


Test Your Tech

Identity theft is:

- A. Your sister borrowing your makeup, your shoes, and your boyfriend.
- B. Someone using your name, address, social security number, driver's license number, and credit card number at your expense.
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Privacy


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

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Dating For Total Dummies


When you buy a book, the transaction creates information ... who owns it?
Is the information yours or the business's?



Dating For Total Dummies

When you buy a book, the transaction creates information ... who owns it?
Is the information yours or the business's?
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?

Justices Brandeis & Warren wrote ...

*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 no fed 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



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 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




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

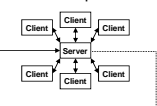
Real Networks in 1999 secretly gathered data on people's personal music tastes, encrypted the info so no one would know, didn't mention it in their privacy statement, and used TRUSTe auditor -- the day after getting caught, they improved their privacy statement ... should we ever trust them???



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



Client:210465
Name: **Chris**
Book: **Dating**

4.95.142.16:210465: Chris, Dating for Total Dummies




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

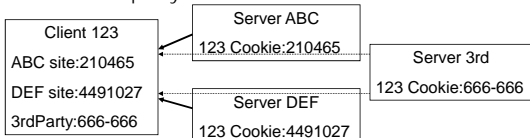
But there is a problem



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




Client 123
ABC site:210465
DEF site:4491027
3rdParty:666-666

Server ABC
123 Cookie:210465

Server 3rd
123 Cookie:666-666

Server DEF
123 Cookie:4491027



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 ...
123	210465	666-666	val 1	val 2

Company DEF Database				
Customer	Cookie	Ad Agcy	Data1	Data 2 ...
123	4491027	666-666	val 1	val 2



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