

Intellectual Property Information Economics (again)

- Info, ideas have public goods quality
- Degrees of non-excludability and non-rivalry.
- High fixed costs, low marginal (incremental) costs.

Problems (tragedy of the commons)

- Production vs. copying.
- Incentive problem for creators.
- Non appropriability.
- Market failure – underproduction of valuable, original ideas, creativity, innovation etc.
 - Think of music piracy debate.
 - Pirated software.

Some possible Solutions

- Subsidize basic research, creators, etc.
- Trade secrets – contract and tort law.
 - But: hinders mobility of people and ideas.
- Indirect appropriation (open source software, academics, reputation)
- OR:
- Create IP rights: patents, copyright.
 - Exclusive right to use, sell, distribute, disseminate.
 - Limited monopoly – duration, scope.

Type 1: Copyright

- Authors and publishers (incl record co's, etc.)
- original works, performances, etc.
- Copyright transfer.
- No need to register.
- Not facts and ideas, only their expression.
 - Why?

Type 2: Patents

- Researchers and inventors.
- Registered, need gov't approval.
- Again – not ideas and facts.
- Must be useful, original, non-trivial improvement.
- Publicity requirement.

Type 3: trademarks (we won't discuss)

Problems and trade-offs.

- IP provides incentives for creators. (social benefit).
- But: IP creates monopoly (pricing) power. (social cost).
 - Too many fences around ideas?
 - high transaction costs for downstream users.
 - Unmet needs/access – AIDS drugs for poor.
 - Proprietary culture crowds out free culture.

Finding the ‘right amount’ – The copyright balance

- Winter: Do we always need IP protection?
- Poor copy quality.
- Costs of copying: time, effort, quality, delay.
- Copying can help sell the original
- Academic journals
- Windows OS benefited from imperfect exclusion.
- Opportunity for subsidy or indirect appropriation.
- Time lag.

The copyright balance cont’d

- Fair use
 - Exemptions for education, critique, etc.
- First sale doctrine: public libraries.
- Compulsory licenses
- Legal copying – VCR’s, cassette tapes, etc.
- Academic journal exchange.
- Media levies (cd’s dvd’s)

Music and video file-sharing

- Why it is diff from VCR recording.
- Ease of copying.
- Does file-sharing crackdown make sense?
 - Yes: Reliance on record sales.
 - No: Advertising, sampling justification. Piracy (sharing) can be good!
 - Helps music or helps music industry?
 - Poor quality of copies? Impact on demand for original?
 - Alienating the audience.
 - Peer to peer culture and creativity.

Patent laws past and present

- Rent seeking and patents:
 - Early patents: prizes to attract inventors.
 - 19th century: technology poorly protected.

- Canada's 19th century patent law.
- Patents become popular once corps became R&D intensive.
- Developed countries (US esp.) strengthened patents in 70's and 80's (fight competition).
- Int'l patent law today: helps tech exporters.

Patent law controversies

- Pharmaceutical patents and 'access'.
- Patent races: are they good?
- Industrial patents:
 - Defensive patents.
 - Stifling patents
 - Legal costs of defending patents.
 - Production delays.
 - Unnecessary duplication?

Too broad?

- Against broad patents:
 - pioneering firm not the best to develop or apply.
 - Stifles incremental tech development.
 - Too much duplication, not enough complementarity.
- Against narrowing patents:
 - Discourage broad sweeping innovation, basic research
 - Leads to trade secrets - less mobile tech and skilled personnel.

Other solutions

- Subsidize basic research (but firms manipulate tax benefits).
- Sunset laws or 'use or lose it' laws.
- Compulsory licensing (AIDS drugs).
- Flexible patent law- vary by industry or invention (Germany)

Today's worries

- Smaller firms hurt by expanding IP.
- Applied science wins over basic research.
- Ideas improve by being shared.
 - Open source software.
 - Academic research norms.
- Newton:
 - "If I have seen further it is by standing on ye shoulders of Giants."
- Technology replaces law: encryption technologies, digital rights management.