



# Michelle's Web Side Story

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# [ Meet Michelle ]

- Michelle is an average Internet user.
- Michelle loves the World Wide Web.
- She regularly visits many sites to read the news and to check her email.
- She goes to Amazon.ca to buy her family and friends presents during the holiday season.

# [ Michelle's Story ]

- Michelle was very surprised that operators of Web sites knew-
  - When she logged on (6:30 a.m.)
  - How long she was connected (73 minutes)
  - Which sites she visited (cbc.ca, bbc.co.uk, gmail.google.com, amazon.ca)
  - Which software she ran on her computer (Microsoft Windows XP, Powerpoint)
- Surprise → Outrage.
- Why?

# Michelle's Story

- She soon realized that there was a privacy policy that she could have read to learn about such matters.
- The CBC's privacy policy says-

*“The ads appearing on this Web site are delivered to you by DoubleClick, our Web advertising partner. Information about your visits to this site, such as number of times you have viewed an ad (but not your name, address, or other personal information), is used to serve ads to you.”*

# [ Amazon.ca's privacy policy ]

- “We employ other companies and individuals to perform functions on our behalf. Examples include fulfilling orders, delivering packages, sending postal mail and e-mail, removing repetitive information from customer lists, analyzing data, providing marketing assistance, processing credit card payments, and providing customer service. They have access to personal information needed to perform their functions, but may not use it for other purposes.”

# [ Now, what? ]

- She did not know what to think.
  - Was CBC.ca acting responsibly? Was Amazon.ca providing adequate privacy protection?
  - Were there actions reasonable?
- She could not draw a clear conclusion.
- "Was this a good guy or a bad guy?", she wondered when she visited the next web site.
- She **could not tell** and that started to bother her.

# Why is it hard to figure out who is the bad guy on the Web?

- The Web is an intangible medium.
- The Web is a textual medium.
  - You judge people by textual content.
- You cannot see the people behind the web site.
- Web site Spoofing is possible.
  - A web page can be “hijacked”.
  - Search results can be redirected.
- You do not always have access to information that is being collected.

# You do not have to fill a form to provide information on the Internet

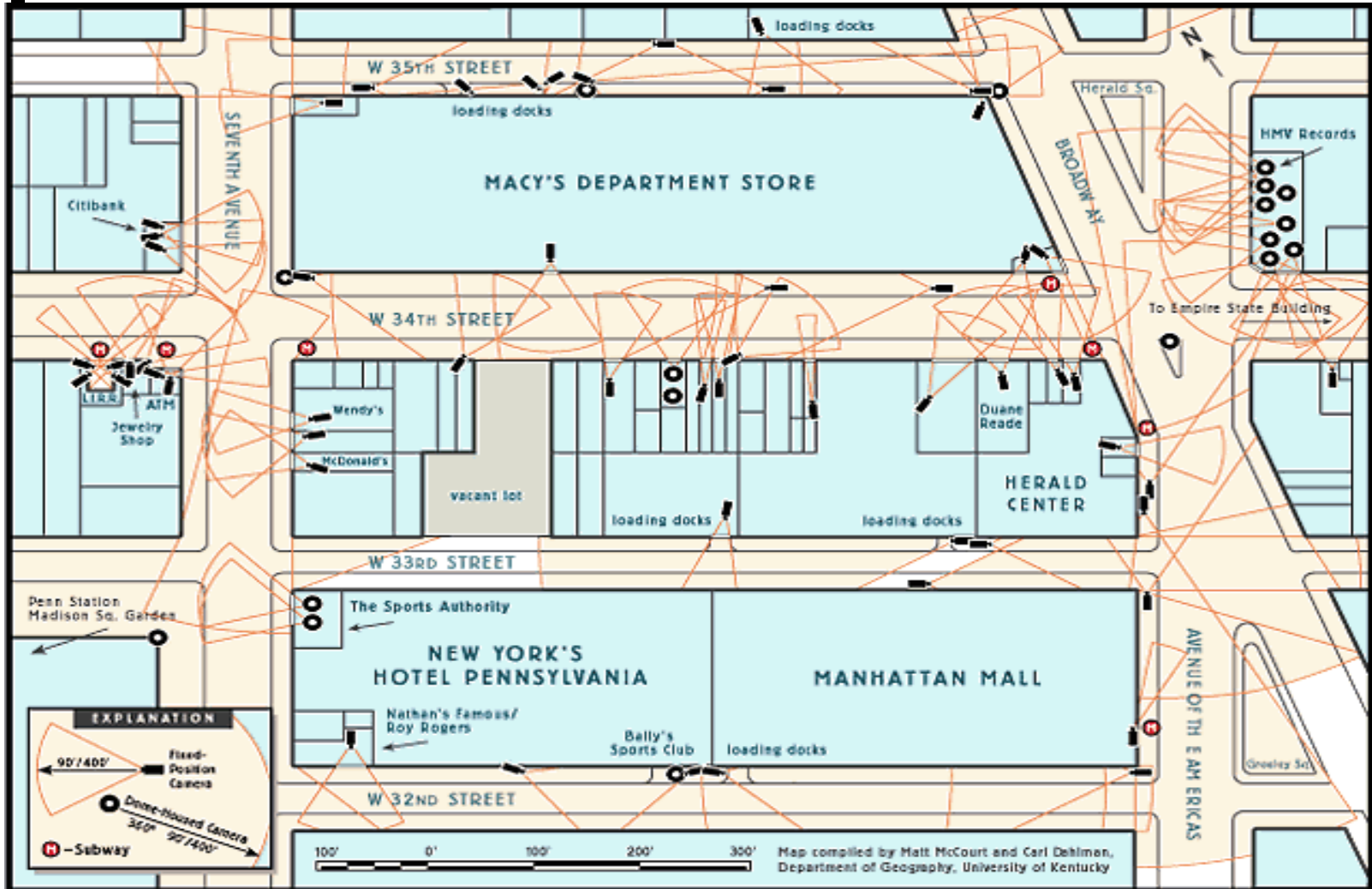
- Simply by logging on to a site, you provide information about-
  - IP Address
  - Browser Type
  - Operating System
  - Plug-ins (e.g. Flash, Shockwave, Acrobat)
  - Screen Dimensions
  - # of web pages browsed in a session
  - Your time zone
  - Who registered your domain name
- Try it out at- <http://www.network-tools.com/analyze>



# [ What is Privacy? ]

- Privacy is the right to be left alone.
- A private consumer wants to control relationship with the firm.
  - Be aware of information collection.
  - Have the option not to provide information.

# Privacy was threatened even before the World Wide Web.



# However, the Internet takes the threat to a new level

- Unprecedented levels of data collection by-
  - Search engines.
  - Direct marketers.
  - Publishers.
  - Government.
- Unobtrusive data collection.
- Integrating data sources.

# How do business leaders think of privacy?

- **Scott McNealy, founder of Sun Microsystems:**  
“You don’t have privacy. You never had privacy. Get used to it.”
- **Bill Gates**  
“Users should be in control of how their data is used. Policies for information use should be clear to the user. Users should be in control of when and if they receive information to make best use of their time. It should be easy for users to specify appropriate use of their information including controlling the use of email they send.” (*company-wide memo on trustworthy computing*)

# How do regulators think of privacy?

1. **Notice:**

Data collectors must disclose their information practices before collecting personal information from consumers.

2. **Choice:**

Consumers must be given options with respect to whether and how personal information collected from them may be used for purposes beyond which they were collected.

3. **Access:**

Consumers must be able to view and contest the accuracy and completeness of data collected about them.

4. **Security:**

Data collectors must take reasonable steps to assure that the information collected from consumers is accurate and secure from unauthorized use.

# How do **regular people** think of privacy?

- Privacy fundamentalists (about 25% of the population)
  - Deeply concerned about privacy rights and potential invasions of privacy.
  - Reject any consumer benefits that require oversight of their activity or the release of data about themselves.
- Privacy unconcerned (about 12% of the population)
  - Don't care about privacy.
  - Don't see any problem with giving their information away.
- Privacy pragmatists (63%)
  - Balancing the potential benefits and threats involved in sharing information.
  - Particularly concerned about the secondary use of information.
  - They are willing to give up privacy for tangible benefits.

# Why do “good guys” collect personal information?

- Targeted advertising.
  - Cashmere sweater for Michelle.
- Personalization
  - Personalized content, “My Store”, “My Yahoo”
- Revenue from the sale of personal information.
  - Corporations can sell personal information to other firms or governments.



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[Trash](#)

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▼ **Quick Contacts**

- **The Gmail Team**  
Set status here ▼
- Allison Lam
- Caitlin Roran
- Gabe Carter
- John Lewis
- Lizzie Astley
- Mitchell Tarver  
Moving this week
- Nathan Woodward  
Working from home
- Nicola Brennan
- Zach Taylor  
A bit busy
- Alex Lidell
- Paige Stevens
- Wayne Carlson

[Add contact](#) [Show all](#)

### Good Camera [inbox](#)

★ Mitchell Tarver <tarver13@gmail.com> I've been 1:19 pm (0 minutes ago)

★ Chris to Mitchell 1:20 pm (0 minutes ago)

Wow, this is the most comprehensive review I've read in awhile. I was thinking of getting a Sony, but now I'm sort of swayed by the s50 too... yeah, the review sounds great... you should definitely get one for Joshua! Now I'm jealous!

[- Show quoted text -](#)

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★ Mitchell Tarver <tarver13@gmail.com> to me

You can borrow mine and try it. I already bought it.

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[ But, there are “bad guys” who collect information, too. ]

- Identity Theft

- These people want to financially benefit from your identity. e.g. use your credit cards.
- **Phishing**, Pharming

- Spyware, Adware, Malware

- Unauthorized sale of information to Spammers.



## Secure Trading System Login

 Log on

Please use your **UserID** and **password** to log on.

UserID:

Password:

 Submit

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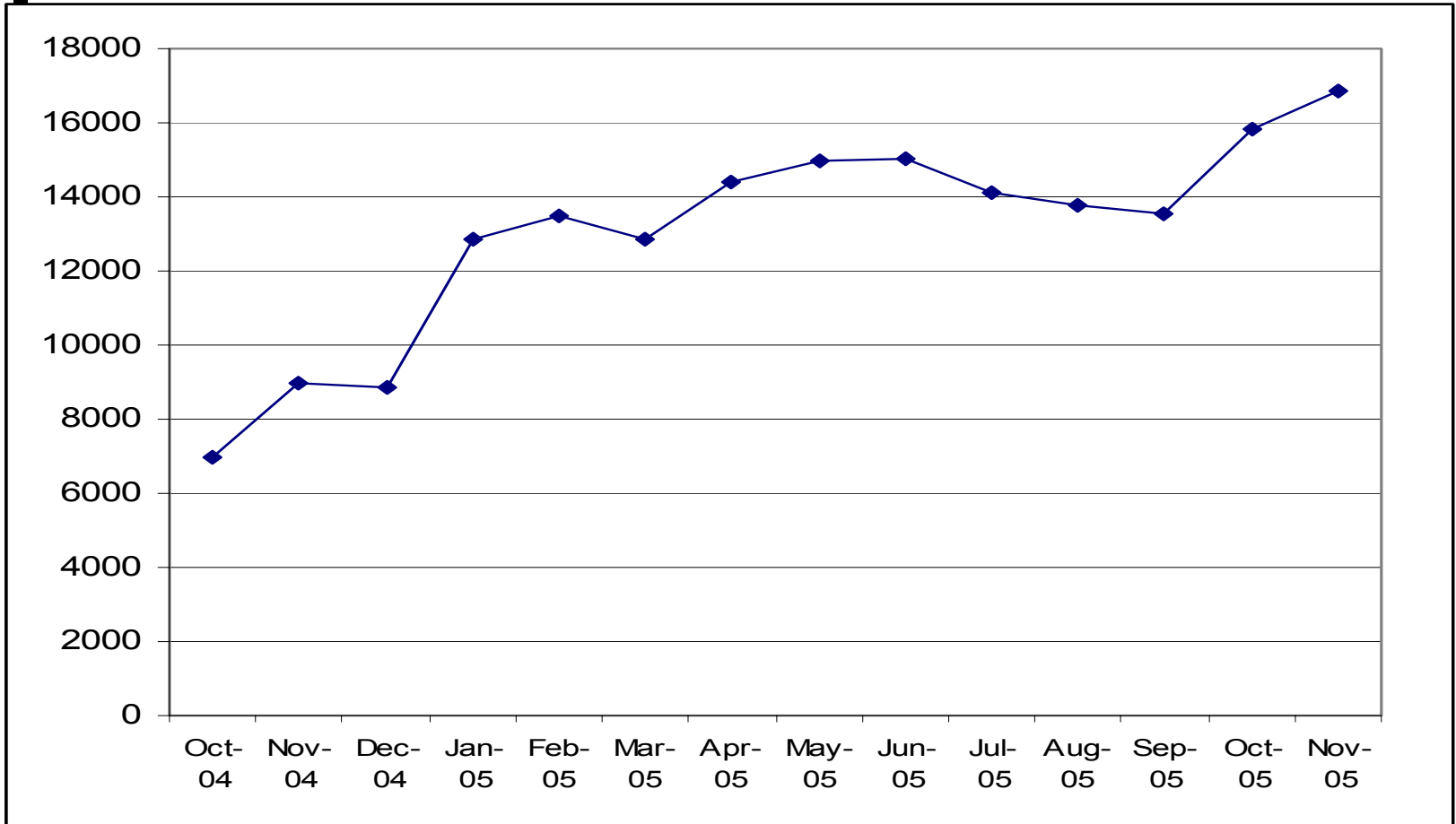
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# [ Example of what is out there. ]

- “<SuperCash | #cctradez> I can cash out Washington Mutual , Key bank , Money access , HouseHold, CitizensBank, Mellon Bank, Sky Bank, BankNorth , Zip Network , Commerce Bank, PNC bank (443071) , Regions Bank , Banknorth , Bank One (478200), Capital One (517805 , 529149, 493422, 412174) PEOPLE'S BANK , Bank Of America (440893 , 549105, 550535), The Hungtington National Bank , JAPAN , MBNA (549035, 426429, 549198), Republic Bank.”
- [Source:  
[http://firstmonday.org/issues/issue10\\_9/abad/index.html](http://firstmonday.org/issues/issue10_9/abad/index.html)]

# Number of Phishing Attacks



# Phishing is a big problem

- Attacks are sophisticated.
- Even experts cannot always differentiate between a legitimate and illegitimate message.
- One study found that 72% of college students clicked on a phishing message. (Jagatic et. al. 2005)
- 80% of West Point students clicked on a bogus email purporting to be about grades. “Even with four hours of computer security instruction, 90 percent of the freshmen clicked on the embedded link.” (Ferguson 2004)

[

I Say-

On the Internet,

**EVERYBODY**

knows that you are a  
Dalmatian.



*"On the Internet, nobody knows you're a dog."*

# Consumers are worried about privacy on Internet

- 81% try to protect themselves against privacy risks they are aware of.
- 82% refused to give information to a website because they felt it was too personal.
- 85% disagreed that a website has the right to resell user information.
- 90% agreed that users should have complete control over demographic information.
- 84% would rather give up looking for favorite content rather than allow health and financial information to be tracked and provided to marketers.
- 79% felt that being in control of who can get information about you was important.
- 80% were very or somewhat concerned about threats to personal privacy online, with similar results noted for concerns regarding the collection of email addresses without consent and tracking visits for ulterior motives.

[ And, Michelle... ]

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- You better be worried, too.



# Current Approaches to Communicate Privacy Practices

- Privacy Policy
- Privacy Seal



# [ How to Think of Privacy Policy ]

- Privacy Policy as Notice
- Privacy Policy as Contract
- Privacy Policy as Advertisement

# Three Ways to Think of a Privacy Policy

## 1. Privacy Policy as Notice

- Policy is viewed as a warning to consumers about the actions of the firm.
- Merely information about how the website plans to collect, store, analyze and disseminate information.

## 2. Privacy Policy as Contract

- Policy is viewed as a legal document that clearly specifies the boundaries between firm and consumer.
- Policy will often contain conditional clauses.

# Three Ways to Think of a Privacy Policy

3. Privacy Policy as Advertisement
  - Persuasive communication vehicle – convince people transactions are safe and secure.
  - Communicate privacy in a format and with content that allow consumers to make informed choices.
  - Anticipate the emotional and cognitive needs of the targeted consumer – If consumers are concerned, the website must find ways to communicate how they alleviate those concerns.
  - This does not mean the website should lie, distort, omit or negate their privacy intentions – just present in a way that resonates with the consumer.


# Idea!! Short Privacy Policies

- Privacy policies are boring, legalistic and cumbersome.
- Mostly, they are LONG.
- What if we forced people to come up with SHORT privacy policies?
- Here's a real policy- **“Note: we will never rent or sell your e-mail address to anyone.”**

# [ Will not get us there. ]

- Most people do not click on the link to privacy policies.
  - Do not have confidence that they can understand.
  - Feel that privacy policies are unreadable.
  - They can't find or skip over the tiny link.

# Are Seal Programs the Answer?

- TrustE; BBB Online 
- If you have a seal, it means that you must adhere to certain guidelines.
- Many problems-
  - Very few firms have signed up with these programs.
  - TrustE has not been very tough on firms who signed up.
  - Since TrustE is paid by members, this is natural.

# [ Studies have found that.. ]

- Consumers regard sites with privacy seal more positively.
- However, those sites are as likely to violate the consumer's privacy as any other site.



# [ So, what do we do? ]

- Get more people to **click** on the link to the privacy policy.
- How can we do that?

# [ New Framework ]

- We need to understand why people click or don't click on a privacy policy link.
- The Decision to Click Framework suggests that :

Motivation  
+ Opportunity  
+ Ability  
-----  
= Click

# New Framework

## ✦ Motivation

- Does the consumer have the desire to process privacy information? It's voluntary!
- Based on:
  - Initial attitude about the website – High quality? Easy to use? Lacks dead links? Visually appealing?
  - Trusting beliefs in the website – Does the site make me comfortable? Do lots of other people use this site?
  - Concern about information privacy – unconcerned, alarmed or pragmatist?

## ✦ Opportunity

- Make the link to privacy policy more salient and prominent.
- Attract attention to it! Advertise it!
- Each piece of online content must compete for the consumer's attention.

## ✦ Ability

- Make them more aware about potential hazards.
- Educate consumers about privacy.
- Provide consumers with tools.
- Give consumers the confidence to understand and make informed privacy choices.

# Let's Get Back to Our Friend Michelle

- Motivation
  - She's concerned about what is going on with her private information, yet still continues to email and make purchases online.
  - She thinks some websites are of higher quality and tends to visit them more often.
  - She is generally trusting of other people, but these revelations have really spooked her.
- Opportunity
  - She uses the Internet to save time, so she usually clicks on links that are clear and on the top or middle of the page.
  - She doesn't like flashy banner ads, but also can't stand the fine print at the bottom.
- Ability
  - She knows that her private information is collected online.
  - She is not sure of the full extent of this collection or how it is used.
  - She would like to know more, but doesn't have too much time to invest in learning about this.

Will Michelle Click on the Privacy Policy Link?

[ Check Back Soon... ]

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It's under investigation.....