Basic policy issues

- IPRs attempt to facilitate knowledge generation and dissemination:
  - Patents and copyrights
  - Trademarks and service marks
- Temporary protection allows creator to control use of copyrighted work and secure a stream of income
- After protection works become part of the “public domain”

Economics of information

- Information is a quasi-public good
  - Once produced, it can be consumed by many people without wear and tear
  - Very low incremental cost raises the problem of how firms can recoup the investment expense of creating information
  - Often results in exorbitant surcharges over the variable cost of an information product
- Property rights can remedy problem

Legal framework

- Article I, Section 8, U.S. Constitution. Congress shall have the power "to promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries"
- Trademark Act of 1946 as amended
- Patent Act of 1959 as amended
- Copyright Act of 1976 as amended (early predecessors were passed in 1790 and 1909)

Legal framework ...

- Digital Millennium Copyright Act (DMCA) of 1998
Challenges and critique

- Technological change
  - Photocopying, audio and video recording
  - Cable television, satellite broadcasting
  - Internet and digital information processing
- Optimal duration and exceptions?
  - Copyright Act of 1790: 14 years
  - Copyright Act of 1909: 28 years
  - Presently: life of author plus 70 years
- Negative effects on creativity

Part II

Patents, Trademarks, Service Marks

Patents

- Section 101 Patent Act of 1959:
  "Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor …"
- Since 1995 last for 20 years.
- Software can be patented (10% of all patents in 1998).

Trademarks/Service marks

- Allow consumers to identify product or service (trust).
- Statutory creations of states and federal government.
- Lanham Act defines trademark as "… any word, name, symbol, or device, or any combination thereof adopted and used by a manufacturer or merchant to identify his or her goods or services."

Part III

Trademark ...

- Last for 10 years but can be renewed indefinitely.
- If not “defended” become part of the public domain.
- Registration at PTO is not necessary for protection but brings advantages in infringement cases.
- Trademarks and Servicemarks can be traded.

Copyright:
Scope & Rights
Protection

- The Copyright Act protects "original works of authorship fixed in a tangible medium of expression"
- Protects work itself, not ideas or facts underlying it

Types of work that can be copyrighted
- Literary works
- Musical works, including lyrics
- Dramatic works, including music
- Pantomimes and choreographic works
- Pictorial, graphic, and sculptural works
- Motion pictures, television programs, and other audiovisual works
- Sound recordings
- Compilations, e.g. of poems
- Architecture

“Originality”

- Most important criterion for work to be copyrighted
- Originality means:
  - The work is solely produced by the copyright owner
  - Created through his/her own effort
  - Not copied/derived from the work of others
  - Work does not have to be unique, innovative, or groundbreaking

“Fixed in tangible medium”

- "Fixed" means:
  - The work, under the authority of the author
  - is sufficiently embodied in a copy or recording, so that it
  - can be observed, comprehended, reproduced, or otherwise communicated for more than a brief period of time
- Examples include:
  - Recording on audio or videotape
  - Printed works or works stored on computer

Rights

- Copyright grants six exclusive rights
  - To reproduce the work in copies or phonorecords;
  - To prepare derivative works based upon the original (e.g., a screenplay from a book);
  - To distribute copies or phonorecords of the copyrighted work to the public for sale or other transfer of ownership, or by rental, lease, or lending;

Unprotected works
- Trivial materials (e.g., titles)
- Ideas
- Utilitarian goods
- Methods, systems
- Mathematical principles and formulas

“Originality” ...

- Copyright does not protect the idea of the work or the facts behind it
  - "In no case does copyright protection for an original work of authorship extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work" (§102, Copyright Act 1976)

Rights ...

- To perform the work publicly, in the case of literary, musical, dramatic, and choreographic works, pantomimes, and motion pictures and other audiovisual works;
- To display the copyrighted work publicly, in the case of literary, musical, dramatic and choreographic works, pantomimes, and pictorial, graphic, or sculptural works, including the individual images of a motion picture or other audiovisual work; and
Rights ...

- In the case of sound recordings, to perform the work publicly by means of a digital audio transmission.
- The rights can be sold, (leased, given as a gift, transferred to heirs, etc.) as a bundle or individually
- "First sale" doctrine: owners can sell without further royalty liability
- "Moral rights" controversy

Work made for hire

- Work prepared by an employee or an independent contractor?
  - Existence of a written contract
  - Source of instrumentalities and tools
  - Discretion of hired party over work hours
  - Hired party's role in hiring assistants
  - Method of payment
  - Tax treatment of the hired party
- Owned by employer

Duration

- Copyright Act 1976: 50 years
- Present duration for works created after January 1, 1978 (Sonny Bono Copyright Term Extension Act of 1998)
  - Life of author plus 70 years (or a total of 95 years for works already protected in 1976)
  - Work for hire, 95 years from publication or 120 years from the date of creation
- Challenged in Eldred v. Ashcroft

Registration & notice

- Copyrighted works should be registered and identified by the appropriate copyright symbol
  - © 2002 Johannes M. Bauer
  - Registration at Copyright Office, Library of Congress, Washington, D.C. 20559
- Work is protected even if not registered and no notice affixed
- Enforcement requires registration

International protection

- No "international copyright" that will automatically protect an author's work on a global basis
- Protection depends on the national laws of a country, often simplified in international treaty obligations
  - Berne Union for the Protection of Literary and Artistic Property (Berne Convention)
  - Universal Copyright Convention (UCC)

Part IV

Limitations
Fair use

- The Copyright Act allows limited use of copyrighted materials without permission under certain conditions
  - Purpose and character of the use
    - Commercial use is not a fair use (e.g., Hi-Tech Video Productions v. Capital Cities/ABC, 1992)
    - Non-profit educational use may qualify for fair use treatment
    - Course packs not fair use (Basic Books v. Kinko’s, 1991)

Fair use ...

- The nature of the copyrighted work
  - Published work tends to be less protected
- The amount and substantiality of the portion used in relation to the copyrighted work as a whole
- The effect of the use upon the potential market for or value of the copyrighted work

Compulsory Licenses

- Statutory (or compulsory) licenses intend to reduce the complexity of negotiating performance rights
- Give broadcasters, cable TV, DBS, and non-interactive webcasters the right to use copyrighted material as long as a predetermined fee is paid
- Fees determined by Copyright Arbitration Royalty Panel (CARP)

Infringement

Part V

Forms of infringement

- Direct copyright infringement is the affirmative action of violating an author’s rights under section 106 of the Copyright Act
- Contributory infringement occurs when one knowingly supervises the infringing activities of another and the observer stands to benefit from the infringement
- Vicarious infringement occurs when the defendant has the right to supervise the infringer and has a financial stake in the infringing acts even though the defendant had no knowledge and did not directly participate

Infringement

- To win a copyright suit a plaintiff must demonstrate that:
  - The infringing party had access to the copyrighted work AND
  - The infringer did copy the copyrighted work
- Copying requires a demonstration of:
  - Substantial OR striking similarity
  - Typically, similarity needs to exist in several dimensions (e.g., plot and characters)
Remedies for infringement

- Can be sought by a copyright owner once infringement is established
- The following remedies are available:
  - Injunctions
  - Impoundment and disposition of infringing articles
  - Damages (actual or statutory)
  - Criminal copyright infringement can carry monetary fines and prison

Selected cases

- Bright Tunes v. Harrisongs (1976)
  - George Harrison was accused of violating the copyright with his song "My Sweet Lord"
  - Substantial similarity to "He's So Fine" was found by the court
  - Because "He's So Fine" was very popular, access was considered as established
- Universal Studios and "Great White"
- Great American Hero and Superman

Part VI

Important Areas and Cases of Copyright Law

Fair use cases

- Historical events
  - Rosemont Enterprises v. Ramdon House (1966) finds that copyright owner cannot, in effect, copyright history
  - Estate of Martin Luther King v. CBS (1990s) upheld that CBS infringed upon Estate's rights when including a 9 minute segment of the "I Had a Dream" speech into a documentary
- Television news and video clipping services

Fair use cases ...

- Parody
  - "When Sunny Gets Blue" parodied as "When Sonny Sniffs Glue" (Fisher v. Dees 1986, 9th U.S. Circuit Court of Appeals)
  - Roy Orbison "Oh, Pretty Woman" parodied by 2 Live Crew as "Pretty Woman" (Campbell v. Acuff-Rose Music 1994, U.S. Supreme Court)
  - "The Wind Done Gone"
- Comparison advertising

Music licensing

- Music rights differentiated
  - Underlying music and lyrics (composer, lyricist, music publisher)
  - Performance rights (recording artist)
- Compulsory license: anybody can record copyrighted music by merely paying a specified royalty
- Copyright Act does give composer performance rights but not recording artist for merely playing a record
Music licensing ...
- Electronic media operators must obtain public performance rights from composers. Administered by:
  - American Society of Composers, Authors, and Publishers (ASCAP)
  - Broadcast Music Incorporated (BMI)
  - Society of European Stage Actors and Composers (SEASAC)
- Blanket license, per program license

Cable TV licensing
- Cable systems must pay copyright royalties to distant, non-network broadcast stations that they carry
- Cable systems hold a compulsory license that allows them to pay a blanket fee
- Fee is collected and distributed to the right owners by the Copyright Office

Recording technologies
- Video cassette recorders (Sony Corp. of America v. United City Studios, 1984, U.S. Supreme Court) finds that “time shifting” is a fair use and does not violate copyright laws
- “Coalition to Save America’s Music” lobbied for royalties on blank audio tapes
- Audio Home Recording Act (1992) levied fees on digital audio recording equipment and blank digital audio tapes

Computer software
- Software can be copyrighted as “literary work” (Apple Computer Inc. v. Franklin Computer Corp., 1983, 3rd circuit U.S. Court of Appeals)
- Attempts to copyright the “look and feel” of software interfaces failed
  - Apple against Microsoft and Hewlett Packard (pull down menus, icons, mouse, …)
  - Lotus (1-2-3) against Borland (Quattro)

Video games
- Several court decisions limited the right of software makers to use the Copyright Act to limit competition
  - Galoob Toys v. Nintendo of America (1992) held that “Game Genie” is fair use rather than an unlawful derivative work
  - Sega Enterprises v. Accolade Inc. (1992) held that computer software companies can “reverse engineer” a competitor’s code to make compatible products

Internet
- Posed a fundamental challenge to current approach to copyright
  - Material on the Internet is generally copyrighted and not in the public domain
  - Ease of copying and digital processing
  - Linking and deep linking
- Owners of copyrights started to search for new technologies to secure and enforce copyrights
Part VII

Digital Millennium Copyright Act of 1998
Title I

Background

- WIPO process under way since early 1990s, redirected to focus on digital environment
- WIPO Copyright Treaty (1996)
- WIPO Performances and Phonograms Treaty (1996)

WIPO Copyright Treaty

- Right of communication to the public:
  - Authors shall have exclusive right of authorizing any communication to the public of their works by wire or wireless means (incl. Internet)
- Technological Protection Measures
- Rights Management Information
- Protection of software and databases
- Reaffirms scope of permissible exemptions

DMCA 1998: Overview

- Expands copyright protection for material on the Internet
- Establishes rules for the circumvention of technical copyright protections (e.g., copyright management systems)
- Reduces liability for carriers, manufacturers of hardware, and ISPs for pirated information on their sites
- Narrows fair use exceptions

DMCA: Anticircumvention

- 1201(a) Technological Protection Measures (TPMs) against access
  - Prohibits circumvention of TPMs that “effectively control access”
  - Requires application of information (password) or a process of treatment (scrambling or encryption)
  - Prohibits trafficking in devices of services that can bypass TPMs

DMCA: Anticircumvention..

- 1201(b) TPMs against copying
  - Prohibits manufacture, import or sale of a “technology, product, service, device, component or part” that is:
    - “primarily designed or produced”
    - “limited commercially significant purpose”
    - “marketed” for purposes of circumvention
  - No requirement that equipment respond to TPMs
  - Limited exceptions

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**DCMA: Integrity of CMI**

- Copyright Management Information:
  - Title, author, owner, terms and conditions for use, identifiers
  - Examples include ASCAP or BMI watermarks to enable tracking of use; ISBN numbers

- DCMA prohibits:
  - Knowing provision of false CMI with intent to enable or conceal infringement
  - Intentional removal or alteration of CMI
  - Knowing distribution

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**OCLLI 1998**


- Genesis:
  - Sega Enterprises v. MAPHIA (1994).
  - LaMacchia v. United States (1994).
  - Content owner pressure.

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**Basic approach**

- Protection of service providers under certain conditions.
- Service providers are OSPs, ISPs, employers, universities, web hosts, portals, etc.

- Conditions for protection:
  - Policy for termination of repeat infringers.
  - Designation of agent (for stored material).

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**Protected conduct**

- Conduit activities (transmission and incidental storage).
- System caching (facilitating access).
- Storing information on system for user.
- Providing information location tools.
- Immunity for removal of allegedly infringing material.

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**Liability**

- New knowledge standard:
  - Applicable to stored material and information location tools.
  - Actual knowledge or red flag.
  - Awareness of facts or circumstances from which infringing activity is apparent.
  - No duty to monitor.

- Direct financial benefit.
- Right and ability to control.
Notice and takedown
- Copyright owner must provide statutory notification.
- Service provider must remove or disable access.
- Faulty notice does not provide knowledge or red flag.
- Provider must inform subscriber of take down.
- Statutory counter notification.

Part IX
Internet and Copyright: Selected Cases

DVD publishers v. DeCSS
- Content Scrambling System (CSS) encodes DVDs so that they can only be played in purchase region
- DeCSS disables CSS
  - In *Universal City Studios, Inc. v. Remeides* (2000) a court found that DeCSS violates anti-circumvention provisions of DMCA
  - In addition, a court found that even linking to a site with the DeCSS software is a violation of DMCA (2600 Enterprises hacker magazine)

MP3.com
- MP3 format allows easy storage, serial copying, and transmission
- My.MP3.com allowed individuals to access database of music
  - "Instant Listening Service" allows customers to buy from MP3.com and provides instant database access
  - "Beam It" service allows customer to insert CD in computer and unlocks database access.
  - Files cannot be copied directly onto harddrive but indirectly via an MP3 player

Napster
- Napster music-sharing site attracted 14 million users at peak
- RIAA and various artists sued MP3.com and Napster
  - Claimed contributory and vicarious copyright infringement
  - Napster found guilty of copyright infringement (*A&M Records et.al. v. Napster, 2001*), essentially shut down
  - MP3.com bought by Vivendi Universal

The story continues ...
- KaZaA Media Desktop, Audiogalaxy Satellite, Morpheus together have approximately 14 million users
- Example KaZaA enforcement problems
  - Software designers in The Netherlands
  - Servers probably in Denmark
  - Source code in Estonia
- Self-help and sabotage
Webcasting

- Digital Performance Right in Sound Recordings Act of 1995 gave record companies the right to receive royalties when their recordings were played on digital audio broadcast services.
- Subsequently applied to streaming services by broadcasters:
  - Compulsory license for non-interactive streaming but not for interactive streams.
  - Certain restrictions on streams.

Webcasting fees

<table>
<thead>
<tr>
<th>Service</th>
<th>Performance fee (section 114)</th>
<th>Ephemeral license fee (section 112)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radio-retransmission of AM or FM broadcast</td>
<td>0.07¢</td>
<td>8.8% of performance fees dues</td>
</tr>
<tr>
<td>Internet only transmissions</td>
<td>0.07¢</td>
<td></td>
</tr>
<tr>
<td>Non-commercial broadcasters</td>
<td>0.02¢</td>
<td></td>
</tr>
<tr>
<td>Business establishment service</td>
<td>Statutorily exempt</td>
<td>10% of gross proceeds</td>
</tr>
<tr>
<td>Minimum fee for streaming services</td>
<td>$500 for each licensee</td>
<td></td>
</tr>
</tbody>
</table>

Source: Copyright Office, 2002

Some guidelines

  1. Linking to other sites is generally ok.
  2. Don’t try to pass off someone else’s material as your own.
  3. When in doubt, ask permission.
  4. Don’t just assume that reusing material is ok.
  5. Use of ideas or of information from a copyrighted work is also generally ok.
  6. The mere possession of material does not make you the copyright owner.
  7. Look at the purpose and character of your intended use.
  8. Compare the portion of the work that you are using to the work as a whole.
  9. In general, try to make sure that your unlicensed use of any copyrighted work does not significantly affect the potential economic market of the original work.
  10. Don’t assume that your use of copyrighted material on intranet systems are not infringements or will not be seen outside the company.

Critique and Alternatives

Critique

- Copyright backfires: complexity of copyright suppresses creativity.
- Example movie maker:
  - Has to secure rights from author (script) and composer (music).
  - Needs to acquire separate synchronization rights for music.
  - Objects used in the background.
  - Elements borrowed from other copyrighted material ...

Critique ...

- No good rationale for duration:
  - Expansion from 14 to life of author plus 70.
  - Copyright should be differentiated (one model fits all philosophy inappropriate).
- Fair use exemptions should be broadened, not narrowed.
- DMCA bargained by copyright owners and ISPs, excluded librarians, educators, creators ...
Self-help systems
- Shrink-wrap licenses
- Encryption
- Technology-assisted copyright management systems
  - Invisible messages, digital watermarks
- Sabotage
  - Posting of spoof files
  - Deleting files from computers

Alternatives to copyright
- Open source
  - Uses copyright protection to grant specific public interest uses
  - Public Licenses (e.g., GNU General Public License, Netscape Public License (NPL))
  - Reveal source code, allow modifications as long as they remain open source
- Creative Commons licenses (http://creativecommons.org)

Alternative business models
- Fee-based encrypted downloads
- Fee-based ephemeral downloads
- Ad-based downloads
- Fee-based interactive streaming
- Tip jars
- Keep content in “containers”
- Tax on content-related technologies
- Government rewards instead of IPRs

Selected sources
- US Copyright Office <http://lcweb.loc.gov/copyright/>
- US Copyright Office, Copyright Basics <http://lcweb.loc.gov/copyright/circs/circ1.html#fee>
- U.S. Copyright Office <http://lcweb.loc.gov/copyright/onlinesp/list> for a list of all the designated agents.
- Fair use provisions <http://fairuse.stanford.edu/>
- Cases and copyright news <http://www.benedict.com/>