## Hardware Threat Model

- 1. USB ports
  - a. <a href="https://www.sans.org/reading-room/whitepapers/threats/usb-ubiquitous-security-b">https://www.sans.org/reading-room/whitepapers/threats/usb-ubiquitous-security-b</a> ackdoor-33173
- 2. Flight controller
  - a. <a href="http://www.securityweek.com/design-flaws-expose-drones-hacker-attacks-resear">http://www.securityweek.com/design-flaws-expose-drones-hacker-attacks-resear</a> cher
- 3. Sensors
  - a. GPS
    - i. https://www.owasp.org/images/5/5e/OWASP201604 Drones.pdf
  - b. Other
    - i. <a href="https://ccdcoe.org/cycon/2013/proceedings/d3r2s2\_hartmann.pdf">https://ccdcoe.org/cycon/2013/proceedings/d3r2s2\_hartmann.pdf</a>
- 4. Flashing
  - a. Need to find previous research
- 5. General
  - a. <a href="http://ieeexplore.ieee.org/document/6815228/">http://ieeexplore.ieee.org/document/6815228/</a>
  - b. <a href="https://www.rsaconference.com/writable/presentations/file\_upload/ht-w03-hacking-aprofessional-police\_drone.pdf">https://www.rsaconference.com/writable/presentations/file\_upload/ht-w03-hacking-aprofessional-police\_drone.pdf</a>

## OS Threat Model

- 1. Exploit Packages
  - a. Any resources Dominic has found on those available
- 2. Encryption (or lack thereof)
  - a. <a href="https://www.joanneum.at/fileadmin/UNTERNEHMEN/news/Zukunftskonferenz\_2">https://www.joanneum.at/fileadmin/UNTERNEHMEN/news/Zukunftskonferenz\_2</a> 016/Stefan Rass.pdf
  - b. <a href="http://brl.ee.washington.edu/eprints/6/1/2015">http://brl.ee.washington.edu/eprints/6/1/2015</a> Teleop Security Threats.pdf
  - c. <a href="http://journal.frontiersin.org/article/10.3389/frobt.2015.00023/full">http://journal.frontiersin.org/article/10.3389/frobt.2015.00023/full</a>
- 3. Resource Access
  - a. <a href="https://www.researchgate.net/publication/310671472\_SROS\_Securing\_ROS\_over-the-wire-in-the-graph">https://www.researchgate.net/publication/310671472\_SROS\_Securing\_ROS\_over-the-wire-in-the-graph and through the kernel</a>
- 4. Authentication
  - a. http://ieeexplore.ieee.org/document/6869141/
- 5. General
  - a. <a href="https://www.willowgarage.com/sites/default/files/icraoss09-ROS.pdf">https://www.willowgarage.com/sites/default/files/icraoss09-ROS.pdf</a>

## **Network Threat Model**

- 1. Flight Control System
  - i. https://www.dji.com/naza-m-v2
  - b. Ardupilot
    - i. http://ardupilot.org/copter/docs/common-pixhawk-overview.html
- 2. Wireless
- i. https://wiki.wireshark.org/CaptureSetup/WLAN
- ii. <a href="https://security.stackexchange.com/questions/17344/how-do-you-analyze-an-unknown-network-protocol">https://security.stackexchange.com/questions/17344/how-do-you-analyze-an-unknown-network-protocol</a>
- iii. <a href="https://www.aircrack-ng.org/doku.php?id=getting-started">https://www.aircrack-ng.org/doku.php?id=getting-started</a>
- b. 2.4Ghz
  - i. <a href="http://www.grymoire.com/Security/Hardware.html#TOC">http://www.grymoire.com/Security/Hardware.html#TOC</a>
- c. 900Mhz
  - i. <a href="http://www.grymoire.com/Security/Hardware.html#Hacking\_the\_.3C1Ghz">http://www.grymoire.com/Security/Hardware.html#Hacking\_the\_.3C1Ghz</a>
    <a href="mailto:Range\_28900Mhz\_29">Range\_28900Mhz\_29</a> Spectrum
- d. Packets (MitM)
  - i. <a href="http://brl.ee.washington.edu/eprints/6/1/2015\_Teleop\_Security\_Threats.p">http://brl.ee.washington.edu/eprints/6/1/2015\_Teleop\_Security\_Threats.p</a> <a href="mailto:df">df</a>
  - ii.
- 3. Fuzzing
- i. <a href="https://blog.fuzzing-project.org/27-Network-fuzzing-with-american-fuzzy-lo-p.html">https://blog.fuzzing-project.org/27-Network-fuzzing-with-american-fuzzy-lo-p.html</a>
- 4. DoS/DDos
  - a. <a href="http://drwxr.org/tag/denial-of-service/">http://drwxr.org/tag/denial-of-service/</a>
- 5. General