Copyright Protection for Computer Programs and Digital Media

CJ341 – Cyberlaw & Cybercrime Lecture #13

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Topics

➢ **Copyright & Computer Programs**

➢ **Digital Imaging**

➢ **End-User License Agreements (EULAs)**

Copyright & Computer Programs

➢ Overview
➢ Historical Snapshot
➢ Proving Infringement
➢ Expressions
➢ Levels of Abstraction
➢ Whelan v. Jaslow 1986
➢ Lotus Development Corp v. Paperback Software Int'l 1990
➢ Computer Associates Intl v. Altai 1992
➢ Lotus Development Corp. v. Borland Int'l 1995
➢ International Protection of Computer Programs

Copyright & Computer Programs: Overview

➢ **Extent of copyright protection for computer programs complicated and controversial**
  ❑ Computer programs:
    ✓ Many "have all the earmarks of a creative literary-style document." (Burgunder)
    ✓ Integral part of an operational machine
➢ **Programmers want widest protections**
  ❑ Code covered, conceptual aspects, file structures, organization, user interface
➢ **Companies want limitations**
  ❑ Only literal code
  ❑ Want to avoid market monopoly

Historical Snapshot (1)

➢ **Mid-1960s: uncertainty about copyright protection of computer programs**
➢ **1976: Major revision of Copyright Act**
  ❑ Congress recognized it couldn't address issues posed by computers to copyright policy
  ❑ Created *National Commission on New Technological Uses of Copyrighted Works* (CONTU)
  ❑ Charged with making recommendations about changes to encompass new technology

http://digital-law-online.info/CONTU/contu1.html

Historical Snapshot (2)

➢ **1978: CONTU* released report**
  ❑ Recommended copyright protection for computer programs
  ❑ Protection should only extend to expression of computer programs
  ❑ Report ambiguous in defining what aspects constitute expression
➢ **1980: Update of Copyright Act**
  ❑ Computer programs protected
  ❑ Ambiguities remained
  ❑ Courts left with determining protection parameters

*CONTU = National Commission on New Technological Uses of Copyrighted Works

Proving Infringement

- Requires showing:
  - Substantial *similarity* of the works and of the protectable* expression
- Guiding Copyright Principles
  - Should provide *incentives* to develop and distribute works
  - *Exclusivity*
  - Should provide sufficient *protection*

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* As spelled in US Code; sometimes spelled *protectible* elsewhere.

Expressions

- Copyright disputes boil down to basic issue: distinguishing protectable *expression* from unprotectable *ideas*
- *Cannot protect content that is indispensable to convey an idea (Burgunder p. 314)*
  - Otherwise 1st to discuss idea would lock down all further use of the idea
- Example of court case involving expression in computer world: *Apple v. Microsoft and HP (1989)*:
  - Core issue: scope of protectable expression (graphical use interface or *GUI*)

Levels of Abstraction

- Multiple expressions test
  - Underlying principles of copyright guide
  - Alternative expressions
- Distinction between *ideas* and *expressions*
  - Court decisions somewhat *ad hoc,* but attempt to reflect guiding copyright principles
  - Line may seem elusive

See extended discussion in Burgunder pp 309-317

Wassily Kandinsky (Russian, 1866-1944) *Abstraction*, 1922, Lithograph

Picture from Wesleyan Univ. Davison Art Center Web site http://tinyurl.com/44hrfm

Whelan v. Jaslow 1986 (1)

First significant decision to address copyright protection for computer programs
- *Jaslow Lab* hired *Strohl Systems Group Inc* to create a bookkeeping program
- *Ms Whelan* (Strohl employee) developed *Dentalab* program in EDL
- Whelan left employ of Strohl on friendly terms
- Strohl assigned entire interest in Dentalab to Whelan
- Whelan & Jaslow agreed Jaslow would market Dentalab for 35% commission
- *Jaslow* developed *Dentcom* program in BASIC
- Jaslow cancelled agreement w/ Whelan and independently marketed *both programs*
- Whelan charged Jaslow with *copyright infringement*
- Jaslow claimed *ownership* of Dentalab & *denied* copying code for Dentcom

Whelan v. Jaslow 1986 (2)

- Court ruled Whelan owned the copyright
- Found unlawful reproduction based on access and similarities
  - Jaslow had access to original code
  - Dentcom was *virtually identical* to Dentalab
    - ✓ File structures
    - ✓ Subroutine functions
- Jaslow appealed to Appeals Court but decision in favor of Whelan was affirmed
  - Courts decided copyright issues by analogy to literary works: expression v. idea
  - *Detailed structure of the program* was part of the *expression*, not the *idea* of that program
  - Therefore subject to copyright restrictions

http://cases.justia.com/us-court-of-appeals/F2/797/1222/104748/

Lotus Development Corp v. Paperback Software Int'l 1990

- Two competing application programs (spreadsheets and other functions): *Lotus 1-2-3* and *VP-Planner*
- Lotus sued Paperback Software, alleging unlawful copying of the 1-2-3 *user interface*
- District Court
  - Computer programs are not entitled to an unlimited scope of copyright protection
  - BUT more similarities than differences
- Paperback claimed that need for compatibility and industry standardization trumps expansive copyright protection
  - Court was not persuaded
  - Found infringement and *ruled for plaintiff* (Lotus)

Computer Associates Intl v. Altai 1992

1. CA created job-scheduling program and developed an operating system (OS) language
2. Altai hired a programmer who had worked on the CA project: developed component-compatibility program for Altai
3. Altai began marketing its *own scheduling program*
4. CA learned that Altai may have *appropriated parts* of its OS-compatibility program and sued Altai for IP infringement
5. Altai then *REWROTE* the software
6. District Court found *Altai infringed* in its *first* version of its new program (created with help of former CA programmer), but *not in the re-write*
7. CA appealed
8. Appeals Court affirmed decision in favor of defendant (Altai)
9. Result: case *reduces* the degree of copyright protection for computer programs

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Lotus Development Corp. v. Borland Int'l 1995

- *Lotus 1-2-3* a pioneering PC spreadsheet program (like Microsoft *Excel* which came later)
  - ❑ Contained hundreds of commands, menus and submenus
- Borland spent three years developing its *Quattro* program
  - ❑ Determined that compatibility with 1-2-3 was important
  - ❑ *Did not copy any of Lotus's code*
- District Court
  - ❑ Determined infringement by Borland of copyrightable expression (interface and key reader)
  - ❑ Borland appealed, claiming that the Lotus menu command hierarchy is not copyrightable under Section 102(b)
- Appeals Court
  - ❑ Reversed district court decision
  - ❑ Found command hierarchy uncopyrightable and *no infringement*
  - ❑ Importance of standardization and compatibility noted

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International Protection of Computer Programs

- Developed countries in agreement
  - ❑ Want copyright laws to cover exact code
- Controversy
  - ❑ Disagreement in US concerning extent to which copyright should protect computer programs
  - ❑ Duplicating software significant revenue source for some countries (e.g., China)
    - ✓ Reluctant to pass or enforce copyright protection laws
    - ✓ 90% software piracy rates in some areas (e.g., Latin America, Asia)

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International Protection (2)

- *1991: EU Directive*
- Harmonized copyright policies concerning computer programs among EU nations
- Copyright protection extends to *expression* of a program (but not to underlying principles or ideas)
- Owner or licensee can
  - ❑ Make back-up copy
  - ❑ Use program for intended purpose
  - ❑ Correct errors
  - ❑ May reverse analyze (aka *reverse engineer*) if necessary to achieve interoperability

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International Protection (3)

- *1994: TRIPS (Agreement on Trade-Related Aspects of Intellectual Property Rights)*
- WTO member obligation to protect computer programs
- Specifies copyright protects expressions, but not ideas, procedures or methods of operations
- Authors have right to prohibit *rentals* of their work (common problem in 1980s)
- Developed countries had until 2006 for compliance
- Less-developed countries have until 2016 for some aspects of the treaty

http://www.wto.org/english/tratop_e/trips_e/trips_e.htm

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Digital Imaging

- Digital Imaging Overview
- Digital Imaging Issues
- Legal Issues
- Moral Rights
- Ethical Issues
- Propaganda
- Personal Issues
- Hoffman v. Capital Cities

http://www.theufos.com/images/Extraterrestrial_Being.jpg
Permission granted by copyright owners for inclusion.

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Digital Imaging Overview

> - **Creation**
> - **Alteration (e.g., editing, re-editing)**
> - **Processing**
> - **Compression**
> - **Storage**
> - **Printing**
> - **Display**

digital imaging
FOR PHOTOGRAPHERS

ADRIAN DAVIES & PHIL FENNESSY

Digital Imaging Issues

> - **Legal**
>   - ❑ **Copyright**
>   - ❑ **Fair Use**
>   - ❑ **Evidentiary**
>   - ❑ **Criminal**
> - **Moral Rights**
>   - ❑ **Proper Attribution**
>   - ❑ **Protect integrity of the work**
> - **Ethical**
> - **Personal**

Which Came First - The Digital Camera or the Digital Camera Image?

Original Digital Art by Noel Carboni

See **http://ncarboni.home.att.net/DigiLinks.html**

Permission granted by author for inclusion here.

Legal Issues

> - **Copyright**
>   - ❑ **Originality**
>   - ✓ **Digital sampling: using**
>   - ▪ **Photographer: composer**
> - **Other Intellectual Property issues**
>   - ❑ **E.g., Trademark reproduction, alteration**
> - **Evidentiary (to be discussed in upcoming lectures)**
>   - ❑ **Chain of Custody**
>   - ❑ **Authentication: pictures *can* lie**
> - **Criminal**
>   - ❑ **Exploitation of Children – virtual child pornography (as previously discussed)**

Enjoy Cocaine

Moral Rights (1)

> - **Rights of creators of copyrighted works**
>   - ❑ **First recognized in France and Germany**
>   - ❑ **Included in Berne Convention for the Protection of Literary and Artistic Works in 1886, (revised 1928 & 1986)**
> - **US signed convention in 1988**
>   - ❑ **Still does not completely recognize moral rights as part of copyright law**
>   - ❑ **Treats moral rights under defamation or unfair competition**

Moral Rights (2)

> - **Include**
>   - ❑ **Attribution**
>   - ❑ **Anonymous or pseudonymous publication**
>   - ❑ **Integrity**
>   - ✓ **No distortion or mutilation**
>   - ✓ **Must not detract from artist's relationship with work**
>   - ✓ **Even after it leaves the artist's possession or ownership**
> - **Distinct from economic rights**
>   - ❑ **Apply even if artist has assigned rights to work**
>   - ❑ **US Visual Artists Rights Act of 1990 (VARA) recognizes moral rights, but only applies to works of visual art.**

Moral Rights (3)

> - **US adoption of Berne Convention**
>   - ❑ **Moral rights addressed**
> - **1991 Amendment Copyright Act**
>   - ❑ **Explicitly protects moral rights of author**
>   - ❑ **"…a still photographic image produced for exhibition purposes only, existing in a single copy that is signed by the author, or in a limited edition of 200 copies or fewer that are signed and consecutively numbered."**
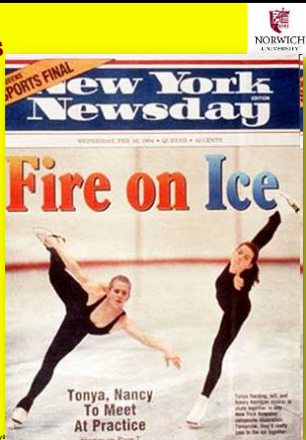
Ethical Issues

> Image manipulation:

1994: *New York Newsday* cover photograph depicting Tonya Harding & Nancy Kerrigan skating next to each other when *they hadn't done so*

DIGITAL FAKERY

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Propaganda

> *Swift Boat Veterans for Truth* circulated picture supposedly of John Kerry at a rally with Jane Fonda in 1970s
> Part of vicious smear campaign against Kerry
> Photo was *fake*: it was a composite

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Personal Issues

> Privacy Rights
> Publicity Rights
> Morphed pictures
> ❑ Morphing software
> ❑ Examples: Politician faces in experiments by social scientists
> ❑ But can morph with unpopular figures for subliminal effects

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Hoffman v. Capital Cities (1)

> 1982: Dustin Hoffman cross-dresses in film *Tootsie*
> 1997: *Los Angeles Magazine* publishes picture of Dustin Hoffman's head merged onto body of female model
> ❑ Model wearing designer dress and shoes
> ❑ Photo caption: *"[DH] isn't a drag in a butter-colored silk gown by Richard Tyler and Ralph Lauren Heels"*
> Hoffman's lawyers argued it was a covert ad: named designers who advertised elsewhere in magazine & implied endorsement by DH

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Hoffman v. Capital Cities (2)

> Federal Trial Court (1999)
> ❑ Ruled that image manipulation was violation of "right of publicity" granted to stars and other public figures
> ❑ Exploited and robbed celebrities of dignity, professionalism and talent
> ❑ Awarded DH $3M in compensatory and punitive damages
> Appeals Court (2001)
> ❑ *Reversed decision*
> ❑ Held 1st Amendment rights trump publicity rights
> ✓ Public figure
> ✓ Magazine using likeness for social commentary
> ✓ Magazine disclosed use of "digital magic"

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More Digital Fakery

> See The Hoax Photo Database
> Countless examples of digitally-modified photos

Iranian press photo of 4 missiles launched July 9, 2008   *Original photo showing only 3 missiles successfully launched*

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End-User License Agreements (EULAs)

- Fundamental Principles of Contract Law
- Uniform Commercial Code (UCC)
- Statute of Frauds under Common Law
- Uniform Computer Information Transactions Act (UCITA)
- Digital Signatures

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Fundamental Principles of Contract Law

- Elements of a Contract*
- Invalidating Agreements
- Remedies for Breach of Contract

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*Legally enforceable agreement

http://www.law.cornell.edu/wex/index.php/Contracts

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Elements of a Contract

- Offer & acceptance
  - Communicated to both (or more) parties
  - Serious intent to establish binding agreement
- Capacity
  - Right or authorization to engage in agreement
  - Mental status, age may affect capacity
- Legality
  - Undertakings for illegal acts are unenforceable under law
  - Attorneys must be licensed in jurisdiction
- Consideration
  - Some legally recognized value exchanged

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Invalidating Agreements

Contract may be voided due to

- Undue influence – e.g., close relationship
- Duress – threats, intimidation
- Fraud – misrepresentation
  - In execution: signature under false pretenses
  - In inducement: lies
- Mutual mistake of fact
  - Good-faith agreement
  - Both parties lacking essential information
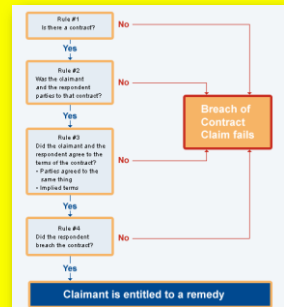
http://www.justice.govt.nz/wht/images/boc-flow1.gif

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Remedies for Breach of Contract

- Common-law
  - Return to equivalent status for victim
    - Compensatory damages
    - Consequential damages
    - Incidental damages
  - Punitive damages upon intentional tort
- Equitable remedies
  - Specific performance (e.g., unique asset)
  - Injunction barring specific harm
  - Reformation – modifying contract (rare)

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Uniform Commercial Code

Uniform Law Commission
The National Conference of Commissioners on Uniform State Laws

- UCC framework (1952)
  - National Conference of Commissioners on Uniform State Laws (NCCUSL)
  - American Law Institute (ALI)
- Article 2: Law of sales
  - Applies to sale of goods (not services)
  - Merchant/non-merchant distinction
  - Lack of essential terms
  - Good faith & fair dealing
  - Warranties

The American Law Institute

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Merchant/Non-merchant Distinction

- Under common law, acceptance had to be in terms identical to original offer
- Article 2 of UCC allows acceptance to include additional terms UNLESS the new terms
  - Agree only to a subset of offer terms
  - *Materially** change the offer
  - Are objected to by offeror in *reasonable** time

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*red-flag words beloved by lawyers

Lack of Essential Terms

- Common law precluded contract enforcement in absence of
  - Definition of contracting parties
  - Price
  - Quantity
  - Delivery dates. . . .
- UCC Article 2 loosens requirements
  - Court may judge that parties *intended* to enter into contract
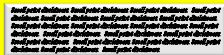 - May fill in details (except quantity)

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Good Faith & Fair Dealing

- UCC Article 2 requires *good faith*
  - Honesty in fact and
  - Observance of reasonable commercial standards of fair-dealing
- Also *avoidance of unconscionability*
  - Court can refuse to enforce terms that strike the court as shockingly unfair
  - E.g., small-print disclaimers, denial of rights of consumers

Warranties

- *Express* warranties enforced under UCC Article 2
  - Affirmations of fact or promises by sellers
  - Description of goods
  - Samples, models (no *bait and switch*)
- Implied warranties
  - *Merchantability* – fitness for intended use
  - Fitness for *particular purpose* – response to specific needs
- Exclusion of warranty
  - Generally ignore disclaimers that are *unreasonable*

Warranties (cont'd)

- Attempted exclusion of warranties of merchantability or fitness for specific purpose
  - Must be written and conspicuous
- Courts have usually sided with *consumer*
  - Less protective of commercial buyers
- Bears directly on *shrink-wrap* and *click-wrap* agreements
- Brown v. SAP America case
  - Breach of contract
  - Court ruled that plaintiff could not claim fraud solely to invalidate limitation of liability

Requirements of a Writing: Statute of Frauds

- Common law
- UCC
- Signature requirement
- Electronic contracts and the UCC
- Computer software as goods

Statute of Frauds and Perjuries (1677)
Written contract required for –
❖Promise to answer for debt
❖Terms greater than 1 year
❖Marriage terms
❖Sale of real property
❖Promise to pay estate debts
❖Sale of goods costing > $500

UCC Art. 2 §2-201:
Written contract required except –
❖Merchants – written confirmation
❖Specially-manufactured goods
❖Evidence in court admitting contract
❖Goods already paid for
❖Goods received and accepted

Requirements of a Writing (cont'd)

- ➤ Signature requirement
- ➤ Electronic contracts and the UCC
- ➤ Computer software as goods

Signature serves for
- ❖ Evidence
- ❖ Ceremony
- ❖ Approval
- ❖ Efficiency and logistics

❖ UCC covers *goods*
❖ Includes *leases* of goods
❖ Hardware definitely covered
❖ Software license = lease?
  ❖ Communications Group
    v . Warner Court ruled
  ❖ that license *was* a
    lease under terms of UCC
Therefore warranty enforceable

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Uniform Computer Information Transactions Act

- ➤ Historical background of UCITA
  - ❑ American Law Institute & Natl Conference Commissioners on Uniform State Laws
  - ❑ Attempt to clarify electronic contracts
- ➤ Causing uproar
  - ❑ Conflict between vendors and customers
  - ❑ Consumer-protection groups up in arms
  - ❑ Passed only in MD & VA so far (2006.10)
  - ❑ Creeping through state legislatures (9 states had passed components as of 2006.10)

Join others to defeat UCITA

affect

http://www.ucita.com/

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General prov UCITA

Exclusions
❖ Financial services
❖ Audio / visual programming
❖ Movies, recordings
❖ Compulsory license
❖ Contract of employment for employees
❖ UCC Articles 3-8

- ➤ Scope
  - ❑ Computer information transaction =
    - ✓ Agreement to
    - ✓ Create, modify, transfer, license *computer information** or rights
    - ✓ Includes support contract
  - ❑ *= information in electronic form from computers
- ➤ Exclusions
- ➤ Opting out of the Act: by
- ➤ Formation of contract
- ➤ Offer and acceptance

Contracts for ≥$5,000 enforceable
Authenticated record; or
License of ≤ 1 year; or
Performance / information accomplished / accepted; or
Admission in court

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Warranties under the UCITA

Similar to terms of UCC Article 2
- ➤ Express warranties
- ➤ Implied warranties
- ➤ Disclaimers – may not be enforceable unless
  - ❑ Conspicuous
  - ❑ Unambiguous
- ➤ Breach of contract
  - ❑ Notice of breach
  - ❑ Response to request for information about defect
- ➤ Remedies

Remedies include
❖ Cancellation
❖ Contractual remedies
❖ Liquidated damages
❖ Compensatory damages

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Now go and study

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