

Software as a Form of Intellectual Property

- **What is intellectual property?**
- **How is it protected?**
- **Is software considered intellectual property?**

Copyright History

- **Basis of copyright is technology!**
- **Basis of copyright is property rights!**
- **Printing Press - 1456**
- **Publishers rights - 1556**
- **Author's rights: 1710, Statute of Anne**
- **First copyright law - US, 1790**

Copyright Evolves with Technology

- 1800 - player piano rolls
- 1976 - phonograph records, pictures, tapes
- 1978 - CONTU -> cover programs
- 1980 Franklin VS Apple (Op. Sys.)
- evolves with court cases -

US Copyright Law

■ U.S Constitution, Art.I, Sect. 8

- ◆ granted Federal government power to set copyright law

■ Copyright Act of 1976

- ◆ section 110: display works for home use, face-to-face teaching
- ◆ Section 117(amended 1980): software protection

Types of Intellectual Property

- Trade Secret
- Trademark, Servicemark
- Works for Hire
- Patent
- Copyright

What do they have in common?

- Protection of an intangible product
- Grant exclusivity to owner
- Covered by law, valid only in countries recognizing them
- Can be enforced in court

Patent

- **Monopoly right provided by the Constitution**
- **Granted for a design for 14 years**
 - ◆ **might include a user interface**
- **Granted for an invention 17 years**
 - ◆ **new, useful, unobvious**
- **Requires a lawyer, money, time!**

Software Patents

- “look and feel” of a package
- specific internal operations
 - ◆ spell checking
 - ◆ editing features
 - ◆ use of a cursor
- many software products have been patented

What can be copyrighted?

“original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced, or otherwise communicated.”

Ideas cannot be copyrighted!

What is protected?

■ Literary works

- ◆ computer programs, source and object code, microcode

■ Musical works, sound recordings

■ Dramatic works, pantomime, choreography

What is protected (cont.)?

- Pictorial, graphical, sculptural
- Motion pictures, audio-visual works
 - ◆ computer screens, interfaces, menus
- Anything that has a wide range of expression available

What is not protected?

- Works not in tangible form
- Names, titles, short phrases
- Ideas, procedures, methods, systems, processes, concepts - can patent them
- Commonly known information
- Where manner of expression is limited - formula, algorithm

How is copyright acquired?

- As soon as work is created- does not have to be published
- May use a notice such as
© C. Dianne Martin, 2002
- May decide to register it for \$25
- Must be enforced by owner!
- Lasts lifetime plus 50 years

Section 106: 5 Basic Rights

- **Right to reproduce**
- **Right to create derivative works**
- **Right to sell or distribute to public**
- **Right to perform work in public**
- **Right to display work in public**

Copyright Enfringement

- **It's breaking the law!**
- **Enfringement of non-registered copyright - damages**
- **Enfringement of registered copyright - attorneys fees, triple damages!**
- **Possible 5-10 years in prison!**

Section 107: Fair Use

“criticism, comment, news reporting, teaching, scholarship, research”

- Purpose of use
 - ◆ commercial vs non-commercial
- Nature of work
 - ◆ fiction vs non-fiction
- Amount of work used
- Effect of use on market

Fair Use guidelines for education - text material

- **brevity - less than 10% of whole**
 - ◆ unless it is the “essence” of work
- **spontaneity - not enough time to get permission**
- **cumulative effect - 1 course, 1 term**

Fair Use guidelines for education - music material

- **temporary, emergency situation**
- **excerpting small portions for instructional purposes**
- **editing or simplifying purchased copies**
- **making a single copy of a sound recording owned by teacher to construct lesson or exam**

Fair Use guidelines for education - video material

- **do not confuse personal with public use in classroom - Sony**
- **standard is frequency of playback**
- **no more that twice in 10 days**
- **may be used once more for exam**
- **must be erased after 45 calendar days**

Software Copyright Protection

- protects software on all medium
- protects software across medium
- protects software over networks
- “fair use” is problematic
- “look and feel” issue still unclear

SW Developer's Dilemma

- **“Electronic Lumberyard” of bits and pieces of various media**
- **Can we identify owners of original work?**
- **Information has greater utility in electronic form than in print.**
- **Electronic form facilitates reuse of bits and pieces. (F.D. Fisher)**

What to do?

- Give credit
- Get permission when possible
 - ◆ ASCAP
 - ◆ CCC -Copyright Collecting Clearinghouse
 - ◆ automated copyright clearinghouse
- Practice “Fair Use”

Remember...

- taking a “little bit” hurts
- keep ownership straight
- lawyers can't fix it
- keep packaging unique
- don't use celebrities

What is a License?

- **contractual privilege extended to someone to have one or more copies**
- **exclusive vs non-exclusive**
- **“shrinkwrap” license**
- **site license - limited number of copies**
- **network or multiple user license**

What is Shareware?

- **Concept - give people free software to try and ask them to send money!**
- **Niche industry - bootstrap into the software market**
- **Two software markets - commercial business market, consumer market**

When shareware works...

- **Software is well-written**
- **Users receive support, upgrades**
- **Products available through clubs, nets, BBS, magazines**
- **Programs are not copy protected**
- **Moderate prices - \$10 - \$50**

Public Domain Software

- freely available
- not copy protected
- not necessarily maintained
- disk vendors sell public domain, shareware software on diskettes
- beware of viruses!

Technical Issues

- Will copyright system work for electronic products?
- Digital plasticity - ease of use
- Digital editing tools
 - ◆ clip art and clip sound can be used
- Hypertext linking
- Unknown impact of CD-ROMs

Digital Rights Management

- DRM is a technology that enables the secure distribution, promotion, and sale of digital media content on the Internet.
- Napster case
- Microsoft:
<http://www.microsoft.com/windows/windowsmedia/drm.asp>
- Technical solution
 - ◆ Uses strong encryption
 - ◆ Uses spellchecker to catch / flag infringing passages - treat WP like “circumvention”
 - ◆ Maintains a clearinghouse database



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