Lecture 5-2
Privacy
Participation Quiz

ARE MULTIPLE CHOICE EXAMS AN ACCURATE MEASURE OF ONE'S KNOWLEDGE?

A. YES
B. A AND C
C. A AND B
D. ALL OF THE ABOVE
Privacy and Trust

• Modern life more private
• Challenge: living among strangers
• Remedy: establishing reputations
  – Ordeal, such as lie detector test or drug test
  – Credential, such as driver’s license, key, ID card, college degree
• Establishing reputation is done at the cost of reducing privacy
Ways Information Becomes Public

- Rewards or loyalty programs
- Body scanners
- Digital video recorders
- Automobile “black boxes”
- Enhanced 911 service
- RFIDs
- Implanted chips
- Cookies
- Spyware

...can you think of others?
Information Privacy

“It should be illegal for a search engine to publicly disclose users’ search histories, even in anonymized form.”

AOL.com did this in August, 2006

Data Mining

• Data mining
  – Searching for patterns or relationships in one or more databases
  – This info typically provided by the customer for another purpose

• Many internet services are essentially provided as an opportunity to gather valuable data
  – Google; Facebook; free online courses

• Also performed by the government
  – Efforts to detect terrorism via phone, bank, travel records
  – Tax audits

• Questions:
  – Ownership: do you have any rights over information arising from transactions in which you participated?
  – Ethics: what data mining activities are unethical? Which are ethical?
  – Does it make a difference whether DM is opt-in or opt-out?
  – At what point does DM become “creepy”?
  – Should we worry about ending up in a “personalization bubble”? 
Strong Encryption

• Strong encryption: encryption at a level that is believed not to be breakable by any other than sender/receiver
  – e.g., 256-bit AES
  – mathematical reasons to believe governments can’t break it either

• Availability of strong encryption
  – Previously classified as a munition by US, regulated
  – 1991: US Senate passed a law requiring all encryption systems to include a “back door”
  – In response, Phil Zimmerman created PGP
  – Government tried to shut it down
  – 1999, 2000: courts ruled that these restrictions are illegal, encryption protects privacy and free speech

• Questions
  – Should there be laws against use/distribution of strong encryption?
  – How should governments respond to its existence?