PiNet: The Evolution of a Simple Wish

Why describe my home control network here? Well, it's complicated. Bottom line, if I did it, you can do it. And you might want to. So here's how it started, and here's what I did.

There are a bunch of Home Automation options out there, but none of them made me feel good. Besides that, I really didn't set out to do a whole centralized control system, it just sorta morphed from a simple wish.

**One Simple Wish - the garage door**

It started with my wish to know whether my garage door was open or not. In 2015 I wrote my first Python program, and [ohd](https://github.com/casspop/ohd" \o "https://github.com/casspop/ohd) was born.

**then the pool**

Then we got a in-ground pool in the backyard. The commercial controller was abominable, so I picked up another Raspberry Pi, a relay board, and wrote my second Python application, [poolApp.py](https://github.com/casspop/PoolControls).

**then the Weather Station**

When I dumped the second Accurite weather station into the trash in only two years, I started my quest for a Reliable, Robust, Repairable Raspberry Pi-based [Weather Station](https://github.com/casspop/Pi-based-weather-station).

I had a little i3 Lenovo computer that really wasn't doing anything, so I thought it made sense to put it to work holding the mySQL database for the weather station. So I stuck a 4TB hard drive in it that I pulled out of a WD MyBook external and put it to work.

**then the web-based UI (VPN or local-only, not Internet)**

Not much later, I realized I needed a single interface for all this stuff, and [allApp.py](https://github.com/casspop/Pi-based-weather-station/tree/master/Code/all) was born. It runs on Brilliant, the little i3 Lenovo. (allApp is currently housed in the WeatherPi repo.)

**and then Eyes (cameras)**

Zoneminder runs headless on Ubuntu on a fairly hairy gaming computer bought on sale from Best Buy (this one I didn't build myself). I have four 4K TCP/IP cameras and the Raspberry Pi Camera in WeatherPi feeding into it. Our interface to that system is part of the allApp.py running on that cutesy little i3 Lenovo.

**and then the shop**

I built myself a pretty nice shop in the back yard. It has A/C for the summer, and heat in the winter. I hated the GE cloud-based App controls for the window unit, so I ripped out the controls electronics and built my own out of, you guessed it, another Pi and relay board. [ShopPi](https://github.com/casspop/ShopPi) was born.

That pretty well describes in a concise manner the PiNet as it exists today. More to come.

Check out the [functional diagram](https://github.com/casspop/PiNet/blob/main/Docs/PiNet%20Block%20Diagram.pdf) in the Docs folder.

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