

3-part setup to prepare for carl's code drop

Part 1. Quick and easy installers

Python 2.7.x

latest version of Python 2 is 2.7.8. Python 3 will not work, nor will the default Python that comes with mac os

<https://www.python.org/download/> (likely you'll want to scroll down to find "Python 2.7.8 Mac OS X 64-bit/32-bit x86-64/i386 Installer (for Mac OS X 10.6 and later [2])")

Pygame Library

used to draw stuff on the screen, make raster images and get user input from mouse, keyboard, etc...

Closest thing to Processing in the Python world you can get... for now.

<http://pygame.org/download.shtml> (make sure to pick the link for the version of pygame that corresponds to our version of Python, 2.7. Likely the top link in the mac os section, "pygame-1.9.1release-python.org-32bit-py2.7-macosx10.3.dmg")

USB<->Serial Adapter Driver

if you want to be able to connect to pen plotter. Not essential. One can always generate a plot file and run the plot from another connected computer. However, it's more fun to be able to control the pen plotter live (http://lostritto.com/risd2013spring/wp-content/uploads/2013/02/MacOS-driver-USB-serial-10.6.x-to-10.8.x_v2.6.4.pkg.zip)

Numpy Library

required by other libraries and generally useful

http://sourceforge.net/projects/numpy/files/NumPy/1.8.1/numpy-1.8.1-cp27-none-macosx_10_6_intel.whl/download

Cenon

Freeware app has nothing to do with python and is not an essential part of the workflow. But allows viewing of .hpgl files (plot files), really good for debugging output. However, when you get really good you can open and .hpgl file in a text editor and see the drawing the same way Neo looks at code and can see the matrix.

<http://www.cenon.info/>

Part 2. Libraries you need to install "manually"

same process applies for each of the below libraries:

1. download and uncompress the package.
2. from the terminal, navigate to inside the folder you just unzipped. Protip: drag and drop a folder to the terminal to get its full path. The 'cd' command in terminal "changes directories" so you could type 'cd '(including a space but without the quotes) and then drag and drop the folder to the terminal window, then press enter. You should now be inside the folder of the library.
3. Type, again without the quotes, "python setup.py install" and press enter. Pay attention to what happens. It might ask to press enter or report an error

Pyserial Library

required to speak in python to the serial port, used by Chiplotle

Chiplotle Library

for pen plotting and creating HPGL files

<https://pypi.python.org/pypi/Chiplotle> version 0.4.1

Shapely Library

used to operate on vector geometry outside of Rhino, geared toward GIS, mapping, charting applications but useful for all shape things. certain geometric operations like intersect, difference, etc, work better here than in Rhino python

<https://pypi.python.org/pypi/Shapely> green download link at top right

Part 3. Setup / Testing

1. open terminal and type “Chiptotle” and press enter. The first time you do this it will prompt you a few times. Respond accordingly. This is necessary to do before you can “import chiptotle” in a Python script.
2. Type “exit()” and press return to exit the chiptotle prompt (you might never return to the chiptotle prompt except to send a file to the plotter)
3. type “which python” and press enter. It should look something like:
/Library/Frameworks/Python.framework/Versions/2.7/bin/python
4. type “python” and press enter. Type “import chiptotle” and press enter. Type “import pygame” and press enter. Type “import shapely” and press enter. If nothing happens, great! If errors happen, not great.