

CPSC156a: The Internet Co-Evolution of Technology and Society

Lecture 11: October 16, 2003

**Introduction to Digital Copyright and
Online Content Distribution**

Basis of US Copyright Law

U.S. Constitution:

[Article I, Section 8]

"The Congress shall have Power...

[Clause 8] 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..."

Note: The founding fathers did not feel the need to empower Congress to create physical property rights.

Examples of Exclusive Rights

- to reproduce the copyrighted work
- to prepare derivative works
- to distribute copies through sales, rental, lease, or lending
- to perform the copyrighted work publicly (applies, *e.g.*, to plays)
- to display the copyrighted work publicly (applies, *e.g.*, to sculpture)
- digital audio transmission

[These are paraphrases.]

Exception: “4-factors” test for “Fair Use”

- The purpose and character of the use, including whether such use is of a commercial nature or is for non-profit educational purposes
- The nature of the copyright work
- The amount and substantiality of the portion used in relation to the copyright work as a whole
- The effect of the use upon the potential market for or value of the copyrighted work

Exception: First-Sale Rule

- When a copyright owner sells a copy of a work, he relinquishes control over that copy but not over the work.
- The work cannot be reproduced by the purchaser, but the copy can be loaned, resold, or given to someone else.
- "Promotes progress" by enabling, *e.g.*
 - libraries
 - used book stores

General Structure of Copyright Law

- Copyright owners' rights stated explicitly.
- General public has no explicitly stated rights, just exceptions to owners' rights.
- Fair use is a *defense* against a charge of infringement.

This structure works fairly well for traditional media, particularly books.

Structure is Challenged by Digital Works

- Digital documents are fundamentally different:
 - Copies are perfect.
 - Copies can be made at zero cost.
 - Copying is not necessarily a good proxy for infringement.
- TPSs are imperfect:
 - A perfect TPS could moot fair use: no infringement, no charge, no defense.
 - But no TPS can be perfect in today's computers. General purpose PCs are programmable, and hence TPSs are circumventable (at least by experts).

Three Major “Enforcers” Support a Content-Distribution Business

- Copyright law
- Technical Protection System (TPS)
- * Business Model

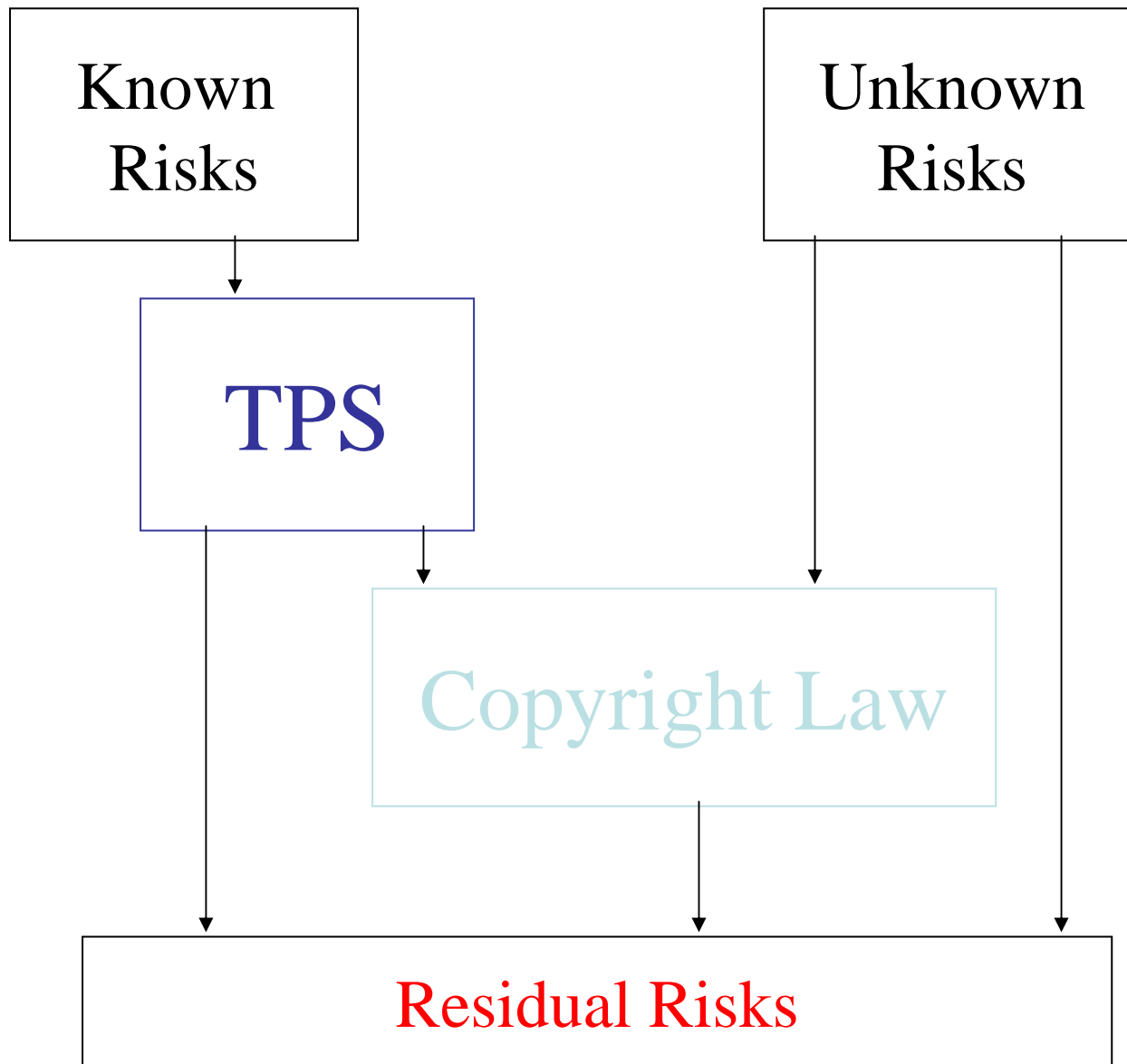
Dual Doomsday Scenarios

Today's Rights Holders and Distributors:

TPSs won't work. Copying, modification, and distribution will become uncontrollable.

Fair-Use Advocates and (Some)

Consumers: TPSs will work. Rights holders will have *more* control than they do in the analog world.



Best TPS is a Great Business Model

"The first line of defense against pirates is a sensible business model that combines pricing, ease of use, and legal prohibition in a way that minimizes the incentives for consumers to deal with pirates."

Lacy et al., IEEE Symposium on Industrial Electronics, 1997.

Holy Grail: A Great Business Model for Internet Music Distribution

Hal Varian (quoted in C. Mann's 2000 "Heavenly Jukebox" article): "Maybe Coke will find a way integrate itself directly into the shows. Or they'll release the music free on the Internet, except that it will be wrapped in a commercial." What's the difference if the Spice Girls are marketed by Coca-Cola or by Virgin Records, soon to be a subdivision of AOL-Time Warner?

2000 Sales by RIAA members: \$15B

2000 Coca-Cola Net Operating Income: \$20.5B

Fundamental Challenge for any Online Music-Distribution Business

- Consumers expect to pay considerably less for Internet-delivered music files than for physical CDs.
- But Internet-based distribution probably won't be much cheaper. Rough breakdown of CD-business costs:
 - First-copy: 21.1%
 - * Manufacturing: 8.5%
 - Marketing and sales: 49.9%
 - Licensing costs and profits: 20.5%

CPSC156a HW3: Due 10/30/03

Your third HW assignment is to write a three-page essay in which you propose a "solution" to the problems of the popular-music distribution industry that have been wrought by technological change (*e.g.*, p2p file sharing).

Reading Assignment For This Week

The following 3 sections of the Digital Dilemma report are required reading:

- Overview of digital-copyright issues:
http://books.nap.edu/html/digital_dilemma/ch1.html
- Basics of copyright law, fair use, and private-use copying:
http://books.nap.edu/html/digital_dilemma/ch4.html
- Discussion of the Digital Millenium Copyright Act of 1998:
http://books.nap.edu/html/digital_dilemma/appG.html