



# Will People Ever Pay for Privacy?

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Presented at BlackHat Briefings  
Amsterdam, May 2003



# Overview

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- The Importance of Privacy
  - What Is Privacy?
  - The Conflict
  - Lessons
  - How to Include Privacy in Product Plans
  - Conclusions



# Does Privacy Matter?

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- Polls say that it does
- Media reports pay it huge attention
- People seem to care quite deeply



# They don't act that way

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- Tell strangers all sorts of things
- Don't object to intrusive searches
- Don't buy privacy products in great bulk
- Author worked for Zero-Knowledge for three years
  - Still in business, not ruling the world.
- “People won't pay for privacy”



# People Won't Pay for Privacy

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- Wrong Conclusion
- People won't pay for things they don't understand:
  - The problem a product solves
  - The way it solves it
- Freedom Network had both those issues
  - People were amazingly excited by the idea



# Quick Review Freedom Net

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- Zero Knowledge's Anonymous IP net
  - Real time
  - Email, web, chat
  - No single trust point
  - Very expensive to operate (ZKS paid)
- No longer in operation



# Privacy is Very Complex

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- Includes Spam, ID theft, cookies, right to be left alone, informational self-determination, “lie and get away with it,” and abortion
- Includes unobservability, untracability, data protection
- People pay for curtains, unlisted phone #s, and Swiss bank accounts



# Privacy means too much

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- The word has too many meanings
- People use it sloppily
- The result is confusion over what people want and will pay for





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What is Privacy?

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**Confusing!**



# Privacy is Many Things

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- Spam, telemarketers
- ID theft, CC theft
- Cookies
- Total Information Awareness
- CAPPED II
- Curtains & Venetian Blinds
- Do Not Call lists
- Fair Information Practices and Data Protection Laws
- Right to be left alone
- Informational self-determination
- “Lie and get away with it”
- Abortion
- Gut feelings



# Broad Set of Privacy Tech

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- Cash and banks
  - Athenian banks and taxation
- Remailers
- Fake ID
- Curtains
- Anti-spyware



# Complexity vs Engineering

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- Complex systems are hard to build
- Fundamental Security principle
- Privacy is a very complex issue
- Maybe the law can help?



# Laws Much More Uniform

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- Almost all built on Fair Information Practices
- Data Protection
- Tradeoff between
  - “You must give us this data”
  - “We’ll treat it fairly”
  - Mandatory tradeoff (one size fits all)



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# Two Important Conflicts

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- Data collection, protection, use
- Privacy is fuzzy and complex





# Data Collection, Protection

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- Business collects data for various good reasons
- Wants to maximize value from data
  - Legal in US
  - Data Protection law in “rest of the world”
- Individuals are often disempowered



# Externalities

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- A situation in which someone's well-being is affected by another's action, and they have no control of, or involvement in that action
- Pollution is a classic example



# Looking at the Externality

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- Storage of data creates privacy hazard
- (Computer security stinks)
- Users are not in a position to insure against risk
  - Hard to measure value
  - Hard to measure risk
  - Risk is a likelihood of a hazard leading to damage
- May lead to tort claims



# Risk & Externality

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- *Business are not motivated to protect data as well as the individual who will be hurt by its release*
- AIDS patient lists
- Many people not comfortable with this tradeoff
  - “Privacy Extremists”



# Both Sides Are Rational

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- Business needs certain data to function
- Customer doesn't trust the business
- Lets not even talk about secondary uses (yet)



# Both Sides Are Emotional

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- People are tired of privacy invasions
  - Ask the travel business about CAPPS II
- Businesses are tired of privacy complaints
  - Ask your HR person for privacy problem stories...but only over beer.



# Privacy is Fuzzy & Complex

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- Many meanings of the word make it easy to talk about different things
  - Add to economic and emotional conflict
  - Good recipe for pain and suffering



# Zero-Knowledge Experience

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- Sold really cool Freedom Network anonymous IP service
- Consumers don't understand online privacy invasion
- Consumers don't understand "Anonymous IP"





## Zero-Knowledge, cont

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- It didn't do well in the market
- What can we learn from this?
- NOT: "People won't pay for privacy"
- Service didn't meet a meaningful threat that the users cared about



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# Match Threats and Defense

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- Both real threats, and perceived ones
- Your collection and storage of data is a threat
- Don't take that personally, its just economics of externalities



# Threat: ID Theft

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- Two major types:
  - Account takeover
  - Application Fraud
- Now an insurable risk
  - <http://www.msnbc.com/news/910153.asp?0cv=TB10&cp1=1>
  - “time and money it takes you to wade through the logistical and legal paperwork.”



# Account Takeover

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- Consumers very aware of threat
- Collected carbons
- Visa: Don't print entire CC # on receipt
- Matches threat & defense in customer visible way
- Doesn't address storing CC# in db
  - May well be a worse problem
  - But not visible to consumer



# Account Takeover (2)

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- Digital Cash
  - Way cool technology
  - “Too much work for the consumer”
  - Actually, too much work because the consumer doesn’t see the benefits, just the cost
- Poor matching of defense to perceived threat



# The Hell With It?

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- If consumers don't have a choice...
- Security vs privacy & the nature of trust
- Effort here will be rewarded
  - If it results in a visible difference
  - Laziness here exposes you to risk and customer hatred
  - Ask TRW Credit (formerly Experian)
- Talk to your regulators



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# Privacy Impact Assessment

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- What are you collecting, and why?
- What are you storing, and why?
- What are you selling to your partners...
- PIAs now mandated in many places
- See
  - <http://www.gov.on.ca/MBS/english/fip/pia/>
  - [www.cio.gov/Documents/pia\\_for\\_irs\\_model.pdf](http://www.cio.gov/Documents/pia_for_irs_model.pdf)
  - <http://www.anu.edu.au/people/Roger.Clarke/DV/PIA.html>

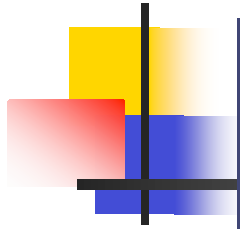


# Beyond PIAs

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- Minimize!
- The core consumer concern is that you're not trustworthy
- Don't argue, agree!
- "We don't want your data!"
- Collect less, use it better
- Think from customer's viewpoint

# Washington Post



washingtonpost.com

*This will only take a few seconds.*

Knowing more about our audience will help us continue to improve our web site and provide ads that are relevant to our audience. It's fast and it's FREE.

**Please fill out the form below to proceed.**

**Gender:**  Male  Female

**Year of Birth:**  (e.g. 1965) **Zip:**  (U.S. Only) (e.g. 20171)

**Country:**

[Questions?](#) | [Privacy Policy](#)

<Gavin> I hate those surveys they give

Gavin is a 102 year old Albanian reading the washingtonpost.com

<Smartboy> I'm guessing they think they have a great readership in Newton Falls, Ohio (Zip code 44444)



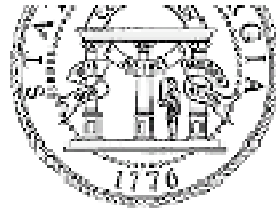
# Washington Post Survey

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- “What are you collecting, and why?”
- WP is collecting demographics
  - Probably to help sell ads
  - Ad sales, prices keep falling
  - Data that everyone knows to be bad can't help
- Comments at bottom were unprompted as I was writing presentation (IRC channel)

# State of Georgia

GA Identity  
Theft



STATE OF GEORGIA

Governor's Office of  
Consumer Affairs

GA Identity  
Theft

## Your Personal Information

First Name:

Last Name:

Address:

Apt. or Suite No.:

SSN:

 -  -  123-45-6789

Date Of Birth:

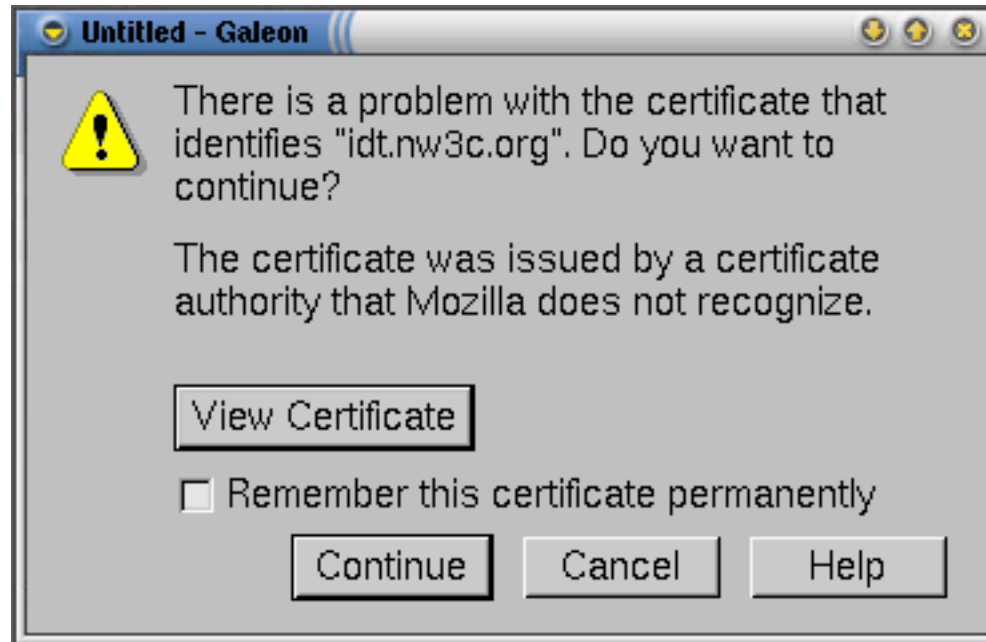
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# State of Georgia

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# State of Georgia

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- Deserves kudos for doing something
- Could be more sensitive
  - Collecting everything needed to commit more ID theft in one place
- Very privacy sensitive audience
- No clear statement of what's mandatory
- No clear statement of data use
  - (May be concealed in long legalese)



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# Privacy is...

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- Complex
- Multi-faceted
- A cause of heartache all around
- Manageable



# Risk and Externality

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- Promises won't satisfy the growing privacy camp
- Understand the problem
  - Divide and conquer
- Turn it against your competitors
- Toolset for
  - Understanding
  - Improving