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## Reading Discussion

***Blown to Bits***

**Chapter 6**

**Balance Topped**

***Who Owns the Bits?***

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Notes for CSC 100 - The Beauty and Joy of Computing  
The University of North Carolina at Greensboro

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### What does the title mean?

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The title of this chapter is "Balanced Topped"

What does that refer to?

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### Copyright

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More than 50 years ago, copying was difficult

Copying digital information is trivial

The balance....

- Copyright owners see the balance tipping away from them since copyright infringement is so easy and widespread now
- Many people see the balance tipping toward copyright owners because penalties are out of proportion with modern realities and new laws like the DMCA severely restrict new technologies in the name of "copyright protection"

How do *you* see this balance?

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## The Times They are A-Changin'

(c) Bob Dylan, 1964 (please don't sue me)

### Pushing balance toward copyright holders:

- NET (No Electronic Theft) act of 1997 - criminalized some non-commercial copyright infringement
- Use of secondary infringement to go after tool-makers
- DMCA (Digital Millennium Copyright Act) of 1998 - significant due to anti-circumvention provisions
- Recent proposals:
  - SOPA (Stop Online Piracy Act) - proposed House bill would require search engines and ISPs to delist/block sites when requested. Major protests (Google collected >7 million signatures on a petition, several big sites like Wikipedia and thousands of sites had a "blackout" on Jan 18, 2012). Seems to have been derailed, at least for now.
  - PIPA (PROTECT IP Act) - similar to SOPA, but a Senate version.

### Pushing toward consumers:

- DRM inconvenience led to most music distribution being DRM-free
- New business models for digital times: Pandora, Spotify, Netflix, YouTube, ...
- New views from content creators: Creative commons and open distribution

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## Some Questions...

How do you feel about copyright holders "commandeering" ISPs and search engines as protectors of the copyright holders' rights (SOPA)?

- One view: ISPs and search engines are private companies and should not be coerced into serving another private company's interests
- Another view: ISPs and search engines only have value because content creators put out content, so in return they can help those content creators

Are new models viable?

- Would you pay for a subscription service?
- For streaming services: When is "online all the time" reasonable?
- Do we still need record companies?

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## Peer-to-Peer

Technology and Mind-set

Peer-to-Peer and "Web 2.0" refer to higher interactivity, collaboration, and more widespread content creation/sharing

P2P technology evolution:

- Napster: Central directory, P2P copying
- Gnutella (Grokster, Kazaa, etc.): Distributed searching and copying
- Bittorrent: Directory info (seeds) semi-distributed, copying from multiple machines
- Anonymous variations: Freenet, Tor services, ...

Question: Do these services have *significant non-infringing uses*?

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## Technology Lock-In

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DMCA makes circumventing copy protection illegal whether used for copyright infringement or not (with some exemptions).

Possible example (fictional but it could happen):

What if I get a copy of "The Scarlet Letter" through an e-book company, in their proprietary, protected format. This was written in 1850, so is no longer under copyright. The e-book company goes out of business, and my e-reader no longer works because it can't contact their servers. Could I extract that content to read on a different platform?

As a copyright issue, no problem. But DMCA says this kind of circumvention is illegal, and it locks me into that proprietary e-book format even when copyright is not an issue.

**Question:** Is this reasonable? Where do you draw the line?

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## A Student Comment

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How does UNCG handle online copyright infringement?

From UNCG policy on DMCA:

*When notified, under penalty of perjury, by a copyright owner of infringing materials on a computer attached to the university network, UNCG will take immediate action to block network access to the computer and notify the owner of the computer. Network access will be restored after the infringing material is removed from the computer or within 14 days after receiving a proper counter-notification, unless the copyright owner files an action seeking a court order against the computer owner. A second violation will result in loss of access to the University network for three years. Additionally, as an OSP, UNCG may be served with a subpoena for the identity of the owner of a computer determined to contain infringing materials. UNCG will comply with a lawfully issued subpoena that meets the requirements of the DMCA. Violation of the DMCA can result in severe civil or criminal penalties.*

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