

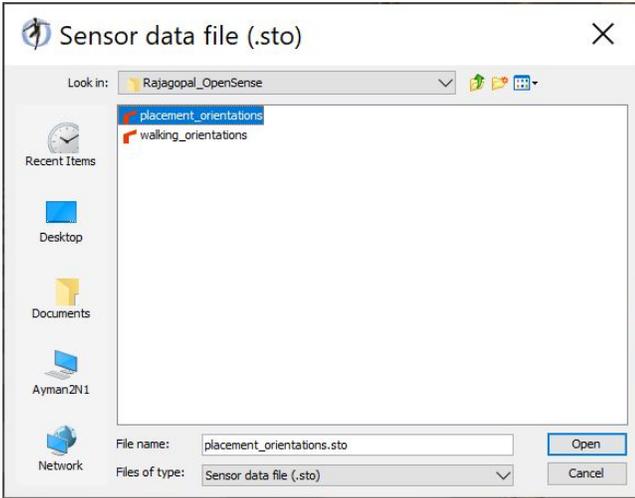
Preview Sensor Data

Sensor data can be previewed in OpenSim to verify that preprocessing was done correctly and that data is in agreement with the intended model. In some cases, you can also use OpenSim's feature for [Associating Data with a Motion](#). For example, if you've already run IK and you want to visualize sensor data or ground reaction forces in sync with the inverse kinematics trial you should use the Associate Data motion feature.

If you have multiple files representing different pieces of data, this tool allows you to verify that the data was transformed consistently. Since the goal is to ensure that the data is consistent with an OpenSim model for further analysis, this module handles data files in the format accepted by OpenSim tools. The sensor data need to be represented as (.sto) file containing Quaternions. Each Quaternion is represented as a triad in the 3D window.

The preview functionality is accessible through the menu FilePreview Sensor Data...

Upon selecting this option, the user is prompted to browse for the .sto file containing quaternion data, an example file is provided within the OpenSense example files.

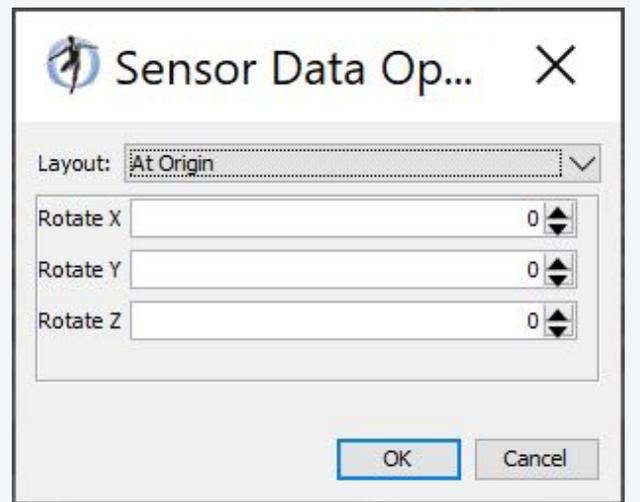


Since sensor orientation data typically do not have "translation/position" information, the user is prompted to choose a placement to position the triads corresponding to the quaternions from the data file in the 3D window. The following figure shows the dialog and the corresponding options to customize sensor data visualization.

Layout Options:

- At Origin: All triads are overlaid at the origin (overlapping).
- Evenly Spaced along X/Y/Z: The triads are spread out in a straight line along the corresponding axis
- Half Circle in Y-Z Plane: The triads are evenly placed along the perimeter of a half-circle in the vertical Y-Z plane
- Place at matching segments on current model: This is likely the most useful layout if you have a model with segments that match (based on name) the sensors in the data file. The current model is used to provide the translation/placement of the corresponding triads.

The dialog also allows for applying Rotations around X, Y, and/or Z to help users decide the transform between sensor data frame and OpenSim frame.



Once loaded, the sensor data "motion" is treated uniformly as other motions in the OpenSim application, in that it can be animated using the motion slider and/or synchronized with other motions if desired.

Next: [Importing and Exporting SIMM Models](#)

Previous: [Previewing Motion Capture \(Mocap\) Data](#)

Home: [Preparing Your Data](#)