Announcements

Project 2B due tonight at 11:00 PM

Midterm 2 on Friday -- Review in Lab

Privacy

No matter how exemplary your life is, there are things you want to keep to yourself

Dating For Total Dummies

When you buy a book, the transaction creates information ... who owns it?

Is the information yours or the business's?

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Four options on how to use it --

- **Store can't use after business purpose over**
- **Store can use it, if you approve**
- **Store can use it, unless you object**
- **Store can use information no matter what**

What Is Privacy?

Warren & Brandeis in *Harvard Law Review*

The common law secures to each individual the right of determining, ordinarily, to what extent his thoughts, sentiments and emotions shall be communicated to others. Under our system of government he can never be compelled to express them (except upon the witness stand); and even if he has chosen to give them expression, he generally retains the power to fix the limits of the publicity that shall be given them.

What Is Privacy?

Brandeis & Warren continued …

The narrower doctrine [of privacy] may have satisfied the demands of society at a time when the abuse to be guarded against could barely have arisen without violating a contract or a special confidence; but modern devices afford abundant opportunities for the perpetration of wrongs without the participation of the injured party

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Portable cameras and faster film … 1890

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Modern devices mean we need a new definition of privacy

A Definition

What does "privacy" mean in the modern world?

Privacy, the right of people to choose freely under what circumstances and to what extent they will reveal themselves, their attitude, and their behavior to others

- Privacy is a right
- **You control when & how much is revealed**

Fair Information Practices

To "protect privacy" in IT, HEW created "fair Info practices"; OECD expanded

- **OECD principles are the "gold standard"**
- **Defined in 1980**

Limited Collection Principle	Security Principle
Quality Principle	Openness Principle
Purpose Principle	Participation Principle
Use Limitation Principle	Accountability Principle

- **Business & Government are separate cases**

Europe vs America

EU, much of non-EU Europe, NZ, Hong Kong, Australia, Canada use OECD

- **US privacy law for government is (has been?) strong**
- **US privacy law for business is "sectoral", meaning it is limited to sectors and specific business practices**
  - **Very few industries/practices covered**
  - **Almost anything goes, e.g. identity theft**
  - **US has new federal law protecting med info**

Think About It

EU law says, "Info on EU citizens must comply with OECD on leaving EU"

- **US privacy is so bad, EU information cannot come here**
- **US-EU negotiations**

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- **US privacy is so bad, EU information cannot come here**
- **US-EU negotiations stalled over**
  - **Opt-in/Opt-out**
  - **Enforcement**

Person decides to "allow" or must "prohibit" use

Who checks compliance and imposes penalties?

Think about it for SPAM

Some Info is Protected

UW: Family Educational Rights & Privacy Act

As a general rule the University will not release a student's educational records to a third party without written consent of the student. This includes tuition account information.

This is strong protection … it even includes practices of returning homework

Some Info is Protected

- UW Libraries
  - *The University of Washington Libraries values the privacy of library users. The Libraries seeks to minimize the collection and retention of personally identifiable information.*
- When information is not kept, it cannot be abused.

Digital Privacy

How private is your information online?

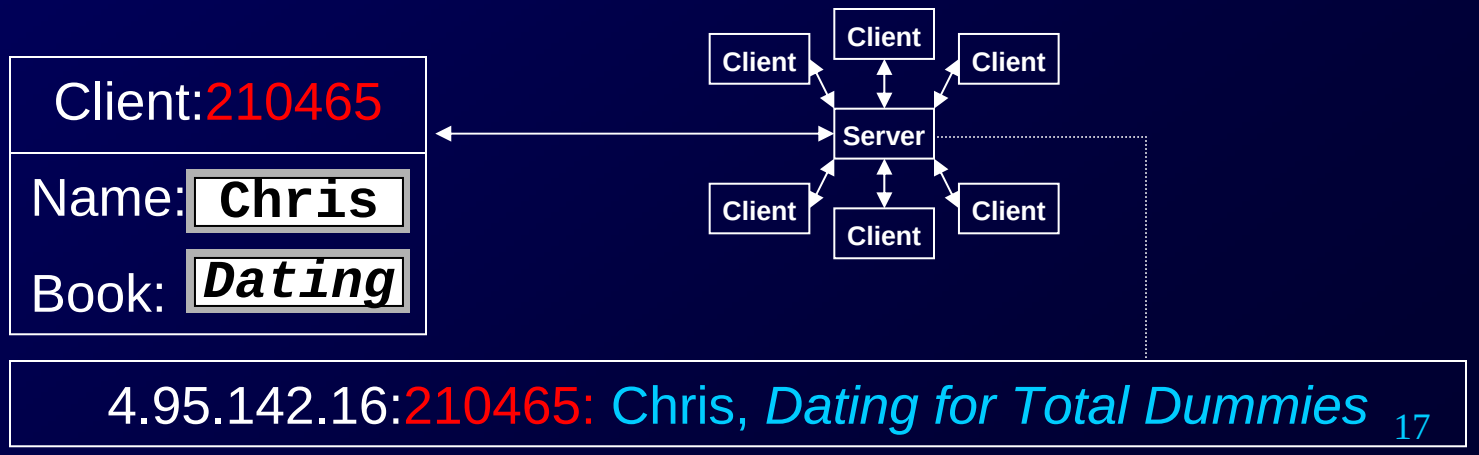
- **Reputable online business post Privacy Stmt**
- **The statement should understandable to you and say what info they collect, what they will do with it, how to "opt-out", etc.**
- **But, there is little policing & few penalties**

Real Networks in 1999 secretly gathered data on people's personal music tastes, encrypted the info so no one would know, didn't mention it in their privacy statement, and used TRUSTe auditor -- the day after getting caught, they improved their privacy statement … should we ever trust them???

Cookies

Cookie: a record stored by a Web server on a client (your computer)

- **The cookie is usually a unique ID that allows the server to remember who you are**
- **Well known CS idea that improves Web use**



Cookies: Good

Cookies are used by many sites and they make Web usage much better

- **Many sites, e.g. Oxford English Dictionary use cookies**
- **Banking and credit card applications cannot be secure enough without cookies**
- **If there privacy laws met OECD standards, cookies would be all good and no one but computer scientists would know about them**

But there is a problem

Cookies: Bad

Cookies can be stored in your computer by sites you have not visited: 3rd party

- **3rd Party Cookies come from a site in business with the site you visit, e.g. for ads**
- **3rd party cookies allow info to be correlated**

Correlating Cookies

The 3rd party cookie becomes the key (literally, in DB sense) to join (in DB sense) the info held by separate co.s

Company ABC Database

Customer	Cookie	Ad Agcy	Data1	Data 2 ...
Chris	210465	666-666	val 1	val 2

Company DEF Database

Customer	Cookie	Ad Agcy	Data1	Data 2 ...
Chris	4491027	666-666	val 3	val 4

It's The Same Chris!!!

Managing Cookies

You control whether your computer accepts cookies -- look in browser

- **If you don't care about privacy, accept all cookies**
- **If you greatly value your privacy, accept no cookies**
- **If you want some privacy AND benefit from the useful stuff on the Web, accept cookies but reject 3rd party cookies**

Reputable companies tell you their cookie policy

Privacy Statements

QFC's Advantage Card

The information gathered by QFC will be used to give you, our valued customer, our very best. You have our word on that! We pledge that QFC will not release your name to any list service or manufacturer, and that such information will be held in the strictest of confidence–even within our company.

Privacy Statements

Kroger and its affiliates may use personal customer information to create merchandising and promotional programs tailored around specific purchases, the frequency of store visits, volume of purchases, and other data…We may share personal customer information with our subsidiaries, affiliates, agents, representatives and trusted partners for the limited purpose of providing services or information to Kroger or our customers at our direction.

Privacy Statements

Kroger and its affiliates may use personal customer information to create merchandising and promotional programs tailored around specific purchases, the frequency of store visits, volume of purchases, and other data…We may share personal customer information with our subsidiaries, affiliates, agents, representatives and trusted partners for the purpose of providing services or information to customers at our direction.

We strive to collect, use and disclose personal information consistent with the laws of the United States as well as the laws of other countries in which we do business, including the laws of the European Union.