

This tutorial begins by assuming that you have a [CMZ](#) file for each subject/session from [Visual3D](#). If necessary you can use our [build CMZ feature](#) or work through the Visual3D tutorial for [building a CMZ file](#).

Data

This tutorial can be completed with any CMZ file. One possibility is a data set from a Visual3D Workshop at a recent ASB meeting: [V3D Workshop @ ASB](#).

Load your library

[Inspect3D_Loaded_Library.png](#)

To start, you need to tell Inspect3D where to look for your data. After opening Inspect3D:

1. [I3DLoadLibrary.png](#) { [/images/thumb/a/a1/I3DLoadLibrary.png/30px-I3DLoadLibrary.png](#) Click the Load Library button on the [ToolBar](#) to open the Library dialog:
 1. Click **Browse** to open a dialog that allows you to select a file path
 2. Select the top level folder/root directory which contains the CMZ files NOTE: the CMZ files' associated CMX files must also be present for Inspect3D to be able to load the library.
 3. Click **Select Folder**
2. Click **Load**
3. Once the library is loaded, you will be able to do some initial exploration here in the Load Library dialog:
 1. Verify which CMZ files have been loaded in the 3D Viewer dropdown box as well as which C3D files are associated with each CMZ;
 2. Verify which file tags are present in the library;
 3. If you have loaded [multisubject data](#), verify which [subject prefixes](#) and [subject tags](#) are present in the library; and
 4. Animate the data contained in any loaded C3D file.
4. Close the Library dialog

Define queries and group signals

[Inspect3D_Auto-populated_Queries.png](#)

Once you have loaded the library, the Group definition dialog will be activated. You now have the ability to automatically or manually define queries that will group the signals in your library. To do this:

Click on the [I3DGroups.png](#) { [/images/thumb/5/58/I3DGroups.png/20px-I3DGroups.png](#) **Query Definitions** icon on the [ToolBar](#)

Click on [I3DGroups.png](#) { [/images/thumb/5/58/I3DGroups.png/20px-I3DGroups.png](#) **Query**

Definitions to define group definitions for the first time and open the [Advanced_Query_Section](#)

Alternatively, if you have previously saved query definitions, you can click on

[I3DOpenGroupDef.png](#) { [{/images/thumb/1/14/I3DOpenGroupDef.png/20px-I3DOpenGroupDef.png](#)

Load Query Def & Compute Groups to load a [Q3D_Query_File](#) file containing query definitions and then automatically calculate the groups for the loaded library.

Either manually create group definitions by

Clicking the [ActionAdd48x48.png](#) green addition button to name a new group and add it

While your new group is selected, click the [ActionAdd48x48.png](#) green addition button to name and define a new sub-group

Repeat these steps until you have created all of your groups

OR Click **Auto-Populate Groups**

Accept the default settings and click **Create**

Once you have created your query definitions:

Click **Calculate All Queries** to apply the queries you have defined to the loaded library.

Close the Query Builder dialog. Note that if Inspect3D has not finished computing all of the groups then it will ask you if you want it to continue. Click **Compute Groups**.

Manually Create Group Definitions (Video)

Load video

Local File

Local File might collect personal data.

Continue

Dismiss

<https://wiki.has-motion.com/File:Inspect3DManuallyDefineGroups.mp4>

Visualize your data

[SignalsAndTraces.PNG { /images/thumb/9/96/SignalsAndTraces.PNG/500px-SignalsAndTraces.PNG](#)

Now that the signals in the library have been grouped, it is now possible to visually examine them and begin exploring your data:

1. Select a particular group in the **Groups** widget of the Queried Data subwindow to determine which signals you would like to view
2. Selecting different workspaces in the Queried Data subwindow's **Workspaces** widget determines which are displayed. Checking the **Select All Workspaces** box conveniently displays all of the workspaces associated with your selected group(s)
3. Check the appropriate boxes to plot all sequences, workspace means/standard deviations, and group means/standard deviations.
4. Click **Refresh Plot**

The [Options dialog](#) allows you to modify the [plot options](#) to determine what is displayed. For example, you can choose the number and layout of plots to display, change how lines are coloured and styled, and modify axis labels among many other things.

If you have multiple plots, then a gray bounding box will appear around the active plot, identifying which plot is currently being modified.

Interact with your data

You can highlight a trace by left-clicking on it. This causes the trace to become more visually prominent than non-highlighted traces and produces a tooltip that includes:

1. The trace's group name
2. The trace's workspace name
3. The name of the specific [C3D](#) file for that trace
4. The trace's frame range from that C3D file

- 5. The trace's sub-group name
- 6. The x- and y- values of the trace where you left-clicked it

A trace can be excluded from the plot by:

- 1. left-clicking on the trace to highlight it; then
- 2. right-clicking and selecting **Exclude > Exclude Trace (raw data)** from the context menu.

You can confirm that the trace has been excluded in the **Workspaces** widget: excluded traces will be marked with a red X and workspaces containing excluded traces will have their checkmark icon replaced by an X.

Manually View Group Definitions (Video)

Load video

Local File

Local File might collect personal data.

Continue

Dismiss

<https://wiki.has-motion.com/File:Inspect3DPlottingData.mp4>

Save the application workspace

Click [I3DSaveWorkspaceAs.png](#)  to save the work you've done so far. This saves the application workspace as an [I3D_Workspace_File](#), which is an XML file.

NOTE: If you have excluded data then your CMZ files are out of sync with your Inspect3D workspace at this point. This means that if you re-queried the loaded library, you would need to exclude the traces again. To avoid this, click the [I3DUpdateCMOsWithBadEvents.png](#)  **Update CMZ files** icon on the [ToolBar](#) to update your CMZ files at any point.

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