

6.805/6.806/STS.085, Ethics and Law on the Electronic Frontier  
**Lecture 12: Semantic Web Public Policy Challenges**

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Semantic Web Public Policy Challenges: Privacy, Provenance, Property and Personhood

Today we will spend time discussing the work that Hal and Danny have been involved in and topics we have been discussing in this course. Also look at public policy perspective on Internet Infrastructure and how this has affected the design of WWW.

- I. Overview
  - A. Privacy issues
  - B. Property
  - C. Provenance – where information comes from and if we should trust it or not  
(Diagram on slide 4)
- II. Personal philosophy
  - A. Technology is a mess
  - B. General view – law needs to catch up to technology
- III. Laws
  - A. We just understand what to do (like languages) that we mostly follow most of the time and do the right thing without these laws being right in front of our face.
  - B. The web is kinda weird with respect to laws
    - i. We buy and sell without knowing the parties and don't easily know the privacy and the protection affording us
    - ii. The nature of the web does not make it easy for us to know the laws
    - iii. The technology is helping the environments to adapt so we can know what to do and what not to do
    - iv. Lot of what people have tried to do is "ex ante policy enforcement barriers" to prevent people from doing activities or to enforce certain rules
    - v. The focus should be to communicate to the users how to comply to rules as opposed to prevent us from not complying
- IV. Privacy Shifts
  - A. Most intrusions that we should be concerned about should be based on the inferences drawn after the fact not from the practices and information collected and done at the time
  - B. Examples
    - i. Credit card transactions → profiling
    - ii. Web logs → web search patterns  
(people are becoming more concerned about how people use their logs and look at how we search the web, think Google)
    - iii. instantaneous location → travel patterns
  - C. there are very few collection barriers in the U.S., but more focus on putting rules in place as to how we will use the data and a usage

description with accountability. We actually haven't decided on the nature

- i. RIAA – “after the fact” rules for music downloads

V. Provenance

- A. Centralized Approach - Since modern press, have centralized mechanisms for how we share the information and editorial
  - i. Newspaper – upfront filter for things posted in the news
  - ii. Google – search algorithm
    - a. has really impacted how we view the world
    - b. probably no other centralized institution or organization has impacted the world more other than religion
- B. Decentralized Approach - Online news
  - i. Allow you to see structured data and metadata
  - ii. Can apply a trust filter in order to filter information
  - iii. Some browsers allow you to collect a collection of data and then filter through it (vs. New York Times)
  - iv. Del.icio.us
    - decentralized approach to sharing search results
    - can choose which individual's view you'd like to see or trust data from

So there is a departure from centralized filters to filters that happen in a much more dispersed way.

VI. Property

- A. New notions about how to protect intellectual property whether technically or legally
- B. New model is appearing for content production
  - i. from Hollywood content (centralized production) now to decentralized content we use (Flickr, Weblogs, etc.)
  - ii. Creative commons – open description of licensing terms in the hopes that people will follow those rules. Now Google and Yahoo allow you to use Creative Commons license to filter through their data
  - iii. Once again a shift from enforcement barriers to open information and sharing on Web

VII. 2 Models of Personhood

- Big gaps in Internet Technology is Identity Management
- A. Liberty Alliance & Sun Microsystems have tried to put together a reliable trusted identity system
  - 1. multiple ID info bundles so they can be the “trusted” 3<sup>RD</sup> party
  - 2. very complicated and hard to know if it will ever work
- B. Decentralized approach
  - 1. De-referencerable 2<sup>nd</sup> parties

VIII. Conclusion

- A. shift from centralized systems to more decentralized approaches
- B. think that the rules in the environment will become more clear to people, thus resulting in more people following the rules

C. need more transparency of the rules and the ability to catch those who break the rules