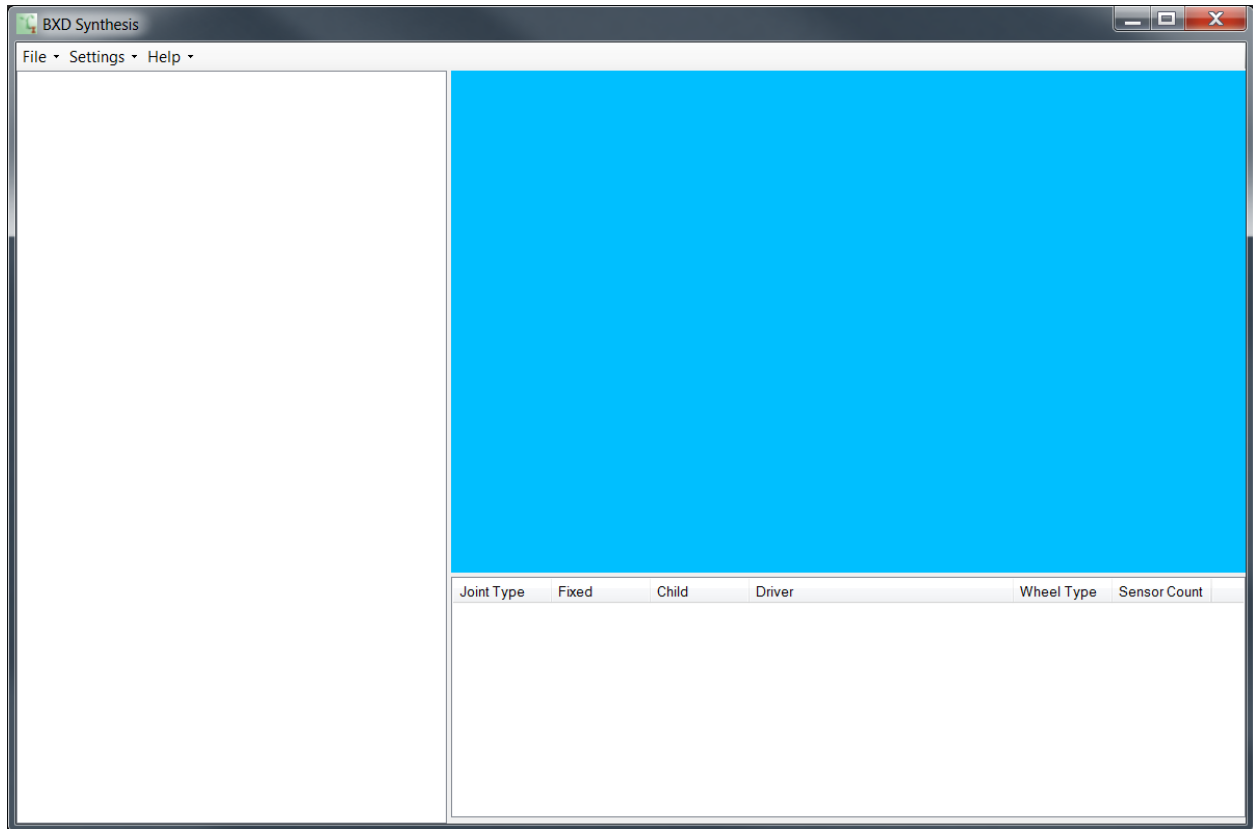
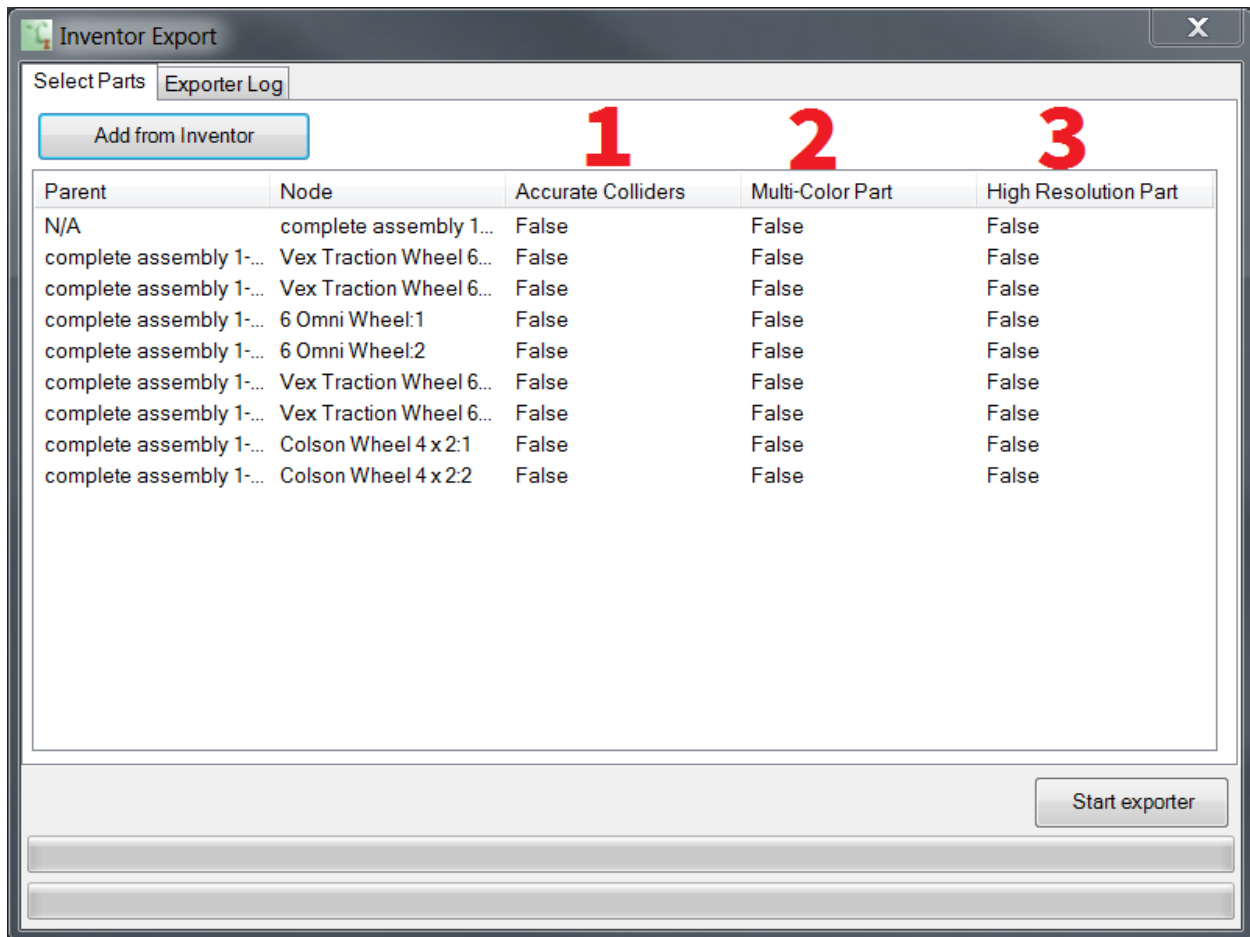


The Synthesis Robot Exporter allows you to export robot models from Inventor and configure them to work in the simulator. Although you can edit many aspects of your robot, exporting it is a simple process.



To begin, go to **File->Load** from Inventor. In the dialog that appears, click the **Add from Inventor** button and wait for the program to load your robot. After it finishes, you should have a list of all the subassemblies on your robot that are connected by joints. These are called nodes. Before you export the robot, you can change some settings for each node.

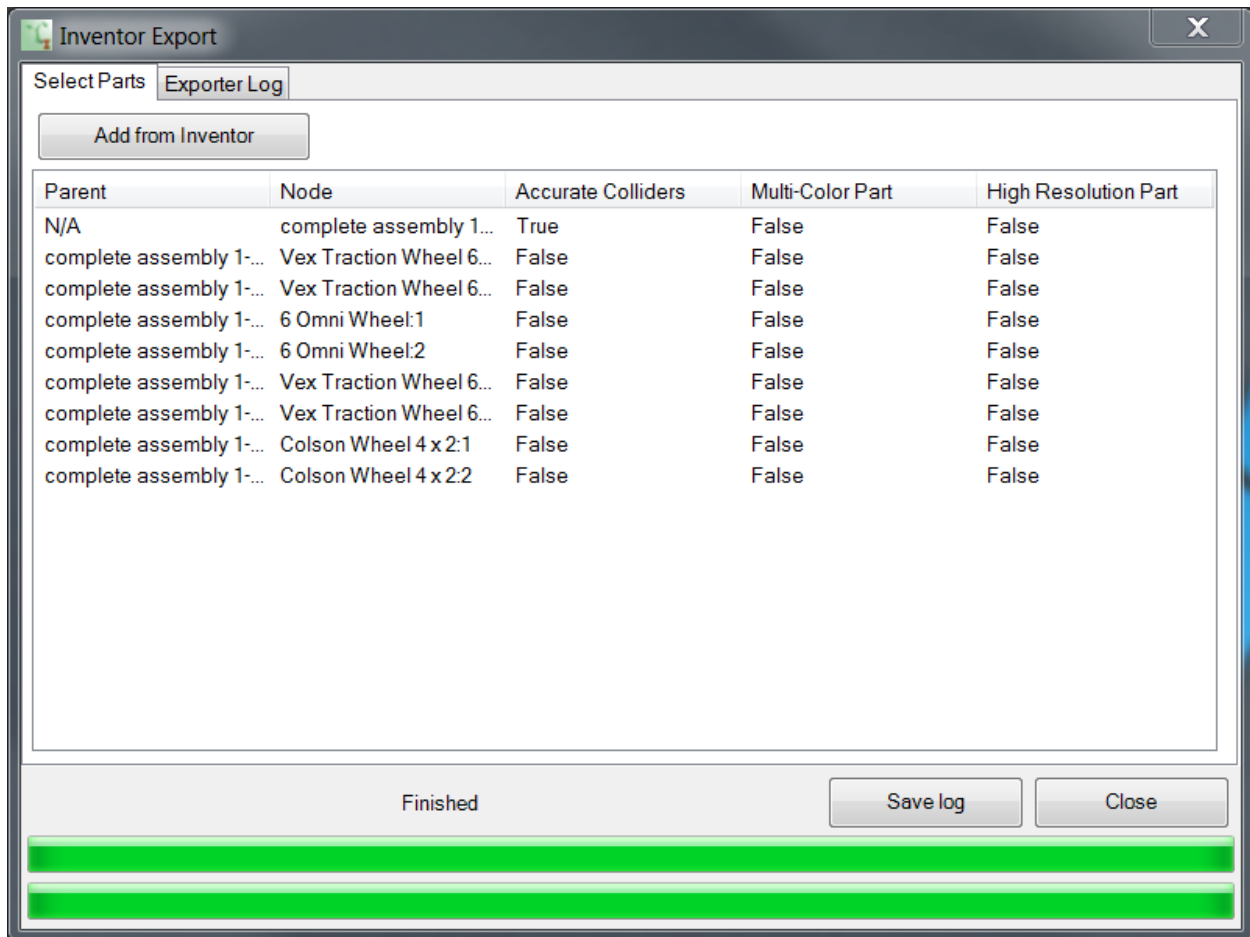


Accurate Colliders (1) allows you to export certain assemblies or parts with complex collision shapes. For example, it would be used on an assembly that is used to pick up a tote or container. It wouldn't be used on a wheel, as it would take more time than is necessary on a simple shape.

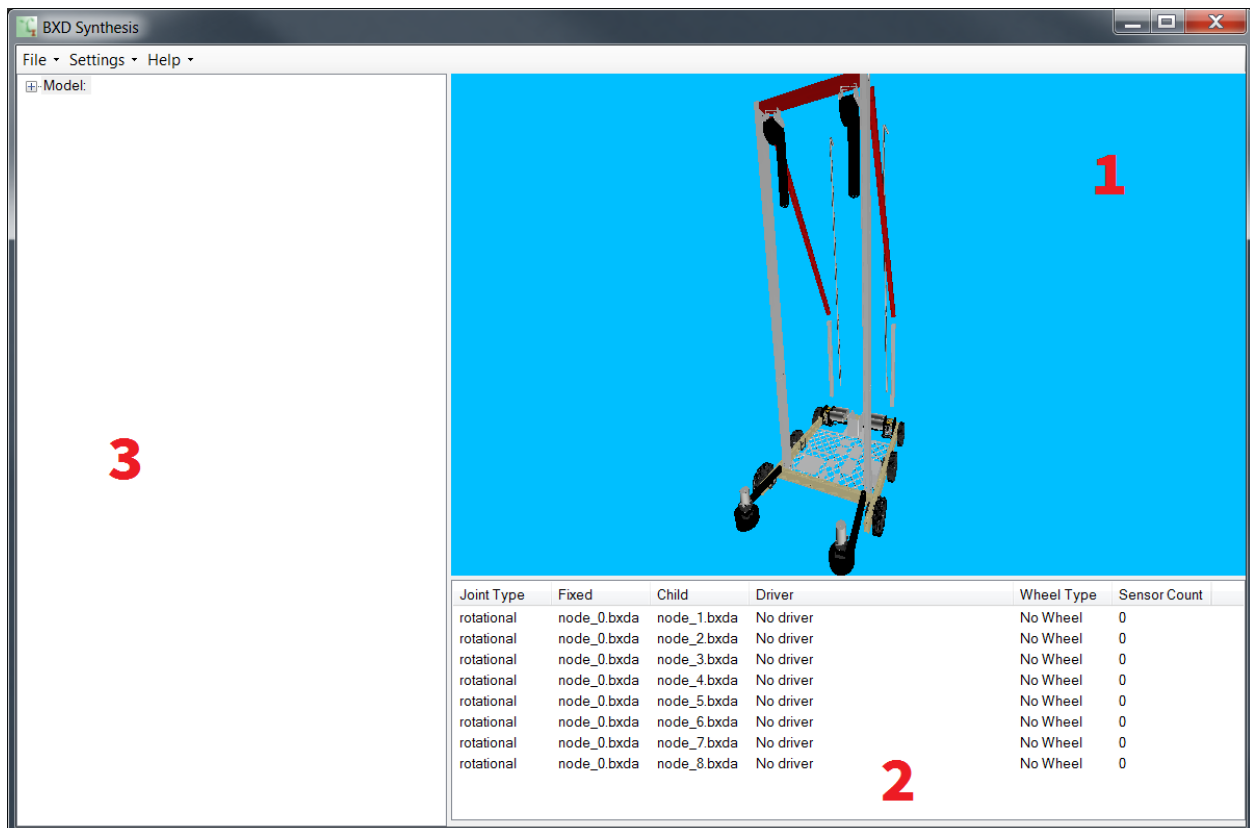
Multi-Color Part (2) allows you to force assemblies or parts to export with multiple colors per part. Depending on the complexity of the part, however, the exporter might do this anyway.

High-Resolution Part (3) allows you to export parts and assemblies at a higher resolution than normal.

When you're finished, click "Start Exporter" and wait for it to complete.



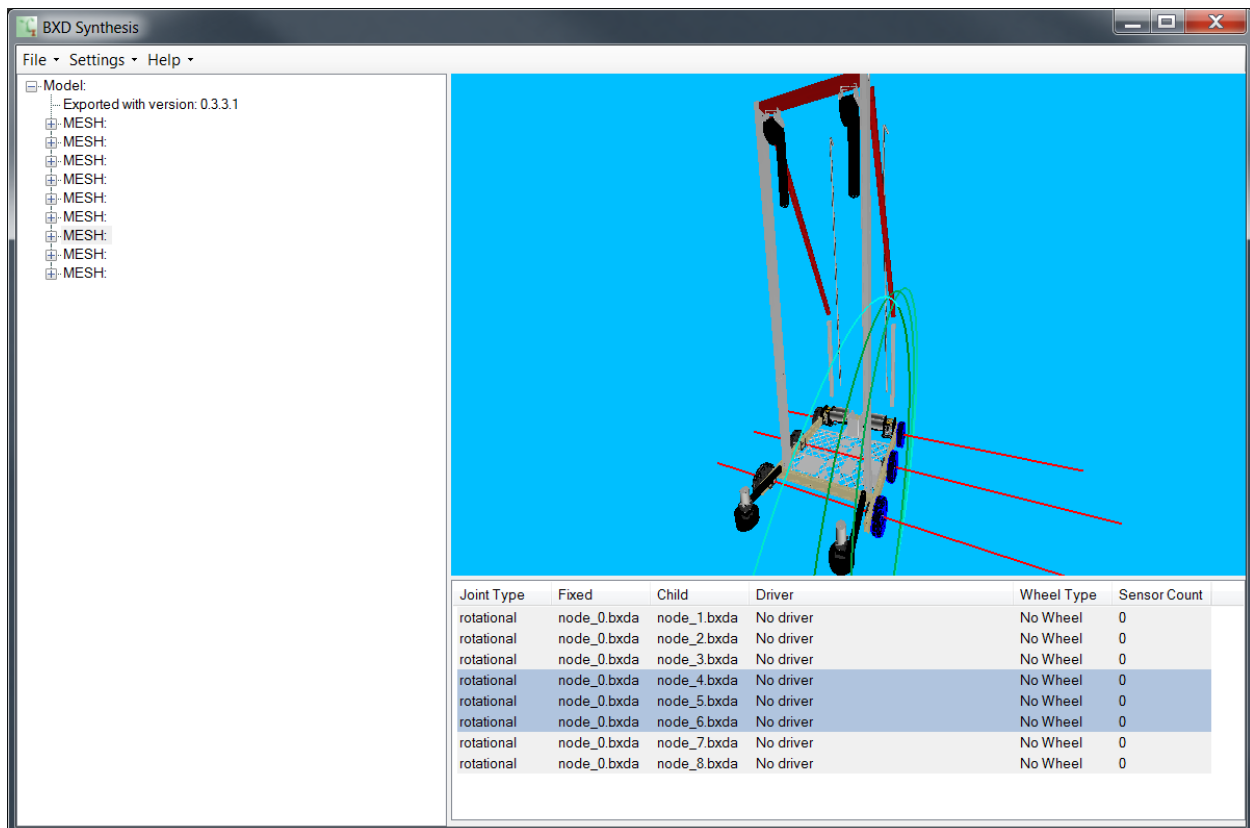
After the export is complete and you have closed the exporter window, the three panes of the main window will fill up.



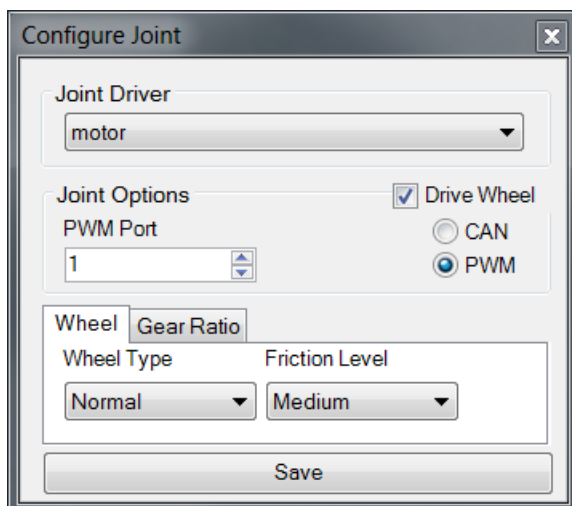
The **Robot Viewer** (1) allows you to view the robot and select parts by clicking on them. The camera controls are the same as they are in Inventor, and you can select multiple parts by holding control while clicking.

The **Joint Editor** (2) holds information about the robot's joints. By right clicking on selected joints, you can edit information about the joint driver, the sensors attached to the joint, and the limits of motion on the joint.

The **Mesh Editor** (3) lets you edit some other properties of the robot such as mass and visual properties. You can double click on highlighted values to edit them.



To give the robot some functionality in the simulator, let's add some basic joint information to its wheels. Select the wheels on one side of the robot and right click on the selected wheels in the joint editor. Select **Edit Driver** and a window will pop up.



Under **Joint Driver**, select motor and make sure that **Drive Wheel** is checked. Set the PWM port to the same port it is connected to in the code, and then select type of wheel it is under **Wheel Type**. You can also set the friction level and gear ratio. Hit **Save** to save your work and close the window.

After you edit some more wheels, go to **File->Save** and save it to a folder. Now you have a functional robot to use in the simulator.