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# Considering the Next Generation of Innovators: Incorporating the Needs of Start-ups into the United States Patent and Trademark Office's Intellectual Property Strategy

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# Considering the Next Generation of Innovators: Incorporating the Needs of Start-ups into the United States Patent and Trademark Office’s Intellectual Property Strategy

*Matthew J. Pinkerton\**

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## I. INTRODUCTION

*“America’s economic strength and global leadership depends on continued innovation and the ability to protect investments in those innovations.”*

*—The United States Patent and Trademark Office, Performance and Accountability Report: Fiscal Year 2009, 22 (2009).*

*“The first step in winning the future is encouraging American innovation.”*

*—President Barack Obama, State of the Union Address (Jan. 25, 2011).*

Over the past fifty years, innovation has generated sustainable, broadly shared growth that has accounted for almost half of the United States’ gross domestic product.<sup>1</sup> Innovation has also created new industries, fueled wealth creation, and produced high-value, higher paid jobs.<sup>2</sup> Innovation, furthermore, presents the most promising solution to some of the greatest challenges facing contemporary society including addressing climate change, developing sustainable energy alternatives, revitalizing healthcare, and promoting the economic development of impoverished nations.<sup>3</sup>

Two essential components of innovation are newly created businesses (commonly known as “start-ups”) and intellectual property (IP) rights:<sup>4</sup> start-ups

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1. COUNCIL ON COMPETITIVENESS, INNOVATE AMERICA: NATIONAL INNOVATION INITIATIVE SUMMIT AND REPORT 36 (2005), [http://www.compete.org/images/uploads/File/PDF%20Files/NIU\\_Innovate\\_America.pdf](http://www.compete.org/images/uploads/File/PDF%20Files/NIU_Innovate_America.pdf).

2. *Id.*

3. *See id.* (stating that “innovation has always been the way people solved the great challenges facing society. Today, innovations . . . will enable us to achieve dramatically higher levels of health across the planet . . . find plentiful, affordable, environmentally-friendly sources of energy; spread democratic approaches . . . and, expand access to the knowledge that can enable a more secure and satisfying future.”); Dr. Michael Yuan, *Will Health 2.0 start-ups usher in consumer-driven healthcare?*, VENTUREBEAT (Oct. 7, 2009), <http://venturebeat.com/2009/10/07/will-health-20-start-ups-usher-in-consumer-driven-healthcare/> (describing how in October 2008, the U.S. Chief Technology Officer called upon start-ups to lead the revolution of the healthcare system by injecting much needed “collaboration and communication technologies” into the industry).

4. Throughout this comment, intellectual property rights refer to the legal rights that result from intellectual activity in the industrial, scientific, literary, and artistic fields. As a general matter, IP laws grant IP creators certain time-limited rights to control the use made of those productions. WORLD INTELLECTUAL PROP. ORG., WIPO INTELLECTUAL PROPERTY HANDBOOK: POLICY, LAW AND USE 3 (2nd ed. 2004), <http://www.wipo.int/about-ip/en/iprm>. As this comment often refers to inventions and new technology, the typical IP right involved is a patent. In the US, the term of a new patent is 20 years from when the application for the patent was filed. U.S. patent grants are effective only within the U.S., U.S. territories, and U.S. possessions. A patent does not give its holder the right to make, use, offer for sale, sell or import, but the right to exclude others from making, using, offering for sale, selling or importing the invention. *What Are Patents, Trademarks, Servicemarks, and Copyrights?* U.S. PATENT AND TRADEMARK OFFICE, <http://www.uspto>.

are a significant source of new ideas, technologies, and processes, while IP rights provide these young enterprises with the incentive to invent and the opportunity to successfully commercialize their groundbreaking work.<sup>5</sup> Presently, many industries have been, or are currently being, reinvented by imaginative start-ups. For instance, in the wake of the recent troubles in the U.S. automobile industry Tesla Motors, an emerging Silicon Valley enterprise,<sup>6</sup> is pioneering the next-generation of automobiles with its patented electronic vehicles technologies.<sup>7</sup> And as world leaders struggle to curb global warming, Solaren, a Southern California start-up, is at the forefront of the green energy revolution with its plans to deploy patented solar-power collecting satellites that will beam energy back to receiver stations on earth.<sup>8</sup> These examples illustrate the important connection between start-ups, IP and innovation. When one also takes into account the relationship between innovation and sustained growth, it is apparent that countries that recognize the importance of start-ups and IP in capturing the value of creativity are better placed to capitalize on innovation, and will thereby be more likely to secure long-term economic prosperity.

In light of the crucial role of start-ups and IP rights for the United States, this Comment will review the United States Patent and Trademark Office's (USPTO) IP strategy and its effectiveness in advancing the IP needs of start-ups.<sup>9</sup> This Comment argues that although the USPTO's concentration on improving the certainty and timeliness of patent and trademark determinations is indispensable in ensuring an effective IP system, such a focus does little to address the needs of

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gov/web/offices/pac/doc/general/whatis.htm (last modified May 12, 2004).

5. CHRISTOPHER M. KALANJE, *ROLE OF INTELLECTUAL PROPERTY IN INNOVATION AND NEW PRODUCT DEVELOPMENT* 1-3, [http://www.wipo.int/export/sites/www/sme/en/documents/pdf/ip\\_innovation\\_development.pdf](http://www.wipo.int/export/sites/www/sme/en/documents/pdf/ip_innovation_development.pdf).

6. See *Tesla Motors*, N.Y. TIMES (Updated June 29, 2010), [http://topics.nytimes.com/top/news/business/companies/tesla\\_motors/index.html?inline=nyt-org](http://topics.nytimes.com/top/news/business/companies/tesla_motors/index.html?inline=nyt-org) (noting that "Tesla Motors was founded in 2003 as Silicon Valley's solution to the nation's energy problem. If a struggling Detroit could not make an electric vehicle, then a Silicon Valley start-up would.").

7. Maryann N. Keller, *Why Remaking the Auto Industry Makes No Sense*, BLOOMBERG BUSINESSWEEK (Sept. 29, 2009), [http://www.businessweek.com/lifestyle/content/sep2009/bw20090929\\_277702.htm](http://www.businessweek.com/lifestyle/content/sep2009/bw20090929_277702.htm). In terms of success, in May 2010 Tesla announced an assembly plant in California. This plant could add more than 1,000 jobs to the State, showing that the start-up is helping restore the struggling U.S. automobile industry. Jim Motavalli, *Electric Car Agreement for Toyota and Tesla*, N.Y. TIMES (May 20, 2010), [http://www.nytimes.com/2010/05/21/business/21tesla.html?\\_r=1](http://www.nytimes.com/2010/05/21/business/21tesla.html?_r=1).

8. Ina Jaffe, *Company Plans to Pull Solar Energy from Orbit*, NAT'L PUB. RADIO (Dec. 17, 2009), <http://www.npr.org/templates/story/story.php?storyId=121531373&ps=cprs>. In December 2009, the California Public Utilities Commission, to further the state's progress towards its renewable energy goals, approved a renewable energy contract between Pacific Gas and Electric Company and Solaren Corporation. Solaren expects to "provide 1,700 gigawatt-hours of energy per year throughout the 15-year contract term beginning in 2016 at a facility in Fresno County." Press Release, Cal. Pub. Util. Comm'n, CPUC Takes Another Step Toward State's Renewable Energy Goal with Approval of PG&E Contract (Dec. 3, 2009), [http://docs.cpuc.ca.gov/word\\_pdf/news\\_release/110678.pdf](http://docs.cpuc.ca.gov/word_pdf/news_release/110678.pdf).

9. The USPTO has outlined its strategic approach in its 2010-2015 STRATEGIC PLAN and its 2007-2012 STRATEGIC PLAN. *Strategy and Reporting*, U.S. PATENT AND TRADEMARK OFFICE, <http://www.uspto.gov/about/stratplan/index.jsp#heading-2> (last modified Dec. 28, 2010).

start-ups. Specifically, the USPTO does not encourage start-ups to acquire IP rights or help start-ups capitalize on any IP rights they may hold.<sup>10</sup> Moreover, the USPTO's approach to international IP relations, while effective in promoting the U.S. model of regulation, should instead emphasize a collaborative approach to improving IP protection for U.S. start-ups operating internationally.<sup>11</sup> To improve how its strategy assists start-ups, the USPTO should look to the practices of IP governing bodies in Denmark, Japan and Australia. By adjusting its focus to provide greater support for start-ups in its next strategic plan, the USPTO will enable start-ups to better capitalize on their innovative ideas, which will directly and significantly contribute to economic growth and quality of life in the United States.

In Part II this Comment explores how start-ups vastly benefit from IP rights. Part III then describes the present strategy of the USPTO and its effectiveness in improving the IP system, as well as its shortcomings in addressing the IP concerns of start-ups. Next, Part IV looks at the practices of governing IP bodies in Denmark, Japan, and Australia, and describes how their strategies incorporate the IP needs of start-ups in ways not considered by the USPTO. Finally, Part V of this Comment will discuss which specific components of these countries' IP strategies the USPTO should adopt in its next strategic plan.

## II. THE BENEFIT OF INTELLECTUAL PROPERTY TO NEWLY CREATED BUSINESSES

Historically, a start-up company's entry to the marketplace was barred by tangible factors.<sup>12</sup> New businesses needed large amounts of capital to cover the substantial costs of manufacturing, distribution, and marketing.<sup>13</sup> In the modern business setting, however, substantially less capital is required to overcome these barriers.<sup>14</sup> Manufacturing can be outsourced to overseas factories, shipping companies can assist with distribution logistics,<sup>15</sup> and new means of affordable

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10. The USPTO has the authority to offer these services under its enabling legislation. 35 U.S.C. § 2(a)(2) (2003) provides that "[t]he United States Patent and Trademark Office, subject to the policy direction of the Secretary of Commerce shall be responsible for disseminating to the public information with respect to patents and trademarks."

11. The USPTO has the authority to give advice and guidance to the US government as well as foreign governments on matters of international IP protection. 35 U.S.C. §§ 2(b)(8)-(b)(9) (2003) provide that the USPTO shall advise the President and Federal departments and agencies. 35 U.S.C. § 2(b)(10) provides that the USPTO shall "provide guidance, as appropriate, with respect to proposals by agencies to assist foreign governments and international intergovernmental organizations on matters of intellectual property protection."

12. George C. Lewis, *The Cautionary Tale of Crocs and the New World of Instant Competition*, 37 COLO. LAW. 39 (2008).

13. *Id.*

14. *Id.*

15. *Id.* (citing as examples Federal Express, United Postal Services and DHL).

marketing now exists through a variety of Internet sites.<sup>16</sup> Instead, the biggest hurdle start-ups face today in reaching the marketplace is an intangible barrier: IP rights.<sup>17</sup> As explored below, new businesses largely depend on obtaining IP rights in order to acquire and exploit ideas, attract investors, obtain financing, and successfully access new markets.

#### *A. Acquiring Information and Exploiting Innovation*

IP rights play a major role for start-ups that seek to acquire information from others or to profit from their own valuable knowledge.<sup>18</sup> This trading of valuable information creates several vital benefits for start-ups. First, it dramatically increases collaboration and the diffusion of innovative knowledge.<sup>19</sup> As an example, when Indian inventor Dr. Milind V. Rane developed an improved system for recovering heat from engines, boilers, and furnaces, he licensed the right to manufacture and sell the system to Unidyne, a small company based in Mumbai.<sup>20</sup> This allowed Unidyne to increase the efficiency of its product line of steam generators and water heaters.<sup>21</sup> Similarly, start-up automobile manufacturer Tesla Motors is contributing to the dissemination of innovative battery technology.<sup>22</sup> While Tesla is primarily developing lithium-ion battery technology for its own electric automobiles, it has expanded its research to other fields in order to capitalize on the commercial opportunities in licensing the patented science behind its batteries.<sup>23</sup> The company is seeking ways to adapt its batteries for use in, *inter alia*, lawn mowers, motorcycles, and satellites.<sup>24</sup> By doing so Tesla, like Dr. Rane, allows other industries to benefit from its technical knowledge.

A second benefit of trading protected IP is that once a start-up obtains IP rights for its own innovation, it can sell or license that knowledge to others,

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16. *Id.* (citing as examples [www.amazon.com](http://www.amazon.com) and [www.ebay.com](http://www.ebay.com)).

17. *Id.*

18. See SHAHID ALIKHAN AND RAGHUNATH MASHELKAR, *INTELLECTUAL PROPERTY LAW AND COMPETITIVE STRATEGIES IN THE 21ST CENTURY* 106 (2nd ed. 2009) (discussing how IP rights for small and medium enterprises (SMEs), which include start-ups, contributes to the diffusion of knowledge).

19. *Licensing of Intellectual Property Rights; a Vital Component of the Business Strategy of Your SME*, WORLD INTELLECTUAL PROP. ORG., [http://www.wipo.int/sme/en/ip\\_business/licensing/licensing.htm](http://www.wipo.int/sme/en/ip_business/licensing/licensing.htm) (last visited Dec. 21, 2010) (describing a licensing agreement as a partnership between the IP rights holder and the licensee, who is authorized to use such rights); See also WILLIAM VAN CAENEGEM, *INTELLECTUAL PROPERTY LAW AND INNOVATION* 6 (2007) (discussing how IP rights contribute to the diffusion of knowledge).

20. *Commercialization of Invention Before the Grant of Patent—The Case of a Matrix Heat Recovery Unit*, WORLD INTELLECTUAL PROP. ORG., [http://www.wipo.int/sme/en/case\\_studies/mhru.htm](http://www.wipo.int/sme/en/case_studies/mhru.htm) (last visited Dec. 28, 2010) [hereinafter *Commercialization*].

21. *Id.*

22. David Welch, *Tesla: A Carmaker with Silicon Valley Spark*, BLOOMBERG BUSINESSWEEK (July 30, 2007), [http://www.businessweek.com/magazine/content/07\\_31/b4044419.htm](http://www.businessweek.com/magazine/content/07_31/b4044419.htm).

23. *Id.*

24. *Id.*

which enables start-ups to generate revenue streams.<sup>25</sup> This can be critical for new enterprises as either a primary or supplementary source of income.<sup>26</sup> Returning to the example of Tesla Motors, licensing its battery for uses in other industries has allowed the young company to draw an income and sustain itself while it continues to develop its automobile production and sales.<sup>27</sup> For Indian inventor Dr. Rane, his agreement with Unidyne increased Unidyne's product portfolio and Dr. Rane's royalty payments funded his work on subsequent inventions.<sup>28</sup> Without IP rights it would be considerably more difficult to license technology or derive these valuable revenue streams.

### *B. Attracting Venture Capital and Otherwise Obtaining Financing*

In addition to using IP rights to generate income, start-ups can utilize IP to secure funding.<sup>29</sup> Venture capitalists, who want to maximize returns and minimize risks,<sup>30</sup> are typically wary of the long-term viability of start-ups.<sup>31</sup> In the technology sector alone, nine out of ten start-ups fail.<sup>32</sup> With a protected IP portfolio start-ups can reassure potential investors of their business' viability. IP rights indicate that a core business technology is not infringing on another party's IP and that the start-up is not at risk of litigation.<sup>33</sup> Moreover, with IP rights a start-up is substantially less exposed to copying or reverse engineering.<sup>34</sup> Finally, income derived from licensing or selling protected IP allows investors to see the initial value of a start-up's ideas.<sup>35</sup>

The importance of IP rights to venture capitalists was highlighted in a 2008 study of patenting and entrepreneurship in the United States (hereinafter referred

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25. See Joel W. Mohrman, *Capitalizing on Intellectual Property*, 38 THE BRIEF 36, 37 (2009) (describing how companies benefit from licensing IP by, *inter alia*, generating licensing revenues).

26. See Stuart J.H. Graham et al., *High Technology Entrepreneurs and the Patent System: Results of the 2008 Berkeley Patent Survey*, 24 BERKELEY TECH. L.J. 1255, 1302 (2009) (noting that while licensing revenue is relatively unimportant for many start-up firms, some of the smallest start-up companies rely more heavily on licensing revenue than larger firms).

27. See Welch, *supra* note 22 (noting that adapting their lithium-ion battery technology for other applications helps Tesla achieve efficiencies without waiting for increased sales).

28. *Commercialization*, *supra* note 20.

29. See MARIO W. CARDULLO, INTELLECTUAL PROPERTY-THE BASIS FOR VENTURE CAPITAL INVESTMENTS 1, [http://www.wipo.int/export/sites/www/sme/en/documents/pdf/venture\\_capital\\_investments.pdf](http://www.wipo.int/export/sites/www/sme/en/documents/pdf/venture_capital_investments.pdf) (last visited Dec. 28, 2010) (asserting that "[i]ntellectual property is an integral part of value creation in a technology-based enterprise and as such is a critical element in obtaining venture capital for SMEs.").

30. *Id.*

31. Ron Corbett, *IP Strategies for Start-up Ecommerce Companies in the Post-Dot-Bomb Era*, 8 TEX. WESLEYAN L. REV. 643, 644 (2002).

32. Xuan-Thao Nguyen, *Collateralizing Intellectual Property*, 42 GA. L. REV. 1, 37-38 (2007).

33. Corbett, *supra* note 31, at 649-50.

34. *Id.*

35. *Id.* at 649.

to as the “Berkeley Patent Survey”).<sup>36</sup> In a survey of 1,332 early-stage technology companies, the Berkeley Patent Survey found that eighty-two percent of start-ups with venture backing held patents.<sup>37</sup> In the biotechnology industry the number rises to ninety-seven percent.<sup>38</sup>

Alternatively, IP rights can be used in secured financing, which may be preferable for start-ups as it allows them to avoid losing partial ownership to an equity investor.<sup>39</sup> Protected IP can be used in secured financing either as collateral or through securitization.<sup>40</sup> When used as collateral for funding, IP rights secure a loan and are subject to seizure by the lender upon default.<sup>41</sup> According to the World Intellectual Property Organization (WIPO), “[c]ollateralizing commercial loans and bank financing by granting a security interest in IP is a growing practice,” especially in the music, internet, and technology industries.<sup>42</sup> In addition, if a start-up’s IP generates substantial cash flow it can instead be used in securitization through the issuance of securities based on its future revenue stream or exclusive receivables.<sup>43</sup> This allows start-ups to gain immediate liquidity by capitalizing on future income.<sup>44</sup> Currently, there is only a small market for IP asset-based securities due to a limited number of buyers and sellers.<sup>45</sup> However, a recent proliferation of IP security exchanges, such as the Chicago-based Intellectual Property Exchange International (IPXI),<sup>46</sup> may trigger greater interest in IP asset-based securities.<sup>47</sup>

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36. Graham et al., *supra* note 26, at 1255 (summarizing the responses of 1,332 early-stage technology companies founded since 1998).

37. *Id.* at 1255, 1277 tbl.1.

38. *Id.* at 1277 tbl.1.

39. See Nguyen, *supra* note 32, at 15 (explaining that companies seek secured financing because it allows the founders to retain control of the business).

40. *Id.* at 17-18; see also BLACK’S LAW DICTIONARY 297 (9th ed. 2009) (defining “collateral” as “property that is pledged as security against a debt” or “property subject to a security interest or agricultural lien”).

41. See Nguyen, *supra* note 32, at 22 (describing how under a secured financing, when a debtor defaults on an obligation to a creditor, the creditor may seize the collateral).

42. *The Securitization of Intellectual Property Assets—A New Trend*, WORLD INTELLECTUAL PROP. ORG., [http://www.wipo.int/sme/en/ip\\_business/finance/securitization.htm](http://www.wipo.int/sme/en/ip_business/finance/securitization.htm) (last visited Dec. 28, 2010) [hereinafter *Securitization*].

43. *Id.*

44. John M. Gabala Jr., “Intellectual Alchemy”: *Securitization of Intellectual Property as an Innovative Form of Alternative Financing*, 3 J. MARSHALL REV. INTELL. PROP. L. 307, 314 (2004).

45. *Securitization*, *supra* note 42.

46. *About*, INTELLECTUAL PROP. EXCH. INT’L, <http://www.ipxi.com/about> (last visited Dec. 28, 2010) (describing itself as the world’s first financial exchange focused on intellectual property: “IPXI facilitates investment in and risk management of IP-related assets, and allows IP owners—both large and small—to unlock the value of their assets, creating an efficient and transparent means for technology transfer to improve price discovery.”).

47. *Securitization*, *supra* note 42.



C. An International Market Receptive to IP Rights

Finally, U.S. start-ups need the benefit of IP rights in other countries in order to successfully operate in their markets.<sup>48</sup> Absent IP protection, a start-up is vulnerable to having its products copied or distributed without its authorization.<sup>49</sup> This type of IP infringement has been a major problem in developing countries,<sup>50</sup> with Asia being the biggest violator.<sup>51</sup> The Organization for Economic Cooperation and Development (OECD) estimates that in 2005 the value of international trade in counterfeit and pirated products may have reached as high as 200 billion U.S. dollars.<sup>52</sup>

Start-ups are particularly exposed to unauthorized IP reproduction or distribution as they most often only hold a small number of IP rights.<sup>53</sup> Moreover, start-ups are frequently drawn to overseas foreign markets, especially start-ups that develop platform technologies.<sup>54</sup> Platform technologies are technologies that have a multitude of applications across several different industries,<sup>55</sup> and new companies with such technology often find it difficult to effectively penetrate the various potential markets on their own.<sup>56</sup> Consequently, to bring their technology to the market, these start-ups partner with large corporations who have the means to incorporate the technology into their product lines.<sup>57</sup> The resulting products are then distributed in a number of different countries.<sup>58</sup> For instance, Eikos, a start-up nanotechnology company in Massachusetts, created carbon nanotube inks for conductive films.<sup>59</sup> The nanotube inks have applications in flat panel displays,

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48. See *General Information Concerning Patents*, U.S. PATENT AND TRADEMARK OFFICE, <http://www.uspto.gov/web/offices/pac/doc/general> (last modified Sept. 9, 2008) (stating that U.S. patent grants are effective only within the United States, U.S. territories, and U.S. possessions).

49. See Andrew W. Carter et al., *Who cares about Japan? Part Three of a Three-Part Series*, 8 NO. 9 PAT. STRATEGY & MGMT. 1 (2008) (describing the potential for IP theft faced by corporations when investing in developing countries).

50. *Id.*

51. See *id.* (noting that Asia represents about 70 percent of the world's total offenders, the biggest violators being China, Thailand, Korea, Hong Kong, and Taiwan).

52. *Id.* This figure does not include non-tangible digital products.

53. See Graham et al., *supra* note 26, at 1277 tbl.1 (stating the average number of patents/applications held by start-ups across several industries is 4.7, while in the software/internet industry this number is as low as 1.7).

54. Ottilia Saxl, *International Alliances in Nanotechnology*, 1 NANOTECHNOLOGY L. & BUS. 210, 210 (2004).

55. *Id.*

56. *Id.*

57. *Id.*

58. See *id.* (noting that such partnerships between large corporations and small companies "cut easily across national boundaries."). In addition to the Eikos example provided, Sumito, a "giant" Japanese corporation partnered with Carbon Nanotechnologies, Inc., a start-up company from Houston, and added the start-up's nanotube technology to several of its products intended for its Japanese and South Korean markets. *Id.* at 211.

59. *Id.* at 211.

flexible solar energy collectors, and organic light-emitting diode lighting.<sup>60</sup> To make their invention profitable Eikos entered into an agreement with a subsidiary of the Itochu Corporation, one of the world's largest companies with operations spread across seventy-four countries.<sup>61</sup> This allowed Eikos to market a nanotechnology that may become the new market standard for video displays and lighting.<sup>62</sup> If success is obtained, however, it may also thrust the start-up's technology into a myriad of foreign markets, putting its core IP at greater risk of unlawful appropriation.

In summary, with IP rights start-ups are better able to amass and commercialize new technologies as well as attain capital through investors and secured financing. Equally important, recognition of IP rights in foreign markets currently lacking an IP system will help start-ups avoid infringement of their IP. The USPTO could significantly contribute to the success of start-ups by providing assistance with these IP considerations.

### III. THE USPTO'S CURRENT INTELLECTUAL PROPERTY STRATEGY

As the federal agency that advises on IP policy and enforcement procedures for the U.S. government,<sup>63</sup> the USPTO influences how the United States approaches IP acquisition, commercialization, and protection.<sup>64</sup> Historically, the USPTO has set forth the agency's strategic goals in successive five-year plans. In 2007 the USPTO released its 2007-2012 strategic plan.<sup>65</sup> Then, in 2010 the USPTO released its 2010-2015 strategic plan.<sup>66</sup> In both plans the USPTO identifies as its primary goals optimizing the timeliness and quality of patent and trademark reviews, increasing IP protection abroad, and working towards a unified international IP standard.<sup>67</sup> While the agency has in some instances been able to successfully target these goals, such a focus fails to help start-ups obtain IP rights, exploit IP once rights have been obtained, or promote international receptiveness of U.S. IP policies. The following sections will explore the

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60. *Id.*

61. *Id.*; *Corporate Profile*, ITOCHU, <http://www.itochu.co.jp/en/about/profile> (last modified Apr. 1, 2010).

62. Saxl, *supra* note 54, at 211.

63. See *The USPTO: Who We Are*, U.S. PATENT AND TRADEMARK OFFICE, <http://www.uspto.gov/about/index.jsp> (last modified July 31, 2010) (stating that the USPTO advises the President, Secretary of Commerce, and governmental agencies on IP policy, protection, and enforcement).

64. See *id.* (noting that American industry has "flourished" under the USPTO's system of protection).

65. U.S. PATENT AND TRADEMARK OFFICE, 2007-2012 STRATEGIC PLAN (2007), <http://www.uspto.gov/web/offices/com/strat2007/stratplan2007-2012.pdf> [hereinafter 2007-2012 STRATEGIC PLAN].

66. U.S. PATENT AND TRADEMARK OFFICE, 2010-2015 STRATEGIC PLAN (2010), [http://www.uspto.gov/about/stratplan/USPTO\\_2010-2015\\_Strategic\\_Plan.pdf](http://www.uspto.gov/about/stratplan/USPTO_2010-2015_Strategic_Plan.pdf) [hereinafter 2010-2015 STRATEGIC PLAN].

67. See 2007-2012 STRATEGIC PLAN, *supra* note 65, at 3; see 2010-2015 STRATEGIC PLAN, *supra* note 66, at 2 (citing optimization of patent quality and timeliness, optimization of trademark quality and timeliness, protection and enforcement domestically and globally, and achievement of organizational excellence as strategic goals).

USPTO's strategy in greater detail, including the successes and deficiencies of the current approach.

A. *Objective 1: Providing Timely and High Quality Examinations*

In the face of record growth in patent and trademark filings, the USPTO first set out to improve the efficiency and accuracy of IP rights examinations.<sup>68</sup> The USPTO currently faces a backlog of over 1,200,000 patent applications.<sup>69</sup> Adding to this problem is the increasing number of patents filed each year.<sup>70</sup> As a result, the amount of time between the date of filing for a patent or trademark and the date of issuance is considerable.<sup>71</sup> The period presently averages over 34 months,<sup>72</sup> and for some patents it can take as long as four years.<sup>73</sup>

This protracted period of pendency is more than just an inconvenience for patent and trademark applicants. Rather, it poses a threat to the effectiveness of the entire IP system.<sup>74</sup> A longer pendency period results in a shorter period in which enterprises can profit from their innovations.<sup>75</sup> At worst, the technology may be superseded before a patent is granted.<sup>76</sup> This substantially diminishes the incentive to invest in new technology and product development,<sup>77</sup> and thereby directly damages the United States' competitiveness.<sup>78</sup>

In addition to targeting efficiency, the USPTO's focus on accuracy promotes economic vitality by ensuring that only valid patent applications are approved for issue.<sup>79</sup> The resulting certainty enhances confidence and investment in the marketplace.<sup>80</sup> Most importantly, it gives a business' competitors clear warning,

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68. Jason D. Grier, *Chasing Its Own Tail? An Analysis of the USPTO's Efforts to Reduce the Patent Backlog*, 31 HOUS. J. INT'L L. 617, 628-29 (2009).

69. U.S. PATENT AND TRADEMARK OFFICE, PERFORMANCE AND ACCOUNTABILITY REPORT: FISCAL YEAR 2009 115 tbl.5 (2009), <http://www.uspto.gov/about/stratplan/ar/2009/2009annualreport.pdf> [hereinafter USPTO FISCAL YEAR 2009].

70. *Id.* at 112 tbl.1 (showing that the total number of patent applications filed with the USPTO rose from 409,532 in 2005 to 485,500 in 2009).

71. *Id.* at 14. The period between an applicant's filing date and the date of issue is commonly known as the "pendency period." *Id.* at 36.

72. *Id.* at 115 tbl.4.

73. Grier, *supra* note 68, at 626.

74. DANISH PATENT AND TRADEMARK OFFICE, STATUS AND PERSPECTIVES 2008 5 (2008), <http://www.dkpto.org/media/145598/statusandperspectives2008.pdf> [hereinafter STATUS AND PERSPECTIVES].

75. *Id.*

76. *Id.*

77. *Id.*

78. See USPTO FISCAL YEAR 2009, *supra* note 69, at 14.

79. *Id.* at 10.

80. *Id.* at 14; Craig Allen Nard, *Certainty, Fence Building, and the Useful Arts*, 74 IND. L.J. 759, 759 (1999) (asserting that a sense of security permits the IP rights holder to "secure risk capital from investors, which in turn facilitates the commercialization of the claimed invention.").

and avoids investment in and development of same or similar technology.<sup>81</sup> A supplemental benefit is that it helps judicial efficiency, as courts are presently burdened with a disproportionate amount of patent litigation.<sup>82</sup>

With these concerns regarding greater efficiency and accuracy in mind, the USPTO increased the quality of its examiners and examination process.<sup>83</sup> Towards this end the USPTO developed the Patent Training Academy and partnered with universities to offer IP courses and entice science and engineering students to become patent examiners.<sup>84</sup> The USPTO also heightened the review of examiners' consistency, and began providing feedback and remedial training.<sup>85</sup>

As an additional step to improve efficiency, the USPTO implemented several duplication-eliminating measures. First, an electronic application file management system is now offered.<sup>86</sup> The electronic system allows patent examiners, technical support staff, and adjunct users to access a single electronic file.<sup>87</sup> Second, the USPTO continues to enter into bilateral and multilateral agreements with IP offices in different countries.<sup>88</sup> These agreements limit duplicative efforts relating to patent applications filed in multiple IP offices by permitting offices of subsequent filings to receive the examination results of the office of first filing.<sup>89</sup> The USPTO recently entered into such a program with the Korean Intellectual Property Office.<sup>90</sup> Pilot programs have also been initiated with Denmark, Germany, Singapore, and Finland, while existing programs are in place with the European Patent Office, Australia, Canada, Japan, and the United Kingdom.<sup>91</sup>

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81. Nard, *supra* note 80, at 759-60.

82. Grier, *supra* note 68, at 627 (discussing how the growing backlog puts pressure on patent offices); Julie A. Hedlund, *Patents Pending: Patent Reform for the Innovation Economy*, THE INFO. TECH. & INNOVATION FOUNDATION 1 (2007), <http://www.itif.org/files/PatentsPending.pdf> (explaining that between 1990 and 2005, patent litigation has increased by 120 percent, twenty-four times faster than the increase of civil litigation).

83. 2007-2012 STRATEGIC PLAN, *supra* note 65, at 16.

84. *Id.* More recently, the USPTO has also targeted patent attorneys and patent agents for examiner positions. 2010-2015 STRATEGIC PLAN, *supra* note 66, at 12.

85. USPTO FISCAL YEAR 2009, *supra* note 69, at 36.

86. *Id.* at 37; See also *About EFS-Web*, U.S. PATENT AND TRADEMARK OFFICE, <http://www.uspto.gov/patents/process/file/efs/index.jsp> (last modified Jan. 31, 2011) (explaining that the USPTO's web-based patent application allows anyone with a web-enabled computer to "file patent applications and documents without downloading special software or changing document preparation tools and processes.").

87. USPTO FISCAL YEAR 2009, *supra* note 69, at 37.

88. *Id.* at 15, 23. These agreements are referred to as "Patent Prosecution Highways" or ("PPHs").

89. *Id.* at 15; See also 2010-2015 STRATEGIC PLAN, *supra* note 66, at 15 (proposing that when applications are filed in multiple countries, the country of first filing prioritizes work on that application so that the work is available to the other countries before the they need to begin their own search and examination).

90. *Id.* at 23.

91. *Id.* (stating that pilot PPH programs have been implemented with IP Offices in Denmark, Germany, Singapore, and Finland); U.S. PATENT AND TRADEMARK OFFICE, PERFORMANCE AND ACCOUNTABILITY REPORT FISCAL YEAR 2008 17 (2008), <http://www.uspto.gov/about/stratplan/ar/2008/2008annualreport.pdf> (stating that PPH agreements have been established with the European Patent Office, Australia, Canada, Japan,

The USPTO has achieved substantial success through these initiatives. The Patent Training Academy has become standard training for all examiners and received certification from the International Organization for Standardization.<sup>92</sup> The percentage of applications approved by examiners without errors, meanwhile, has improved steadily since 2005, and in 2009 reached 96.9 percent.<sup>93</sup> The USPTO has also been able to meet its targets for the length of pendency, which has capped the growing pendency rate.<sup>94</sup>

Looking forward, two new pilot programs, the first action program and the accelerated examination program, evidence a further commitment to promoting timeliness. The first action program allows patent applicants to request an interview before the first determination on the merits of the application.<sup>95</sup> The interview gives the examiner a better understanding of the invention and allows for resolution of patentability issues at the beginning of the application process.<sup>96</sup> In comparison, the accelerated examination program permits an applicant to complete the examination process within twelve months on the condition that the applicant files a complete electronic application, limits the number of claims, conducts a pre-examination search, and is available to interview to resolve any patentability issues.<sup>97</sup> By in large, these examples illustrate the USPTO's commitment to achieving the goals of its strategic plan.

As described above, the importance of the USPTO to make timely and accurate IP determinations is difficult to overstate. Nonetheless, until the USPTO's strategy incorporates measures to ensure that innovative start-ups actually file for IP rights, start-ups will not benefit from the achievements in the examination process. The Berkley Patent Survey found that across a range of industries less than forty percent of start-ups hold patents.<sup>98</sup> In the Software and Internet industry the number of patent holders is less than twenty-five percent.<sup>99</sup>

This is not entirely surprising given the difficulty of navigating the process of filing for IP rights. To obtain IP rights, a start-up must first successfully identify its IP assets and understand its rights to IP protection. The start-up must then search the USPTO's database to determine if another party has already claimed its idea, meet the filing requirements, provide the appropriate fees, and complete the application documents.<sup>100</sup> Without some system of guidance, start-ups can

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and the United Kingdom).

92. USPTO FISCAL YEAR 2009, *supra* note 69, at 14.

93. *Id.* at 15.

94. *Id.* at 14 (stating that the USPTO kept the rate at just above 34 months for length of pendency from first filing to the issuance of IP rights or abandonment).

95. *Id.* at 16.

96. *Id.*

97. *Id.* at 16-17.

98. Graham et al., *supra* note 26, at 1277.

99. *Id.*

100. See *Patent Process*, U.S. PATENT AND TRADEMARK OFFICE, <http://www.uspto.gov/patents/process/index.jsp> (last modified Apr. 19, 2010) (providing a diagram explaining the steps to obtaining a patent).

easily become lost in the process, or fail to engage in it at all. A lack of understanding of the IP system is evident in the Berkley Patent Survey.<sup>101</sup> Of the 1,332 start-ups surveyed, 38 percent responded that they believed, without confirmation, that their technology was not patentable, while another 17 percent declared that they had no need for legal protection.<sup>102</sup>

It is certainly possible for start-ups to receive advice on IP rights and the process for acquiring those rights, but the expense of obtaining assistance has deterred some start-ups from seeking counsel. Returning to the Berkley Patent Survey, the majority of start-ups who went without patent protection stated that the cost of obtaining a patent influenced their decision.<sup>103</sup> The survey also revealed that the average cost for a start-up to acquire its most recent patent was over \$38,000.<sup>104</sup> One respondent suggested that compared to larger businesses, start-ups often pay more to their IP prosecuting attorneys because start-ups tend to file for patents relating to their core business model and usually rely on outside counsel to complete the process.<sup>105</sup>

Similarly, by not offering guidance on how to manage and exploit IP rights once obtained, the objectives of the present strategy are of limited significance to start-ups.<sup>106</sup> After IP rights have been granted, start-ups still need to ascertain how to bring their innovation to the market. The Berkley Patent Survey indicates that start-ups are not presently capitalizing on the potential of exploiting IP rights.<sup>107</sup> Amongst all respondents, the most important reason for patenting is to prevent others from copying the start-up's products or services.<sup>108</sup> Meanwhile, obtaining licensing revenue on average only ranked somewhere between "slightly important" and "moderately important."<sup>109</sup> In light of the lack of start-ups taking commercial advantage of their IP rights, the USPTO should intercede to educate start-ups on the benefits of commercializing IP rights as well as to help establish a market where the exchange may occur.

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101. *See generally*, Graham et al., *supra* note 26.

102. *Id.* at 1312 tbl.2.

103. *Id.* at 1310.

104. *Id.* at 1311 (noting that "[t]his figure is significantly higher than the averages for patent prosecution reported in other literature, which vary from a low of \$10,000 to a high of \$30,000.").

105. *Id.*

106. *See generally* 2007-2012 STRATEGIC PLAN, *supra* note 65 (stating the objectives of the present strategy, but making no mention of how start-ups should utilize IP rights).

107. Graham et al., *supra* note 26, at 1299.

108. *Id.* at 1297.

109. *Id.* at 1301.

*B. Objective 2: Strengthening IP Rights Abroad*

The remaining major goal of the USPTO is to strengthen IP protection around the world and develop a unified standard for international IP practices.<sup>110</sup> In order to strengthen IP protection abroad, the USPTO expanded the number of IP experts posted at U.S. embassies to advocate for U.S. policies.<sup>111</sup> The USPTO has also been central to incorporating IP obligations into new bilateral and multilateral treaties and free trade agreements.<sup>112</sup>

Concurrently, the USPTO has worked with other patent offices to unify international IP practices.<sup>113</sup> As previously mentioned, the USPTO has entered into cooperative work sharing agreements with a number of foreign IP government agencies.<sup>114</sup> Additionally, the USPTO established the Global IP Academy (GIPA) to offer foreign officials information on international IP obligations and norms, as well as on the U.S. model of protecting and enforcing IP rights.<sup>115</sup> In 2009, GIPA provided training to more than 2,226 officials from 128 countries on a variety of topics, including IP protection, enforcement, and technology transfer.<sup>116</sup> GIPA also organized and hosted two capacity building events with the Asian-Pacific Economic Cooperation and the Association of South East Asian Nations, and conducted a two-week study tour program on IP rights enforcement in the U.S. legal system for 23 foreign judges and prosecutors.<sup>117</sup>

However, by no means is this concern for IP rights in other countries charitable. Instead, posting IP experts to key export markets and GIPA's capacity building program are part of the United States' persistent effort to advance IP rights around the world.<sup>118</sup> As part of this "unremitting policy"<sup>119</sup> the USPTO also continually monitors the global enforcement of IP rights through the Special 301 Report,<sup>120</sup> and repeatedly employs trade agreements to extend the legal protection

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110. USPTO FISCAL YEAR 2009, *supra* note 69, at 22.

111. *Id.* at 22-23 (stating that in 2009, IP experts were posted to Brazil, Beijing, Guangzhou and Shanghai in China, Egypt, India, Russia, Switzerland, and Thailand).

112. *Id.* at 23.

113. *Id.*

114. *Id.*

115. *Id.* at 26.

116. *Id.*

117. *Id.* at 27.

118. See PEDRO ROFFE, BILATERAL AGREEMENTS AND A TRIPS-PLUS WORLD: THE CHILE-USA FREE TRADE AGREEMENT 4 (2004), <http://www.quno.org/geneva/pdf/economic/Issues/Bilateral-Agreements-and-TRIPS-plus-English.pdf> (arguing that the United States has "followed a consistent and unremitting policy of elevating IP [rights] standards."); see also Brent W. Sadler, Comment, *Intellectual Property Protection Through International Trade*, 14 HOUS. J. INT'L L. 393, 393 (asserting that "[t]he United States is concerned about the current status of intellectual property rights in several contexts. Many countries do not protect intellectual property rights to the extent desired by the United States.").

119. ROFFE, *supra* note 118.

120. See generally 2009 Special 301 Report, OFFICE OF THE U.S. TRADE REPRESENTATIVE, EXEC.

of IP.<sup>121</sup> There are numerous examples of the USPTO's reliance on trade agreements to achieve a higher standard for IP protection: before the finalization of the TRIPS Agreement,<sup>122</sup> which introduced standard IP rules to international trade, the USPTO "jumped the gun" by entering into a bilateral agreement with Canada that set its own standard international IP rights.<sup>123</sup> Moreover, subsequent trade agreements with Jordan, Laos, and Vietnam have included extensive "TRIPS-plus" provisions.<sup>124</sup> With the assistance of the USPTO, the United States has since signed numerous other trade agreements that include specific provisions on IP rights with many countries including Israel, Australia, Morocco, Malaysia, Peru, Chile, Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua.<sup>125</sup> These agreements have precipitated significant patent law reform for several U.S. trading partners.<sup>126</sup>

Although it is commendable that the USPTO fervently seeks to promote U.S. IP interests abroad, its current efforts are too unilateral to be of benefit to U.S. start-ups.<sup>127</sup> At this point, the USPTO has not offered much support of international IP protection discussions in collaborative, multilateral settings.<sup>128</sup> In fact, USPTO officials have been critical of the progress of discussions regarding the harmonization of IP law before the World Intellectual Property Organization (WIPO).<sup>129</sup> One USPTO news release stated that certain events at WIPO raised

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OFFICE OF THE PRESIDENT, <http://www.ustr.gov/about-us/press-office/reports-and-publications/2009/2009-special-301-report> (last visited Feb. 6, 2011).

121. JOHN R. THOMAS, CONGRESSIONAL RESEARCH SERVICE, INTELLECTUAL PROPERTY AND THE FREE TRADE AGREEMENTS: INNOVATION POLICY ISSUES 1 (2005), [www.ipmall.info/hosted\\_resources/crs/RL33205\\_051221.pdf](http://www.ipmall.info/hosted_resources/crs/RL33205_051221.pdf).

122. See generally *TRIPS-Introduction*, U.S. PATENT AND TRADEMARK OFFICE, <http://www.uspto.gov/ip/global/trips.jsp> (last modified July 4, 2009) (explaining WTO's Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), which introduced intellectual property rules into multilateral trading systems).

123. ROFFE, *supra* note 118.

124. *Id.* at 4-5.

125. *Id.* at 5 (listing Israel, Australia, Morocco, Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua as countries the United States has signed such free trade agreements with); Robert L. Stoll, Comm'r for Patents, U.S. Patent and Trademark Office, Statement before the Subcommittee on Government Management, Organization, and Procurement, Committee on Oversight and Government Reform, U.S. House of Representatives: Protecting Intellectual Property Rights in a Global Economy (Dec. 9, 2009), <http://www.uspto.gov/news/speeches/2009/2009Dec9.jsp> (listing Malaysia, Peru, and Chile as countries the United States has signed such free trade agreements with).

126. THOMAS, *supra* note 121, at 17-18.

127. See 2007-2012 STRATEGIC PLAN, *supra* note 65, at 22-25.

128. See Stoll, *supra* note 125 (stating that the USPTO has sought the "worldwide adoption of reasonable legal norms concerning . . . IP," and "a more harmonized international patent system.").

129. See *Patent Law Harmonization Talks Stall; Brazil, Argentina, India Oppose Compromise*, U.S. PATENT AND TRADEMARK OFFICE, <http://www.uspto.gov/main/homepagenews/bak2005jun14.htm> (last modified June 14, 2005)[hereinafter *Patent Law Harmonization*]; see also *What is WIPO?*, WORLD INTELLECTUAL PROP. ORG., [http://www.wipo.int/about-wipo/en/what\\_is\\_wipo.html](http://www.wipo.int/about-wipo/en/what_is_wipo.html) (last visited Dec. 28, 2010) (stating that WIPO's mandate is to "promote the protection of IP throughout the world through cooperation among states and in collaboration with other international organizations.").



“serious questions as to whether WIPO is even a viable forum for further meaningful patent discussions.”<sup>130</sup>

The problem with this unilateral approach is that it is unlikely to encourage the enforcement of IP rights in foreign countries, and consequently is not helpful to start-ups. Instead of allowing a country the opportunity to foster its own IP regulation system, the USPTO’s *modus operandi* pressures nations to accept a foreign IP system. Ultimately, this may result in a weaker adherence to the IP laws implemented. Such a result occurred when China put into effect IP laws mandated by TRIPS. The regulations imposed through TRIPS were primarily developed by Western countries, and were largely inconsistent with Chinese “notions of community and tradition.”<sup>131</sup> Within 12 months of implementing TRIPS, IP piracy in China returned to its alarmingly high pre-TRIPS level.<sup>132</sup> Unless the USPTO begins to facilitate genuinely multilateral solutions, start-ups will continue to be exposed to this type of IP infringement.

#### IV. LESSONS FROM OTHER COUNTRIES

Now that the shortcomings of the USPTO strategy have been discussed, the approaches taken by agencies responsible for IP policy in Japan, Denmark, and Australia will be explored in order to provide a number of possible ways to enhance the USPTO’s next strategy. Denmark and Japan offer two frameworks for ensuring that start-ups achieve IP protection and are able to commercially exploit their IP. As detailed below, Denmark focuses on providing start-ups with an assessment of how to capitalize on IP as well as a venue for start-ups to license and sell their IP rights.<sup>133</sup> Japan’s IP strategy, furthermore, offers start-ups support from the conception of an idea all the way to its commercialization.<sup>134</sup>

On the international IP side, Japan and Australia present an approach to IP relations that is based on mutual rather than unilateral discourse. Japan has developed strong reciprocal relationships with other countries.<sup>135</sup> In similar

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130. *Patent Law Harmonization*, *supra* note 129.

131. See Nicholas R. Monlux, *Copyright Piracy on the High Seas of Vietnam: Intellectual Property Piracy in Vietnam Following WTO Accession*, 37 *AIPLA Q.J.* 135, 162 (2009).

132. *Id.* at 161 (observing that the estimated trade lost to piracy in 1996 by category was: Motion Pictures 85 percent, Sound Recordings/Musical Compositions 53 percent, Business Software Applications 95 percent, Entertainment Software 97 percent; the estimated trade lost to piracy in 2001 by category was: Motion Pictures 88 percent, Sound Recordings/Musical Compositions 90 percent, Business Software Applications 93 percent, Entertainment Software 92 percent).

133. *IP Introduction Package*, DANISH PATENT AND TRADEMARK OFFICE, <http://www.dkpto.org/ip-law-policy/national-ip-policy/ip-introduction-package.aspx> (last modified Sept. 4, 2009) [hereinafter *IP Introduction Package*]; *IP Marketplace*, DANISH PATENT AND TRADEMARK OFFICE, <http://www.dkpto.org/ip-law-policy/national-ip-policy/ip-marketplace.aspx> (last modified Sept. 4, 2009) [hereinafter *IP Marketplace*].

134. See JAPAN PATENT OFFICE, ANNUAL REPORT 2009 66-72 (2009), [http://www.jpo.go.jp/shiryoe/toushin\\_e/kenkyukai\\_e/annual\\_report2009.htm](http://www.jpo.go.jp/shiryoe/toushin_e/kenkyukai_e/annual_report2009.htm) [hereinafter JAPAN PATENT OFFICE ANNUAL REPORT 2009].

135. *Id.* at 123-24.

fashion, Australia has emphasized building strong, collaborative working relationships with countries in its region.<sup>136</sup>

#### A. Denmark

Denmark's strategy centers on providing accessible and valuable IP information to new businesses.<sup>137</sup> Information provided by the Danish Patent and Trademark Office (DKPTO) educates start-ups on how to benefit from their IP in an individually tailored manner.<sup>138</sup> First, the DKPTO offers new Danish companies an IP "Introduction Package."<sup>139</sup> The package includes IP guidance from a coach at one of the government's "Growth Houses"<sup>140</sup> and a session with a private IP advisor as well as a subsidy towards the cost of filing for IP rights.<sup>141</sup>

Next, the DKPTO introduced the Strategic IP Audit<sup>142</sup> to aid start-ups in determining whether they are effectively incorporating their IP into their business strategy.<sup>143</sup> The audit consists of an interview during which the enterprise's use of IP is reviewed.<sup>144</sup> At the conclusion of the review, the auditors prepare an evaluative report that includes recommendations for possible additional applications of the company's IP assets.<sup>145</sup> The DKPTO subsequently introduced an internet-based version of the IP audit, known as the "IP Response."<sup>146</sup> The IP Response website offers start-ups, upon answering a series of questions,<sup>147</sup> an

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136. *Collaborative Activities*, IP AUSTRALIA, [http://www.ipaustralia.gov.au/resources/international\\_collab.shtml](http://www.ipaustralia.gov.au/resources/international_collab.shtml) (last visited Dec. 28, 2010) [hereinafter *Collaborative Activities*].

137. Lone Hartung, *The Danish Patent and Trademark Office in a New Role-Facilitating Business for SMEs*, IPR HELPDESK BULL. NO. 28 (IPR Helpdesk, Alicante, Spain), July-Aug. 2006, at 5, [http://www.ipr-helpdesk.org/newsletter/28/pdf/EN/N28\\_EN.pdf](http://www.ipr-helpdesk.org/newsletter/28/pdf/EN/N28_EN.pdf).

138. STATUS AND PERSPECTIVES, *supra* note 74, at 6.

139. *IP Introduction Package*, *supra* note 133.

140. *Id.*; see generally *About Startvækst*, STARTVÆKST, <http://www.startvaekst.dk/aboutstartvaekstto> (last modified Nov. 25, 2009) (explaining that "Startvækst" (Growth/Start Houses) are regional business centers operated by the Danish Enterprise and Construction Authority in cooperation with a number of public and private partners, offering a number of tools for business owners, such as template contracts and budgets for designing a business plan and access to private advisers).

141. *IP Introduction Package*, *supra* note 133.

142. Hartung, *supra* note 137, at 5.

143. *Id.*

144. *Id.*

145. *Id.*

146. *IP Response*, DANISH PATENT AND TRADEMARK OFFICE, <http://www.dkpto.org/online-tools/ip-response.aspx> (last modified Sept. 7, 2009) [hereinafter *IP Response*].

147. *Id.*; see also *IP Response Questions*, DANISH PATENT AND TRADEMARK OFFICE, <http://ipresponse.dkpto.dk/examples/skemaENG.pdf> (last visited Feb. 7, 2011). The first series of questions look at strategies regarding the company's development of knowledge. The second series of questions consider "management and practical procedures in relation to development of knowledge." The third series inquires into the "resources and competencies in, and organization of, how to work with knowledge." The final series concentrates on the "concrete results based on development of new knowledge."

evaluation of how effectively it uses its IP, and how the start-up can further capitalize on its IP.<sup>148</sup>

Beyond educating start-ups on the value of IP, the DKPTO has introduced a forum to assist with the diffusion and commercialization of IP.<sup>149</sup> The “IP Marketplace” offers start-ups the opportunity to purchase or license other company’s IP rights or to sell or license its own IP rights.<sup>150</sup> At the same time, the website allows users to indicate to others any particular technology they wish to obtain.<sup>151</sup> Remarkably, Denmark’s IP Marketplace offers an efficient method of facilitating IP exchange; at a single website start-ups can gain access to important technology of other companies while simultaneously profiting from the sale and licensing of its own IP.<sup>152</sup>

### B. Japan

Japan’s IP strategy shares some similar goals with Denmark, but achieves them through somewhat different measures. Japan’s comprehensive IP strategy was initiated in 2002 as part of a determined effort to transform the nation’s approach to IP.<sup>153</sup> Then Prime Minister, Junichiro Koizumi, stated his plan to turn Japan into a “nation . . . built on the platform of intellectual properties.”<sup>154</sup> The subsequent IP strategy incorporated far-reaching measures to assist individuals and businesses obtain and benefit from IP rights.<sup>155</sup>

To begin with, the Japan Patent Office (JPO) provides a vast range of services designed to enlighten new businesses about IP rights.<sup>156</sup> For example, the JPO holds introductory meetings on IP rights and seminars on the strategic acquisition and implementation of IP rights.<sup>157</sup> Furthermore, the JPO offers lectures, meetings, and individual consultations by IP rights specialists.<sup>158</sup> To supplement these explanatory services, Regional IP Advisory Counters have been established by the JPO at Chambers of Commerce and Industry throughout Japan.<sup>159</sup>

As part of the next step to assist individuals and businesses register for IP protection, application advisors are available for consultation on filing

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148. IP Response, *supra* note 146.

149. *See IP Marketplace, supra* note 133.

150. *Id.*

151. *See id.*

152. *Id.*

153. Andrew W. Carter et al., *Who cares about Japan?: Part One of a Three-Part Series*, 8 No. 2 PAT. STRATEGY & MGMT. 1 (2007).

154. *Id.*

155. *See id.*

156. *See JAPAN PATENT OFFICE ANNUAL REPORT 2009, supra* note 134, at 66-72.

157. *Id.* at 67.

158. *Id.*

159. *Id.* at 68.

procedures.<sup>160</sup> To further facilitate the filing process, private search organizations commissioned by the JPO perform complimentary prior art searches for start-ups' patent applications.<sup>161</sup> On top of that, the JPO may reduce examination fees for small companies under certain conditions, and when businesses are ready to utilize their inventions, allow applications to fast track.<sup>162</sup>

Japan, like Denmark, also offers support for the commercial use and trade of IP. To this end the JPO established the National Center for Industrial Property Information and Training (INPIT).<sup>163</sup> Somewhat similar to the DKPTO's model, INPIT provides a directory of IP available for purchase and licensing—but the INPIT goes one step further by also holding patent market fairs where companies who seek forms of cooperation and licensing can present their technological developments and business plans.<sup>164</sup> Further still, INPIT has experts available to mediate and provide information for patent licensing and technology transfers.<sup>165</sup>

Despite the great number of resources the JPO places on national IP creation, its concern with the facilitation of the IP process is not limited to domestic efforts alone. On the international front, Japan has concentrated on assisting nations develop their own IP protection system, rather than promoting the Japanese approach.<sup>166</sup> The JPO has helped other nations with several important IP components. More recently the JPO assisted with establishing a digital IP library in Indonesia,<sup>167</sup> supported the development of a digital IP administration system for the Philippines' IP office, and helped structure an electronic filing system in Vietnam.<sup>168</sup> In a further effort to assist developing nations, the JPO dispatches experts to provide onsite guidance, and has accepted 3,037 government and civilian trainees from fifty-four countries since April 1996.<sup>169</sup> Finally, the JPO conducts regional symposia and fora. For instance, the JPO recently held a symposium on strengthening border control measures in Thailand, a forum on university IP coordination in Vietnam, and training for university professors who engage in IP education in Sri Lanka.<sup>170</sup>

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160. *Id.*

161. *Id.* at 69.

162. *See id.* at 70.

163. *Id.* at 81.

164. *Id.*

165. *Utilization*, NAT'L CTR. FOR INDUS. PROP. INFO. AND TRAINING, <http://www.inpit.go.jp/english/utitl/index.html> (last visited Dec. 28, 2010) [hereinafter *Utilization*].

166. JAPAN PATENT OFFICE ANNUAL REPORT 2009, *supra* note 134, at 128-30.

167. *Id.* at 133 (noting that Indonesia's digital IP library was launched in 2007).

168. *Id.*

169. *Id.* at 131.

170. *Id.* at 131-32.

C. Australia

Australia offers a second approach to international IP relations. IP Australia, the government agency responsible for Australia's IP system, places great emphasis on building mutually beneficial relationships with other nations' IP offices.<sup>171</sup> In building these relationships IP Australia has sought to be receptive to other countries' ideas. For example, IP Australia has hosted delegations from China, who briefed Australian officials on the protection and enforcement of IP rights in China.<sup>172</sup> Additionally, IP Australia has received delegations from Japan to exchange information on patent administration and examination procedures, and from Taiwan to learn about nontraditional trademarks.<sup>173</sup>

In terms of providing assistance, IP Australia, like the JPO, has focused on providing assistance to neighboring developing countries. IP Australia has helped Vietnam progress towards compliance with TRIPS and accession to the World Trade Organization, and also counseled Pakistan on various technical, operational, and administrative functions of an IP office.<sup>174</sup> In addition, IP Australia has identified appropriate resources for training IP officials in Pacific Island countries,<sup>175</sup> hosted Papua New Guinea IP staff for a month-long training program,<sup>176</sup> and worked with the New Zealand Ministry of Economic Development to consider closer collaboration in and the regulation of IP lawyers.<sup>177</sup> Finally, in partnership with the Intellectual Property Office of Singapore and the Hong Kong Intellectual Property Department, in 2006 IP Australia developed a program to equip Asia-Pacific Economic Cooperation member economies with "the skills and resources to implement public education and awareness" of the effective use of IP rights in the region.<sup>178</sup> This strategy by IP Australia—as well as that of the JPO—is a stark difference to the international approach of the United States.

V. A START-UP-EMBRACING USPTO INTELLECTUAL PROPERTY STRATEGY

The approaches of Denmark, Japan, and Australia provide valuable perspective and guidance on how to develop a U.S. system that considers the IP

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171. *Collaborative Activities*, *supra* note 136.

172. *Id.*

173. *Id.*

174. *Id.*

175. *Id.*

176. *IP Australia's Development Cooperation Activities*, IP AUSTRALIA, [http://www.ipaustralia.gov.au/resources/international\\_dca.shtml](http://www.ipaustralia.gov.au/resources/international_dca.shtml) (last visited on Dec. 28, 2010) [hereinafter *Development Cooperation Activities*].

177. *Collaborative Activities*, *supra* note 136.

178. *Development Cooperation Activities*, *supra* note 176.

needs of the start-up company. This final Part will explore which elements of the various approaches are best suited to be integrated into the next USPTO strategy.

*A. Develop New Programs to Encourage Start-ups to Secure IP Rights*

First, the USPTO should incorporate aspects of the Danish model into its IP strategy to encourage start-ups to acquire IP rights. While the USPTO could also consider Japan's approach due to the comprehensive support it provides start-ups with, the comparative costs of Denmark and Japan's strategies suggest that Denmark's approach is a preferable model.

One far-reaching benefit of the measures implemented by the DKPTO is that they encourage start-ups to acquire IP rights. In particular, the Strategic IP Audit and IP Response programs provide a strong incentive to obtain IP by identifying the commercial value of IP rights.<sup>179</sup> The Strategic IP Audit provides start-ups with an understanding of how their unique knowledge can be combined with their business goals, and the extent to which they are presently capitalizing on their unique knowledge.<sup>180</sup> Additionally, the IP Response program helps start-ups identify IP assets that could be licensed or otherwise exploited.<sup>181</sup> The effectiveness of these initiatives is demonstrated by the fact that between 2002 and 2006 Danes filed more patents per person at two major IP offices, the JPO and the European patent office, than each of their Scandinavian neighbors Sweden, Finland, and Norway.<sup>182</sup> Furthermore, during the same period Denmark remarkably obtained more foreign-orientated patents per person than any other country in the field of biotechnology and the second highest number of foreign-orientated pharmaceuticals patents per person.<sup>183</sup>

In comparison, the JPO's strategy offers step-by-step guidance to start-ups for obtaining IP.<sup>184</sup> Under their approach a start-up is guided through the IP process by first being introduced to IP rights at a JPO seminar.<sup>185</sup> Next, a start-up has the opportunity to meet with IP specialists and application advisors to help it through the registration process.<sup>186</sup> Finally, third party organizations are available to conduct complimentary prior art searches.<sup>187</sup> This exhaustive service has

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179. See Hartung, *supra* note 137, at 5; *IP Response*, *supra* note 146.

180. *Id.*

181. See *IP Response*, *supra* note 146.

182. See WORLD INTELLECTUAL PROP. ORG., WORLD INTELLECTUAL PROPERTY INDICATORS 23 (2009), [www.wipo.int/freepublications/en/intproperty/941/wipo\\_pub\\_941.pdf](http://www.wipo.int/freepublications/en/intproperty/941/wipo_pub_941.pdf) [hereinafter WORLD IP INDICATORS] (using a Relative Specialization Index (RSI) to correct for "the effects of country size and focuses on the concentration of patent families at a specific patent office.").

183. *Id.* at 25-26. (providing that between 2002 and 2006 Danes acquired 3,961 biotechnology patents and 5,404 pharmaceutical patents).

184. See JAPAN PATENT OFFICE ANNUAL REPORT 2009, *supra* note 134, at 66.

185. *Id.* at 67.

186. *Id.* at 67-68.

187. *Id.* at 69.

contributed to Japan's impressive patent application rate. Between 2002 and 2006, Japanese individuals and businesses filed over 700,000 patents worldwide, representing 23.8 percent of all filings completed within the period.<sup>188</sup> The only country that filed more patents during the same period was the United States with 25.9 percent.<sup>189</sup> When the relative size of the two countries is taken into account, however, Japan produced approximately 200 percent more patents per person than the United States.<sup>190</sup> Moreover, in 2007 Japan accounted for an astonishing 39 percent of patents filed in China, 40 percent of patents filed in Korea, and 38 percent of patents filed in the United States.<sup>191</sup>

Although Japan's approach has been very successful and is therefore highly attractive, the USPTO must consider the expense of the JPO's strategy. In the 2009 financial year, the JPO's budget was over 1.45 billion U.S. dollars,<sup>192</sup> compared to the USPTO's budget of nearly two billion U.S. dollars.<sup>193</sup> The JPO's budget equates to approximately 10 U.S. dollars per person while the USPTO's present budget is approximately 6.50 U.S. dollars per person.<sup>194</sup> If the USPTO was to adopt the JPO's model, it would need to source close to an additional billion dollars<sup>195</sup> or be forced to reduce expenditure elsewhere. It is unlikely that the USPTO could secure a budget large enough to provide the same level of support as the JPO, and alternatively, a reduction in existing services would impact the USPTO's current critical goals of timely and quality IP determinations. In comparison to the sizeable budgets of the USPTO and the JPO, in 2006 the DKPTO was self-sufficient, and instead made a profit of approximately one million U.S. dollars.<sup>196</sup> Given that the DKPTO's strategy has proven to be effective in helping Danish businesses acquire IP rights and can be implemented without great expense, it is the better option for the USPTO to add to its IP strategy.

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188. WORLD IP INDICATORS, *supra* note 182, at 22.

189. *Id.*

190. See generally *The World Factbook*, CENT. INTELLIGENCE AGENCY, <https://www.cia.gov/library/publications/the-world-factbook/rankorder/2119rank.html> (last visited Dec. 28, 2010) [hereinafter *The World Factbook*] (indicating that the present population of the U.S. is over 307,212,000 and that the present population of Japan is over 127,079,000).

191. WORLD IP INDICATORS, *supra* note 182, at 22.

192. JAPAN PATENT OFFICE ANNUAL REPORT 2009, *supra* note 134, at 164. At the time of this writing, the currency conversion used for this figure was 1 U.S. Dollar = 82.9924 Japanese Yen. See, e.g., *Universal Currency Converter*, XE, <http://www.xe.com/ucc/> (last visited Dec. 23, 2010).

193. USPTO FISCAL YEAR 2009, *supra* note 69, at B.

194. See generally *The World Factbook*, *supra* note 190.

195. The cost of the USPTO spending 10 U.S. dollars per person, which is approximately an additional 3.50 U.S. dollars per person multiplied by a population of 307,000,000. See generally *The World Factbook*, *supra* note 190.

196. DANISH PATENT AND TRADEMARK OFFICE, STATUS AND PERSPECTIVES 2006, 28-29 (2006), <http://ip-guiden.dkpto.dk/media/24847/aarsberetning%202006uk.pdf>. At the time of this writing the currency conversion used for this figure was 1 U.S. Dollar = 5.67671 Danish Kroner. See, e.g., *Universal Currency Converter*, XE, <http://www.xe.com/ucc/> (last visited Dec. 23, 2010).

*B. Establish a Market for Start-ups to Trade IP and Procure Capital*

In addition to looking to Denmark to help start-ups acquire IP rights, the USPTO should adopt Denmark or Japan's model for establishing a market for start-ups to purchase and sell IP. First, Denmark's virtual IP marketplace establishes a convenient means for trading IP.<sup>197</sup> Such a readily accessible market helps start-ups efficiently acquire vital IP as well as capitalize on their own IP. As previously discussed, by assisting start-ups obtain technologies from other parties, the service aids the diffusion of valuable knowledge and thereby likely facilitates start-ups' development of derivative technologies.<sup>198</sup> Moreover, as a result of selling or licensing their IP through the IP marketplace and generating a revenue stream, start-ups may directly attract investors who see value in their product, or indirectly attract investors by establishing the economic viability of their ideas.

The DKPTO website lists several companies that have achieved international success through the use of its IP marketplace.<sup>199</sup> The examples range from innovative ice cube solutions to sewer systems and hat racks.<sup>200</sup> As a further testament to the success of the marketplace, a profusion of online IP trading marketplaces have begun to populate the Internet. For example, Intellectual Property EXchange Limited (IPEXL), which was originally organized by the Intellectual Property Office of Singapore, provides patent, trademark, and design search services for Australia, Canada, China, Hong Kong, Indonesia, Japan, Korea, Malaysia, Philippines, Singapore, Taiwan, Thailand, the United Kingdom, the United States and Vietnam.<sup>201</sup> Additionally, the University of British Columbia created the intellectual property exchange "Flintbox."<sup>202</sup> The website currently has "over 10,000 registered users and 200 different organizations across six continents."<sup>203</sup>

The USPTO should establish a similar marketplace of its own for trading IP. In particular, Denmark's marketplace model presents an achievable and cost-effective approach. Additionally, implementing such a virtual IP trading site would not be onerous on the USPTO. Rather, the IP holder could be left to be responsible for listing on the website any IP they are willing to sell or license. If the USPTO were to follow Denmark's management, furthermore, the terms of

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197. *IP Marketplace*, *supra* note 133.

198. See VAN CAENEGEM, *supra* note 18, at 6.

199. *Case Stories*, DANISH PATENT AND TRADEMARK OFFICE, <http://www.ip-marketplace.org/cases> (last visited Dec. 28, 2010).

200. *Id.*

201. *About Intellectual Property EXchange Limited (IPEXL)*, INTELLECTUAL PROP. EXCH. LTD., <http://www.ipexl.com/en/companyprofile.html> (last visited Dec. 28, 2010).

202. *About Flintbox*, FLINTBOX, <http://www.flintbox.com/public/fbxcontent/about> (last visited Dec. 28, 2010). Wellspring Worldwide subsequently acquired Flintbox in 2010. *Id.*

203. *Id.*



any consequential licensing or purchase agreement would be left to the IP holder and the interested third party.<sup>204</sup>

The USPTO should additionally embrace the JPO's efforts to create an IP market for start-ups. In total, the JPO publishes 71 million gazettes and relevant information of patents, utility models, designs and trademarks, which are also retrievable by a search system.<sup>205</sup> Such a tangible publication in the United States would compliment a virtual IP marketplace. While the JPO's publication service could be readily adopted, it may be difficult for the USPTO to integrate all of the additional services provided by JPO, especially providing mediation services and business fairs,<sup>206</sup> once again by reason of cost and resources. Nonetheless, by establishing both a virtual and physical marketplace for businesses to trade IP, the USPTO would vastly improve connections between start-ups and the IP market.

### C. Foster a Global Marketplace that is More Receptive to U.S. Start-ups

Turning now to the international IP forum, the USPTO should transition its approach to international IP diplomacy from a United States-centric stance to a more collaborative approach, as demonstrated by IP Australia and the JPO. By being open to other countries' IP perspectives, hosting delegations, and being receptive to advice, IP Australia is establishing favorable IP relations with its trading countries.<sup>207</sup> In contrast, the JPO's focus is at first blush similar to the United States because they both emphasize dispatching experts abroad to provide IP guidance.<sup>208</sup> The JPO, however, has sought a more supportive approach, and has assisted numerous countries develop their own IP regulatory system.<sup>209</sup> The JPO, like IP Australia, also concentrates on sharing ideas rather than promoting its own model for IP protection.

Instead of trying to draw countries into the U.S. IP regulatory system, the USPTO should similarly work towards developing collectively conceived IP systems. For instance, rather than using trade agreements to broaden IP rights in other countries, the USPTO should follow the JPO's example and offer a regional symposium highlighting the benefits of greater IP enforcement.<sup>210</sup> In

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204. *FAQ*, DANISH PATENT AND TRADEMARK OFFICE, <http://www.ip-marketplace.org/faa-hjaelp-til-handel/faq> (last visited Dec. 28, 2010).

205. JAPAN PATENT OFFICE ANNUAL REPORT 2009, *supra* note 134, at 84 (explaining that the service is completed by the Industrial Property Digital Library, which was commissioned by the JPO).

206. *Utilization*, *supra* note 165 (describing how INPIT is available to mediate IP licensing deals); JAPAN PATENT OFFICE ANNUAL REPORT 2009, *supra* note 134, at 81 (describing the business fairs provided by INPIT to help companies license their IP rights).

207. *See Collaborative Activities*, *supra* note 136.

208. *See* JAPAN PATENT OFFICE ANNUAL REPORT 2009, *supra* note 134, at 131-33.

209. *Id.* at 133-34.

210. *Id.* at 131-34.

addition, in similar fashion to IP Australia, the USPTO should host delegations from China to learn why its culture was resistant to the TRIPS provisions.<sup>211</sup> These approaches are more likely to make countries more amenable to the notion of expanding their IP protection. The present tactic of pressuring nations to accept the U.S. model of IP regulation, on the other hand, will likely continue to be largely ineffective. Ultimately, this will harm start-ups by perpetuating the existing low rate of IP enforcement in some parts of the world, and may even induce hostility towards U.S. businesses in some countries.

Moreover, adopting a collaborative approach and focusing on mutually beneficial IP solutions would help achieve a more harmonized global IP standard. A standardized system would greatly improve predictability and directly benefit start-ups by lessening the concerns when they partner with multinational corporations and generally make for a more seamless transition between the domestic market and foreign markets.

## VI. CONCLUSION

The USPTO's IP strategy effectively improves the certainty of IP rights and promotes U.S. IP policies globally. Yet the approach does little to address the needs of start-ups. The strategy does not provide support for start-ups looking to acquire or exploit IP. The strategy also fails to help new businesses use their IP rights to obtain finance. The USPTO should look to Denmark and Japan to cure these deficiencies. Finally, the USPTO could do more to help open new markets for start-ups by avoiding an overly United States-centric approach. The USPTO should instead adopt Australia and Japan's approach of mutual collaboration and local solutions. By incorporating these elements into its IP strategy, the USPTO can provide better support for start-ups, which will lead to higher levels of innovation, which in turn will contribute to the United States' future economic strength and global leadership.

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211. See Monlux, *supra* note 131, at 162.

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