

## Spring 2013 Syllabus

### **UIC CS 491 (special topics: Computing Law Policy & Ethics)/Kent Law Special Topics, Computer and Network Privacy and Security**

History will record what we, here in the early decades of the information age, did to foster freedom, liberty, and democracy. Did we build information technologies that protected people's freedoms even during times when society tried to subvert them? Or did we build technologies that could easily be modified to watch and control?

Bruce Schneier, *Risks of Data Reuse*, CRYPTO-GRAM, July 15, 2007, <http://www.schneier.com/crypto-gram-0707.html>.

*Sources for readings:* Some are available on the web and either we will give you the URL or Google Scholar will. Some readings will be made available on the course websites; others will be posted to the course Piazza site.

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#### **Team taught:**

Prof. Richard Warner, Chicago-Kent/IIT School of Law.

Prof. Robert Sloan, UIC Computer Science Department.

Tuesdays and Thursdays, 2:00–3:15

Tuesdays: Kent Law School Room 170 (565 W. Adams St.)

Thursdays: UIC Taft Hall Room 208

(Middle of block bounded by Halsted, Morgan, Taylor & Harrison, a little closer to Morgan than Taylor)

(UIC Students only will meet Tuesday January 15 at UIC location)

Required book: Ross Anderson, *Security Engineering*, (2<sup>nd</sup> edition, 2009, and edition matters!).

Recommended book: James Rule, *Privacy in Peril*.

Numerous other provided readings.

This unusual course will meet with a mixed class of UIC students from computer science, communications, and other disciplines concerned with privacy and security in the modern era, and Kent Law school students.

## **Course Topics**

### **Privacy 0**

*Thoughts about Privacy from the late 1800s to roughly 1984*

S. D. Warren & L. D. Brandeis, *The right to privacy*, 4 HARVARD LAW REVIEW 193–220 (1890). (Very possibly the most cited law journal article of all time)

I. Asimov, "The Dead Past," available online at

<http://www.scribde.com/limba/engleza/books/ISAAC-ASIMOV-THE-COMLETE-STOR43226.php>

*Charles Katz v. United States* (provided edited excerpts)

J. J. Thomson, *The right to privacy*, PHILOSOPHY & PUBLIC AFFAIRS 295–314 (1975).

### **Privacy I**

*More or Less Traditional Information Collection and Processing*

Dwyer v. American Express

In Re Google Inc. Privacy Litigation

Anderson, *Security Engineering*, Chapter 24.6, Privacy and Data Protection

#### Recommended reading

James Rule, PRIVACY IN PERIL

Daniel Solove, A Brief History of Information Privacy Law,

[http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=914271](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=914271)

*Notice and Choice*

Solon Barocas and Helen Nissenbaum, *On Notice: The Trouble with Notice and Consent*

Carnival Cruise Lines v. Shute

#### Recommended reading

J. H. Beales III & T. J. Muris, *Choice or Consequences: Protecting Privacy in Commercial Information*, U. CHI. L. REV. 109–135 (2008)

## Norms

Helen Nissenbaum, *Protecting Privacy in an Information Age: The Problem of Privacy in Public*, 17 LAW AND PHILOSOPHY 559 (1998)

Humphrey Taylor, "Most People Are 'Privacy Pragmatists' Who, While Concerned About Privacy, Will Sometimes Trade It Off for Other Benefit," *The Harris Poll* 17 (2003), <http://www.harrisinteractive.com/vault/Harris-Interactive-Poll-Research-Most-People-Are-Privacy-Pragmatists-Who-While-Conc-2003-03.pdf>.

## 4<sup>th</sup> Amendment and Surveillance Issues

Katz v. United States

Kyllo v. United States

United States v. Jones

Smith v. Maryland

Anderson, *Security Engineering*, Chapter 24 through 24.3.8

## Insecure Software

*Introduction to the Economics of Information Security*

Anderson, *Security Engineering*, Chapter 7

Ross Anderson & Tyler Moore, *Information security: where computer science, economics and psychology meet*, 367 PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY A: MATHEMATICAL, PHYSICAL AND ENGINEERING SCIENCES 2717–2727 (2009).

## General Problem

Spafford, Eugene H. "Remembrances of Things Pest." *Communications of the ACM* 53, no. 8 (2010): 35–37.

Anderson, *Security Engineering* Chapter 25.3 and 25.5.

CWE/SANS TOP 25 Most Dangerous Software Errors, <http://cwe.mitre.org/top25/>

## Lemons Market Issues

George Akerlof, *The Market for "Lemons": Quality Uncertainty and the Market Mechanism*," 84 QUARTERLY JOURNAL OF ECONOMICS 353 (1970)

Bruce Schneier, "How Security Companies Sucker Us With Lemons," *Wired*, 2007, [http://www.wired.com/politics/security/commentary/securitymatters/2007/04/securitymatters\\_0419](http://www.wired.com/politics/security/commentary/securitymatters/2007/04/securitymatters_0419)

## Recommended reading

John R. Michener, Steven D. Mohan, James B. Astrachan and David R. Hale,

"Snake-Oil Security Claims" *The Systematic Misrepresentation of Product Security in the E-Commerce Arena*, 9 MICH. TELECOMM. TECH. L. REV. 211 (2003)

### *Liability Proposals*

Bruce Schneier, *Liability changes everything*, November 2003,  
<http://www.schneier.com/essay-025.html>

Michael D. Scott, *Tort Liability for Vendors of Insecure Software: Has the Time Finally Come?* 62 Maryland Law Review 425 (2008),  
<http://www.law.umaryland.edu/academics/journals/mdlr/print/articles/67-425.pdf>

#### Recommended reading

Jennifer A. Chandler, *Improving Software Security: A Discussion of Liability for Unreasonably Insecure Software*, in ANAPUM CHANDER, LAUREN GELMAN, AND MARGARET JANE RADIN (EDS.), *SECURING PRIVACY IN THE INTERNET AGE* 155 (2006)  
Shuba Gosh and Vikram Mangalmurti, *Curing Cybersecurity Breaches Through Strict Products Liability*, in *SECURING PRIVACY IN THE INTERNET AGE* 187

## **Introduction to Information Security**

*Foundations: Security goals, standards, and mindset, and overview of the Internet*

Anderson, *SECURITY ENGINEERING*, Chapters 1–2.3, 25.1–25.2.

Sloan and Warner, *Primer on the Internet*, excerpted from Chapter 2 of *Unauthorized Access*

### *Attacks and Defense*

Sloan and Warner, Chapter 8, *Unauthorized Access*

Anderson, *SECURITY ENGINEERING*, Chapter 21 through 2.14.5.2.

Wash, Rick. "Folk Models of Home Computer Security." In *Symposium on Usable Privacy and Security (SOUPS)*, 2010.

#### Recommended Reading:

Anderson, *SECURITY ENGINEERING*, Chapters 2.4–5.3, omitting 3.7 and 4.3

## **Network attacks**

### *Current Law*

In the Matter of BJ's Wholesale Club

Kline v. 1500 Massachusetts Ave. Apartment Corporation  
Patco v. United People's Bank

### *Insurance*

Kevin Kalinich, *Network Risk Insurance: A Layman's Overview*,  
[http://www.kentlaw.edu/faculty/rwarner/classes/privacy/materials\\_2008/economics\\_info\\_security/market\\_solutions/wp\\_2004\\_10\\_network\\_risk\\_insurance\\_319.pdf](http://www.kentlaw.edu/faculty/rwarner/classes/privacy/materials_2008/economics_info_security/market_solutions/wp_2004_10_network_risk_insurance_319.pdf)

### **Malware**

Ponemon Institute, 2012 State of the Endpoint,  
[http://www.lumension.com/Media\\_Files/Documents/Marketing---Sales/Whitepapers/Ponemon-2012---State-of-the-Endpoint.aspx](http://www.lumension.com/Media_Files/Documents/Marketing---Sales/Whitepapers/Ponemon-2012---State-of-the-Endpoint.aspx)

#### Recommended reading

Paul Schmehl, *Past its Prime: Is Anti-Virus Scanning Obsolete?*,  
<http://www.symantec.com/connect/articles/past-its-prime-anti-virus-scanning-obsolete>

Jeffrey Hunker, *CREeping FAILURE: HOW WE BROKE THE INTERNET AND WHAT WE CAN DO TO FIX IT* (McClelland & Stewart, 2010)

### *Proposed Solutions*

Dallas Wood and Brent Rowe, *Assessing Home Internet Users' Demand for Security: Will They Pay ISPs?*,  
<http://weis2011.econinfosec.org//papers/Assessing%20Home%20Internet%20Users%20Demand%20for%20Security%20-%20Will%20T.pdf>.

#### Recommended reading

Brent Rowe, *The Role of Internet Service Providers in Cyber Security*,  
[https://www.ihssnc.org/portals/0/PubDocuments/ISP-Provided\\_Security\\_Rowe.pdf](https://www.ihssnc.org/portals/0/PubDocuments/ISP-Provided_Security_Rowe.pdf), 2010

Brent Rowe, Doug Reeves, Dallas Wood, Mike Gallaher, *ISP-based cyber security: Can government provide the right incentive?*,  
[https://www.ihssnc.org/Portals/0/Agenda\\_Docs/Rowe.pdf](https://www.ihssnc.org/Portals/0/Agenda_Docs/Rowe.pdf), 2009.

*The Communications Security, Reliability and Interoperability Council, Final Report: Internet Service Provider (ISP) Network Protection Practices Working Group 8*,  
[http://www.fcc.gov/pshs/docs/csric/CSRIC\\_WG8\\_FINAL\\_REPORT\\_ISP\\_NETWORK\\_PROTECTION\\_20101213.pdf](http://www.fcc.gov/pshs/docs/csric/CSRIC_WG8_FINAL_REPORT_ISP_NETWORK_PROTECTION_20101213.pdf) 2010

## Privacy II

*Overview of the new technological developments of the late 1990s and 2000s:*

Hal Ableson, Ken Ledeen, and Harry Lewis, *Blown to Bits: Your Life, Liberty and Happiness After the Digital Explosion*, available from <http://www.bitsbook.com/excerpts/>, Chapter 2, Naked in the Sunlight.

Anderson, *Security Engineering*, Chapter 23.3, "Bleeding Edge: Web Applications"

Sloan and Warner, Primer on Data, excerpted from Chapter 2 of *Unauthorized Access*

### *Behavioral Advertising*

Bose v. Interclick

JOSEPH TUROW ET AL., AMERICANS REJECT TAILORED ADVERTISING AND THREE ACTIVITIES THAT ENABLE IT (2009), <http://ssrn.com/abstract=1478214>.

PREFERENCE CENTRAL, CONSUMER PERSPECTIVES ON ONLINE ADVERTISING - 2010 (2010), <http://www.preferencecentral.com/consumersurvey/download/>

### *Big Data*

Omer Ten and Jules Polonetsky, *Privacy In The Age Of Big Data: A Time For Big Decisions*, 64 Stanford Law Review 63, <http://www.stanfordlawreview.org/online/privacy-paradox/big-data>

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McKinsey Global Institute, Big data: The next frontier for innovation, competition, and productivity, [http://www.mckinsey.com/Insights/MGI/Research/Technology\\_and\\_Innovation/Big\\_data\\_The\\_next\\_frontier\\_for\\_innovation](http://www.mckinsey.com/Insights/MGI/Research/Technology_and_Innovation/Big_data_The_next_frontier_for_innovation)

### *Do Not Track Technologies*

PEDRO G. LEON ET AL., WHY JOHNNY CAN'T OPT OUT: A USABILITY EVALUATION OF TOOLS TO LIMIT ONLINE BEHAVIORAL ADVERTISING (2011), [http://www.cylab.cmu.edu/files/pdfs/tech\\_reports/CMUCyLab11017.pdf](http://www.cylab.cmu.edu/files/pdfs/tech_reports/CMUCyLab11017.pdf)