Exporting Humidifier example to Simulink model

To generate a Simulink model directly from the modeling tool

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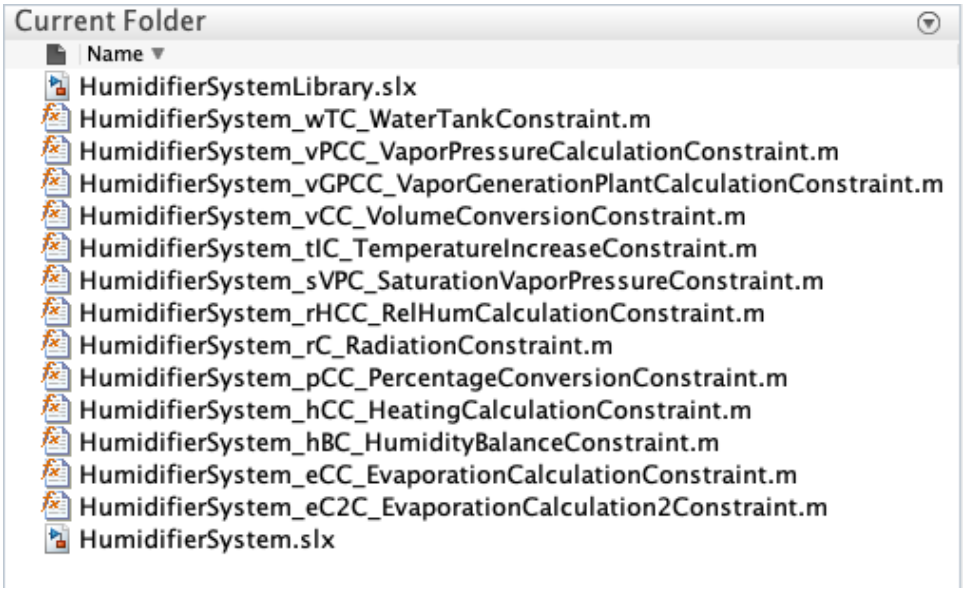
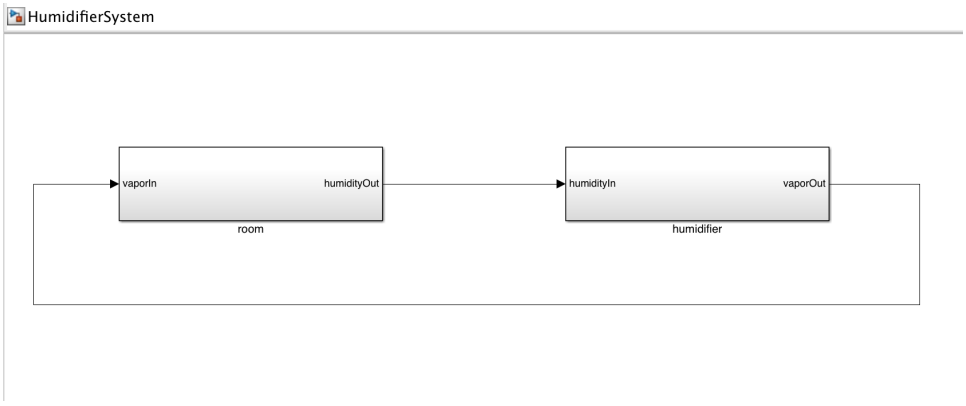
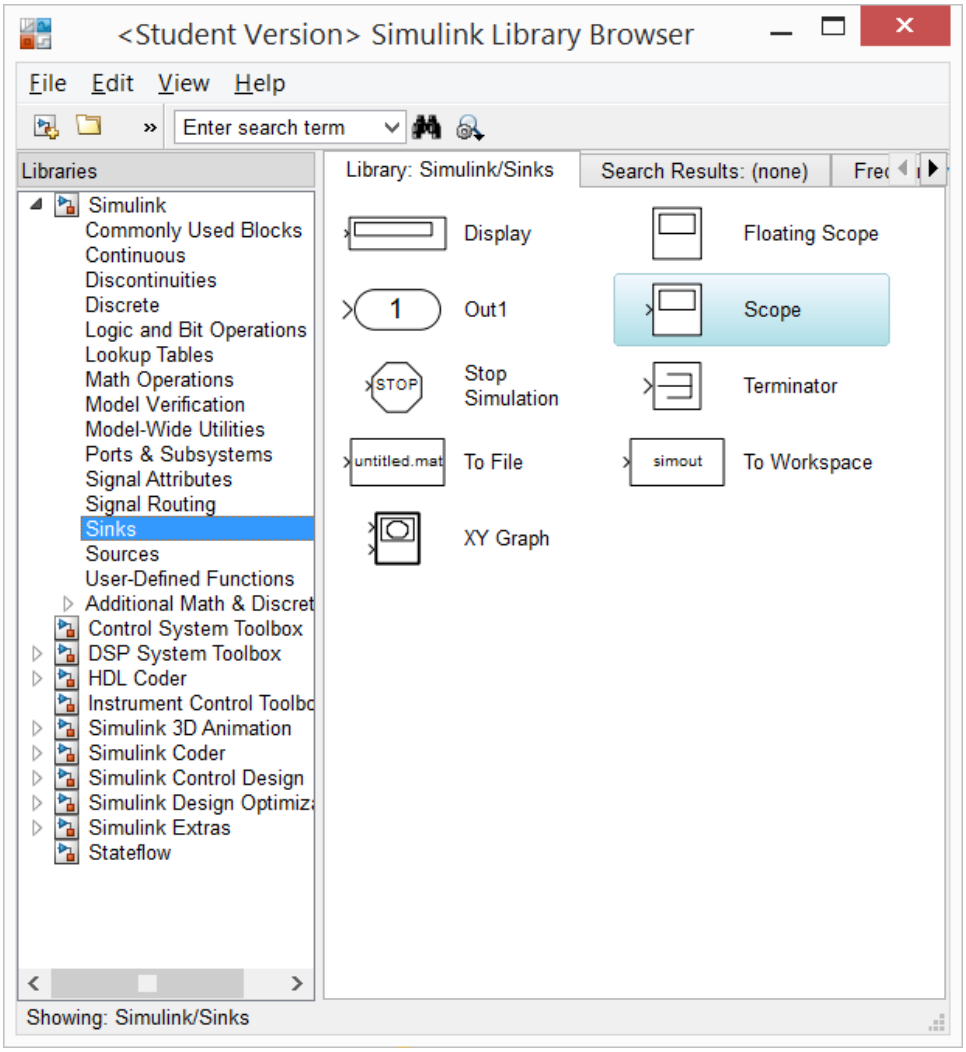
1. Right-click the *Block* **HumidifierSystem** and select **Tools** > **Exportto Simulink**.
2. Set the options listed below and click **OK**:
    - **Format**: XML (.sdl)
    - **S-Function or Simscape**: S-Function version 2
3. Launch Matlab with Simulink and Stateflow extensions.
4. In Matlab's **Current Directory** navigation bar, search for the file directory where the Simulink files (as well as the SysML files) are saved, and set it as the current directory. The **Current Folder** panel should display generated Simulink (.slx) files.



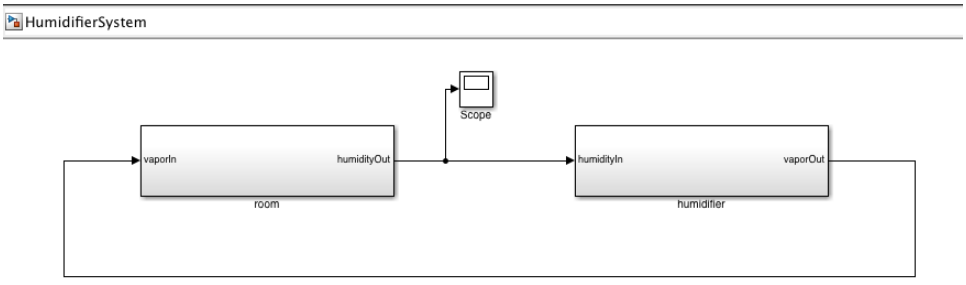
5. In the **Current Folder** panel, double-click the file named **HumidifierSystem.slx**. The model will open up in a Simulink window.



6. Open the **Library Browser** either by using the **4-block** icon or by going to **Tools** > **Library Browser**. Find and click on **Sinks** among the list in the **Libraries** panel, which will be categorized under **Simulink**.

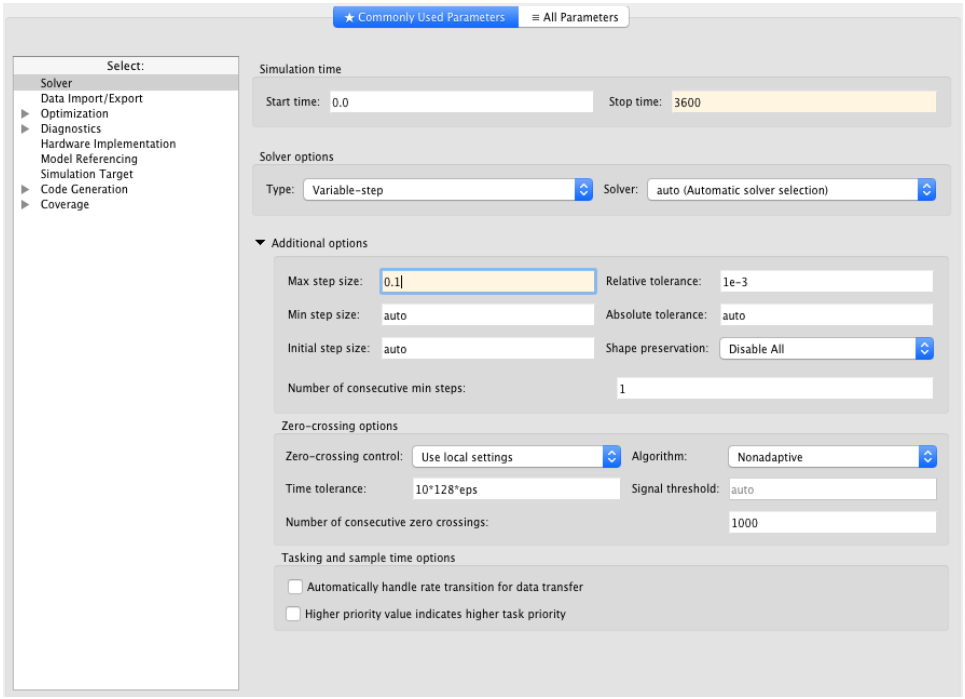


7. Pull-and-drag the **Scope** block from the **Sinks** library list into the **HumidifierSystem** Simulink model. Attach a signal line segment from the **Scope** port onto the signal line that connects the *humidity-out* port of the room block to the *humidity-in* port of the **humidifier** block.

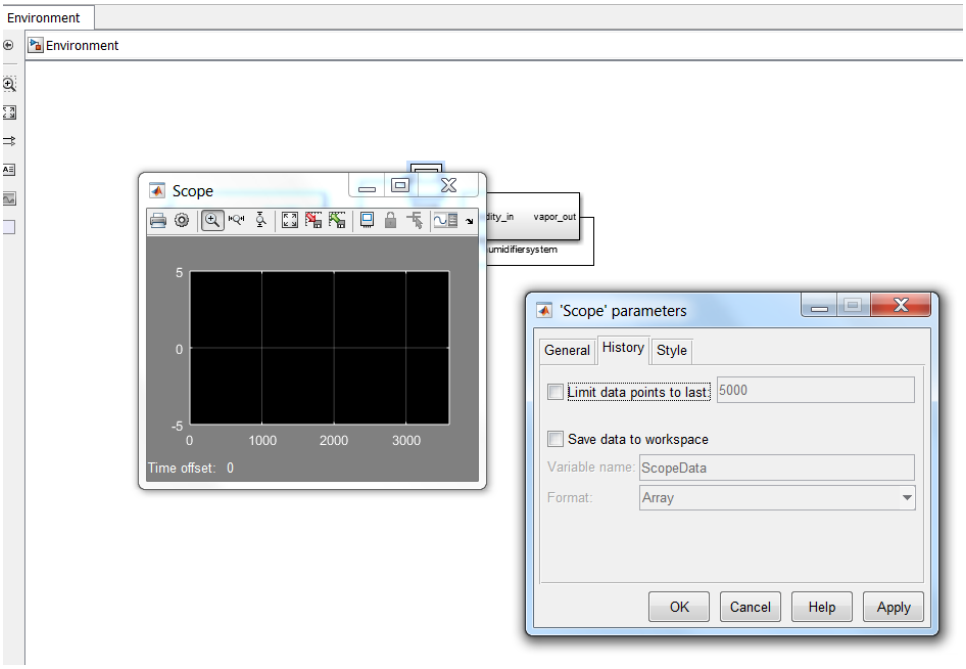


8. Go to **Simulation** > **Model Configuration Settings**. This allows selecting the types of solver and the runtime of the simulation. Select a **Start Time** of **0.0**, and a **Stop Time** of **3600**. Under **Solver Options**, select the solver **Type** to **Variable-step** (or any other desirable solver that is

suitable) and change the **Max step size** to **0.1**. Press **Apply**, then press **OK**.



9. Double-click the **Scope** block in the model. An empty (black) plot will show up. Press the **'Scope' parameters** button (the gear icon above the empty plot). A **'Scope' parameters** dialogue box will pop up. Go to the **History** tab and uncheck the option box **Limit data points to last**. Press **Apply**, and then **OK**.



10. Go to **Simulation** > **Run**. Double-click on the **Scope** block to see the simulation results.