

Smart Technologies to safeguard e-health

*Managing Patient Confidentiality and
Information Governance*
26 June 2012, Melbourne

Stephen Wilson
Lockstep Group



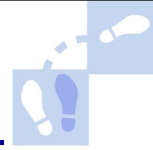
Is privacy dead?

“People have really gotten comfortable not only sharing more information and different kinds, but more openly and with more people. That social norm is just something that has evolved over time”

Mark Zuckerberg January 2010



Or are they selling something?



Zuck: Yeah so if you ever need info about anyone at Harvard, just ask. I have over 4,000 emails, pictures, addresses ...

[Friend]: What? How'd you manage that one?

Zuck: People just submitted it. I don't know why. They trust me. Dumb f***s!

Mark Zuckerberg 2004 (age 19)

Don't caricature the young



“The data show that [young adults] and older adults are more alike on many privacy topics than they are different ...

“Young-adult Americans have an aspiration for increased privacy even while they participate in an online reality optimized to increase revelation of personal data.

“Public policy agendas should therefore not start with the proposition that young adults do not care about privacy.”

HOW DIFFERENT ARE YOUNG ADULTS FROM OLDER ADULTS WHEN IT COMES TO INFORMATION PRIVACY ATTITUDES & POLICIES?
APRIL 14, 2010

“We suggest...that young-adult Americans have an aspiration for increased privacy even while they participate in an online reality that is optimized to increase their revelation of personal data.” (see page 30)

Chris Hoofnagle
UC Berkeley School of Law, Berkeley Center for Law and Technology

Jennifer King
UC Berkeley School of Information

Su Li
UC Berkeley School of Law, Center for the Study of Law and Society

Joseph Tunow
Annenberg School for Communication, University of Pennsylvania

Is privacy dead?

“If you have something that you don't want anyone to know, maybe you should not be doing it in the first place”

Eric Schmidt (Google)
December 2009

“I’ve Got Nothing to Hide” and Other Misunderstandings of Privacy

DANIEL J. SOLOVE*

TABLE OF CONTENTS

I.	INTRODUCTION	745
II.	THE “NOTHING TO HIDE” ARGUMENT	748
III.	CONCEPTUALIZING PRIVACY	754
A.	A Pluralistic Conception of Privacy	754
B.	The Social Value of Privacy	760
IV.	THE PROBLEM WITH THE “NOTHING TO HIDE” ARGUMENT	764
A.	Understanding the Many Dimensions of Privacy	764
B.	Understanding Structural Problems	768
V.	CONCLUSION	772

I. INTRODUCTION

Since the September 11 attacks, the government has been engaging in extensive surveillance and data mining. Regarding surveillance, in December 2005, the *New York Times* revealed that after September 11, the Bush Administration secretly authorized the National Security Administration (NSA) to engage in warrantless wiretapping of American citizens’ telephone calls.¹ As for data mining, which involves analyzing

* © Daniel J. Solove 2007. Associate Professor, George Washington University Law School; J.D., Yale Law School. Thanks to Chris Hoofnagle, Adam Moore, and Michael Sullivan for helpful comments, and to my research assistant Sherrin Shakespeare. I develop some of the ideas in this essay in significantly more depth in my forthcoming book, *Understanding Privacy*, to be published by Harvard University Press in May 2008.

1. James Risen & Eric Lipton, *Bush Lets U.S. Spy on Callers Without Courts*, *Secret Order to Widen Domestic Monitoring*, N.Y. TIMES, Dec. 16, 2005, at A1.

Identity theft

Trends in Credit Card Fraud Categories FY2006-11

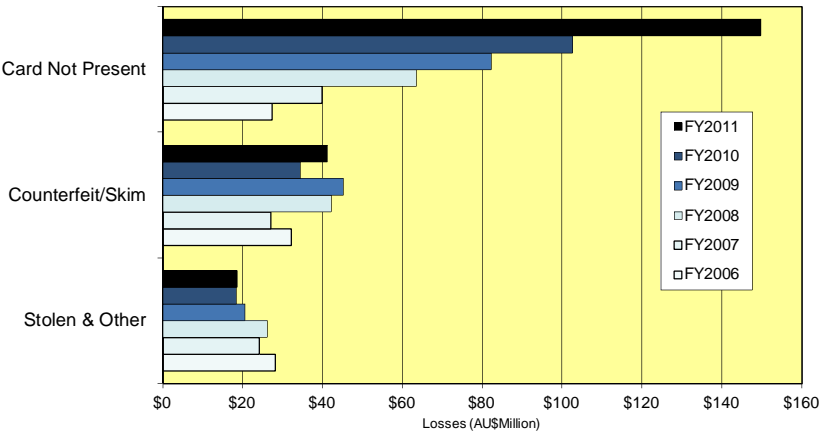


Diagram Copyright © Lockstep Consulting 2010-12

Medical data breaches



InformationWeek
THE BUSINESS VALUE OF TECHNOLOGY

Utah's Medicaid Data Breach Worse Than Expected

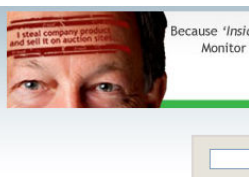
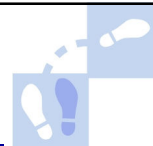
Utah Department of Technology Services (DTS) reveals 780,000 individuals have been affected by the theft of sensitive Medicaid information. That's far worse than initial estimates.

By Nicole Lewis, [InformationWeek](#)

April 11, 2012

URL: <http://www.informationweek.com/news/healthcare/security-privacy/232900128>

Medical data breaches



NYC hospital system breach affects 1.7 million

Angela Moscantolo February 24, 2011

PRINT EMAIL REPRINT PERMISSIONS TEXT: A | A | A

The New York City Health and Hospitals Corp. (HHC), the city's municipal hospital system, has begun notifying 1.7 million individuals about the theft of electronic record files that contained their personal information.

What type of personal information? Full names, addresses, Social Security numbers, medical record numbers, health insurance information, diagnosis and treatment data, telephone numbers, mothers' maiden names and birth, admission and discharge dates.

What happened? The computer backup tapes were stolen on Dec. 23 from the truck of HHC's record management services vendor, GRM Information Management Services, while being transported to a secure location. At the



Q: Why do you rob banks?

A: Because that's where the money is

Willie Sutton*

Medicine 2.0

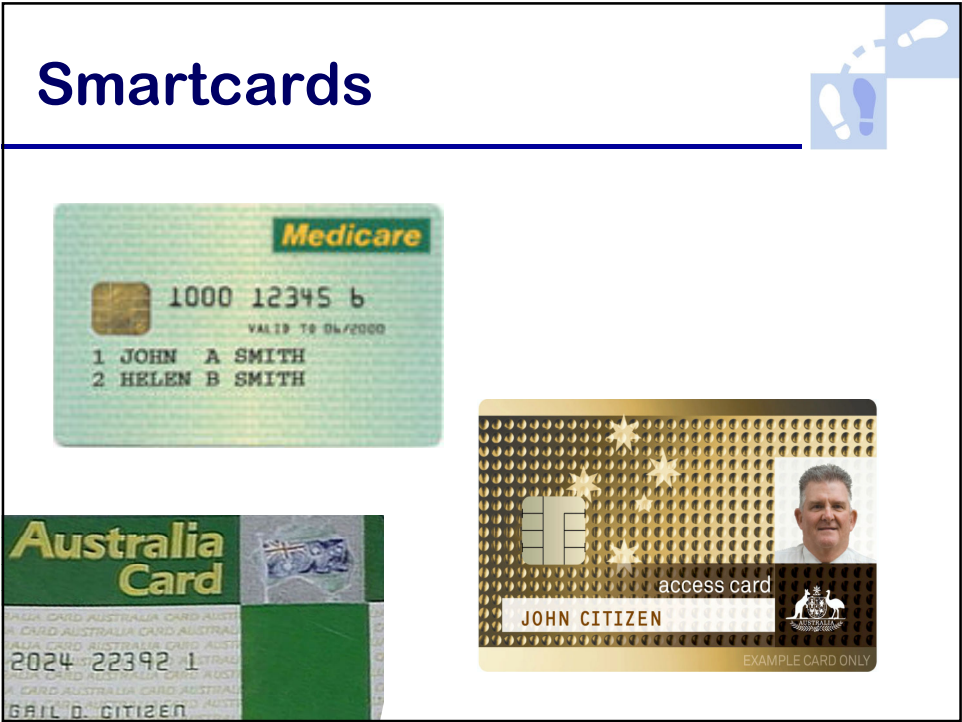


Boston, September 2012

<http://www.medicine20congress.com>

- Clinical Trial Apps for Mobile Devices - Evidence for take away?
- Feasibility Testing of an Electronic Symptom Diary for Adolescents with Cancer
- Teledermoscopy through a Smartphone App
- Use of Mobile Health Technology as an Intervention for Type II Diabetes
- Feasibility of a Mobile Phone Based System to Increase Vaccine Coverage and Timeliness Through Conditional Cash Transfers and Short Message Reminders in Rural, Western Kenya
- Mobile Application for Prevention and Management of Heart and Stroke Risk Factors
- The Connectivity Matrix of Implantable Cardiac Devices for the Integration of Remote Device Data in the Electronic Medical Record
- Internet and Mobile Technology Use Among Urban African American Parents

Smartcards



Habit forming



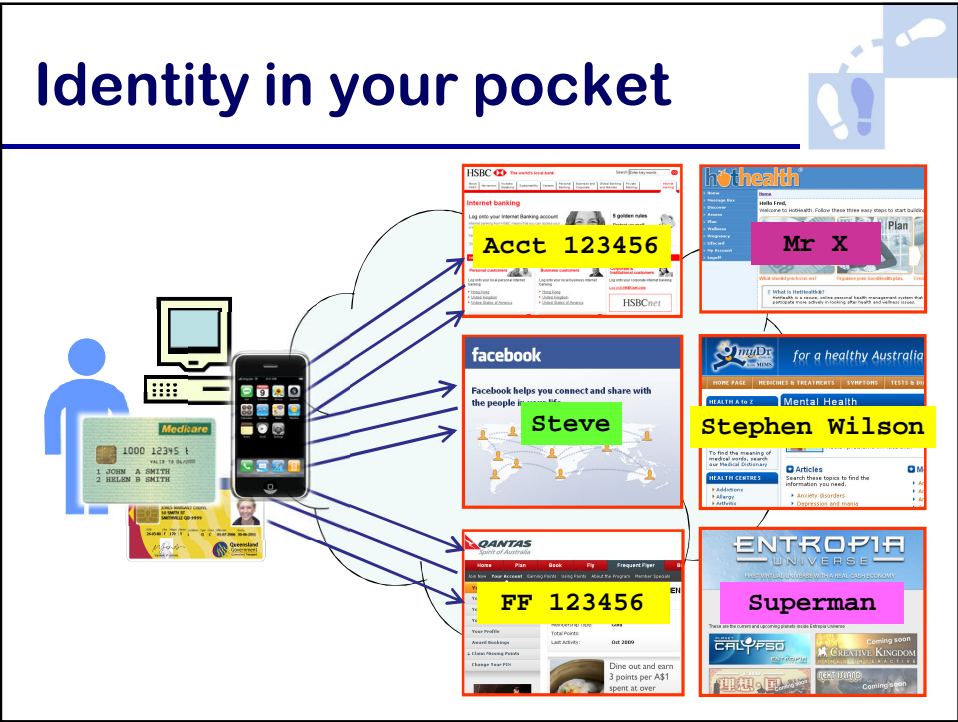
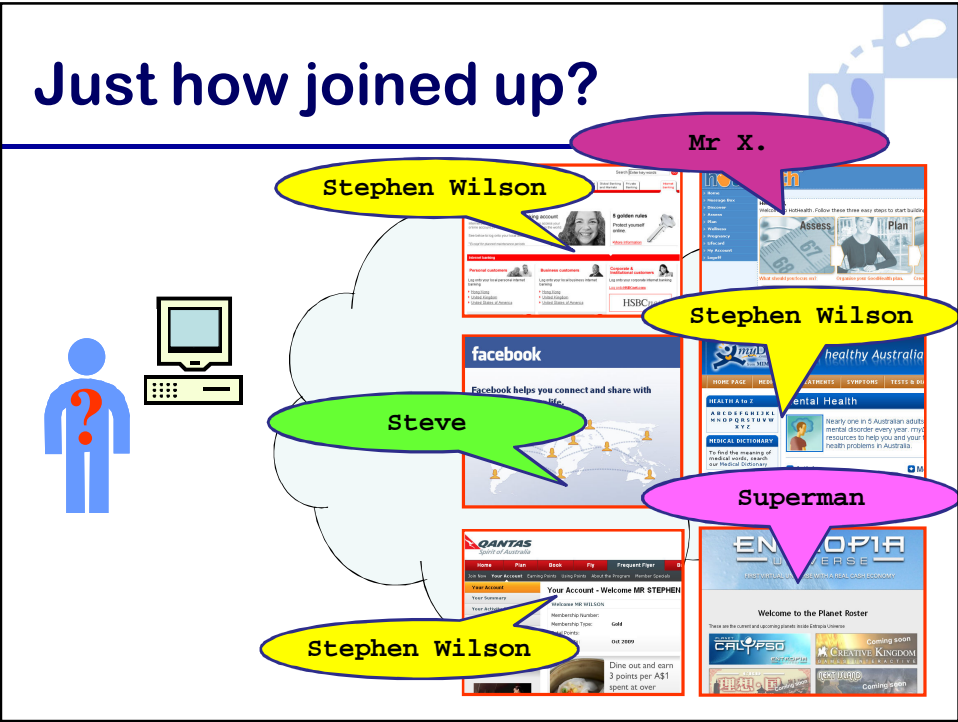
What's so smart?

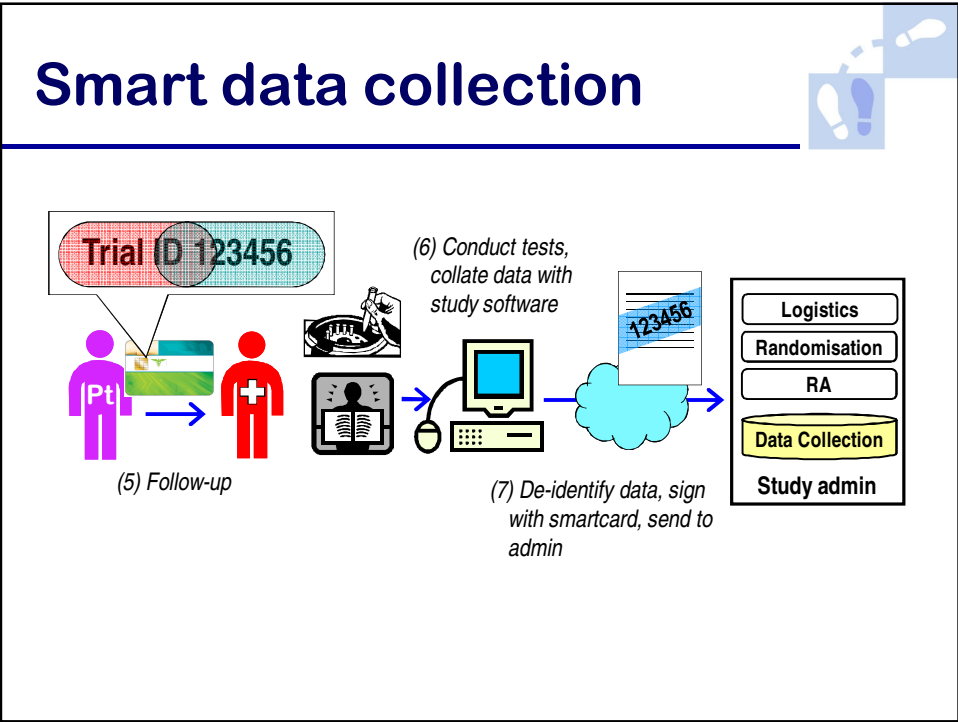
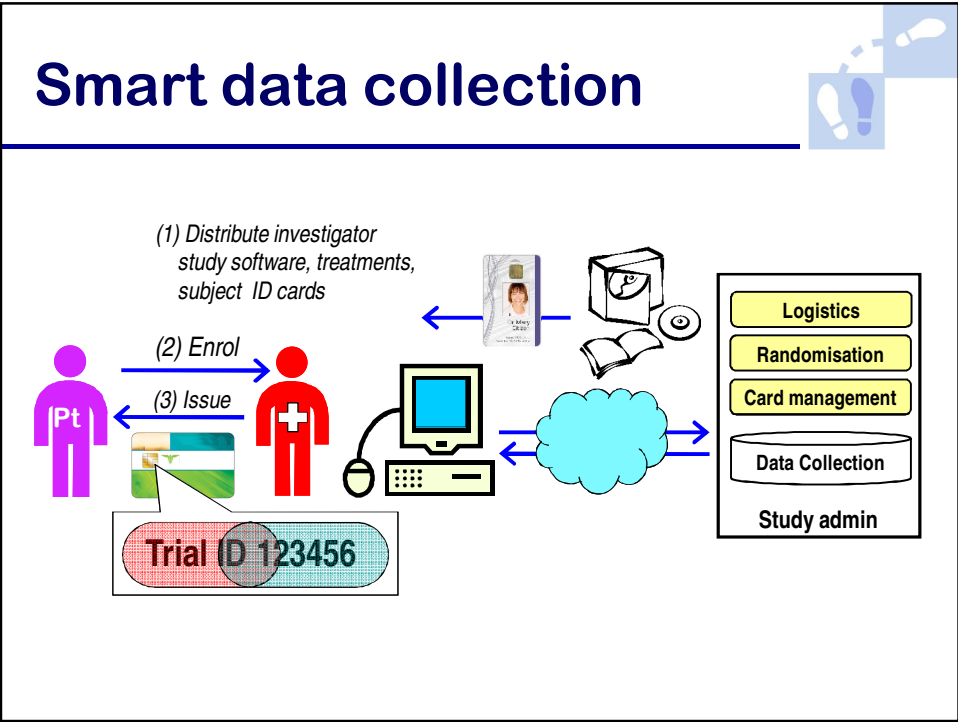
Know what's going on around them

- Access controls
- Mutual authentication, reader-to-chip
- Anti-skimming
- Self-monitoring
- Transaction signing

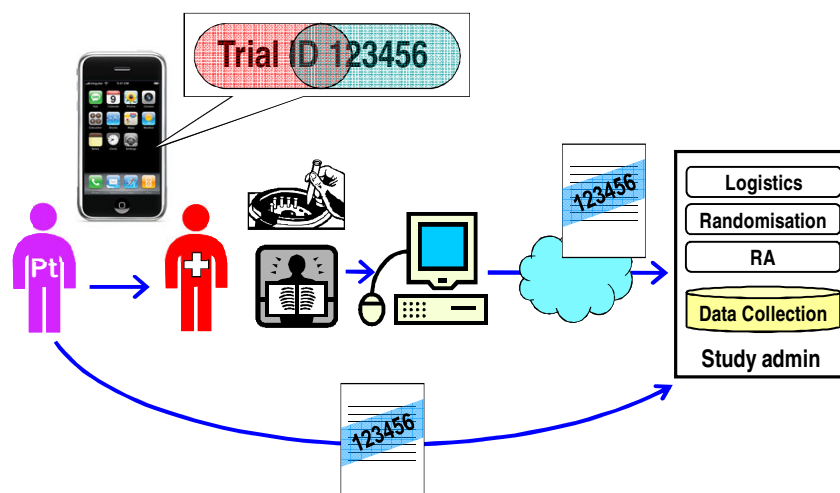
A day in the digital life

Internet banking
E-commerce
Employment
Telecommuting
Health information
Education & Training
E-Health Records
Social security payments
Tele consultation
Medical OSN





Patient empowerment



Privacy is ...

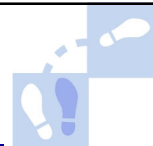
- Not about security
- Not all about secrecy
 - Few people want anonymity
- Is about control
- Is about respect
 - *Use limitation, Openness etc.*

Further reading



- *Anonymity & Pseudonymity in eResearch via smartcards and Public Key Infrastructure*
eResearch Australasia conference, Manly (Sydney), 2009
www.eresearch.edu.au/wilson2009
- *What's so smart about smartcards?*
http://lockstep.com.au/library/babysteps/lockstep_bs10_what_makes_smar.pdf
- *Smartcards and prescription shopping*
http://lockstep.com.au/library/babysteps/babystep07_smartcards_and_pr.pdf
- *Patient Privacy and Security - Not a zero sum game!*
Wilson et al, Australian Epidemiologist V12.1, 2005
http://lockstep.com.au/library/ehealth/patient_privacy_and_security

Discussion



swilson@lockstep.com.au
www.lockstep.com.au

