Federal Trade Commission and Department of Justice

Competition and Intellectual Property Law and Policy in the Knowledge-Based Economy

March 19, 2002

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[[No form of regulation has expanded as dramatically with as little legislative direction as patents on software and methods of doing business. This historic expansion of the patent system has greatly exacerbated a number of the underlying problems of the system. It appears to impose disproportionately large information and transaction costs in a field uniquely open to small businesses and individuals. It has been colored by a persistent crisis in quality and the practical failure of public disclosure as the quid pro quo for exclusive rights.]]

Assessing and attacking these problems is difficult, because the lack of empirical data on real world practice is one of the principal problems of the patent system. There is data at the front end in terms of the patent-granting operations of the PTO, and there is data at the back end for the relatively few patents that actual end up in litigation. There is virtually nothing in between – on licensing practices, portfolio building, risk management strategies, or the overwhelming majority of patent disputes that do not go to court. Yet that is where the economic action is.

The Mansfield/Levin/Cohen line of empirical studies helps illuminate this vast territory by surveying the views of R&D managers, but these studies stop short of the heterogenous world of software development, let alone the recent economy-wide phenomenon of business methods patents. Given the U.S. lead in software and the patenting of software, it is ironic the first empirical studies of software developer perspectives were two European studies released last year.

In contrast to other regulatory systems, the administrators of the patent system do not mediate among competing interests in a neutral manner (except in the rare case of interferences). Rather the system operates by awarding strong private property rights on an *ex parte* basis. Once the patent is granted, the administrator plays no further role and can therefore be indifferent to how patents play out in practice. Accordingly, the USPTO is focused on its internal operations rather than on the proper functioning of the patent system as a whole. It does not engage economists and does not participate in mainstream debate on innovation, competition, and economic growth.

PTO is charged by statute with advising the President and Executive Branch on intellectual property policy and in practice takes the lead on policy development

within the administration. But instead of performing integrated policy research and analysis, PTO has styled itself as an advocate for expanded rights as shown by the performance goal in recent corporate plans: "Help protect, promote and expand intellectual property rights systems throughout the United States and abroad."

Corporate Plan (1999-2001):

Performance Goal: "Help protect, promote and expand intellectual property rights systems throughout the United States and abroad."

However, the 2002 plan drops the term "expand" and introduces an element of balance: "The Under Secretary and Director champions intellectual property rights and forges a balance between the public's interest in intellectual property and each customer's interest in his/her patent and trademark."

Corporate Plan 2002:

"One of the chief missions of the USPTO is to strengthen intellectual property (IP) protection in the United States and abroad, making it more accessible, affordable, and enforceable."

"The Under Secretary and Director champions intellectual property rights and forges a balance between the public's interest in intellectual property and each customer's interest in his/her patent and trademark."

It remains to be seen how this complex formula will be articulated and implemented.

At an operational level, the PTO's institutional limitations continue to shape its implementation of the Government Performance and Results Act, which requires agencies to identify and maintain metrics for evaluating their effectiveness. PTO has chosen to evaluate its performance in terms of patent grants and customer surveys that measure its service to patent applicants and patent professionals.

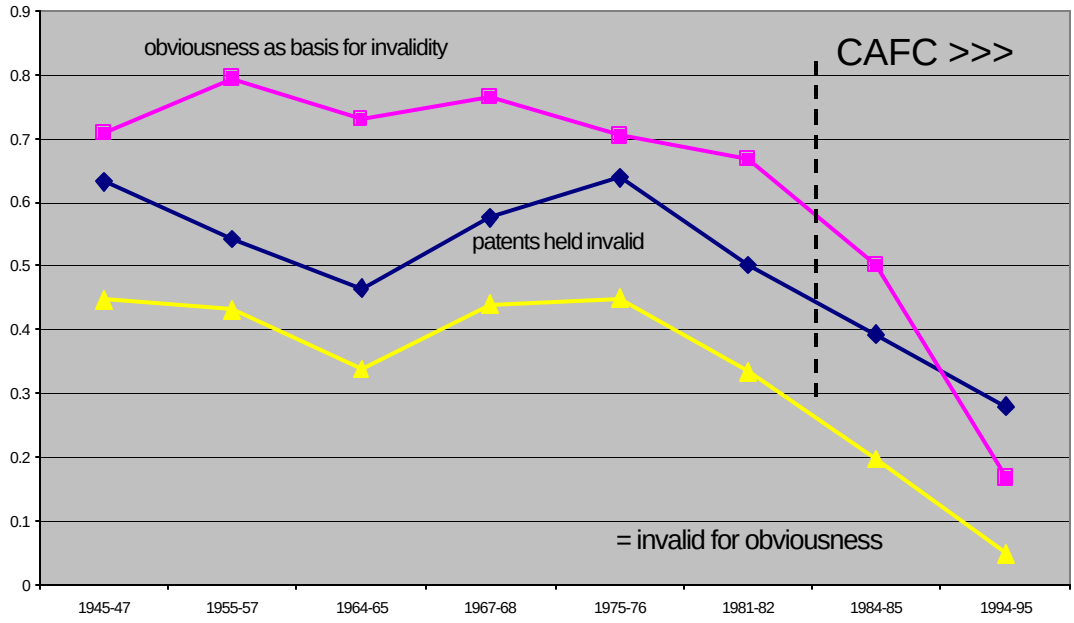
PTO Mission

- The mission of the Patents Business is to help customers get patents.
- The mission of the Trademarks Business is to apply the provisions of the Trademark Act of 1946 in the examination and registration of trademarks.

The corporate plan proclaims starkly: The mission of the Patents Business is to help customers get patents. By contrast, the mission of the Trademark Business remains the examination of trademarks.

This institutional orientation, which is indifferent to the size or sophistication of the "customer," undercuts PTO's claims for additional resources to address the persistent problem of quality. Unfortunately, that problem has been framed by the debate around fee diversion, with the implication that it could be resolved if only Congress would stop channeling patent fees to other purposes. While I would agree that greater resources are needed for reexamination and the fee diversion is dubious policy, it may not be much worse than giving a government agency a financial stake in expanding the scope of its operation, especially when the agency styles itself as advocate of expansion.

PTO can rightly claim that it does not actually set substantive policy and points out that policy is set by the Court of Appeals for the Federal Circuit, which has not been shy about expanding the scope of its jurisdiction and asserted competence. Much may be said about the influence of the Federal Circuit, but let me build on Cecil Quillen's observations. Glynn Lunney recently reported some interesting data in his article, E-obviousness.



decline of non-obviousness holdings in appellate decisions

source: Glynn Lunney, E-Obviousness

He adds to the well-known figures on holdings of invalidity (middle line) with information on obviousness as the grounds for invalidating (top line). His initial figures, using selected two-year periods, show that holdings of obviousness dropped substantially as the reason for invalidity after the formation of the Court of Appeals for the Federal Circuit. When you multiply out his figures (bottom line), you can see very dramatic drop in successful invalidation on grounds of nonobviousness.

Quality and performance should not be confused with "customer satisfaction." The metric should be keyed to the creative and innovative individuals that the patent system is intended to incent. That is, whether the PTO awards patents at a level which meets their standards of merit and practicality. Inadvertent infringement should become rare, and the risks it creates should be manageable, even for small companies.

The ultimate test will be whether developers (rather than lawyers) actually choose to read patents. I.e., whether patents are read because they are truly enabling, include reliable information about ownership, and do not normally require interpretation by an attorney. If the benefits of reading outweigh the costs (including opportunity costs and risk of willful infringement), then the disclosure function will be realized. Much has been made in recent years of the value of patents in supporting innovation markets, but this is directly contingent on how well-defined patents are – whether they clearly inform and reveal rather than surprise, astound, and mystify. Unfortunately, we have no empirical information on the extent to which licensing is genuinely enabling because it facilitates the transfer the knowledge and allows use of sought-after technology, or reflects expedient settlement of inadvertent infringement or disputes over broadly claimed patent that would be too costly and distracting to contest.

The build-up of information and transaction costs favors large companies over small because they enjoy economies of scale and scope in the management of patent-related knowledge and can internalize and spread costs while maximizing revenues through in-house patent and licensing departments. The high transaction costs of contesting patents has created an array of tactics that can exploited against those least able to bear them. For a small company accused of infringement, to cost of a $10,000 license will look very attractive compared to a similar cost of securing an outside opinion on validity and infringement that may still point to the need for a license. As for going to court, consider the costs for litigating patents where the amount in dispute is under $1,000,000:

average cost of litigation

amount at stake < $1 million

1999:		2001:
$400K	→	$499K

source: AIPLA Economic Report 2001

AIPLA figures for 2001 show an average of $499,000, up 25% from two years earlier. Double this and you see that both sides will now on average spend more in legal expenses than the amount in dispute, and that the calculus has changed substantially in just two years. This is why so few cases go to court, not because

there are so few disputes. Many are settled because alleged infringers, especially small companies, have no real choice facing costs like these.
In conclusion:

[[The quality problem must be addressed methodically. The PTO needs to come to grips with what the private sector has learned about knowledge management in information-rich environments, including costs and limitations. Certainly, if any agency needs a Chief Knowledge Officer and a coherent strategy for managing public knowledge on a vast scale, it is the PTO. However, it will need independent expertise and analysis to address this aspect of the quality problem, not just a reallocation of its own resources. PTO funding should be enhanced but with a commitment to address the quality problem in an authoritative, accountable manner using with the best talent the private sector has to offer.]]

Mark Lemley has written a provocative article, Rational Ignorance at the Patent Office. I believe it understates the value of examination for reducing transaction costs in the private sector, but it suggests that there may be rational limits to investing in some aspects of quality at the front. At least, registration should be investigated as an alternative to examination for certain sectors or technologies.

Although the PTO is the only Executive Branch agency specifically charged with addressing intellectual property policy, intellectual property is far too critical to be left to an agency that styles and conducts itself as an advocate and that measures its effectiveness by how ex parte applicants judge it and how many patents it grants. While I commend the Department of Justice and the Federal Trade Competition for examining the role of intellectual property policy in innovation and competition, this engagement should be continual rather than occasional. The competition agencies can bring broad expertise to bear that will help provide an economic understanding of innovation – including how it works for different technologies, in different industries, and at different points in the value chain. This must be based on real understanding of how patents work in practice and how the costs of evaluating and negotiating patents play out.

While neither Justice nor FTC are positioned to conduct extensive empirical research, they could be empowered to collect information that would help monitor the vast amount of economic activity that takes place after grant and prior to litigation – to help evaluate the extent to which the system is either abused or used productively to transfer and disseminate knowledge. In particular, any notice letter sent to advise a company that it may be infringing should be registered with the Federal Trade Commission. Beyond the value of monitoring the system, this would discourage the use of broadcast notice letters to intimidate and threaten.

The competition agencies can do much to help articulate the research agenda and can do as part of the present initiative. But I would go further.

Given that the patent system has positioned itself front and center in the digital economy, it is not unreasonable to require that 1% of the fees it generates should be directed to assessing the real impact of patents on competition and innovation in different sectors. An additional 1% should be dedicated specifically to understanding the problems of quality and predictability drawing on independent research and specific initiatives that can return meaningful information.