

Testimony
Of
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Before
Subcommittee on Courts, the Internet, and Intellectual Property,
Committee on the Judiciary
House of Representatives
Washington, D.C.
April 27, 2006

Mr. Chairman and Members of the Committee:

Thank you for the invitation to present my thoughts on "Patent Harmonization." I appear as a member of the Advisory Board of the Professional Inventors Alliance – a group of independent inventors that support strong patent protections.

The Three P's

The U.S. patent system has three major problems today.

1. Pendency rates are far too long, denying the nation new innovations in a timely manner;
2. Piracy of U.S. intellectual property rights is not being adequately addressed;
3. Premature publication of patent applications at 18-months is (a) enabling the theft of U.S. intellectual properties, (b) denying patent applicants the ability to use their innovations as trade secrets, and (c) encouraging inventors not to file patent applications, thereby diminishing the nation's general knowledge.

Proposals to shift from a first-to-invent to a first-to-file system, to eliminate the "best mode" requirement in a patent application and to expand the publication of patent applications will weaken the U.S. Patent System and discourage American innovation at just the moment both should be strengthened to meet expanding global competition.

Six National Economic Tools

The President and Congress have six basic tools to direct the U.S. economy:

1. Fiscal Policy
2. Monetary Policy

3. Exchange Rate Policy
4. Trade Policy
5. Technology Policy
6. Competition Policy (Antitrust)

For more than two centuries, the strongest of those six has been U.S. Technology Policy, the heart of which is the nation's system of intellectual property laws and the rights they create. Those laws and rights, the strongest in the world, have encouraged national innovation and the spread of general knowledge beyond anything achieved by any other country in history.

These intellectual property rights, in whatever form they exist, are ultimately social contracts between the originator of an idea and society. The arithmetic of the exchange is simple: the temporary award of ownership allows the public to benefit from new ideas and encourages the creation of even more innovations.

What varies among nations is the way they balance this *quid pro quo* -- ownership for disclosure -- and which interests they favor in their patent policies.

At its heart, the American system of intellectual property protection -- whether that protection comes as a patent, copyright, trademark, computer mask, or trade secret -- favors the rights of ownership. U.S. law gives inventors and writers the long-term, exclusive right to make, use, or sell their creations and powerful legal means to defend their rights in U.S. courts.

Most other nations, however, still view an originator's discovery as a legacy to society almost from the inception. Thus, those intellectual property systems favor the quick distribution and shared commercialization of new ideas, even if this puts the inventor or writer at a disadvantage.

Think about cameras. In the United States, Kodak violated Polaroid's instant photography patents, lost their case in court and then had to pay Polaroid \$1 billion in damages. In Japan, by contrast, one company develops a killer application, such as technology to stabilize shots, but all other Japanese camera makers soon introduce the same technology. In the U.S., the innovator could use that technology to sweep the market. In Japan, a government-approved and often a government-guided cartel shares the technology among competitors.

The differences of national emphasis -- ownership vs. sharing -- among the U.S. European, and Japanese intellectual property systems are substantial.

The stated or explicit goal of patent harmonization efforts is to synchronize these divergent patent systems so they generally work alike. In itself, this bringing together of national systems is desirable.

However, there is an unstated, and vital, issue involved: Will patent standards and protections be raised or lowered in the harmonization process? Harmonize up? Or, harmonize down?

That is the choice now before Congress.

Parties in Conflict

For almost two centuries, Congress has set intellectual property rights by allowing the affected parties to find a compromise. Now that process is impaired, largely because of the changing nature of the parties at interest. Before the 1960s, the battle was between domestic industries and between individual industries and large corporations. With globalization, the conflict is between national systems, which means foreign nations and their corporations versus both small and large entity inventors. As U.S. corporations offshore their R&D and manufacturing, their interests are increasingly aligned with those of foreign-based multinational companies that are trying to weaken U.S. protections for small entity domestic inventors.

Small versus Large Entities – The United States Patent and Trademark Office (USPTO) distinguishes between what it terms “small entities” (independent inventors, companies with 500 or fewer employees, not-for-profit organizations and universities) and “large entities” (larger corporations).

Until the last half of the 20th century, the principal patent conflict was between independent inventors and large U.S.-headquartered corporations, reflecting the fact that individual inventors are a natural enemy of the status quo, large corporations and state-owned enterprises.

“Innovation is a hostile act as it threatens the status quo and those who benefit from it,” says inventor Paul Heckel. That threat, Heckel claims, explains the difference between the U.S. patent system and those of Japan and Europe. Those systems were developed to minimize the threats to entrenched interests, while ours was created after our Revolution when the entrenched interests, that is, the British, had been overthrown and those in power had little but the vast future of a nation to develop.

The American experience is that these small entities, particularly independent inventors, can devastate an entrenched interest, almost overnight. Indeed, doing just that, and becoming rich and famous is the dream of most such entrepreneurs. Moreover, it happens repeatedly in

America. Small entity invention has a particular American quality, reflecting our culture. Even with all the filings from large U.S. corporations and their counterparts from around the world, small entity inventors still file roughly 45 percent of all U.S. patent applications every year. That happens nowhere else in the world.

Such innovation is the very heart of what Austrian economist Joseph Schumpeter called “creative destruction.” For more than two hundred years, it has been the engine of America’s economic growth. It is our principal hope for meeting the global economic challenge we face.

For the small entity inventors, their IP rights are essential. Patents provide them the means to raise capital, make license arrangements and defend themselves against infringers. As surely as night follows the day, other nations will seize upon patent changes to weaken intellectual property rights in the United States and thus weaken those same IP rights abroad.

Moreover, with weakened protections, no U.S. IP holder will be safe, whether small or large. In a world where China, India, and other nations are quickly becoming the world’s workshop -- manufacturing everything from the simplest to the most advanced technologies -- a large and growing number of traditional U.S. corporations are in reality little more than intellectual property holders, who are “non-practicing” their technologies. In this radically different economic environment, the protection of those corporations’ intellectual property rights is vital because those rights are what constitute their stockholders’ real value.

Small Entities versus Transnational Entities – Europe, Japan, China, India and other nations aggressively use their patent systems as a tool of national development. Changes in U.S. patent laws that enable their corporations to get a look at U.S. patent applications before a patent is awarded is to their advantage. So, too, processes that ease their ability to challenge U.S. patents as a means to coerce a license or shorten the duration of a patent through confrontation, or place the validity of a patent into legal limbo is also to their advantage.

Since the early 1990s, one of the principal goals of Japanese and European-financed lobbying in the United States has been to change U.S. patent practices. There is a formidable force. Overall, the Center for Public Integrity reports that foreign governments and corporations now fund almost one-third of all lobbying in Washington, D.C. When the lobbying dollars of the largest U.S.-based corporations and their trade associations is added to the foreign efforts, almost 80 percent of all lobbying dollars come from a coalition of businesses and governments that wish to weaken U.S. patent protections. Their goal, moreover, is fully understandable – in America, an inventor with strong patent protections,

a contingency fee law firm, and access to the federal court system is a real economic threat to a patent pirate.

Harmonizing Down U.S. Patent Standards

Not surprisingly, many U.S. corporations have long sought to weaken patent protections for independent inventors. Repeatedly over the past forty years, a succession of Presidents has appointed patent reform commissions dominated by these corporate interests. Their reports repeatedly offer the same solutions – (1) they seek to cut the term of patent protection; (2) they seek to give the world a look at a patent application before the USPTO grants patent protection; (3) they seek to weaken the legal remedies and damage awards to small entity patent holders; and (4) they seek to change the award of an invention from the first-to-invent to the first-to-file a patent application.

In short, these corporate-led commissions have urged Congress to harmonize down – that is, to make the U.S. patent system more like that of Japan and Europe rather than have U.S. patent negotiators try to raise the patent standards of those nations to that of the United States.

Moreover, the temptation of the Executive Branch of the U.S. Government to reduce IP rights is great. The temptation arises out of the creation of TRIPS within the World Trade Organization, which has put IP rights into trade negotiations. In the past, the United States has traded away various U.S. industries to secure global trade agreements – textiles, apparel and steel are the most visible examples.

In the current WTO round, developing nations refused to begin the negotiations unless the United States would agree to compulsory licensing of pharmaceuticals. The USTR capitulated, putting this nation on a slippery slope of IP concessions in exchange for trade rights.

Indeed, we are already along that path. China is a flagrant violator of U.S. IP rights, yet our government refuses to bring a case against China at the WTO for denying U.S. intellectual property owners' rights that are supposedly theirs under China's accession agreement to the WTO. Again, the U.S. is swapping away IP rights for foreign policy and other trade goals.

This "harmonize down" effect comes into sharp relief by reviewing a landmark GAO study - **Intellectual Property Rights - US Companies' Patent Experiences in Japan**, published in the spring of 1993. It provides a baseline comparison of the U.S. and Japanese patent systems, as they existed 13 years ago. The changes since then are dramatic.

In this study, GAO examiners interviewed Japanese patent officials and lawyers, and they surveyed 300 corporations who were top patent holders in Japan. The respondents were top U.S. patent holders in three sectors – chemicals, semiconductors, and biotechnology – and included 90 percent of the U.S. companies that were part of the top 200 U.S. patent holders in 1991. Almost half of these companies had 10,000 employees or more, 32 percent had between 501 and 10,000, and 19 percent had 500 or fewer. More than 90 percent of these respondents had also filed patent applications in Japan during the past five years, two-thirds held ten or more Japanese patents, and all were experienced international businesses. The majority of these respondents were also large enterprises, with 60 percent reporting sales of more than \$1 billion annually.

While the 300 responding companies had all the resources needed to hire the best talent and do whatever the Japanese required foreign businesses to do in Japan, two-thirds reported significant problems dealing with Japan's patent system. By contrast, only 25 percent said they had similar patent problems in Europe and 17 percent in the United States.

In stunning detail, the GAO study also revealed that, unlike the United States, which administered its patent system in a country-neutral manner, Japan's patent system then was at once a defensive, offensive, and a strategic tool of national development. It was being used to (1) keep foreign goods out of Japan, (2) protect proprietary Japanese technology, (3) examine the inner workings of the best foreign technology and (4) get foreign patents under advantageous conditions.

The GAO concluded that the differences in patent policy between the U.S., Japan and Europe were as follows:

- The United States awarded patents to the person who is the first-to-invent. Europe and Japan awarded patents to the first-to-file an application.
- The United States provided seventeen years of protection from the date it issues a patent, no matter how many years the USPTO took to process the application. Europe and Japan provided protection that ended twenty years after the filing date, despite how much time they consumed in the review process.
- United States patent applications were secret until the government granted a patent. All other nations published patent applications eighteen months after an applicant files.
- The United States gave inventors a grace period of one year in which to file an application after they have shown their invention to the public and imposed no restrictions on the ways originators may reveal their inventions. Europe and Japan gave inventors a

grace period of six months for disclosure and limited the types of disclosures they could make without losing their right to a patent.

- The United States and Europe excluded third parties from the patent review process. The Japanese Patent Office allowed third parties, including rival companies, to participate in their patent reviews.
- The United States did not allow third party opposition during the patent review process. Japan allowed third parties to oppose a patent application even before they grant an award. Europe allowed third party opposition but only after they grant a patent.
- The United States Patent Office automatically examined every patent application filed. Europe allowed patent applicants to defer examination for up to six months. Japan allowed patent applicants to defer examination for up to seven years.
- The United States accepted patent applications in all languages. Europe accepted applications in the languages of nation party to the European Patent Convention. Japan accepted the patent applications in Japanese.
- The United States and Europe processed patent applications rapidly, generally in nineteen months or less. Japan processed patent applications slowly, generally in six to seven years.
- The United States' and Europe's scope of patent protection is wide, giving the inventor exclusive rights within a broad boundary of claims. Japan construed the scope of its patent protection as narrowly as possible.
- The United States and European legal systems eased the private enforcement of patent rights. Japan has discouraged private action.

Most of the 300 corporate respondents to the GAO survey answered that they were unable to protect their intellectual property in Japan, and many also acknowledged that they were forced to enter cross-licensing and partnership deals with Japanese rivals that they would never have even considered in Europe or the United States.

If these large transnational corporations were unable to cope in Japan, then most individual inventors and small firms faced an almost impossible task.

In the intervening years, Japan has made some changes in its patent system. It has established a tribunal to hear patent cases, takes applications in English, hired more examiners and lowered its pendency rate. Yet, its basic system remains unchanged. It uses the first-to-file

approach, limits patent terms to 20 years, pre-publishes applications and permits third party opposition.

As this list reveals, the direction of U.S. patent law changes over the intervening years has been *to change the U.S. patent system so that it is more like Japan's.*

Moreover, the USPTO is taking (May 3, 2006 deadline) public comment on a proposed rule on the practice of continuation applications that will further make the U.S. system like Japan's – a rule that will cut the number of a patent claims in an application.

As you know, pendency is an ongoing and increasing problem for the PTO and frankly for American competitiveness. However, any change in PTO rules that limits the number of continuations and the number of claims will not affect pendency. But, it will create great suffering for small entity inventors -- universities, biotechnology firms, emerging technology companies, small businesses and independent inventors. Currently, they can file a patent application and modify it as one's research progresses. Application and revision costs are borne by the applicant progressively and timely public disclosure occurs.

The proposed rules restrict the patent applicant to 10 claims and to 1 continuation absent special circumstances. The PTO thinks that this will reduce examiner workload and relieve pendency, though it has yet to demonstrate this. Instead, the rules create new, amorphous requirements that the patent applicant must meet. Essentially the rules mean that the patent applicant must perform the examination process themselves all in advance. This radical change represents a first step toward converting the PTO into a registration system.

This rule change is so significant it is something for Congress and not for the PTO to decide. I urge this Committee to review those proposed changes and comments in hearings.

Three Harmonization Issues

First-to-Invent Versus First-to-File – For more than two centuries, the United States has awarded a patent to the first person to invent the creation. All other nations award the patent to the first person to file a patent. The Governments of Japan and Europe support U.S. adoption of a first-to-file system. Several Presidential and academic study commissions also favor a first-to-invent approach. In the 1993 GAO survey, three-quarters of the companies with 10,000 employees or more favored a first-to-file system, as did about half the companies with 501 to 10,000 employees.

In that survey, of course, a quarter of the large corporations and about half of the mid-sized companies favored a continuance of the first-to-invent approach. I am unaware of any survey of small entity inventors on this issue. Various independent inventor groups, however, advocate leaving the first-to-invent system in place, arguing that it is functioning well.

In a recent study of whether small or large entities are advantaged or disadvantaged by the first-to-invent approach, former Commissioner of Patents and Trademarks Gerald J. Mossinghoff did a statistical analysis of what happens when two parties claim to have invented something at nearly the same time, a process called interference cases or two-party decisions. If there were problems in the first-to-invent system, a large number of such cases would exist.

Remarkably, in the 22-year period 1983-2004, Mossinghoff found there were only 3,253 two-party decisions, a period when the USPTO received 4.5 million applications and granted more than 2.4 million patents. Thus, there were on average only such 155 such cases per year, or as Mossinghoff pointed out, fewer than one in one thousand applications filed.

Mossinghoff also found that the number of small entities advantaged in that 22-year period by the interference process was 286 and the number disadvantaged was almost the same (289), a strong statistical suggestion that the USPTO was ably managing the process.

Mossinghoff's data provides a strong argument for not changing from a first-to-invent to a first-to-file patent system. Specifically, the supposed disadvantage of the present approach is that it leads to confusion and conflicts. Yet, as Mossinghoff's data reveals, the number of interference cases in the 22 years analyzed was administratively trivial.

His data also reveals that small entities were involved in only 17.6 percent of these two-party cases, although they generate 45 percent of all patent applications. The overwhelming majority of those interference cases (82.4 percent) were between large entities fully capable of financing their advocacy.

Mossinghoff's data reveals that the number of small entity inventors affected by interferences occurs only with one of every 7,800 applications. This is so statistically insignificant as to be irrelevant. One of 7,800 is not a problem.

The point is that our present system is not adversely affecting large or small entity inventors. Then, why change it? Why go to all the trouble, all the costs of changing to something else, when the benefits are so illusory and slight? If there is some benefit other than doing like other nations do, advocates of that change should be forthcoming as to what that is.

The other question raised in Messinghoff's paper is about the ability of those few, those one of 7,800, inventors to finance the legal costs of a two-party case. He found that 575 small entity inventors took their cases to conclusion, which also strongly suggests that legal costs were not a barrier, even for those few.

The question of legal costs is related to a broader argument made for altering the U.S. Patent System, namely that the U.S. is in a "patent litigation" emergency – that is, a flood of lawsuits with little or no merit is threatening the innovation process.

I examined that issue in a recent working paper published by the U.S.-China Economic and Security Review Commission (*A Great Wall of Patents*, October 2005). I concluded from publicly available data that the U.S. does not have a patent litigation crisis. Indeed, the data makes clear that the threat of lawsuits for most inventors is actually diminishing.

The real litigation threat is to a handful of large corporations whose business models rely on the aggressive, unapproved and uncompensated use of the patented works of others. The owners of that intellectual property are suing these large companies and winning large awards. In appeal, the courts are upholding these awards as valid. Now, a handful of these large entity patent holders have banded together and are trying to achieve through legislation what they cannot get in the courts – easier access to the IP of others, at a lesser cost and with fewer penalties.

Federal judicial caseload statistics for patent lawsuits and USPTO data on patent applications and patents issued reveal:

- An inventor is less likely to be involved in a patent suit today than in the past. The number of patent lawsuits filed per the number of patent applications filed has been on a downward slope since 1990.
- Likewise, the number of patent lawsuits filed per the number of patents granted by the USPTO has also declined even greater – almost 13 percent between 1988 and 2004.
- Only 5/10,000 of one percent of patents issued are challenged in a patent trial.ⁱ
- In 2004, more than 28 percent of patent lawsuits settled with no court action required.ⁱⁱ
- In 2004, more than 53 percent of patent lawsuits settled before pretrial.ⁱⁱⁱ
- In 2004, more than 14 percent of patent lawsuits settled during or after pretrial.^{iv}

- In 2004, only 96 patent cases went to trial, which represents only 3.5 percent of all patent cases filed that year^v.

Put into context, the number of patent lawsuits that went to trial during the period 2001 to 2004 rose from 76 cases to 96.

Fewer than 100 patent trials a year is not a patent litigation crisis – particularly in a nation that issues almost 200,000 patents annually and where litigants settle almost all patent lawsuits before trial.

Although the current first-to-invent system is working very well, imagine what is likely to happen if Congress were to change it to the first-to-file approach.

The large corporations could standardize their global patent operations and perhaps get some savings out the efficiencies. They are well accustomed to working in first-to-file systems around the world.

For the small entities, the shift would be chaotic. They are not accustomed to the first-to-file approach. Their experiences and knowledge of the patent system are grounded in the first-to-invent system. Hundreds of thousands of inventors, academics, lawyers and paralegals would be forced to learn a new system – a costly and disruptive process at best for them, and for the USPTO.

The first worry on the part of many inventors and academics would be whether someone would steal their innovations and rush to the USPTO to file an application--a legitimate concern in today's world of unchecked piracy. Indeed, Chinese inventors are now taking patent applications posted on the Net and using that information to be the first-to-file in China.

The fear of patent piracy, here and abroad, would motivate countless inventors to rush to file. Inevitably, the result would be a flood of premature patent applications. In turn, the influx of such applications will greatly burden the USPTO at a time when patent pendency is already rising.

And what are the principal gains from incurring these costs and dealing with the resulting chaos, other than pleasing patent bureaucrats in other countries and allowing transnational corporations to save a few patent-processing fees? Other than being like other nations, what is the advantage to the United States and small entity inventors for making such a shift?

In short, the advocates of this change have failed to prove that the marginal benefits of this shift will equal the marginal costs and inventor confusion. This is significant, for we are at a moment when larger patent issues loom, such as unchecked patent piracy by nations such as China,

the growing technological challenge from abroad and rising pendency rates at home. Our limited USPTO resources should be devoted to those issues, rather than to a change that would create unproductive chaos.

Imagine the response if we were to ask England and Japan to change from a right to a left hand drive system for their automobiles so they could be like us and thus make life easier for our automakers. Congress should view their demands for patent harmonization in a similar way – deciding what is in our inventor's and our country's best interests.

Best Mode – Should inventors be required to include in their patent applications the “best mode” to replicate and use their creations?

I think the answer is yes – absolutely. The golden covenant of a patent is simple – exclusive use in exchange for making public new knowledge. Otherwise, the patent grantee gains the benefits of government-licensed exclusivity, while denying the public the full knowledge to which they are entitled.

In the early part of the 20th century, I.G. Farben, the giant German chemical cartel, was granted hundreds of chemical patents in the United States, giving them exclusive use over their creations. However, Farben cheated. When DuPont and other chemical makers tried to replicate those processes during World War I, they discovered that vital elements were missing. Indeed, Pierre DuPont, who lost more than \$100 million of 1917 dollars trying to replicate those chemicals, claimed that if DuPont chemists had followed the Farben patents, they would have been killed.

The point is the United States should not give exclusive rights to inventors unless they share with the public the best and true mode. Expanding public knowledge is one of the patent system's most important functions.

Pre-Publication of Patent Applications at 18-Months From Filing

In 1999, the United States enacted harmonization legislation that required the USPTO to reveal to the world vital information from all patent applications that have been on file for 18-months. An exception was made for those inventors who seek a patent that is limited to the United States. Today, approximately 10 percent of patent applications fit that criteria and are not published on the Internet at 18-months if not granted.

The 18-month rule may be meaningless for large entity inventors. It devastates small entity inventors – giving competitors and pirates the world over vital details about their creations before patent protections are granted.

The 18-month rule is driving small entity inventors away from the patent process, denying the nation substantial knowledge. In the past, an

inventor could take a failed application and apply the knowledge as a trade secret. With 18-month publication and 30 months plus patent pendency, the secret is spilled to the world. The USPTO rejects about one-third of all patent applications. This means that approximately 60,000 to 70,000 potential U.S. trade secrets will be made available to U.S. competitors and pirates worldwide annually.

Are foreign competitors stealing ideas and technologies from what I label the premature publication of patent applications? Consider this: In 2004, the director of Japan's External Trade Organization's Intellectual Property Rights Office in Beijing visited a leading Chinese company. The head of that corporation's intellectual property division showed him a room with several dozen computers whose exclusive purpose was to search the patent applications put up on the Internet by the USPTO and its equivalent in Japan and Europe. The Chinese executive explained it was easier and far less expensive to pull information from foreign patent applications than to do their own research.

When informed of this, the Japanese Patent Office began monitoring the number of hits its patent application files on the Net were getting. They counted 17,000 hits per day from China and 55,000 per day from South Korea.

Likewise, the very system that is supposed to protect America's most precious technological secrets is revealing them prematurely to the rest of the world. When I explain the 18-month publication rule to business executives, they are dumbfounded that such a thing could be possible.

I conclude that the real issue is not whether to include the 10 percent of patents under the 18-month rule, but how to stop pre-publication altogether. I cannot imagine any benefits to U.S. inventors or the nation from the present approach, while the liabilities are obvious.

Conclusion

Harmonization of the world's patent systems is a desirable goal for the United States. The vital question in that harmonization process is whether the United States should lower its standards to those of other nations or whether we should work to raise their standards to ours.

Put another way, what is there in the patent systems of Germany, France, Italy, England, Japan, Brazil, India and South Korea that is so superior to that of the U.S. that Congress should change two centuries of success to follow their lead and be like them? The argument that all other nations do something – that the U.S. should join a herd simply because there is a herd -- is insufficient reason to change U.S. patent laws that have worked so well for this nation for so long.

As I describe in this testimony, the U.S. has followed the lead of other nations in recent years and lowered its vital patent standards in the name of harmonization. Those changes, and those now before the Congress, weaken U.S. IP protections. Our independent inventors are greatly disadvantaged by those changes – shorter effective patent terms and the premature publication of patent applications particularly.

It would be very useful to have these harmonization issues rethought in a forum where small entity inventors – independent inventors, small companies, non-profit organizations and academic inventors -- are an integral part of the process. Such an exchange would be congruent with our long tradition of bringing a balanced compromise on patent policy to the Congress.

Thank you for allowing me to share my perspectives with you.

Notes

ⁱ Calculated from data contained in **Federal Judicial Caseload Statistics, 2004**, Table C-4 and **Performance and Accountability Report: fiscal year 2004, Table 1**, p. 116.

ⁱⁱ Calculated from data contained in **Federal Judicial Caseload Statistics, 2004**, Table C-4.

ⁱⁱⁱ Ibid.

^{iv} Ibid.

^v Ibid.