RPi Security Camera System – Nicholas Crimmins

Quick Recap:
- Uses multiple USB webcams each connected to a RPi
- Stream from RPi to a webserver
- Access from any browser
- Secured via SSL

Streaming Package, "Motion"

- Part of the Raspbian repository

- *$ sudo service motion start* #start motion (stop, restart)

- Start in daemon mode, run in background

- By default, can only access from local IP

  - 192.168.X.X:8081

- Streams at low frame rate, ~2-5 FPS

Global Access with SSL, "Pagekite"

- Webserver with configurable SSL, DNS server names

- Can be used with Windows/Mac/Linux

- Allows secure, global access of stream (SSL can be enabled)

  - https://n02469512.pagekite.me #address of stream

- Not a Raspbian package, have to add to package source list to install

- Free and 100% open source

- Set user/password for access

  - *$ pagekite 8081 n02469512.pagekite.me   #enable pagekite server without access* restricitons

  - *$ pagekite 8081 n02469512.pagekite.me +password/<USER>=<PASSWORD>* #start server with access restrictions

  - Can also enable access for certain IP's only

Issues, Next Steps

- "Motion" a bit inefficient, promising alternative "mpjeg-streamer"

  – Also not a Raspbian package, have to find correct version/installation & add to package sources list

  – Multiple associated libraries needed

  – More difficult to configure, but more efficient streaming

- Streaming without saving the data is impractical for a security system

  – Archive footage for later viewing

  – Upload to database while streaming