Spike 03 outcomes

Name: Flash a firmware to the esp8226

Goals:
The team needs to be able to flash different firmware to the device, this spike should impart the ability

Personnel:

primary – Edward secondary - Luke

Technologies, Tools, and Resources used:

- https://github.com/geekscape/nodemcu_esp8266
- https://github.com/geekscape/esp8266_nodemcu_examples/firmwareJDBC_4
- https://github.com/nodemcu/nodemcu-flasher

Tasks undertaken:

- Installed pyserial on a laptop running Ubuntu.
- Pulled the git repository for pytool.
- Ran the command to flash the device with NodeMCU firmware (Lua interpreter and SDK).

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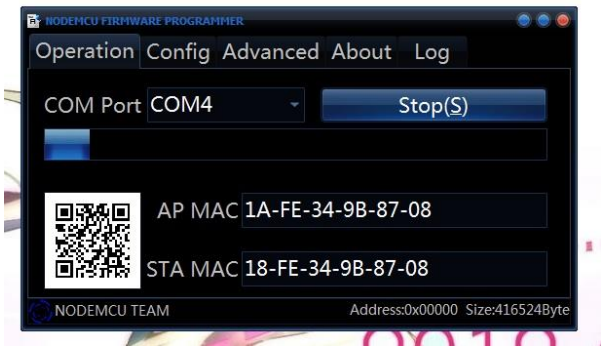
command and output:

edward@l10nA6:~/Source/esptool$ sudo python2.7 esptool.py -p
/dev/ttyACM0 write_flash 0x00000
~/Source/esp8266_nodemcu_examples/firmware/nodemcu_dev_0x00000
.bin 0x10000
~/Source/esp8266_nodemcu_examples/firmware/nodemcu_dev_0x10000
.bin
Connecting...
Erasing flash...
Writing at 0x0000b400... (100 %)
Erasing flash...
Writing at 0x00064400... (100 %)

Leaving...
```

- Pulled the git repository for nodemcu-flasher.

- Ran nodemcu-flasher to flash nodemcu firmware onto esp8266.



What we found out:
Flashing the esp8266 can be done through com port command line tool or via a gui(for specifically flashing nodemcu firmware).

Open issues/risks [Optional]:

- Requires python2.7 and depends on pyserial. A little arcane and unwieldy, we might consider adding a GUI in QTQuick and making it python2/3 agnostic (or just python 3).
- the gui method is far easier, but only flashes nodemcu firmware. A clone that can flash generic firmware would be good resource.