Computer & Network Security

Lecture 7-2

Computers & Society (CPSC 430)
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https://www.cs.ubc.ca/~kevinlb/teaching/cs430
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?
“Canadians should be able to vote online in federal, provincial and municipal elections.”

**Section 101**

A total of 51 voter(s) in 1157 hours

- 13 votes (25%) — Strongly agree
- 8 votes (16%) — Agree
- 14 votes (27%) — Neutral
- 13 votes (25%) — Disagree
- 3 votes (6%) — Strongly disagree

**Section 102**

A total of 56 voter(s) in 1156 hours

- 15 votes (27%) — Strongly agree
- 29 votes (52%) — Agree
- 6 votes (11%) — Neutral
- 3 votes (5%) — Disagree
- 3 votes (5%) — Strongly disagree
Online Voting

• Motivation:
  – More people would vote
  – Votes would be counted more quickly
  – Cost less money
  – Avoid disputed elections like Florida 2000
  – Eliminate ballot box tampering
  – Software can prevent accidental over-, under-voting

• Risks:
  – Gives unfair advantage to those with computers
  – More difficult to preserve voter privacy
  – More opportunities for vote selling
  – Obvious target for a DDoS attack
  – Security of election depends on security of home computers
  – Susceptible to phony vote servers, manipulation by foreign governments
  – No paper copies of ballots for auditing or recounts
  – Reduction in perceived legitimacy of elections even if everything works