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## The Patent Reform Debate: Has Patent Overprotection Resulted in Not-So-Smartphones?

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## The Patent Reform Debate: Has Patent Overprotection Resulted in Not-So-Smartphones?

### Abstract

This Article discusses the issue of excessive patent protection and possible remedies; the discussed remedies are the usage of antitrust laws or simply replacing certain patents with copyright protection. This Article first explores the relationship between patent protection and antitrust law. It then describes a number of tests that have been used in the past and one proposed new test, designed to confront this interrelationship. While considering these tests, this Article applies two controversial real-world patents to each in order to examine their benefits and problems. This Article then goes on to discuss the possible benefits of protecting inventors through copyright laws. Generally, the primary goal of regulating these areas of law is to reach an optimal level of “consumer welfare” consisting of innovative products at competitive prices. While this Article discusses numerous legal theories, they will be framed in the context of attempting to produce the greatest amount of consumer welfare.

### Keywords

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*Article*

**The Patent Reform Debate:  
Has Patent Overprotection Resulted  
in Not-So-Smartphones?**

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**Abstract**

This Article discusses the issue of excessive patent protection and possible remedies; the discussed remedies are the usage of antitrust laws or simply replacing certain patents with copyright protection. This Article first explores the relationship between patent protection and antitrust law. It then describes a number of tests that have been used in the past and one proposed new test, designed to confront this interrelationship. While considering these tests, this Article applies two controversial real-world patents to each in order to examine their benefits and problems. This Article then goes on to discuss the possible benefits of protecting inventors through copyright laws. Generally, the primary goal of regulating these areas of law is to reach an optimal level of “consumer welfare” consisting of innovative products at competitive prices. While this Article discusses numerous legal theories, they will be framed in the context of attempting to produce the greatest amount of consumer welfare.

**Table of Contents**

INTRODUCTION.....	329
I. PATENT AND ANTITRUST LAW .....	332
II. BALANCING PATENT AND ANTITRUST LAWS.....	335
III. COPYRIGHT LAW .....	338
IV. COMPETING TESTS .....	340
A. <i>The Scope Test</i> .....	342
B. <i>The Intent Test</i> .....	344
C. <i>Introduction to the Common Denominator Test</i> .....	346
V. THE COMMON DENOMINATOR TEST AND THE <i>APPLE V. SAMSUNG</i> LITIGATION .....	346
A. <i>Rebuttal, Ex Ante Factors, Ex Post Factors and Surrebuttal</i> .....	346

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B. <i>Applying the Common Denominator Test to the D’677 Patent</i> .....	351
C. <i>Applying the Common Denominator Test to the ’381 Patent</i> .....	354
D. <i>Applying the Common Denominator Test in General</i> .....	357
VI. COPYRIGHTS AND THE D’677 PATENT .....	359
CONCLUSION.....	361

### INTRODUCTION

As of September 2012, Americans were using 234 million mobile devices, 119.3 million of which were smartphones.<sup>1</sup> This incredibly large demand for communication devices has encouraged high-stakes litigation between market competitors over many issues. On May 14, 2012, the United States Court of Appeals for the Federal Circuit heard a case brought by Apple Inc. (“Apple”) against Samsung Electronics Co. Ltd. (“Samsung”).<sup>2</sup> One of the issues before the court was whether it should issue a preliminary injunction preventing the sale of a number of Samsung products that allegedly violated Apple’s patents for a large rectangular smartphone display

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<sup>1</sup> Stephanie Adamo, *comScore Reports September 2012 U.S. Mobile Subscriber Market Share*, COMSCORE (Nov. 2, 2012), [http://www.comscore.com/Insights/Press\\_Releases/2012/11/com\\_Score\\_Reports\\_September\\_2012\\_U.S.\\_Mobile\\_Subscriber\\_Market\\_Share](http://www.comscore.com/Insights/Press_Releases/2012/11/com_Score_Reports_September_2012_U.S._Mobile_Subscriber_Market_Share). As of September 2012, Samsung held 26 percent of the United States smartphone and non-smartphone original equipment manufacturer (OEM) market share. Apple possessed only 17.5 percent of the OEM market share. In terms of smartphone operating systems, Google led with 52.5 percent, then Apple followed with 34.3 percent. Other competitors such as RIM, Microsoft, and Symbian held 8.4 percent, 3.6 percent, and 0.6 percent, respectively. *Id.*

<sup>2</sup> *Apple, Inc. v. Samsung Elec. Co., Ltd.*, 678 F.3d 1314 (Fed. Cir. 2012).

(the D'677 patent)<sup>3</sup> and a software feature known as the “bounce-back.”<sup>4</sup> The issues were remanded back to a California District Court, where the jury granted Apple \$1,049,393,540 in damages for Samsung’s patent infringement<sup>5</sup> and an injunction banning sales of Samsung’s Galaxy 10.1 tablet computer.<sup>6</sup> Samsung appealed the court’s decision, resulting in the court sustaining the injunction,<sup>7</sup> then removing the injunction<sup>8</sup> on the Galaxy Tab 10.1. Immediately following that development, Samsung filed suit against Apple for its then newly released iPhone 5.<sup>9</sup> The companies, as of April 2014, have at trial over a new

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<sup>3</sup> *Id.* at 1317.

<sup>4</sup> *Id.* at 1318.

<sup>5</sup> Apple, Inc. v. Samsung Elec. Co., Ltd., No. 11-CV-01846-LHK 2012 WL 4078433 (N.D. Cal. Aug. 24, 2012); *see Apple Demands More Than \$2 Billion from Samsung for Patent Infringement*, INFOWORLD (Apr. 1, 2014), <http://www.infoworld.com/d/the-industry-standard/apple-demands-more-2-billion-samsung-patent-infringement-239587> (lowering the final judgment to an amount of \$929 million).

<sup>6</sup> Apple, Inc. v. Samsung Elec. Co., Ltd., No. 11-CV-01846-LHK, 2012 WL 2401680, at \*5 (N.D. Cal. June 26, 2012).

<sup>7</sup> Apple, Inc. v. Samsung Elec. Co., Ltd., No. 11-CV-01846-LHK, 2012 WL 4097751, at \*2 (N.D. Cal. Sept. 17, 2012).

<sup>8</sup> Apple, Inc. v. Samsung Elec. Co., Ltd. No. 11-CV-01846-LHK, 2012 WL 4490558, at \*2 (N.D. Cal. Oct. 1, 2012).

<sup>9</sup> Joanna Stern, *Apple v. Samsung Battle Goes On: Galaxy Tab Ban Lifted As Samsung Pushes for iPhone 5 Ban*, ABC NEWS (Oct. 2, 2012), <http://abcnews.go.com/Technology/apple-samsung-wages-galaxy-tab-ban-lifted-samsung/story?id=17376176>; *see also* Florian Mueller, *Samsung Asserts Eight More Patents Against Apple in California, Including Two FRAND Patents*, FOSS PATENTS (Apr. 18, 2012, 11:33 PM), <http://www.fosspatents.com/2012/04/samsung-asserts-eight-more-patents.html> (explaining that Apple and Samsung have filed patent litigation against each other in nine countries other than the United States).

body of utility patents.<sup>10</sup> In the present case, Apple has requested that the jury grant damages in excess of \$2 billion.<sup>11</sup>

Other technological firms are injecting themselves into high-stakes patent litigation as well. Google is claiming \$4 billion in damages against Microsoft for failure to pay licensing fees on patents related to Microsoft's Xbox gaming system.<sup>12</sup> VirnetX was awarded \$368.2 million against Apple for unlicensed use of their technologies in Apple's Facetime program.<sup>13</sup> Additionally, Apple filed suit against Samsung, claiming that the version 4.1 of the Android operating system infringed some of Apple's software patents.<sup>14</sup> All of these claims were brought just within the first two weeks of November 2012.

According to Judge Richard Posner, "patent protection is on the whole excessive and . . . major reforms are necessary."<sup>15</sup> He made this comment while referring to the \$1,049,393,540 verdict, in 2012, against Samsung, which awarded Apple one of the largest verdicts in the history of patent litiga-

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<sup>10</sup> Martyn Williams, *Apple Demands More Than \$2 Billion from Samsung for Patent Infringement*, INFO WORLD (Apr. 1, 2014), <http://www.infoworld.com/d/the-industry-standard/apple-demands-more-2-billion-samsung-patent-infringement-239587>.

<sup>11</sup> *Id.*

<sup>12</sup> *Google v. Microsoft Patent License Trial Begins*, BBC NEWS (Nov. 13, 2012), <http://www.bbc.co.uk/news/technology-20314883>.

<sup>13</sup> *Apple Loses Facetime Patent Lawsuit to VirnetX*, BBC NEWS (Nov. 7, 2012), <http://www.bbc.co.uk/news/technology-20236114>.

<sup>14</sup> *Id.*

<sup>15</sup> Richard Posner, *Do Patent and Copyright Law Restrict Competition and Creativity Excessively?*, BECKER-POSNER BLOG (Sept. 30, 2012, 10:30 PM), <http://www.becker-posner-blog.com/2012/09/do-patent-and-copyright-law-restrict-competition-and-creativity-excessively-posner.html>.

tion.<sup>16</sup> Competitors in the technology industry are finding that, in order to effectively compete, they must not only excel in the market itself, but in the courts as well. This excessive amount of litigation has turned the judicial system into a secondary, but essential, arena for companies to challenge each other.

### I. PATENT AND ANTITRUST LAW

Patent law protects inventors by granting them the right to exclude others from benefiting financially from their innovations.<sup>17</sup> Article I, Section 8 of the Constitution gives Congress the power to grant patents.<sup>18</sup> The purpose of that section is to promote innovation by securing inventors, for limited amounts of time, “the exclusive right to their respective writings and discoveries.”<sup>19</sup> Patents are primarily governed by Title 35 of the United States Code.<sup>20</sup> Patents offer patentees the “right to exclude others from making, using, offering for sale, or selling the invention throughout the United States.”<sup>21</sup> However, these protections expire after twenty years.<sup>22</sup>

In some instances, patents are granted to protect inventors from competition that arises after the inventor has made major investments into research

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<sup>16</sup> *Id.*; Jessica Vascellaro, *Apple Wins Big in Patent Case*, WALL ST. J. (Aug. 25, 2012, 1:41 PM), <http://online.wsj.com/article/SB10000872396390444358404577609810658082898.html>.

<sup>17</sup> U.S. CONST. art. I, § 8, cl. 8.

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

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

<sup>20</sup> 35 U.S.C. § 2; *see also* Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (changing patent system from first-to-invent to first-to-file).

<sup>21</sup> 35 U.S.C. § 154 (2012).

<sup>22</sup> *Id.*

and development.<sup>23</sup> In other situations, marketplace competitors become so powerful that other competitors are driven out.<sup>24</sup> Competition is conducive to innovation, and sometimes patent overprotection stifles innovation by eliminating competition.<sup>25</sup>

Patent owners will not be denied relief or found guilty of patent misuse if they derive revenues from their patents, sell licenses to others, enforce patent rights against infringement, refuse to license certain rights, or “tie” patents to other patents in another market, unless the patent owner has market power in the market of the other patent that the first patent is being tied to.<sup>26</sup> Patents should be understood as negative rights. They provide the patentee the right to exclude; the ability to exclude in patent law is somewhat different than the concept of exclusion involved in antitrust law.<sup>27</sup>

As indicated in the introduction to this Article, there are many types of patent lawsuits being brought. It is important to distinguish between design patents and, the most common type, utility patents.<sup>28</sup> Utility patents grant protection to “any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.”<sup>29</sup> Utility patents are particularly useful because they allow inventors to exclude others from

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<sup>23</sup> Christopher Leslie, *Antitrust and Patent Law as Component Innovation Policy*, 34 J. CORP. L. 1260, 1261 (2009).

<sup>24</sup> *Id.* at 1265.

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

<sup>26</sup> 35 U.S.C. § 271 (2012).

<sup>27</sup> Robin Feldman, *Patent and Antitrust Differing Shades of Meaning*, 13 VA. J.L. & TECH. 1, 8 (2008).

<sup>28</sup> DON W. MARTENS & JOHN B. SGANGA, JR., PRE-LITIGATION PATENT ENFORCEMENT § 2:7 (2012) (noting that patent number 8,000,000 was granted in 2011).

<sup>29</sup> 35 U.S.C. § 101 (2012).

making, using, or selling their inventions.<sup>30</sup> Some inventions that are particularly likely to acquire utility patents are mechanical devices, electronic devices, chemical compounds, and production processes.<sup>31</sup>

Design patents, on the other hand, grant protection for the nonfunctional ornamental aspects of an invention.<sup>32</sup> So, design patents protect the product's appearance, not its functionality.<sup>33</sup> In order to determine whether a design patent has been infringed, a fact finder must determine "whether an ordinary observer would find that the allegedly infringing design has a 'sameness of appearance' to the patented one, not whether the accused infringer used the same artistic idea in general."<sup>34</sup> This Article analyzes both design and utility patents.

American antitrust laws were created with the purpose of protecting and promoting competition.<sup>35</sup> Although one of the goals is to prohibit collusion, this Article will focus primarily on the goals aimed against exclusion.<sup>36</sup> Exclusion, in the context of antitrust law, refers to monopolists keeping their competitors from entering into markets and competing through some anticompetitive conduct. The legislative intent to counteract exclusion particularly applies where

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<sup>30</sup> 35 U.S.C. § 271 (2012).

<sup>31</sup> MARTENS & SGANGA, *supra* note 28, at § 2:7.

<sup>32</sup> 35 U.S.C. § 171 (2012).

<sup>33</sup> MARTENS & SGANGA, *supra* note 28, at § 2:7.

<sup>34</sup> Daniel H. Brean, *Enough Is Enough: Time to Eliminate Design Patents and Rely on More Appropriate Copyright and Trademark Protection for Product Designs*, 16 TEX. INTELL. PROP. L.J. 325, 332 (2008) (citing *Gorham Mfg. Co. v. White*, 81 U.S. 511, 528 (1871)).

<sup>35</sup> JOHN MILES, 1 HEALTH CARE AND ANTITRUST LAW § 1:2 (2013).

<sup>36</sup> *Id.*

a firm takes an action that precludes others from competing against it and is particularly troublesome where the firm engaging in this type of conduct already has substantial market power or where the market in which it competes is highly concentrated, when its exclusionary action lacks any procompetitive justification, or when the exclusion results from collusion among several firms.<sup>37</sup>

Antitrust laws are meant to protect competition; desired consequences consist of lower prices, higher output, and increased innovation. Anticompetitive conduct tends to deny these benefits to consumers.<sup>38</sup>

## II. BALANCING PATENT AND ANTITRUST LAWS

Both patent and antitrust laws share the goal of benefiting the consumer through increased innovation, but there is an inherent paradox within their particular methods of operation. Patents focus on promoting innovation; innovation is protected by allowing inventors to exclude others from using the claims of their patents. Antitrust laws focus on promoting competition, but sometimes increased competition is achieved by condemning the exclusion creat-

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<sup>37</sup> *Id.*; see also 15 U.S.C. § 2 (2012) (partially governing antitrust law, section 2 of the Sherman Act provides that “[e]very person who shall monopolize, or attempt to monopolize . . . shall be deemed guilty of a felony, and, on conviction thereof, shall be punished by fine not exceeding \$100,000,000 . . .”); 1 LOUIS ALTMAN & MALLA POLLACK, CALLMAN ON UNFAIR COMPETITION, TRADEMARKS AND MONOPOLIES § 4:29 (4th ed. 2012) (noting that a company’s large size is not indicative of a monopoly, but if it were to be abused, courts should take size into consideration).

<sup>38</sup> Michael A. Carrier, *Unraveling the Patent-Antitrust Paradox*, 150 U. PA. L. REV. 761, 768 (2002).

ed by patents.<sup>39</sup> In *Atari Games Corp. v. Nintendo of America, Inc.*, the court stated that “[w]hen a patent owner uses his patent rights not only as a shield to protect his invention, but as a sword to eviscerate competition unfairly, that owner may be found to have abused the grant and may become liable for antitrust violations . . . .”<sup>40</sup> The Supreme Court explained in *Brunswick v. Pueblo Bowl-O-Mat* that, in order for complainants to establish a private antitrust action, they must be able to prove that they suffered an “injury of the type the antitrust laws were intended to prevent” and that the injury either “reflect[s] the anticompetitive effect either of the [antitrust] violation” or other unlawfully anticompetitive conduct made possible by or related to that violation.<sup>41</sup> The ideal marketplace would consist of equilibrium between innovation and competition, but neither patent nor antitrust laws alone encourage movement towards equilibrium.

A number of tests have been used and proposed in order for courts to maximize consumer welfare by balancing the virtues of both patents and antitrust laws. The most common approach for courts to determine whether a company has exceeded patent or antitrust boundaries is to inquire into the “scope” of the patent.<sup>42</sup> Generally, if the patentee’s actions fall within the scope of the patent, they would

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<sup>39</sup> *Id.* at 762-63.

<sup>40</sup> *Atari Games Corp. v. Nintendo of Am., Inc.*, 897 F.2d 1572, 1576 (Fed. Cir. 1990).

<sup>41</sup> *Brunswick v. Pueblo Bowl-O-Mat*, 429 U.S. 477, 489 (1977); 1 ALTMAN & POLLACK, *supra* note 37, at § 4:48; *see* 15 U.S.C. § 15 (2012) (granting standing to “any person who shall be injured in his business of property by reason of anything forbidden in antitrust laws”).

<sup>42</sup> *Carrier*, *supra* note 38, at 788-89.

be considered immune from antitrust litigation.<sup>43</sup> Actions falling outside of the patent's scope are only subject to antitrust liability if there is a showing of anticompetitive behavior.<sup>44</sup>

Another test focuses on the patentee's intent.<sup>45</sup> In a case decided by the Ninth Circuit,<sup>46</sup> the court determined that there is a presumption of legality when a patentee has patented products, but this presumption can be rebutted if the patentee's actions can be shown to have had a pretextual business justification to mask anticompetitive conduct.<sup>47</sup> This "intent test" requires the court to examine the defendant's subjective intent.<sup>48</sup>

These tests have been the basis for courts' patent analyses in the past, but Michael Carrier, in *Unraveling the Patent-Antitrust Paradox*, proposes an alternative.<sup>49</sup> He suggests, in his Common Denominator Test, that there be an initial presumption that a monopolist's conduct is lawful so long as there is an objective justification for patent-based actions other than harming competitors.<sup>50</sup> The test then provides a chance for rebuttal, from the alleged patent infringer, to demonstrate that competition, not patents, is responsible for innovation in the industry.<sup>51</sup> At this point, the court should consider the type of industry involved and determine whether it is

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<sup>43</sup> *Id.* at 788-89.

<sup>44</sup> *Id.*

<sup>45</sup> *Id.* at 793-94.

<sup>46</sup> *Image Technical Servs., Inc. v. Eastman Kodak Co.*, 125 F.3d 1195, 1219 (9th Cir. 1997).

<sup>47</sup> Carrier, *supra* note 38, at 788-89 (citing *Kodak*, 125 F.3d at 1219).

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

<sup>49</sup> *Id.*

<sup>50</sup> *Id.* at 765.

<sup>51</sup> *Id.* at 765.

one where innovation is derived from massive investments into research and development, or if it is an industry where competitors continuously improve upon products with relatively little investment into research and development.<sup>52</sup> The patentee may then counter with a surrebuttal demonstrating that the market in question is characterized by innovation; if he can successfully do so, he will not be liable for the antitrust action.<sup>53</sup>

### III. COPYRIGHT LAW

Copyrights protect original works of authorship that are “fixed in any tangible medium of expression, now or later developed, from which they can be perceived, reproduced, or otherwise communicated.”<sup>54</sup> Protection for copyrighted materials lasts for the creator’s life plus 70 years.<sup>55</sup> Among many other things, copyrights protect pictorial, graphic, and sculptural works.<sup>56</sup> The term “original” only requires that the work be created independently by the author and that “it possesses at least some minimal level of creativity.”<sup>57</sup> Only a slight amount of creativity is required; most works easily satisfy this minimal level because they possess some creativity, “no

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<sup>52</sup> *Id.* at 818; *see id.* at 831, 756 (noting that for the rebuttal to be effective, the alleged patent infringer must demonstrate that industry innovation is primarily dependent on a competitive market by showing that there are market-based incentives to innovate, the product is not difficult to create, the product is difficult to imitate, or that the industry is characterized by innovation built upon previously developed products).

<sup>53</sup> *Id.*

<sup>54</sup> 17 U.S.C. § 102 (2012).

<sup>55</sup> 17 U.S.C. § 302 (2012).

<sup>56</sup> 17 U.S.C. § 102.

<sup>57</sup> *Feist Publ’ns, Inc. v. Rural Tel. Serv.*, 499 U.S. 340, 345 (1991).

matter how crude, humble or obvious [they] might be.”<sup>58</sup> Designs must be original and nonfunctional, but, similar to design patents, the protection extends only to those particular features.<sup>59</sup> Copyright protection for artistic craftsmanship will be afforded to features that can be identified separately from and that are capable of existing independently of the article’s utilitarian aspects.<sup>60</sup>

Copyrights, unlike design patents, protect only the expression of ideas, as opposed to ideas themselves; concepts similar to the already common ideas cannot be protected, or otherwise, “the first to come up with an idea will corner the market.”<sup>61</sup> In order to prove a copyright breach, plaintiffs must show proof that the “defendant copied the plaintiff’s copyrighted material.”<sup>62</sup> The plaintiff must also prove that the copying was “so extensive that it rendered the infringing and copyrighted works ‘substantially similar.’”<sup>63</sup>

A typical defense against copyright claims is the fair use doctrine. It allows for parties, other than the copyrighting party, to make “transformative” uses of the copyrighted material.<sup>64</sup> The statute requires courts to analyze the defense by using four different factors: (1) the purpose and character of the use (i.e., whether it is used for commercial purposes),

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

<sup>59</sup> 17 U.S.C. § 101 (2012).

<sup>60</sup> *Id.*

<sup>61</sup> *Apple Computer, Inc. v. Microsoft Corp.*, 35 F.3d 1435, 1443 (9th Cir. 1994).

<sup>62</sup> *Johnson v. Gordon*, 409 F.3d 12, 18 (1st Cir. 2005) (citing *Segrets, Inc. v. Gillman Knitwear Co.*, 207 F.3d 56, 60 (1st Cir. 2000)).

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

<sup>64</sup> 17 U.S.C. § 107 (2012).

(2) the nature of the copyrighted work, (3) the substantiality of the portion used in relation to the copyrighted work, and (4) the effect of the use upon the potential market.<sup>65</sup> By serving a different purpose, adding a new meaning, or adding a new expression to a work, transformative works promote artistic progress.<sup>66</sup> As a new creation becomes increasingly more transformative, the other factors that would weigh against a fair use defense, such as commercialism and effects on the market, become less significant.<sup>67</sup>

#### IV. COMPETING TESTS

Although there are numerous ongoing patent cases that may have even larger impacts on the technology industry than the aforementioned litigation between Apple and Samsung, this Article only considers Apple's D'677 (design patent) and '381 (utility patent) patents to analyze how the scope, intent and Common Denominator tests apply in terms of initiating antitrust liability. After exploring the option of counteracting patent protection with antitrust laws, this Article will explore the alternative of using copyright laws. The copyright laws will only be applied to the D'677 patent because copyright law is only practical for replacing design patents.

The D'677 patent was issued on June 29, 2010 claiming a simple smartphone design with a large rectangular display.<sup>68</sup> It also specifies that the phone's corners are rounded, the phone's face is a

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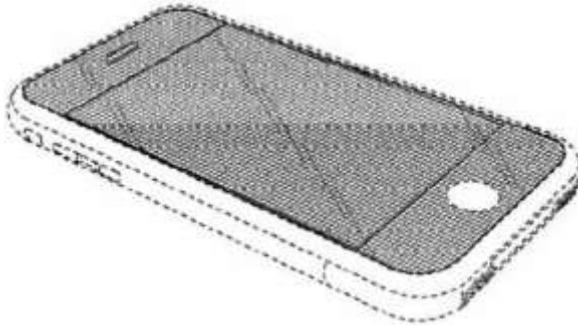
<sup>65</sup> *Id.*

<sup>66</sup> Brean, *supra* note 34, at 350-51.

<sup>67</sup> *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 570 (1994).

<sup>68</sup> *Apple, Inc. v. Samsung Elec. Co., Ltd.*, 678 F.3d 1314, 1317 (Fed. Cir. 2012).

highly-polished, reflective surface, and that the design contains no ornamentation other than a rectangular speaker slot above the display and a circular button below.<sup>69</sup>



**Figure 1. D'677 Patent Design<sup>70</sup>**

This minimalistic design drew sharp criticism from Samsung in the wake of the \$1,049,393,540 verdict; a Samsung statement argued that it was “unfortunate that patent law can be manipulated to give one company a monopoly over rectangles with rounded corners.”<sup>71</sup>

U.S. Patent No. 7,469,381 (the '381 patent), or the bounce-back feature, was designed for Apple's smartphones and tablets, the iPhone and iPad.<sup>72</sup> This feature, protected by the '381 patent, is engaged while the user is scrolling through a document on the device.<sup>73</sup> When the user scrolls beyond the end of the document, sees an area indicating the document's

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

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

<sup>71</sup> *Samsung to Appeal After \$1bn Apple Award in US Case*, BBC NEWS (Aug. 25, 2012), <http://www.bbc.co.uk/news/technology-19381096>.

<sup>72</sup> *Apple*, 678 F.3d at 1318.

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

end and releases his or her finger, the document “bounces-back” into view.<sup>74</sup>

Seeking to find a favorable system for analyzing the D’677 and ’381 patent protections, this Part will apply the scope, intent and proposed Common Denominator tests to evaluate whether antitrust liability should be invoked to counteract anticompetitive behavior connected with patents.

### ***A. The Scope Test***

Courts commonly consider the scope of a patent’s grant when deciding if a patentee misused a patent. Patent owners cannot improperly extend their power into the marketplace by surpassing the scope of what Congress intended to grant through patent law.<sup>75</sup> Filing for a patent requires that the patentee give a detailed description of the invention describing the manner of its production that is clear enough for somebody “skilled in the art” to recreate the invention.<sup>76</sup> The courts use this rule of specificity to determine the scope of the patent; as long as the action falls reasonably within the patent grant, a patent misuse defense will never succeed.<sup>77</sup> Because of this, the scope test is highly favorable to patent protection and the legal monopolies granted to inventors. If a claim were to arise concerning a patentee’s actions that fall within the scope of the patent, the

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

<sup>75</sup> *Atari Games Corp. v. Nintendo of Am., Inc.*, 897 F.2d 1572, 1576 (Fed. Cir. 1990).

<sup>76</sup> 35 U.S.C. § 112 (2012).

<sup>77</sup> *Princo Corp. v. Int’l Trade Comm’n*, 616 F.3d 1318, 1328 (Fed. Cir. 2010) *cert. denied*, 131 S.Ct. 2480 (U.S. 2011); *see Monsanto Co. v. McFarling*, 363 F.3d 1336, 1341 (Fed. Cir. 2004); *Virginia Panel Corp. v. MAC Panel Co.*, 133 F.3d 860, 869 (Fed. Cir. 1997).

actions would presumably be considered lawful.<sup>78</sup> If the patentee's actions are found to be outside of the scope of the patent, a defendant may allege "patent misuse" as a defense and possibly recover under section 2 of the Sherman Act.<sup>79</sup>

The first step in the scope test is to determine whether the patent falls within the specific description as given by the patentee. Assume that the alleged infringer produced a smartphone that utilized the design of the D'677 patent and the bounce-back feature of the '381 patent. Under the scope test, the patentee would simply claim that the competitor took the product design of a rectangular display with rounded corners and bounce-back feature, and applied it to his own product. The defendant may either deny that he has copied the patented design or, in some instances, argue a defense of patent misuse.<sup>80</sup>

Patent misuse, an affirmative defense to an allegation of patent infringement, allows a party to also invoke antitrust laws against a patentee if the defendant can prove that the patentee filed the patent application with a scheme to create an illegal monopoly or to restrain trade.<sup>81</sup> In *United States v. Am. Tobacco Co.*, the United States Supreme Court explained that restraints of trade embrace acts, contracts, agreements, or combinations of these which "prejudice [the] public interest by unduly restricting

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<sup>78</sup> Carrier, *supra* note 38, at 790.

<sup>79</sup> 1 ALTMAN & POLLACK, *supra* note 37, § 4:57 (explaining that if a patentee is able to lessen or destroy competition through the "exclusionary power of the illegal patent claim," the elements for a monopoly are present and the defendant may counter with an antitrust suit).

<sup>80</sup> *Id.*

<sup>81</sup> *Id.*

competition or unduly obstructing the due course of trade.”<sup>82</sup> The party that allegedly infringed on the patent essentially takes the place of the government by asserting a claim to annul a patent for fraud.<sup>83</sup> Furthermore, if the fraudulently procured patent violates section 2 of the Sherman Act, the party that allegedly infringed the patent may seek treble damages for the harm imposed by the patent.<sup>84</sup>

### ***B. The Intent Test***

The intent test is used in some jurisdictions; it looks at the subjective intent of the patentee.<sup>85</sup> Juries are to presume that the patentee’s desire to profit from its patent rights is “legitimately procompetitive.”<sup>86</sup> There is opportunity for rebuttal if there is evidence that “the [patentee] acquired the protection of the intellectual property laws in an unlawful manner” or that there was a misleading pretext to the patentee’s act.<sup>87</sup> Patentees may not “rely upon a pretextual business justification to mask anticompetitive conduct.”<sup>88</sup>

If the patentee, the owner of the D’677 and ’381 patents, were to file suit against a competitor, applying the intent test, the fact-finder would have to determine the patentee’s subjective intent for enforcing the patent. Here, the presumption stands

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<sup>82</sup> U.S. v. American Tobacco Co., 221 U.S. 106, 179 (1911).

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

<sup>84</sup> Walker Process Equip., Inc. v. Food Mach. & Chem. Corp., 382 U.S. 172, 173 (1965)

<sup>85</sup> Carrier, *supra* note 38, at 793-94; see Image Technical Servs., Inc. v. Eastman Kodak Co., 125 F.3d 1195, 1219 (9th Cir. 1997).

<sup>86</sup> *Kodak*, 125 F.3d at 1219.

<sup>87</sup> *Id.*

<sup>88</sup> *Id.*

that the patentee's actions are legitimately procompetitive. But, if the alleged patent infringer can demonstrate that the patent was either illegally obtained or that the patentee used a business pretext to mask his anticompetitive conduct, the patentee could then face antitrust liability. Examples of such anticompetitive conduct include tying arrangements, grant-back provisions, purchaser resale restrictions, restrictions on licensee's sales elsewhere, mandatory package licensing, royalty provisions that are not reasonably related to the licensee's sales, and resale price restrictions.<sup>89</sup>

Along with the intent test taking a substantial amount of power from patentees, it may also cause a drastic shift toward antitrust law.<sup>90</sup> Focusing on the patentee's intent may be especially problematic because every company is essentially in business to outsell its competitors.<sup>91</sup> In order to prove the patentee's subjective intent, discovery could likely lead to documents or e-mails that appear provocative, but there is the possibility that they just have been made during the course of healthy competition.<sup>92</sup> In the course of competition, it is natural that firms desire to outsell their market rivals; patent protection, in some instances, may be the only practical means of a firm prevailing. The benefit of exclusion, which is offered by patents, can wither away if patentees have to strike a delicate balance between excluding under the patent laws and not interfering with competition, which is protected by antitrust laws.<sup>93</sup>

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<sup>89</sup> MILES, *supra* note 35, at § 5:12, at \*15 (2012).

<sup>90</sup> Carrier, *supra* note 38, at 794.

<sup>91</sup> *Id.* at 794.

<sup>92</sup> *Id.*

<sup>93</sup> *Id.*

### ***C. Introduction to the Common Denominator Test***

If the courts were to apply the proposed Common Denominator test, they would begin with the presumption that “a company’s patent-based actions are lawful as long as there is a plausible justification for the action other than injuring competitors.”<sup>94</sup> One such example of a plausible justification would be “efficiency.”<sup>95</sup> Instead of looking at the patentee’s subjective intent, the court should consider the objective circumstances surrounding the patentee’s justification.<sup>96</sup> Patents essentially allow for a legal monopoly over certain products, so “[s]uch a strong presumption makes sense not only because a company’s actions based on its valid patents are not the typical ‘bad acts’ punished under section 2, but also, relatedly, because they are the intended reward of the patent system.”<sup>97</sup>

## **V. THE COMMON DENOMINATOR TEST AND THE *APPLE V. SAMSUNG* LITIGATION**

### ***A. Rebuttal, Ex Ante Factors, Ex Post Factors and Surrebuttal***

Once the patentee demonstrates a plausible justification for its patent-based actions, the alleged patent infringer may then set out to prove the rebut-

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<sup>94</sup> *Id.* at 816-17.

<sup>95</sup> *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585, 609-10 (1985) (ruling that a ski ticket distributor’s exclusion of a ski resort’s tickets was not based on a plausible justification, rather, the justification led to an inefficient and inconsistent logical outcome).

<sup>96</sup> *Carrier*, *supra* note 38, at 816-17.

<sup>97</sup> *Id.* at 817.

tal.<sup>98</sup> The rebuttal determines whether industry innovation is rooted in patents or competition.<sup>99</sup> If the innovation arises from an industry that is considered to be competition-based, such as a technological field, then the rebuttal surmounts the presumption of lawfulness.<sup>100</sup> The presumption of lawfulness can be surmounted even when patent-based acts do not appear to be predatory, because, as Carrier claims, “patents cannot be the ultimate trump card.”<sup>101</sup> To determine the type of industry, the courts have to consider both *ex ante* and the *ex post* factors.

The first *ex ante* factor that must be proven by the alleged patent infringer is that the market in question has “market-based nonpatent incentives to innovate in the industry.”<sup>102</sup> Examples of such incentives would include the ability for the innovator to be a market pioneer<sup>103</sup> or the competition taking place in a “network effects market.”<sup>104</sup> In terms of market pioneers, industries, including pharmaceuticals, cigarettes, oil-drilling rigs, investment banking, or even computer and semiconductor industries, allow for the early innovators to sustain substantial market shares even after their patents expire.<sup>105</sup> Possible explanations for this occurrence are customer familiarity, brand loyalty, and cost advantages.<sup>106</sup> The term “network effects market” refers to markets

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<sup>98</sup> *Id.* at 818.

<sup>99</sup> *Id.*

<sup>100</sup> *Id.* at 819.

<sup>101</sup> *Id.*

<sup>102</sup> *Id.* at 831.

<sup>103</sup> *Id.* at 821.

<sup>104</sup> *Id.* at 822.

<sup>105</sup> *Id.* at 821-22.

<sup>106</sup> *Id.* at 821-22 (noting that in consumer goods businesses, pioneers have amassed twenty-nine percent of the market while late entrants gained only twelve percent).

that benefit each participant through the cumulative effect of adding other participants.<sup>107</sup> The social networking website Facebook is an example of a network effects market that envelopes a larger market share and higher value as it becomes more popular.

After proving that there are non-patent incentives to innovate in a market, the alleged patent infringer must prove at least one of the two remaining *ex ante* factors: “that the product is easy to create or that it is difficult to imitate.”<sup>108</sup> Patents are particularly important in instances where investments of time and capital are very high; on the other hand, they are less important when there is a relatively smaller time and capital investment.<sup>109</sup> The pharmaceutical industry is an example of an industry where products are exceedingly more difficult to create and requires spending “hundreds of millions of dollars and take[s] ten to fourteen years to bring new drugs to market.”<sup>110</sup>

Industries where patents do not spur innovation, including aircraft production, semiconductor production, vehicle designing, and primary metals, may actually enhance industry-wide innovation by moving away from patents and more toward anti-trust liability.<sup>111</sup> In terms of the degree of difficulty to imitate products, patents are more necessary when it is relatively easier for competitors to imitate the product.<sup>112</sup>

Referring back to the pharmaceutical indus-

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<sup>107</sup> *Id.* at 822.

<sup>108</sup> *Id.* at 831.

<sup>109</sup> *Id.* at 823-24.

<sup>110</sup> *Id.* at 824.

<sup>111</sup> *Id.* at 826-27.

<sup>112</sup> *Id.* at 827.

try, it may take years and millions of dollars to develop a new drug, but once it is marketed, the cost of imitation may be low because competitors could copy the product.<sup>113</sup> Such a low cost to reverse-engineer and copy could be devastating to drug developers and other innovators of the sort, who have carried the research and development costs. Some industries, such as those that require complex mechanical engineering or intricate machinery, may not necessitate patents due to the difficulty to imitate.<sup>114</sup> Carrier's test, attempting to optimize innovation, provides an industry-specific analysis that carefully considers the need for patent protection. The Common Denominator test has a number of factors that, if at least one of them is met, "ensures that the presence of market-based incentives alone does not trigger the conclusion that patents are not necessary in the industry."<sup>115</sup> These safeguards are present because market-based incentives could be existent in industries, such as pharmaceuticals, that are dependent on patent protection.<sup>116</sup>

Carrier explains his belief that patent protection is not essential when a product is either easy to create or difficult to imitate on its innovations.<sup>117</sup> His theory, that patent protection may not be essential, is based upon the industry-specific analysis, and, more particularly, whether companies need to recoup up-front research and development costs.<sup>118</sup> So, by Carrier's approach, patents are not needed when a product is easy to create or difficult to imitate

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<sup>113</sup> *Id.* at 827.

<sup>114</sup> *Id.* at 828.

<sup>115</sup> *Id.* at 831.

<sup>116</sup> *Id.*

<sup>117</sup> *Id.*

<sup>118</sup> *Id.*

because substantial expenditures were not put into its creation or it is naturally difficult to imitate.<sup>119</sup> In such situations, he argues that competition, not patent protection, is essential for innovation.<sup>120</sup>

The next stage of analysis focuses on the *ex post* factor. Here the courts should analyze the “cumulative nature of innovation in the industry.”<sup>121</sup> The term “cumulative industry” refers to an industry producing products that are continuously improved and innovated upon.<sup>122</sup> Products in cumulative industries usually consist of those that have a newly innovated feature combined with already existing inventions. Thus, a danger arises in this type of industry where a patent is issued and subsequent innovations are stifled.<sup>123</sup>

Another inverse relationship exists here between patent and antitrust law: this particular type of industry may benefit from antitrust law which would possibly lead to an increase in innovation due to the cumulative effect of competitors “one-upping” each other.<sup>124</sup> Carrier argues that antitrust laws should play a greater role in industries that innovate off of predecessors’ inventions.<sup>125</sup> The Common Denominator test’s rebuttal applies only when “both *ex ante* and *ex post* factors favor competition.”<sup>126</sup>

After analyzing the rebuttal, the court may find that innovation will best be supported through a competitive market that is enhanced by antitrust

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

<sup>120</sup> *Id.*

<sup>121</sup> *Id.* at 839.

<sup>122</sup> *Id.* at 829.

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

<sup>124</sup> *Id.*

<sup>125</sup> *Id.* at 832.

<sup>126</sup> *Id.*

law; but, just because a patentee is involved in a certain industry does not suggest that he should be automatically liable for an infraction of section 2 of the Sherman Act.<sup>127</sup> After a successfully proven rebuttal, the Common Denominator Test allows for a surrebuttal.<sup>128</sup> The surrebuttal simply requires that the patentee provide actual evidence that the industry is distinguishable as one that is innovative, thus confining this test only to industries that are discernibly non-innovative.<sup>129</sup>

After the Common Denominator Test's presumption, rebuttal, and surrebuttal have been applied, and there is any question as to whether they are applicable to the perceived antitrust activity, the default assumption is that the action is lawful.<sup>130</sup> Carrier explains that the Common Denominator Test should not apply to section 2 of the Sherman Act to industries that innovate through both patents and competition; the pharmaceutical industry fits this description.<sup>131</sup>

### ***B. Applying the Common Denominator Test to the D'677 Patent***

First, in the case of the D'677 patent, the courts would begin with their initial presumption: the patentee's actions are lawful as long as he can provide an objectively plausible justification for his

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<sup>127</sup> *Id.* at 833.

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

<sup>129</sup> *Id.* at 834 n.314 (noting that "some true (i.e., nonsham) innovation is enough" and that the lack of innovation should be apparent if a market is not benefiting from new and improved products).

<sup>130</sup> *Id.* at 832.

<sup>131</sup> *Id.*

actions.<sup>132</sup> Suppose that the patentee brings a patent infringement suit against a competitor because the competitor is producing and selling a smartphone with a rectangular-shaped screen and rounded corners, thus enforcing the D'677 design patent. Countering the claim, the alleged infringer may pinpoint one of the patentee's actions and argue that it constitutes anticompetitive behavior. If the court accepts the patentee's justification as plausible, then the competitor may offer a rebuttal.<sup>133</sup>

The alleged infringer's rebuttal will take into account the type of industry that is involved by going through the Common Denominator test's *ex ante* and *ex post* factors.<sup>134</sup> First, the alleged infringer will need to establish that there are market-based non-patent incentives for the patentee to innovate.<sup>135</sup> In this scenario, the patentee was the market pioneer who designed the rectangular smartphone with rounded corners, so he had the early accessibility to the market in order to establish customer familiarity, brand loyalty, or cost advantages such as favorable contracts with distributors. These would certainly constitute market-based non-patent incentives to innovate.<sup>136</sup> The rebuttal also requires that the competitor prove at least one of the two remaining *ex ante* factors.<sup>137</sup>

The two remaining *ex ante* factors are whether the product is easy to create and whether it is difficult to imitate. Considering the D'677 patent's description, the court would have to inquire into the

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<sup>132</sup> See *supra* note 49 and accompanying text.

<sup>133</sup> See *supra* notes 50, 96-98 and accompanying text.

<sup>134</sup> See *supra* note 51 and Part V.A.

<sup>135</sup> See *supra* note 100 and accompanying text.

<sup>136</sup> See *supra* notes 100-05 and accompanying text.

<sup>137</sup> See *supra* notes 101-05 and accompanying text.

level of difficulty in inventing a smartphone with a highly-polished rectangular screen and rounded corners. Certainly a sophisticated technology company will hire expert designers and engineers to devise an optimal product, but the D'677 patent reveals no greater skill than "that exercised by the ordinary designer who is chargeable with knowledge of the prior art."<sup>138</sup> The costs of developing the D'677 patent are presumably microscopic compared to the costs of researching and developing in a field such as pharmaceuticals. In terms of the difficulty to imitate the D'677 patent, as shown by the competitor's actions, there would be very little difficulty in copying the general smartphone design. Therefore, because the patent would be easy to copy, the only two successfully rebutted *ex ante* factors would be that there are market-based non-patent incentives to innovate and that the patented product was relatively easy to create. Fulfilling two of the three *ex ante* factors satisfies the *ex ante* requirement, but the *ex post* requirement still remains.<sup>139</sup>

Courts must consider, for the *ex post* requirement, whether the industry innovation comes about in a cumulative manner.<sup>140</sup> The smartphone, and technology industry in general, is very innovative. New products are constantly being released. But, in terms of cumulative technology, design features like the D'677 patent are not the result of cumulative technology. The D'677 patent protects a unique design feature which was developed independently by Apple designers. Perhaps the D'677 patent is similar

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<sup>138</sup> Gen. Time Instruments Corp. v. U.S. Time Corp., 165 F.2d 853, 854 (2d Cir. 1948).

<sup>139</sup> See *supra* note 106 and accompanying text.

<sup>140</sup> See *supra* notes 119-21 and accompanying text.

to the design of the original iPhone that was released in 2007, but in August 2012, a jury even confirmed that the D'677 design was not copied from a previously released Samsung tablet, as Samsung had argued.<sup>141</sup> The design patents of the smartphone industry, including the D'677 patent, are not created through cumulative innovation. Because the D'677 patent is not brought about through cumulative innovation, the *ex post* factor is not met.

According to Carrier's framework, failure to meet the *ex post* factor is sufficient enough to end the analysis in favor of the patentee.<sup>142</sup> In other words, in the case of the D'677 patent, the analysis would not even go as far as the surrebuttal stage. Furthermore, the *ex ante* requirements do not appear to be well-suited in the case of design patents. Relative to other patented inventions, design patents are nearly always easy to create and easy to copy. It appears that, in the case of the D'677 patent, the Common Denominator test fails to institute any substantive antitrust claim for the allegedly infringing parties.

### ***C. Applying the Common Denominator Test to the '381 Patent***

Suppose that the patentee brings a patent infringement suit against a competitor because the competitor is producing and selling a smartphone that has a bounce-back feature similar to that described in the '381 patent. Applying the Common Denominator test to the '381 patent begins with the same presumption that the patentee's actions are

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<sup>141</sup> Apple, Inc. v. Samsung Elec. Co., Ltd., No. 11-CV-01846-LHK 2012 WL 4078433 (N.D. Cal. Aug. 24, 2012).

<sup>142</sup> Carrier, *supra* note 38, at 832.

lawful as long as he can provide an objectively plausible justification for his actions.<sup>143</sup> The patentee would be bringing his lawsuit to enforce the protections granted by the '381 utility patent. Countering the claim, the alleged infringer may pinpoint one of the patentee's acts and argue that it constitutes anti-competitive behavior. If the court accepts the patentee's justification as plausible, then the alleged infringer may offer a rebuttal.<sup>144</sup>

In determining the *ex ante* factors, there are the same market-based non-patent incentives for the '381 patent to innovate as existed with the D'677 patent (e.g., customer familiarity, brand loyalty and cost advantages).<sup>145</sup> The next two factors to determine are whether the '381 patent was easy to create and difficult to imitate.<sup>146</sup> In terms of the degree of difficulty in creating the '381 patent, it is certainly more difficult to develop than the D'677 patent, but not too difficult to create by Carrier's standards.<sup>147</sup>

By Carrier's standards, difficulty in creation is essentially measured by time and capital investments into research and development; the '381 patent would fall into Carrier's "simple ideas easily conceived" category.<sup>148</sup> He contrasts inventions in the technological realm, such as the '381 patent, with the pharmaceutical industry, which requires much

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<sup>143</sup> See *supra* note 49 and accompanying text.

<sup>144</sup> See *supra* notes 50, 96-98 and accompanying text.

<sup>145</sup> See *supra* notes 100-05 and accompanying text.

<sup>146</sup> See *supra* note 106 and accompanying text.

<sup>147</sup> See *supra* notes 115-18 and accompanying text.

<sup>148</sup> Carrier, *supra* note 38, at 826 (arguing that patents are not necessary in industries such as internet business methods, civilian aircraft, semiconductors, office equipment, motor vehicles, rubber products, textiles, primary metals, instruments, food, steel, and electrical components).

more time and capital investment for research and development.<sup>149</sup> The '381 patent would not be difficult to create by the Common Denominator test's standards. In terms of difficulty to imitate, it is not clear what a court would determine in this category. Creating the bounce-back feature was relatively easy for the patentee, so it would presumably be not too difficult for a competitor to imitate.<sup>150</sup> Even though the '381 patent would be relatively easy to imitate, it would still be more difficult than imitating the D'677 patent or any other design patent. Therefore, the '381 patent would be, by Carrier's standard, easy to create and moderately difficult to imitate.

The '381 patent protects a smartphone feature, the bounce-back, which exhibits the industry's newest utility innovations. The historical chain of innovation leading to smartphones started with "land-line" telephones, then rudimentary mobile telephones were invented and the modern cellular telephone was based upon that technology. Less complex cellular phones were continuously innovated upon until all of the available technology was finally compiled into the first modern smartphone. Innovations for the more rudimentary cellular phones led to smartphone technology. With smartphone technology came the innovation of features such as document readers; the bounce-back utility was subsequently innovated to compliment these new features.<sup>151</sup>

The courts would likely recognize that the

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<sup>149</sup> *Id.*

<sup>150</sup> Difficulty in creating the bounce-back feature is being compared to the difficulty of creation in other fields such as pharmaceuticals and complex engineering.

<sup>151</sup> *The Evolution of the Mobile Phone*, ENG'R'S F. MAG. (Nov. 6, 2013), <http://www.ef.org.vt.edu/2013/11/the-evolution-of-the-mobile-phone.html>.

technology, communications, and smartphone industries, in their present states, are the result of continuous cumulative innovation. These products are quickly outdated by newer models and designs that have innovated from previous designs. The cumulative nature of the smartphone industry satisfies the Common Denominator's rebuttal, thus allowing for a surrebuttal from the patentee.<sup>152</sup>

A surrebuttal may be successfully made if the patentee demonstrates that his industry is inherently innovative.<sup>153</sup> In this case, the '381 patentee would have to provide actual evidence of innovation. Utility features in the smartphone market are constantly being updated by new products that are exceedingly more innovative. Undoubtedly, the smartphone market is inherently innovative, at least in terms of smartphone functionality, due to the extensive research and development of new products by technology firms.<sup>154</sup> Because of the inherently innovative nature of the smartphone industry, the patentee's surrebuttal is satisfied and the '381 patent will likely not lead to any antitrust liability.

#### ***D. Applying the Common Denominator Test in General***

Carrier's Common Denominator test would provide the industry-specific analysis that patents should receive, but have not in the past. He argues

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<sup>152</sup> See *supra* note 126 and accompanying text.

<sup>153</sup> See *supra* note 127 and accompanying text.

<sup>154</sup> Dividend Kings, *4 Tech Giants Ready To Surge On Smartphones*, SEEKING ALPHA (Nov. 6, 2012, 10:28 AM), <http://seekingalpha.com/article/982361-4-tech-giants-ready-to-surge-on-smartphones> (discussing the major role played by industry leaders such as Microsoft, Apple, Google and the new market entry of Amazon).

that this test would not have any more than a minor impact on patent-based incentives in markets where they should be present.<sup>155</sup> The Common Denominator test allows patents to remain valid even after a patentee has faced antitrust litigation because the test is just designed to provide an antitrust remedy when patents are used in anticompetitive ways.<sup>156</sup> Carrier also argues that this test is only applicable to monopolists, i.e., companies with at least a sixty to seventy percent market share; other patentees, with smaller market shares, lack the ability to exercise control over markets.<sup>157</sup>

This test may be making an unfounded logical leap towards antitrust liability when there is a more simple solution. With the Common Denominator test there are two extremes: one where all patentee actions are lawful and the other, where patentee actions are subject to antitrust liability. This quick jump to enforce a patent or antitrust law ignores the middle ground where patents are still valid in industries in which patents stifle innovation.

Carrier's test already determines whether patent protection is essential in an industry; this is why it should be applied only to determine whether patent protection should be continued on any particular utility patent. Instead of protection being afforded to competitors only by means of antitrust litigation, if the Common Denominator test stripped patent protection after its analysis, a lack of patent protection would spur innovation in markets where patent protection was neither necessary nor beneficial to begin with. Finally, if patent protection

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<sup>155</sup> Carrier, *supra* note 38, at 848.

<sup>156</sup> *Id.*

<sup>157</sup> *Id.* at 848-49.

is removed and patentees were to behave in an anticompetitive manner, then, the antitrust laws will apply regularly to remedy that problem.

The Common Denominator test certainly has much to offer in today's patent market. Recognizing that "innovation takes place through different paths in different industries" is a good first step in modernizing the patent system.<sup>158</sup> The Common Denominator test also takes into consideration essential elements of innovation such as market-based incentives, the ease of creating, the difficulty of imitating, and markets that are cumulative in their innovation.<sup>159</sup> Because of these *ex ante* factors, the Common Denominator test is much better suited for utility patents rather than design patents.

## VI. COPYRIGHTS AND THE D'677 PATENT

Daniel H. Brean, in *Enough Is Enough: Time to Eliminate Design Patents and Rely on More Appropriate Copyright and Trademark Protection for Product Designs*, argues that design patents should be phased out by copyrights; copyrights will "protect designs through copyright law to the extent that they are artistic."<sup>160</sup> In analyzing the possibility of copyright protection, it is important to distinguish between functional and nonfunctional features on commercial products. This Part examines the possibility of taking the artistic design from the D'677 patent and protecting it with a copyright, rather than a design patent.

To begin with, would the D'677 design be copyrightable? It is a sculptural work that is capable of

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<sup>158</sup> *Id.* at 854.

<sup>159</sup> *Id.*

<sup>160</sup> Brean, *supra* note 34, at 374.

being both perceived and reproduced, so the D'677 design is appropriate copyright subject matter.<sup>161</sup> The design, albeit minimalistic, is creative, original, and nonfunctional. If the smartphone designer notices that a competitor has copied his design, and that design is substantially similar, he may then enforce his copyright.

In order to prove a fair use defense, the alleged copyright infringer would need to demonstrate that his smartphone design was transformative.<sup>162</sup> The four factors that the court uses to determine the design's fair use (i.e., its purpose and character, its nature, the substantiality of the portion used and the effect of the use upon the potential market) would weigh against the alleged infringer.<sup>163</sup> But, the more that he can show that his product is transformative, the less weight that the four fair use factors will carry.<sup>164</sup> Assuming that the D'677 design was implemented in another smartphone, the determination as to how transformative the subsequent design is will determine whether the alleged infringer will be liable. If the design were to be taken with almost no changes, and the alleged infringer sold its product commercially, the courts would be likely to find liability for a copyright breach.<sup>165</sup> But, if the general square shape was taken and improved upon, to the extent that the court finds it transformative, the alleged infringer will only have exercised fair use of the copyrighted design.<sup>166</sup>

Replacing design patents with copyright pro-

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<sup>161</sup> 17 U.S.C. § 102 (2012).

<sup>162</sup> See *supra* notes 52-65 and accompanying text.

<sup>163</sup> See 17 U.S.C. § 107 (2012); see *supra* Part III.

<sup>164</sup> *Id.*

<sup>165</sup> *Id.*

<sup>166</sup> *Id.*

tection would provide a solution to many of today's issues regarding design patent litigation. Inventors of truly original and creative designs would receive even more stringent protection (70 years after the designer's death)<sup>167</sup> than they previously would have under design patents (20 years after patent is granted).<sup>168</sup> As mentioned earlier, Samsung's counsel complained that Apple was claiming its monopoly on rectangles with rounded corners: with this copyright analysis, Samsung would have been able to argue a fair use defense. Whether their product was transformative enough for the defense to be effective, would have been a factual determination for the court.

This analysis, inquiring into how transformative a design is, adds incentives for competitors to create new design features, therefore leading to more innovative products. Transitioning towards copyright law would be a fair approach to allow future innovators to take already existing ideas and innovate off of them, and if they were to copy, then copyright owners would have protection extending for a longer period than that granted by patents.

### CONCLUSION

In order to optimize innovative consumer products, patent, antitrust, and copyright law must be reconciled to a certain extent. Patents encourage innovation, but at the expense of competition. Antitrust law encourages competition, but unbridled competition could lead to a market that takes away incentives from innovators.

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<sup>167</sup> See *supra* note 54 and accompanying text.

<sup>168</sup> See *supra* note 21 and accompanying text.

The scope test<sup>169</sup> provides a stronger patent regimen, while the intent test<sup>170</sup> shifts the scale more towards antitrust law. The Common Denominator test,<sup>171</sup> very wisely, takes into consideration the type of industry involved. The Common Denominator is a good test that should be considered in future patent litigation, but only to the extent of determining whether patent protection should be continued. Carrier's test overlooks the possibility that sometimes eliminating patents could spur innovation, without even entering into consideration of antitrust law.

Copyright protection, giving protection to true artistic designs with a reasonable fair use defense, provides a good alternative to design patents. In the future, if courts were to apply the Common Denominator test and remove utility patent protection in warranted situations, consumers would likely receive the same innovative products at more competitive prices. Finally, these benefits to the consumer would also exist if, like Brean argued, courts were to transition design patent protection more towards copyright protection.<sup>172</sup>

In the future courts can increase consumer welfare by loosening some of the legal monopolies created by utility patents through an industry-specific analysis, and by simplifying the dilemma involved with design patents by phasing them out in favor of copyright protection.

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<sup>169</sup> See *supra* Part IV.A.

<sup>170</sup> See *supra* Part IV.B.

<sup>171</sup> See *supra* Part IV.C and Part V.A.

<sup>172</sup> See *supra* Part VI.