Full Motion-Capture Setup

# Optitrack/Motive

# Ground Station Computer

Machine requirements:

1. Windows 10 (TODO: and 11?)
2. Ethernet port to connect to the Optitrack system
3. Ability to broadcast a Wifi hotspot from the computer

## Motive Connection

Initial setup:

1. Set up the ethernet connection:
   1. Connect via ethernet cable to lab computer running Motive and connected to Optitrack camera array.
   2. Open ControlPanel -> Network and Internet -> Network and Sharing Center and click “Change adapter settings” on the left side of the window.
   3. Right-click on the ethernet device being used by the Motive ethernet connection and select “Properties”.
   4. Under the Networking” tab, double-click on “Internet Protocol Version 4 (TCP/IPv4)”.
   5. Select “Use the following IP address” and enter these values for the following fields:
      1. IP address: 192.168.11.3
      2. Subnet mask: 255.255.255.0
   6. TODO: Also mention DNS server addresses?
   7. Click “OK”, then “OK”.
   8. Close the network windows.
2. Install AftrBurner/Optitrack\_Viewer
   1. Follow the instructions in this YouTube video (<https://youtu.be/hPGZf2dHSG0>) from timestamps 0:00 to 10:32 to install AftrBurner onto the computer.
   2. Extract the “optitrack\_viewer-omnicopter.zip” file and copy the whole folder to the directory “C:\repos\aburn\usr\hub”.

Each run:

1. Connect ethernet connection:
   1. Connect via ethernet cable to lab computer running Motive and connected to Optitrack camera array.
2. Begin reading OptiTrack data onto the computer:
   1. Run the “OptiTrack\_Viewer.exe” executable located in the directory “C:\repos\aburn\usr\hub\optitrack\_viewer-omnicopter\cwin64”.
   2. A window should appear titled “AftrBurner Engine”.
   3. In that window, click “Mocap Tools” in the “Menu” window, then “Show Object Viewer”.
   4. In the “Object Viewer” window, click “CONNECT”.
   5. Ensure that the “omnicopter” object is checked under the list of available models.
   6. Select “omnicopter” relative to “origin”.