

## IP: Intellectual Property

- Term is pervasive, so we will use it
  - What does Stallman say about IP?
  - What does IP mean to Cisco employee?
- In US, and most other countries, IP similar
  - Copyright: fixed/expressed, not an idea
  - Patent: idea, non-obvious, useful
  - Trade-secret: not-disclosed, secret

## Patents and the Internet

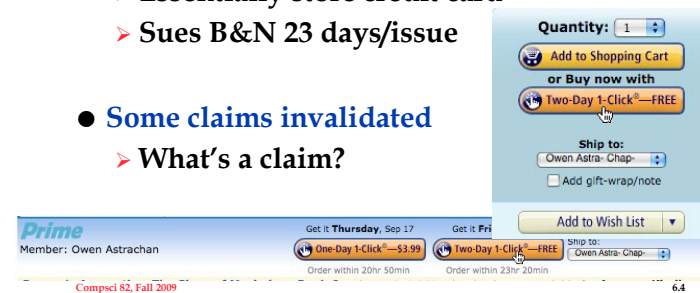
- Internet built on open standards and source
  - What are open standards? Why?
  - What is open source? Why?
- Is IP<sup>2</sup> an oxymoron with Internet's start?
  - Why was there a change (e.g., patents)?
  - Court system and economics/business

## Software Patent: Brief History

- State Street Bank & Trust, 1998
  - Software running mutual funds
  - State Street asks to invalidate patent
  - Patent upheld: *useful, concrete and tangible result should be considered patentable.*
- Beginning of huge number of software patents being filed
  - Prior to this no *algorithms* patented

## Amazon One-Click

- What does patent cover? How to find this?
  - USPTO online, other patent sites
  - Essentially store credit card
  - Sues B&N 23 days/issue
- Some claims invalidated
  - What's a claim?



## Key Patent Aspects

- **US: First to File**
  - Provisional Patent (protect invention)
  - \$1500 provisional to \$15K full (legal fees)
  - Lasts 20 years from date of filing
    - Requires paying "maintenance fees"
- **Non-obvious to one skilled-in-the-art**
  - Must examine prior art, who must?
- **Must be useful, must exist!**
  - No speculative patents

## Patents: good, bad, ugly, other?

- **USPTO examiners not always "expert"**
  - Are they skilled-in-the-art?
  - Getting better, but...
- **Defensive patenting: Red Hat, IBM, Sun**
  - Procure patents, no enforcement, why?
- **Patent trolls as business model**
  - Buy patents, not "in business" per se
- **<http://pubpat.org/> What are the stories here?**

## Aside: Akamai for neophytes

[http://www.akamai.com/html/about/company\\_history.html](http://www.akamai.com/html/about/company_history.html)  
<http://www.youtube.com/watch?v=d2E3NfcomVI>

- **How do cnn.com and nytimes.com cope?**
  - What was traffic like at 10:00 pm EST?
  - Web/Internet cope with flash crowds?
- **15,000 servers; 69 countries; 1,000 networks**
  - Richmedia, software, e-commerce, ...
  - 70%? Of CDN market
- **Customized DNS, overlay network, patented**
  - Location, Server, ...

## From Akamai to patents to p2p

- **Akamai: US Patent 6,108,703, August 2000**

Claim: distributed hosting framework operative in a computer network in which users of client machines connect to a content provider server, the framework comprising: a routine for modifying at least one embedded object URL of a web page to include a hostname pretended to a domain name and path; a set of content servers, distinct from the content provider server, for hosting at least some of the embedded objects of web pages that are normally hosted by the content provider server; at least one first level name server that provides a first level domain name service (DNS) resolution; ...