

# Information Security Best Practices

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# Outline

- Computer Science at CSU Channel Islands (CI)
- Best practices:
  1. Encrypt communications
  2. Encrypt storage
  3. Good password & 2FA
  4. HTTPS & VPN
  5. Updates/Patches
  6. Backup and batteries
  7. Beware Phishing and Ransomware

# Comp Sci @ CI





# Talent



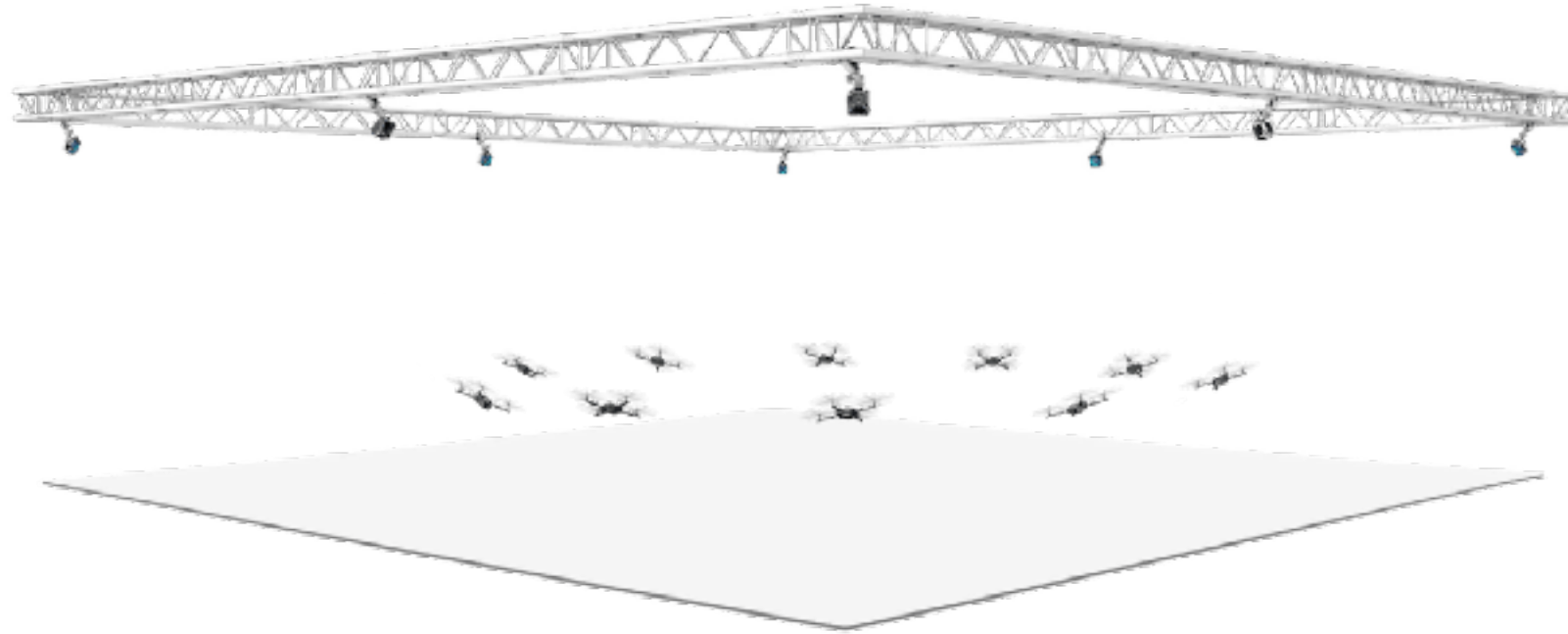
<http://socalcontest.org/history/2017/details-2017.shtml>

# Robotics Lab

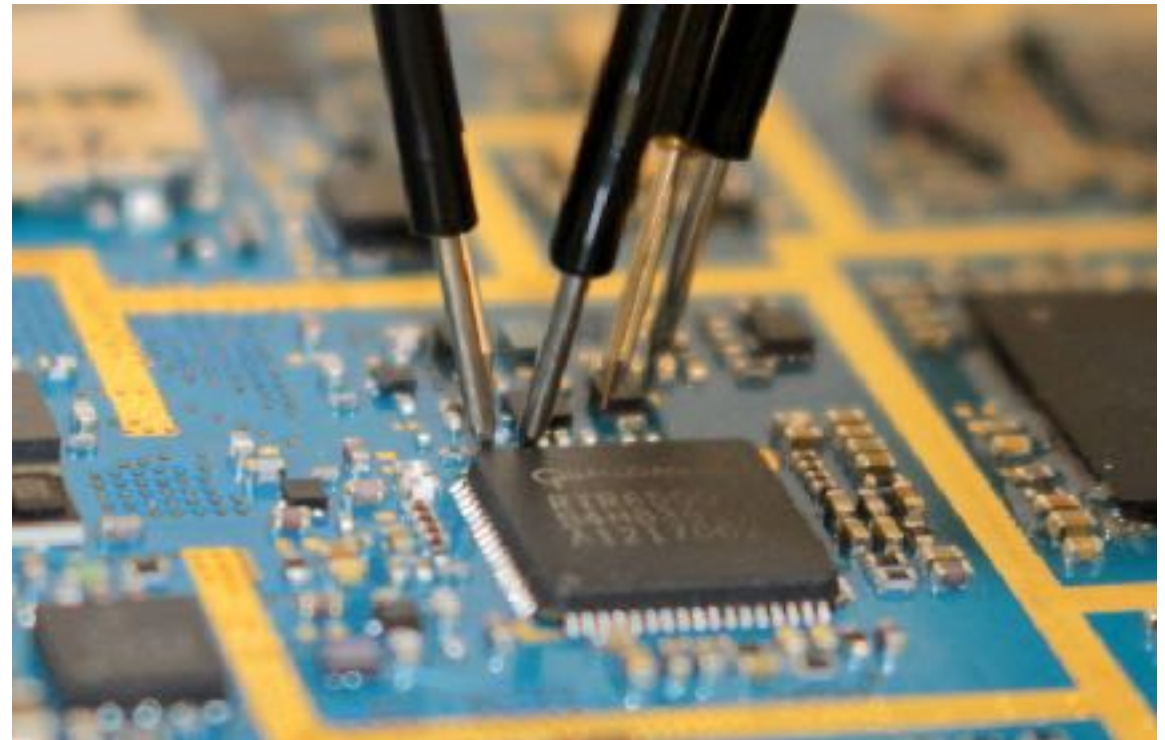




# Embedded Systems



# Networks & Security



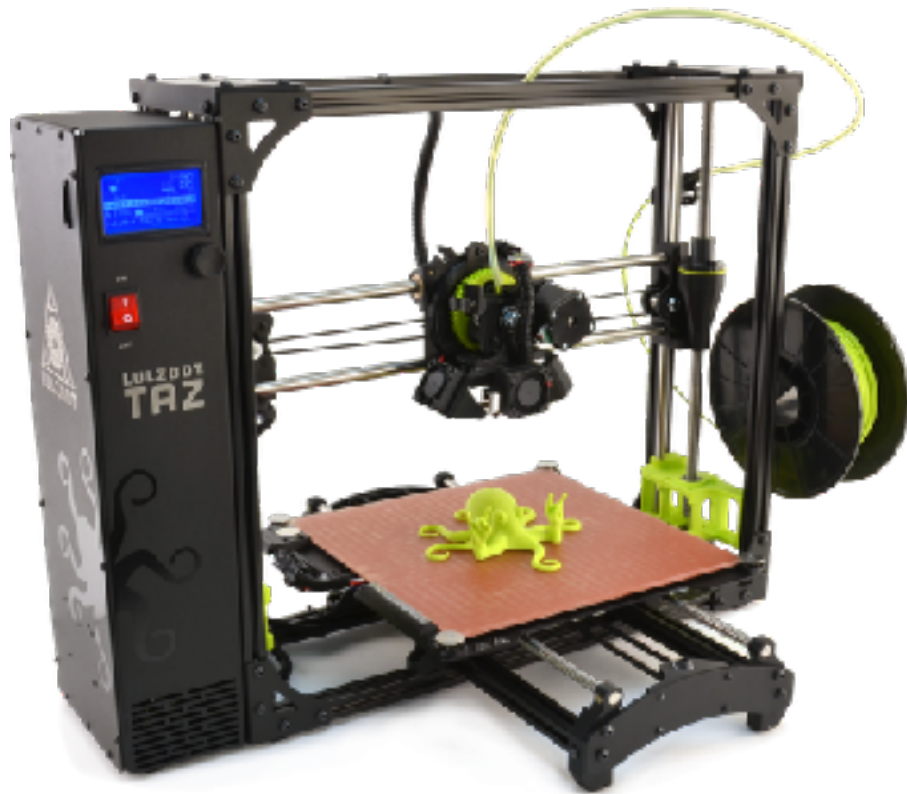
# Mechatronics Engineering

Starting in the Fall 2018





# “Revolution”



# **Information Security Best Practices**

# 1. Encrypt Communications

- Two free tools:
  - GnuPG
  - OpenSSL



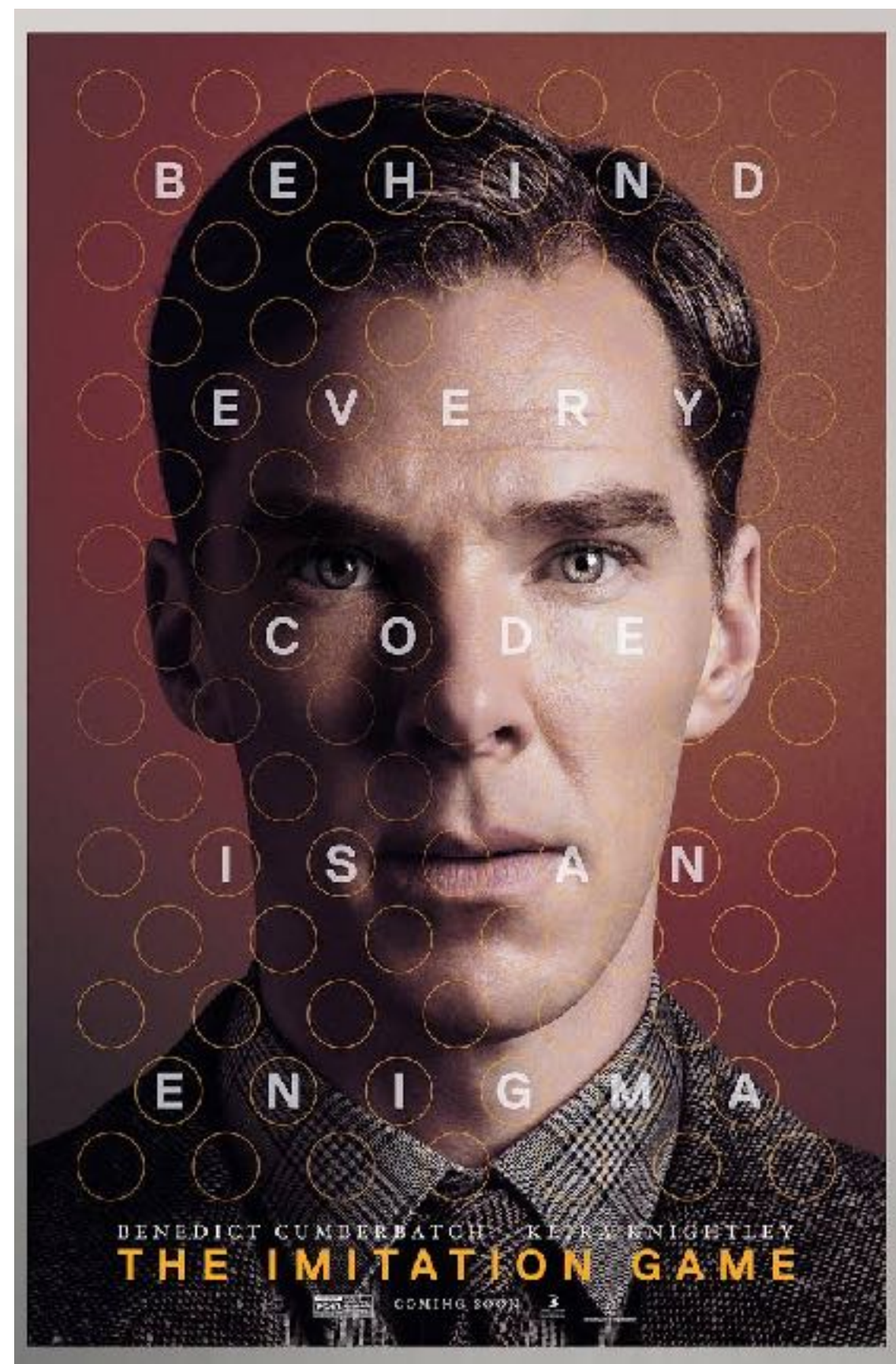
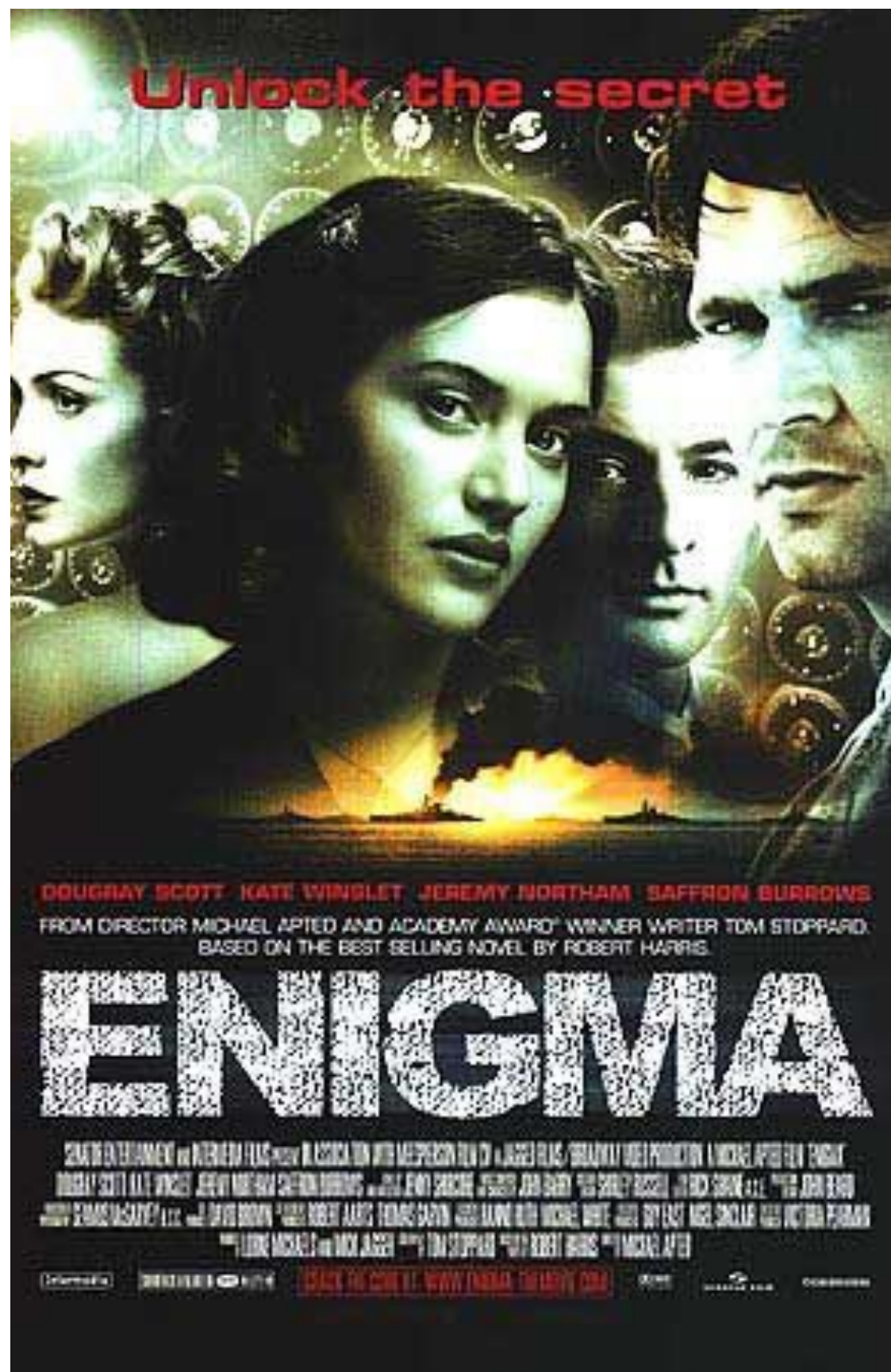


# 2. Encrypt Storage

- File Vault on MacOS
- BitLocker on Windows



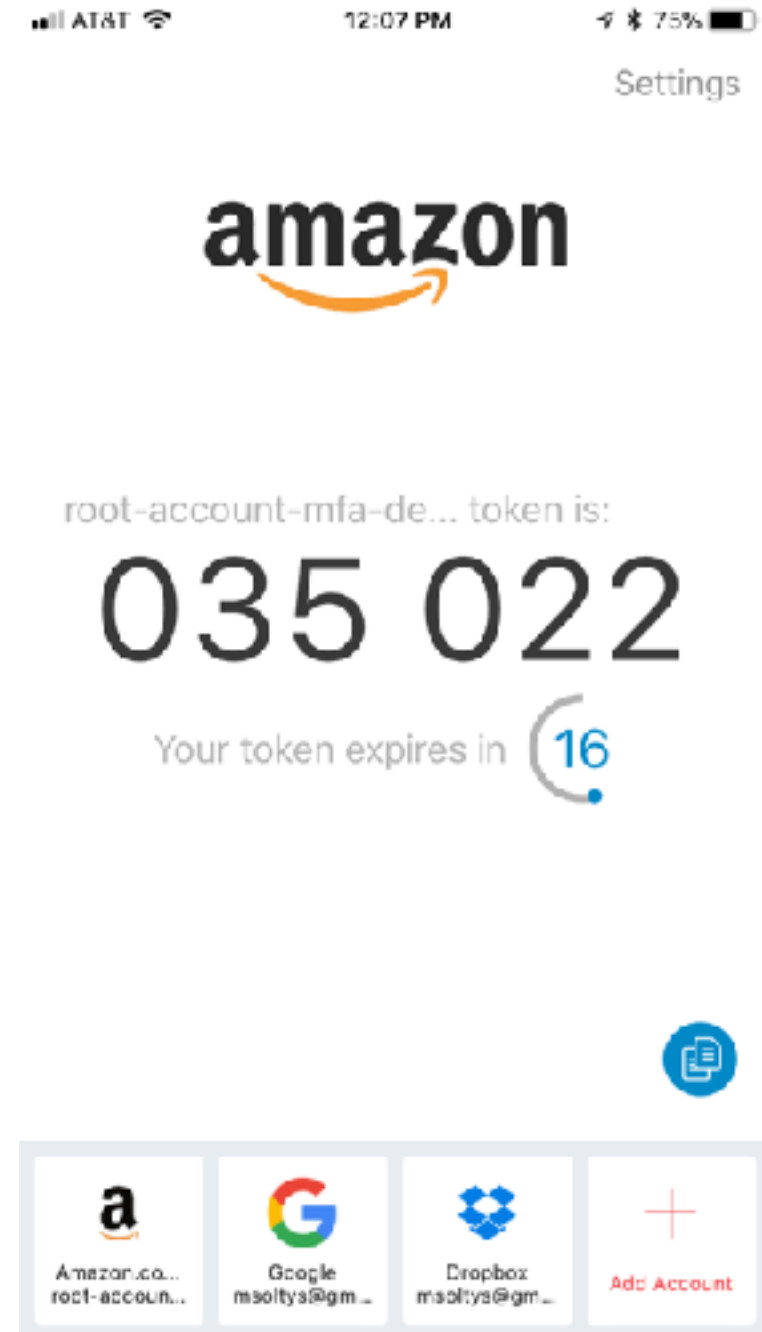






# 3. Good passwords & 2FA

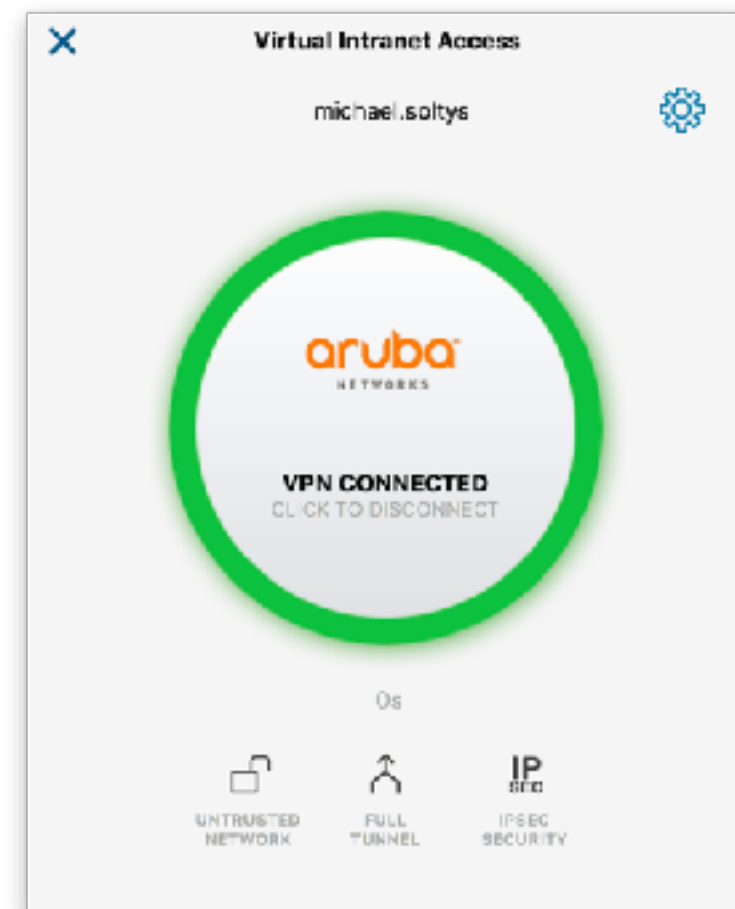
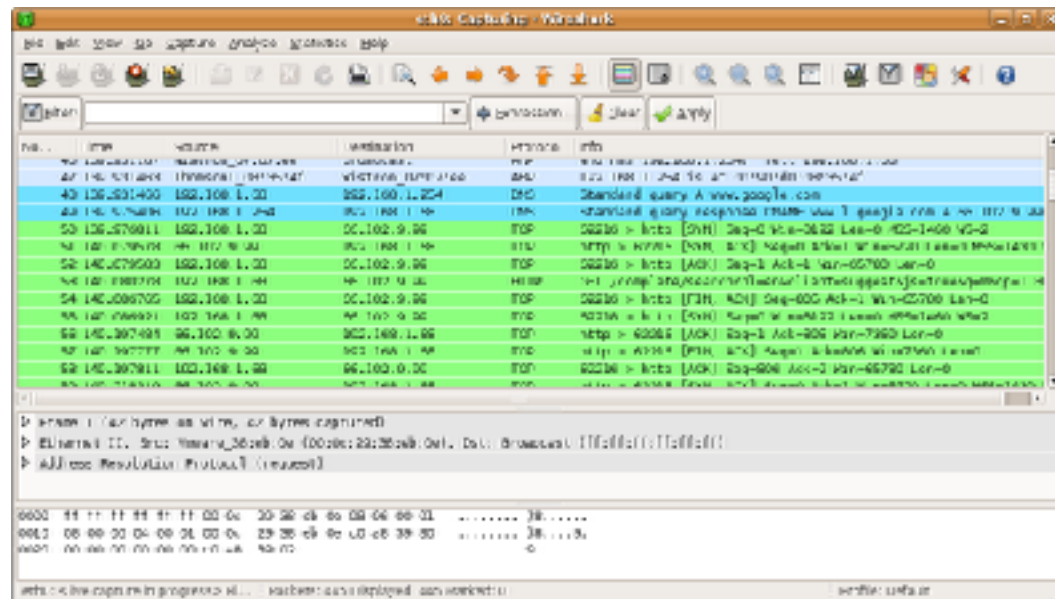
- Authy 
- iCloud & trusted devices
- Password manager:  
<https://github.com/michaelsoltys/password>





# 4. HTTPS & VPN

- “Tunnelling”
- Rogue WiFi or Wireshark



# 5. Updates & Patches

- Equifax:
  - attackers abused a vulnerability in Apache to break in to the company's Web applications.
  - That flaw was patched on March 8, 2017, but Equifax waited until after July 30, 2017 to patch the vulnerability...



# 6. Backups & Batteries



- Backup to the cloud
- Use UPS (Uninterrupted Power Supply / surge protector)





# Beware Phishing & Ransomware

- RSA assault involved a variant of the Poison Ivy Trojan:
  - Once inside the network, the attacker carried out privilege elevation attacks to gain access to higher value administrator accounts.
  - “Secret”: you don’t have to know much to deploy these attacks.



<http://map.norsecorp.com>

**Thank you!**

This talk available here: <http://www.msoltys.com/talks>