Foreign Filing Licensing and Patent Application Publication: A Risk to National Economic Security?

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Especially in these times of economic crisis, our economic security is just as vitally important as our national security. The protection of this country's innovations from unfair foreign exploitation must be of paramount importance to the incoming Administration.

One step in better protecting our country's innovations is to fix a material weakness in our system of controlling the export of technology. The USPTO should evaluate its procedures and legal authority that protect our country's innovations, especially the USPTO's practices and procedures in the granting licenses to file patent applications abroad and in the publishing of patent applications for technologies subject to export controls.

Summary

Technological innovation is the bedrock of the economic prosperity of the United States. Innovation drives this country's economic growth and assures economic security for its people. In these times of economic crisis, protection of innovation should be of the utmost concern to the incoming Administration. National security and economic security are intertwined. The United States should not only protect its physical borders, but also its metaphysical borders, through better protecting intellectual property rights.

Securing this country's innovative advantages requires a coordinated effort among various agencies of the federal government. The first and foremost agency that protects our technological innovations is the United States Patent and Trademark Office (USPTO) of the Department of Commerce. The USPTO has issued approximately 190,000 patents per year since 2000,[i] these patents provide patent owners with up to 20 years of exclusive rights to their inventions.

Beyond legal exclusivity for this country's innovations, the government limits the transfer of our sensitive innovations to foreign countries. Controlling the export of U.S. technologies is vital not only to protect this country's national security but also our economic security interests as well.

Numerous agencies, such as the departments of Defense, Homeland Security, State, NASA, Justice, and Energy, are involved in restricting the proliferation of technologies that would affect our national security. The USPTO's contribution is to keep patent applications secret and to withhold their publication for as long as national security interests are identified. When national security is at risk by publicly disclosing an invention claimed in a patent application, the requisite security agency instructs the USPTO to issue a secrecy order on the application. The USPTO has a great deal of experience with secrecy orders for patent

applications because secrecy orders have been used since World War I to prevent technologies from slipping into the hands of the enemy.

The screening of patent applications, in the USPTO's Office of Licensing and Review, begins with an automated word search for terms that might implicate national security interests and continues with a second level search by trained examiners having security clearances. The quality or effectiveness of the screening process cannot be evaluated by the public, because the USPTO no longer states what sources of information it uses to screen a patent application for a referral to a defense-related agency for a final determination of whether a secrecy order would issue.

Several agencies, such as the Bureau of Industry and Security (BIS) of the Department of Commerce, are also involved in protecting the nation's economic interests and furthering the country's foreign policy through economic sanctions. The BIS, the State Department, and the Department of Energy have delegated to the USPTO the authority to control the export of economically sensitive or restricted technologies through the granting of a license for the limited purpose of filing in a foreign country an application for patent protection for inventions made in the United States.

Because of the absence of statutory authority to do so, the USPTO's protection of economic security interests may be lacking. The USPTO could theoretically control the export of economically sensitive (but not national security sensitive) technologies by refusing to grant a foreign filing license. However, the requestor may challenge such refusal as being beyond its authority. Evaluation of the USPTO's method of determining whether to grant a foreign filing license is not possible because the USPTO has no publicly available information on what criteria it uses. In addition, the USPTO does not publish statistics on the number of foreign filing licenses that were granted or were refused and the reasons for a refusal. Shockingly, an analysis, based upon publicly available data and using conservative estimates, indicates that the USPTO grants a foreign filing license to nearly all patent applications.

Fundamentally, there is a design weakness in the system to protect this country's innovations and, thus, its economic security. Since the passage of the American Inventors Protection Act of 1999, the USPTO publishes to the world pending patent applications 18 months after the filing of the earliest application anywhere in the world. The USPTO has published over 1.4 million patent applications since 2003.[ii] Under the present law, a patent application will be published unless it is subject to a secrecy order, or its publication would be detrimental to the national security, or the U.S. applicant certifies that the applicant will not file a patent application in another country. Astonishingly, if the controlled technology is made public through publishing its patent application, export controls regulations no longer apply. In other words, the USPTO can lift export controls imposed by other agencies on a technology by publishing its patent application.

The national security, on the one hand, is protected from the unintended consequences of the publication of patent applications because no application is published that is subject to a secrecy order. However, the economic security, on the other hand, is not so protected. Technologies that have export controls for reasons of economic security can be made available to the world by patent application publication. This is a fundamental flaw in the system. The rip in the economic security net must be mended.

The USPTO advised that the only way for a U.S. applicant to avoid publication of sensitive technology was to opt-out of publication by promising not to file overseas.[iii] According to this advice, applicants must give up their overseas patent rights in order to protect national economic security. This leaves protection to the national economic security in the hands of altruistic inventors.

Our recommendations are:

- The USPTO and the agencies involved in screening patent applications for national security risks should create a comprehensive, unified package of criteria used to evaluate the national security implications of patentable technologies. A declassified version of the criteria should be made publicly available.

- The USPTO and the agencies involved in controlling exports should create a comprehensive, unified package of criteria to evaluate the economic security implications of patentable technologies. A declassified version of the criteria should be made publicly available.

- The USPTO should evaluate its procedures and legal authority to screen applications for foreign filing licenses that implicate economic security concerns.

- The USPTO should propose legislation and should promulgate rules that would modify the screening and publication of patent applications to better protect our economic security.

- The USPTO should make more transparent its processes of screening patent applications for national security and economic security concerns, including publishing statistics on secrecy orders and foreign filing licenses.

Secrecy Orders

"Whenever publication or disclosure by the publication of an application or by the grant of a patent on an invention" might "be detrimental to the national security" in the opinion of the Commissioner of Patents and/or the "head of the interested Government agency," the Commissioner of Patents "shall order that the invention be kept secret and shall withhold the publication of an application or the grant of a patent."[iv]

History

Secrecy orders have a long history[v] that dates back to 1917.[vi] The 1917 Act stated, in part:

> That whenever during a time when the United States is at war the publication of an invention by the granting of a patent might, in the opinion of the Commissioner of Patents, be detrimental to the public safety or defense or might assist the enemy or endanger the successful prosecution of the war he may order that the invention be kept secret and withhold the grant of a patent until the termination of the war.[vii]

Invention secrecy laid dormant during the 1920s and 1930s. Before the U.S.'s involvement in World War II, the government reinstituted the invention secrecy law in 1940[viii] and amended the law in 1941[ix] and 1942.[x] In both World War eras, invention secrecy was only enforced during wartime.[xi] However at the advent of the Cold War, invention secrecy was reauthorized.[xii] In response to the Department of Defense's repeated requests, Congress repealed the acts of 1917, 1940, 1941, and 1942, and passed the Invention Secrecy Act of 1951.[xiii] The Invention Secrecy Act continues to this day as 35 U.S.C. §§ 181-188.

Secrecy Order Procedures

Patent applications are screened in the USPTO's Office of Licensing and Review.[xiv] All provisional, utility, design, and Patent Cooperation Treaty applications are screened. Foreign language patent applications are also screened if they can be translated with software that performs the machine translation.[xv] The screening process would include a review by examiners with appropriate security clearances and technical backgrounds inspecting each patent application to determine if it contains "subject matter, that if disclosed, might impact the national security."[xvi]

There are three levels of review:

First Level: Automated screening in the Office of Initial Patent Examination. When an application is filed, it is converted to text. The text is checked against a master list of terms (for example, "atomic

energy"). Approximately 600,000 patent applications are filed each year.

Second Level: Manual screening by the examiners. The USPTO estimates that approximately 75,000 applications are manually screened by the licensing and review examiners.

Third Level: Referral to the defense agencies for a final decision. Defense agencies include: the Defense Threat Security Administration (for the Defense Department (DoD) and the National Security Agency (NSA)), the Department of Energy (DoE), the National Aeronautics and Space Administration (NASA), the Department of Homeland Security, and the Department of Justice. The USPTO estimates that there are approximately 22,000 patent applications that are referred to the defense agencies for a final determination.[xvii]

Up until August 2001, the USPTO had stated in its procedures that it would base its determination upon information provided by the Armed Services Patent Advisory Board (ASPAB),[xviii] the DoE, and NASA. At the time, the USPTO referenced the ASPAB's Patent Security Category Review List ("Category Review List") and the DoD's Militarily Critical Technology List (MCTL).[xix] However, the USPTO now no longer discloses what information it uses to make its determination.[xx]

An important guideline that the USPTO may still use[xxi] is ASPAB's Category Review List.[xxii] The Category Review List consists of 30 categories of inventions, containing about 370 specific items, which are identified as being of security interest to different defense agencies. The agencies identified in the Category Review List are the Army, the Navy, the Air Force, the Department of Energy [Atomic Energy Commission], NASA, and the National Security Agency.[xxiii] Items contained on the list include military devices as well as items with commercial applications.[xxiv] Another source is the MCTL. The non-classified version of the list is available on the Internet.[xxv] There are 20 categories of restricted technologies, such as biological, information systems, and nuclear systems technology.[xxvi]

The USPTO forwards applications containing subject matter deemed a possible national security threat to the interested defense agencies.[xxvii] An agency's decision to impose a secrecy order is governed by the statutory standard that "the publication or disclosure of the invention by the granting of a patent would be detrimental to the national security."[xxviii] Because this is the only statutory restriction on the defense agency's discretion, the defense agency essentially is left to its own devices to make its decisions. After making its decision, such agency using the Category Review List simply informs the DoD that it wants a secrecy order, and the DoD instructs the Commissioner of Patents to issue the order.[xxix] Other nonmilitary agencies take it upon themselves to notify the USPTO.[xxx]

Types of Secrecy Orders

Secrecy Orders apply to the subject matter of the invention, not just to the patent application itself. Therefore, the secrecy order restricts disclosure or publication of the invention in any form. Furthermore, other patent applications already filed or later filed which contain any significant part of the subject matter of the application also fall within the scope of the order and must be brought by applicants to the attention of the USPTO.[xxxi]

There are three types of secrecy orders that could be issued: (1) Secrecy Order and Permit for Foreign Filing in Certain Countries, (2) Secrecy Order and Permit for Disclosing Classified Information, and (3) Secrecy Order.

1. The first type of secrecy order is to be used for those patent applications that contain technical data whose export is controlled by the guidelines contained in the DoD Directive 5230.25 (Nov. 6, 1984) which reviews export control under 10 USC 140(c) and the MCTL. The first type of secrecy order is intended to permit the widest utilization of the technical data in the patent application while still controlling any publication or disclosure that would result in an unlawful exportation. This type of secrecy order is based on the applicable export controls in either the Commodity Control List (CCL) or the Munitions Lists of the International Traffic in Arms Regulation (ITAR), and identifies the countries where corresponding patent applications may be filed. Countries with which the United States has reciprocal security agreements are: Australia, Belgium, Canada, Denmark, France, Germany, Greece, Italy, Japan, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Turkey, and the United Kingdom. Applications subject to a secrecy order cannot be filed directly with the European Patent Office since there is no reciprocal security agreement with it. Instead, applications must be filed in the individual EPO member countries identified above.

2. The second type of secrecy order is used for those patent applications containing technical data that is properly classified or classifiable (with no Government proprietary interest) under a security guideline where the patent application owner has a current DoD Security Agreement. If the application is classifiable, this secrecy order allows disclosure of the technical information as if it were classified as prescribed in the Industrial Security Manual (ISM). The intent of the second type of Secrecy Order is to treat classified technical data presented as a patent application in the same manner as any other classified material.

3. The third type of secrecy order is used for those patent applications that contain technical data properly classifiable under a security guideline where the patent application owner does not have a DoD Security Agreement. The order prevents disclosure of the subject matter to anyone without an express written consent from the Commissioner for Patents.

> This type of secrecy order is used where the other types of orders do not apply, including orders issued by the direction of agencies other than the DoD.[xxxii]

Even with a secrecy order, an application will still be examined but not to the point of final resolution until the secrecy order is lifted. If the national application is found to be in condition for allowance except for the secrecy order, the applicant and the agency, which caused the secrecy order to be issued, will be notified. This notice places the national application in a condition of suspension until the secrecy order is removed. When the secrecy order is removed, the USPTO will issue a notice of allowance.[xxxiii] If the national application comes to a final rejection, it must be appealed or otherwise prosecuted to avoid abandonment. Appeals in such cases must be completed by the applicant but will not be set for hearing until the secrecy order is removed, unless otherwise specifically ordered by the Commissioner for Patents.[xxxiv] In the case of international applications, they will be processed up to the point where, if it were not for the secrecy order, record and search copies would be transmitted to the international authorities or the applicant.[xxxv]

A secrecy order expires after one year. However, the Commissioner of Patents can continue the secrecy order each year upon notification from the head of the department who requested the secrecy order.[xxxvi] The Commissioner will lift the secrecy order upon the request of the agency that requested the secrecy order.[xxxvii] Also, any principal affected by the secrecy order can petition the Commissioner for Patents of the USPTO to modify[xxxviii] or remove a secrecy order.[xxxix]

There are penalties for violating a secrecy order, such as the USPTO deeming the patent application abandoned.[xl] There are also criminal penalties. If the invention that has been ordered to be kept secret is knowingly and willfully published or filed in a foreign country without a license, the applicant can be fined up to $10,000 and/or imprisoned for not more than two years.[xli]

Statistics

According to one 1994 report, about 3% of all patent applications that are filed typically fall into one of the areas identified in the Category Review List, and these are forwarded to the defense agencies for review. Some form of secrecy order, ranging from limited export control to outright classification, is imposed on about five to 10 percent of the applications that are reviewed by the military.[xlii]

Historically, the number of secrecy orders in effect during the 1960s and the 1970s fluctuated between 4,100 and 5,100.[xliii] From FY 1998 to FY 2008, the number of secrecy orders in effect fluctuated from a high of about 6,200 to a low of about 4,750. See Table 1. The majority of secrecy orders were imposed in the late 1980s and early 1990s. The number of secrecy orders in effect were at their highest in the 1990s. The number dropped in the early 2000s and have returned to the number of secrecy orders in effect in the late 1980s. Of note, since FY

1997, approximately one-third of the secrecy orders imposed were upon patent applications submitted by the private sector. Table 1 ("John Doe SOs").

Since FY 2002 (18 months after the passage of the AIPA), the trend has been a slow incremental increase in the number of secrecy orders in effect but the numbers are very low. Only 809 secrecy orders have been issued while 522 have been rescinded. See Table 1.

Overall, the USPTO and the defense agencies have a long-standing, extensive and coordinated system designed to the prevent the disclosure of information that implicates the national security. However, a USPTO secrecy order affects a very small number of applications.

Foreign Filing Licenses

The Invention Secrecy Act of 1951[xliv] barred the filing of an application for a patent or for the registration of a utility model, industrial design, or model in respect of an invention made in this country in any foreign country prior to six months after filing in the United States without a license obtained from the Commissioner of Patents.[xlv]

History[xlvi]

Statutes requiring permission by license to file a patent application abroad were first enacted in 1940, before the US's direct involvement in World War II.[xlvii] The 1940 statute deemed a patent application abandoned if "an application for a patent therefore has been filed in a foreign country by the inventor or his assigns or legal representatives, without the consent or approval of the Commissioner of Patents."[xlviii] The purpose of the licensing was to prevent the "publication or disclosure of an invention by the granting of patent might, in the opinion of the Commissioner of Patents, be detrimental to the public safety or defense."[xlix]

In 1941,[l] the statute was amended to state:

> No person shall file or cause or authorize to be filed in any foreign country an application for patent or for the registration of a utility model, industrial design, or model in respect of any invention made in the United States, except when authorized in each case by a license obtained from the Commissioner of Patents under such rules and regulations as he shall prescribe.[li]

The Invention Secrecy Act of 1951 repealed the World War II foreign filing licensing statutes and substituted the present-day 35 USC 184. The purpose of the Act was to prevent exportation of information potentially detrimental to the security of the country.[lii] The Patent Act of 1952 merely codified the Invention Secrecy Act of 1951 without any changes.

Export Controls Generally

The U.S. government imposes controls on the export of certain types of technical information. The Departments of State, Energy and Commerce administer these restrictions. The department that regulates the export of the technical information depends on the subject matter involved:

1. The Directorate of Defense Trade Controls (DDTC), in the Department of State, is responsible for regulating the export of arms and munitions through the International Traffic in Arms Regulations (ITAR).[liii] The types of technologies controlled by ITAR are listed in the United States Munitions List (USML).[liv] The USML contains defense articles or services. The USML's 20 categories of technologies range from combat shotguns to directed energy weapons, from explosives to biological agents, and from aircraft to space craft components.

2. The National Nuclear Security Administration (NNSA), in the Department of Energy, is responsible for regulating and licensing the export of nuclear technologies through the Assistance to Foreign Atomic Energy Activities regulations.[lv]

3. The Bureau of Industry and Security (BIS), in the Department of Commerce, is responsible for regulating the export of technologies that affect national security, economic security, or the foreign policy goals through the Export Administration Regulations (EAR).[lvi] The BIS maintains the Commodity Control List (CCL)[lvii] that lists the types of technologies that may require a BIS export license. The CCL has ten categories that are similar to the categories of the Militarily Critical Technologies List that includes restricted technologies, such as biological, information systems, and nuclear systems technology.

The goals of the export controls under the authority of the Departments of State and Energy are to protect national security by preventing the export of technologies with a military application or nuclear technologies that could be used to harm the U.S.

The BIS's mission is to "advance U.S. national security, foreign policy, and economic objectives by ensuring an effective export control and treaty compliance system and promoting continued U.S. strategic technology leadership."[lviii] The purpose of export control by the BIS is:

> The export control provisions of the EAR [Export Administration Regulations] are intended to serve the national security, foreign policy, nonproliferation, and short supply interests of the United States and, in some cases, to carry out its international obligations. Some controls are designed to restrict access to dual use items by countries or persons that might apply such items to uses inimical to U.S. interests. These include controls designed to stem the

> proliferation of weapons of mass destruction and controls designed to limit the military and terrorism support capability of certain countries. The effectiveness of many of the controls under the EAR is enhanced by their being maintained as part of multilateral control arrangements. Multilateral export control cooperation is sought through arrangements such as the Nuclear Suppliers Group, the Australia Group, and the Missile Technology Control Regime. The EAR also include some export controls to protect the United States from the adverse impact of the unrestricted export of commodities in short supply.[lix]

The BIS's purposes to control the export of technology is broader than just controlling technologies that might be "detrimental to national security."

Export Control and Patent Applications

The Invention Secrecy Act gave exclusive control over the exportation of technical information for the limited purpose of preparing a patent application for filing or possible filing overseas to the USPTO. The DDTC, NNSA, and the BIS have delegated their export control authority to the USPTO if the purpose of the exportation is for preparing a patent application for filing or possible filing overseas.[lx]

Foreign filing licenses for the purpose of a patent application in a foreign country do not authorize the export of any technology that is not specifically submitted to the USPTO as part of a U.S. patent application or a petition for a foreign filing license. In other circumstances, the BIS or the other export control agencies are responsible for the licenses to export technology. [lxi]

Foreign Filing Licensing Procedures

The USPTO grants foreign filing licenses according to its regulations.[lxii] The USPTO does not disclose what criteria it uses to determine whether or not a foreign filing license would be granted. In fact, the Office of Licensing and Review will not provide guidance to an applicant on whether the applicant's invention would be subject to a foreign filing license.[lxiii]

Under 35 USC 184, "except when authorized by a license obtained from the Commissioner of Patents, a person shall not file or cause or authorize to be filed in any foreign country prior to six months after filing in the United States an application for patent or for the registration of a utility model, industrial design, or model in respect of an invention made in this country." A license from the Commissioner for Patents is required before filing any application for patent including any modifications, amendments, or supplements thereto or divisions thereof or for the registration of a utility model, industrial design, or model, in a foreign patent office or any foreign patent agency or any international agency other than the United States Receiving Office, if the invention was made in the United States and: (1) an application on the invention has been on file in the

United States less than six months prior to the date on which the application is to be filed, or (2) no application on the invention has been filed in the United States.[lxiv]

If the invention is subject to a secrecy order, the Commissioner of Patents will not grant a license without the concurrence of the head of the department or the chief officer of the agency who caused the order to be issued.[lxv] The license may be granted retroactively where an application has been filed abroad through error and without deceptive intent and the application does not disclose an invention within the scope of a secrecy order.[lxvi]

There are two ways to obtain a license to file a patent application abroad: either petitioning for a foreign filing license[lxvii] or waiting six months after filing a patent application in the USPTO, at which time a license on that subject matter is no longer required as long as no Secrecy Order has been imposed.[lxviii]

The most common way by which a foreign filing license may be obtained is the mere filing of an application in the USPTO. Every U.S.-originated application filed in the USPTO is considered to include an implicit petition for a foreign filing license. The grant of a license is not immediate or even ensured. If the application is not marked by the security screeners, the petition is granted. This is indicated to the applicant by the presence on the filing receipt of the phrase "Foreign Filing License Granted" and a date. The license becomes effective on the date shown. Further, grant of this license is made of record in the application file.[lxix]

The license permits the applicant to file the application with a foreign patent office including the authority to: export and file the application in foreign countries and international organizations, make amendments, modifications or supplements in the application, and take any action in the prosecution of the foreign or international application, as long as the action does not change the general nature of the subject matter, which would require a secrecy order to be issued.

If a license is not procured, the applicant will not receive a U.S. patent or an issued patent will be invalidated unless the failure to procure such a license was through error and without deceptive intent, and the patent does not disclose subject matter within the scope of 35 U.S.C. 181.[lxx]

Statistics

In 1966, it was noted that "the Government has neither the means of preventing the actual filing of patent applications abroad nor an agency to discover violations of the foreign licensing provisions."[lxxi] In fact, violations of the foreign filing licensing statute seems to only be brought to light by private parties in litigation to invalidate the claims of an issued patent.[lxxii] This apparent weakness in the enforcement of foreign filing licensing is further compounded by the fact that the USPTO does not publish statistics on foreign filing licensing activities.

An indirect and very conservative estimate on the number of foreign filing licenses can be made based upon USPTO's published statistics. A reasonable assumption is that any application filed by a resident of the U.S. would be eligible for a foreign filing license because the patent application would concern "an invention made in the United States." According to the USPTO, there were approximately 920,000 patent applications filed by a resident of the US between FY 2004 and 2007.[lxxiii] If the USPTO issues a secrecy order, a foreign filing license for that patent application would not normally be given. Between Fiscal Year 2004 and 2007, there were 466 secrecy orders issued. Forty-five of the secrecy orders allow filing of a patent application in those countries with a reciprocal secrecy agreement with the U.S. Table 1. Thus, one can assume that at least 421 foreign filing licenses were denied due to the existence of a secrecy order. Therefore, based on this conservative estimate, less than .05 percent of requests for a foreign filing license were denied.

In comparison, in FY 2006 the BIS received 18,941 applications for an export license and denied or revoked 196 applications[lxxiv] [a 1.0% denial rate] and in FY 2007 the BIS received 19,512 applications and denied or revoked 176 applications [a 0.9% denial rate].[lxxv]

Implications

Based on the above analysis, the USPTO grants all but a very few applications a foreign filing license. Only when the disclosure of information in a patent application is deemed detrimental to the national security would a foreign filing license be denied. This could be due to the fact that foreign filing licensing was originally designed to only protect national security.

However, the purpose of export controls has been broadened to encompass not only national security interests but also economic competitiveness and foreign policy goals. For example, the BIS's mandate is broader than just protecting national security. Therefore, the USPTO's liberal granting of foreign filing licenses may be a material weakness and may not be in harmony with the policies of other government agencies with regard to export controls.

Patent Application Publication

The American Inventors Protection Act of 1999 (AIPA) amended the patent statute to require the publication of most patent applications 18 months after their filing. The USPTO touted "a number of significant benefits to the patent system" of publishing patent applications. USPTO Director Q. Todd Dickinson stated, "It allows earlier insight into the state-of-the-art, helping organizations and inventors better pinpoint their research and development investments. It expands the library of prior art available to USPTO's examiners, ensuring that the first inventor can be readily determined earlier in the process. And, it brings us another step closer to an international patent, an important goal in today's global

economy."[lxxvi] The USPTO has published over 1.4 million patent applications since 2003.[lxxvii]

There are exceptions to patent application publication. Under the present law,[lxxviii] a patent application will be published unless, among other things,[lxxix] it is subject to a secrecy order[lxxx] or its publication would be detrimental to the national security.[lxxxi] The two exceptions are co-extensive, that is, if national security is implicated in a patent application, a secrecy order would issue.[lxxxii] If a secrecy order is issued, the patent application will not be published. Another way is that the applicant certifies that the applicant will not file a patent application in another country.[lxxxiii]

Patent Application Publication's Effects on Export Controls

As stated above, technologies subject to a secrecy order will not be published unless and until the secrecy order is lifted. However, the publication of patent applications affects export control policies that have broader mandates than just protecting national security.

The U.S. government imposes controls on the export of certain types of technical information. The Departments of State, Energy and Commerce administer these restrictions depending on the subject matter involved. The Invention Secrecy Act gave exclusive control over the exportation of technical information for the limited purpose of preparing a patent application for filing or possible filing overseas to the USPTO. The Departments of State, Energy and Commerce delegated their export control authority to the USPTO if the purpose of the exportation is for preparing a patent application for filing or possible filing overseas. As stated, the USPTO grants all but a very few applications a foreign filing license. Therefore, the USPTO's liberal granting of foreign filing licenses may not be in harmony with the policies of other government agencies with regard to export controls.

Patent application publication has a greater effect on export controls than foreign filing licenses. Export controls are lifted if the technology detailed in a patent application or patent is made publicly available. For example,

- The ITAR, which is administered by the State Department, does not control technology that is in the public domain.[lxxxiv] "Public domain" means "information which is published and which is generally accessible or available to the public ... through patents available at any patent office."[lxxxv]

- The Energy Department would authorize the export of technology that is public information.[lxxxvi] This includes information "available in public libraries, public reading rooms, public document rooms, public archives, or public data banks, or in university courses."[lxxxvii]

- The EAR, which is administered by the Commerce Department, no longer applies if export controlled technology "becomes generally accessible to the interested public in any form, including … Patents and open (published) patent applications available at any patent office."[lxxxviii]

Barring an exception listed previously,[lxxxix] the USPTO will publish a patent application 18 months after its filing. Under the present law, a patent application that is denied a foreign filing license but has no secrecy order imposed will be published. Therefore, technologies that were denied an export license by another agency would be freely available for export due to the USPTO's publication of the technology in a patent application.

The USPTO advised that the only way for an applicant to avoid publication of sensitive technologies was to opt-out of publication by promising not to file overseas.[xc] According to this advice, applicants must give up their overseas patent rights in order to protect national economic security. This leaves protection to the national economic security in the hands of altruistic inventors.

There is rip in the economic security net that needs mending.

Recommendations

Based upon our findings, we recommend the following:

1. *The USPTO and the agencies involved in screening patent applications for national security risks should create a comprehensive, unified package of criteria used to evaluate the national security implications of patentable technologies. A declassified version of the criteria should be made publicly available.*

There are many agencies involved in screening technologies for national security issues, including the departments of Defense, State, Homeland Security, Energy, and Commerce, NASA, the NSA, and even the National Institutes of Health. At one time, the USPTO used one list authored by the ASPAB – an agency that no longer exists. A new comprehensive, unified list of technologies along the lines of the old ASPAB Category Review List, should be created. The new criteria should be used by all agencies in order to more efficiently and effectively screen patent applications for national security issues.

2. *The USPTO and the agencies involved in controlling exports should create a comprehensive, unified criteria package to evaluate the economic security implications of patentable technologies. A declassified version of the criteria should be made publicly available.*

There are a similar number of agencies involved in the control of exports that would affect our economic security. However, there has never been a unified list of criteria used to evaluate patent applications that may affect economic security

like the ASPAB's Category Review List. The Commodity Control List maintained by the BIS would be a good first step at a comprehensive, unified list.

3. *The USPTO should evaluate its procedures and authority to screen applications for foreign filing licenses that implicate economic security concerns.*

Publicly available information on how the USPTO grants foreign filing licenses indicate that only national security concerns are taken into account. The procedures and criteria used by the USPTO should mirror the procedures and criteria used by other agencies when they grant export licenses. There should not be the incongruent result that a technology that is banned from export can have the details of that technology exported in the form of a patent application.

4. *The USPTO should propose legislation and should promulgate rules that would modify the screening and publication of patent applications to better protect our economic security.*

The intention of patent application publication is to allow earlier insight into the state-of-the-art, to expand the library of prior art available to USPTO's examiners, and to bring an international patent system a step closer to reality. However, an unintended consequence is that U.S.-made technologies that may be vital to the continued economic health of the nation are made available to the world for exploitation. The USPTO should propose legislation and rules that would allow U.S. inventors and manufacturers to exploit innovations of US-origin first before such innovations are made known to the world.

5. *The USPTO should make more transparent its processes of screening patent applications for national security and economic security concerns, including publishing statistics on secrecy orders and foreign filing licenses.*

Good government requires transparency. The USPTO should publish in its annual report statistics on the number of secrecy orders issued and rescinded. Presently, the data are only disclosed through a Freedom of Information Act request.[xci] Right now, there is no way of knowing that applicants are securing foreign filing licenses, as required by law. The publication of the number of foreign filing licenses issued and denied would be another vital component in ensuring the enforcement of the nation's export controls.

Foreign Filing Licensing and Patent Application Publication:
A Risk to National Economic Security?

Table 1 - Secrecy Orders Issued by USPTO by Fiscal Year and Sponsoring Agency

Activity	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08
New Secrecy Orders	630	847	731	774	452	297	205	124	105	102	151	72	83	83	139	136	124	106	108	128	68
Rescinded SOs	237	413	496	372	543	490	574	324	277	210	170	210	245	88	83	87	80	76	81	68	47
Total SOs in effect	5122	5556	5791	6193	6102	5909	5540	5340	5168	5060	5041	4903	4741	4736	4792	4841	4885	4915	4942	5002	5023
Sponsoring Agencies for new SOs																					
ASPAB/DTSA	113	153	170	181	75	62	68	38	16	35	38	0	23	17	60	38	22	23	3	12	10
ARMY	179	107	145	93	50	29	20	11	14	4	17	24	16	11	15	23	16	14	2	22	8
NAVY	159	275	205	220	132	76	48	23	39	39	28	13	23	30	16	6	8	8	36	28	8
AF	166	292	194	265	174	105	58	37	28	24	67	20	12	25	44	65	69	46	40	45	20
DoE	13	20	16	15	21	25	11	15	8	1	4	15	9	0	3	4	3	6	7	0	2
NASA	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5	9	20	21	20
NIH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	1	0	0	0	0
New DoD SOs by Type																					
Type 1[a]	299	356	296	362	201	31	6	3	14	14	11	5	16	7	13	8	18	11	19	15	21
Type 2[b]	271	414	321	297	170	149	131	64	61	66	52	33	44	43	101	74	50	66	55	79	35
Type 3[c]	47	57	97	100	60	92	57	42	22	21	84	19	14	33	22	50	52	23	27	34	10
New SO's imposed by DoE, NASA	13	20	17	15	21	25	11	15	8	1	4	15	9	0	3	4	4	6	7	0	2
John Doe SOs										23	99	18	24	44	37	51	61	32	29	53	22

[a] Patent applications that contain technical data subject to export control guidelines.
[b] Patent applications that contain technical data that is properly classified or classifiable under a security guideline where the applicant has a current DoD Security Agreement.
[c] Patent applications that contain technical data that is properly classified or classifiable under a security guideline where the applicant does not have a current DoD Security Agreement.

ENDNOTES

[i] U.S. Patent and Trademark Office, *Performance and Accountability Report: Fiscal Year 2008*, Table 6
119, available at: http://www.uspto.gov/web/offices/com/annual/2008/2008annualreport.pdf.
[ii] U.S. Patent and Trademark Office, *Performance and Accountability Report: Fiscal Year 2008*, Table
115, available at: http://www.uspto.gov/web/offices/com/annual/2008/2008annualreport.pdf.
[iii] Statement of Deputy Director Peterlin to Pat Choate, September 2008 meeting.
[iv] 35 USC 181.
[v] See, Lee, Sabing, "*Protecting The Private Inventor Under The Peacetime Provisions Of The Invention Secrecy Act,*" Berkeley Tech. L. J., 12:2, Fall 1997, available at:
http://www.law.berkeley.edu/journals/btlj/articles/vol12/Lee/html/reader.html
[vi] Act of Oct. 6, 1917, ch. 95, 40 Stat. 394 (1917).
[vii] *Id.*
[viii] Act of July 1, 1940, ch. 501, 54 Stat. 710 (1940).
[ix] Act of Aug. 21, 1941, ch. 393, 55 Stat. 657 (1941).
[x] Act of June 16, 1942, ch. 415, 56 Stat. 370 (1942).
[xi] See *The Government's Classification of Private Ideas*, H. Rep. 96-1540, 96th Cong. 2d Sess. (Dec. 22 1980) at 3. ("From its inception in 1917, invention secrecy was premised on the fact or imminent prospe of war. … invention secrecy authority has been limited in time of war, but is now assumed to be permar in time of peace.").
[xii] *Id.* at 53-62 (detailing the history of the enactment of the Invention Secrecy Act in the 1950s).
[xiii] Invention Secrecy Act of 1951, ch. 4 §§ 10 & 11, 66 Stat. 3 (1952) (codified as amended at 35 U.S.C 181-188 (1994)).
[xiv] *The Government's Classification of Private Ideas: Hearings Before a Subcomm. of the House Comm Government Operations*, 96th Cong., 2d Sess. at 2 (1980) (statement of Rene D. Tegtmeyer, Assistant Commissioner for Patents, Patent and Trademark Office, Department of Commerce) [hereinafter *Hearings*].
[xv] American Intellectual Property Law Association, Biotechnology, Chemical, & Pharmaceutical Custo Partnership Meeting Summary, U.S. Patent & Trademark Office, December 4, 2007, available at:
http://www.aipla.org/Content/Microsites101/Biotechnology/Committee_Documents3/PTO_Customer_I nersh ip_MeetingReports/December_2007_Meeting1/BCPAIPLAReportDec4.doc
[xvi] MPEP § 115.
[xvii] American Intellectual Property Law Association, Biotechnology, Chemical, & Pharmaceutical Custo Partnership Meeting Summary, U.S. Patent & Trademark Office, December 4, 2007, available at:
http://www.aipla.org/Content/Microsites101/Biotechnology/Committee_Documents3/PTO_Customer_I nersh ip_MeetingReports/December_2007_Meeting1/BCPAIPLAReportDec4.doc
[xviii] The Armed Services Patent Advisory Board, which performed security review of patent applications behalf of the Department of Defense, was terminated in 1997, and its functions were transferred to the Defense Technology Security Agency (Pub. L. 105-85 § 906, 111 Stat. 1856 and H. Rpt. 105-132, p. 39
[xix] Federation of American Scientists, "*Administration of the Invention Secrecy Act in the Patent and Trademark Office*," 1991, available at: http://www.fas.org/sgp/othergov/invention/admin.html.
[xx] *Compare* MPEP § 115 (7th ed. July 1998) to MPEP § 115 (8th ed. Aug. 2001).
[xxi] *See also,* Peter J. Fasse and Rolf G. Hille, *USPTO's security & energy reviews*, *Industrial Biotechnology*, Vol. 4, No. 2, Summer 2008, pp. 139-141.
[xxii] Armed Services Patent Advisory Board, *Patent Security Category Review List* (1971) (declassified i 1994) [hereinafter ASPAB List].
[xxiii] *Id.*
[xxiv] *Id.*
[xxv] http://www.dtic.mil/mctl/MCTL.html
[xxvi] *Id.*
[xxvii] MPEP § 115.
[xxviii] 35 USC 181 ¶ 3.
[xxix] *See Hearings* at 451 (prepared statement of the ASPAB).
[xxx] MPEP § 115.

[xxxi] MPEP § 120.
[xxxii] *Id.*
[xxxiii] 37 CFR 5.3(c).
[xxxiv] 37 CFR 5.3(a).
[xxxv] 37 CFR 5.3(d).
[xxxvi] 35 USC 181.
[xxxvii] *Id.*
[xxxviii] 37 CFR 5.5.
[xxxix] 37 CFR 5.4.
[xl] 35 USC 182.
[xli] 35 USC 186.
[xlii] *See* Steven Aftergood, *Invention Secrecy Criteria Disclosed*, SECRECY & GOV'T BULL., Nov. 1994 (Federation of American Scientists), available at http://www.awpi.com/IntelWeb/US/S-GB/041.html.
[xliii] *The Government's Classification of Private Ideas*, H. Rep. 96-1540, 96th Cong. 2d Sess. (Dec. 22, 1980) at 2.
[xliv] Invention Secrecy Act of 1951, Sec. 4, 66 Stat. 5 (1952).
[xlv] 35 USC 184.
[xlvi] For good discussions of the history, see 34 Geo. Wash. L.Rev. 373 (1965) and 64 Mich. L.Rev. 496 (1966).
[xlvii] *See* Act of July 1, 1940, ch. 501, 54 Stat. 710.
[xlviii] 54 Stat. 710 (1940).
[xlix] *Id.*
[l] Act of August 21, 1941, ch. 393, 55 Stat. 657.
[li] 55 Stat. 657, sec. 3.
[lii] S.Rep. No. 1001, 82d Cong., 2d Sess. 1-3 (1951), reprinted in [1952] U.S. Code Cong. & Ad. News 1321, 1321-23 (Senate Report); *See also Beckman Instruments, Inc. v. Coleman Instruments, Inc.*, 338 F.2d 573, 576, 143 USPQ 278, 280 (7th Cir. 1964).
[liii] 22 CFR parts 120 through 130.
[liv] 22 CFR part 121.
[lv] 10 CFR part 180.
[lvi] 15 CFR parts 730-744.
[lvii] 15 CFR part 774.
[lviii] http://www.bis.doc.gov/about/index.htm
[lix] 15 CFR 730.6.
[lx] 15 CFR 734.3(b)(1)(v) and 734.10(b); 22 CFR 125.2(b); 10 CFR 810.3 and 810.7(a).
[lxi] "*Scope of Foreign Filing Licenses*," Notice, 73 FR 42781 (July 23, 2008), and 22 CFR 125.2(b).
[lxii] *See* 37 CFR Part 5.
[lxiii] USPTO, Office of Licensing and Review, FAQs at http://www.uspto.gov/web/offices/pac/dapp/opla/lr/faqs_lr.htm ("It is not the role of Licensing and Review to determine the need for a license. Rather, the need for a license is a legal decision that lies with the applicant.").
[lxiv] 37 CFR 5.11.
[lxv] 35 USC 184, 37 CFR 5.11(d)
[lxvi] 35 USC 184.
[lxvii] 37 CFR 5.12.
[lxviii] 37 CFR 5.11(e)(2).
[lxix] MPEP § 140.
[lxx] 35 USC 185.
[lxxi] 64 Mich. L. Rev. at 499.
[lxxii] *See e.g., In re Gaertner*, 604 F.2d 1348 (CCPA 1979), *Control Systems Research, Inc. v. Aerotech, Inc.,* 429 F. Supp. 914 (W.D. Pa. 1977).
[lxxiii] USPTO, *Performance and Accountability Report Fiscal Year 2008*, Table 7.
[lxxiv] *Annual Report Fiscal Year 2006*, Bureau of Industry and Security, Department of Commerce, p. 5.
[lxxv] *Annual Report to the Congress For Fiscal Year 2007*, Bureau of Industry and Security, Department of Commerce, p. 16.

[lxxvi] USPTO, "*USPTO Will Begin Publishing Patent Applications,*" Press Release 00-72, Nov. 27, 2000, available at: http://www.uspto.gov/web/offices/com/speeches/00-72.htm.
[lxxvii] U.S. Patent and Trademark Office, *Performance and Accountability Report: Fiscal Year 2008*, Table 1 p. 115, available at: http://www.uspto.gov/web/offices/com/annual/2008/2008annualreport.pdf.
[lxxviii] The Patent Reform Act of 2007, as introduced in both houses of Congress, would have required all patent applications to be published, except when the application is subject to a secrecy order (CHECK). The Patent Reform Act failed to be passed by the Congress before the end of the 110th Session.
[lxxix] See generally 35 U.S.C. § 122(b)(2).
[lxxx] 35 U.S.C. § 122(b)(2)(ii).
[lxxxi] 35 U.S.C. § 122(c).
[lxxxii] 35 USC 181.
[lxxxiii] 35 U.S.C. § 122(b)(2)(B)(i).
[lxxxiv] 22 CFR 125.1(a).
[lxxxv] 22 CFR 120.11(a)(5).
[lxxxvi] 10 CFR 810.7 (a).
[lxxxvii] 10 CFR 810.3.
[lxxxviii] 15 CFR 734.7(a)(3).
[lxxxix] See generally 35 U.S.C. § 122(b)(2).
[xc] Statement of Deputy Director Peterlin to Pat Choate, September 2008 meeting.
[xci] *See* http://www.fas.org/sgp/othergov/invention/stats.pdf