



Overview

The CyPhy2ESMoL interpreter creates an ESMoL software implementation model from a CyPhyML cyber component assembly. CyPhyML represents controllers as alternative models, which contain an idealized specification for the controller (in Simulink), as well as a detailed controller implementation model (realized through ESMoL). The generated ESMoL model represents the software interfaces for controller components defined in Simulink, the hardware platform on which the software will run, the deployment of the software to the hardware, and timing parameters for the deployed software. From the ESMoL model we can generate the software implementation code to be used in either TrueTime platform simulations or the FRODO time-triggered runtime on target hardware.

Supported Context

TestBench models

The Dynamics interpreter presents an option to create controller simulations through the ESMoL tools instead of using an idealized Simulink controller.

Options

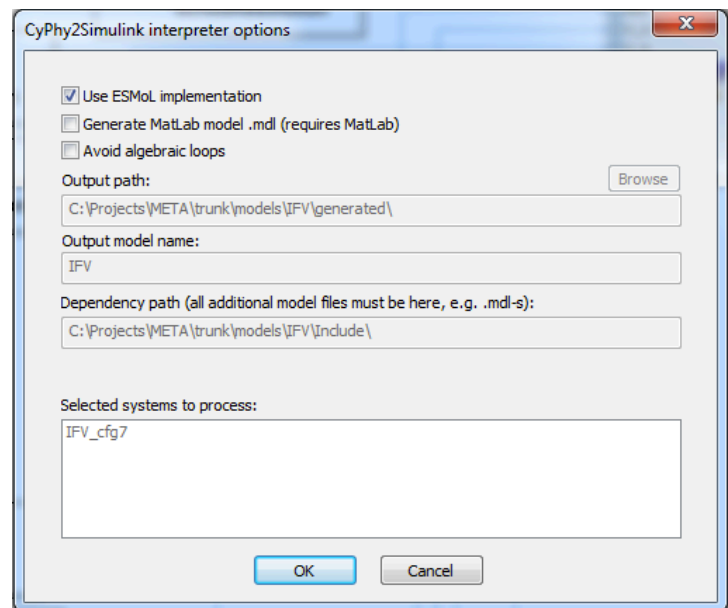


FIGURE 1 DYNAMICS INTERPRETER DIALOG BOX WITH PARAMETERS

Use ESMoL implementation:

Indicates to the Dynamics interpreter that Simulink simulations for any controller components should be generated using the CyPhy2ESMoL interpreter. The resulting generated subdirectory will contain an ESMoL model generated for the test bench. Running the ESMoL interpreters on the generated model will create code and scripts to include the TrueTime model in the generated Simulink simulation. Run 'IFV_buildscript.m' from within Matlab in the generated directory to create the Simulink model.