Chapter 23. Meeting 23, Languages: Intellectual Property and Copyright

23.1. Announcements

• Sonic System Project Report due Today, 3 December

23.2. Quiz

• 10 Minutes

23.3. Copyright

• Copyright: the right to copy
• An intangible property right: right of copyright is based on authorship and exists separate and apart from any particular physical expression
• Protects the expression of ideas, not the ideas themselves
• Original copyright holders have exclusive right of first publishing

23.4. Public Domain

• Works created prior to copyright law, or that have fallen out of copyright, are in the public domain
• No person or entity can claim the work as private property, and the work cannot be re-copyrighted
• Works may be used for commercial or non-commercial applications

23.5. The Value of the Public Domain

• Provide a pool of shared resources for reworking and remixing
Reworking and remixing is a type of creativity

23.6. What can be Copyrighted

- Facts, ideas, procedures, processes, systems, methods of operation, concepts, principles, and discoveries are not copyrightable (Moser 2006, p. 38)

- Copyright protects original expressions in a fixed medium

- Sound recordings are a separate copyright (a separate expression in a fixed medium) from the underlying musical composition

- Improvisation (as not fixed in a medium) is not copyrighted unless it is recorded; a copyright then exists for the composition and the recording (Moser 2006, p. 39)

23.7. Copyright Origins

- Technology and copyright have always been intertwined

- Copyright’s origins as “... a delayed response to technological advances” (Moser 2006, p. 12)

- 1710: The Statute of Anne in England: Granted authors a copyright of 14 years, with a 14 year extension
Anno Octavo

Annae Reginae.

An Act for the Encouragement of Learning, by Vesting the Copies of Printed Books in the Authors or Purchasers of such Copies, during the Times therein mentioned.

Whereas Printers, Book-sellers, and other Persons have of late frequently taken the Liberty of Printing, Reprinting, and Publishing, or causing to be Printed, Reprinted, and Published Books, and other Writings, without the Consent of the Authors of Proprietors of such Books, and Writings, to their very great Detriment, and too often to the Ruin of them and their Families: For Preventing therefore such Practices for the future, and for the Encouragement of Learned Men to Compose and Write useful Books; May it please Your Majesty, that it may be Enacted, and be it Enacted by the Queen most Excellent Majesty, by and with the Advice and Consent of the Lords Spiritual and Temporal, and Commons in this present Parliament Assembled, and by the Authority of the same, That from and after the Tenth Day of April, One thousand seven hundred and ten, the Author of any Book or Books already Printed, who hath not Transferred to any other the Copy or Copies of such Book or Books, Share or Shares thereof, on the Book-seller or Book-sellers, Printer or Printers, or other Person or Persons, who hath or have Purchased or Acquired the Copy or Copies of any Book or Books, in order to Print or Reprint the same, shall have the sole Right and Liberty of Printing such Book and Books by the Term of One and twenty Years, to Commence from the said Tenth Day of April, and no longer; and that the Author of any Book or Books already Composed and not Printed and Published, or that shall hereafter be Composed, and his Assignes or Assigns, shall have the sole Liberty of Printing and Reprinting such Book and Books for the Term of Fourteen Years.
Whereas Printers, Booksellers, and other Persons, have of late frequently taken the Liberty of Printing, Reprinting, and Publishing, or causing to be Printed, Reprinted, and Published Books, and other Writings, without the Consent of the Authors or Proprietors of such Books and Writings, to their very great Detriment, and too often to the Ruin of them and their Families: For Preventing therefore such Practices for the future, and for the Encouragement of Learned Men to Compose and Write useful Books; May it please Your Majesty, that it may be Enacted ... That from and after the Tenth Day of April, One thousand seven hundred and ten, the Author of any Book or Books already Printed, who hath not Transferred to any other the Copy or Copies of such Book or Books, ... shall have the sole Right and Liberty of Printing such Book and Books for the Term of One and twenty Years, to Commence from the said Tenth Day of April, and no longer; and that the Author of any Book or Books already Composed and not Printed and Published, or that shall hereafter be Composed, and his Assignee, or Assigns, shall have the sole Liberty of Printing and Reprinting such Book and Books for the Term of fourteen

- Applied only to books

23.8. The U.S. Constitution

- 1783: Article I, Section 8, Clause 8: the Progress Clause

- Congress is empowered “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.”

23.9. Copyright Act of 1790

- First implementation of constitutional mandate

- Modeled on Statute of Anne

- Gave authors 14 years of copyright, with the option to renew

- Later extended to 28 years, renewable for 14 years (Krasilovsky 2003, p. 103)

- Protected books, charts, maps; music was not protected

23.10. Copyright Act of 1909

- Offered protection to “all the writings of an author” independent of medium

  Supreme Court interprets this as applying to the results of all creative and intellectual labor

- Total copyright term extended to 56 years: original term of 28 years, renewable for 28 years (Krasilovsky 2003, p. 103)

- Copyright granted to composers and music publishers; not to musicians and record companies
Copyright protections only granted to registered works

Created a compulsory mechanical license to reproduce and distribute sound recordings of musical compositions

23.11. Copyright Act of 1909: Compulsory Mechanical Licenses

- An exception to copyright, where the copyright holder’s permission is not required
- Motivated in part by popularity of player pianos and the market for selling piano rolls
- After initial authorization of recording distribution, any other person may also record and distribute recordings of the work after giving written notice and paying statutory royalty (starting at 2 cents) on each record made and distributed
- Audio recordings and piano rolls themselves could not yet be copyrighted; only the underlying composition was protected
- 1909: statutory rate of 2 cents per unit for each mechanical license (Krasilovsky 2003, p. 98)
- 2006: 9.1 cents or 1.75 cents per minute of playing time or fraction thereof, whichever is great

23.12. Copyright Act of 1976

- Went in to effect on 1 January 1978
- Copyright becomes automatic: no registration is required
- Any work of original authorship can be protected
- Duration extended to life of author plus 50 years
- Fair use doctrine is introduced

23.13. Copyright Act of 1976: Music

- Recordings themselves (not only the composition) are protected for the first time
- Copyright protection given for all sound recordings first fixed and published on or after 15 February 1972
- Recordings pre 1972 were protected by state laws
- Recordings before 1972 would have fallen into the public domain on 2047, but this was extended by the CTEA to 2067.

- Permits some copying and distribution without permission
- Four determining factors, but no certainty prior to litigation
  - 1. Purpose and character of use: commercial v. nonprofit educational purposes
  - 2. Nature of the copyrighted work
  - 3. Amount and substantiality of the portion used in relation to the copyrighted work as a whole
  - 4. The effect of the use upon the potential market for or value of the copyrighted work
- There are no rules as to proportions of a work (percentage, notes, seconds) that can be used for fair use

23.15. Sony Corp. of America v. Universal City Studios, Inc. 1984

- 1981: Ninth Circuit Court of Appeals found that “… the home use of video recorders was not a fair use, and that Sony could be held liable for supplying a product whose primary and intended purpose was to tape commercial television programs, virtually all of which were copyrighted”
• Film studios sued Sony over a video copying technology (Betamax)

Known as the Betamax case

• Supreme Court rules that making copies of complete television shows does not constitute copyright infringement

• “… ensures that new forms of technology that can be used to infringe copyrights cannot be banned as long as they also have substantial non-infringing uses” (Moser 2006, p. 19)


• Copyright notices become optional

• Prior to this, works without copyright notices (within up to 5 years) fell into the public domain
• The lack of required notices and registration makes it difficult to gain permission from a copyright holder


• Motivated by the DAT
• Required “serial copyright management systems” in digital audio recorders
• Imposes royalties on the sale of digital audio recording devices and media
• “… exempted individuals from liability for copyright infringement for private, non-commercial copying” (Moser 2006, p. 19)

23.18. 1997: No Electronic Theft (NET) Act

• Government can prosecute both those who sell, and those who give away for free, copyrighted works
• Such electronic theft is a felony
• Prior to this, if a copyrighted work had been given away for free it was (possibly) not a copyright violation
• Motivated in part by the dismissal of United States v. LaMacchia (1994)

   Macchia, an MIT student, provided a server (Cynosure) to which users could post and (through a different server) download commercial software

   Congress closed the “LaMacchia loophole” with the NET Act

23.19. 1998: Sonny Bono Copyright Term Extension Act (CTEA)

• Automatically extended copyright term for works copyrighted between 1964 and 1977 to 67 years
• Increased term of new copyrights to life plus 70 years
• Promoted by Mary Bono, widow, claiming that Sonny believed “… that copyrights should be forever” (Lessig 2005, p. 215).

• In House, 10 of 13 sponsors received maximum contribution from Disney’s PAC. In Senate, 8 of 12 sponsors received money form Disney’s PAC. RIAA and MPAA paid more then 200,000 in campaign contributions (Lessig 2005, p. 218).
23.20. Reading: Lessig


- What was problematic about the Sony Bony Copyright Term Extension Act (CTEA)?

- What motivated Eldred to challenge the CTEA?

- Does Lessig suggest that congress acts in the public’s best interests in establishing copyright laws? Whose interests are being met?

- What was the significance of United States v. Lopez as it related to copyright law?

- Is piracy of the public domain possible?

- How does the public domain promote progress?

- Why does Lessig argue that real harm of copyright extensions falls upon works that are not commercially exploited?

- What was Lessig’s argument in the Eldred case? What was the government’s argument?

- What did Lessig think he did wrong in arguing this case?


- Challenge to the CTEA by Eric Eldred

- Eldred designed and hosted a non-commercial web-based library of public domain writings

- Argument: it is a violation of the constitution for congress to be allowed to extend an existing copyright

- The case lost 7 to 2

- File sharing service created by Shawn Fannin in 1999
• Not a true peer-to-peer system, as central servers maintained master lists of files and users

• A & M Records and 17 record companies file a complaint on 6 December 1999 for contributory and vicarious copyright infringement against Napster, Inc.

• Napster designed a system that permitted “transmission and retention of sound recordings employing digital technology”

• Court rules that Napster had knowledge of direct infringement, and materially contributed to infringement

• July 2001 Napster was shut down

23.23. MGM Studios, Inc. v. Grokster, Ltd 2005

• Between software manufacturers and consortium of 28 entertainment companies

• Supreme Court unanimously states that file sharing companies can be sued for inducing copyright infringement

• “We hold that one who distributes a device with the object of promoting its use to infringe copyright, as shown by clear expression or other affirmative steps taken to foster infringement, is liable for the resulting acts of infringement by third parties.”

• Question remains as to what evidence is necessary to prove that copyright infringement is being fostered