CSE 303
Concepts and Tools for
Software Development

Magdalena Balazinska
Winter 2007
Lecture 20 – Contemporary Issues of
Computing: Identity Theft

The Problem

- Increasing volumes of digital information + era of easy credit = identity theft explosion

- ID theft: Imposter gains access to personal information and impersonates the victim

- Thieve's goals

    – Obtain credit (mortgage, credit card)

    – Obtain merchandise or services

    – Use false credentials

- Consequence for victim: debt and/or criminal record

Some Statistics

- Numbers quoted in studies vary

- Here are some numbers to give you an idea

  - 10 million victims per year and growing!

  - 50 billion dollars per year for US businesses and consumers

  - Average in hundreds of hours to recover from id theft!

  - Emotional impact is also severe

  - http://www.idtheftcenter.org/factsandstats_1006.pdf

  - http://en.wikipedia.org/wiki/Identity_theft

Identity Theft Technique 1

- Shoulder surfing
  - Go to coffee shop; buy coffee
  - Sit next to person who looks rich
  - Watch over their shoulder as they engage in online banking or similar activity and type their login & password
- Higher tech approach
  - Bring own laptop and intercept other people's wireless communications or even hack into their computers
  - Pretend to be a wireless access point

http://www.cnn.com/2005/TECH/internet/06/21/hotspot.hacking/

http://www.jiwire.com/wi-fi-security-traveler-hotspot-1.htm

Identity Theft Technique 2

- Hack into a company's database
  - Exploit some known vulnerability

- Lower tech solutions
  - Steal a computer (often laptop) containing personal info
  - Pay an insider to sell personal information
  - Often people **post sensitive data online by accident**

- Number of incidents is scary:
  - 104,067,495 documented records involved in security breaches since 2005
  - http://www.privacyrights.org/ar/ChronDataBreaches.htm

Identity Theft Technique 3

- **Phishing**
    - Initiate electronic communication pretending to be a trustworthy entity: bank, e-retailer, email service
    - Trick people into divulging sensitive information
    - Typically through email or IM

- **Pharming**
    - Cause users to be redirected to fraudulent website through DNS hijacking or "poisoning" (requires hacking into a DNS server)
    - Can also simply register a similar looking domain name

- http://www.antiphishing.org/

Identity Theft Technique 4

- Low tech methods also exist for identity theft

- Examples:
    - Stealing mail
    - Dumpster diving
    - Shoulder surfing when others simply fill out forms say at the department of motor vehicles

Questions

- What is the social impact of identity theft?

- Who is responsible?

- What can we do about it?

- Is it a technical problem or a legal problem?