Computer Security and Reliability

Covering material from Chapters 7 and 8

Computers & Society (CPSC 430)
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https://www.cs.ubc.ca/~kevinlb/teaching/cs430
Attacks: how mean computers hurt nice computers

• **How:**
  – Phishing
    ▪ Have you been targeted? Has an attack been successful?
  – [Distributed] Denial of Service

• **Why:**
  – Cybercrime: professionalization of malware
    ▪ renting botnets (DDoS; spam)
    ▪ stealing credit card numbers, passwords
  – Cyberwarfare: states as actors or targets
    ▪ North Korea vs USA gov, corporate sites (2009)
    ▪ Russia vs Georgia during and after South Ossetia war (2008)
    ▪ Stuxnet (2009-)
    ▪ A variety of government, activist sites during Arab Spring (2011)
    ▪ Anonymous
Electronic Money

• Financial transactions are increasingly moving online

• Advantages
  – easier transactions
  – easier access to credit
  – discourages black market economy
  – prevents businesses from having to carry cash floats

• Disadvantages
  – empowers a few corporations
  – less anonymity
  – security risks

• Other advantages/disadvantages? What do you think?
Blockchain

• Distributed ledgers offer an alternative approach to electronic money that works more like cash

• What is:
  – blockchain?
  – mining?
  – what stops someone from spending the same digital money twice?
  – what’s an NFT

• But, the currency is incredibly volatile (and, not everyone even agrees that it makes sense to think of it as money)

What do you think? Should governments encourage blockchain-based currencies? Do you use them?
Course Evaluation

10 minutes to fill in course evaluation. It’s at:

https://seoi.ubc.ca/evaluations

...Then we’ll discuss:

“Self-driving cars should be allowed to operate on public roads once they have been shown to be at least slightly safer than the average human driver.”