

Happy Birthday (Oct 28, 1998) DMCA!

Blogs, search engines, e-commerce sites, video and social-networking portals are thriving today thanks in large part to the notice-and-takedown regime ushered in by the much-maligned copyright overhaul. A decade ago, when the DMCA was enacted, these innovations were unheard of, embryonic or not yet conceived. Now, Google has grown into one of the world's largest companies, and its video-sharing site YouTube has left an enduring mark on public discourse.

<http://blog.wired.com/27bstroke6/2008/10/ten-years-later.html>

DMCA: The good, the bad, the ugly?

- Notice and take down for copyright infringement
 - <http://www.ivanhoffman.com/dmca.html>
 - <http://www.chillingeffects.org/dmca512/faq.cgi>
- To submit a takedown notice, provide:
 - Complainant: name, address, e-signature
 - Where are the infringing materials? Ref/link/id
 - Statement: no legal basis for use of materials
 - Statement: act on behalf of copyright holder

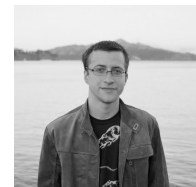
DMCA and chilling effects

- Dmitry Sklyarov, Elcomsoft, 2001
 - Arrested? Conference?
- Ed Felten, SDMI, 2001
 - RIAA urges reconsideration
 - <http://www.cs.princeton.edu/~prc/Parodies.html>
 - Alex Halderman, Sony rootkit
- Ben Edelman and CIPA (children's internet protection act)
 - Research, tools, distribution, "just sue"



Jon Lech Johansen

- DeCSS
 - How does DVD encryption work?
 - What is GPL issue with original code?
 - Brute force attack on 40-bit key beyond DeCSS
- Apple, iTunes, Fairplay, DRM
 - Digital Rights Management
 - iPhone
 - Hacker Jon



P2P: origins and current state

- **Shawn Fanning**

- Napster, 1998-99
- Under 20, mp3, ...
- Centralized server
- Rupture, EA \$15 million



- **Justin Frankel**

- Winamp, 98-99
- Just 20, mp3, ...
- AOL, \$50+ million
- Gnutella



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Napster, copyright, law

- **Napster was centralized, file-sharing/p2p**

- Why was it centralized?
- What did centralization mean? Where are files?

- **Napster started just after DMCA, court cases new**

- A&M Records, Inc. v. Napster, Inc.
- Direct, contributory, vicarious infringement

- **What about Grokster? See <http://www.grokster.com>**

- Microsoft, RIAA, Mark Cuban, ...
- Unanimous Supreme court, but Universal v Sony

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Gnutella and distributed, p2p software

- **Originally a software package, pulled by AOL**

- Protocol used in Limewire, 40% of p2p today? Soon to die? (Lawmeme)
- All clients are equal, but some are more equal than others, e.g., supernodes
- "Bad actors" can affect the network, an actor is a client, e.g., Xolox in 2002, others today? "bandwidth-hog/bandit"

- **Bittorrent, eDonkey, Kazaa, ...**

- Why do we have different protocols/programs?

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Bittorrent BitTorrent™

- **Started by Bram Cohen, <http://bitconjurer.org>**

- Distributed p2p
- Meta-data, torrent, tracker
- You must cooperate to download
- 20-30% of all Internet traffic



- **Files are split up and downloaded in pieces**

- Advantages? Disadvantages?

- **Seeder, swarm, clients**

- "optimistic unchoking" compared to tit-for-tat

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Brian Fox

- GNU Bash Shell (developer)
 - Buddycast (co-developer)
- “each person has a sweet spot — a place where they are incredibly productive and at their happiest while doing so — okorians spend their lives living there — the okori sweet spot is the realization of the concept, the delivery of the impossible, from the germ of the idea to the instantiation of it”

http://www.theokorigroup.com/sweet_spot

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Bittorrent meets DMCA and RIAA

- Indirect Swarm detection
 - In swarm? Liable
 - NAT, other IP address
 - “in-the-wild” experiment
- False positives
 - Direct harder
- Man-in-the-middle
 - No Encryption



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