

Eyes on the Network



Paul Gurke

University of Advancing Technology
(Network Security), SIP311

Technical Field & Background Information

This project resides in the field of Network Security.

The product is envisioned to help both technical and non-technical users.

Time in automation manufacturing projects revealed gaps in IT understanding.

Many problems can be solved by performing the same troubleshooting task.

I want non technical users to be empowered by data to solve technical IT issues.



Project Description

This project focuses on creating a tool that can attach to a network, collect data on active devices and display the results.

Using captured network traffic, the device will format the data and present it to the user.

The user would be able to ADD or REJECT the device into a persistent device list via a website.

The user would also be able to take a file generated with the detected devices.



<https://www.digitalskills.com/computing/best-ethernet-cables/>



Innovation Claim

This project shows innovation in that there are no easily affordable devices that provide this technical capability.

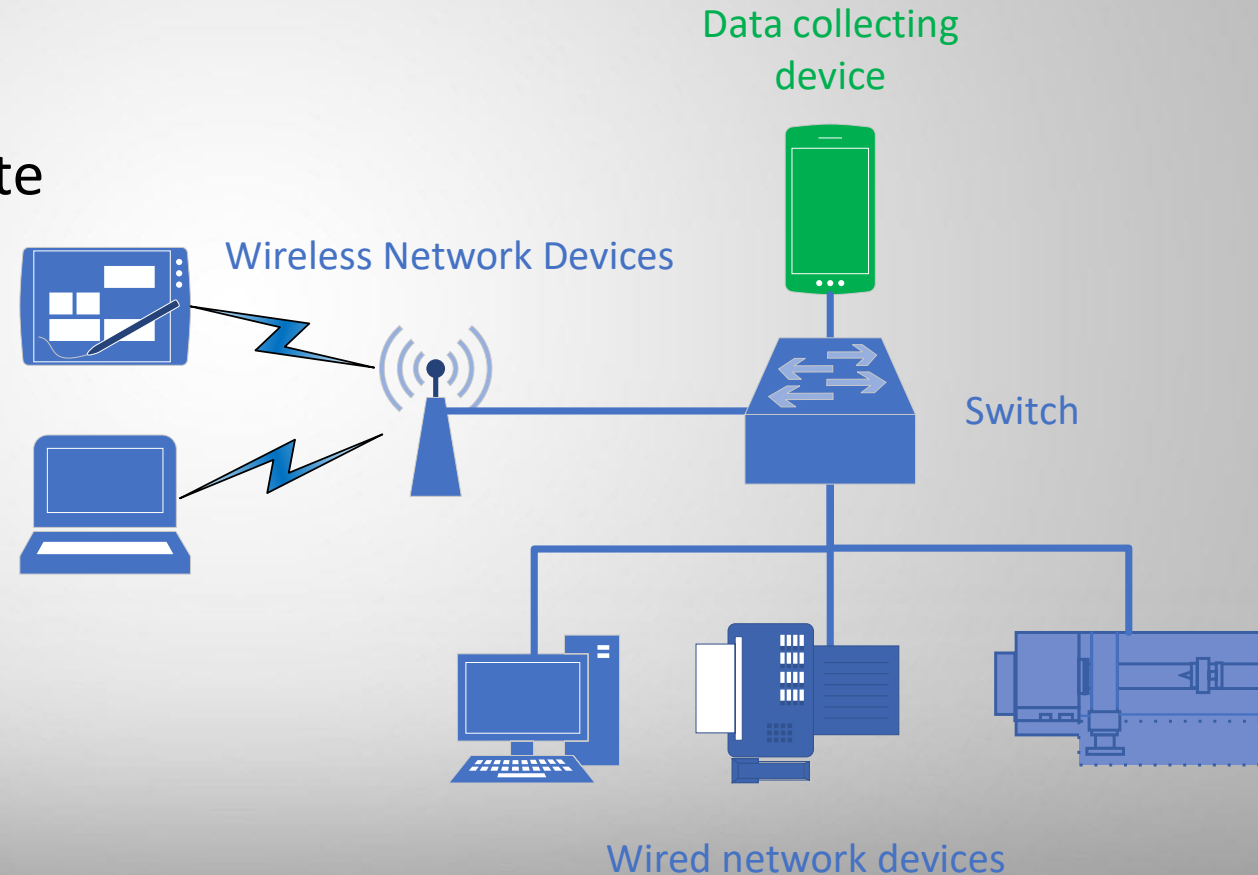
It presents otherwise unseen information.



I will be working primarily alone to develop the code that runs on a Linux OS. The platform will be Raspberry Pi as it is relatively easy to work with.

I have about until July to complete a Minimal Viable Product which will demonstrate some or all of the projected functionality.

| Date | Time | MAC | IP | | |
|------------|-------|-------------------|----------------|------------|--------|
| 12/12/2020 | 22:23 | 00-50-56-C0-00-08 | 192.168.200.12 | ADD | REJECT |
| 12/10/2020 | 5:51 | 00-50-56-C0-00-07 | 192.168.200.11 | | |
| 12/10/2020 | 5:50 | 00-50-56-C0-00-06 | 192.168.200.10 | | |
| 12/10/2020 | 5:50 | 00-50-56-C0-00-05 | 192.168.200.9 | | |
| | | | | Clear Data | |



Target Market

This project would benefit:

Industrial – Manufacturing, automation,
mechatronics...

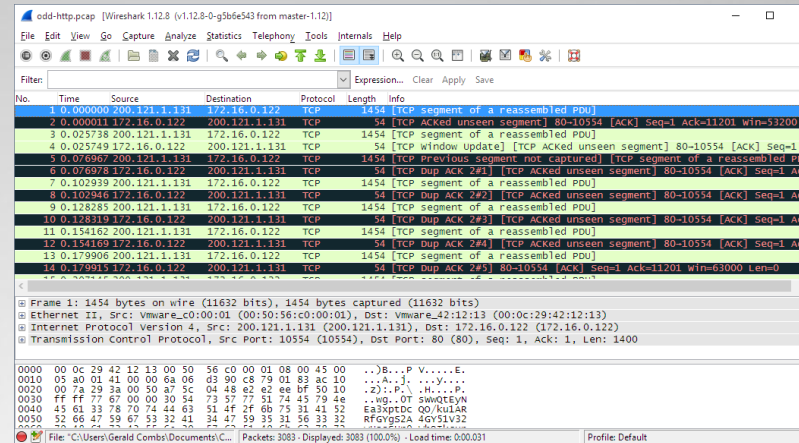
Home – SOHO, Personal...



<https://www.seattletimes.com/business/boeing-aerospace/boeing-revs-up-robots-for-777x-in-everett-factory-signals-that-a-797-awaits/>

Prior Art

Wireshark - <https://www.wireshark.org/>



Firewalla - <https://firewalla.com/>



RevPi - <https://www.electronicweekly.com/news/products/bus-systems-sbcs/industrial-raspberry-pi-3-mounts-din-rail-2019-01/>



Conclusion

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Innovation Claim: This project is innovative because it introduces automation based on “unseen” network traffic.

