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To: SecrecyOrder.Comments@USPTO.gov.

Response to: *Notice of Request for Comments on the Feasibility of Placing Economically Significant Patents Under a Secrecy Order and the Need to Review Criteria Used in Determining Secrecy Orders Related to National Security.*

The two basic questions asked in this Request for Comments are:

1. Whether the United States should identify and bar from publication and issuance certain patent applications as detrimental to the nation's economic security?
2. What is the desirability of changes in the existing procedures for reviewing applications that might be detrimental to national security?

Framing the Questions

Question 1 is framed such that it will almost certainly elicit a strong answer of **NO** from most, if not all respondents, including me.

In large measure, such a negative response to something so vital to national and economic security reflects a widespread rejection of the inflexible, bureaucratic, predatory system into which the existing secrecy procedures have devolved. Created in the depths of the Cold War, centered on nuclear technologies, the means of their delivery, occasionally used by national security agencies as a means to extort or even take inventor's creations for little or no payment, the extension of the present system to include vital economic technologies will be fiercely opposed, as it should be.

The real question is how do we use secrecy orders selectively, and wisely administered, to (a) provide both national and economic security, (b) do so in a manner that encourages innovation, (c) does not victimize inventors, and (d) does not encourage inventors to rely on trade secrets as the primary protection for their technology. The patent "bargain" with society is inventors get a period of exclusive use and society gets the knowledge about the advance. A trade secret, by contrast, provides limited protection and society is denied the new knowledge.

The 17 questions in the back of this Request for Comments are centered on three basic issues.

1. What should be national policy on the USPTO's publication of patent applications and issued patents on which U.S. National Security Agencies have imposed export controls?
2. What should be national policy on the global publication of patent applications at 18-months from the filing date although the average processing pendency is much longer (33 months in 2011)?
3. What should be U.S. policy on the secrecy and protection of extraordinary and often proprietary technologies that affect the nation's economic security?

The Disconnect Between National Security and Congressional-Mandated USPTO Publication

Espionage, Pirating and Counterfeiting -- James R. Clapper, Director for National Intelligence, provided the Senate Select Committee on Intelligence (January 31, 2012) an unclassified assessment of the worldwide threats the United States faces. Cyber threats, he reported, now pose a critical national and economic security concern. State actors, particularly China and Russia are "of particular concern," he noted. "Entities within these countries," he pointed out, "are responsible for extensive illicit intrusions into US computer networks and theft of US intellectual property."

Also, the October 2011 Report by the Office of the National Counterintelligence Executive titled "*Foreign Spies Stealing U.S. Economic Secrets in CyberSpace: Report to Congress on Foreign Economic Collection and Industrial Espionage, 2009-2011*" pointed out what tempting targets U.S. industry, the Federal Government, universities, and other nonprofit organizations are by noting a National Science Foundation estimate that in 2008 (latest data) these players expended \$398 billion on R&D (2.8 percent of the US GDP). The report also observed that while cyber theft was a major means that foreign nations and corporations use to collect sensitive, classified and export-controlled information, a variety of more classic methods are still widely used, including:

- Personal requests for information;
- Solicitation of marketing (consulting) services;
- Conferences, conventions, and trade shows;
- Official foreign visitors and exploitation of joint research;
- Foreign targeting of US visitors overseas;
- Open source information in journals, social networks, and other public websites.

The publication of full patent applications under review by the USPTO is the world's largest source of open source information on proprietary cutting edge technologies. In 2011, the USPTO published 321,000 patent applications. Of these, roughly half were from U.S. applicants. This treasure house of information, being

sought by U.S. economic and strategic rivals being sought by all means, is available on the Internet for free. And as a patent application, the information has protections for the inventor that are so weak as to be useless.

The Report to Congress also pointed out that several vital US economic sectors are priority targets for these foreign spies, including:

- Clean technologies;
- Advanced materials and manufacturing;
- Healthcare, pharmaceuticals and related technologies;
- Agricultural technologies;
- Energy and other natural resources technologies;
- Military technologies;
- Marine systems;
- Aerospace/aeronautics.

These are foundation technologies the U.S. needs to rebuilding our economy and provide a significant portion of the new jobs the nation requires in the 21st Century.

Every major business trade association has registered their concerns with Congress, the US Trade Representative and Federal executives about the surge of cyber intrusions, pirating and intellectual property infringement that increasingly plague them, inventors, IP owners and investors. Ironically, most of these same organizations supported the legislation that requires the USPTO to make public the patent applications that contain those proprietary secrets.

18-Month Publication of Patent Applications -- The publication policies that Congress and a succession of Presidents have set for the USPTO almost totally ignore national or economic security issues.

In the Senate Judiciary Committee hearings on what became the America Invents Act of 2011, the Senators held a total of 5 hours of hearings in the combined 110th, 111th and 112th Congresses – five hours. Not a single witness was called to address any national security concerns on the USPTO publication of patent applicants' most sensitive information. Equally significant, neither a single individual inventor nor a representative of a small entity enterprise nor a venture investor was called to testify. Thus, security concerns and the role of these policies in the decline of innovation and patenting by small entity and individual inventors were given zero consideration in the Senate hearings. The House hearings had a handful of such representatives, but no attention was given to the security-related dimension of congressional publication mandates imposed on the USPTO.

The inattention to these issues is significant for in 1999 Congress enacted legislation that broke more than 2 centuries of tradition and required the USPTO to publish all patent applications at 18-months from filing or any earlier priority date claimed. Between FY 2002 when that law took effect and the end of FY 2011, the USPTO published more than 2.3 million patent applications, of which half were from US companies, universities and inventors. (See Table 1 in Appendix)

Simultaneously, for a host of reasons, the USPTO has been unable to process patents within that 18-month period from filing. (See Table 2 in Appendix) In FY 2011, the Patent Office's processing time was 33 months on average. As a result, the secrets of an inventor's patent application are made public to the world at 18-months from filing, while the average time a patent is issued is 33 months. On average, an inventor's secrets are open to the world for 15 months during which no meaningful patent protection exists.

Because of these congressionally-mandated publication policies, the secrets of more than 1 million U.S.-origin patent applications were made available on the Internet to competitors, pirates and infringers around the world between 2002-2011 – allowing anyone to work around the U.S. patent protections and steal a march into global markets. The principal protection a patent holder has in other nations is they can sue the infringers, but only if they have notified them, but in a "Catch-22", gaining knowledge of infringement is beyond the means of most patentees. And the efficacy of patent laws of other nations, particularly where there is state-led infringement, ranges from weak to meaningless.

The making of U.S. inventors' secret so public with virtually no protection is a recent and radical change in U.S. patent laws and policies. Between 1790-1999, U.S. policy was to keep the details of an application secret until a patent decision was made by the USPTO. If the patent was granted, the inventor had patent rights that could be enforced in the federal courts. If the patent were denied, the inventor could practice the technology as a trade secret or try again for a patent with an improved application.

Since enactment of the 1999 Patent Act, when a patent is denied, the art goes into the public domain. About a third of all patent applications are now denied and the inventor/applicant loses control of the subject matter when that occurs. While pirates, counterfeiters and rivals gain by this new post-1999 policy, the inventors and investors who pay for the R&D, development and legal work lose. The biggest losers, of course, are U.S. workers and economy.

One exception to publication was put into the 1999 Act. If an inventor chooses, they can have the USPTO keep secret their application, that is, not publish at 18-months. But to gain such secrecy the inventor is forced to agree that no foreign patent would ever be sought. This, of course, undermines larger U.S. efforts to protect America's technology and to increase exports to other nations. It is a "Sophie's" choice – keep the secrets until patent protection is given but lose protection outside the United State.

The Declining Use of Secrecy Orders -- As recently as the ending days of the Cold War (FY 1988-FY 1991) when the Soviet threat was collapsing, technology security was taken seriously. Then, the US imposed hundreds of Global Security orders annually. In FY 1988, 630 orders were imposed; in FY 1989, 847 more were imposed; plus another 774 in FY 1991. But when the Cold War was perceived as being over and the threat to US national security thus also appeared over, the number of secrecy orders issued declined rapidly. By FY 2011, the US issued only 143 secrecy orders. Of these, 33 were issued at the request of foreign governments, 110 were issued at the request of the Army, Navy, Air Force, and Department of Energy – almost a residual legacy for certain security programs. In FY 2011, only 11 "John

Doe" secrecy orders were issued – which are primarily orders on proprietary technologies.

U.S. Export-Control Security Orders -- Another form of national security protection is export controls – the legal constraint of the export of certain technologies and knowledge by the U.S. government. The US continues to impose export controls on many technologies. For those technologies, the owners have strict restrictions on the use of their creations and their ability to share documentation with foreigners -- either via electronic, verbal or written communications. The penalties for violating these export control laws include both stiff fines and imprisonment in a federal prison.

The national goal, of course, is to maintain the secrets of vital defense related technologies out of the hands of US adversaries. The primary responsibility to identify which technologies merit a secrecy order resides with the National Security Agencies. It is they who possess the talent and expertise to identify what secrets should be held tight. Basically, the USPTO handles the paperwork.

Yet, if these agencies fail to act and there is no requested secrecy order, including on those same export controlled technologies, the USPTO is required to publish the details of the patented technology including the best mode as to how to make and apply it. Many other nations have the technical skills and machinery needed to make virtually anything found on these US export control lists – certainly they can once they have the roadmap that the patent or patent application provides.

Thus, present policies prevent the sale of certain technologies, but USPTO publication provides the blueprint of how to make the same technologies.

As a result of the indiscriminate publication which Congress has mandated, the nation loses the security that the export controls are supposed to create and the patent owners lose the business that they would otherwise gain. Put more bluntly, the present USPTO publication policies are directly undermining US export controls in the most fundamental way.

Economic Security -- Finally, sustaining a healthy and competitive national economy has been recognized by Congress in many pieces of legislation as being as vital to the national well being as military security. Congress in a variety of studies and pieces of legislation has proclaimed that the "theft, wrongful destruction or alteration, misappropriation, and wrong conversion of proprietary economic information substantially affects and harms interstate commerce, costing US firms, businesses, industries, and consumers millions of dollars annually."

Yet, the USPTO has no legal authority to protect key economic technologies with secrecy orders and no process exists to determine what technologies merit such protections even if it had such authority.

And even if the U.S. had such authority and selection criteria, the existing system of national security secrecy orders is so deeply flawed that it is not a model to emulate. For example, if a patent application is deemed by a national security agency of enough importance to impose a secrecy order, the USPTO is required to withdraw the application from examination and no patent is issued until the federal agency placing the hold releases it. The inventor must cease and desist any discussions

with any others about the technology. Also, the compensation process is lengthy and when exercised by the patent owner in the past it has repeatedly resulted in litigation in which the national security agencies will not provide the courts information needed to set a compensation value. Thus, the process is a little disguised federal “taking.” It creates inventor and corporate resistance and undermines national security. Better ways are needed.

Observations

1. The principal thrust of U.S. patent policy and law since the early 1990s has been to Europeanize the U.S. patent system – the operative term has been to “harmonize” the U.S. system to be like that of Europe and Japan. The U.S. accession to the World Trade Organization in 1994, the enactment of the Patent Act of 1999 and the Patent Act of 2011 have facilitated that transition.
2. The European system favors large entity inventors over small entity inventors – that is firms with more than 500 employees over firms with fewer than 500 workers, individual inventors, universities and independent research organizations.
3. As the European-type changes have been instituted in U.S. patent law, including (a) changing the patent term to 20-years from filing from 17-years from patent grant, (b) the publication of Applications, (c) the shift of granting patents to the first-inventor-to-file rather than the first-inventor-to-invent, and (d) the addition of adversarial quasi-judicial processes within the USPTO to determine patent validity, **the portion of patents going to these small entities has declined sharply – falling from 29 percent in 1990 to 19.8 percent in 2011 – a drop of almost one-third in only two decades.** (See Tables 3 and 4 in Appendix)
4. Equally significant, the portion of patents going to individual inventors has collapsed with the Europeanization of the U.S. patent system. In 1990, before the Europeanization process began, individual inventors were awarded 19.2 percent of all US patents awarded. **By 2011, only 6.9 percent of patents were awarded to individual inventors – a drop of 64 percent.** (See Table 5 in Appendix)
5. Advocates of application publication note that the number of patent applications that seek publication protection has dropped. The reason is that the number of individual inventors seeking patents is in free fall.
6. The drop in patents awarded to **U.S.-origin individual inventors** is particularly significant because they are the major source of the disruptive inventions that create entire new industries and most new jobs. **In 2011, only 5 percent of all utility patent issued went to U.S.-origin inventors – a decline of 64 percent from 1990 when the percent was 13.9 percent.** (See Table 5 in Appendix)
7. Today, an independent inventor has odds of about 3.5 out of 10 that their technology will receive no patent protection after filing an application, though all their secrets will be fully disclosed to the world on the Internet if

normal patent processes are used. Prior to the 1999 patent act, the USPTO was required to keep secret the details of an application until a patenting decision was made. Then, a patent applicant could take their creation, if denied a patent and practice it as a trade secret or try again for a patent with an improved application.

8. Of the almost 1 million U.S.-origin patent applications published by USPTO between 2002-2010, an estimated 300,000 were denied. Thus, the research and effort that went into the technologies denied a patent was effectively taken from the inventor and given to the world because once published, their creations are considered prior art.
9. Three principal reasons are usually given for publication at 18-months from filing.
 - The first is the U.S. is bound by treaty to do such. Yet, corporations and governments in the U.S., Europe and Japan are devoting billions of dollars to countering cyber theft of patent technologies. A simple way to thwart much of that early theft is to keep patent applications secret before a patent decision is made – as the U.S. did from 1790 until 2002.
 - The second excuse is that all the major nations publish Applications and thus any inventor seeking a patent worldwide would be publishing anyways. The presumption is that the European and Japanese patent systems, and those of other nations cannot be changed and they are indifferent to technology piracy and counterfeiting and IP theft. (I have interviewed dozens of inventors who did not know they could elect not to publish. The USPTO default is to publish until instructed otherwise.)
 - The third excuse is to prevent “submarine patents.” This is an urban myth that is promoted by the advocates of early publication. As part of the campaign to Europeanize the US system, publication at 18-months was a high priority. It was an idea proposed in 1966 in a patent study commission created by President Lyndon Johnson, long before the Internet. In the 1990s, Jerome Lemelson, a prolific inventor, was accused of filing patents on machine vision, making additional filing amendments for examination and by that keeping his patent “submerged” until a corporation violated it, at which point he would “surface” the patent and sue the infringer. Analysis of Lemelson’s most controversial patents on machine vision revealed that it was the USPTO that forced the inventor to make the divisions. Between 1954 and his first filing until the first of his patents were issued in 1963, he received only 30 months of continuance time. And the basic patent was published for years after 1993, available to all. The “submarine” argument was a political ruse and the “threat” presents no obstacle while in review at the USPTO.
10. The USPTO lacks the legislative authority to impose secrecy orders on vital economic security technologies.

11. The Federal government has created no procedure or criteria needed to ascertain what is an economic security technology.
12. In the absence of viable protections on such technologies, IP owners are increasingly using trade secret protections, which are weak. When this happens, society loses access to knowledge and the patent owner risks the loss of their creation.

USPTO's Questions

1. Should the USPTO institute a plan to identify patent applications related to critical technologies or technologies important to the United States economy to be placed under secrecy orders?

Yes. But a different type of secrecy order is required than what now exists – one that allows a patent to be issued, an independent judicial process to oversee compensation, and appropriate bounds on the use of the patented technology.

2. Which government body should be designated by the President to provide the USPTO with the final determination as to which applications should receive this treatment?

The responsibility should be jointly shared between the National Security Agencies, including the Departments of Defense, Home Land Security, and State, plus Commerce and Justice. Coordination should be by the National Security Advisors' Office from within the White House. A relatively few patents would be involved and the administrative burden relatively light – particularly in view of the security stakes involved.

3. Which mechanisms should a governmental body use, at the time a patent application is filed, to determine that publication at 18-months of that particular application would be detrimental to national economic security?

Any technology put on the Federal export control lists should automatically have any related patents or patent applications taken down from the USPTO's publication mechanisms.

The intelligence agencies have identified many of the technologies targeted by other governments and foreign sources, such as encryption devices. The publication default should be that such technologies must be reviewed prior to having applications or patents published. The National Security Agencies should regularly and systematically review those findings to determine where and when the new secrecy orders are imposed.

4. What criteria should be used in determining that dissemination of a patent application would be detrimental to national economic security such that an application should be placed under a secrecy order?

See answer to question 3.

5. Would the current statutory authority provided to the USPTO cover regulations authorizing economic secrecy orders, or would such orders require a new statutory framework?

A new statutory framework would be required. Also shared authorizing jurisdiction inside Congress with the Defense and Intelligence Committee would be required. National security and intelligence matters fall outside of the realm of the House and Senate Judiciary Committees, the current authorizing committees.

6. What would be the effect of establishing a new regulatory scheme based on economic security on businesses, industries, and the economy?

The question misses a major player in innovation – individual inventors. Fortunately, the protection of patent applications would greatly benefit all.

Aggressive attention to the security of patent applications and published patents is a major, low cost means to decrease the theft of America's IP.

Those corporations that file the most patents should be most supportive of not revealing unprotected company secrets and equally supportive of having the U.S. government negotiate such policies with other nations. Today, most of these corporations are lobbying for greater IP protections, even as they ironically support early publication of their own patent Applications.

The default should be no publication until a patent decision is made – the reverse of what now exists. A second-best solution would be to publish only the abstract included in all patent applications.

Also any company that wants their patent Application published should be given the option to having the USPTO doing so, including at the moment of filing.

I strong suspect that there is a major disconnect between corporate patent departments and senior corporate leadership on this issue. I have yet to meet a corporate CEO that is indifferent to the mandated public release of their company's most important technological secrets.

7. How could Government agencies best perform such a determination while remaining in compliance with applicable laws and treaty obligations?

Much of the current problem exists because applicable laws and treaty obligations are antiquated and inappropriate to the present situation and thus merit change. Presumably, other governments share a concern about massive patent theft and infringement and would find that keeping patent applications secret to be an effective, low cost form of security.

The U.S. Congress has not considered the national and economic security implications of the early publication of patent applications. Nor, has it considered the clearly devastating effects that early publication has already played in reducing the level and pace of invention by the most creative elements of our society – small businesses, universities and individual inventors.

Early on, I recommend that the Congressional Committees responsible for defense and national security matters conduct hearings on the security consequences of publication of Applications and of technologies on the export control lists.

8. *How would such a policy affect the public notice function that underlies the policy of publication, including the ability of United States inventors and innovators to timely access the newest technological information upon which to build and stay ahead?*

A solution is to adequately fund the USPTO and reduce the pendency rate to 18-months or less – as it was two decades ago. The 18-month publication of inventors' secrets to benefit other inventors, corporations and nations is more akin to economic cannibalism than rational innovation policy.

This question should contain a second part: What is the cost to society and the economy of helping infringers and competitors with the release of unprotected technology secrets and what is the consequence of discouraging innovation by small entity inventors and individual inventors with this 18-month publication mandate? These are questions that merit examination by Congress and the General Accountability Office.

9. *What would be the impact on United States innovators, companies, and employers? How would such a secrecy order affect United States businesses that currently have substantial business operations or sales in foreign countries?*

Imposing secrecy orders on technologies that are on an export control list would increase pressure on regulators to remove from the list those technologies that are available elsewhere and list only those where export controls could be effective. This will increase exports.

Eliminating the “no foreign filings” rule on inventors that choose not to publish at 18-months from filing would enable these inventors to better compete in global markets.

I am unaware of any study that compares the existing secrecy orders issued, the specific technologies on the export control lists and the related patents/applications that are published. I suggest that USPTO made such a comparison and analysis.

Businesses that are supposed “American companies” have an obligation to the national security. Global security may require some sacrifice by them and their stockholders.

10. *Are the procedures currently available before the USPTO, such as non-publication requests and prioritized examination, sufficient to minimize risks to applicants and allay concerns with 18-month publication of their invention? If not, why?*

No. They are not. Many small entities and most individual inventors cannot afford to purchase a prioritized examination.

Please publish the data on the number of non-publication requests received annually and the number granted. Without that, I cannot comment on that tool.

So long as hundreds of thousands of U.S.-origin patent applications are published at 18-months annually and one-third are rejected, but the information is put into the public domain, the losses to U.S. innovators and investors are enormous.

Secrecy until a patent decision is made, coupled with the destruction of rejected patent applications, is the easy, sure, costless way to minimize infringement risks to inventors and society.

11. *What are the risks that an economic secrecy order regime would influence other nations to implement similar laws? Would the global implementation of an economic secrecy order regime benefit or hinder the progress of innovation in the United States?*

Hopefully, other nations would adopt similar laws. A respect for intellectual property rights would be greatly enhanced by helping IP owners gain the exclusive right of use of their vital technologies, particularly in a world where effective IP laws do not exist in many nations.

Premature publication of proprietary secrets, coupled with state-led infringement, discourages R&D development and forces small entity inventors out of the process – often altogether.

Ultimately the destructive nature of the present policy is found in the extraordinary declining role of small entity and independent inventors in the U.S. economy. The high, negative cost – largely unexamined – of present policies are reflected in the tables that accompany this response.

12. How would such a secrecy order regime affect international efforts toward a more harmonized patent system?

It would encourage the strengthening of patent rights. U.S. national and economic security issues outweigh in importance the quest for a harmonized global patent system.

13. Should the USPTO consider limiting what is published at 18 months?

The USPTO should publish only those applications whose owner requests such publication. The default should be no publication until a patent is granted. Patent applications denied a patent should be destroyed, as in the past. Other nations concerned about IP security should be asked to do the same.

This would be a return to the practices used prior to the 1999 Patent Act – policies that the U.S. used successfully for more than 200 years.

Answers to questions 14, 15, 16 and 17 require classified data not in my possession.

Appendix

Table 1 –U.S. Patent Applications, Patents Granted, Pre-Grant Patent Publications and Secrecy Orders Issued and Rescinded (FY 1991-2010)

Table 2 – Patent Average Pendency (FY 1989-2011)

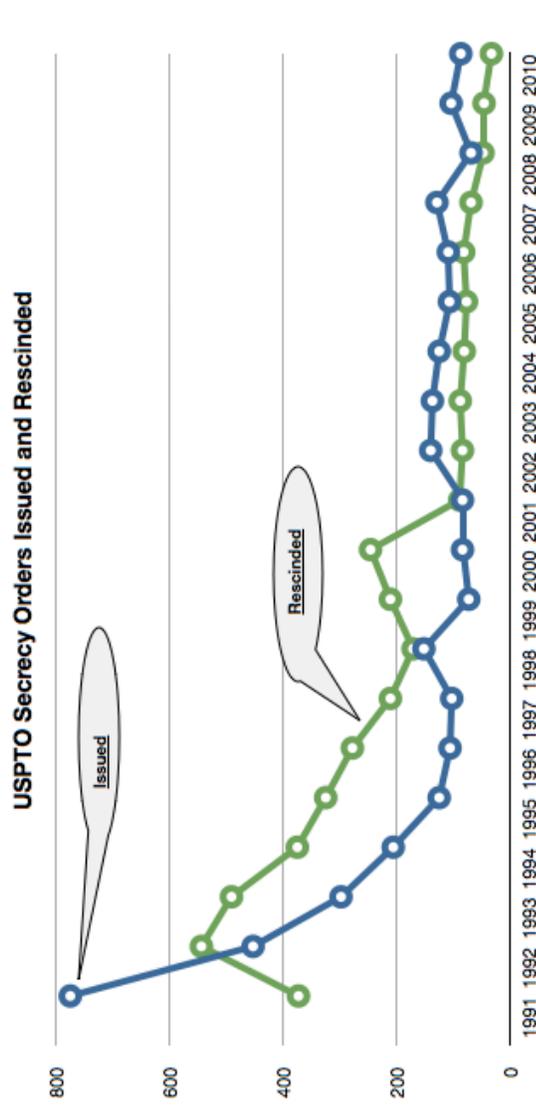
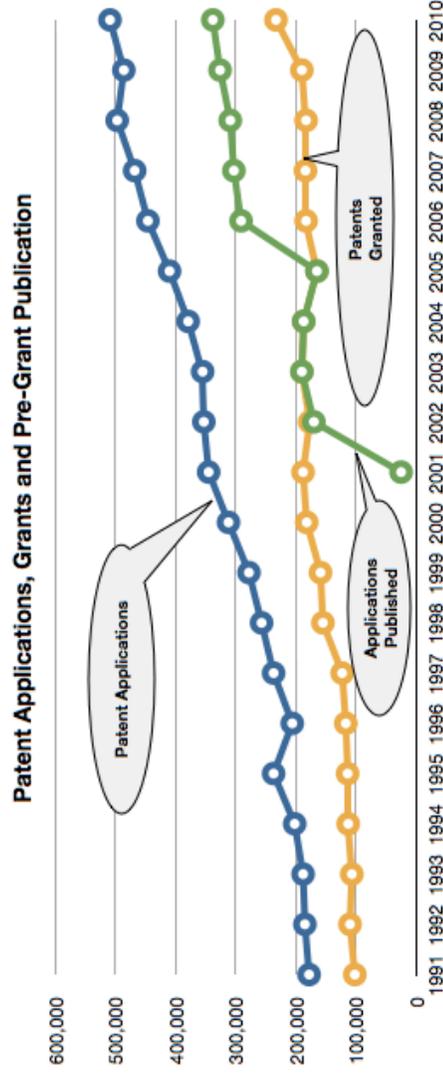
Table 3 – Share of U.S. Patents Granted to Small Entities, (FY 1988-2009)

Table 4 – Utility Patents Issued to Small Entities (USPTO Annual Report 2011)

Table 5 – Number and Percent of U.S. Patents Granted to U.S. and Foreign Individuals (1964-2011)

U.S. Patent Applications, Patents Granted, Pre-Grant Patent Publications and Secrecy Orders Issued and Rescinded (FY 1991-2010)

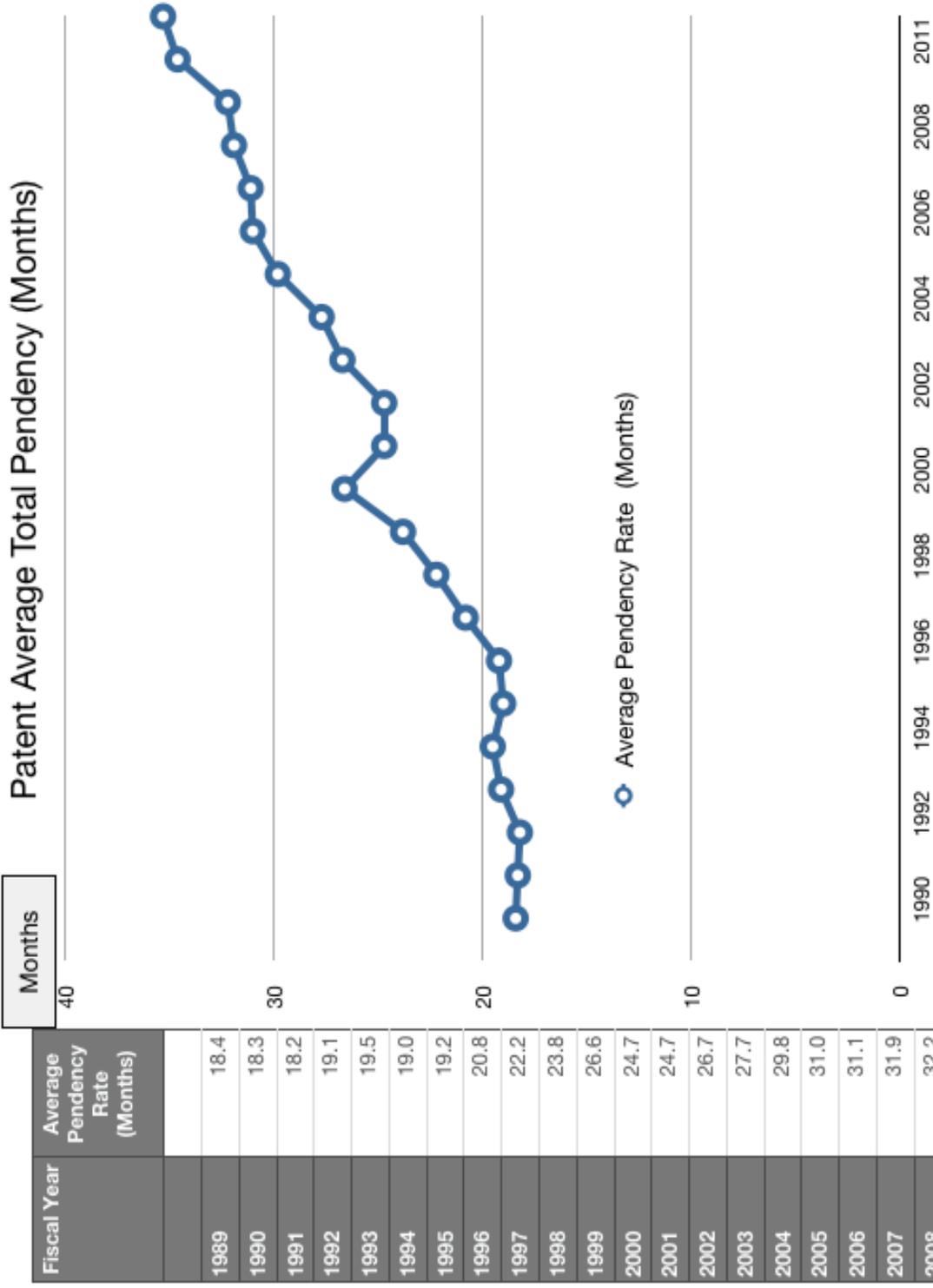
Fiscal Year	Patent Applications Filed	Applications Published at 18 Months from Filing	Patents Granted	USPTO Secrecy Orders Issued	USPTO Secrecy Orders Rescinded	Total Secrecy Orders in Effect
1991	178,000	N.A.	102,000	774	372	6,193
1992	185,000	N.A.	110,000	452	543	6,102
1993	188,000	N.A.	107,000	297	490	5,909
1994	202,000	N.A.	113,000	205	374	5,540
1995	237,000	N.A.	114,000	124	324	5,340
1996	206,000	N.A.	117,000	105	277	5,168
1997	237,000	N.A.	123,000	102	210	5,060
1998	257,000	N.A.	155,000	151	170	5,041
1999	278,000	N.A.	159,000	72	210	4,903
2000	312,000	N.A.	182,000	83	245	4,741
2001	345,000	25,000	188,000	83	88	4,736
2002	353,000	170,000	177,000	139	83	4,792
2003	355,000	190,000	190,000	136	87	4,841
2004	379,000	187,000	187,000	124	80	4,883
2005	410,000	165,000	165,000	106	76	4,915
2006	446,000	291,000	183,000	108	81	4,942
2007	468,000	303,000	184,000	128	68	5,002
2008	497,000	309,000	183,000	68	47	5,023
2009	486,000	326,000	190,000	103	45	5,081
2010	509,000	338,000	233,000	86	32	5,135



Sources: Data on patent applications filed, granted and published comes from the USPTO Annual Reports. Data on secrecy orders comes from The Union of Concerned Scientists. Publication of patent applications began in November 2001.

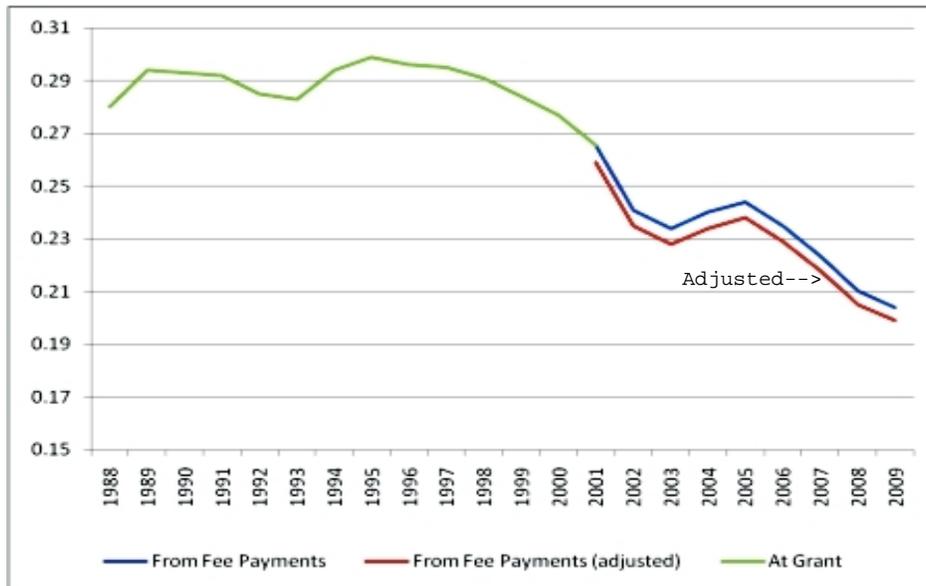
Patent Average Total Pendancy (Months)

(FY 1989-2011)



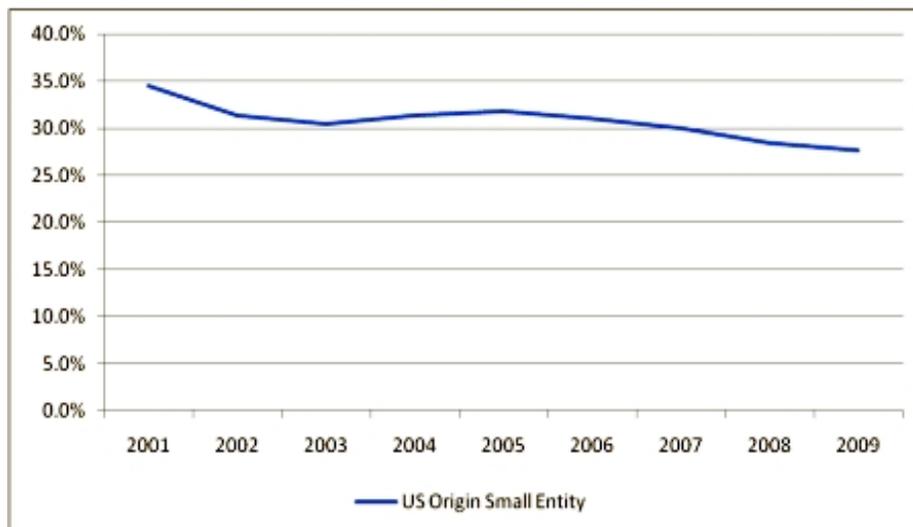
Source: Annual Reports, United States Patent and Trademark Office.

Share of U.S. Patents Granted to Small Entities, 1988-2009



Source: Created from data provided by the USPTO
(c) Copyright Scott Shane 2010

Percentage of U.S. Patents Granted to U.S. Residents Awarded to Inventors in Small Entities, 2001-2009



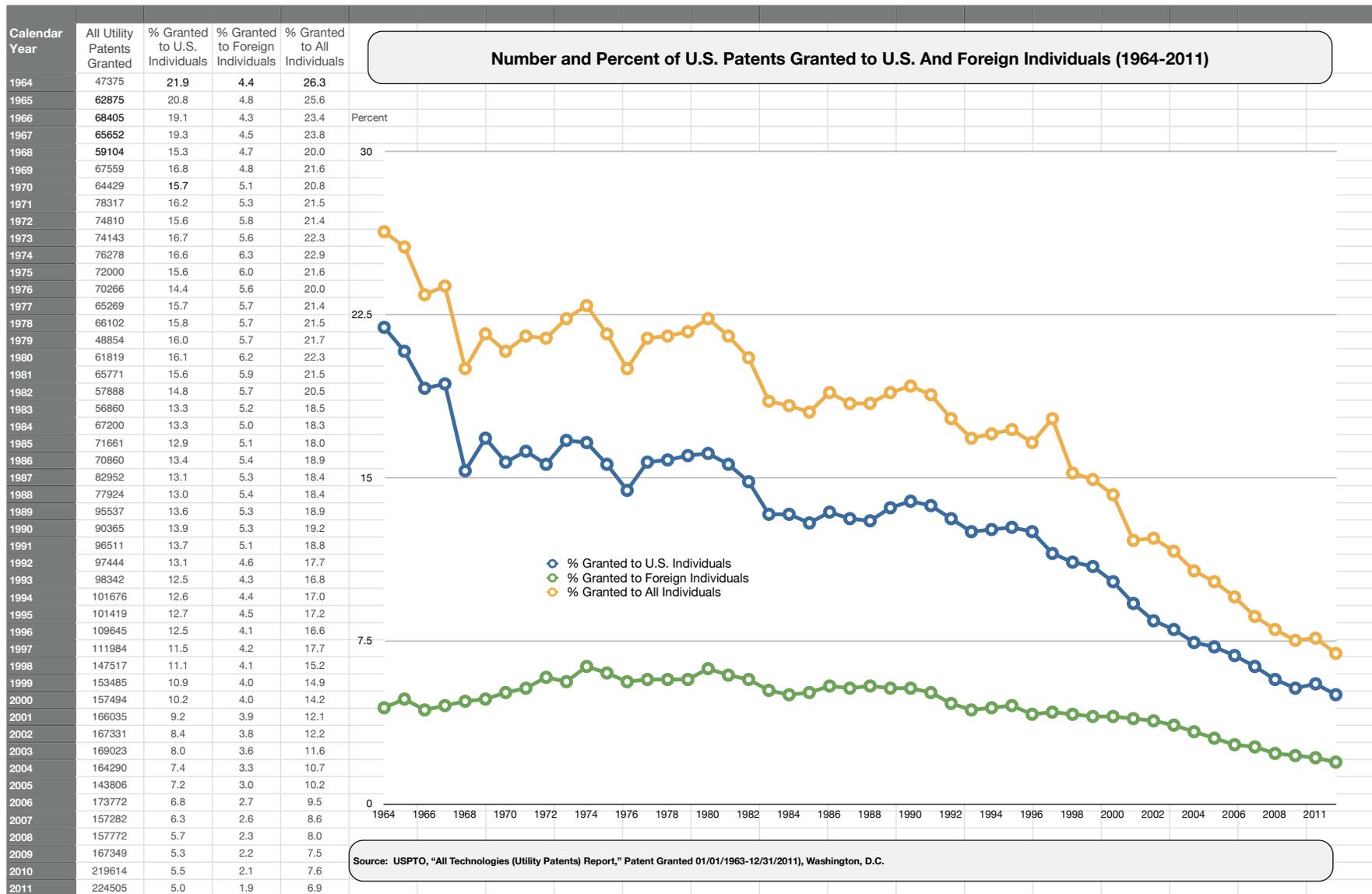
Source: Created from data provided by the USPTO
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Note: The USPTO defines “small entities” as individual inventors, firms with 500 or fewer employees, universities and independent research organizations.

Table 11: Utility Patents Issued to Small Entities

TABLE 11: UTILITY PATENTS ISSUED TO SMALL ENTITIES (FY 2007 - FY 2011)					
Fiscal Year of Grant	2007	2008	2009	2010	2011
Percentage Small Entity	22.14%	20.87%	19.76%	19.87%	19.80%
US origin ¹ (#Note1)	30.38%	28.76%	27.54%	27.76%	27.87%
Foreign origin ¹ (fn_wlt11_1b.html#MainContent)	13.66%	13.06%	12.27%	12.22%	12.16%
Percentage Large Entity	77.86%	79.13%	80.24%	80.13%	80.19%
US origin ¹ (fn_wlt11_1c.html#MainContent)	69.62%	71.24%	72.46%	72.24%	72.13%
Foreign origin ¹ (fn_wlt11_1d.html#MainContent)	86.34%	86.94%	87.73%	87.78%	87.84%
Notes:					
1: Patent origin is based on residence of the first-named inventor. (back to text) (#BackFromNote1)					

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Source: USPTO, "All Technologies (Utility Patents) Report," Patent Granted 01/01/1963-12/31/2011), Washington, D.C.