FROM GERMANY TO AUSTRALIA: OPPORTUNITY FOR A SECOND TIER PATENT SYSTEM IN THE UNITED STATES

Peter A. Cummings[*]

INTRODUCTION

> *Certainly an inventor ought to be allowed a right to the benefit of his invention for some certain time. Nobody wishes more than I do that ingenuity should receive liberal encouragement.*
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> –Thomas Jefferson[1]

As an inventor and the first patent examiner in the United States, Thomas Jefferson came to understand that granting limited property rights to genuine invention is an essential function of a government that wishes to

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* J.D. expected May 2010, Michigan State University College of Law, specializing in Intellectual Property Law; B.S. 2007, Michigan State University College of Engineering. Special thanks to professor, Karen Kimble, for her guidance and inspiration.

1. Letter from Thomas Jefferson to Oliver Evans (May 2, 1807), *in* 9 WRITINGS OF THOMAS JEFFERSON 200, 201 (Albert E. Bergh ed., 1907) *cited with approval in* Graham v. John Deere Co., 383 U.S. 1, 8 (1996).

foster an innovative and progressive society.[2] To generate the competition and innovation driven capitalism for which Jefferson advocated, he realized that inventors that spend money, time, and effort to create a new and useful idea or device deserve the right to exclude others from capitalizing on their work and investment for a limited period of time. In exchange for granting these patent rights, an inventor must fully disclose his invention in a patent application, which is published to expand public knowledge and further drive innovation.[3] Implementing these basic *quid pro quo* patent principles has been the premise for most countries with developed patent systems, including the United States.[4]

Although most developed and developing countries grant intellectual property rights to encourage innovation and creativity, many critics argue that some of the current intellectual property systems are inefficient and ineffective means of achieving their desired ends.[5] Reforms and developments have been used to address various alleged problems with these systems. One system that has been used to reform intellectual property protection in many of these countries, with varying results, is a second tier patent regime.[6]

Currently, the United States is one country where the intellectual property system, specifically the patent system, is frequently criticized for being inefficient and costly.[7] The current U.S. patent law has not been amended recently despite the criticism and frequent legislative attempts at reform.[8] This lack of legislative reform has led to an increase in discrepancy between new areas of technological innovation and stagnant patent laws, resulting in new and erratic court interpretations and doctrines.

One of the current concerns with the U.S. patent system is an inefficient patent application examination process, specifically the problem of extended pendency of a patent application in the United States Patent and Trademark Office ("USPTO"). A trend of an increasing number of patent applications filed in the USPTO corresponds to the increasing length of time

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2. GREGORY A. STOBBS, SOFTWARE PATENTS 14–16 (2d ed. 2000) (explaining that Thomas Jefferson urged for a restriction of monopolies in the Constitution, but realized there should be an exception for literature and inventions). In his position as the first patent examiner, Thomas Jefferson only issued fifty-seven patents. *Id.* at 15.

3. *Id.* at 18.

4. *See* KEITH E. MASKUS, REFORMING U.S. PATENT POLICY: GETTING THE INCENTIVES RIGHT 8–9 (Council on Foreign Relations, CSR No. 19, 2006).

5. *See, e.g.* Kristen Osenga, *Entrance Ramps, Tolls, and Express Lanes — Proposals for Decreasing Traffic Congestion in the Patent Office*, 33 FLA. ST. U. L. REV. 119 (2005).

6. WIPO, Where Can Utility Models be Acquired?, http://www.wipo.int/sme/en/ip_business/utility_models/where.htm (last visited Nov. 3, 2009).

7. MASKUS, *supra* note 4, at 5.

8. There have been many attempts to reform the patent laws of the United States, the most recent being the Patent Reform Act of 2009. Patent Reform Act of 2009, S. 515, 111th Cong. (2009).

it takes for a patent application to receive its initial review.[9] Examination delays affect technology areas differently, but generally the market life of some patents expire well before a patent application would be reviewed, let alone issued. In addition to increased application pendency, there are also concerns that applications are not receiving a thorough review.[10] Hastily reviewed applications may ultimately lower confidence in the validity of issued patents and divert thorough review to the court system.

Judicial review of patent validity coupled with lagging legislative patent reform has left courts to develop standards for patentability requirements,[11] specifically the non-obvious requirement.[12] Historically this standard has been difficult for courts to articulate, adjusting terminology and adding tests accordingly. Most recently the Supreme Court weighed in on the non-obvious standard, seemingly opening up more avenues for to one to attack the validity of a patent. The effects of this more stringent non-obvious standard are beginning to become apparent in federal circuit, district court, and patent board appeals. Ultimately, patent validity has been more difficult to maintain and opposing examiner obviousness rejections is a more common occurrence.

Lastly, one of the primary goals of current patent reform is to harmonize U.S. patent law with patent laws prevalent around the globe. This goal of global harmonization has been criticized as not allowing countries to individualize and experiment with alternate legal philosophies. However, some global harmonization could have the desired effect of increasing patent examining efficiency and consistency. These concerns motivated the signing of international treaties designed to attain some global intellectual property consensus and accommodate trends of growing international business.[13]

This Article will review second tier patent regimes that have been implemented in other countries and determine whether in light of recent

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9. Gene Quinn, *USPTO Backlog: Average Patent Pendency Out of Control*, IP WATCHDOG, Apr. 22, 2009, http://www.ipwatchdog.com/2009/04/22/uspto-backlog-patent-pendency-out-of-control/id=2848/ (showing charts of increased application pendency for pending applications from 1989 to 2008).

10. *See generally* ADAM B. JAFFE & JOSH LERNER, INNOVATION AND ITS DISCONTENTS: HOW OUR BROKEN PATENT SYSTEM IS ENDANGERING INNOVATION AND PROGRESS, AND WHAT TO DO ABOUT IT (2004) (offering several examples and discussing the general decline in patent quality).

11. The court's role is to interpret statutes, but creating alternate interpretations and subtests can lead to confusion.

12. The non-obvious requirement was codified in 1952. 35 U.S.C. § 103(a) (2006 & Supp. 2008).

13. *See* Paris Convention for the Protection of Industrial Property, Mar. 20, 1883, 21 U.S.T. 1583, 828 U.N.T.S. 305 (as last revised July 14, 1967 and as amended Sept. 28, 1979); Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, 1869 U.N.T.S. 299; Strasbourg Agreement for the International Patent Classification, Mar. 24, 1971, 26 U.S.T. 1793; Patent Cooperation Treaty, June 19, 1970, 28 U.S.T. 7645, 1160 U.N.T.S. 231.

patent harmonization efforts, USPTO congestion, and a more stringent non-obvious standard, the U.S. patent system should be supplemented with a second tier patent regime. Part I of this Article will generally introduce second tier patent systems and discuss some common characteristics. Part II will examine second tier patent systems in more detail, analyzing developed systems and recently implemented developing systems. Part III will briefly explain the U.S. patent system, propose a specific second tier system, predict the effects of implementing such a system, and finally explain some possible alternatives to a second tier system. Finally this Article will conclude that the United States can benefit from implementing a second tier patent system in light of the current state of its patent system.

I. WHAT IS A SECOND TIER PATENT?

Generally, a second tier patent system compliments a patent system to offer a more accessible form of patent protection for a shorter term, usually characterized by less stringent patentability requirements.[14] Second tier patents systems are enacted in approximately seventy-five countries, where these property rights are commonly referred to as utility models, utility innovations, utility certificates, short-term patents, petty patents, and innovation patents.[15] Due to a lack of general international consistency regarding what features should comprise a second tier patent system, various forms of second tier patent systems have been designed. The most significant differences between current second tier patent systems include: the protectable subject matter, the granting procedure, the substantive patentability criteria, and the duration of protection.[16]

A. Subject Matter

The subject matter of second tier patent systems has historically been restricted to a three-dimensional form requirement.[17] Some systems have

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14. Uma Suthersanen & Graham Dutfield, *Utility Models and Other Alternatives to Patents, in* INNOVATION WITHOUT PATENTS: HARNESSING THE CREATIVE SPIRIT IN A DIVERSE WORLD 18, 18 (Uma Suthersanen, Graham Dutfield & Kit Boey Chow eds., 2007).

15. *See generally* MORAG MACDONALD & UMA SUTHERSANEN, DESIGN AND COPYRIGHT PROTECTION OF PRODUCTS: WORLD LAW & PRACTICE (2000); *see also* WIPO, Where Can Utility Models be Acquired?, *supra* note 6.

16. Uma Suthersanen, *Utility Models and Innovation in Developing Countries*, UNCTAD-ICTSD Project on IPRs and Sustainable Development, 2006, at 2, http://www.unctad.org/en/docs/iteipc20066_en.pdf.

17. Roland Liesegang, *German Utility Models After the 1990 Reform Act*, 20 AIPLA Q.J. 1, 2 (1992) (describing Germany's traditional utility model system being limited to "'working tools and implements, articles of everyday use or parts thereof,' that is, to three-dimensionally configured movables (Raumform-Efordernis' three-dimensional concrete shape requirement)").

retained a three-dimensional subject matter restriction[18] while others have extended protection to processes, biotechnological inventions, and electric circuitry. Other systems have simply adopted the same subject matter as their respective patent laws.[19] Tailoring subject matter requirements is one way for a country to give preference to its thriving technology areas or focus second tier patents on technology areas that will benefit the most from a second tier system.

B. Granting Procedure

Most second tier patent systems use a registration system that does not have a substantive pre-grant examination, merely a check for formalities.[20] However, some countries have implemented systems of substantive examination similar to standard patent systems.[21] One way countries have regulated how second tier patents interact with standard patent systems is by designing a granting procedure intermingled with the patent system. Some counties use a granting procedure that allows for a parallel patent application strategy. These parallel application systems allow inventors to have a patent and a second tier patent application for the same subject matter reviewed simultaneously, thereby securing second tier patent protection while patent prosecution is still occurring. Similarly, other systems allow a patent application to convert to a second tier patent application or vice versa. The interaction between the granting procedures for standard patents and second tier patents will largely determine the practical purpose of a second tier patent for business strategy.

C. Substantive Patentability Criteria

Like standard patents, most second tier patent systems require some level of novelty, usefulness, and inventiveness. Second tier patent systems vary considerably as to what level of novelty is required. Systems range from strict universal novelty to relative novelty to mere domestic novelty. The level of usefulness, or industrial applicability, required for a second tier patents also varies considerably from system to system. However, almost all second tier patent systems require a decreased level of inventiveness, or

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18. Denmark, Finland, Greece, Italy, Portugal, and Spain second tier patent systems have "three-dimensional inventions defined in terms of 'form', 'structure' or 'configuration' which results in a 'practical and appreciable advantage' for their use or manufacture and in particular utensils, instruments, tools, apparatus, devices[.]" Suthersanen & Dutfield, *supra* note 14, at 27.

19. Belgium, Ireland, Netherlands, and France have second tier patent systems that have adopted the subject matter requirements of the country's domestic patent laws. *Id.* at 25.

20. *Id.* at 18–19.

21. *Id.* at 19–20. One example is the new utility model in Taiwan. *Id.* at 33.

obviousness, in relation to the respective country's standard patent requirement. Some of the disparity between these requirements from country to country can be attributed to varying patentability requirements for standard patents, which drives the purpose and philosophy behind each countries second tier patent.

D. Duration of Protection

Similar to second tier patent systems' decreased inventiveness requirement, a common attribute of second tier patent systems is that their duration of protection is less than a standard patent. This decreased duration of protection ranges from six to fifteen years depending on the country.[22] To achieve the maximum length of protection, most countries require periodic maintenance fees to be paid, as they do for standard patents.

Although second tier patentability requirements vary considerably internationally, attributes of these systems are becoming more consistent as countries experiment with alternate means to protect and spur domestic innovation. Authors have suggested that second tier patent systems can now be grouped into four specific categories,[23] demonstrating that countries are becoming more harmonized, even without significant second tier patent treaties.[24]

II. INTERNATIONAL CASE STUDY

In 1843, the first known second tier patent system was introduced by the United Kingdom's Utility Designs Act in response to heavy criticism of the British patent system.[25] The Utility Design Act sought to protect minor inventions, particularly the "shape or configuration of useful articles of manufacture."[26] Such utility designs, which protected the design of functional three-dimensional devices, are now referred to as "classical"

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22. *Id.* at 20.

23. The four identified classifications are: classical regime, German regime, patent regime, and de facto regime. Mark D. Janis, *Second Tier Patent Protection,* 40 HARV. INT'L. L. J. 151, 168 (1999). Currently, examples of the classical regime are Italy, Spain, and Greece; examples of the German regime are Germany and Austria; examples of the patent regime are Ireland and France; and examples of the de facto regime are the United Kingdom and the United States. Suthersanen & Dutfield, *supra* note 14, at 25.

24. *See supra* note 13. Some of the harmonization could be due to patent harmonization, but second tier patents are only recognized in some treaties and agreements, and generally referred to as "Utility Models." None of these international treaties offer a definition or scope for a "Utility Model." Suthersanen & Dutfield, *supra* note 14, at 20–21.

25. Janis, *supra* note 23, at 156. Critics "argued that the British patent system was too administratively complex, and the application procedure too costly and time consuming." *Id.* at n.26 (citation omitted).

26. *Id.* at 156.

second tier patent systems.[27] The United Kingdom's recognition of inadequate standard patent protection, spurred other countries developing intellectual property law systems to consider second patent protection.[28] The following sections will examine the development and current characteristics of countries that have established second tier patent systems and others that have recently adopted second tier patent systems.

A. Established Second Tier Patent Systems

1. German Utility Model (Gebrauchsmuster)

In the late nineteenth century, Germany was industrializing rapidly away from its rural agriculturally based economy.[29] With the encouragement of large industry lobbies, such as Siemens, the German Reich introduced the first German patent law in 1877 despite a strong anti-monopoly movement at the time.[30] Accordingly, stringent patentability requirements were put in place, specifically an inventiveness requirement referred to as a *technisher Fortschritt*, or a "technical step forward in the art."[31] In light of Britain's recognition of minor inventions, Germany shortly thereafter, in 1891, enacted the Utility Model Act to introduce the *Gebrauchmuster*, or the German utility model.[32] The German utility model featured "a lower standard of inventiveness, a non-examination system, and a short period of protection."[33] Like Britain's short-lived second tier patent system, Germany's original utility model was a classical second tier patent system, closing the gap between patent law and design law by protecting functional designs.[34] Since its inception, the German utility model has generally been considered a means of support and indication of domestic innovation by offering fast and low-cost protection.[35]

In 1978, Germany lowered its inventiveness standard for patents slightly from the "technical step forward" standard to the *erfinderishe Tätigkeit*, or

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27. *Id.* at 156–59.

28. Although the United Kingdom was the first to develop a second tier patent system, the Utility Design Act was repealed after enactment of the Patents, Designs, and Trademarks Act of 1883. Chen Ruifang, *The Utility Model System and Its Benefits for China: Some Deliberations Based on German and Japanese Legislation*, 14 INT'L REV. INDUS. PROP. & COPYRIGHT L. 493, 494 (1983).

29. Suthersanen & Dutfield, *supra* note 14, at 28.

30. *Id.*

31. Janis, *supra* note 23, at 158.

32. Suthersanen, *supra* note 16, at 15.

33. *Id.*

34. Ruifang, *supra* note 28, at 494. Generally, patent law does not protect the way a device looks and design law only protects the non-functional visual attributes of device. Therefore, the three-dimensional requirement for classical second tier patent systems can function to protect those visual attributes not covered by patent law and design law.

35. Suthersanen & Dutfield, *supra* note 14, at 29.

"inventive activity," standard to correspond with the common European inventive step standard.[36] Accordingly, in 1986, the inventiveness standard for utility models also adjusted to the *erfinderisher Schritt*, or "inventive step," standard, not to be confused with the common European patent standard.[37]

Additionally, the German Utility Model Act has been amended, most recently in 2005,[38] to include a broader range of subject matter, including electrical inventions, chemical substances, and pharmaceuticals in addition to basic mechanical inventions.[39] The Utility Model Act, however, still restricts subject matter such as methods, computer programs, manufacturing processes, and biotechnological inventions.[40] This legislative shift away from a strict three-dimensional form requirement resulted in Germany's utility model system being no longer classified as a classical second tier patent regime, instead forming its own classification: the German regime.[41]

With an expanded subject matter that overlapped standard patentable subject matter, the granting procedure to obtain a German utility model has become increasingly important to understand in order to strategically protect an invention. A common practice called "splitting-off," is using a utility model to supplement a standard patent application either during patent prosecution or any time within the first ten years of a patent grant.[42] Currently, roughly one out of every two patent applications are filed in conjunction with a split-off utility model.[43] Split-off utility models are also used to protect inventions that are no longer eligible for patent protection due to lack of absolute novelty, as utility models have a six month novelty grace period for publications.[44] This decreased level of novelty for German utility models requires only that the invention not be part of the "state of the art." The state of the art includes "all technical products or processes published before the date of filing of the utility model application," but

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36. Janis, *supra* note 23 at 162–63. Germany made this inventiveness adjustment in response to the recent European Patent Convention. *Id.*

37. *Id.* at n.64.

38. *See* Gebrauchsmustergesetz [Utility Model Law], Aug. 28, 1986 BGBl. I at 1455, § 1(1) (F.R.G.) *available at* http://www.wipo.int/clea/en/text_html.jsp?lang=en&id=982.

39. Janis, *supra* note 23, at 164; *see also* DPMA, Utility Models, http://www.dpma.de/english/utility_models/index.html (last visited Nov. 3, 2009).

40. DPMA, Utility Model Protection, http://www.dpma.de/english/utility_models/utility_model_protection/index.html (last visited Nov. 3, 2009).

41. Janis, *supra* note 23, at 165 (suggesting that Germany's utility model system should be analyzed as a model structure for adopting countries since these significant legislative changes).

42. DPMA, Procedure, http://www.dpma.de/english/utility_models/procedure/index.html (last visited Nov. 3, 2009).

43. Suthersanen & Dutfield, *supra* note 14, at 30 (citing ERICH KAUFER, THE ECONOMICS OF THE PATENT SYSTEM 12 (1989) (stating that nearly one German patent application in every two is accompanied by a utility model registration)).

44. DPMA, Procedure, *supra* note 42 (explaining that publishing an invention makes that invention no longer novel for patentability requirements).

gives inventors a six month grace period from the time of their own use or description of the invention.[45]

Although the German utility model offers some popular advantages to patents, the term of a utility model is only ten years as opposed to twenty years for patent protection.[46] To be entitled to the entire ten years of protection the inventor must pay increasing maintenance fees on the third, sixth, and eighth years.[47] Another negative aspect of the German utility model is that anyone may submit a request for cancelation along with the requisite fee and the registered utility model will be substantively examined by the German Patent Office for validity.[48]

Despite some disadvantages in the German utility model system, corporations and inventors continue to file for and benefit from utility model registration.[49] Filing a utility model application requires a technical description and claims that determine the scope of the invention, which commonly require an attorney to adequately prepare.[50] Aside from attorney fees, filing a utility model application currently costs forty euro, opposed to at least four hundred euro for a patent application.[51] With high levels of innovation and stable levels of filings and grants for patent and utility models,[52] German utility models continue to be a popular and successful protection system, leaving critics concluding that the system is generally successful.[53]

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45. DPMA, Utility Model Protection, *supra* note 40; *see also* Utility Model Law, *supra* note 38, § 3(1).

46. Suthersanen & Dutfield, *supra* note 14, at 30.

47. DPMA, Fees Utility Models, http://www.dpma.de/english/utility_models/fees/index.html (last visited Nov. 3, 2009). Currently, the first maintenance fee is EUR 210, the second is EUR 350, and the last is EUR 530. *Id.*

48. Utility Model Law, *supra* note 38, § 15.

49. Suthersanen, *supra* note 16, at 16. In general, German utility models are mostly filed by SMEs and entrepreneurs. Only in exceptional cases do large corporations file for utility models, including situations where application strategy or urgency are the primary considerations. *This information was generously provided by a German Patent Attorney*.

50. Utility Model Law, *supra* note 38, § 4(2).

51. *Compare* DPMA, Fees Utility Models, *supra* note 47, *with* DPMA, Patent Fees, http://www.dpma.de/english/ patent/fees/index.html (last visited Nov. 3, 2009).

52. *Compare* WIPO, Statistics on Patents, http://www.wipo.int/ipstats/en/statistics/patents/ (last visited Nov. 3, 2009), *with* WIPO, Statistics on Utility Models, http://www.wipo.int/ipstats/en/statistics/models/ (last visited Nov. 3, 2009) (showing the ten and five year averages from 2007 being: 21,621 and 20,898 for Utility Model filings; 17,687 and 16,817 for Utility Model grants; 59,722 and 59,903 for Patent filings; and 16,469 and 17,986 for Patent grants).

53. Suthersanen, *supra* note 16, at 16. However, small and medium sized enterprises ("SMEs") and entrepreneurs may not be benefiting as much as desired from the utility model system, despite its apparent success, due to the studies showing that SMEs are still reluctant to invest in R&D. *Id.*

2. Japanese Utility Model

As an emerging world power in the midst of industrialization,[54] Japan joined the Paris Convention on June 15, 1899, opening its doors to foreign patent applicants.[55] Vindicating its previous concerns, patents were granted to foreign applicants at a much higher rate than national applicants.[56] These statistics were partially attributable to the fact that Japan's newly created patent system had very high patentability standards, which led to granting patents only to inventions with a high level of inventiveness not yet prevalent in Japan.[57] At this time, Japanese inventions were more craft and agriculturally based as opposed to the mechanical and industrial inventions of foreign applicants.[58] To protect national interests, Japan looked to the German utility model system as a means to protect the minor inventions not protected by their strict patent laws. On March 15, 1905, Japan enacted its own Utility Model Act.[59]

The stated purpose of Japan's Utility Model Act is "to encourage *devices* by promoting the protection and the utilization of *devices* relating to the shape or structure of an article or combination of articles, and thereby to contribute to the development of industry,"[60] This statement of purpose demonstrates how Japan emulated Germany's original three-dimensional form requirement, making Japan's first utility model system a classical regime. However, similar to Germany, Japan has expanded its subject matter to include electric circuits, buildings, and material properties, only excluding processes and substances without defined shape.[61] Japan also maintained a lower level of inventiveness like Germany by enacting that a utility model will not be registered for a "device [that] would have been

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54. *See* CONRAD D. TOTMAN, A HISTORY OF JAPAN 347–48 (2000).

55. Ruifang, *supra* note 28, at 495.

56. *Id.* at 494, tbl.1.

57. *Id.* at 495.

58. *Id.*

59. *Id.*

60. Jitsuyo Shin'an Ho [Utility Model Act], Law No. 123 of 1959, art. 1 (emphasis added), *available at* http://www.cas.go.jp/jp/seisaku/hourei/data/UMA.pdf. The Patent Act's purpose is focused towards inventions, opposed to Utility Model devices. Shubyoenho [Patent Act], Law No. 89 of 1978, art. 1, *translated in* Japan Patent Office, Patent Act (Act No. 121 of 1959), http://www.cas.go.jp/jp/seisaku/hourei/data/PA.pdf. Devices are defined as a "creation of technical ideas utilizing the Act of nature." Jitsuyo Shin'an Ho [Utility Model Act], Law No. 55 of 2006, art. 1, *translated in* Japan Patent Office, Patent Act (Act No. 123 of 1959). Inventions are defined as a "highly advanced creation of technical ideas utilizing the laws of nature." Patent Act, art. 1. http://www.wipo.int/clea/docs_new/pdf/en/jp/jp006en.pdf.

61. Nobuo Monya, *Revision of the Japanese Patent and Utility Model System*, 3 PAC. RIM L. & POL'Y J. 227, 242 (Marvin Motsenbocker & Hiroki Mitsumata trans., 1994).

exceedingly easy to create."[62] Although subject matter has expanded, Japan's utility model system has changed considerably in the past twenty years, resulting and contributing to utility model applications reducing from an average of over 150,000 applications for the ten years before 1994, to an average of under 11,500 applications for the ten years after 1994.[63]

In addition to expanding the subject matter, Japan has also changed the utility model granting procedure. Before the 1994 amendment, Japan registered a utility model by not only examining it for compliance with formalities, but also required that the applicant or a third party request that a substantive examination be made within four years, otherwise the application would be considered withdrawn.[64] This substantive examination was similar to patents, and gave applicants confidence in the validity of their utility models. However, increased confidence in validity resulted in more applications for utility models than patents, which in turn congested the patent office and eliminated the utility model's purpose of quick protection.[65]

In 1994, the substantive examination requirement was eliminated, and an optional technical opinion was implemented. The technical opinion now allows an applicant or a third party to request the Patent Office prepare an opinion as to the registrability of a claimed device, paying a fee for each claim to be reviewed.[66] The technical opinion will then be published in the Utility Model Bulletin and may be used as evidence in enforcement hearings.[67] Although not a required part of registration, these opinions offer some stability to the system, decrease the burden of courts, and give applicants some confidence in their rights.

Another difference from the German utility model is that Japanese utility models cannot be obtained in conjunction with patents, eliminating possible double protection. The only interaction Japanese utility models have with the patent system is that, upon the applicant's request, a utility model application may be converted into a patent application,[68] and a patent application or a design application may be converted to a utility model

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62. Jitsuyo Shin'an Ho [Utility Model Act], Law No. 123 of 1959, art. 3(2) (explaining the inventive step requirement in terms of a person ordinarily skilled in the art of the device), *available at* http://www.cas.go.jp/jp/seisaku/hourei/data/UMA.pdf.

63. WIPO, Statistics on Utility Models, *supra* note 52.

64. Ruifang, *supra* note 28, at 498.

65. Suthersanen, *supra* note 16, at 17

66. Jitsuyo Shin'an Ho [Utility Model Act], Law No. 123 of 1959, art. 12 . Registering a Utility Model in Japan costs 14,000 yen per case, and a request for a technical opinion is 42,000 yen per case plus 1,300 yen per claim. *Id.* at art. 54(2). In comparison, a patent examination is 84,000 yen per case plus 2,700 yen per claim. Shubyoenho [Patent Act], Law No. 89 of 1978, Appended Table (in relation to Article 195), *available at* http://www.cas.go.jp/jp/seisaku/hourei/data/PA.pdf.

67. *See* Jitsuyo Shin'an Ho [Utility Model Act], Law No. 123 of 1959, art. 14(3).

68. Shubyoenho [Patent Act], Law No. 89 of 1978, art. 46(1).

application.[69] Converting applications allows applicants to lower their objectives during patent prosecution, while still obtaining some protection for their invention, and in effect reduce congestion in the patent office.

In pursuit of reinvigorating the diminished utility model filings, Japan reintroduced a ten year term of protection from its reduced six year term. Japan originally implemented the six year term at the same time it eliminated substantive examination.[70] The six year term significantly reduced the value of a utility model and contributed to the reduced utility model application rate. Reintroducing the ten year term has slightly raised and stabilized application rates, but generally utility model protection has remained an unpopular alternative to patents.

Some authors suggest that more technical innovation coupled with more relaxed patent examination standards has contributed to increased patent grants and decreased utility model registration.[71] Nevertheless, Japan's industrialization and increases in national innovation correlate with the high number of utility models registered until the mid-1990s.[72] Instead of eliminating the utility model system,[73] Japan has continued to offer protection for incremental innovation, creating a persuasive precedent for developing Asian countries and other countries considering a second tier patent system.

B. Developing Second Tier Patent Systems

1. Chinese Utility Model

In 1978, the People's Republic of China started an economic reform that eventually opened its doors to foreign trade and developed China into a major player in the global economy.[74] China's economic transformation coupled with its abundance of natural resources and inexpensive labor has attracted corporations from the United States to invest in outsourcing manufacturing in China.[75] By joining trade organizations, such as the WTO, and increasing manufacturing, China has been forced to implement and attempt to comply with international intellectual property standards. In creating a new intellectual property system, China had the opportunity to

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69. Jitsuyo Shin'an Ho [Utility Model Act], Law No. 123 of 1959, art. 10(1)–(2).

70. Suthersanen, *supra* note 16, at 17

71. *Id.*

72. *See* Natalie M. Derzko, *Using Intellectual Property Law and Regulatory Processes to Foster the Innovation and Diffusion of Environmental Technologies*, 20 HARV. ENVTL. L. REV. 3, 17 (1996) (arguing that Japan's utility model regime may be responsible for Japan's heavy involvement in developing "incremental changes in technology").

73. Ruifang, *supra* note 28, at 500.

74. Vicky Hu, Abstract, *The Chinese Economic Reform and Chinese Entrepreneurship*, JORNADA D'ECONOMIA, May 2005, *available at* http://unpan1.un.org/intradoc/groups/public/documents/apcity/unpan023535.pdf.

75. Suthersanen, *supra* note 16, at 19.

implement an intellectual property system to drive domestic innovation and capitalized on foreign investment, similar to Japan's initial intellectual property system.[76]

With three failed attempts, in 1898, 1911, and 1944, at implementing a lasting intellectual property system, China enacted its first modern patent law in 1984, with a stated purpose "to encourage inventions-creations, to foster the spreading and application of inventions-creations, and to promote the progress and innovation of science and technology, for meeting the needs of the construction of socialist modernization."[77] The Patent Law created a three tier patent system: the first tier patent is referred to as an "invention patent" and is equivalent to a standard twenty-year patent; the second tier patent is referred to as a "utility model patent," protecting the shape, pattern, or color of an object for ten years; and the third tier patent is referred to as a "design patent." [78]

The Patent Regulations passed in conjunction with the Patent Law defines a utility model as "any new technical solution relating to the shape, the structure, or their combination, of a product, which is fit for practical use."[79] Essentially, a utility model patent is only granted for subject matter of product-related technological solutions, excluding processes, biological material, fluids, gases, and computer implemented inventions.[80] Specifically, the Patent Law requires that a valid utility model patent claims an invention-creation that possesses novelty, inventiveness, and practical applicability.[81]

The novelty requirement is absolute, meaning that before filing for a utility model patent no identical utility model has been publicly disclosed in publications, used, or made known to the public by any other means in China or abroad.[82] Although the statute is explicit as to what constitutes novelty, according to critiques, this requirement is frequently abused by national Chinese residents obtaining utility patent protection for inventions

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76. Ruifang, *supra* note 28, at 501–03.

77. Patent Law (promulgated by the Standing Comm. Nat'l People's Cong., Mar. 12, 1984, effective Apr. 1, 1985), art. 1 (PRC), *available at* http://www.jpo.go.jp/shiryou_e/s_sonota_e/fips_e/pdf/china/patents_law.pdf.

78. *Modalities of Future Utility Model Systems*, 13 IIP BULLETIN 38, 44–45 (2004), *available at* http://www.iip.or.jp/e/ summary/pdf/detail2003/e15_06.pdf.

79. Patent Regulations (promulgated by the Standing Comm. Nat'l People's Comg., amended June 15, 2001, effective July 1, 2001), R. 2 (PRC), *available at* http://www.jpo.go.jp/shiryou_e/s_sonota_e/fips_e/pdf/china/patents_regulations.pdf.

80. Kit Boey Chow et al., *China and Taiwan, in* INNOVATION WITHOUT PATENTS: HARNESSING THE CREATIVE SPIRIT IN A DIVERSE WORLD 152, 155 (Uma Suthersanen, Graham Dutfield & Kit Boey Chow eds., 2007).

81. *Id.*

82. Patent Law (promulgated by the Standing Comm. Nat'l People's Cong., Mar. 12, 1984, effective Apr. 1, 1985), art. 22 (PRC).

imported from overseas.[83] This practice is possible due to the fact that utility model patents are only given a cursory examination for formalities. These fraudulent utility model patents allow the owners to threaten legal action on foreign corporations seeking to manufacture in China. Counterfeiting is already a prevalent problem that China is attempting to combat, and having a legal system that counterfeiters are able to manipulate magnifies the problem. Despite the number of tainted uses the utility model patent system, utility models patent registrations have risen to extraordinary levels, doubling invention patent grants in 2007 with over 150,000 registrations to less than 68,000 invention patent grants.[84]

Unlike novelty, the inventiveness standard is lowered for utility model patents. The Patent Law attempts to distinguish the requisite inventiveness as "prominent substantive features" and "notable progress" for invention patents and "substantive features" and "progress" for utility model patents.[85] Due to the frequent confusion as to what these levels of inventiveness represent,[86] the Examination Guidelines proposed that for invention patents, "an invention is deemed to be non-obvious even to an expert who has conducted a comprehensive search in all neighboring and related fields," but for utility model patents "the search should be restricted to the fields to which the technical solution immediately pertains."[87]

Although China's utility model patent system is being abused by counterfeiters, many commentators suggest that a form of substantive examination would improve the quality of utility model patents and curb the abuse of the system.[88] Currently, of the patent invalidity proceedings brought, 95% are filed against utility model patents, of which 60% are declared invalid.[89] As validity concerns rise, these proceedings will continue to increase for utility model patents, vindicating a concern for some type of substantive examination. If China's role in the global economy continues to increase, these concerns will need to be addressed to

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83. Suthersanen, *supra* note 16, at 20.

84. *See* WIPO, Statistics on Utility Models, *supra* note 52; WIPO, Statistics on Patents, *supra* note 52.

85. Patent Law (promulgated by the Standing Comm. Nat'l People's Cong., Mar. 12, 1984, effective Apr. 1, 1985), art. 22 (PRC).

86. The Higher People's Court of the Beijing Municipality attempted to resolve the confusion, saying "'prominent substantive features' means an invention with essential technological breakthrough, resulting in prominent and essential changes in the relevant field of technology; 'notable progress' represents a great leap forward which overcomes any shortcomings of the relevant technology, or a noticeable technical success." Chow et al., *supra* note 80.

87. *Id*.

88. Suthersanen, *supra* note 16, at 21.

89. *Id.*

establish an internationally trusted patent system that stimulates national innovation.[90]

2. *Australian Innovation Patent*

Another recently implemented second tier patent system is Australia's Innovation Patent system. The innovation patent is Australia's second attempt at a second tier patent system, the first being the petty patent system. Before discussing the innovation patent system, it is necessary to understand the positive and negative aspects of the petty patent system.

In 1978, the Australian legislature organized a committee, known as the Franki Committee, to compile a report analyzing whether Australia needed a form of intellectual protection for lesser technological developments in addition to existing patent and design laws.[91] The committee concluded that although they did not believe there was a gap in protection between design and patent protection, a petty patent system should be implemented to provide cheap and quick short-term protection for patentable inventions.[92] This recommendation was partially attributable to the committee finding that the patent system took too long to obtain protection for inventions with short commercial life and the patent system was too expensive for SMEs and entrepreneurs seeking protection of these short term inventions.[93] As a consequence, the petty patent system was implemented in 1979, incorporating all the recommendations of the Franki committee.

Interestingly, the subject matter and patentability requirements of the petty patent system were identical to the patent system.[94] The idea was that the petty patent system could be utilized for any patentable invention with a lower level of inventiveness that also met the other requirements to receive a standard patent. This was supposed to allow an applicant to quickly receive protection of their invention for a shorter, six-year term, opposed to a twenty-year patent term.[95] The granting procedure for a petty patent required only a cursory review of the application's formalities, but during the petty patent's initial year of registration anyone could present evidence of invalidity to the patent office commissioner to invalidate the petty

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90. *See generally* Jennifer A. Crane, Note, *Riding the Tiger: A Comparison of Intellectual Property Rights in the United States and the People's Republic of China*, 7 CHI.-KENT J. INTELL. PROP. 95 (2008) (discussing how U.S. businesses are hesitant to transfer technology to China due to the lack intellectual property enforcement system).

91. INDUSTRIAL PROPERTY ADVISORY COMMITTEE, REPORT ON PROPOSED PETTY PATENT LEGISLATION ¶¶ 4–5 (1978) a*vailable at* http://www.acip.gov.au/library/Report%20on%20Proposed%20Petty%20Patents% 20Legislation%20-%201978.pdf.

92. *Id.* ¶ 7.

93. *Id.* ¶ 8.

94. Andrew Christie & Sarah Moritz, *Australia, in* INNOVATION WITHOUT PATENTS: HARNESSING THE CREATIVE SPIRIT IN A DIVERSE WORLD 119, 122–23 (Uma Suthersanen, Graham Dutfield & Kit Boey Chow eds., 2007).

95. *Id.*

patent.[96] The granting procedure also allowed for divisional patents to be made from a petty patent application and a petty patent application could be converted to a standard patent application.[97]

One of the major problems with the petty patent system resulted from its requirement that only one claim could be made for each petty patent.[98] Although one claim forced applicants to focus their invention to a concise phrase, the single claim was very difficult to enforce because the claim was usually either too narrow and easy to invent around or too broad and invalid for being obvious.[99] Another problem the single claim presented was that drafting such concise language required specialists, who in turn made the cost of applying for a petty patent similar to the costs associated with applying for a standard patent.[100] Further, six years of protection was criticized as not being worth the cost and uncertainty associated with a petty patent registration.[101] These problems associated with the petty patent system resulted in only 389 petty patent applicants in 1994.[102]

In an attempt to correct the deficiencies of the petty patent system, in July 2001, Australia implemented the Innovation Patent system, completely replacing the petty patent system.[103] The key conceptual difference with the new Innovation Patent system was that the inventiveness standard was lowered below the inventiveness required for a patent to provide protection for incremental inventions with a lower level of inventiveness.[104] The revision articulated the new inventiveness standard as an "innovative step" as opposed to the "inventive step" required for patents.

> [An] innovative step [is stated to be found for the claimed invention unless] when compared with the prior art base . . . a person skilled in the relevant art, in light of the common general knowledge as it existed in the part area before the priority date of the relevant claim, [would find that the claimed invention] only var[ies] from the [prior art] in ways that make *no substantial contribution* to the working of the invention.[105]

This is contrary to the "inventive step," which is not found if "the invention would have been *obvious* to a person skilled in the relevant

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96. Janis, *supra* note 23, at 165.
97. Christie & Moritz, *supra* note 94.
98. *Id.*
99. *Id.* at 123.
100. *Id.*
101. *Id.* at 124.
102. IP Australia, Introduction of the Innovation Patent: Government Response to the Recommendations of the Advisory Council of Industrial Property (ACIP) Report "Review of the Petty Patent System" www.ipaustralia.gov.au./patents/what_innovation_review.shtml (last visited Nov. 9, 2009).
103. Christie & Moritz, *supra* note 94, at 125.
104. *Id*.
105. Patents Act, 1990, § 7(4) (Austl.) (last amended in 2006) (emphasis added).

art . . . ."[106] These standards were recently distinguished by the Federal Court of Australia in *Delnorth Pty Ltd. v. Dura-Post Pty Ltd.*, stating that an innovative step may be obvious, but it must make a contribution of real substance to the to the working of the invention.[107]

In light of the different standards of inventiveness articulated by the Federal Court of Australia, an inventor to may attempt to bolster their patent position by obtaining innovation patents for incremental improvements to their patented invention that may be obvious, but make a substantial contribution.[108] The standard for an incremental invention protectable by an innovation patent is that it must be different and substantial, not that it advances the prior art.[109] This strategy may allow inventors to protect the unpredictable advances in the invention years after a patent is obtained.[110]

A key practical difference for the Innovation Patent system is the allowance of a maximum of five claims to be made for an invention, opposed to the one claim requirement for a petty patent.[111] This alteration allows drafters more flexibility to successfully claim an invention that is both valid and enforceable. In effect, these claims can be drafted more like a standard patent application, not forcing applicants to seek more expensive, single claim drafting specialists. Innovation patents are also given a maximum of eight years of protection, which has the effect of increasing the value of a claimed invention.[112]

Although innovation patents seem to offer a quickly obtainable and more valuable property right for inventions that were not protectable prior to implement the innovation patent system, the validity of innovation patents will remain uncertain without a required substantive examination.[113] However, the commissioner may grant a substantive examination prior to registration and anyone may request a substantive examination after grant.[114] Unlike the patent system, third parties are forced to wait until an

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106. *Id.* § 7(2) (emphasis added).

107. Delnorth Pty Ltd. v. Dura-Post Pty Ltd. (2008) F.C.A. 1225 (finding a surface coating applied to a bendable roadside post not a substantial contribution significant enough to receive innovation patent protection, but finding the steel used in the post to be a substantial enough contribution to receive innovation patent protection).

108. This information was kindly provided by an Australian patent attorney. *See also* Stephen Albainy-Jenei, *Innovation Patents in Australia: The Strongest Patent in the World?*, PATENT BARISTARS, Dec. 17, 2008, http://www.patentbaristas.com/archives/2008/12/17/innovation-patents-in-australia-the-strongest-patent-in-the-world/.

109. *Id.*

110. *Id.*

111. Patents Act, 1990 § 40(2)(c).

112. Christie & Moritz, *supra* note 94, at 126. The Government rejected ACIP's proposal to make substantive examination a requirement within the first four years like the petty patent. IP AUSTRALIA, *supra* note 102. The Government relied on the fact that other countries did not require substantive examination to keep costs low and efficiency of the system high. *Id.*

113. Christie & Moritz, *supra* note 94, at 126.

114. *Id.*

innovation patent is registered before they can oppose it, allowing for quick and reliable registration. Also, the innovation patent granting procedure allows for the same divisional applications and application conversions as petty patents, but still does not allow for double protection or PCT route applications.[115]

With the striking advantages offered by innovation patents, it is surprising that in 2007 only 1,229 innovation patent application were filed, opposed to over 27,000 patent applications filed.[116] Although innovation patent applications are increasing, it is suggested that the advantages of innovation patents are not readily known to the inventing public.[117] The alterations made to Australia's second tier patent system are some of the most recent international developments of second tier patent systems. Like the other countries previously discussed, Australia's persistence in continuing to modify its second tier patent system to benefit SMEs and entrepreneurs demonstrates the importance of protecting incremental and less inventive inventions to industrial countries[118]

115. IP AUSTRALIA, *supra* note 102.

116. *See* WIPO, Statistics on Utility Models, *supra* note 52; WIPO, Statistics on Patents, *supra* note 52; *see also* Albainy-Jenei, *supra* note 108.

117. Albainy-Jenei, *supra* note 108.

118. Christie & Moritz, *supra* note 94, at 139–41.

C. Summary Chart of Current Second Tier Patent Systems

GERMANY	
Subject Matter	Includes electrical inventions, chemical substances, and pharmaceuticals; and restricting methods, computer programs, manufacturing processes, and biotechnological inventions.
Granting Procedure	Cursory examination for formalities, may split-off application (double protect)
Substantive Patentability	*Novelty* – invention not be part of the "state of the art" *Inventiveness* – inventive step (less than standard European inventive step) *Useful*
Duration of Protection	10 years
JAPAN	
Subject Matter	Includes electric circuits, buildings, and material properties; and excluding processes and substances without defined shape.
Granting Procedure	Cursory examination for formalities, with an optional technical opinion.
Substantive Patentability	*Novelty* – universal novelty *Inventiveness* – not easily made by a person skilled in the art *Useful* – industrially applicable
Duration of Protection	10 years
CHINA	
Subject Matter	Product-related technological solutions, excluding processes, biological material, fluids, gases, and computer implemented inventions.
Granting Procedure	Cursory examination for formalities.
Substantive Patentability	*Novelty* – absolute novelty (not strictly enforced) with a 6 month grace period for public disclosure at limited types of events; *Inventiveness* – prominent substantive features and represents a notable progress in the art *Practical Applicability* – can be made or used and produce effective results.
Duration of Protection	10 years
AUSTRALIA	
Subject Matter	Same as patent, excluding plants, animals, and biological processes.
Granting Procedure	Formalities check, substantive examination upon commissioner request or after grant by applicant or third party.
Substantive Patentability	*Novelty* – absolute novelty *Innovative step* – substantial contribution to the working of the invention *Useful*
Duration of Protection	8 years

III. U.S. PATENT SYSTEM

> *The Congress shall have Power . . . to promote the Progress of Science and useful Arts by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.*[119]

The United States Constitution allows Congress to secure discoveries for inventors to promote the progress of science and useful arts. Exercising this grant, in 1790, Congress enacted the U.S. Patent Act, establishing a patent system that has evolved to comprise utility patents, design patents, and the recently created plant patents. Utility patents were the original patent grant established in 1790 to protect "any new and useful art, machine, manufacture, or composition of matter and any new and useful improvement."[120] Shortly thereafter, in 1842, the law was amended to include design patents for "any new and original design for a manufacture or for printing on a fabric."[121] As innovation sculpted our nation's technology and the United States began to industrialize, these definitions also adjusted and conformed to encompass the new inventions worthy of patent protection. Now, generally, utility patents are obtained to protect the way a device or process works, design patents are obtained to protect the way a device looks,[122] and plant patents are obtained to protect defined varieties of asexually propagated plants.[123] To understand some of the intricacies and functions of these forms of protection, some more detailed features must be illuminated.

First, design patents can be obtained for a maximum of fourteen years for the design of an article of manufacture which is ornamental, novel, and non-obvious. A design patent does not protect the primarily functional aspects of a design, limiting design patents to only protecting the appearance of an article, not any of its structural features.[124] Since a design patent is driven by the article's appearance, only a single claim can be made in a design patent application, which will direct the claim to one or more pictures that illustrate in dashed lines the un-claimed portion of the visual depiction. Subject matter for a design patent application may relate to the configuration or shape of an article, to the surface ornamentation applied to an article, or to a combination thereof.[125] Design patent applications are only given a cursory examination to check for formalities, similar to some

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119. U.S. CONST. art. I, § 8, cl. 8.

120. Ladas & Perry LLP, A History of the Patent Law of the United States, http://www.ladas.com/Patents/ USPatentHistory.html (last visited Nov. 3, 2009).

121. *Id.*

122. USPTO, A Guide to Filing a Design Patent Application, http://www.uspto.gov/web/offices/pac/design/index.html (last visited Nov. 3, 2009).

123. USPTO, Patents Guidance, Tools & Manuals, http://www.uspto.gov/web/offices/pac/plant/#1 (last visited Nov. 3, 2009).

124. USPTO, A Guide to Filing a Design Patent Application, *supra* note 122.

125. *Id.*

second tier patent systems. Therefore, validity proceedings will likely determine whether the design was obviousness, determined by a designer having ordinary skill in the art. Infringement cases on the other had are judged as to whether an ordinary observer, familiar with the prior art, would have been deceived, seemingly intermingling design patents with a form of unfair competition protection.

Utility patents on the other hand, can be obtained for twenty years from the filing date for any new, useful, and non-obvious process, machine, manufacture, composition of matter, or any improvement thereof.[126] Opposed to design patents, a utility patent must be useful in the sense that it must be operable, practical, and beneficial. The utility requirement is similar to the industrial applicability requirement of some of the second tier patents. Further, a claimed invention for a utility patent must be generally new; however, a one-year grace period is given to the applicant for some disclosures of the invention.[127] Finally the claimed invention cannot be obvious. Courts have struggled to better define what is considered obvious, but generally the invention cannot be obvious to a person having ordinary skill in the art at the time of the invention.[128]

A. U.S.P.T.O. Congestion

Currently, of the three forms of patent protection in the United States, the utility patent is the most sought after form of protection. Since 1987, applications for utility model patents have increased from 130,000, to 220,000 in 1997, and to 456,000 in 2007.[129] The U.S. patent system has been challenged to keep up with this extreme increase in patent applications, generating numerous complexities and complications in the patent system. A primary problem being a growing back-log of applications, resulting in an increasing pendency period before an application is given an initial substantive review[130] For some applicants, primarily SMEs and entrepreneurs, the cost of prosecuting a utility patent coupled with the time to obtain protection, sometimes taking two to three years, leaves their invention unprotected and undisclosed.

B. U.S. Inventiveness Standard

The congestion in the patent office may be partially attributable to the fact that U.S. patent law that has been in flux as courts have created requirements for inventiveness in addition to the novelty and usefulness

126. 35 U.S.C. § 101 (2000).
127. 35 U.S.C. § 102(b) (2000).
128. 35 U.S.C. § 103 (2000).
129. *See* WIPO, Statistics on Patents, *supra* note 52.
130. *See* Quinn, *supra* note 9.

requirements.[131] Congress attempted, in 1952 to codify the requirement in 35 U.S.C. § 103, which states that a patent will not be granted if "differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art."[132] This inventiveness requirement is now known as the obviousness requirement, which is similar to the "inventive step" requirement in most other countries with established utility model systems.

In 1982, Congress created a Federal Circuit court to have exclusive jurisdiction over all patent appeals in attempt to have a more unified body of patent law. Since its creation, the Federal Circuit developed an obviousness standard known as the "TSM" test that required a patent challenger to show a "teaching, suggestion, or motivation" in the prior art in order to combine features of prior art in a way that would be considered obvious to a person of ordinary skill in the art. This test made it very difficult for an opposer to show that a patent was obvious and it even made it difficult for an examiner to issue a rejection based on the fact that they might believe the invention was obvious. Upholding patent validity and making patents easier to issue, may have severely contributed to the flood of patent applications received at the USPTO.

After thirty years of a denying certiorari for challenges to the obviousness standard, on April 30, 2007, the Supreme Court decided a case, *KSR Int'l Co. v. Teleflex*, where the obviousness of a combination invention, an electric sensor on a gas pedal, was at issue.[133] The Federal Circuit had ruled on the case that there was a lack of a specific finding linking the teaching, suggestion, or motivation of the pieces of prior art to each other.[134] This case presented a great opportunity for the Court to reject the "TSM" test and implement a standard it felt more comfortable with. However, the Court did not reject the "TSM" test and instead added another dimension to the person with ordinary skill in the art, making them a person who also has ordinary creativity, able to see obvious uses of prior art beyond their primary purposes.[135] The Court also articulated this by say that combining some elements of prior art may have been obvious to try.[136] The Court used a combination of these standards to decide that the claimed invention was obvious, and therefore the electric sensor pedal patent was invalid.

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131. *See* Robert P. Taylor, *Patent Law in Flux: Echoes of the Supreme Court*, at 93, 102 (PLI PATENTS, COPYRIGHTS, TRADEMARKS, & LITERARY PROPERTY COURSE HANDBOOK SERIES NO. 947, 2008).

132. 35 U.S.C. § 103 (2000).

133. KSR Int'l Co. v. Teleflex, Inc., 550 U.S. 398 (2007).

134. *Id.* at 414.

135. R. Polk Wagner, *The Supreme Court and the Future of Patent Reform*, 55 FED. LAW. 35 (2008).

136. *See* Taylor, *supra* note 131.

By failing to articulate a definite test for obviousness, patent challengers now have more avenues on which to attack a patent. Further, examiners have also been less reluctant to issue 35 U.S.C. § 103 obviousness rejections based on the *KSR* precedent. In effect, the inventiveness standard was raised, making inventions that were once patentable and enforceable unprotected under U.S. patent law. Justice Kennedy articulated the loss of protection for less inventive creations best by stating,

> We build and create by bringing to the tangible and palpable reality around us new works based on instinct, simple logic, ordinary inferences, extraordinary ideas, and sometimes even genius. These advances, once part of our shared knowledge, define a new threshold from which innovation starts once more. And as progress beginning from higher levels of achievement is expected in the normal course, the results of ordinary innovation are not the subject of exclusive rights under the patent laws. Were it otherwise, patents might stifle, rather than promote, the progress of useful arts.[137]

C. Implementation in the United States

In examining why the four countries focused on in this analysis have implemented second tier patent systems, a general theme has been established. These countries were troubled by an inefficient patent system that was too costly for the small benefit some of these incremental or short term inventions would receive in exchange for significant fees and disclosing their invention. To maintain the innovative momentum these, usually domestic, inventions fostered, these countries adopted systems with a goal to offer quick and cheap protection for these socially valuable creative solutions and innovations. Although, each of these countries struggled to implement a successful system the first time, each country valued the goal of protecting these inventions enough to struggle through the growing stages of implementing a new large scale government grant system. The United States may be able to benefit from a similar system if they tailor the system to address the goals and concerns of the domestic inventors.

First, the United States would need to determine the subject matter it would offer protection for. With such a broad range of economic opportunity and fields to innovate within in the United States, I believe that the United States should take the same approach the Australian government did when it rejected the ASCI proposal to restrict the subject matter. Instead, Australia believed it would be better to offer second tier patent protection to all the same fields as patent protection is offered to, therefore not predetermining what areas have opportunity for innovation. There could be an argument here that the government should encourage certain

137. KSR Int'l v. Teleflex, 550 U.S. at 427.

economic sectors that it believes to be best for the entire country, such as alternative energy areas; however, I believe market influences should determine what areas are most beneficial to obtain second tier patents.

Next, the United States will need to determine what type of granting procedure should be applied to its innovation patent. Since U.S. inventors and technology investors value the stability behind a substantively examined property right, I would suggest the United States follow a grant procedure similar to Japan. This would allow an inventor to secure protection easily by quickly and cheaply registering the property rights; however, anyone can order a technical opinion from the patent office for rights that are in conflict or need to be evaluated for sale. Although these opinions are not binding in Japan, I believe U.S. courts that are unfamiliar with patented technology would be more inclined to follow the administrative opinion than that of either party. Another advantage of this type of examination, is that private attorneys need not be overly involved in the examination process, which would lead reduce the risk of the system relying on well written of a validity opinion an inventor could afford.

Also, with respect to the granting procedure, I would recommend that the United States adopt a system similar to Germany, where patent rights and second tier patent rights may be obtained for relatively the same subject matter, known as "splitting-off" in Germany. This option will make the second tier patent more versatile, in the sense that some types of inventions that need quick protection, but are also worthy of standard patent protection can obtain protection for the complete initial stage of marketing.

Third, and most notably, the United States will have to decide what substantive patentability criteria it wishes to require of a second tier patent. As the ease of implementation is paramount, which can be seen by the frequency of fraudulent second tier patents in China, I would recommend that the novelty requirement be the same as that of the patent system. Also it would make sense to replicate the usefulness requirement of the current patent system.

The inventiveness requirement should get the most thought of all the criteria selections for a second tier patent. In light of the *KSR* decision's increased level of inventiveness, the United States seems to be presented with an opportune time to implement a second tier patent system that offers protection to those inventions that were just recently worthy of a patent. There would be concern that lowering the inventiveness standard below that of the pre-*KSR* level would create a saturated second tier patent market and greatly diminish the level of respect of a second tier patent recipient, as compared to a patent recipient. Hence, the inventiveness standard should be that of the patent system prior to *KSR*.

Finally, a period of protection must be selected that offers a period of exclusivity that is worth the registration cost and disclosure of the incremental inventions seeking protection. I believe Australia's eight-year term seems reasonable to avoid inducing inventors of patentable inventions

to seek second tier patents over a utility patent. A claim restriction like Australia may also be beneficial to avoid this situation.

Like every second tier patent system analyzed, this proposed system will need more thorough and detailed planning, and most likely amendments thereafter. However, the possible benefits of implementing a second tier system can be realized if other countries' experiments are observed and incorporated into a plan for a U.S. second tier patent.

D. Concerns with Implementation

Some negative effects are inevitable when implementing a system with so many variables. Especially when implementing a system that offers limited monopoly rights to select individuals whose applications are not being substantively reviewed. One concern is that these property rights will be abused by owners sending unwarranted cease and desist letters to non-infringers. This concern may be mitigated with an effective option to request a technical opinion, as envisioned in the proposed system. Another concern is that courts will depart from the suggested standard when interpreting the requisite level of inventiveness. Giving the disparity with the current inventiveness standard, introducing another to the courts could result in a more complicated and an ultimately unsuccessful system. Statutory interpretations by the Federal Circuit and lower courts would need to be made with close attention to legislative intent. Ultimately all major changes will have an element of risk, but nothing will be gained without taking such a risk.

E. Alternatives to a U.S. Utility Model System

Another argument against implementing a second tier system is that unlike some of the countries analyzed, the United States has other intellectual property protection laws that may overlap with some of the situations in which a second tier patent would be used. Such laws include the unfair competition laws in the United States, which discourage confusingly similar commodities in the consumer marketplace. Another related system is the design patent system, which may be able to offer some protection to inventions that are covered by second tier patents. This does not seem like a persuasive objection, however, because design patents overlap with utility patents in an identical manner and this has not caused problems. The trade dress laws also overlap by offering a means to protect consumers from confusingly similar product packaging and external appearance. Overall, these systems do not offer the same benefits as a second tier patent and therefore should not hold back the implementation of a second tier patent system.

CONCLUSION

A second tier patent system is based on the same basic *quid pro quo* patent principles that have been the premise for most of the world's developed patent systems, including the United States' system.[138] Upon review of four prominent second tier patent systems, one can see many of the same reasons motivating the adoption of a second tier patent system in different countries. Incorporating attributes of other countries' second tier patent systems in ways sensitive to the United States' current situation, could result in a beneficial second tier patent system in the United States. The system would cultivate inventors' innovative spirit, satisfying Thomas Jefferson's understanding that a nation needs to offer a limited benefit to *all* inventors for disclosing their creative innovations for the good of society.

138. *See* MASKUS, *supra* note 4, at 8–9.