* Turn on the robot to apply power to the BeagleBone.
* Use PuTTY to open an SSH prompt to the BeagleBone at 10.42.76.12

If it doesn’t work connect Ethernet cable direct to BeagleBone from the driver station laptop.

User: ubuntu

PW: temppwd

* Open a browser on the driver station and go to <http://10.42.76.12:5800>
* To restore default settings delete all \*.txt files and restart:

cd /home/Ubuntu

rm \*.txt

sudo reboot

* Changes to settings files become effective immediately or after reboot

echo 0 > enableDynamicSettings.txt (check at startup only)

echo 1 > enableDynamicSettings.txt (check every 2 seconds)

* Choose image displayed in browser at <http://10.42.76.12:5800>

echo 0 > enableStreamFilterImage.txt (normal camera plus annotated “X”)

echo 1 > enableStreamFilterImage.txt (Black/White filtered image)

* Change camera exposure time

echo 260 > exposureZeroTo2047.txt

minimum 3

maximum 2047

neutral value approx. 260

lower exposure time makes image darker

Be patient - may take up to 4 seconds to change in the browser

* Saturation and intensity filters are almost wide open on the vision system, but the color (hue) we are looking for is affected by local lighting conditions. For example the green LED light reflected from the counter-reflective tape falls in a range of 76 to 92 for fluorescent lighting in Mr. Zook’s room, but was in range 79 to 96 for the halogen lighting at Las Vegas.

echo 79 > filterHueLowerBoundZeroTo255.txt (sets lower bound)

echo 92 > filterHueUpperBoundZeroTo255.txt (sets upper bound)