# Visual3DServer Tutorials

## Purpose

The purpose of these tutorials is give users a step by step guide for a typical user session. For detailed explanations of the user environment please see either the Documentation page or the Plugin page.

Using Visual3DServer generally occurs in three distinct steps.

## Basic Steps

Note: your computer's performance affects how well real-time will work. If you are having problems with dropped frames, see Troubleshooting for more information.

### Preparing the data to be streamed into Visual3DServer

The data sent to the server can come either from a subject during a live capture session or can come from a pre-recorded file.

The procedure for a live capture session is highly dependent on your study protocol or clinical procedure. However, certain elements are common. We recommend that each study protocol have it's own checklist in order to ensure that nothing is forgotten (for further discussion on this point see The Checklist Manifesto). A sample checklist used for getting a lab and subject set up for a biofeedback session can be found here.

If you are testing the streaming process you can set up a C3D file to stream as described in the C3D file tutorial or a CEN file to stream as described in the CEN file tutorial.

Similar to streaming a C3D or CEN file, users can stream from pre-recorded files from certain softwares that are associated with the hardware plugins. They include:

- Mac Cortex
- NP Motive
- NDI First Principles
- Qualisys
- Vicon

For instructions on how to stream pre-recorded data from these programs consult their respective user manuals.

### Setting up Visual3DServer

When setting up Visual3DServer each hardware system has specific settings that must be set on the Server plugin, as well as the general Server settings that should be set.

- AMTI
- AMTI Type 6
- Bertec
- Mac Cortex
- NP Motive
- Myon
- NDI First Principles
- NP OptiTrack
- Qualisys
- Vicon
- x-io

### Connecting a Biofeedback application

Once Visual3DServer is streaming data a variety of different applications can connect to it, including custom applications that users can write themselves.

- Visual3D Realtime
- SNRC WRAMC BADER
- Treadmetrix Client
- CFI Bader Client
- Custom Built Applications