Patent Reform

Patent Reform Topics
- Law & economic model for understanding patent law
- Evaluate aspects of the patent system
  - Patent acquisition: role of private parties and government
  - Patent scope
  - First to file v. first to invent
  - Opposition
  - Cost of litigation
  - Optimal amount of examination

Law and Economics
- Framework for understanding/evaluating legal regimes/rules
- At least two considerations:
  - Maximize social welfare (make the pie bigger)
  - Distributional considerations
- Example:
  - Allowing a factory to pollute makes the factory owner (much) better off, but at the expense of the surrounding community
  - Is this an efficient rule?

Example: Nuisance Law
- General rule: you can do whatever you want with your property so long as it doesn’t interfere with another’s use and enjoyment of their property
- If your neighbor is burning garbage, you can enjoin (stop) him from doing so
  - Is this a good rule?

Pollution Example
- Fact pattern
  - Party A builds a factory on their property, which is worth $100/year
  - The factory spews smoke, which causes $50/year harm to neighbor B
- Assuming that the parties can negotiate without cost:
  - What happens if A is entitled to pollute?
  - What happens if B is entitled to clean air?

The Coase Theorem
- In the absence of transaction costs, the allocation of initial entitlements is irrelevant, because the parties will negotiate an efficient allocation
  - Corollary: Job of government is to “lubricate” transactions
- Transaction costs:
  - Getting the parties together
  - Negotiating, creating contracts
  - Obtaining information
  - Enforcement
Transaction Costs

• Assume high transaction costs:
  – Party A builds a factory on their property, which is worth $100/year
  – The factory spews smoke, which causes $50/year harm to neighbor B
  – It costs $30 to each party to negotiate
• What happens if A is entitled to pollute?
• What happens if B is entitled to clean air?
• Lesson: if transaction costs are high, then place the entitlement with the party that values it most

Cheapest Cost Avoider

• Assume abatement:
  – Party A builds a factory on their property, which is worth $100/year; can install smoke scrubber for $10
  – The factory spews smoke, which causes $50/year harm to neighbor B; can install air filter for $20
• With and without transaction costs:
  – What happens if A is entitled to pollute?
  – What happens if B is entitled to clean air?
• Lesson: if transaction costs are high, then place the entitlement against the party that is the cheapest cost avoider

Coase in the Patent Context

• In the patent context, Coase means:
  – Selecting rules that correctly allocate rights when transaction costs are high
  – Reducing transaction costs
• Example areas:
  – First to file v. first to invent
  – Registration system v. examination system
  – Patent scope

Thought Experiment

• Can we imagine a system where the allocation of rights is (more or less) random?
  – Randomly assign patent rights to the parties
  – Let the parties sort out who values the entitlement the most
• Somewhat less random approach:
  – A registration system
• What is good or bad about such approaches?

Example Features of Patent Law

• First to file system has lower transaction costs than first to invent
• Claim construction: Dictionary definitions vs. contextual approach
• Enablement / written description requirement
  – What about after-emerging technologies?
• Best mode requirement
• Assignment system

Prospect Theory

• The allocation of patent rights can be analogized to mineral prospecting and claiming
Prospect Theory

- Basis: “finders keepers” rule
- In prospect theory, the ability to strike a claim provides assurances that the prospectors efforts to make mineral discoveries will be rewarded
- Requirements/Features
  - Enforceable property rights
  - Clear boundaries
  - Requirement to develop or “work” claim

Over investment

- A “finders-keepers” approach can stimulate over investment
- Other approaches: Would a quota system work?

Patent Scope

- Narrow patents
  - Reduced incentives to invent
  - Competitive environment for improvements
- Increase breadth
  - Increase incentives to invent, possibly wasteful
  - Blockages (especially in cumulative technologies), follow on parties are less likely to engage in invention
  - But holders of broad patent may be able to coordinate operations of other parties to make follow on inventions

Modifying Patent Scope

- Levers:
  - Change standard for non-obviousness
  - Change the claim breadth (e.g., limit to just concrete examples disclosed in spec)
  - After-emerging technologies (strict enablement)
  - Change the duration

Patent Validity as Public Good

- Patent validity is a public good with a collective action problem
  - When a large number of parties are held up by patent troll, it is very difficult to coordinate action
  - Free riding: sit back and let other parties shoot down patent OR just negotiate privately with the patent holder
- Who is responsible for assuring validity?
  - Right now, public/private approach: USPTO does some work, while private parties fight it out in court

Examination vs. Registration

- Examination or registration?
- How much examination is optimal?
- Current situation: In 2010, approximately $1.9B in fees
  - Works out to be about $4K per application (based on about 500K applications filed)
Patent Fees

• In 2010, approximately $1.9B in fees

Registration

• Why not get rid of the examination function of the patent office?
• Registration-based system
• Let private parties fight out validity in court
• Under Coase, parties can just negotiate an efficient allocation
• But, high transaction costs abound:
  — Information costs: imagine 1 patent holder and 10 potential licensors: each of them has to determine validity
  — Litigation is complex

Increasing Examination

• Assumptions:
  — Litigation costs = $2 or 20B/year
  — Double fees ($2B increases to $4B)
  — Increases acquisition costs from $20K/patent to $40K/patent ($10B increases to $15B)
  — Reduces the number of patents by 30% (fewer filed, fewer allowed)
  — Fewer patents means lower litigation costs (down by $600M or 6B).
• Under the lower assumption, $4.4B increase
• Under the higher assumption, $1B savings

Opposition Proceedings

• Often, the patent holder’s competitor is best situated to invalidate patent
• Problems with re-examination (current approach)
  — Limited types of evidence/reasons for reexam
  — Weird estoppel provisions: (a party cannot later in litigation argue over the same art)
  — Ex parte: requestor can be anonymous, but limited interaction with examiner
  — Inter partes: requestor is not anonymous
• Good things about reexamination
  — Cheap (compared to litigation)

Opposition

• Europe provides a more robust opposition system
  — Different types of evidence/reasons for reexam
  — No estoppel provision
• Much higher rates of opposition: about 6% of issued patents
• Outcomes: 1/3 each revoked, reduced, maintained
  — Compare in US:
    • Inter partes: 45% revoked, 45% reduced, 10% maintained
    • Ex parte: 10% revoked, 70% reduced, 20% maintained

Reward System

• Reward system
  — Ex post rewards provided to inventors based on the social welfare contributed
  — Solves the monopoly pricing problem, improves social welfare
  — Collect taxes to obtain reward money
  — Distribute rewards based on use of invention
  — No more patent litigation
• The hard part: Accurate valuation