SETTING UP ANY LAPTOP FOR TAKEOFF

**Get Dropbox:**

#This is only for a one time sync. Dropbox will sync only as long as this terminal is open

#but will not start automatically. Use the Dropbox desktop application instead.

#This is a backup in case you can’t get the desktop application for whatever reason.

Cd ~ && wget -O - “<https://www.dropbox.com/download?plat=lnx.x86_64>” | tar xzf -

~/.dropbox-dist/dropboxd

**Get MATLAB**

Request matlab license from RPI

Follow install instructions from RPI

Choose matlab release for linux

Open zip file, extract to some path

In that folder, right click -> open in terminal

Type: sudo ./install #sudo is for root privileges, pls don’t forget

This will open Matlab Install Wizard, follow set up from there as you would with RPI instructions

Install desired packages (recommended packages are probably fine)

Notes:

When you have to verify university login, the “Click here” hyperlink doesn’t work. Copy and paste the text into OpenOffice (or whatever word editor Linux has) and then you can click the link from there.

If the installer doesn’t respond when you need to log into your Mathworks account, kill the process and try again. If that doesn’t work, reboot your system. (Sorry, we don’t have a better solution for this yet.)

**Get Python and Serial**

sudo apt install python-minimal

sudo apt install python-serial

**Permission to use /dev/ttyUSB0**

groups $USER #check if USER is in dialout group

sudo gpasswd –a $USER dialout #add USER to dialout group if not in already

sudo chmod a+rw /dev/ttyUSB0 #might have to be done at every boot

**Setting Serial Port baud rate**

#Open a new terminal

ls /dev/tty\* #check which serial ports the Xbees are on

#currently, we are trying to send commands from BASE4 STM-5 to UAV BASE4

#and receive data on Hummingbird BASE3 from UAV BASE4

stty –F /dev/ttyUSBX 38400 #X=USB number (e.g. USB0) and 38400 is baud rate

#set baud rate for serial ports in use. Xbees need to be plugged in first

In Matlab, open libport\_ss.cpp

On line 48, change “/dev/ttyUSB0” to the port you are using for BASE4 STM-5

Copy+paste the commented command at the top of the file into the command window and run

This creates a Matlab executable that sends commands over the port you specified

**NOTES**

**DO NOT LEAVE BOOTLOADER JUMPER CABLE PLUGGED IN WHILE CONNECTING BATTERY**

On the HP EliteBook, to run MATLAB:

* open a new terminal (or cd ~ in any terminal)
* type ./matlab.sh

HP Elitebook Ubuntu Login:

* Username: lessia
* Password: mav7219