

Patent Reform and Competition in Nanotechnology



Erik B. Flom, Ph.D, J.D.

Welsh & Katz, Ltd.

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Goal of Reform: Healthy Nanotechnology Environment

Activities

- Research
 - Development
 - Commercialization
-
- How to Get?
 - Predictability
 - Efficiency



Lesson From Aviation History

- Orville and Wilbur Wright
 - Patent in 1906 for bilateral stabilization
- Glenn Curtiss
 - Patent in 1911 for ailerons
- The Wright Brothers, having the dominant patent sue Curtiss



Resolution in Early Aviation

- Wright eventually wins suits, Henry Ford and Alexander Graham Bell try to rescue Curtiss, and the suit reopens.
- The second suit is terminated by WWI, and the formation of the aviation patent pool (1% mandatory license for duration of war).
- Surviving Wright sells company before end of war. Purchasers do not resume lawsuits. In 1929 the Curtiss and Wright companies merge.



What is a Patent Pool?

- A patent pool is a group of patents that can be licensed together for a single fee, even if the patents in the pool have different owners.
- Presently, Patent Pools are highly regulated under antitrust or competition law.



Recent Examples of Patent Pools

- MPEG-2 (1997) (9 companies) (DoJ)
- DVD (1998 & 1999) (8 companies) (DoJ)
- Lasik/VISX (2 companies) (FTC)
- These examples show why one-stop shopping for patents is efficient to reduce costs of negotiating over and over. Patent pools can lead to efficiencies.



How Do Reforms Affect Patents and the Competitive Environment

- Reforms can makes existing problems
 - Better
 - Worse

- Let's Examine The Effect On
 - Quality
 - Efficiency



Quality – Needs Improving

- IPO 2005 Survey:
 - 139 Companies Asked
 - 80 Responded
 - 22 Chem, Pharma, and Biotech Companies



Quality Metrics

- Current Performance - Less Than Satisfactory
 - 47.5% of all polled firms
 - 54.5% of chem/pharma/biotech firms
- Expected Pendency – Getting Longer
 - 67.5% of all polled firms
 - 72.7% of chem/pharma/biotech firms



Quality – Five Year Outlook

- Getting Worse
 - 28.7% of all firms polld
 - 27.3% of chem/pharma/biotech
- Improving?
 - 15.0% of all firms polled
 - Only 9.1% of chem/pharma/biotech



International Impact

- U.S. Filings Affect International Notice
 - USPTO identifies the prior art
 - USPTO provides preliminary examination report
 - Usually same examiner for U.S. case and PCT case.
- If the U.S. Examiner does not do a good job, international players have a hard time figuring out what is going on with the patent.



Reforms That Can Affect Quality

- Post-Publication Opposition
 - Harmonizes internationally.
- Structural Reforms at USPTO
 - GOCO (like a national laboratory)
 - Keep all fees, pay more to examiner



Reforms That Can Affect Efficiency

- Reduce Continuation Applications
 - Narrow first, broad later creates uncertainty.
- Post-Grant Opposition
 - Final form of the patent will take longer to get out.



Reforms For Patent Pool Formation

- Strong Industry Leadership Needed
 - Nanotech too much over the map now.
- More Involvement of Patent Agencies in Patent Pool Formation (Independent Experts)
 - Major countries already require independent experts, but do not provide them.
- Challenging Invalid Patents In A Pool
 - Post-grant opposition will help here.



What About Reforms To Litigation?

- Injunctions Are A Necessary Tool
 - Price setting is too hard otherwise.
 - “Patent Trolls” are not that common in nanotech.
 - Universities are often non-manufacturing patentees.
- Willfulness
 - Notice of the patent should not be enough.



Conclusion

- Patent Reform Can Help
 - Make the nanotech patent space more predictable and efficient
 - Facilitate pooling of patents to avoid long-lasting conflict situations
 - Make patent law more consistent across many countries.