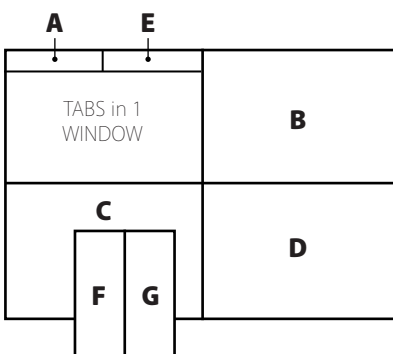


## SFL001 | DRONE FLIGHT + POINT CAPTURE

1. Place DRONE in NET at the crosshairs of the marker in the center and turn ON.
2. Connect OPTITRACK System to power to turn ON.
3. Start up UBUNTU + PC Machines
  - in UBUNTU -- Connect to Bebop2Power Wi-Fi Network
  - in PC -- Start up Motive, open Calibration File, and generate RigidBody from DRONE in NET -- call it 'bebop'
4. In UBUNTU -- ctrl + alt + t to start the ROS terminal

<b>A) TO START COMMUNICATION b/w UBUNTU + PC</b>	bebop roslaunch rosbridge_server rosbridget_websocket.launch
<b>B) TO GET MOTIVE RIGIDBODY into ROS</b>	bebop roslaunch drone_mocap drone_mocap.launch
<b>C) TO START DRONE via ROS</b>	bebop roslaunch bebop_driver bebop_node.launch
<b>D) TO USE JOYSTICK CONTROLLER</b>	bebop roslaunch bebop_tools joy_teleop.launch
<b>E) TO GET POINTS from DRONE</b>	bebop -scripts directory- python bebop_position_controller.py
<b>F) TO SEE XYZ COORDINATES of DRONE</b>	bebop rostopic list rostopic echo /vrpn_client_node/bebop/pose
<b>G) TO SEE XYZ COORDINATES of CAPTURED POINT</b>	bebop rostopic list rostopic echo /bebop/captured_pose



### NOTES in UBUNTU

- ctrl + shift + t to make a TAB within the ROS window
- ctrl + c to shutdown process within ROS window
- ↑ (up arrow) to retrieve last thing you typed in ROS window
- E) wont look like it's doing anything after the last input.

## SFL002 | GEOMTOOLS POINT CAPTURE

1. Place DRONE in NET at the crosshairs of the marker in the center and turn ON.
2. Connect OPTITRACK System to power to turn ON.
3. Start up UBUNTU + PC Machines
  - in UBUNTU -- Connect to Bebop2Power Wi-Fi Network
  - in PC -- Start up Motive, open Calibration File, and generate RigidBody from DRONE in NET -- call it 'bebop'
4. In UBUNTU -- ctrl + alt + t to start the ROS terminal

<b>A) TO START COMMUNICATION b/w UBUNTU + PC</b>	bebop roslaunch rosbridge_server rosbridget_websocket.launch
<b>B) TO GET MOTIVE RIGIDBODY into ROS</b>	bebop roslaunch drone_mocap drone_mocap.launch
<b>C) DEFINE GEOMTOOL in MOTIVE</b>	Create a rigidbody in Motive -- name it <u>GeomToolA</u> Make copies of this rigidbody for however many points need to be captured (0-9) -- name them <u>SnapPoint#</u> On each SnapPoint#, press ctrl + click the marker you want to be recorded. Then right click "Set Pivot Point to Respective Marker" Repeat this for all SnapPoint rigidbodies to get all points
<b>D) TO GET POINTS from GEOMTOOL</b>	bebop -scripts directory- python capture_rigid_bodies.py
<b>E) TO CAPTURE POINTS from GEOMTOOL</b>	in window D press 0-9 to capture that specific SnapPoint and SPACEBAR for all captured points Make sure specific SnapPoint's checkbox in rigidbody window in Motive is checked if wanting to capture. Press escape to restart capture. Can only transmit 4 pts MAX at a time.
<b>F) TO SEE XYZ COORDINATES of GEOMTOOL</b>	bebop rostopic list rostopic echo /vrpn_client_node/bebop/GeomToolA
<b>G) TO SEE XYZ COORDINATES of SNAPPOINT</b>	bebop rostopic list rostopic echo /vrpn_client_node/bebop/SnapPoint#