CSCI 215 Social & Ethical Issues In Computing

Class 5 – Government Spying

Transparency in Government
Notes

• Computer Museum Reschedule – Next Tuesday (NOT Thursday)
• Proposals due tonight
• Homework 2 posted
  • Already found an issue – the last video option will not be an option (Sorry)
• Retro – Update, working on / bear with me
  • Less text heavy slides (or at least some more visually interesting things)
  • Still working on worthwhile questions to spark better conversations
Review

• What prevents me from discussing your grades with your classmates?
  • A. HIPPA  B. FERPA  C. The CS department  D. COPPA

• Which Amendment protects your privacy against the government reading letters sent to your mailbox (without a warrant)?
  • A. First  B. Eightieth  C. Fourth  D. Zeroth
• The Privacy Act of 1974, 5 U.S.C. § 552a, establishes a code of fair information practices that governs the collection, maintenance, use, and dissemination of information about individuals that is maintained in systems of records by federal agencies. A system of records is a group of records under the control of an agency from which information is retrieved by the name of the individual or by some identifier assigned to the individual.

• Requires federal agencies to give people access to records that have been collected concerning them, “allowing them to verify and correct them if needed.”

Privacy Act of 1974 – Current Topics

• FBI has a large biometric database (palm prints, fingerprints, iris scans, facial and tattoo photographs) called Next Generation Identification System (NGI)

• 05 MAY 2016, FBI has filed for NGI to be except from the Privacy Act of 1974 (https://s3.amazonaws.com/public-inspection.federalregister.gov/2016-10119.pdf)

• It is just 10 pages (relatively short for a government document)
Privacy Act of 1974 – Current Topics

• FBI Claims act interferences with detecting, deterring, and prosecuting crimes
  • And also alludes to increased protection of witnesses and informants.

• Do you have a right to know about the data your government is collecting about you?

• Does the source / means of the data collection matter?

• Do you think this is a reasonable exception?
How much does this data matter?

Whistleblowing

• Who is Julian Assange?
• Who is Edward Snowden?
• Who is Thomas Andrew Drake?
Julian Assange

• Australian Journalist / Computer Programmer / Hacker
• Editor in Chief of WikiLeaks (sometimes credited as founder)
• Currently has political asylum in Ecuador

“to bring important news and information to the public... One of our most important activities is to publish original source material alongside our news stories so readers and historians alike can see evidence of the truth.”
WikiLeaks

WikiLeaks Documents and controversy Examples

• Treatment at Guantanamo Bay Procedures
• Report of Australian Government censoring websites
• Apache Helicopter attack footage in Iraq
Edward Snowden

- American Computer Professional
- Contractor who leaked classified NSA data
- Temporary asylum in Russia
Thomas Andrew Drake

- Senior Executive of NSA for 7 years
- 2008 Attempted to alert his superiors and Congress to what he saw as illegal activities, waste and mismanagement at the NSA
- Reported unclassified documents to a reporter using encrypted channels
- Charged with numerous counts, including Espionage Laws violations. Faced up to 35 years in prison
- 2011 settled and sentenced to 1 year probation and 240 hours community service
NSA – National Security Agency

• Formed in 1952 on President Harry Truman’s order following codebreaking in WWII

• “... we gather information that America's adversaries wish to keep secret. Through Information Assurance, we protect America's vital national security information and systems from theft or damage by others.

• Through carrying out its missions, NSA [...] helps save lives, defend vital networks, and advance our Nation's goals and alliances, while strictly protecting privacy rights guaranteed by the U.S. Constitution and laws”

• https://www.nsa.gov/about/faqs/about_nsa.shtml
Some of the info leaked by Snowden
Surveillance Back Doors

• http://www.ted.com/talks/christopher_soghoian_a_brief_history_of_phone_wiretapping_and_how_to_avoid_it#t-269418

• http://www.ted.com/talks/malte_spitz_your_phone_company_is_watching

• More on this later.
Some of the info leaked by Snowden

FAA702 Operations
Two Types of Collection

**Upstream**
- Collection of communications on fiber cables and infrastructure as data flows past.
  (FAIRVIEW, STORMBREW, BLARNEY, OAKSTAR)

**PRISM**
- Collection directly from the servers of these U.S. Service Providers: Microsoft, Yahoo, Google, Facebook, PalTalk, AOL, Skype, YouTube, Apple.

You Should Use Both
Some of the info leaked by Snowden

Phone Meta Data

• Cannot keep the content of phone calls, but can keep *meta data*

• For Example:
  • Phone numbers of both caller and recipient
  • Number of any calling cards used
  • Time and Duration of calls
Some of the info leaked by Snowden

- **TURBINE**: a brain for malware
- NSA implanted Computer Network Exploitation (CNE): surveillance malware installed on computers and networking devices
- Over 50,000 computers, expected to reach over 85,000 by 2013
- TURBINE designed to allow automated implants (over millions)
  - A brain, that operated with little or no human interaction
  - Uses man-in-the middle or man-on-the-side attaches (More on this later)
  - Pretends to be a Facebook server, and is able to extract files from hard drive
What allows NSA to do this?

• Section 215 of Patriot Act (and its successor USA Freedom Act)
• FISA (Foreign Intelligence Surveillance Act)
  • Allows data collection about and from foreigners, or US Citizens suspected of espionage

In regards to the phone metadata
• **May 2015**: Declared collecting phone metadata illegal
• **August 2015**: U.S. appeals court overturned lower’s court ruling
But To be Fair

NSA defends collecting information about US Citizens because it is not *intentionally* targeting them – it’s just part of the mass surveillance.

• Any Analyst can abuse these tools (though take comfort because “this doesn’t happen a lot”)
But To be Fair

“In the course of their daily work they stumble across something that is completely unrelated to their work, for example an intimate nude photo of someone in a sexually compromising situation but they’re extremely attractive,” he said. “So what do they do? They turn around in their chair and they show a co-worker. And their co-worker says: ‘Oh, hey, that’s great. Send that to Bill down the way.’ ”
But To be Fair

**LOVEINT**: spy on love interests, spouses, ex-spouses, first dates
  - Love Intelligence

• In 2003, an NSA employee was internally investigated after a woman with whom he had a sexual relationship reported him to the government because she suspected he was monitoring her calls.

• An investigation revealed that over a period of five years, the employee had unlawfully monitored nine phone numbers associated with female foreign nationals.
But To be Fair

**LOVEINT**: spy on love interests, spouses, ex-spouses, first dates
  - Love Intelligence

- In 2004, a wife was found to have followed a foreign number she found on her husband’s phone because she thought he was cheating.

- In each of these three cases there was no prosecution or disciplinary action taken because the NSA staff involved in the abuses resigned.

- One LOVEINT case was referred to the Justice Department in 2011—but it declined to prosecute.

- Worst Punishment was a reduction in pay for two months, restricted access to intelligence.
But To be Fair

2 former NSA reported that they listened to solders overseas:

• "Hey, check this out," one said he would be told, "there's good phone sex or there's some pillow talk, pull up this call, it's really funny, go check it out. It would be some colonel making pillow talk and we would say, 'Wow, this was crazy.'"
But surely this is worth it to protect our safety
Some Issues

NSA directors have lied to Congress on a number of issues. By NSA’s own admissions

• Originally defended these actions by stating this data has helped to stop 54 terrorist attacks
• Later admitted to only 13 attacks on or in the US
• Then revealed only 1 of these attacks was discovered through mass surveillance (as opposed to confidential informants, existing law enforcements, etc)
• And this was not an attack or plot, it discovered a taxi driver and 3 accomplices raised $8000 to a Somolian terrorist group (who has never been involved with an attack on US)
Discussion Point

• Is there a difference between the data Social Media collects about you and the data Government collects about you?

• Is there a difference between the Snowden Leaks and WikiLeaks?

• Is there a difference between emails and snail mail?