
Intellectual Property: Copyright; Trademarks



Alternatives to Copyright

- Not everyone wants to restrict access to their work
- Academics, for example, generally don't profit and hence want maximum distribution
- Open Access publishing
- Creative Commons

Open Access

- Many scientific papers are published by commercial firms like Springer and Elsevier
- Others are published by professional organizations like ACM and IEEE
- Most of these publishers charge for access, to make a profit or to support their work
- But—the authors do not receive royalties, and the peer review—the quality control on scientific work—is provided free by other scientists
- The research is generally government- (i.e., taxpayer-) funded
- Should these papers be freely available? More and more academics say “yes”

Sci-Hub

- Alexandra Elbakyan, a Kazakh bioengineer now living in Russia has created a web site for free access to paywalled journals
- Her code finds open library proxies at universities with site licenses—and possibly passwords shared with her; she won't say
- The publisher has accused her of stealing logins
- “I started the website because it was a great demand for such service in research community.”

Creative Commons

- Creative Commons is a way to use copyright law to stipulate one of several pre-written licenses
- Attributes selectable include “no commercial use”, “attribution required”, right to share changed versions, etc.

- My slides:  (attribution, no commercial use)
- This is a legally-binding license, imposed by the copyright owner

The GNU General Public License (GPL)

- Encourage (one view of) desirable open source (or, to some, “free”) software
- Uses *copyleft*—an actual, legally enforceable copyright with a pre-attached license
- This license imposes certain restrictions, such as mandatory source code availability
- Note: there are many other open source licenses; see <https://opensource.org/>)

File-Sharing

- Individuals obtain a digital copy of some work and distribute it
- The copyright owner is not compensated
- Does this reduce the incentives for creation?
- Or do the pirated copies represent revenue that would never have been realized in any event?
- (Often, there are unauthorized versions of works for which there is no legal version.)
- It violates copyright law as currently written.
- That is not to say that current law is correct

From the Library of Congress Web Site

“Uploading or downloading works protected by copyright without the authority of the copyright owner is an infringement of the copyright owner’s exclusive rights of reproduction and/or distribution. . .

“Whether or not a particular work is being made available under the authority of the copyright owner is a question of fact. But since any original work of authorship fixed in a tangible medium (including a computer file) is protected by federal copyright law upon creation, in the absence of clear information to the contrary, most works may be assumed to be protected by federal copyright law.

“Since the files distributed over peer-to-peer networks are primarily copyrighted works, there is a risk of liability for downloading material from these networks.”

Cost Issues

- Many different components go into the retail cost of a copyrighted item: royalties, performance (for music), editing (for books), acquisition by the publisher, marketing, physical production, distribution, retailer overhead, and more
- Digital distribution affects physical production *only*
- Electronic distribution costs much less, but servers, data centers, Internet connectivity, etc., are not free
- What has changed is the ratio between fixed costs and per-unit costs

The Underlying Issue

<i>Era</i>	<i>Creation Cost</i>	<i>Reproduction Cost</i>
Manuscripts	High	High
Gutenberg	High	Medium
1900	Medium-high	Medium-low
1995	Medium	Low
Now	Medium	Zero

The cost of creating a work has dropped somewhat, because of things like word processors, cheap high-quality sound equipment, etc. The cost of editing, mixing, has probably gone up. But—the cost of reproduction is close to zero. How can the fixed costs be covered?

Related Issue: Open Access Publishing

- Most academics do not profit (or expect to profit) from their writings
- Can professors post their own papers on their web pages?
- Some publishers require you to sign over copyright to them and bar postings
- But some universities (Harvard, MIT, some others) have policies requiring that articles be posted
- But—how will academic publishing houses be supported? Do they add value?

How Peer-to-Peer Works

- Napster: centralized index, but the actual file transfer did not go through the central server complex
- Gnutella and many later systems create *overlay networks*; queries are flooded over the overlay, while file transfers go directly over the Internet
- This latter is far less subject to *subpoena attacks*

BitTorrent

- Files are divided into chunks
- A *tracker* can tell you which nodes have which chunks
- Different pieces of the file are downloaded from different sites
- Once a node obtains a file, it can offer it for upload
- Download speed is related to upload speed offered—prevent “leeching”

Protecting Copyright

- One approach: suing file-sharers
- But—expensive and unpopular
- New crime: criminal copyright infringement without a profit motive
- “3 strikes” laws—make ISPs responsible for disconnecting repeat infringers

The Problem with ISP Enforcement

- No due process
- People rarely have a choice of ISP
- There's a difference between downloading copyrighted material and downloading the same file without proper permission—but that doesn't show up on the wire

Felony Interference with a Business Model?

- The current structure cannot survive; it was based on technological assumptions that are no longer correct
- (You wouldn't design today's book publishing industry for a pre-Gutenberg era.)
- But—there are still fixed, medium-independent costs that need to be covered
- The challenge: devising a sustainable business model *and* overcoming vested corporate commitments to today's structure

How Should We Protect Software?

- For external distribution, copyright plus a license agreement seems to be the standard
- Patents can sometimes be useful (albeit controversial), but only if there's a clear case for novelty and non-obviousness
- 👉 Note that you need some probable way of knowing if infringement is taking place
- Internal software is always copyrighted. It *may* be a trade secret, but that might hurt internal access to source code
- Requiring employees to sign NDAs is a good idea regardless
- Check with your lawyer!

Trademarks

- “Protect words, names, symbols, sounds, or colors that distinguish goods and services from those manufactured or sold by others and to indicate the source of the goods. Trademarks, unlike patents, can be renewed forever as long as they are being used in commerce.” (from USPTO web site)
- Identifies certain brands
- Prevent confusion (deliberate or otherwise) about the brand

Defending Trademarks

- Companies must defend their trademarks or they can be lost
- Examples: “thermos” and “yo-yo“
- Might Google and Xerox face that problem?

Trademark Law is Complex

- Only Corning can make pink fiberglass insulation (774 F.2d 1116)
- 👉 They've been doing so since 1956, and had major advertising campaigns (featuring the Pink Panther) stressing the color
- Louboutin has a trademark on red-soled shoes—but only when the rest of the shoe is a contrasting color; anyone's red shoe can have a red sole
- (Yes, there are serious restrictions on when one can trademark a color...)

Limitations on Trademark Scope

- Trademarks are limited by geography—“Joe’s Frabjous Pizza” can exist in New York and San Francisco simultaneously
- Trademarks are limited by field of discourse: Delta Airlines, Delta Faucets, Delta Porter Cable tools, etc.
- But “famous” trademarks are protected throughout the U.S.
- Key issue: will people be confused? Would “McBurgers” infringe McDonald’s trademark? Almost certainly.

Trademarks and the Internet

- What's a geographic limitation?
- What about the DNS?

Trademarks and the DNS

- The DNS is a tree—there’s no way to search on two different limiting fields
- Only one company can have, e.g., **delta.com**
- JoesFrabjousPizza.com should resolve differently in New York than in San Francisco—and differently for food than for electronics
- It would be much harder to build a simple distributed database if one wanted to permit such queries
- “The DNS name space is a hierarchical name space derived from a single, globally unique root. This is a technical constraint inherent in the design of the DNS.” (RFC 2826)
- A few companies (such as Google) do do location-based DNS responses, but the granularity probably doesn’t match trademark law

DNS Lookups Are Context-Free

- A person looking for airline tickets won't be confused by power tools
- But the DNS doesn't know the user's mental context
- Even your browser (and Google) don't necessarily know it
- Many DNS lookups are done by and for automated processes far removed from explicit user requests
- The human notion of “confusion” simply doesn't work

Are Domain Names Trademarks?

- Under certain circumstances, domain names themselves can be trademarked
- But—the commercial use has to be more than just the address
- “The mark is WWW.XYZ.COM for on-line ordering services in the field of clothing. Specimens of use consisting of an advertisement that states ‘visit us on the web at www.xyz.com’ do not show service mark use of the proposed mark.” (USPTO Examination Guide 2-99)
- **amazon . com** is a trademark, though

Infringing Trademarks via the DNS

- Who can register the domain `mcdonalds.com`?
- Before the hamburger company caught on, a journalist registered it—he asked people to email suggestions for the name via `ronald@mcdonalds.com`
- Yes, today that would likely be seen as infringement. . .

Cybersquatting

- Grab a trademarked name that you think someone might want, then offer to sell it to them
- Typosquatting—grab a name that’s a typographical error away from a common DNS entry
- Barred in the U.S. under 15 USC 1125(d): “A person shall be liable in a civil action by the owner of a mark . . . [if] that person has a bad faith intent to profit from that mark . . . [and] registers, traffics in, or uses a domain name that . . . is identical or confusingly similar” (lots more)
- In some cases, there is redress via ICANN’s Uniform Domain-Name Dispute-Resolution Policy

Internationalization Issues

- Who gets $\delta\epsilon\lambda\tau\alpha$.gr?
- What American word would infringe `cccp.ru`? Recall that “CCCP” is the abbreviation for *Soyuz Sovetskikh Sotsialisticheskikh Respublik*, and has the (English) sound value “SSSR”
- The Cyrillic equivalent to the English CCCP is *КККП*—does it infringe?
- Again—the issue is whether or not there is confusion

We Have Jurisdiction Problems Again

- The Internet doesn't understand borders
- Different companies' trademarks have different reaches
- Consumers don't always know what countries' sites they're browsing

Should We Have Names in the DNS?

- The phone system has survived without mnemonic names
- Today, our phones have address books—but browsers have bookmarks
- Often, people use search engines to find places anyway
- Do we really need these problematic names? Many people think they're more trouble than they're worth

Trademarks and Advertising

- Google's ads work by selling "keywords"
- "When people search on Google using one of your keywords, your ad may appear next to the search results." (google.com)
- What if a company uses a competitor's trademark as a keyword for its own ads?

Uber

- We all know about Uber—actually, Uber Technologies—it “arranges” rides
- There’s an older Gainesville, FL, company named Uber Promotions; it mostly does event-planning—but that can include arranging transportation
- There was evidence of confusion
- The judge’s injunction required Uber Tech to ensure that search engines gave proper results
- Is this feasible?

An International Legal Issue

- LVMH (the owner of Louis Vuitton) filed suit against Google in France
- LVMH won there
- Google appealed to the EU's European Court of Justice
- The court ruled in 2010 that (a) Google did not infringe simply by selling keywords, but must take down infringing ads after notification; (b) the advertisers could be liable; (c) Google could be liable if its business practices encourage infringement
- The suit was finally dropped in late 2014!
- Might other jurisdictions feel differently? If Google has to change `www.google.fr`, it's one thing; need they change `www.google.com` as well?

Counterfeit Goods

- If eBay sells counterfeit trademarked goods, are they liable?
- Tiffany sued in the U.S.; eBay won
- “the law is clear: it is the trademark owner’s burden to police its mark, and companies like eBay cannot be held liable for trademark infringement based solely on their generalized knowledge that trademark infringement might be occurring” (576 F. Supp. 2d 463, 2008)
- eBay lost in France to LVMH; the two finally agreed on a joint anti-counterfeiting campaign
- In Germany “the high court said while EBay couldnt be held liable for damages [to Rolex], it had to monitor its site to prevent fakes from being sold once it had become aware of the problem” (bloomberg.com)

Several Issues

- What are the plaintiffs' real concerns?
- Trademark confusion?
- Counterfeit goods?
- Discount sales of luxury goods?
- All of the above?

Conduits or Creators?

- When are web sites passive conduits, as opposed to content owners?
- How much filtering is required?
- Does the law create a disincentive for partial filtering?

Trademarks and Free Speech

- Can you incorporate a trademark into a domain name critical of someone?
- Is **farmersinsurancegroupsucks.com** free speech or a trademark infringement?
- What about when **peta.org** took you to a page for “People Eating Tasty Animals”?

Criticism is OK

“The following shall not be actionable as dilution by blurring or dilution by tarnishment under this subsection:

“(A) Any fair use, . . . including . . .

“(ii) identifying and parodying, criticizing, or commenting upon the famous mark owner or the goods or services of the famous mark owner.”

15 USC §1125

That Means that the .sucks Domain is Legal

- The whole purpose of the TLD is criticism
- 👉 A domain MyMegaCorp.sucks doesn't infringe the trademark of MyMegaCorp (but the content has to stick to opinion or documentable facts to avoid slander issues)
- However... Some see the existence of the TLD as a vehicle for extortion: companies will feel forced to buy their subdomain to protect it.
- Is that different from MyMegaCorpSucks.com?

Computers and Trademarks

- Technological choices don't agree with historic trademark principles
- Trademarks are being used in new ways—typo-squatting couldn't occur without the web, because people didn't normally type trademarks
- Computers are conduits, and have no judgment