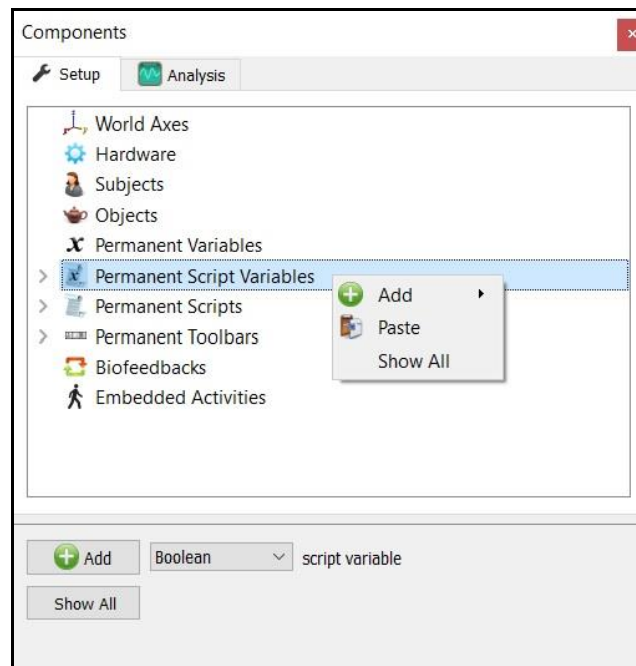


## **The MotionMonitor xGen Software Guide: Generating Virtual Event Markers**

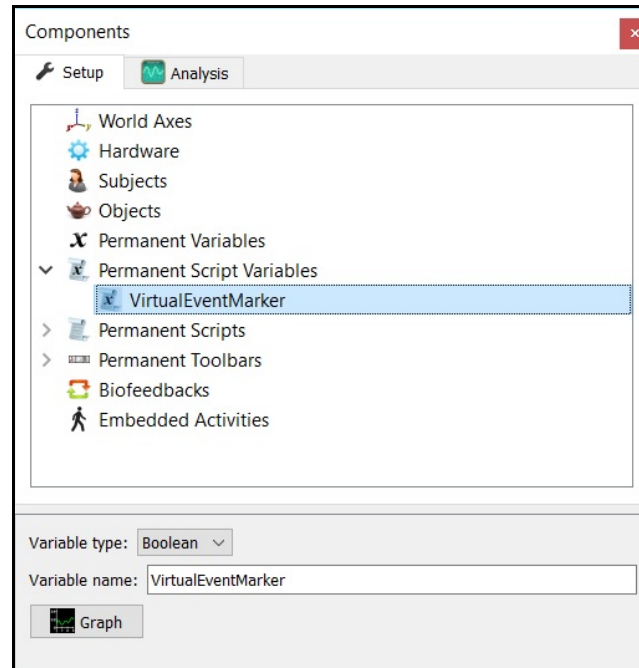
The following document provides instructions for generating virtual event markers. Virtual event markers are events that are made manually within each Activity and identified by the user, as opposed to using a variable expression to automatically identify an event. These events can be helpful for when identifying events that would otherwise be difficult to define using formulas or that are based off video data.

1. The first step in generating a virtual event marker is to add a Boolean Permanent Script Variable, as shown below.



The reason for Adding the Boolean variable as a Permanent Script Variable, instead of as a Boolean Analysis Script Variable, is to ensure that the updated values get properly saved and to prevent the Boolean data from becoming overwritten if an Analysis file were loaded. It needs to be added as a script variable because it won't be receiving its data from another component, such as a hardware device or Subject data.

2. After adding the Boolean Permanent Script Variable and providing a Variable name, the Boolean variable can be graphed. The graph can be created by clicking on the Graph button in the Permanent Script Variable parameters panel, as seen below, or through the Graphs node in the Analysis Components tab. A tutorial video for configuring graphs can be found at <https://www.innsport.com/supportxgen.html>.

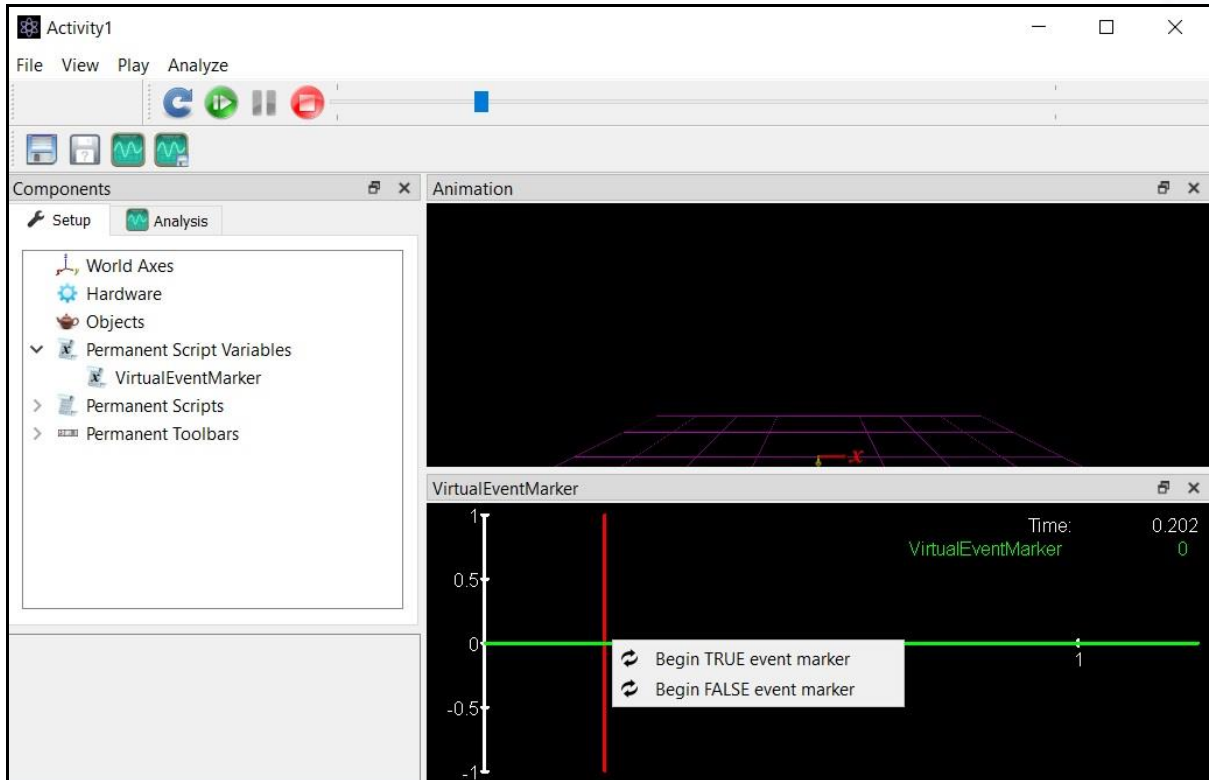


Although Boolean Permanent Script Variables can also receive their value (True or False) from a Permanent Script, the manual definition of their condition is performed through a graph.

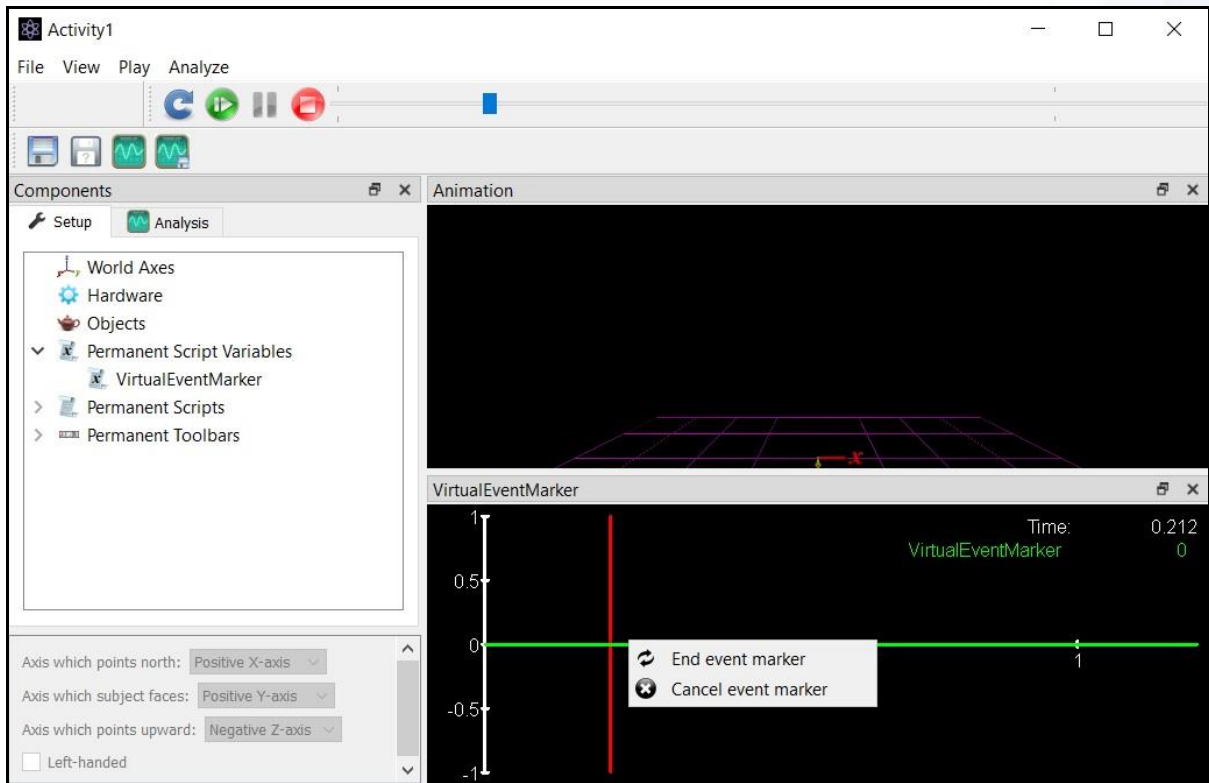
Having been added to the Live Workspace, this Boolean Permanent Script Variable will be available within all subsequently recorded Activities. Please refer to the Adding a virtual event marker to previously recorded data section later in this document if you are looking to add a virtual event marker to Activities that have already been recorded. Otherwise, continue to step 3.

3. To identify an event within a recorded Activity file, move the time cursor to the desired position in your virtual event marker graph. Right click anywhere on the virtual event marker plot and select the Begin TRUE event marker or Begin FALSE event marker condition, based on whether your current Boolean Permanent Script Variable is TRUE (1) or FALSE (0).

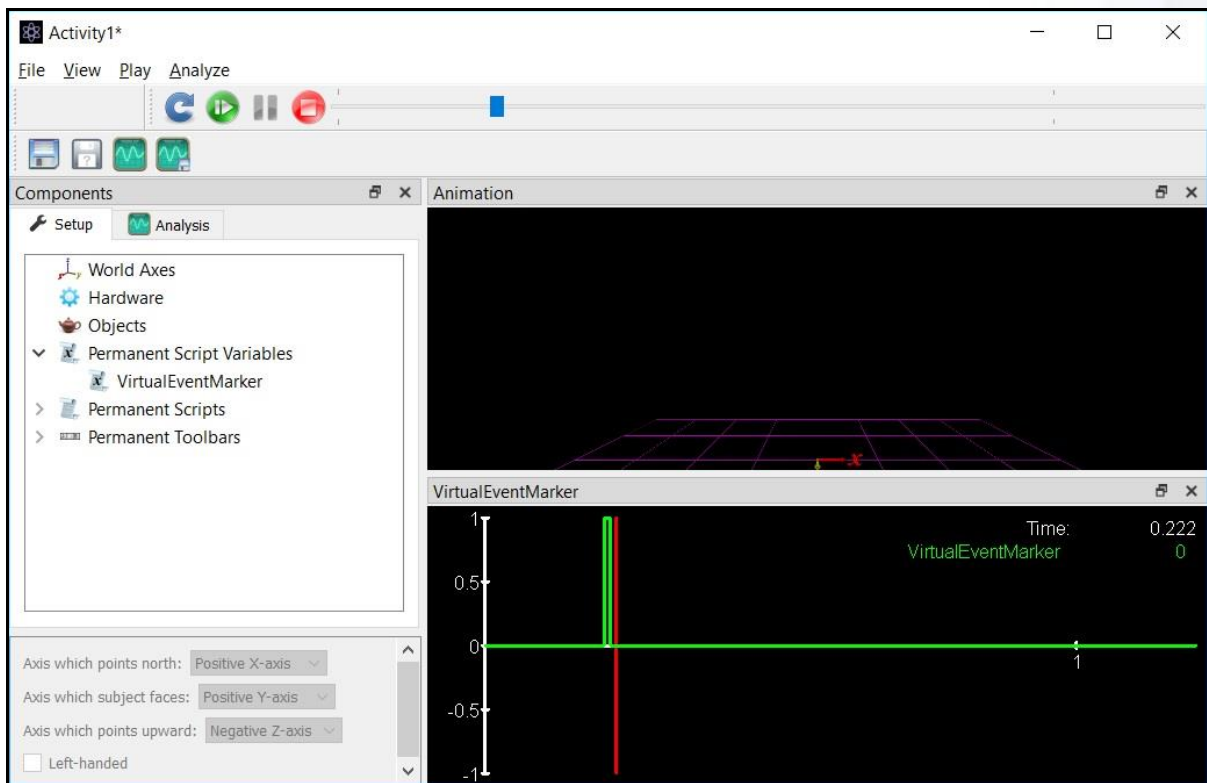
By default, the value of a Boolean variable will be set to False, or 0. However, as mentioned previously, this value may also be controlled through a script.



4. Then, move the time cursor to the desired end position in your virtual event marker graph. Right click anywhere on the virtual event marker plot and select the End event marker or Cancel event marker selection.



5. Your virtual event marker is now displayed and the activity file will need to be re-saved in order to retain the changes. This process can be repeated for additional virtual event marker variables or multiple events within the same virtual event marker.

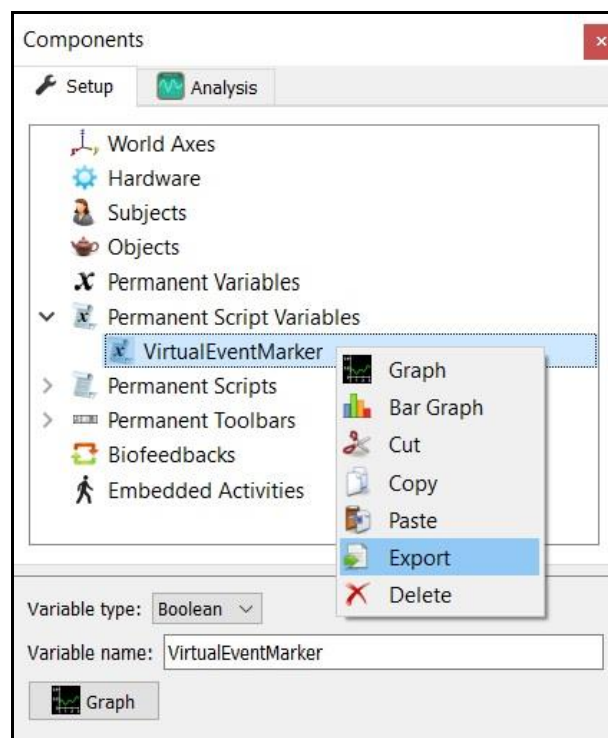


This data can be exported through a report with any other data. A tutorial video for configuring reports and exporting data can be found at <https://www.innsport.com/supportxgen.html>. One note of caution would be to make certain that your Virtual Event Marker definition duration (i.e. the time between the Begin TRUE event marker and End event marker) is sufficient to be “captured” by the Sampling Interval set in your graphs and reports. For instance, if the duration of your event maker was only 0.001 seconds, but the Sampling interval for your graph is 10msec, you wouldn’t be able to see the event displayed in the graph.

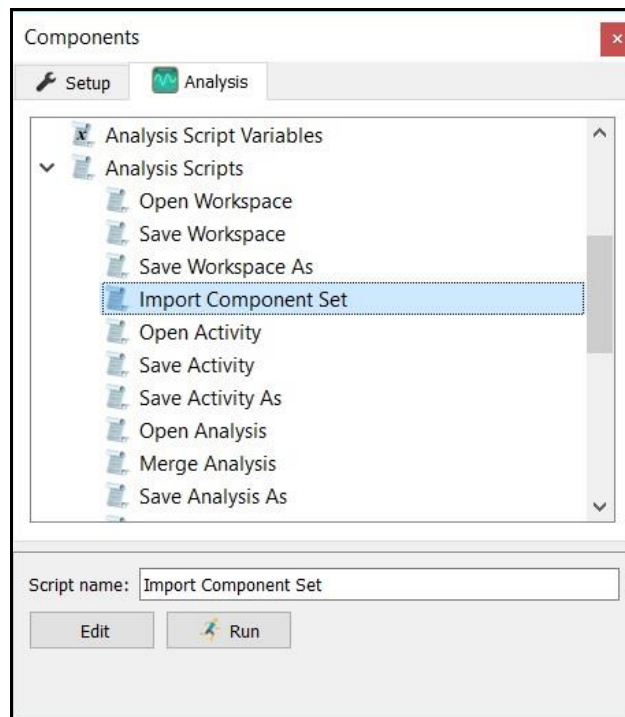
## [Adding a virtual event marker to previously recorded data](#)

The following instructions walk through the procedure for adding a virtual event marker to an Activity that has already been recorded. By design, Setup Components are generally configured such that you can't add to or modify them in post processing. So, we can't simply add a Boolean Permanent Script Variable as we would in the Live Workspace. However, there is a way to import components and variables into our Activities from the Live Workspace. This procedure uses Component Sets, which is a file type that can contain various, user selectable, elements from your Live Workspace.

1. From the Live Workspace, right click on the Boolean Permanent Script Variable and select the Export option. This will result in a Folder Browser dialog opening where you can select an existing Component Set file or create a new Component Set. After selecting Save, the selected component (i.e. VirtualEventMarker Permanent Script Variable) will be saved to the specified Component Set.



- From the Activity file, select the Import Component Set script from the Analysis Scripts node in the Analysis Components window. Click the Run button from the parameters panel for the Analysis Script and select the Component Set specified in the previous step.



- The Boolean Permanent Script Variable should now be displayed in the Permanent Script Variables list, as shown below. Save the activity to retain these changes and modify your virtual event marker as previously described. The previous and current step will need to be repeated for each Activity file that was recorded without the Boolean Permanent Script Variable.

