

Intellectual Property in Cyberspace II

CIS 150: Fundamentals of Information Systems

So, what's next with IP?

- Revisit and review
 - Betamax Case (seminal fair use case related to contributory infringement)
 - DMCA
- Solutions (other than CR laws) to the IP problem
 - Technology-based solutions (encryption, DRM)
 - Market-based solutions (new business models)
 - Social norms-based solutions (taxation)
 - Other legal IP protections (patents, trademarks, and trade secrets)
- Is a top-down approach or a bottom-up approach more effective?
- Open Source Software
 - Should we forget about all of this? Should all software be free?

Copyright Laws

(Summary of the Betamax Case)

- Sony v. Universal City Studios (1984) – The Betamax Case
 - Background
 - » Sony developed Betamax, a video cassette recording machine that allowed customers who purchased Betamax to record TV shows
 - Supreme Court ruling on the two critical issues
 1. Is recording a movie for personal use a CR infringement or fair use?
 - Fair Use. Betamax has substantial non-infringing uses (fair use). For example, recording a movie for viewing at a later time (time-shifting) is fair use (especially since they are copying free, public programming)
 2. Can manufacturers of technologies that enable CR infringements be liable for contributory CR infringement (or infringements committed by its purchasers)?
 - Manufacturers of home video recording devices with substantial legal uses cannot be held liable for contributory CR infringement.
 - A key element to this decision was that Sony's relationship with the purchaser ended with the sale of the machine and that it did not have the right and ability to supervise or stop CR infringing activities
 - Often cited in web-based entertainment cases and cases about production/distribution of new types of digital recording devices

Copyright Law

(Summary of the DMCA)

- Digital Millennium Copyright Act (1998)
 - Two (2) critical anti-circumvention rules
 - » Outlaws the act of circumventing a technical protection (such as encryption or digital rights management) to access a CR'ed work
 - ◆ Exception: You may circumvent to make fair use of a work that you acquired legally (reverse engineering for interoperability, computer security research)
 - » Outlaws the manufacturing or distribution of technology that enables others to circumvent copyrighted work
 - ◆ It outlaws technologies primarily designed for the purpose of circumvention of a technology protection
 - Intermediary liability (and safe harbors)
 - » Intermediaries (such as ISPs and search engines) over which CC'ed digital works are transmitted qualify for immunity (or safe harbor) from contributory infringement
 - » To qualify, intermediaries must be willing to terminate service to repeat CR infringers and remove material from their sites once they are put on notice that the material infringes a CR

Copyright Law

(Testing the DMCA – Music Sharing)

- The Napster case
 - Background
 - » 1999 – Shawn Fanning opened Napster, an online service that allowed users to copy MP3 files (e.g., unprotected digital music) from one user's hard drive to another user's hard drive
 - ◆ > 50 million users by 2000, ~ 100 million MP3 files available
 - » Napster had its members download peer-to-peer (P2P) / file-sharing software that allowed users to transfer songs from each other's hard drives
 - ◆ Napster did not store any MP3 music files on its own server
 - ◆ It provided a central directory – a list of available songs and a list of Napster users logged in to the service (like a digital music GPS)
 - Claim
 - » Recording Industry Association of America (RIAA) claimed that 90% of files copied via Napster violated record label CR and sued Napster for \$100,000 per copied song (claimed contributory CR infringement because Napster facilitated the illegal copying)
 - Two critical issues
 1. Was the copying and distribution of music via Napster legal under the fair use guidelines?
 2. If not, was Napster responsible (and therefore liable) for the CR infringements committed by its users?

Copyright Law

(Testing the DMCA – Music Sharing)

- The Napster case
 - Defense (Issue 1)
 - » Napster claimed that there are many non-infringing uses of Napster
 - ◆ Some works were not CR'ed
 - ◆ Some artists (e.g., new, independent artists) gave Napster authorization to use their works (permissive distribution)

Fair Use?

- » The purpose of the use (non-profit use) → (~For)
 - ◆ Napster did not charge for its services
 - ◆ Napster argued that people made copies for personal, not commercial use
 - Space-shifting (like time-shifting in Betamax Case); that is, people download copies of songs that they already own on CD to have in multiple places (home, car, work, etc.)
 - Sampling; that is, people sample songs and then buy the CDs
- » The nature of the copyrighted work (songs are very creative) → (Against)
- » The portion of the copyrighted work used (whole songs were copied) → (Against)
- » The effect of use upon the value of the copyrighted work → (Against)
 - ◆ Napster claimed that sampling actually would help record labels
 - ◆ However, most sales data and surveys of college students suggested otherwise!

Copyright Law

(Testing the DMCA – Music Sharing)

- The Napster case
 - Defense (Issue 2)
 - » Napster claimed safe harbor status (as a search engine) under the DMCA
 - ◆ DMCA provides safe harbor protection against contributory infringement – that is, liability committed by customers of intermediaries (ISPs) or “information location tools” (e.g., search engines)
 - ◆ Napster did not keep copies of CR material on its server
 - ◆ It only provided a central directory – a list of available songs and a list of Napster users logged in to the service
 - ◆ It was acting like a search engine, which is protected under the DMCA
 - Technology Overview

[HowStuffWorks - How the Old Napster Worked](#)

[HowStuffWorks - Napster's Architecture](#)

[HowStuffWorks - Gnutella's Architecture](#)



Copyright Law

(Testing the DMCA – Music Sharing)

- The Napster case
 - Court ruling
 - » Rejected Napster’s arguments
 - » Ruling on Issue 1: Not Fair Use (CR infringements were rampant)
 - ◆ Ruled that Napster had an adverse impact on the market for CDs, especially among college students
 - Webonize survey of 4,000 college students → 75% used Napster at least once/month
 - » Ruling on Issue 2: Not protected under Safe Harbor provision of DMCA
 - ◆ Lots of reasons
 - RIAA was not trying to stop the manufacturing of P2P networks, but stop Napster’s use of it to make CR material available for unauthorized access
 - Napster did not take actions to help stop CR infringement (a requirement of DMCA Safe Harbor) once they were put on notice of CR infringements
 - That is, Napster had the right and ability to supervise the system, including copyright infringing activities, but did not do so
 - Noted that Napster “knowingly encourages and assists in the infringement of copyrights” (intent is important)
 - » Napster must
 - ◆ Remove listings of CR songs identified by music companies
 - ◆ Pay creators and CR owners a \$26 million settlement for past, unauthorized use of music, and an advance against future licensing royalties of \$10 million

Copyright Law

(Testing the DMCA – Music Sharing)

- **MGM Studios v. Grokster (2005)**
 - **Background**
 - » Grokster was another online file-sharing service that allowed users to copy MP3 files (e.g., digital music) from one user’s hard drive to another user’s hard drive
 - » It was a true peer-to-peer (P2P) system that did not require a central directory like Napster used (computers just make requests to each other along the network)
 - ◆ Makes Grokster more difficult to deal with since you cannot shut it down just by eliminating a central directory (each computer is a distribution source)
 - » Members of the P2P network place files meant for sharing in a “Shared Files” folder
 - » Grokster promoted its software as a replacement for Napster (“The #1 Alternative to Napster”)
 - **Claim**
 - » Movie industry claimed that ~90% of files copied via Grokster violated movie/music company CR and sued Grokster for contributory CR infringement because Grokster purposely facilitated the illegal copying (i.e., their business model depended on CR infringement)
 - **Two critical issues**
 1. Was the copying and distribution of music via Grokster legal under the fair use guidelines?
 2. If not, was Grokster responsible (and therefore liable) for the CR infringements committed by its users?

Copyright Law

(Testing the DMCA – Music Sharing)

- **MGM Studios v. Grokster (2005)**
 - Defense
 - » Grokster claimed it was just a software company without any direct involvement in file swapping (i.e., no right or ability to control CR infringement by users)
 - ◆ Like a web browser that does not control the sites a user browses
 - ◆ Like an email application that does not monitor a user's attachments
 - » P2P networks have many productive, legal uses (true)
 - Supreme Court Ruling
 - » Unanimously ruled that a CR owner can sue an intermediary for contributory CR infringement if the intermediary encourages CR infringement
 - ◆ *Vicarious CR infringement* (intermediary has the ability to supervise infringing activity and has a direct financial interest in such activities)
 - » Ruling led to a controversial new test to determine if software is protected by the Sony v. Universal Betamax ruling
 - ◆ It has to be shown that the distributors of the program have advertised and/or otherwise encouraged or induced its use for CR infringement
 - Grokster forced to pay \$50 million to music and recording industries
 - » Grokster was shut down - do rulings like this threaten the development of new P2P networks? ¹⁰

Copyright Law

(Testing the DMCA – Video Sharing)

- Universal Music Group v. Veoh (2009)
 - Background
 - » Veoh.com is a video-sharing service that works a lot like YouTube
 - » Users can upload videos, watch videos, and download videos
 - » Veoh’s users have been known to upload clips that infringe CR
 - Claim
 - » Universal Music Group claimed that there were massive CR violations on Veoh and filed suit against Veoh for contributory CR infringement
 - Defense
 - » Veoh claimed that it is not responsible for the content that is uploaded by its users (per the DMCA’s Safe Harbor provision) and that it always responds to “takedown requests” by CR owners
 - Court Ruling
 - » Veoh satisfied the DMCA’s criteria for Safe Harbor status since Veoh was not aware of when infringing material was posted and, once becoming aware of infringing material, Veoh acted “expeditiously” to remove it

Copyright Law

(RIAA's Evolving Strategy)

- RIAA v. the People (“Piracy”)
 - Before 2003
 - » Music and movie companies avoided pursuing direct CR infringements by customers in fear of a public backlash
 - » Instead they chose to sue the developers of P2P networks (e.g., Napster, Grokster, StreamCast) for contributory CR infringement
 - 2003
 - » RIAA began to sue individual customers that swap large amounts of music on the Web using *The Digital Theft Deterrence and Copyright Damages Improvement Act of 1999*
 - » They use monitoring technology installed by ISPs and others to identify “hosting” IPs
 - » RIAA has sued about 30,000 people - vast majority settle out of court for a small fee, and only lost a couple of them - these lawsuits don't seem to be slowing down piracy
 - Some surprising stats
 - » In the decade since peer-to-peer (p2p) file-sharing site Napster emerged in 1999, music sales in the U.S. have dropped 47 percent, from \$14.6 billion to \$7.7 billion
 - » Consumer Market Research firm NPD Group reports that only 37 percent of music acquired by U.S. consumers in 2009 was paid for

Copyright Law

(File Sharing and College Students)

- A Couple Notable Lawsuits
 - RIAA v. Thomas-Rasset (2009)
 - » Found guilty of willful, illegal sharing of 24 songs (but was accused of sharing more than 1,700 songs) - jury awarded damages of \$1.92 million (\$80,000/infringed work)
 - RIAA v. Joel Tenenbaum (2009)
 - » 25-year old graduate student at Boston University was ordered to pay \$675,000 or \$22,500 for each of the 30 songs that he was found liable of copyright infringement
- And it's not over yet... [WIRED - Copyright Czar Cozies Up](#)
- How does UofL deal with [copyright violations](#) (illegal sharing of music, movies, software, etc.) by students?
 - 1st time: Lose network access for 1 week after removing material
 - 2nd time: Lose network access for rest of academic **year**
 - 3rd time: Lose network access for UofL **career** and face **dismissal**
 - View [UofL Copyright Video](#)

Technology Solutions

(To Protect IP)

- Digital Rights Management (DRM) Systems
 - Technological protections (e.g., CSS for DVDs) that control access to and use of digital works
 - Limits on the life and uses of digital works (e.g., can prevent saving, printing, making more than a specified number of copies, distributing a file, extracting excerpts, or fast forwarding over commercials)
 - Combination of trusted systems (e.g., readers, players, printers, servers) and rights management
- Example: Amazon's Kindle Wireless Reading Device
- Concerns with DRM
 - Buyers can only view/play DRM-protected works on trusted systems (and not MP3 players)
 - DRM may prevent a person from lending and selling a purchased copy (e.g., violation of the first sale doctrine)
 - How do you ensure fair use (especially with the DMCA)?
 - How do critics, scholars, and teachers access material?
 - Is there an invasion of privacy as creators track what we read, use, etc. with the trusted systems?
- Biggest problem?
 - DRM may not protect content industries since virtually all copy-protection schemes can be broken (e.g., DeCSS) and posted to a P2P
 - In fact, the big four (4) music labels (EMI, Sony, Universal, and Warner) have all negotiated with digital music pay services (e.g., iTunes, Amazon Music Downloads, Napster) to allow them to sell digital music from their catalogs without DRM (i.e., DRM-free)

Market-Based Solutions/New Business Models

(To Protect IP)

- Music Companies have begun to negotiate DRM-free MP3 contracts with legitimate music download companies
 - Major record labels (i.e., Sony BMG, Warner Music, Universal, and EMI) and smaller labels (e.g., “indies”) usually receive a cut of the music download company’s advertising revenue in these deals
 - The Old Music Download Business Model
 - » Subscription service with DRM protections
 - » Subscribers would get unlimited downloads of digital music, but DRM was attached to the songs which limited the subscribers use and transfer of the songs (and what device it could be played on) and ended use when the user cancelled the subscription
 - The New Music Download Business Model
 - » Sell DRM-free MP3 formatted songs on a per song (or album) basis
 - » Tiered pricing (e.g., 69 cents, 99 cents, and \$1.29 per song)

Market-Based Solutions/New Business Models

(Pay Music Download Sites)

- iTunes Store
 - Until April 2009
 - » Digital music in iTunes used to be encrypted with Apple's FairPlay DRM which allowed protected songs to be played on up to five computers at one time, as well as unlimited Apple devices (iPod, AppleTV, etc)
 - » Tunebite was a program designed to circumvent the FairPlay DRM
 - Since April 2009
 - » After iTunes negotiated a deal with the four major music studios all songs purchased from iTunes are DRM-free and can be played on any MP3 player and be transferred to any number of iPods, computers, CDs, or other MP3 devices
 - » Tiered pricing system (\$0.69, \$0.99, and \$1.29 per song)
 - » Extensive, up-to-date music library (>8 million songs)

Market-Based Solutions/New Business Models

(Pay Music Download Sites)

- Napster (the “new” Napster)
 - Old Model (for “new” Napster)
 - » A subscription-based model
 - New Model
 - » Sell DRM-free MP3 formatted songs on a per song (or album) basis
 - Extensive, up-to-date music library (>7 million songs)

Market-Based Solutions/New Business Models

(Pay Music Download Sites)

- Amazon MP3
 - First music download company to sign a DRM-Free MP3 contract with all four major music labels (~ 1 year before iTunes)
 - Tiered pricing system (\$0.79, \$0.89, \$0.99 per song and albums \$5~\$10)
 - Extensive, up-to-date music library (>7 million songs)
- Rhapsody
 - Rhapsody offers subscription and pay-per song options
 - Subscription services
 - » Users can download an unlimited number of DRM-protected songs to their computers or MP3 players
 - » These songs no longer work if the subscription is canceled
 - MP3 Store
 - » Sells individual songs and albums in DRM-free MP3 format
 - » Individual songs (~\$0.99) and albums (~\$9.99)
 - Music library (>6 million songs)

Market-Based Solutions/New Business Models

(Pay Music Download Sites)

- **WalMart Music**

- Offers > 3 million (includes most popular artists and recent albums) DRM-free MP3 songs
- Tiered Pricing (\$0.64, \$0.94, and \$1.24 per song, most albums ~\$9)
- Caveat: explicit songs and albums are edited and there is no option to purchase the unedited versions

- **Zune Marketplace**

- Most songs in the Zune library are available in DRM-protected format (i.e., tracks downloaded from the Zune Marketplace are only compatible with Zune players – that is, trusted players)
- Only about 1 million DRM-free MP3 songs available on Zune (and they are more expensive than the protected songs)
- Music library (~5 million songs – but only 1 million available in MP3)
 - » Fewer “independent” songs than iTunes or Amazon MP3

Market-Based Solutions/New Business Models

(Pay Music Download Sites)

- eMusic
 - Subscription-based model (\$11.99 a month)
 - » Unlike most subscription services, the songs you download are yours even if you cancel your subscription
 - Subscribers can download up to 30 songs/month (which averages about \$0.33 per song)
 - Offers >4 million DRM-free MP3 songs
 - eMusic's library is largely independent (i.e., it is less likely that you will find the most recent works of popular artists)

Market-Based Solutions/New Business Models

(To Protect IP)

- Other market-based solutions implemented by entertainment industry (i.e., content providers) to protect IP
 - Negotiate revenue-sharing contracts that allow files sharing sites (e.g., P2P networks) to post CR'ed digital works in return for a portion of the ad revenues collected by the file sharing sites
 - » YouTube.com has negotiated revenue-sharing contracts with all four (4) major music labels and hundreds of independent labels to post music videos
 - » The contracts generally allow a content provider to share in the ad revenues and to post its own ads at channels devoted to its artists
 - » Hulu.com is a free video-streaming site backed by media companies (NBC, ABC, Fox, Disney, etc.)
 - Negotiate file-filtering contracts in which file sharing sites use filtering software to examine files as users upload them and look for digital “fingerprints” of the entertainment company’s works
 - » Depending on the contract the file-sharing site may either block the post or pay royalty fees to the entertainment company to post the material
 - » Eliminates the need/cost of the file-sharing site to get permission each time
 - » This type of contract requires that the P2P has ad revenues and enough assets and resources to develop an advanced filtering system and to pay the CR royalties

Market-Based Solutions/New Business Models

(To Protect IP)

- Other market-based solutions implemented by entertainment industry (i.e., content providers) to protect IP
 - Some entertainment companies imbed advertising in files that it then posts to the P2P sites, the advertiser gets its message out and the industry gets its fees (from the advertisers)
 - » Coca-Cola includes advertising with music files distributed to P2P sites (e.g., a Jay-Z video sponsored by Coca-Cola)
 - » Viral marketing
 - » P2Ps often consider this SPAM and are generally not happy with this
 - Some entertainment companies try to discourage unauthorized file sharing by flooding questionable P2P file-sharing networks – responsible for many illegal downloads - with decoy files (e.g., low-quality, damaged files) to frustrate users and stop the use of network to violate CR

Social Norms-Based Solutions

(To Protect IP)

- Taxation

- Much of the European Union tax digital media and equipment to pay CR holders for losses expected from unauthorized copying and distribution of digital content
- Taxes on manufacturers of PCs, printers, scanners, and recorders
- Taxes on iPods, cell phones, and blank DVDs
- Taxes > 1 billion euros in 2005 (in 2005 → 1 euro ~ \$1.35)

- Does this make sense?

- For: Makers of copying equipment create losses for CR owners so a tax is a reasonable compromise
- Against: Makes equipment more expensive, penalizes equipment makers unfairly, penalizes honest users unfairly

Summary of Solutions

(To Protect IP)

- Law solutions
 - Entertainment industry has:
 - » Filed many lawsuits over the last decade against intermediaries, P2P network providers, and manufacturers and distributors of circumvention technologies for contributory CR infringement
 - » Filed many lawsuits over the last 5 years against individuals for direct CR infringement
 - All of these lawsuits do not seem to have an impact
- Technology solutions
 - Entertainment industry has used DRM to protect IP
 - However, like most technological protections, DRM can be broken and may prevent fair uses

Summary of Solutions

(To Protect IP)

- Social norms solutions
 - Although taxation on digital media and equipment has become popular in Europe, it has not caught on in the US
- Marketplace solutions
 - The general idea: “If you can’t beat ‘em, then join ‘em”
 - Seems to be the recent focus of the entertainment industry to solve the IT-driven IP problems facing them today

Patents

- What is protected?
 - Machines, inventions, and innovative processes
 - » Laws of nature and scientific principles are not eligible for patents
 - To attain a patent, the innovation:
 - » Must be novel (unknown to others + unused by others before the patent is awarded)
 - » Cannot be described by others in a printed publication (e.g., academic conference)
 - » Must be non-obvious to anyone “skilled in the art”
 - IT-enabled business processes are patentable
- For how long?
 - Patent gives the patent-holder monopoly use (i.e., exclusive right to exclude others from making, using, offering for sale, or selling the invention) for 20 years (from the date the application was filed)
- Penalties for infringement?
 - No limits on infringement penalties

Patents

- Is there protection from independent discovery?
 - Yes!
- Application process?
 - Long (may takes years) and expensive compared to the application process for CR
- Is the innovation placed in the public domain?
 - Yes!
- The debate
 - Should IT-enabled business methods be patentable?
 - Are they necessary to stimulate innovation in cyberspace?
 - Can patent examiners really decide what is novel, non-obvious, and useful?

IT-Based Patents

(A Recent Example)

- The Courier-Journal (Wednesday, October 7, 2009, p. B6)

Patent infringement claims against Toyota to be tested

From Staff and Wire Dispatches

U.S. trade officials said they will open an investigation into whether Toyota violated patents held by a U.S. hybrid technology company.

The company, Bonita Springs, Fla.-based Paice, claims that popular Toyota hybrids like the third-generation Prius and the Lexus HS250h contain technology that violates its patents related to the propulsion of gas-electric vehicles.

Paice is seeking to bar the im-

port of the vehicles into the U.S. The U.S. International Trade Commission, which investigates claims of trade violations, voted to open the investigation Monday. Paice also claims the Camry Hybrid built in Georgetown, Ky., uses imported components that rely on the patented technology.

After the ITC decides to begin an investigation, a judge is named, usually within 45 days, and hearings are held. If the ITC sides with Paice, the trade body could impose penalties including a possible ban on the hybrids' import.

A spokesman for the Japanese automaker said the company's position remains unchanged from last month, when it issued a statement saying it "has many patents on the hybrid technology and believes that it has strong defenses against all of Paice's claims and that it will prevail in the ITC proceeding."

Paice claims Toyota is infringing on its patent for a microprocessor that determines whether a hybrid's electric motor, gasoline engine or both should power the vehicle.

IT-Based Patents

(A Recent Example)

- [Autoblog Green \(November 5, 2009\)](#)



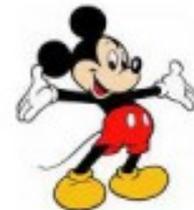
Trademarks

- Definition

- A word, phrase, symbol, graphic, sound that enables a customer to differentiate one company's product from another's
- Law prevents the use of a mark or a confusingly similar mark
 - » Exceptions for fair use and parodies

- Examples

- Graphics: Disney's Mickey Mouse, NBC's Peacock, the shape of the Coca-Cola bottle, McDonald's Golden Arches, Nike's swoosh, Apple's logo
- Words: "Coca-Cola", "Kleenex", "Kodak", "Apple", "Camel", "Pepsi"
- Slogans: Nike's "Just Do It!", McDonald's "You Deserve a Break Today"



Trademarks

- How is a trademark (TM) acquired?
 - When someone is the first to use the mark publicly (to sell a product/service) or registers it with the US Patent and Trademark Office (USPTO)
- Trademark violations
 - Infringement: TM used by someone else in connection with the sale of its goods or services (e.g., a new shoe company uses a “swoosh”)
 - » An infringement occurs if there is a “likelihood of consumer confusion”
 - Dilution: Applies to famous TM known to public (via advertising)
 - » Blurring: TM is associated with dissimilar products (e.g., using Mickey Mouse or the Disney name to sell men’s suits)
 - » Tarnishment: TM is portrayed in a negative or compromising way or is associated with products/services of questionable value or reputation

Trademarks

- Trademark fair uses

- In fair use situations the TM name normally assumes its primary (vs. commercial) meaning
 - » Describing your cereal as being made of “all bran” does not infringe on Kellogg’s TM brand name of “All Bran” cereal
- Parodies
 - » Parody is OK as long as it is not closely connect to commercial use
 - » Making fun of a brand name in a Saturday Night Live skit is OK
 - » Parodying a brand to sell a competing product → most likely a TM infringement

Trademarks

(Seminal Court Cases)

- Universal v. Nintendo (1984)
 - The Donkey Kong Case
- Hasboro v. Internet Entertainment Group (1996)
 - The Candyland Case

Trademarks

(Ownership of Domain Names)

- Ownership of Domain Names
 - Each Internet site has a unique address or domain name
 - ICANN determines (since 1999) the policies for domain name distribution
- Traditional problems
 - Cybersquatting
 - » Registering or using a domain name that is identical or confusingly similar to a TM with the bad faith intent to profit from the goodwill of the TM (often profit by extorting the TM owner)
 - » Example: Say that a new company registers `www.talbots.biz` and sells a line of women's clothing online with the domain name
 - ◆ Consumers may assume that the clothes are affiliated with the well-known Talbot's brand → confusingly similar → infringement

Trademarks

(Ownership of Domain Names)

- Traditional problems
 - Cybergripping
 - » Disputes between the legitimate claims of a TM owners and free speech rights of critics or “grippers” who use a registered TM to protest an organization’s policies or practices
 - ◆ TM owners claim that derogatory statements of grippers are dilutive of their TM
 - ◆ Grippers claim “unconfusing”, non-commercial use of TM for criticism, free speech
 - » Court cases
 - ◆ Scientology-kills.net (OK, fair use)
 - Criticizes the scientology movement and sells T-shirts
 - Does not deceive (it is not confusingly similar) and it expresses an opinion
 - ◆ JewsforJesus.org (not OK, dilutive)
 - Tries to intercept visitors to Jews-for-Jesus.org – a movement that seeks to convert Jews to Christianity – and provides a link to a Jewish Outreach site
 - Does deceive (it is confusingly similar), it tries to intercept those thinking of converting, and it does not express an opinion
 - ◆ Peta.org (not OK, dilutive)
 - PETA vs. “People Eating Tasty Animals” parody

Trademarks

(Linking)

- Linking

- Ticketmaster v. Microsoft (1997)
 - » Deep linking may be a TM violation since it may convey to the user that she is still on the original site, therefore blurring “property lines” in the consumer’s mind
- Can you link to anything any way you want?
- Linking rules:
 - » Avoid linking to sites that prohibit it
 - » Link in the way requested by the linked site
 - » Have a familiarity with the content of the linked site
 - » Avoid impression that a link implies an endorsement in any way of one’s own product or services
- Not a huge issue these days

Trade Secret Laws

- Uniform Trade Secrets Act (UTSA)
 - Gives right to companies to keep certain information secret (to maintain competitive edge)
 - Covers formulas, patterns, programs, devices, methods, processes
- Must have the following characteristics:
 - Be novel
 - Represent economic benefit to firm
 - Involve some cost and effort to develop
 - Is generally unknown to the public
 - Company must show effort to keep the information secret

Trade Secret Laws

- **Problems:**
 - Software often must be put into the public realm, making it difficult to keep secret (and generally unknown to the public)
 - Does not protect from independent discovery
- **Economic Espionage Act (1996)**
 - Federal crime - theft or misappropriation of trade secret
 - Penalties: up to \$10 million and 15 years prison for theft of trade secrets
 - IP lost in industrial espionage → > \$300 bill / year
 - Much debate in the business intelligence community

Trade Secret Laws

- How do you show the courts that you have been keeping information secret?
 - Identify all information to be protected
 - Label it confidential
 - Educate employees of importance of trade secrets
 - Make only accessible to limited # of people on a need-to-know basis
 - Develop non-disclosure agreements
 - Develop non-compete clauses
 - » Compuware v. IBM (2005)
 - Technology protections
 - » Firewalls, encryption, secure databases, etc.

Trade Secrets

(A Recent Example)

- Craig, S., Efratis, A., “Ex-Goldman Worker is Arrested,” *WSJ*, July 7, 2009, p. C3
 - Background
 - » Sergey Aleynikov was a Goldman Sachs computer programmer (\$400,000/year) between May 2007 and June 2009 before moving to start-up automated trading firm Teza Technologies
 - » At Goldman, Aleynikov signed a standard confidentiality pact requiring him to handle all non-public information “in strict confidence” and to return any non-public documents obtained while working at Goldman upon his departure
 - » Before he left Goldman he allegedly stole 32 megabytes of proprietary code related to a high-speed trading application that he helped to develop
 - » He copied the code from his work computer to a server in Germany
 - » Goldman found out about the IP leak when monitoring data uploads from its system
 - Defense
 - » Aleynikov claims that he meant to copy only “open source” files, but he accidentally transferred the proprietary code, which he says he did not pass on to a third party

Trade Secrets

(A Recent Example)

- Goldman Sachs case
 - Accusation
 - » On July 3 the FBI arrested Aleynikov and charged him with "theft of trade secrets" with "the intent to convert that trade secret to the economic benefit of someone other than the owner." (bail was set at \$750,000)
 - ◆ Goldman says that
 - If its competitors get hold of the proprietary code its ability to profit from the speed and efficiency of its system would be largely nullified
 - It spent millions developing and guarding the code and related programs
 - Other Notes
 - » Aleynikov allegedly tried to delete the Goldman data that was uploaded, but the firm's system made a backup copy
 - » One question will be "What types of controls and monitoring did Goldman have in place to protect the data?"
 - Latest Update
 - » Feb 17 (2010) – Aleynikov pleads not guilty to federal charges that he stole software

Trade Secrets

(A Related Example)

- Citadel Investment Group
 - A Chicago-based hedge fund that is suing a former executive (Mikhail Malyshev's) and two other employees for violating their non-compete contractual clauses by setting up Teza Technologies - the firm Aleynikov joined on July 2, 2009 (see previous slides)
 - Claiming that their nine-month non-compete clause runs until November 2009 (until then they are paid \$30,000/month by Citadel)
 - Teza Technologies calls the civil complaint "frivolous" and an attempt to harass its executives
 - To be continued...

Open Source Software (OSS)

- Software enjoys multiple protections
 - CR (source code – JAVA or C++ - is considered a literary expression)
 - Patent (software is a functional, useful machine)
- Open Source movement argues that software should not have any legal protections
 - Open Source Initiative (www.opensource.org)
 - All software should be free to use, modify, customize
 - » Patents/CR interfere with the evolution of incremental improvements
 - Software is distributed free along with the source (human-readable) code which is accessible for modification
 - Claim is that OSS generates better software code with more features, fewer bugs, and more transparency than proprietary code
 - » Since you have thousands of talented programmers contributing
 - Success of OSS depends on willingness of programmers to contribute

Open Source Software (OSS)

- OSS license includes five (5) key provisions
 - Freedom to run the program for any purpose
 - Freedom to access the source code and modify it
 - Freedom to distribute copies of the program
 - Freedom to release modifications to the public
 - Copyleft provision
 - » Can redistribute OSS with modifications/enhancements, but only under the same OSS license under which the user received the code (prevents privatization of code)
- Examples of OSS
 - Linux OS, Firefox web browser, Apache web server (distributed and supported by IBM), MySQL database
 - Open Office Suite personal productivity tools
 - » Writer, Calc, Impress (presentation software), Draw, Base (database software)
 - Super Tux (video-game inspired by Super Mario Brothers)

Open Source Software (OSS)

- Many claim past protection actually stagnates growth
- The way we should develop software is to put stuff out there, then have others incrementally improve upon it over time
- Issues
 - Who manages it?
 - Who decides what gets accepted as a change and what doesn't?
 - How do we ensure that programmers will continue to contribute to it?
- Remember that OSS is all on a voluntary basis
- Very definitely a cool movement in technology
- What does the future hold for OSS?

Summary

- Revisited and reviewed
 - Betamax Case (seminal fair use case related to contributory infringement)
 - DMCA
- Solutions (other than CR laws) to the IP problem
 - Technology-based solutions (encryption, DRM)
 - Market-based solutions (new business models)
 - Social norms-based solutions (taxation)
 - Other legal IP protections (patents, trademarks, and trade secrets)
- Is a top-down approach or a bottom-up approach more effective?
- Open Source Software
 - Should we forget about all of this? Should all software be free?