Internet & Privacy

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Introduction

- Why online privacy?
- Threats to privacy
- Counter measures
Why Online Privacy?

- Safety & security
- Human dignity
- Intellectual freedom
- Constitutional & legal rights
- http://chooseprivacyweek.org/  May 1-7
Threats to Privacy

- Anything shared over the network is open to misinterpretation.
- The Internet not only duplicates, it never forgets!
- Communication over a network, unless strongly encrypted, is never just between two parties.
- Your information footprint is larger than you think.
- Just because something can’t be found today, doesn’t mean it can’t be found tomorrow.
- There is no anonymity on the Internet.
- You can’t avoid having an information footprint by not going online.
- Sharing information over a network means you give up control over that information.
- Identity is not guaranteed on the Internet.
- Information about you on the Internet will be used by somebody in their interest - including against you.

http://teachingprivacy.icsi.berkeley.edu
Threats to Privacy

- Data sharing
- Data mining
- Data theft
- Surveillance

- Social media & the cloud
- Content personalization
- Activity Tracking
- Email & http://
- Monitoring & filtering
- Wifi hotspots
- Malware & hacking
- Mobile apps & devices
- Device lost or stolen
- Internet of things
Social Media & The Cloud

- Terms of service
- Privacy policy
- Privacy controls
- Delete account?
- Be selective
- Stay current
Content Personalization

- Data about you determines content
- In some ways just like social media
- But can work even if not logged in
- Alternatives to google
  - duckduckgo.com
  - ixquick.com
Activity Tracking

- Websites gather info about you
- Logged in or not
- Stored in cookies & local shared objects
- Usually shared with other sites you visit
Activity Tracking

- Use current browsers
- Use privacy mode
- Frequently delete cache, cookies, etc
- Install plugins like lightbeam, better privacy, ghostery, etc
- Use multiple browsers
  - one for surfing
  - another for shopping
  - 3rd for financial

DELETE COOKIES?!
Email & http://

- Email & web pages are open texts
- Many access points along the route
- https encrypts web pages, not email
- Plugin “https everywhere”
- Encrypted email = pita
Monitoring & Filtering

- Widespread in businesses, schools, libraries, homes, ISPs
- Potentially records all unencrypted activity
- May block sites / content
- Get around them with plugins like https everywhere, stealthy
- VPN service $5-10 per month
- Tor anonymous network probably overkill, risky
Wifi Hotspots

- Many are not secure
- Some are honeypots
- Turn off automatic wifi connection
- Avoid mystery hotspots
- Use https or VPN
- Avoid public wifi, use cellular data instead
- And be sure to secure your wifi at home...
Malware & Hacking

- Protect your device
- Windows 7, Mac Lion
- Run software updates
- Turn on firewall
- Turn on other security protections
Malware & Hacking

- Strong passwords protect accounts
- Length > complexity
- Diversify passwords
- Use a pattern
- Password vaults like Lastpass or Keepass
Mobile Apps & Devices

- Take all threats we have covered...
- Add even more personal data
- Plus geotracking
- Mix thoroughly with an exposition of apps
Mobile Apps & Devices

- Become familiar with privacy settings
- Location services
- Wifi settings
- Browser settings
- Alternative browsers like Dolphin, Opera
- Be selective of apps
Device Lost or Stolen

- It will happen to you (or already has)
- Apps & services to find or wipe devices
- Encrypt storage when possible
- Change passwords after theft/loss

WHERE WAS DEVICE STOLEN FROM?

- CAR: 21%
- OTHER: 31%
- HOME: 18%
- AIRPORT, BUS TRAIN, ETC.: 11.5%
- CAFE, RESTAURANT: 11.5%
- OFFICE: 7%
Internet of Things

• Ordinary objects get smart & connected
• All the threats we've covered so far & more
• Keep calm and...