Intellectual Property

Ownership of information will determine access

Two sides

- Entrepreneurs and business argue for strong legal measures to control proprietary information
- Individuals argue for greater access to information

Issues

- Ownership of Software
- Right to distribute proprietary software and other information on the Internet
- Is software patentable, copyrightable, or both?
- Does ”look and feel” of an interface deserve IP protection?
- Do websites qualify as property?
- Transfer and download of MP3 files with proprietary information
Intellectual Property (IP)

- Property
  - Complex concept
  - Fundamental to shaping society and preserving legal order
  - Traditionally land, then tangible items
  - Abstraction
    - *relationship between individuals in reference to things*
    - *who has control*
• Intellectual Objects = IP

  - Intangible, creative works or inventions that are expressions of ideas
  - Non-exclusionary
    multiple people can possess it
  - Non-scarcity
    can be easily reproduced
  - Cannot own an idea
  - Can own the expression of an idea that is creative or original
    * must be fixed in some tangible medium (e.g. book or musical score)
    * machine or process
Bases for Protecting IP

- Why should property be protected? Because of laws
- Anglo-American law is grounded in natural rights and social constructs
- Natural rights: right is granted for products that result from labor expended to produce the product
- Property rights are social constructs established to encourage inventors/creators to bring results to the marketplace
- European law: work is an expression of the creator’s personality, so the creator has the right to determine how the work is displayed and distributed
Software as IP

- No easy answers, fiercely debated in courts
- Hardware has patent protection, like other tangible objects
- Conceptual muddles
  - Software expression: human readable? source vs. machine code
  - Invention to be patented or algorithm that cannot be patented?
- Forms of protection: copyright, patent, trademark, trade secret
Copyright

- Copyright Law
  - 1790 books, maps, charts
  - 1909 any form read and seen visually – excluded
    player piano rolls
    $\Rightarrow$ machine readable vs human readable
  - 1976 Modified, but still excluded software
  - 1980 Literary work extended to include programs, computers and databases that exhibit authorship
    * program is a set of instructions to be used directly in computer to bring about certain results
    * to copyright, need an original expression or arrangement of ideas and not just ideas
  - 1984 Semiconductor Chip Protection Act
  - Protection for ”look and feel” of an interface denied by courts
- 1998 Sonny Bono copyright Term Extension Act (SBCTEA)
  * life of author + 50 years → life of author + 70 years
  * works of hire before 1978: 75 years → 95 years
  * can take work out of the public domain
- Digital Millenium Copyright Act (DMCA)
  * forbids development of any software or hardware
    that *circumvents* copyrighted digital media
  * very controversial

- Copyright law protects the author (person or corporation)
- Copyright is given for expression of an idea that is original, nonfunctional, fixed in a tangible medium
- Functions, processes and inventions are protected by patents
- Author’s rights: make copies, produce derivative works, distribute copies, perform or display works in public
• Fair use doctrine
  – Every author or publisher may make use of copyrighted work for criticism, comment, news, research, or teaching
  – supports ”reverse engineering” – the anticircumvention of DMCA is a challenge

• First-Sale Doctrine
  – Once original work is sold for the first time, the owner loses rights over the work
  – Not clear if you can give away software licensed for use by a particular owner
  – Challenged by DMCA and SBCTEA
• Software Piracy as Copyright Infringement
  
  – Are dollar losses exaggerated?
  – Issue: small number of copies vs. systematic piracy
  – Morally wrong? OK if you can’t afford it? No real harm to large vendors? Slippery Slope?
  – LoMacchia’s BBS – case dropped
- No Electronic Theft Act 1997 (NET)
  - Criminalized dissemination of copyrighted material by electronic means
  - Too far? Is online viewing of copyrighted material illegal? “fixed” in memory?
  - Centralized server (Napster) vs. Decentralized servers (Gnutella, Morpheus, KaZaA) : conceptual muddle

- DeCSS
  - Decrypts DVD’s
  - Argued for fair use on Linux (cannot handle encrypted DVD’s)
  - Shot down under anticircumvention of DMCA
    * illegal to circumvent using decryption
    * under appeal
  - Precedent: not legal to prohibit use of technology because it can be used in copyright infringement if it has other uses (5-4 Supreme Court)
Jurisdiction

• International
  – Treaties
    * TRIPS IP and copyright
    * EU – unifying contract law
    * UN convention on contracts for the sale of goods
• US
  – Uniform Commerce Code
    * sale of goods and contracts
    * lease of goods
  – Uniform Computer and Information Transactions Act (UCITA)
    * Computer Information transactions
    * All contracts regarding software
    * Gives venfors right to remote repossession
    * Need vendor permission to transfer license
    * Undermines consumer protection laws and threatens fair use and first sale exceptions
    * Good for e-commerce, creates jobs
Patents

• Invention or process
• 20-year exclusive monopoly
• Based on Constitution
• Inventions must satisfy three conditions: usefulness, novelty, nonobviousness
• Three types: design, utility and plant
  – Design: for an article of manufacture
  – Utility: process, machine or article of manufacture
• Computer hardware covered
• Diamond vs. Diehr
  – New process rubber → tire
  – Computer program is ”new” part
  – Supreme Court ruled patent is for the process as a whole
Trademarks

- Word, name, phrase, symbol that identifies a product or service
- 1946 Lanham Act
- Supposed to be distinctive
- Issues of trademark dilution

Trade Secrets

- Information used in business sufficiently secret and valuable to afford potential economic advantage
- Protect formulas (Coca Cola), blueprints, chemical compounds, manufacturing processes
- Owner has exclusive rights as long as the secret is maintained
- Law difficult to enforce at international level
Philosophical Foundations of IP

- **Labor Theory**
  - John Locke (1690)
  - financial/economic basis
  - A person is entitled to the fruits of her labor
  - Right to own property is natural

- **Utilitarian Theory**
  - financial/economic basis
  - Property rights are devised by the state to achieve certain practical ends—maximum good for the greatest number

- **Personality Theory**
  - Hegel
  - Intellectual object is an extension of the author’s personality
Other Issues

• Sharing vs. Freedom of Information

• Fate of the Public Domain