The Case Against Patents

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A Canadian (Waterloo even) Tale

- Founded in 1984 by Mike Lazaridis an engineering student at Waterloo and a partner
- March 3, 2006 Canadian company RIM (now called Blackberry Limited) paid $US 612 million to NTP a US patent troll
- The patents over using a wireless connection to send email were later ruled invalid by the US Patent Office
- He who lives by the sword?
- In 2001 RIM pursued a competitor Glenayre Electronics – a pager maker – over a patent to a “single mailbox integration”
- To be clear: none of these patents involved innovation in any way
How to Get Rich with Patents...or Not

- Patent something obvious and wait until somebody else makes something useful along the same lines then sue them.
- Best to get a law degree not an engineering degree.
- Invent something really useful, patent it, and sit on it hoping somebody will buy you out.
- Why have you never heard of Philo Farnsworth...who invented the television?
- Or you could have a good idea and build a business around it...that was how Lazaridis and Fregin got rich; how Zuckerberg got rich; how Bill Gates got rich and so forth.
- By the way: you should/must patent, but for defensive purposes.
Are Patents Good for Canada?

- Is Canada bigger than the US?
- Is Canada a net exporter of ideas to the US? Or a net importer?
Are Patents Good For All of Us?

- U.S. Constitution authorizes Congress to “To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries”

- Does it deliver the goods – more inventions, more innovation, more growth, more prosperity?
Why do we like property?

- My “farm” is my property
- I invest in it, I improve it, I maintain it
- If the “government” or anyone else can take it without my permission
- Why would I bother? See Zimbabwe…
Property and Competition

- If my property is stolen I don’t have it any more
- Suppose that instead of stealing my farm
- My rival sets up a farm next door
- My rival farms harder and invests more
- The price of food is driven down
- I lose my comfortable business, my customers are “stolen”
- This is not theft
- This is competition
Theft and Competition

- Competition is good, theft is bad
- Competition makes us better off, we work harder and invest more
- Theft makes us worse off, we work less hard and invest less
- Property is ambiguous
- The government can grant me “exclusive farming rights”
- This is property, I can license my rival to allow him to farm
- I can sell my “farming rights”
- But this is bad – it prevents competition
- The key problem: downstream restrictions on the use of property
The Idea Behind Patents

• The best way to get rich
• Is to let the other guy get ahead of you
• And try desperately to catch up
Apple and the Iphone

- Lots of firms tried to sell smartphones
- Apple got it right
- iPhone was released June 29, 2007
- First serious competitor, HTC Dream (Android) released on October 22, 2008
- Over 5 million iPhones already sold
- Sales soared to over 25 million units during the subsequent year, while total sales of all Android based phones was less than 7 million
- Was this because of patents?
- Did patents protect Apple?
- Despite every possible use of patents
- Jan 2013, comscore: Apple 35% to Android 54%
**Intellectual Monopoly**

- The absence of IP does not mean the absence of property in ideas
- Copies of ideas are property, and would be even without IP
- IP is monopoly
- Why do economists who love competition and hate monopoly argue in favor of IP?
- Even without IP you earn something – lead time, complimentary sales
- On the other hand – fixed cost, spillover externality, so…
- Competition may not lead to sufficient incentive to innovate/create
- On the gripping hand – IP raises costs of innovation as well increasing reward
The Conventional Wisdom Among Economists

the economics literature in general acknowledges that intellectual property leads to undesirable legal “intellectual monopoly” but generally argues that this might be a good thing


Firms must be able to sell their products at prices in excess of unit production costs if they are to recover their up-front outlays on research and development. In other words, some imperfect competition is necessary to support private investments in new technologies.

- Widely believed
- Wrong as a matter of theory
- Wrong as a matter of fact
Do Patents Lead to More Innovation?

- Innovations generally build on existing goods, that is on earlier innovations – it is generally recognized that intellectual property protection has an undesirable effect on future innovation – Scotchmer (1991) for example

- Holdup problem

- Intellectual monopoly increases the rewards to innovation – but also the costs

- Intellectual monopoly may reduce innovation

- James Watt refused for the 31 years of his monopoly to allow innovation in the steam engine

- the Wright brothers less successfully tried to do the same with the airplane

- empirical evidence: no effect
Patents versus Productivity

![Graph showing a scatter plot with a linear prediction line. The x-axis is labeled 'Inpats_ind' and the y-axis ranges from -4 to 4. The plot includes a red line indicating the linear prediction.]

lnpats_ind
dlabpr

Linear prediction
Ruinous Competition?

♦ You and I build a shoe-factories, we face constant mc of using it: our competition will force price to me leaving nothing to pay for the factories

♦ We know this is not a problem; why does it matter if we compete with each other or our customers?

♦ Shoe factories have a capacity constraint – leads to a positive return

♦ transmission of ideas is similarly limited by scarcity of current set of people and/or products embodying the idea

♦ In the shoe factory case, capacity is chosen small enough that the competitive rent covers the cost of building the factory
Free Software: Complementary Sales

- Why is this an important example?
- Goes to the heart of both copyright and patents
- What is free software?
- Why is the market for free software competitive? Voluntary renunciation of copyright and patents
Do we care about free software?

- Is it commercially important?
- Why I know you used free software today
- Is IBM an important firm?
The Questions and the Answers

- does anyone make money; is it innovative?
- USA today 9/26/2005: “BitTorrent gets $8.75M from venture-capital firm”
- These are not hobbists
- Did Al Gore invent the internets? No free software did
Software Patents

• easy choice: they are a new court mandated development dating only to the mid-1990s

• they are an abysmal failure – all the important software innovation took place before their were patents

• widespread agreement among economists and other scholars – get rid of them
The Arms Race

- Levin et al. [1987] Cohen et al. [2000] surveys of R&D managers: vast bulk of patents useless and involve no innovation
- part of an arms race: successful large company needs a large portfolio of patents to fend off potential lawsuits by rivals
- the big guys don't sue each other: mutual assured destruction
- is it harmless? it costs only about $40,000 to file a successful patent application
Barriers to Entry

- Apple and Microsoft don't sue each other over smartphones.
- They sue the new guy Google which doesn't yet have a big portfolio of junk patents.
- Actual economic value of Microsoft's patents? They can't give away a product that occupies more than a small corner of a large and growing market.
Pharmaceuticals

- Look at data from Indian generic manufacturers
- Takes about 5 years for a new drug to enter the Indian market as a generic following its introduction elsewhere
- Effective patent protection is only about 10 years
- Appears without patent that the innovator of a new product would enjoy a 5 year rather than 10 year monopoly
- When generics enter price of the original does not change much, and the original retains about 50% market share
- So 50% profit loss during the last five years is lost revenue due to not having patents
- About 20% loss of present value
- Web of government regulation
When I started out with my first company, Zip2, I thought patents were a good thing and worked hard to obtain them...too often these days they serve merely to stifle progress, entrench the positions of giant corporations and enrich those in the legal profession...when I realized that receiving a patent really just meant that you bought a lottery ticket to a lawsuit, I avoided them whenever possible.

“We believe that Tesla, other companies making electric cars, and the world would all benefit from a common, rapidly-evolving technology platform.”

“Technology leadership is not defined by patents, which history has repeatedly shown to be small protection indeed against a determined competitor, but rather by the ability of a company to attract and motivate the world’s most talented engineers. We believe that applying the open source philosophy to our patents will strengthen rather than diminish Tesla’s position in this regard.”