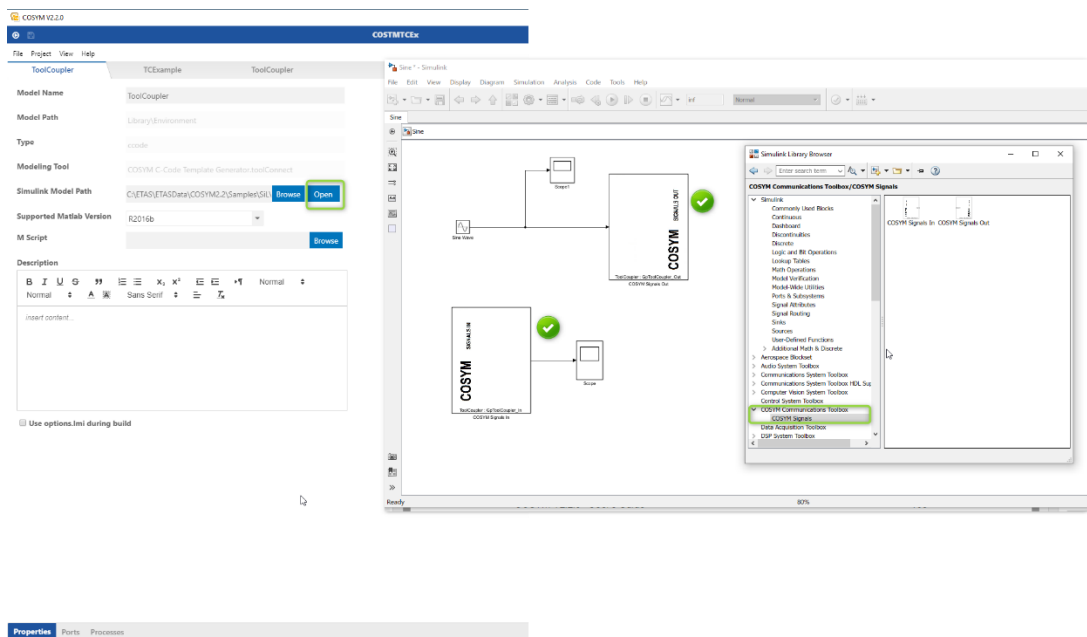


1.3. Create a system in COSYM with a model from COSYM Library (i.e., Buffer) and the tool coupler model (i.e., ToolCoupler).

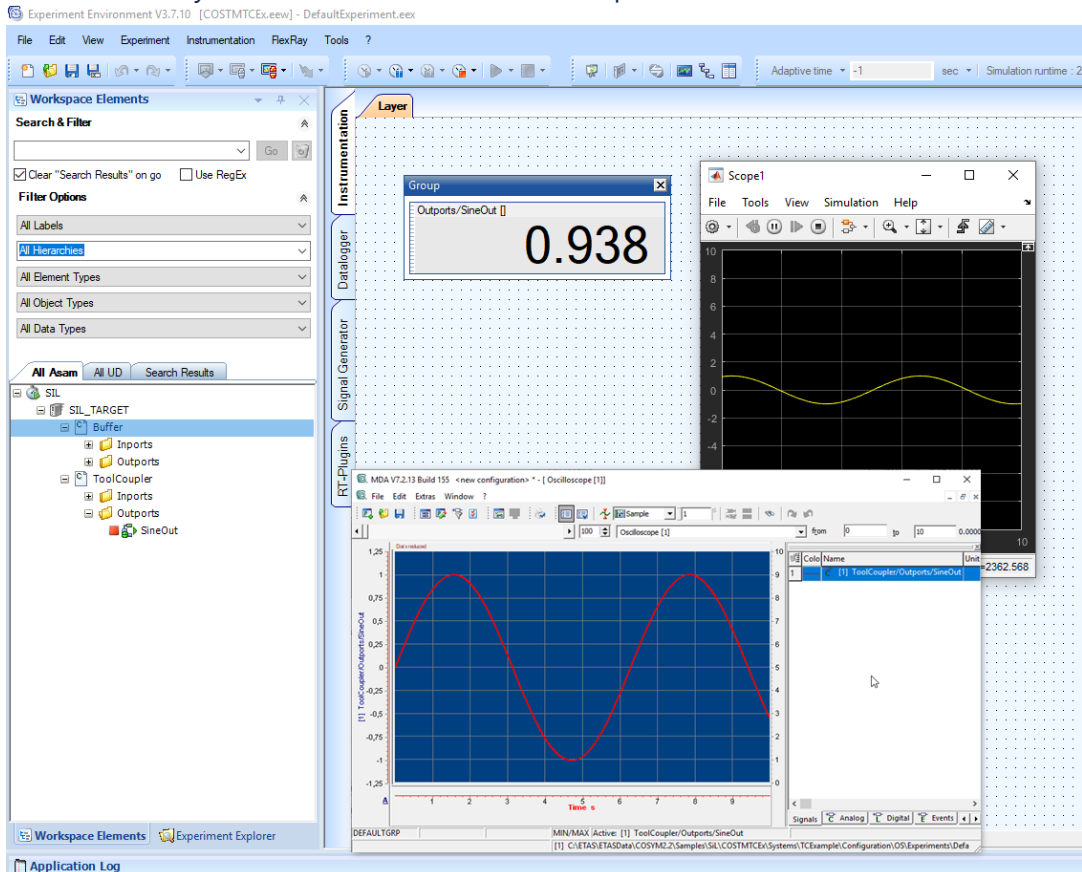
- 1.4. Connect those simulation units in Connections editor, define the OS configuration in Deployment editor, etc.



2. Open the Toolcoupler model in MATLAB®/Simulink®



3. Generate C Code (build system)
4. Download SiL system and "Start Simulation" in Experiment Environment



### Additional information:

The tool coupling feature has been optimized with COSYM v2.2.0. In particular the steps needed in COSYM v2.1.0 regarding "prepare native Simulink model" have been suppressed.



### In case of further questions:

Please feel free to contact our Support Center, if you have further questions.

Here you can find all information: <http://www.etas.com/en/hotlines.php?langS=true&>

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