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**Innovative Synergy: Patent Protection and Cost Subsidies Working  
Together to Stimulate Technological Advancement**

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The author dedicates this note to both of his parents, Wayne and Rose Friedland and to all of his grandparents, Abe and Mary (Molly) Friedland and Giuseppe (Joseph) and Elizabeth Lombardo, who always taught the importance of education and hard work. The author deeply thanks them all for the love and support that they have never hesitated to give.

**INTRODUCTION**

The United States Constitution gives Congress many powers, including the powers to tax and spend for the good of the public<sup>2</sup>, and the power to facilitate technological and intellectual innovation.<sup>3</sup> Both of these powers are exercised in the form of incentive systems to induce certain conduct by the states and/or private entities. Like any incentive system, both patent protection and federal subsidies involve trade-offs between the recipients and the federal government. However, the patent system and the spending

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<sup>2</sup> U.S. CONST. art. I, § 8, cl. 1. (“The Congress shall have Power To lay and collect Taxes, Duties, Imposts and Excises, to pay the Debts and provide for the common Defence and general Welfare of the United States; but all Duties, Imposts and Excises shall be uniform throughout the United States[.]”)

<sup>3</sup> U.S. CONST. art. I, § 8, cl. 8. (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[.]”)

power have yet to be used in conjunction with one another. This note proposes that using these two powers to complement one another would further the goals of both powers; namely, to promote innovation by private entities, particularly in fields that facilitate widespread social utility.

## **BACKGROUND**

### **Patent Protection**

U.S. patent protection is rooted in the Constitution, which gives Congress the power to encourage useful scientific and artistic innovation by giving innovators temporary rights of exclusion over their creations.<sup>4</sup> The first American patent law was enacted shortly after the Constitution itself.<sup>5</sup>

The Patent Act of 1790 provided that a three-member panel from the Cabinet would examine patent applications to determine whether they warranted exclusive protection for their inventions.<sup>6</sup> The Board also only recognized U.S. patents as prior art, to the exclusion of foreign patents and inventions. Finally, under the 1790 Act, patent protection expired after 14 years.<sup>7</sup> In response to complaints regarding the inefficiency of the system established by the Patent Act of 1790, Congress replaced this Act only three years later with the Patent Act of 1793.<sup>8</sup>

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<sup>4</sup> *See Id.*

<sup>5</sup> *See* Edward C. Walterscheid, *Patents and the Jeffersonian Mythology*, 29 J. MARSHALL L. REV. 269, 279 (1995).

<sup>6</sup> *Id.*

<sup>7</sup> *Id.* at 280.

<sup>8</sup> *Id.* at 289.

Under the 1793 Act, patent applications were reviewed by three members of the Department of State: the Secretary of State, the Secretary of War, and the Attorney General.<sup>9</sup> This new Act was the result of a compromise between two bills drafted by Thomas Jefferson and Alexander Hamilton.<sup>10</sup> Ironically, although Thomas Jefferson vehemently opposed the notion of monopoly protection (feeling such exclusive rights would stifle innovation rather than stimulate it), as the first Secretary of State Jefferson held the responsibility of administering the patent system under the first two Patent Acts.<sup>11</sup> The Department of State retained jurisdiction over patent applications for the next four decades, until the Patent Office was formed in 1836.<sup>12</sup>

The Patent Act of 1836 established the United States Patent and Trademark Office (“USPTO”) to examine patent applications as a distinct entity under the Department of State.<sup>13</sup>

After 1836, the next major U.S. patent law was not passed for over a century, until 1952.<sup>14</sup> The Patent Act of 1952 is the source of the law that governs the modern-day American patent system, is codified in Title 35 of the United States Code, and is

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<sup>9</sup> *Id.* at 279.

<sup>10</sup> Walterscheid, *supra* note 5, at 297.

<sup>11</sup> *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 7 (1966).

<sup>12</sup> Patent Act of 1836, ch. 357, 5 Stat. 117 (promoting the progress of useful arts).

<sup>13</sup> Jason O. Watson, *A History of the United States Patent Office*, April 17, 2001, <http://www.historical-markers.org/uspto/history.cgi>; *See also* Rochelle C. Dreyfuss, *The Federal Circuit: A Case Study in Specialized Courts*, 64 N.Y.U. L. REV. 1 (1989).

<sup>14</sup> 35 U.S.C. § 101 (1952) (“Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.”).

largely similar in content to the 1790 Act.<sup>15</sup> Under the Patent Act of 1952, an invention will only be eligible for patent protection if it falls into one of the four listed categories that are known as statutory subject matter: process, machine, manufacture, and composition of matter.<sup>16</sup> A patent application directed to non-statutory subject matter will be rejected by the USPTO.<sup>17</sup>

### **Statutory Subject Matter**

In *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, Signature Financial Group (“Signature”) was the assignee of a patent “generally directed to a data processing system for implementing an investment structure which was developed for use in Signature’s business as an administrator and accounting agent for mutual funds.”<sup>18</sup>

The patented system basically combined the economic benefits of managing a mutual fund with the tax benefits associated with running a partnership.<sup>19</sup> State Street Bank & Trust Co. (“State Street”), one of Signature’s competitors, initially sought a license from Signature to use the patented system, but the negotiations failed.<sup>20</sup> State Street then sued in the United States District Court for the District of Massachusetts, seeking a declaratory judgment that Signature’s patent was invalid on the grounds that it did not claim statutory subject matter under 35 U.S.C. § 101.<sup>21</sup> The District Court granted partial summary

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<sup>15</sup> *See Id.*; *see Walterscheid, supra* note 5, at 279.

<sup>16</sup> 35 U.S.C. § 101 (1952).

<sup>17</sup> *State St. Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368, 1370 (1998).

<sup>18</sup> *Id.*

<sup>19</sup> *Id.*

<sup>20</sup> *Id.*

<sup>21</sup> *Id.*

judgment, declaring that the patent failed to claim statutory subject matter under Section 101, and Signature appealed. Construction of patent claims for purposes of determining patent validity is a question of law, and therefore subject to *de novo* review by appellate courts.<sup>22</sup> Here, the Court of Appeals for the Federal Circuit<sup>23</sup> also had to evaluate whether the claimant had satisfied the standard for summary judgment.<sup>24</sup>

The District Court had construed the claim at issue to be directed to a process and read each “means” clause to simply indicate a step in that process.<sup>25</sup> Based on that interpretation, the District Court next focused its analysis on the three exceptions to the statutory subject matter rule.<sup>26</sup> “Laws of nature, natural phenomena, and abstract ideas” have been held ineligible for patenting by the Supreme Court.<sup>27</sup> Here, based on its interpretation of the patent at issue as being directed to a process, the District Court determined that the patent simply claimed a mathematical algorithm, which is just an abstract idea “until reduced to some other type of practical application, i.e., a useful, concrete, and tangible result.”<sup>28</sup> Therefore, the District Court held that the patent at issue

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<sup>22</sup> *State Street*, 149 F.3d at 1370.

<sup>23</sup> The Court of Appeals for the Federal Circuit is a specialized court created in 1982. Its jurisdiction is based on subject matter, including patent law-related appeals from the federal district courts, rather than on geographical location. See Dreyfuss, *supra* note 13.

<sup>24</sup> *State Street*, 149 F.3d at 1370.

<sup>25</sup> *Id.* at 1371.

<sup>26</sup> *Id.* at 1373.

<sup>27</sup> *Id.* at 1373 (citing *Diamond v. Diehr*, 450 U.S. 175, 185 (1981)).

<sup>28</sup> *State Street*, 149 F.3d at 1373 (citing *In re Alappat*, 33 F.3d 1526, 1544 (Fed. Cir. 1994) (en banc) (internal quotation marks omitted)).

was directed to non-statutory subject matter and granted partial summary judgment of invalidity.<sup>29</sup>

On appeal, the Court of Appeals for the Federal Circuit found that the patent at issue was directed to a machine, not a process, which utilized the algorithm disclosed in the patent, and that machines are statutory subject matter.<sup>30</sup> Accordingly, the Court of Appeals reversed the lower court's grant of summary judgment of invalidity and remanded the case for further proceedings.<sup>31</sup>

### **Novelty, Utility, and Anticipation**

The 1952 Act is also the source of the novelty and utility requirements for patentability.<sup>32</sup> That is, an invention must be both “new and useful” in order to be eligible for a patent.<sup>33</sup> The most common way to demonstrate that an invention fails the novelty requirement is to show a reference that discloses or teaches it. Such a reference that discloses the invention described in a patent application is known as prior art.<sup>34</sup> The ways that a reference can qualify as prior art to anticipate a claimed invention are provided in detail in 35 U.S.C. § 102, which outlines the circumstances in which the USPTO will reject a patent application.<sup>35</sup>

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<sup>29</sup> *State Street*, 149 F.3d at 1370.

<sup>30</sup> *Id.* at 1372.

<sup>31</sup> *Id.* at 1377.

<sup>32</sup> “Whoever invents or discovers any *new and useful* process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.” 35 U.S.C. § 101 (1952) (emphasis added).

<sup>33</sup> *Id.*

<sup>34</sup> BLACK'S LAW DICTIONARY 119 (8<sup>th</sup> ed. 2004).

<sup>35</sup> 35 U.S.C. § 102 (2002).

### **Section 102(a): Knowledge by Others and Printed Publication**

Under 35 U.S.C. § 102(a), if a patent application claims an invention that has already been disclosed in any printed publication, or that other people in the United States knew of or used before the applicant invented it, the USPTO will reject the patent application.<sup>36</sup> The rationale for this rule flows from the fact that a patent is, in a way, a temporary monopoly on the claimed invention, which removes the idea from the public domain. To grant such a right of exclusion on something to which the public already had access would be to remove the intellectual property, and the rights to practice it, from the public domain. This would be unjust, and would also create the mischief of people obtaining patents on inventions that are not really theirs. This risk is also addressed in other parts of 35 U.S.C. § 102.<sup>37</sup>

In *National Tractor Pullers Association, Inc. v. Watkins*, the plaintiffs sued for a declaration that the defendants' patent on a device for measuring the pulling strength of a tractor was invalid under 35 U.S.C. § 271(a).<sup>38</sup> The plaintiffs alleged that the claimed invention was invented in 1963 or 1964 by three men, Huls, Harms, and Sage, who conceived of it substantially the same device, and drew it on a tablecloth in Huls' mother's kitchen.<sup>39</sup> By 1977, when the lawsuit started, the alleged original drawing no longer remained, but Huls made some drawings himself and hired a drafter to prepare

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<sup>36</sup> "A person shall be entitled to a patent unless: (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent." 35 U.S.C. § 102(a).

<sup>37</sup> See 35 U.S.C. § 102(b), (e), (f), (g).

<sup>38</sup> 205 U.S.P.Q. 892, 895 (N.D. Ill. 1980).

<sup>39</sup> *Id.* at 901.

formal ones.<sup>40</sup> The plaintiffs asserted that the conception of the machine on the back of the tablecloth constituted prior knowledge by them, and therefore such knowledge was prior art which anticipated the claimed invention under 35 U.S.C. § 102(a).<sup>41</sup> The Federal District Court interpreted Section 102(a) to require prior *public* knowledge of the invention, or knowledge which is “reasonably accessible to the public,” before the patentee invented the claimed subject matter, in order to render a patent invalid.<sup>42</sup> Since the public never had access to the tablecloth drawings, and the device was never built or practiced by any of the people who claimed to know of it before Watkins invented it, the court held the patent claims valid.<sup>43</sup>

Similarly, in *Rosaire v. Baroid Sales Division, National Lead Co.*, the Court of Appeals for the Fifth Circuit affirmed a lower court decision invalidating Rosaire’s patent claim on methods for testing soil samples for hydrocarbons and establishing a relationship between the amount of hydrocarbon gas in the soil and the locations of the samples.<sup>44</sup> Since the patent claim was held invalid, the underlying claim of infringement was dismissed.<sup>45</sup> Baroid contended that the claimed method had been known and practiced by the Gulf Oil Corporation in 1936.<sup>46</sup> Baroid asserted that Gulf workers “knew and extensively used in the field the same alleged inventions before any date

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<sup>40</sup> *Id.*

<sup>41</sup> *Id.*

<sup>42</sup> *Id.* at 911.

<sup>43</sup> *Id.* at 912.

<sup>44</sup> 218 F.2d 72, 72-73, 75 (5<sup>th</sup> Cir. 1955).

<sup>45</sup> *Id.* at 75.

<sup>46</sup> *Id.* at 73-4.



asserted by Rosaire.”<sup>47</sup> Therefore, Baroid argued, the Rosaire patent was invalid under 35 U.S.C. § 102(a), as the Gulf workers’ prior knowledge and extensive use of the claimed methods indicated that the methods were “known or used by others in this country” before Rosaire invented them.<sup>48</sup>

To the contrary, although Rosaire acknowledged that Gulf Oil employees knew about and used the claimed methods before they were invented by Rosaire and Horvitz, Rosaire argued that Gulf Oil never placed that knowledge in the public domain by applying for a patent or publishing the work.<sup>49</sup> Therefore, Rosaire maintained, Gulf Oil “did not otherwise give the public the benefit of the experimental work.”<sup>50</sup>

Based on the trial court’s factual findings, the appellate court affirmed the trial court’s holding that the patent claim was invalid under 35 U.S.C. § 102(a).<sup>51</sup> The court, rejecting Rosaire’s argument, held that since the method in question was practiced “openly and in the ordinary course of the activities of the employer, a large producing company in the oil industry,” there was no reason or legal precedent which compelled it to read into §102(a) a requirement that the knowledge was brought into the public domain by an affirmative act.<sup>52</sup>

The *Rosaire* requirement that prior knowledge must be prior *public* knowledge to constitute §102(a) prior art is consistent with the holding in *National Tractor Pullers*.

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<sup>47</sup> *Id.* at 73.

<sup>48</sup> *Id.*

<sup>49</sup> *Rosaire*, 218 F.2d at 73.

<sup>50</sup> *Id.*

<sup>51</sup> *Id.* at 74.

<sup>52</sup> *Id.* at 75.

Although the two cases ultimately reached different conclusions on validity based on their own facts, both of these rationales embody the underlying premise of the patent system, which, as noted above, seeks to facilitate innovation by encouraging inventors to put their discoveries into the public domain in exchange for the temporary right to exclude others from practicing them.

### **Section 102(b): On Sale and Public Use**

Similarly, Section 102(b) provides that the USPTO shall reject a patent application that claims an invention that has already been patented in any country, or has been sold or used publicly in the U.S. for more than one year before the application for patent was filed.<sup>53</sup> This rule makes it necessary for inventors to be very cautious regarding how and when they disclose their inventions, if they choose to do so before filing a patent application or before obtaining the patent. That is, if an inventor allows his or her invention to be used publicly or sold in the United States before filing a patent application, the inventor can lose all eligibility for a patent on that invention.

In *Egbert v. Lippman*, the United States Supreme Court invalidated the claims of a patent on a new design for corset springs, on the ground that the inventor had allowed it to be publicly used for over two years before applying for a patent.<sup>54</sup> In *Egbert*, the patent in question had been issued to Barnes, who had claimed a new design for corset-springs he had originally developed eleven years earlier for a friend, Frances Lee Egbert, who later became his wife.<sup>55</sup> When Barnes gave Egbert the new springs he had

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<sup>53</sup> 35 U.S.C. § 102 (b)(2002) (“A person shall be entitled to a patent unless: (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States.”)

<sup>54</sup> *Egbert v. Lippman*, 104 U.S. 333, 335 (1881).

<sup>55</sup> *Id.* at 333-335.

developed, he never placed any restrictions on them, or asked her to keep the invention secret.<sup>56</sup> The Court found this point determinative in evaluating the question of public use, since it found that at the time Barnes gave Egbert the corset-springs, the invention was finished, and a patent application could have been filed at that time.<sup>57</sup> The Court reasoned that Barnes' failure to impose restrictions on the invention's use or require Egbert to keep the invention secret constituted his consent for their public use.<sup>58</sup> Accordingly, the Court held the patent claim invalid because Barnes had "slept on his rights" since he completed the invention in 1855 and did not apply for a patent on it until 1866.<sup>59</sup>

Interestingly, the lone dissenting judge essentially pointed out that there was no need to require that Egbert keep the invention secret, since it was a part of her undergarments, covered by both the corset itself and by her outer clothing.<sup>60</sup> According to the dissent, there was obviously no need for Barnes to ask Egbert to keep the springs a secret, since he had no reason to believe she would expose them, and wearing the corset in public did not give others knowledge of the invention or how it worked.<sup>61</sup> While *Egbert* is an older case, it represents an important construction of the public use provision which has survived through the modern day of American patent law.

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<sup>56</sup> *Id.* at 337.

<sup>57</sup> *Id.*

<sup>58</sup> *Id.*

<sup>59</sup> *Egbert*, 104 U.S. at 337-338.

\*Footnote 60 was removed with the deletion above, yet there was no change to the number of footnotes below.

<sup>60</sup> *Id.* at 338 (Miller, J., dissenting).

<sup>61</sup> *Id.* at 339.

*Moleculon Research Corp. v. CBS, Inc.* is a more modern case that turned on the question of what defines “public use” under 35 U.S.C. § 102(b).<sup>62</sup> In *Moleculon*, the patented product at issue was the now commonly-known Rubik’s Cube® puzzle.<sup>63</sup> While in graduate school, Nichols had conceived of a puzzle game with eight small cubes combined into one larger “2 x 2 x 2” cube, in which each face of the larger cube was a different color and the smaller cubes could rotate with respect to one another.<sup>64</sup> Nichols later became a research scientist at Moleculon in 1962. In 1969, he brought a wood block model of his puzzle to work and Dr. Obermayer, who was the president of Moleculon, took an interest in the puzzle upon noticing it on Nichols’ desk. Obermayer proposed that Moleculon try to commercialize the puzzle game, so Nichols subsequently assigned all of his rights in it to Moleculon in exchange for a share of Moleculon’s revenue from the commercialization.<sup>65</sup> Nichols applied for a patent assigned to Moleculon, which was issued in 1972.<sup>66</sup> Moleculon later sued CBS for infringement of the same patent and CBS counterclaimed for invalidity.<sup>67</sup> The trial court held Moleculon’s claims valid for infringement, and CBS appealed.<sup>68</sup>

CBS argued that the Moleculon patent was invalid under 35 U.S.C. § 102(b), as it was in public use and on sale by Nichols more than one year before the patent application

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<sup>62</sup> *Moleculon Research Corp. v. CBS, Inc.*, 793 F.2d 1261, 1265 (Fed. Cir. 1986).

<sup>63</sup> *Id.* at 1263.

<sup>64</sup> *Id.*

<sup>65</sup> *Id.*

<sup>66</sup> *Id.*

<sup>67</sup> *Moleculon*, 793 F.2d at 1264.

<sup>68</sup> *Id.* at 1261.

was filed.<sup>69</sup> CBS cited *Egbert* in support of its claim that Nichols' showing the model to other persons without asking them to keep it secret constituted public use.<sup>70</sup> The Federal Circuit accepted the lower court's rationale, distinguishing the facts from *Egbert*, on the ground that "Nichols had not given over the invention for free and unrestricted use by another person," as Barnes had done in *Egbert*.<sup>71</sup> Rather, the Court found that Nichols had maintained sufficient control over the puzzle and the information on how it worked.<sup>72</sup> The Federal Circuit pointed out that it was necessary to evaluate the totality of the evidence in determining whether an invention was in public use for purposes of §102(b).<sup>73</sup>

CBS also argued that the invention had been on sale for more than one year before the filing date, however the court stated that the sale of the rights to an invention is not the same as a sale of the invention itself.<sup>74</sup> In affirming the trial court's findings of validity and infringement, the Court held that Nichols did not place the invention on sale or in public use when he assigned his rights in it to Moleculon, or when he discussed the transaction with Obermayer.<sup>75</sup>

While *Egbert* and *Moleculon* represent differing conclusions of law based on seemingly similar facts, the two cases can be reconciled. In both cases, the courts focused to a significant extent on the control that the inventors maintained over their

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<sup>69</sup> *Id.* at 1265.

<sup>70</sup> *Id.* at 1266.

<sup>71</sup> *Id.* at 1266.

<sup>72</sup> *Moleculon*, 793 F.2d at 1267.

<sup>73</sup> *Id.* at 1266.

<sup>74</sup> *Id.* at 1266.

<sup>75</sup> *Id.*

inventions to evaluate the questions of public use. In *Egbert*, the finding of public use stemmed from Barnes' failure to attach any restrictions to the use of the corset springs when he gave them to Egbert.<sup>76</sup> However, in *Moleculon*, Nichols always maintained reasonable control over the puzzle even while it was on display by keeping it in his office, which the court found dispositive with respect to the question of whether he had surrendered the puzzle for use in the public domain.<sup>77</sup>

### **Section 102(c): Abandonment**

An inventor's abandonment of an invention, according to Section 102(c), is grounds for the USPTO to reject an application for patent on the invention.<sup>78</sup> An inventor is considered to have abandoned the invention if he discontinues work on it for an extended period of time.<sup>79</sup> Prior art is considered a "party-specific" statutory bar, since only the inventor can abandon their own invention.<sup>80</sup>

### **Section 102(d): Prior Foreign Filing**

The USPTO will also reject a patent application if the inventor has already applied for a patent on the same invention in another country more than twelve months before filing the American patent application.<sup>81</sup> In *In re Kathawala*, the Court of Appeals

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<sup>76</sup> *Egbert*, *supra* note 54.

<sup>77</sup> *Moleculon*, *supra* note 63.

<sup>78</sup> 35 U.S.C. § 102(c) ("A person shall be entitled to a patent unless: . . . (c) he has abandoned the invention.").

<sup>79</sup> *See Macbeth-Evans Glass Co. v. General Electric Co.*, 246 F. 695 (6th Cir. 1917).

<sup>80</sup> 35 U.S.C. § 102(c).

<sup>81</sup> 35 U.S.C. § 102(d) ("A person shall be entitled to a patent unless: . . . (d) the invention was first patented or caused to be patented, or was the subject of an inventor's certificate, by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application for patent or inventor's certificate filed more than twelve months before the filing of the application in the United States.").

for the Federal Circuit affirmed a patent examiner’s rejection of Kathawala’s continuation-in-part application, as Kathawala had already obtained Greek and Spanish patents claiming the same subject matter whose applications were filed more than one year before he filed for the U.S. patent.<sup>82</sup> Kathawala had discovered new compounds that “inhibited a key enzyme in the biosynthesis of cholesterol.”<sup>83</sup> The Greek patent claimed the methods for producing and using the subject compounds and the Spanish patent only claimed the method for using them.<sup>84</sup> The same methods and compounds were claimed in the U.S. patent application.<sup>85</sup> While Kathawala argued that his Greek patent was unenforceable in that country except as to the process claims, making his invention not “patented” for purposes of 35 U.S.C. § 102(d), the court found that “[w]hen a foreign patent issues with claims directed to the same invention as the U.S. application, the invention is ‘patented’ within the meaning of section 102(d).”<sup>86</sup> Therefore, Kathawala’s claims were held to be properly rejected under 35 U.S.C. § 102(d).<sup>87</sup> This holding illustrates the public policy of encouraging, or requiring, inventors to get to the USPTO as soon as they can, as opposed to delaying a patent application and thus keeping the information out of the public domain for an indeterminate amount of time.

### **Section 102(e): Prior Published Application**

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<sup>82</sup> *In re Kathawala*, 9 F.3d 942 (Fed. Cir. 1993).

<sup>83</sup> *Id.* at 944.

<sup>84</sup> *Id.*

<sup>85</sup> *Id.*

<sup>86</sup> *Id.* at 945.

<sup>87</sup> *Id.*, 9 F.3d at 947.

Under Section 102(e), the USPTO will reject a patent application that describes an invention that was described in another inventor’s United States patent application if that application was already published before the current applicant invented the subject matter claimed.<sup>88</sup> Section 102(e) also provides that a patent application will be rejected if the invention it claims was described in a U.S. patent that had already been issued before the current applicant invented the subject matter.<sup>89</sup> Section 102(e) allows an applicant for a United States patent to claim priority to a previously filed foreign patent application filed under the Patent Cooperation Treaty (“PCT”), but only if the foreign application designated the U.S. as one of the countries where a patent application directed to the same subject matter would subsequently be filed, was published in English, and was published under Article 21(2) of the PCT.<sup>90</sup> Section 102(e) codifies an opinion stated by the Supreme Court in *Alexander Milburn Co. v. Davis-Bournonville Co.*,<sup>91</sup> which supported the policy that “administrative delays in the USPTO should not detract from the anticipatory effect of [prior art references].”<sup>92</sup>

### **Section 102(f): Truth of Inventorship**

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<sup>88</sup> 35 U.S.C. § 102(e) (2002) (“A person shall be entitled to a patent unless: . . . (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for the purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.”).

<sup>89</sup> 35 U.S.C. § 102(e) (2002).

<sup>90</sup> *Id.*; *See* 35 U.S.C. § 351(a) (2002).

<sup>91</sup> *Alexander Milburn Co. v. Davis-Bournonville Co.*, 270 U.S. 390, 401 (1926); *See In Re Bayer*, 568 F.2d 1357, 1361 (C.C.P.A. 1978).

<sup>92</sup> *In re Bayer*, 568 F.2d at 1361.



A patent application filed by an applicant who is not the true inventor or legal representative of the inventor of the claimed invention will be rejected pursuant to Section 102(f).<sup>93</sup> This rule is intended to prevent people from stealing the patent rights to others' inventions by getting to the USPTO before the true inventor.

In *Campbell v. Spectrum*, the plaintiff, Campbell, sued for infringement of his patent on a flexible feed track system with a rectangular cross-section.<sup>94</sup> The defendant, Zimmerman, worked for Campbell at the time the subject feed track was developed, and subsequently left Campbell's employ.<sup>95</sup> In response to Campbell's claim of infringement, Zimmerman counterclaimed that the patent claim at issue was invalid because Zimmerman, not Campbell, was the true first inventor.<sup>96</sup> Campbell asserted that he conceived the idea, then gave Zimmerman instructions on how to make the feed track, after which Zimmerman took the ideas and made the feed track on his own.<sup>97</sup> Zimmerman contended that he got the idea for the rectangular cross-section feed track when he saw his father's belt buckle with a similar shape.<sup>98</sup> The only existing corroboration for the parties' own testimony supported Zimmerman, who the lower court found more credible than Campbell.<sup>99</sup> Adopting the lower court's findings of fact, the

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<sup>93</sup> 35 U.S.C. § 102(f) (2002) ("A person shall be entitled to a patent unless: . . . (f) he did not himself invent the subject matter sought to be patented.").

<sup>94</sup> *Campbell v. Spectrum Auto. Co.*, 513 F.2d 932, 933 (6th Cir. 1975).

<sup>95</sup> *Id.*

<sup>96</sup> *Id.* at 934.

<sup>97</sup> *Id.* at 934-35.

<sup>98</sup> *Id.* at 935.

<sup>99</sup> *Campbell*, 513 F.2d at 934.

Court of Appeals for the Sixth Circuit affirmed the holding of invalidity of Campbell's patent claim because Zimmerman was the true inventor.<sup>100</sup>

### **Section 102(g): Interferences**

When the USPTO determines that the claimed subject matter of multiple simultaneously pending patent applications either partially or fully overlaps, the examiner declares an interference, which is an office action within the USPTO, to determine which applicant, if any, is entitled to a patent on the claimed invention.<sup>101</sup> Interferences are governed in part by Section 102(g).<sup>102</sup> Under Section 102(g), an inventor who "abandon[s], suppress[es], or conceal[s]" his invention loses patent rights to the claimed invention.<sup>103</sup>

Priority of invention is determined by having the applicants submit experiment records and sworn testimony in the form of a Rule 131<sup>104</sup> affidavit in order to establish the earlier invention date. The applicant whose original application was filed earlier is considered the Senior Party, while the later applicant is called the Junior Party, and bears the burden of establishing the earlier invention date, which may include submitting a

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<sup>100</sup> *Id.* at 935.

<sup>101</sup> 37 C.F.R. § 1.608.

<sup>102</sup> 35 U.S.C. § 102(g) ("A person shall be entitled to a patent unless... (g)(1) during the course of an interference conducted under section 135 or section 291, another inventor involved therein establishes, to the extent permitted in section 104, that before such person's invention thereof the invention was made by such other inventor and not abandoned, suppressed, or concealed, or (2) before such person's invention thereof, the invention was made in this country by another inventor who had not abandoned, suppressed, or concealed it. In determining priority of invention under this subsection, there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.").

<sup>103</sup> *Id.*

<sup>104</sup> 37 C.F.R. § 1.131.

Rule 131 affidavit.<sup>105</sup> Until another invention date is established, the filing date of the application is considered the constructive invention date.<sup>106</sup> As long as there are no other bars to patentability, such as anticipation, obviousness, or a statutory limitation, the winner of the interference gets the patent rights on the claimed invention.<sup>107</sup>

In *Peeler v. Miller*, both parties to the interference filed patent applications in the USPTO claiming the same hydraulic fluid intended to reduce cavitation.<sup>108</sup> The USPTO first issued a patent to Peeler, and subsequently declared an interference under Section 102(g) between Peeler's issued patent and Miller's pending application<sup>109</sup> Miller won the interference at the Board of Patent Appeals and Interferences, which Peeler then successfully appealed to the Court of Customs and Patent Appeals.<sup>110</sup> While Peeler relied on his filing date, January 4, 1968, rather than submitting other evidence of his date of invention, Miller submitted testimony that he first became aware of the problems of cavitation with the existing fluid in 1964, conducted testing with different additives during 1965 and 1966, and on April 18, 1966, the research department at Monsanto, his employer, stamped his preliminary disclosure "A (Ready (to file))."<sup>111</sup> Although over four years passed between Miller's reduction of the invention to practice and Monsanto's filing of the patent application, and the record lacked evidence of any action by the research department on the application during the interim, a majority of the Board of

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<sup>105</sup> See *id* § 41.201; see also 37 C.F.R. § 1.131.

<sup>106</sup> 37 C.F.R. § 1.131.

<sup>107</sup> *Id.*

<sup>108</sup> 535 F.2d 647, 649 (C.C.P.A. 1976).

<sup>109</sup> *Id.* at 648.

<sup>110</sup> *Id.* at 648-9.

<sup>111</sup> *Id.* at 649.

Patent Appeals and Interferences found that Miller had not abandoned, suppressed, or concealed the invention for purposes of Section 102(g).<sup>112</sup> Since Miller successfully established that he had invented and reduced to practice the claimed subject matter before Peeler's constructive invention date, Miller won at the Board of Patent Appeals and Interferences and was awarded the patent.<sup>113</sup> However, on appeal, the Court of Customs & Patent Appeals reversed, finding that the four year delay between Miller's reduction to practice and his filing date constituted suppression, and awarded the patent to Peeler.<sup>114</sup>

### **Section 103: Obviousness**

In addition to the statutory subject matter requirement and the novelty and utility requirements of 35 U.S.C. §§ 101-102, the 1952 Act also requires that inventions be non-obvious as a condition to patentability.<sup>115</sup> That is, even if an invention is not directly anticipated by the prior art, the invention may still be ineligible for patent protection if it would be obvious to a person of ordinary skill in the pertinent art in light of all the relevant prior art.<sup>116</sup>

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<sup>112</sup> *Id.* at 649-50.

<sup>113</sup> *Peeler*, 535 F.2d at 650.

<sup>114</sup> *Id.* at 655.

<sup>115</sup> "A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the 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 to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made." 35 U.S.C. § 103(a.).

<sup>116</sup> "Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented." *KSR Int'l Co. v. Teleflex, Inc.*, 127 S.Ct. 1727, 1734 (2007) (quoting *Graham*, 383 U.S. at 17-18) (internal quotation marks omitted).

An early landmark case on the non-obviousness requirement for patentability was *Graham v. John Deere Company of Kansas City*, in which the United States Supreme Court invalidated as obvious a patent claim directed to a plow shank device designed to reduce the shock from plowing rocky soil, minimizing damage to the plow itself.<sup>117</sup> The Court acknowledged that known disadvantages in the prior art, while not conclusive proof of non-obviousness, should be considered in an obviousness evaluation.<sup>118</sup> The Court also indicated that secondary factors, such as “commercial success, long felt but unsolved needs, [and] failure of others” might be relevant in an obviousness evaluation, and should be considered as well.<sup>119</sup> The Court acknowledged that the factors listed were not exclusive, and not determinative, and that the obviousness inquiry is very fact-specific.<sup>120</sup>

One of the most recent major landmark cases on obviousness was *KSR International Company v. Teleflex Inc.*<sup>121</sup> In *KSR*, the United States Supreme Court shed more light on the legal analysis of obviousness as a ground for patent invalidity.<sup>122</sup> The patent at issue was licensed exclusively to Teleflex, and was directed to an “Adjustable Pedal Assembly With Electronic Throttle Control,” which incorporated an electronic sensor with the position-adjustable gas pedal of an automobile, so the sensor triggered a

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<sup>117</sup> *Graham*, 383 U.S. at 4.

<sup>118</sup> *Graham*, 383 U.S. at 3.

<sup>119</sup> *Id.* at 17.

<sup>120</sup> *Id.* at 17-18.

<sup>121</sup> *KSR*, 127 S.Ct. at 1727.

<sup>122</sup> *Id.* at 1739-43.

computer to open the gas valves according to the position of the pedal.<sup>123</sup> This was designed to avoid the deficiencies with the traditional mechanically-actuated gas pedal systems.<sup>124</sup> After this patent issued, KSR added a modular sensor to an adjustable mechanical pedal it had developed for Ford Motor Company, which Teleflex claimed infringed one of its patents.<sup>125</sup> KSR counterclaimed that the Teleflex patent was invalid because it was obvious in light of the relevant prior art.<sup>126</sup> The District Court for the Eastern District of Michigan granted summary judgment for KSR, finding “little difference” between the prior art and the claims at issue.<sup>127</sup> The District Court also found that the relevant prior art satisfied the “teaching, suggestion, or motivation” test.<sup>128</sup> The Court of Appeals for the Federal Circuit reversed, holding that the District Court had not applied its test strictly enough.<sup>129</sup> The U.S. Supreme Court reversed the Court of Appeals, holding the Teleflex patent invalid as obvious in light of the prior art, which contained patents directed to modular sensors, pedals with integrated sensors, and adjustable pedals which include electronic sensors.<sup>130</sup>

### **Costs of Patenting**

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<sup>123</sup> *Id.* at 1734.

<sup>124</sup> *Id.* at 1735-36.

<sup>125</sup> *Id.* at 1736-37.

<sup>126</sup> *KSR*, 127 S. Ct. at 1734.

<sup>127</sup> *Id.* at 1730.

<sup>128</sup> *Id.*

<sup>129</sup> *Id.*

<sup>130</sup> *KSR*, 127 S. Ct. at 1746.

While the foregoing is not an exhaustive summary of the patent law, it represents a broad introduction to the conditions for patentability and the complex legal issues that arise in connection with the patent law. The complicated nature of the patent law and the different types of problems that arise under it require patent attorneys to be skilled both technologically and legally, which is likely part of the reason their fees comprise the vast majority of the cost of getting a patent, which can be thousands of dollars.<sup>131</sup>

A patent constitutes a bargain between the patent holder and the public at large. When an inventor is granted a patent, he or she receives a temporary right to exclude all others from practicing the patented invention in exchange for disclosing to the public what exactly the inventor claims as his invention, a written description of how to make and use it, and the best mode of practicing the invention. The public disclosure of the invention is intended to further the public good by facilitating innovation by others in related fields, and to perpetuate education by studying the inventions of others. This right of exclusion, which some consider a “monopoly right,” protects inventors from having their inventions stolen by others after the inventions have been publicly disclosed. The exclusionary rights conferred on patentees can be extremely valuable in many circumstances, which may be the reason many people and corporations continue to find patent protection economically worthwhile, despite the high monetary costs and time-consuming process associated with applying for, litigating, and enforcing patents.<sup>132</sup>

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<sup>131</sup> See Oppedahl & Olson LLP, What does it Cost to Get a Patent? (1993), <http://www.oppedahl.com/cost/#patent>.

<sup>132</sup> See, e.g., *Kori Corp. v. Wilco Marsh Buggies and Draglines, Inc.*, 761 F.2d 649, 652 (Fed. Cir. 1985) (awarding \$50,000 in attorneys’ fees and \$1,033,616.60 in pecuniary damages).

As is the case with countless other goods and services, a rise in the cost of patent protection can easily prompt inventors to question whether and to what extent they are interested in patenting their inventions. In the context of the patent law, many entities end up electing not to seek patent protection because of the high cost of prosecuting a patent application or based on the nature of the invention itself. Others sometimes wind up choosing not to apply for patent protection, simply because they do not see the trade-off involved as worthwhile. Some believe the high cost of patenting outweighs the loss that they risk by keeping their ideas as trade secrets, which enjoy relatively less legal protection than patented inventions. Furthermore, if a new, useful, and highly beneficial idea originates with a person who lacks the means to obtain a patent on it, the idea could continue to go undisclosed indefinitely, benefiting neither the inventor nor the public. From all this, it logically follows that, like anything else, a decrease in the costs of patenting would spark more interest in patent protection.

### **Federal Spending Power**

The United States Constitution also grants to Congress not only the authority not only to provide patent protection to inventors, but also the power to collect taxes and spend money for the good of the general public.<sup>133</sup> Specifically, Congress may impose conditions on the receipt of federal funding for different things.<sup>134</sup> However, conditions attached to the receipt of any federal funds must substantially relate to the project or objective for which the funds are to be used.<sup>135</sup> For example, the United States Supreme

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<sup>133</sup> U.S. CONST. art 1, § 8, cl. 1.

<sup>134</sup> *See* South Dakota v. Dole, 483 U.S. 203, 206 (1987).

<sup>135</sup> *See id.* at 207-08 (citations omitted).



Court stated that, although states retain the power to establish a legal minimum age at which one may purchase or consume alcohol, Congress retains the power to condition the receipt of federal funding used to improve highways on each state raising its minimum drinking age from 18 to 21 years of age.<sup>136</sup> In *South Dakota v. Dole*, the Supreme Court held that the condition of raising the drinking age from 18 to 21 years was sufficiently related to the purpose for which the funds were earmarked, which was improvement of interstate highways.<sup>137</sup> The Court so held because it believed that the goal of having a uniform drinking age throughout the states would discourage young drivers from combining their desire to drink with their ability to drive on the interstate highways.<sup>138</sup> In other words, if the states each had a different drinking age, people who were old enough to drive but too young to drink in one state would use the interstate highways to travel to a bordering state with a lower minimum drinking age.<sup>139</sup> This would most likely lead to more drunk driving, so the Court reasoned that the goal of having a uniform drinking age throughout the state was a substantial goal related to the federal highway funds for purposes of art. I, § 8, cl. 1 of the Constitution.<sup>140</sup>

Conditional spending is one way in which Congress exercises its spending power to induce certain conduct by either the States or by private entities. The government has also used subsidies to accomplish similar goals.<sup>141</sup> A subsidy is basically something of

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<sup>136</sup> *Id.* at 205-6.

<sup>137</sup> *Id.* at 208.

<sup>138</sup> *Id.*

<sup>139</sup> *Id.* at 209.

<sup>140</sup> *Dole*, 483 U.S. at 212.

<sup>141</sup> *See In re Hooper's Estate*, 359 F.2d 569 (3d Cir. 1966).

value, typically money, which the government gives to a private entity to facilitate an objective by that entity that the government believes will positively affect the public.<sup>142</sup> The purpose of subsidies is not to simply be an arbitrary grant or payment, but rather, government subsidies bear a strong relationship to the objectives for which they are granted.<sup>143</sup> Subsidies are designed to partially alleviate the fact that many worthwhile objectives are often highly cost-prohibitive by effectively reducing the associated costs to the private entities pursuing such objectives.

Subsidies are very common in fields related to the healthcare industry, as the rising cost of healthcare is one of the most important problems that Americans face today.<sup>144</sup> Government programs exist to subsidize the cost of health insurance for low-income families and individuals who would otherwise be unable to afford health care coverage.<sup>145</sup> Subsidies which apply directly to the consumers' cost of the good or service, while often quite helpful to the people receiving them, do little to combat the problem that the price of many highly necessary goods and services remains very high. As inflation increases over time, these types of subsidies lose their effectiveness, unless they grow with the price of the goods they are designed to facilitate access to, which requires more taxpayer money going into them. For this reason, some critics disapprove of consumer-end subsidies, and advocate for other types.

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<sup>142</sup> *In re Hooper's Estate*, 359 F.2d at 575-76 (citation omitted) ("Generally speaking, a subsidy is a grant of public funds or property by a government to a private person to assist in the establishment or support of an enterprise deemed advantageous to the public.").

<sup>143</sup> *Id.* at 576.

<sup>144</sup> *See, e.g.* Massachusetts Health Care Subsidy Program Cost, Enrollment Could Double Over Three Years (Feb. 4, 2008), [http://www.kaisernetwork.org/Daily\\_Reports/rep\\_index.cfm?DR\\_ID=50200](http://www.kaisernetwork.org/Daily_Reports/rep_index.cfm?DR_ID=50200).

<sup>145</sup> *See id.*

Another type of government subsidy, which admittedly receives harsh criticism as well, is a corporate-welfare type of subsidy. Corporate welfare subsidies begin with the assumption that high retail prices result from high production and distribution costs. Basically, corporate-welfare programs seek to reduce the consumer-end cost of certain goods and services by subsidizing the costs to the manufacturers and sellers of providing those goods and services. By effectively reducing the cost that producers must pay in order to provide certain goods and services, this type of subsidy allows the producers to charge their consumers a lower price without losing revenue.<sup>146</sup>

For every one dollar that the government spends on a consumer-end subsidy, the public receives one dollar of benefit. While this is a reasonable return, if there were a way to spend that money more efficiently, the benefit to the public would be twofold. If the public were able to get more than one dollar of value for every one dollar the government spent on subsidies, the subsidies would effectively help a greater number of people, or would help the same number of people to a greater extent, and the taxpayers would get more for their money. This is the goal of other types of subsidies, such as corporate welfare.<sup>147</sup>

One of the biggest risks associated with corporate welfare subsidies is ensuring that the recipients of the federal subsidies actually use the money to reduce their costs and turn the discounts over to the consumers, instead of just increasing their own profits. This is one of the most frequent criticisms of corporate welfare. Many critics simply view corporate welfare as the government giving away taxpayers' hard-earned money to

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<sup>146</sup> See STEPHEN SLIVINSKI, CATO Inst., THE CORPORATE WELFARE STATE: HOW THE FEDERAL GOVERNMENT SUBSIDIZES U.S. BUSINESSES (2007), <http://www.cato.org/pubs/pas/pa592.pdf>.

<sup>147</sup> See *id.*

multi-million dollar corporations and getting nothing in return. However, corporate welfare subsidies are designed to ultimately reduce the cost to consumers of the goods and services provided by the corporations that receive them. Providing a new type of good or service typically requires a high start-up layout, which providers must feel confident that they will earn back before they will commit to the new service. Providers of goods and services also incur initial costs in that they must purchase the required equipment, materials, and often the goods themselves from a wholesaler or other manufacturer. All of these costs are ultimately reflected in the price that the providers charge to consumers, along with a markup for profit.

Subsidizing the costs of production and distribution of goods and services allows, and hopefully encourages, the providers to charge their consumers a lower price.<sup>148</sup> Although receiving a high price from a small number of people is ultimately no different for retailers and producers of goods than receiving a low price from a large number of people, the latter situation is much more socially desirable.

### **PROPOSAL**

As discussed above, the high cost of patenting can act as a deterrent to applying for a patent and taking part in the exchange of disclosure of innovations for a temporary right of exclusion. This means that ideas which have the potential to greatly help society can remain undisclosed just because of the fear of high costs. Curbing the effective cost of patenting would reduce, if not eliminate, this fear, and would encourage more people to try to bring innovations into the public domain. Since Congress has the power to tax and spend to further the public good, one suitable way to effectively reduce patent-related expenditures is to subsidize the costs of patenting. This would make patent protection

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<sup>148</sup> See Doug Koplow, Tax Subsidies (Nov. 17, 2006), [http://www.eoearth.org/article/Tax\\_subsidies](http://www.eoearth.org/article/Tax_subsidies).

available to more people, rather than just the big corporations that can afford patent attorneys' high billing rates. Most importantly, this type of subsidy would make patented innovations more accessible to the public by allowing inventors to charge consumers lower prices for their products, since their costs of bringing the ideas to market, which determine prices, by decreasing the providers' marginal and total costs.

Since any proposal to increase government spending in a new area will always come along with criticisms and concerns, a detailed plan which seeks to preempt as many major foreseeable concerns as possible is necessary. One of the most obvious potential concerns would likely be that a blanket government subsidy on all patent costs would provide a windfall to entities that already choose to participate in the patent system, and might also encourage people to seek patents on more frivolous and less useful ideas. Also, if the subsidized patent costs simply allowed patentees to increase their existing profits, there would be little or no benefit, neither perceptible nor real, to the public. These are all legitimate concerns, and should be addressed carefully in the plan for subsidized patent costs.

Since patent attorneys have a duty of candor to the USPTO<sup>149</sup>, they are already required to do a patentability evaluation of any idea proposed by a client before prosecuting a patent application. So, the potential for increased desire to file patent applications on possibly frivolous conceptions is mostly a theoretical concern, and less of a practical one. Patent attorneys will still be disinclined to pursue patent applications on frivolous or unpatentable ideas by their clients, since the attorneys will have no greater incentive to prosecute patent applications than they have currently. Also, the conditions

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<sup>149</sup> See 37 C.F.R. § 1.56 (2008).

discussed below would also be aimed in part at this concern. Therefore, while people might initially be more interested in filing patent applications on less meritorious ideas, it is highly unlikely that more patent applications would actually be filed, so the public money going toward patent subsidies would not be wasted in this way.

The main purpose of the subsidies proposed here is to make useful innovations available to more people, and eliminate the barriers created by the high costs of patenting, which are subsequently passed on to consumers. With this purpose in mind, conditions to this effect should be attached to the subsidies received by inventors. To spread out the transaction costs of determining who is eligible for the subsidy proposed here, the inventors (or their legal representatives) should be required to apply for the subsidy, and as a part of such an application should be required to demonstrate that the invention in question satisfies and promotes the goals of the subsidy itself. Congress should also either appoint a special committee or office to evaluate applications to determine which inventions would be eligible for the subsidy, or assign the task to an existing government body, such as the USPTO.

For example, only inventions that demonstrate special social value should be eligible for the subsidy, since these are the goods and services to which the government has the greatest interest in facilitating public access. Entities receiving the subsidy should be required to show their costs of patenting and bringing the ideas to market, and demonstrate that the end consumer price after the subsidy to the inventor actually represents a reduction in price from what the sale price would be without the subsidy. This would help to guarantee that inventors and companies are not just pocketing the extra money, and that consumers will enjoy a real economic benefit from the public

expenditure of the subsidy granted. These demonstrations should be accompanied by supported estimates of the number of people to whom the new inventions will become available as a result of the subsidy. Such estimates would put into context how widespread the aid conferred by the subsidy can be, and also would help to verify that the primary beneficiary of the subsidy is the public, as opposed to the inventor.

Failure to meet any of the criteria outlined here, particularly useful invention, accurate demonstration of costs involved, and a true reduction in consumer prices by a reasonable amount, given the circumstances, should render an entity ineligible for the subsidy on the invention for which the subsidy is sought (but not necessarily ineligible for patent protection). While the costs of requiring the USPTO or another government entity to evaluate applications for the subsidy would increase the amount that taxpayer money would need to support, this would be an investment well worth the potential nominal increase in transaction costs. Furthermore, incorporating a nominal, refundable fee with the subsidy application would force people to think carefully about whether they should apply for the subsidy, and whether they truly have the required good-faith belief that they might be eligible for it.

## **CONCLUSION**

People applying for patent protection may only get it on novel, useful, and non-obvious inventions that claim statutory subject matter. Applying for a patent is a complex, lengthy, and costly process, and can lead to expensive litigation. Inventors must be cautious about publishing their own work, allowing others to see, use, or know about it, whether the ideas are truly their own, whether someone else with a similar idea

may reach the USPTO first, and whether any existing invention is similar enough to the claimed invention so as to render the claimed invention anticipated or obvious.

Patent lawyers must be trained both legally and technically in order to be successful in prosecuting and litigating patents, making their rates high and their patents expensive, deterring some potential inventors from seeking patent protection, and forcing others to pass along the costs of patenting to the consumers of their patented goods and services.

While Congress has used its taxing and conditional spending powers to further the public welfare in many different settings, it has not yet applied this approach to the patent system. To increase the benefit to the public of potentially undisclosed, yet highly socially valuable ideas, Congress should subsidize the patent costs of inventors who bring to market inventions which are particularly useful or beneficial to the general public and can demonstrate that the subsidy will truly reduce the price to consumers of the patentee's good or service. Such subsidizing would make innovations more widely socially available by increasing incentives to patent and by allowing providers to lower their prices to the consumers, making more useful inventions more available and less expensive for everyone who needs them.