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# Brazil's New Path to Meaningful Intellectual Property Protection

Luiz Miranda

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# Brazil's New Path to Meaningful Intellectual Property Protection

Luiz Miranda\*

*Today in Brazil, it takes over eleven years to receive legal rights to an invention by means of a patent. This state of affairs provides inadequate intellectual property protection for inventors and businesses, hampering Brazil's desire to accelerate innovation, entrepreneurship, and economic growth through a national patent system. But a new Joint Agreement between the Government of the United States and the Government of the Federative Republic of Brazil could mean rescue is on the way. Both governments agreed to engage in patent work sharing programs between the two patent offices, in hopes of increased efficiency. Yet, some scholars have warned of dangers and impossibilities such programs could cause, such as an even greater backlog of patents waiting to be prosecuted by a flood of new patent filings.*

*This Note addresses the concerns raised by other scholars by providing an alternative scenario, using data from similarly executed patent work sharing programs, along with data from the Patent Prosecution Highway Pilot Program*

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\* Class of 2017 Juris Doctor and Master of Laws in International Law joint degree candidate at the University of Miami School of Law; Bachelor of Science in Computer Science from the University of Central Florida's Engineering College; and over ten years of software development and design experience at Microsoft Corporation. I am incredibly grateful for the invaluable legal writing guidance of Professor Christina M. Frohock, and for the subject matter expertise of Professor Andres Sawicki, both star members of the University of Miami School of Law faculty. This paper is dedicated to my mother Silvia Miranda: our family's secret sauce.

*already underway, as a basis for its proposition. It explains why Brazil continues to pursue a working patent system, and also provides extensive background in how patent work sharing programs work. Finally, it explains how a properly executed program between the United States and Brazil could work, and why this Joint Agreement could mark the beginning of a new path to meaningful intellectual protection in Brazil.*

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## I. INTRODUCTION

Imagine you are an inventor in the United States who has developed a revolutionary new technology in the field of communications. You seek worldwide intellectual protection of your invention via patents and take the appropriate steps to obtain it. You receive a patent in Canada one year later and in the United States the following year. However, in Brazil, the seventh-largest economy in the world, and where your technology is being widely used, a patent has yet to be issued eleven years after you filed for it.

Brazil has been struggling with its patent system as a means of intellectual property protection for some time. From an enforcement perspective, the patent system is relatively well accepted and properly litigated.<sup>1</sup> However, the process of obtaining a patent in Brazil is at best ineffective and at worse entirely broken. Nevertheless, the country could be on the brink of becoming a meaningful player in the global patent protection system, and it may happen with help from the United States. This article will analyze how the expedited examination fast lanes that patent work sharing programs provide may be the solution Brazil has been waiting for.

The Brazilian Intellectual Property Association (“ABPI”), a leading non-profit organization that works in matters related to the doctrine and jurisprudence of intellectual property law in Brazil, has recognized the value of an operational patent system as a way to grow the national economy, increase industry competitiveness, and attract investments.<sup>2</sup> The Brazilian highest authorities agree.<sup>3</sup>

On June 30, 2015, the Government of the United States and the Government of the Federative Republic of Brazil issued a Joint Statement on “Patent work sharing between Patent Offices.”<sup>4</sup> This Joint Statement recognizes that work sharing between the two offices may serve as “a driving force for improving patent quality and facilitating the examination process of patent applications.”<sup>5</sup> In a Joint Communique that same day, United States President Barack Obama and Brazilian President Dilma Rousseff expressed their satisfaction with the completion of the Joint Statement between the two national patent offices “in order to improve efficiencies in the patent

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<sup>1</sup> Associação Brasileira de Propriedade Intelectual, *Propostas para a Inovação e a Propriedade Intelectual. Vol. 1. Fatores de Crescimento Econômico, Competitividade Industrial e Atração de Investimentos*, ABPI at 16 (Sept. 2014), <http://www.abpi.org.br/materiais/diversos/volumes1e2propinovacaepi.zip> [hereinafter ABPI].

<sup>2</sup> ABPI, *supra* note 1 at 16.

<sup>3</sup> U.S.-Braz., Joint Statement Between the Government of the United States and the Government of the Federative Republic of Brazil on Patent Work Sharing Between Offices (June 30, 2015), *available at* <http://www.uspto.gov/sites/default/files/documents/VI.%20U.S.-Brazil%20Joint%20Statement%20on%20Patent%20Work%20Sharing.pdf> [hereinafter Joint Statement].

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

<sup>5</sup> *Id.*

registration process.”<sup>6</sup> Five months later, on November 24, 2015, the United States Patent and Trademark Office (“USPTO”) and the National Institute of Industrial Property of Brazil (“INPI”) announced a Patent Prosecution Highway Pilot Program (“PPH Pilot Program”).<sup>7</sup> The PPH Pilot Program commenced on January 11, 2016, and it is the first step towards the realization of patent work sharing between the two countries.<sup>8</sup>

This article analyzes the implications of patent work sharing programs between Brazil and the United States, such as the PPH Pilot Program. Part I has introduced the problem, and argues that such work sharing could provide a potential solution to Brazil’s desire of attracting investment from companies that demand patent protection as a pre-requisite, while still reducing its patent prosecution backlog. Part II describes how a properly operational patent system can grow the Brazilian economy, increase industrial competitiveness, and attract investments. In addition, it discusses how the current patent prosecution backlog is the system’s main roadblock. Part III examines the Joint Statement issued by the United States and Brazil on patent work sharing, discusses what Patent Prosecution Highway (“PPH”) implementations of such patent work sharing programs generally look like, and examines the PPH pilot program created between the United States and Brazil. Finally, Part IV puts forward the proposition that a properly implemented patent work sharing program could be the answer to Brazil’s patent protection and economic goals, while at the same time addressing its backlog problem. At the same time, the analysis highlights the challenges Brazil must face in order to achieve this result.

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<sup>6</sup> Office of the Press Secretary, *Joint Communique by President Barack Obama and President Dilma Rousseff*, THE WHITE HOUSE, at 1-2 (June 30, 2015), <https://www.whitehouse.gov/the-press-office/2015/06/30/joint-communique-president-barack-obama-and-president-dilma-rousseff> [hereinafter White House Joint Communique].

<sup>7</sup> U.S.-Braz., Memorandum of Understanding Between the United States Patent and Trademark Office and the National Institute of Industrial Property of Brazil on A Patent Prosecution Highway Pilot Program (Nov. 24, 2015), *available at* [http://www.uspto.gov/sites/default/files/documents/PPH\\_MOU\\_and\\_Workplan\\_USPTO-INPI.pdf](http://www.uspto.gov/sites/default/files/documents/PPH_MOU_and_Workplan_USPTO-INPI.pdf). [hereinafter MOU].

<sup>8</sup> *Id.* at 3.

## II. BRAZIL'S STRIVE TO A FUNCTIONAL PATENT SYSTEM

### *A. The Patent System as a Means to Economic Growth*

It is a widespread theory in developed countries such as the United States that a patent system drives innovation, research, and product development.<sup>9</sup> During recent years, President Obama invested in the United States Patent System through initiatives of patent prosecution speed and quality improvements, aimed to “accelerate innovation, entrepreneurship, and economic growth” in the United States.<sup>10</sup> However, despite this strong consensus, evidence of a patent system as a means to economic growth has yet to be sufficiently established.<sup>11</sup> For example, a study of Japan’s expansion of its patent rights system in 1988 did not prove to have any measurable effect on either innovation or research and development.<sup>12</sup> The study tried unsuccessfully to measure the relative contribution of different patents in relation to technological progress.<sup>13</sup> Additionally, patents may serve as a means to hinder innovation of others, such as in cases of defensive and suppressive strategic patent behaviors, where a leading company may patent an invention only as a means of discouraging competitive innovation.<sup>14</sup> Nevertheless, there is another strong economic argument for the creation of a patent system: to discourage trade secret laws and behaviors.<sup>15</sup>

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<sup>9</sup> National Economic Council, Council of Economic Advisers, and Office of Science and Technology Policy, *A Strategy for American Innovation: Securing Our Economic Growth and Prosperity* 3 (Feb. 2011), available at <http://www.whitehouse.gov/sites/default/files/uploads/InnovationStrategy.pdf> (quoting President Obama’s statement that “[t]he key to our success . . . will be to compete by developing new products, by generating new industries, by maintaining our role as the world’s engine of scientific discovery and technological innovation.” Further noting that “we must also commit to making the necessary public investments to support high-quality patent examination.”).

<sup>10</sup> *Id.* at 22.

<sup>11</sup> WILLIAM M. LANDES & RICHARD A. POSNER, *THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW* 325 (Harvard Univ. Press 2003) (discussing whether more patents mean more and better innovation).

<sup>12</sup> *Id.* at 326.

<sup>13</sup> *Id.*

<sup>14</sup> *Id.* at 321.

<sup>15</sup> *Id.* at 330.

A strong argument made for the existence of a patent system is that a working patent system may curb the economic problems created by trade secrets and economic monopolies.<sup>16</sup> Under this theory, if inventors are not awarded patent protection upon disclosure of their inventions, they would instead maintain their competitive advantage through trade secrecy.<sup>17</sup> This trade secrecy would affect various aspects of the economy through undesirable business behaviors. The first undesirable outcome of this is that research and development would remain focused only on inventions that could successfully be kept secret and, therefore, profitable.<sup>18</sup> This means inventions that can be easily reverse engineered, or easily reproducible, would likely see a decrease in investment.<sup>19</sup>

Another undesirable outcome of a lack of patent protection would be decreased efficiency in manufacturing. “The possessor of a secret process for manufacturing a product might not be the most efficient manufacturer of that product.”<sup>20</sup> The highest output efficiency in this situation is to make available the secret process to the most efficient manufacturer.<sup>21</sup> Without a patent system, however, this is not easily accomplished without a likely loss of rights to the invention.<sup>22</sup> This also has a compounding effect of keeping secret a manufacturing process that may also serve to drive efficient manufacturing in other industries and other products.<sup>23</sup> The contemplated solution of licensing the manufacturing trade secret, among other types of trade secrets, is costly due to its high probability of leak and high transaction costs.<sup>24</sup> Lastly, an economy lacking a patent system may be at an increased risk of creating lasting monopolies due to an established firm’s product, superior efficiency, or economics of scale.<sup>25</sup> The patent system may help smaller firms and individual

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<sup>16</sup> LANDES & POSNER, *supra* note 11, at 328.

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

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

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

<sup>20</sup> *Id.* at 329.

<sup>21</sup> LANDES & POSNER, *supra* note 11, at 329.

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

<sup>23</sup> *Id.*

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

<sup>25</sup> *Id.* at 330.

inventors pierce through established monopolies while securing rights to their innovative work.<sup>26</sup>

Whether the patent system directly drives economic growth through the incentivizing of innovation, or through discouraging of economic problems created by trade secrecy and economic monopolies, developed countries such as the United States are convinced that properly implemented patent protection has a positive impact on the future of its economy.<sup>27</sup> Yet, even after decades of intellectual property growth, studies show that developed countries still struggle to establish direct correlations and measurements between a patent system and its effects to innovation and the economy in general.<sup>28</sup> The current view is still that “IP studies have far to go before we can even hope for consensus about the proper bounds of evidence-based intellectual property.”<sup>29</sup> This may serve as a further explanation of the difference in existing worldwide implementations of patent protection laws.

For developing countries such as Brazil, the benefits of a patent system mimic the ones of developed countries, but with certain differences. The ABPI believes that the published patent itself, with its detailed written description, is already an enormous benefit to others who want to develop the same technology.<sup>30</sup> It further notes that the patent system promotes economic and social developments not only in technological areas but also in scientific ones.<sup>31</sup> The ABPI believes the patent system is fundamentally an instrument that functions to stimulate and drive industries of research and development.<sup>32</sup> In addition, for areas such as the pharmaceutical industry, it means market availability of medicine to a society that would otherwise not have access to it without patent protection.<sup>33</sup> Further-

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<sup>26</sup> LANDES & POSNER, *supra* note 11, at 330.

<sup>27</sup> See National Economic Council, *supra* note 9, at 1, 69.

<sup>28</sup> LANDES & POSNER, *supra* note 11, at 331.

<sup>29</sup> John M. Golden, Robert P. Merges & Pamela Samuelson, *The Path of IP Studies: Growth, Diversification, and Hope*, 92 TEXAS L. REV. 1757, 1768 (2014) (concluding that the article is only a stepping stone into further work to establish such an evidentiary-based IP system).

<sup>30</sup> ABPI, *supra* note 1, at 16.

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

<sup>32</sup> *Id.*

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



more, the ABPI reports that the availability of legal resources created from patent protection decreases the risk that intellectual property will be lost, and consequently increases local manufacturing of products.<sup>34</sup> This drives the creation of local jobs and strengthens the local economy.<sup>35</sup> In summary, developing countries that provide intellectual property protection are better suited to reap the benefits of new worldwide technology, medicine, and cutting edge manufacturing.

Brazil's intellectual property laws already exist and are able to protect inventors and companies that want to invest in research and development in the country.<sup>36</sup> The laws appropriately award patent owners with temporary rights to exclude others from their inventions, as long as patents are narrowly limited to the scope of their written specification.<sup>37</sup> However, the inability of applicants to secure a patent in Brazil within a meaningful length of time causes a roadblock to reaping the benefits of the available patent protection.<sup>38</sup>

At bottom, the question as to whether a patent system is a driver of economic growth is up for debate. However, the Brazilian Government believes that a functioning patent system is vital to its domestic investments and economic growth, and this paper will assume the same.<sup>39</sup> What is not debatable is that a patent system with an eleven-year backlog must be revised.

### *B. Brazil's Patent Backlog Problem*

Brazil has an elephant in the room gaining a lot of attention: the backlog. In 2003, the average time to secure a patent in Brazil was relatively slow, about six years.<sup>40</sup> This increased to about nine years in 2009 and is now at an astonishing eleven years.<sup>41</sup> In comparison, the average time to secure a patent in the United States is just over

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<sup>34</sup> *Id.*

<sup>35</sup> ABPI, *supra* note 1, at 16.

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

<sup>37</sup> *Id.*

<sup>38</sup> *Id.* (discussing the backlog problem).

<sup>39</sup> *Id.* (discussing how a patent system helps to drive its domestic economy).

<sup>40</sup> Associação Brasileira da Propriedade Intelectual, *Pais demora 11 anos para aprovar patentes*, BOLETIM DA ABPI NUM. 147 at 4 (May 25, 2015), available at <http://www.abpi.org.br/materiais/boletim/Bol147.pdf>.

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

two years, and about three years in both Colombia and Peru.<sup>42</sup> The United States recognized that a patent system with a large backlog may stall innovation and impede economic growth, and it is working to reduce what it refers to as its current “enormous” two-year patent prosecution backlog.<sup>43</sup> In comparison, Brazil has a lot more work to do. The Brazilian eleven-year backlog currently renders its patent system practically inoperable, especially in areas of technology that can become quickly obsolete post invention, such as in communications and computer technology industries.<sup>44</sup>

The result of the backlog problem is that Brazil only has a patent system in theory, but not in practice. This diminishes Brazil’s image as a country that is able to handle the intellectual property protection needs of international investors, and brings uncertainty to both international and national patent applicants. This creates a roadblock for companies that want to do business in Brazil but are not willing to enter the country without meaningful intellectual property protection.

The current situation is largely due to the lack of patent examiners in the Brazil’s National Institute of Industrial Property (“INPI”), the government agency in charge of examining and issuing patents.<sup>45</sup> In 2014, the INPI employed 192 patent examiners who were in charge of handling its backlog of 184,224 patents that year, which yields about 980 patents per examiner.<sup>46</sup> In comparison, in 2012 the United States employed 7,831 patent examiners to handle its 603,898 patents that year, yielding only about 77 patents per examiner.<sup>47</sup> The bottom line is that there are not enough patent examiners employed in Brazil to handle the current backlog, and the problem is only getting worse.

Brazil has recognized the issue. It is working to address this problem by hiring more patent examiners and undergoing a revamp-

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

<sup>43</sup> National Economic Council, *supra* note 9, at 2 (describing new initiatives driven by the Obama administration and the U.S. Department of Commerce to improve the United States “enormous” backlog).

<sup>44</sup> Associação Brasileira da Propriedade Intelectual, *supra* note 40; ABPI, *supra* note 1, at 16-17.

<sup>45</sup> ABPI, *supra* note 1, at 17.

<sup>46</sup> *Id.*

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

ing of the country's public structure, expecting to hire 150 more examiners per year until 2018.<sup>48</sup> The President of the INPI, Luiz Otávio Pimentel, recognized that, in regards to patent protection in the country, "[t]he worst thing [Brazil] faces is a backlog."<sup>49</sup> However, hiring takes time and money, and Pimentel also recognized that Brazil is currently in a difficult economic situation.<sup>50</sup> This grim economic situation in Brazil has the effect of "a reduction in expenses for public institutions [including the] INPI."<sup>51</sup>

Nevertheless, the country is still interested in assuring its commitment to a viable patent system and to protecting intellectual property in the country. Through it, Brazil aspires to stimulate competitiveness and innovation in the country and the internationalization of its economy.<sup>52</sup>

### III. PATENT WORK SHARING

#### *A. The Patent Work Sharing Joint-Statement*

On June 30, 2015, the United States Department of Commerce and Brazil's Ministry for Development, Industry and Foreign Trade signed a Joint Statement on "Patent Work Sharing Between Patent Offices" of both countries.<sup>53</sup> The Joint Statement details how the two countries reached a common understanding, and proposes a common goal.<sup>54</sup> The countries considered "the value and the importance of increasing collaborative efforts between the respective patent offices, recognizing that work sharing . . . may serve as a

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<sup>48</sup> *Id.* at 18.

<sup>49</sup> James Nurton, *Managing Intellectual Property: Patent Office views from Brazil, Europe and Japan*, EUROMONEY INSTITUTIONAL INVESTOR PLC at 13 (Oct. 14, 2015) (describing the 2015 International Association for the Protection of Intellectual Property Congress lunch panel, featured differing perspectives on "continuous improvement of IP systems," and attended by representatives from the Brazil, Europe, and Japan patent offices).

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

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

<sup>52</sup> Associação Brasileira da Propriedade Intelectual, *supra* note 40.

<sup>53</sup> Joint Statement, *supra* note 3.

<sup>54</sup> *Id.*

driving force for improving patent quality and facilitating the examination of patent applications.”<sup>55</sup> The countries acknowledged that patent work sharing “may contribute to promotion of innovation and investment in [their] economies,” empowering businesses to grow and expand their markets across borders.<sup>56</sup> The outcome of the Joint Statement is an endeavor to “explore patent work sharing arrangements in the short term” via a common understanding:

The patent offices of the two Governments intend to commence cooperative activities, on or after the date of signature of [the] Joint Statement, including the implementation of a mutually beneficial work sharing pilot program that facilitates the examination of patent applications that are commonly filed in the United States and Brazil.<sup>57</sup>

On that same day, U.S. President Obama and Brazilian President Rousseff issued a Joint Communique on their determination to “strengthen an increasingly diversified and mature partnership . . . and [to] focus on meeting the needs and aspirations of the societies of the two largest democracies and economies in the Americas.”<sup>58</sup> The presidents emphasized the important role of bilateral coordination and dialogue and, on the topic of expanding trade and investment cooperation, expressed their satisfaction with the completion of the Joint Statement between the two national patent offices “in order to improve efficiencies in the patent registration process.”<sup>59</sup>

The Joint Statement highlights that it “does not create any legal obligations under international or domestic law.”<sup>60</sup> While this is generally true, the Joint Statement does fall within the international law category of soft law—the document is still considered international law and should not be viewed as simply aspirational. Soft law generally describes non-legally binding international instruments

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<sup>55</sup> *Id.*

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

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

<sup>58</sup> White House Joint Communique, *supra* note 6.

<sup>59</sup> *Id.*

<sup>60</sup> Joint Statement, *supra* note 3.

that the parties hope will achieve general or universal application.<sup>61</sup> These instruments can represent an interim step in treaty making, even if they do not come to fruition.<sup>62</sup> In this case, the Joint Statement opened the door for the respective countries' patent prosecution offices to reach an agreement on how they can implement a patent work sharing program.

Soon after, the United States Patent and Trademark Office ("USPTO") and the National Institute of Industrial Property of Brazil ("INPI") announced a Patent Prosecution Highway Pilot Program ("PPH Pilot Program").<sup>63</sup> Before discussing the details of how the PPH Pilot Program was executed, we must understand the context in which it is to be implemented.

### *B. The Patent Prosecution Highway ("PPH")*

To understand how patent work sharing agreements work, we can look to the most widely used program today, the Patent Prosecution Highway.<sup>64</sup> The Patent Prosecution Highway ("PPH") is a decision-sharing framework in which two different patent granting agencies create an agreement that work generated by a first patent office is later shared with a second patent office.<sup>65</sup> The USPTO and the Japan Patent Office were the first patent granting agencies to enter into such an agreement in July 2006, and since then many countries have followed suit.<sup>66</sup>

PPH agreements initially existed as bilateral agreements between two patent offices, allowing an applicant whose invention claims have been determined to be patentable in an initial country's

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<sup>61</sup> ANTHONY AUST, *MODERN TREATY LAW AND PRACTICE* 49 (Cambridge Univ. Press, 3d ed. 2013).

<sup>62</sup> *Id.* at 50.

<sup>63</sup> MOU, *supra* note 7.

<sup>64</sup> *Patent Prosecution Highway (PPH) - Fast Track Examination of Applications*, UNITED STATES PATENT AND TRADEMARK OFFICE, <http://www.uspto.gov/patents-getting-started/international-protection/patent-prosecution-highway-pph-fast-track> (last modified Oct. 17, 2016) [hereinafter USPTO PPH Fast Track].

<sup>65</sup> John M. Carson, Alan Kessler & Hugh Dunlop, *A Practical Guide to The Patent Prosecution Highway*, *MANAGING INTELLECTUAL PROPERTY* (Apr. 1, 2009), <http://www.managingip.com/Article/2167622/A-practical-guide-to-the-patent-prosecution-highway.html>.

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

patent filing office, the Office of First Filing, to go through an accelerated examination in a subsequent country's patent filing office, the Office of Second Filing.<sup>67</sup> In addition, multilateral PPH agreements, such as the Global and IP5 PPH programs, have seen increased participation by countries around the world, with the Global PPH reaching twenty-one member countries as of July 2015.<sup>68</sup> Multilateral agreements allow patent applicants to designate any of the member countries' patent offices as the Office of First Filing or the Office of Second Filing, allowing an applicant the flexibility to request accelerated examination at any, and all, of the member offices, once an Office of First Filing has determined the invention claims to be patentable.<sup>69</sup> The ultimate goal of these agreements is faster and more efficient worldwide patent prosecution. According to statistical data from patent offices that implement PPH agreements, those offices have increased efficiency, and accomplished this goal.<sup>70</sup>

The way PPH programs increase efficiency is by reducing the amount of redundancy in the prosecution of patent applications filed in multiple patent offices around the world.<sup>71</sup> This redundancy exists largely due to differences in standards of patentability in different countries' patent laws.<sup>72</sup> Patent offices cannot "grant each other's work 'full faith and credit,' without harmonizing their statutes."<sup>73</sup> Therefore, the work done by patent examiners of ensuring that the granting of patents adheres to the country's patent law is largely redone, even when the outcome is substantially the same.<sup>74</sup> Such work includes time-consuming research, such as making sure inventions are novel and non-obvious, in light of prior art.

Properly implemented PPH agreements reduce redundancy in the work done by patent examiners.<sup>75</sup> First, the patent reaches the

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<sup>67</sup> USPTO PPH Fast Track, *supra* note 64.

<sup>68</sup> *Global Patent Prosecution Highway simplifies existing network*, JAPAN PATENT OFFICE (July 6, 2015), <https://www.jpo.go.jp/pph-portal/globalpph.htm>.

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

<sup>70</sup> *Patent Prosecution Highway Portal Site Statistics*, JAPAN PATENT OFFICE, <https://www.jpo.go.jp/pph-portal/statistics.htm> (last visited Nov. 20, 2015).

<sup>71</sup> Carson, *supra* note 65.

<sup>72</sup> *Id.*

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

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

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

second country's patent examiner in a cleaner state, after having gone through a full round of examination including any amendments to the specification, drawings, or claims, in order to become patent eligible in the first country.<sup>76</sup> Second, when a patent examiner in the second country understands how a patent examiner in the first country has conducted his or her work to ensure patentability, the examiner in the second country can start his or her work, starting from where the first examiner left off.<sup>77</sup> This is because the second examiner can rely on the examination already done, and only looks at any material that the first examiner did not consider, due to the differences in the countries' patentability laws.<sup>78</sup> However, dissecting these differences is a challenging task, and PPH agreements work only if the legal frameworks of patent laws between the countries in the agreement share significant commonality. Only then can the second office dramatically reduce the need for further examination.

Due to the rise of the global economy, and the growth of intellectual property as a global trade, the desire to align domestic patent laws of different countries has grown significantly in the past two centuries.<sup>79</sup> The Trade Related International Property Agreement ("TRIPS"), passed in 1994, marked a turning point in recent phases of development concerning proposals to harmonize domestic patent laws at the international level.<sup>80</sup> The agreement laid down substantive principles that applied to all members of the World Trade Organization ("WTO") and signaled "the inevitability of a more harmonized and strong global patent system."<sup>81</sup> Successful PPH implementations are best evidenced in countries that share substantive patent law, creating huge benefits.<sup>82</sup> Japan and Korea provide good

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<sup>76</sup> Carson, *supra* note 65.

<sup>77</sup> *Id.*

<sup>78</sup> *Id.*

<sup>79</sup> David Kappos, Director, U.S. Patent & Trademark Office, *Address at the Managing IP International Patent Forum: A Global Call for Harmonization*, UNITED STATES PATENT AND TRADEMARK OFFICE (Apr. 5, 2011), <http://www.uspto.gov/news/speeches/2011/kapposlondon.jsp>.

<sup>80</sup> Dongwook Chun, *Patent Law Harmonization in the Age of Globalization: The Necessity and Strategy for a Pragmatic Outcome*, 93 J. PAT. & TRADEMARK OFF. SOC'Y 127, 129 (2011).

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

<sup>82</sup> *Id.* at 153; Etienne De Villiers, *The Patent Prosecution Highway: Canada as Office of First Filing*, 2 LANDSLIDE 30, 31 (2010).

examples—the substantive patent law is almost identical in those countries. In the United States and Canada, patent laws grew from similar principles.<sup>83</sup> Therefore, Brazil can only successfully reap the benefits of a Patent Prosecution Highway agreement with the United States if its patent laws are at least substantially comparable to the U.S. patent laws.

*C. The Established USPTO-INPI PPH Pilot Program*

On November 23, 2015, the USPTO and the INPI signed a Memorandum of Understanding creating a PPH pilot program “as contemplated in the June 30, 2015 Joint Statement between the United States Government and the Government of Brazil.”<sup>84</sup> Although limited, the pilot program is the first realization of the aspirations set forth by the Government of Brazil to change its patent system in attempts to promote innovation and cross-country investment in its economy.

The PPH Pilot Program, which launched on January 11, 2016, functions as a limited pilot for commencing cooperation between the patent offices of both countries.<sup>85</sup> At the same time, the program is aimed to encourage cooperation of patent work sharing between the two offices, while still allowing for complete liberty of office-specific guidelines.<sup>86</sup> This includes the liberty of both offices “to reflect their respective legal terminology and processes,” and to allow additional flexibility beyond the core requirements.<sup>87</sup> This results in the ability of each office to fully determine how much work, or how little work, to leverage from the Office of First Filing, without any minimum requirements.<sup>88</sup> As usual of a PPH program, the ultimate decision of patentability remains at the sole discretion of the Office of Second Filing, in accordance to its national laws.<sup>89</sup>

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<sup>83</sup> Chun, *supra* note 80, at 154; De Villiers, *supra* note 82, at 31.

<sup>84</sup> MOU, *supra* note 7, at 1.

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

<sup>86</sup> *Id.* at 4.

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

<sup>88</sup> *Id.* at 3.

<sup>89</sup> MOU, *supra* note 7, at 3.



The extent of the program will be limited, allowing only up to 150 patents to enter the program during its two-year maximum period.<sup>90</sup> In 2014, this would mark only a small percentage (roughly 5%) of the 2,749 patents granted in Brazil that year, and an even smaller percentage (roughly 0.5%) of the 30,342 patents that were filed that year.<sup>91</sup> Although the USPTO is free to accept any application where the INPI was the Office of First Filing, the INPI will conversely accept PPH applications only where the USPTO was the Office of First Filing to recent or newly filed utility applications in the field of oil, gas, or petrochemical inventions.<sup>92</sup> On August 25, 2016, seven months into implementation, the INPI had accepted twenty-two patent applications under the PPH pilot program, with an average time to reach a decision of patentability from initial request at just 117 days, a promising number.<sup>93</sup> Yet, this small number of applicants at seven months after the program's introduction, highlights its limited accessibility.

The PPH Pilot Program, however limited, still has the potential to become a historical turning point in Brazil's strive to become a meaningful player of global intellectual property protection. The Pilot Program highlights its intended plan to be evaluated upon its conclusion for "efficiency, efficacy, and effectiveness."<sup>94</sup> This entails analyzing the results obtained by all applications processed by the program for measurements that can gauge its success.<sup>95</sup> Such measurements would include comparing the time to grant a patent within the program with the time to grant a similar patent outside the program.

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<sup>90</sup> *Id.* at 1.

<sup>91</sup> World Intellectual Property Organization, *WIPO Statistics Database*, <http://www.wipo.int/ipstats/en> (last visited Jan. 1, 2016) (available by a search for the total patents by the Brazil filing office for the year 2014).

<sup>92</sup> MOU, *supra* note 7, at 2.

<sup>93</sup> Brazil Department of Commerce: Instituto Nacional da Propriedade Industrial ("INPI"), *Projeto Piloto Patent Prosecution Highway*, <http://www.inpi.gov.br/menu-servicos/patente/projeto-piloto-pph> (last edited Aug. 31, 2016) (showing statistical results of the PPH Pilot Program as of Aug. 25, 2016).

<sup>94</sup> MOU, *supra* note 7, at 3.

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

The program's success will likely depend on whether the pilot program, like any other such subsequent patent work sharing program, is positioned to take significant advantages of similarities between the two countries' domestic patent laws.

#### IV. PATENT WORK SHARING AS A SOLUTION TO BRAZIL'S PATENT INDUSTRY GROWTH ASPIRATIONS

Patent work sharing programs, such as the new USPTO-INPI PPH Pilot Program, may provide a new avenue for applicants seeking patent protection in Brazil. This new avenue may serve as the solution to the Brazilian Government's desire to grow its national economy, increase industry competitiveness, and attract investments through an operational patent system.<sup>96</sup> There are fears that such programs may hurt Brazil's current patent backlog, due to these programs opening the doors to an expedited track for a significant amount of foreign patent filers.<sup>97</sup> However, if properly implemented, it is possible for Brazil not only to open those doors and increase the number of annual patent grants, but also to help decrease its backlog.

##### *A. Patent Work Sharing as a Fast-Lane to Patent Examinations*

The main benefit of patent work sharing programs is their potential of increasing efficiency in the patent examination process.<sup>98</sup> This increased efficiency comes from the potential decrease in time it takes for a patent examiner in the Office of Second Filing to reach a final decision as to granting or denying a patent, when such patent has already been granted in another country's Office of First Filing.<sup>99</sup> The improvements in patent examination speed are directly proportionate to two factors: 1) the differences in the domestic patent law between the countries participating in the patent work shar-

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<sup>96</sup> ABPI, *supra* note 1.

<sup>97</sup> Rana Gosain, *Electronic Bull. No. 35: Would The Adoption of PPH Pilot Help Brazil To Reduce Its Massive Patent Backlog*, DANIEL ADVOGADOS (Dec. 18, 2014), <http://www.daniel.adv.br/eng/electronicBulletin/n35/bulletin.html>.

<sup>98</sup> Carson, *supra* note 65.

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

ing program, and 2) how much credibility the second country's filing office is willing to give to the already produced work of the first country's filing office.<sup>100</sup>

Extreme examples of both factors illustrate the possibilities for speed improvement of patent work sharing. First, when the domestic patent laws between participating countries are distinct, any examination work completed in a country's Office of First Filing would have no bearing on the examination work that still must be done at any subsequent country's filing office. Second, even when the first factor is met, if a country's Office of Second Filing does not give any faith and credit to the previous examination work performed in the first country's filing office, there is no opportunity of efficiency improvement in the Office of Second Filing's patent examination. In either of these scenarios, the time it takes to get a patent filed in the Office of Second Filing is exactly the same regardless of whether or not the patent is part of the patent work sharing program.

At the same time, if a country shares the same patent laws as another, the Office of Second Filing may potentially reduce the time it takes to examine a patent to virtually nothing. This will depend on how much faith and credit the Office of Second Filing gives to the work performed by the Office of First Filing during its patent examination. This is possible because there would be no new work to be done by the Office of Second Filing; all of the examination effort is applicable and has already been completed by the Office of First Filing. Therefore, when a country shares the patent laws of the first examining country and gives complete trust to the work already completed by that country's examiners, a patent work sharing agreement creates an opportunity for full efficiency of the second country's examination process.

There is an important implication of this described scenario of absolute patent work sharing efficiency. Under this scenario, apart from insignificant transaction costs, the time to get a patent for a new invention in the second country will never be greater than the same time it takes to get a patent in the first country. This remains true regardless of the second country's examination time and remains possible irrespectively of any existing backlog. This is possible because an applicant who wants patent protection is able to file

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

for a patent simultaneously in both countries, and once the patent is granted in the country where examination is the fastest, the applicant could then immediately apply to enter expedited prosecution—for example, through a patent prosecution highway application—in the country with slower patent examination. In the scenario where the slower country—that would become the country with the Office of Second Filing—has equal domestic patent laws and gives full faith and credit to the examination of the faster country—which becomes the country with the Office of First Filing—the patent would be immediately approved, as there is no more work to do.

The two factors highlighted above currently drive the success of patent work sharing programs around the globe. The most prominent example of how a patent work sharing agreement can have a significant effect is the PPH program between Japan and Korea.<sup>101</sup> Because the patent laws in Japan and Korea are substantially the same, an applicant with a previously issued patent in Japan has been able to obtain a patent in Korea in only 28 days.<sup>102</sup> Still, such a successful result can be obtained only when both factors described can be met to a significant extent. Due in part to the disagreement between countries and scholars on how patent laws drive economic growth, and which issues of patentability are better aligned with a country's goal, worldwide patent laws can be significantly misaligned.<sup>103</sup>

The PPH agreement between the United States and Canada provides an example of a more typical and successful patent work sharing program. In 2010, Canada's Patent Office was marketed as an Office of First Filing for applicants who were interested in the quickest road to a patent in the United States.<sup>104</sup> This push noted the similarities between the two countries in not only their language, but also in their domestic patent laws.<sup>105</sup>

Canada incentivized its patent office as an Office of First Filing because it allows applicants to pay for expedited examination

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<sup>101</sup> Chun, *supra* note 80, at 153-54.

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

<sup>103</sup> See generally LANDES & POSNER, *supra* note 11 (describing economic theories driving the creation of patent laws); see also Chun, *supra* note 80 (discussing the continuing need to harmonize patent laws in an effort to drive the worldwide global economy).

<sup>104</sup> De Villiers, *supra* note 82 at 30-31.

<sup>105</sup> *Id.*

through a special provision of the Canadian Patent Rules.<sup>106</sup> Through this route, a patent would be examined in Canada in as little as four weeks, and it was common for an applicant to receive a grant in as little as eighteen months from initial filing.<sup>107</sup> The applicant could then use this allowance as the basis to expedite a patent application of the same invention in the United States, resulting in a United States-issued patent in less than two years: a 30-50% time savings from the 35.3-month average at the time.<sup>108</sup>

David Kappos, the Secretary of Commerce for Intellectual Property and the Director of the USPTO, dubbed this strategic patent route “Toronto Pronto.”<sup>109</sup> Patent applications filed through the Toronto Pronto strategy were known to receive United States grants in less than a year in some cases, a significant reduction in examination time in comparison to traditional filings at the USPTO at the time.<sup>110</sup> Concurrently, the Canadian PPH fast lane was also available as an expedited path for patents filed first in the United States, with the Canadian office as the Office of Second Filing.<sup>111</sup> The average pendency from PPH requests in Canada to a final decision averaged

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<sup>106</sup> *Id.*

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

<sup>108</sup> Marcus Gallie & Jaimie Bordman, *Take the Patent Prosecution Highway: Getting patent applications to grant in the fast lane*, CANADIAN LAWYER INHOUSE MAG., 11, 11 (Feb. 2012), <http://digital.canadianlawyermag.com/i/52834-feb-mar-2012/9> (discussing a strategy to faster United States patent grants through a Canadian patent filing and subsequent use of the established PPH program between the United States and Canada); see also Office of Corporate Planning, *Performance and Accountability Report: Fiscal Year 2010*, UNITED STATES PATENT AND TRADEMARK OFFICE at 12 (2010), <http://www.uspto.gov/about/strat-plan/ar/2010/USPTOFY2010PAR.pdf#page=126>.

<sup>109</sup> Gallie & Bordman, *supra* note 108; see also Gene Quinn, *Kappos Sets Goal of 650,000 Backlog by End of FY 2011*, IPWATCHDOG (Dec. 7, 2010), <http://www.ipwatchdog.com/2010/12/07/kappos-sets-goal-of-650000-backlog-by-end-of-fy-2011>.

<sup>110</sup> Mills & Reeve LLP, *Toronto Pronto*, LEXOLOGY (Aug. 12, 2010), <http://www.lexology.com/library/detail.aspx?g=bc9ffab4-c16c-439a-97a8-3d75fe330bb4>.

<sup>111</sup> Elliott Simcoe, *Why Canada's Patent Prosecution Highway Is A Huge Success*, LAW360 (Oct. 27, 2014), <http://www.law360.com/articles/589540/why-canada-s-patent-prosecution-highway-is-a-huge-success>.

only 5.4 months in 2014.<sup>112</sup> This examination time was also considerably shorter than the 32.9-month average pendency of non-PPH Canadian patent applications filed in that same period.<sup>113</sup>

The success of the PPH path between Canada and the United States, and vice-versa, is only possible because Canada and the United States share a similar legal framework.<sup>114</sup> Claims drafted for the United States are generally also allowable in Canada provided that they meet the similar U.S. patent law requirements of subject matter, novelty, and obviousness.<sup>115</sup> The main caveat to using Toronto Pronto is making sure that the claims sought are allowable subject matter in Canada.<sup>116</sup> General categories of non-patentable subject matter include “mathematical formulae or ‘mere’ discoveries, methods of medical treatment, higher life forms, business schemes, methods of playing an existing game, and professional skill/judgment.”<sup>117</sup> However, the United States has some of the broadest scope of patentable subject matters compared with other jurisdictions, meaning that some of its patentable inventions may not be patentable elsewhere.<sup>118</sup>

### *B. Comparison of the Patent Laws of the U.S. and Brazil*

The United States and Brazil domestic patent laws share many substantive views on what constitutes a patentable invention.<sup>119</sup> Brazil has implemented patent laws that comply with the Trade Related aspects of Intellectual Property Rights (“TRIPS”) agreement, as adopted by the World Trade Organization.<sup>120</sup> Brazil has adhered to

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

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

<sup>114</sup> De Villiers, *supra* note 82, at 31.

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

<sup>116</sup> *Id.* at 32.

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

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

<sup>119</sup> Rana Gosain, *The International Comparative Legal Guide to: Patents 2014 4th ed.: A practical cross-border insight into patent laws: Brazil*, GLOBAL LEGAL GROUP LTD. 30, 31-32 (2014), available at <http://www.iclg.co.uk>; also available at [http://www.daniel.adv.br/eng/articlesPublications/ranaGosain/PAT14\\_Chapter-5\\_Brazil.pdf](http://www.daniel.adv.br/eng/articlesPublications/ranaGosain/PAT14_Chapter-5_Brazil.pdf).

<sup>120</sup> M. Monirul Azam, *The Experiences of TRIPS-Compliant Patent Law Reforms in Brazil, India, and South America and Lessons for Bangladesh*, 7 AKRON INTELL. PROP. J. 61, 62-63 (2015); see also Luciano Martins Costa Povoá, Rob-

TRIPS requirements in its patent laws and has introduced patent protections for both pharmaceutical products and processes.<sup>121</sup> The Brazilian patent law also includes similar bars to patentability such as lack of novelty and inventive step.<sup>122</sup> The most common grounds for invalidity include lack of enablement and lack of support in the specifications.<sup>123</sup> Under Brazil's patent law, Article 24 describes lack of enablement and best mode requirement as:

. . . [T]he specification must describe the subject matter clearly and sufficiently so as to enable a person skilled in the art to carry it out and to indicate, when applicable, the best mode of execution.<sup>124</sup>

Article 25 describes lack of support in the specifications as:

. . . [T]he claims must be based on the specification, characterizing the particulars of the application and defining clearly and precisely the subject matter to be protected.<sup>125</sup>

The United States also enforces that patents satisfy the enablement, best mode, and support in the specification requirements in its laws.<sup>126</sup> Under U.S. law, lack of enablement and best mode are enforced by the requirement that:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set

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erto Mazzoleni & Thiago Caliar, *Innovation in the Brazilian Pharmaceutical Industry Post-TRIPS*, TRIPS COMPLIANCE, PATENT REGIMES & INNOVATION: EVIDENCE & INNOVATION 16, 21 (Sunil Mani & Richard R. Nelson eds., 2013).

<sup>121</sup> Azam *supra* note 120, 62-63; Pova, Mazzoleni & Caliar, *supra* note 120, at 21.

<sup>122</sup> Gosain, *supra* note 119, at 31-32.

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

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

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

<sup>126</sup> 35 U.S.C. § 112.

forth the best mode contemplated by the inventor or joint inventor of carrying out the invention.<sup>127</sup>

In addition, similar specification support enforces that:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.<sup>128</sup>

These texts demonstrate some strikingly similarities between the domestic patent laws of both countries. However, Brazilian's patent law is not as broad as the United States' patent laws when it comes to patentable subject matter. In the United States, a claim that falls within one of the four enumerated categories of patentable subject matter recited in 35 U.S.C. § 101 (i.e., process, machine, manufacture, or composition of matter) is still not patentable if the claims are directed to nothing more than abstract ideas (such as mathematical algorithms), natural phenomena, and laws of nature.<sup>129</sup> In addition, judicially recognized exceptions have been described using various other terms, including "physical phenomena," "scientific principles," "systems that depend on human intelligence alone," "disembodied concepts," "mental processes" and "disembodied mathematical algorithms and formulas."<sup>130</sup>

In comparison, Brazil includes a much wider array of unpatentable subject matters.<sup>131</sup> According to Article 10 of Brazil's Patent Law, all of the following are not patentable:

I. discoveries, scientific theories and mathematical methods; II. purely abstract concepts; III. schemes, plans, principles or methods for commerce, accounting, financing, education, advertising, lottery and control; IV. literary, architectural, artistic and scientific works, or any aesthetic creation; V. computer programmes per se; VI. presentations of information;

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<sup>127</sup> 35 U.S.C. § 112(a).

<sup>128</sup> 35 U.S.C. § 112(b).

<sup>129</sup> 35 U.S.C. § 101; *Diamond v. Diehr*, 450 U.S. 175, 185 (1981).

<sup>130</sup> MPEP 2106 (9th ed. Rev. 7, Nov. 2015).

<sup>131</sup> Gosain, *supra* note 119, at 33.



VII. rules of a game; VIII. operating or surgical techniques and methods, as well as therapeutic or diagnostic methods for the treatment of humans or animals; and IX. the whole or part of natural living beings and biological material found in nature or also isolated therefrom, including the genome or germplasm of any natural living being and the natural biological processes.<sup>132</sup>

In addition, Article 18 also provides that the following are not patentable:

I. that which is contrary to [accepted principles of] morality and good conduct and to public safety, order and health; II. substances, matter, mixtures, elements or products of any kind, as well as any modification of their physical-chemical properties and the respective processes of obtaining or modifying them, when they result from the transformation of the atomic nucleus; and III. The whole or part of living beings, except transgenic microorganisms which meet the three requirements for patentability - novelty, inventive step and industrial application - specified in Article 8 and which are not mere discoveries.<sup>133</sup>

The result is a mixed bag, the striking differences between patentable subject matters in Brazil versus the United States likely mean that the potential for a patent work sharing program varies largely by industry. For example, the pharmaceutical industry may not be able to take advantage of a patent work sharing program as successfully as the communication technology industry, due to Brazil's requirement that a patent must withstand acceptable principles of "morality and good conduct and to public safety, order and health."<sup>134</sup> Brazil's public health oriented, TRIPS-compliant approach to patent laws in relation to pharmaceuticals, has created a

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<sup>132</sup> *Id.*

<sup>133</sup> *Id.*

<sup>134</sup> *Id.*

balance within its intellectual property regime between pharmaceutical innovation and access to medicines.<sup>135</sup> Although a positive approach for Brazil to provide affordability to healthcare in the country, this creates a unique set of domestic laws in comparison with the United States, and could therefore be an industry where a patent work sharing program would be unable to excel.

In addition to statutory text comparison, Brazil will have to study and keep up to date with the ever-changing jurisdiction interpretation of United States patent laws. For example, The Supreme Court has changed the interpretation of the definiteness statutory requirement to patentability in 2014, in the case of *Nautilus, Inc. v. Biosig Instruments, Inc.*<sup>136</sup> The United States Federal Code statutory language requires that a patent specification “conclude with one or more claims *particularly* pointing out and *distinctly* claiming the subject matter which the inventor or a joint inventor regards as the invention.”<sup>137</sup> Prior to the case, United States Federal Courts enforced that a patent claim could only be considered legally indefinite, and therefore unpatentable, when it was “insolubly ambiguous”—just short of ambiguous.<sup>138</sup> The Supreme Court concluded that this standard did not satisfy the statutory requirements, and in place of the “insolubly ambiguous” standard, held that a patent is invalid for indefiniteness “if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.”<sup>139</sup> These two interpretations of patentability flow from an unchanged statutory text, and highlight the difficult task Brazil must face to establish an efficient patent work sharing program.

Nevertheless, once a patent avoids the hurdle of being a patentable subject matter in Brazil, and other potential differentiating factors, there is great potential for the substantial examination in Brazil to share significant similarities with the examination of the same patent in the United States. In addition, patent laws are not static, and

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<sup>135</sup> Azam, *supra* note 120, at 66.

<sup>136</sup> *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2124 (2014).

<sup>137</sup> 35 U.S.C. § 112(b).

<sup>138</sup> *Nautilus*, 134 S. Ct. at 2124.

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

there is current aspiration and tendency for global patent laws to converge even further in the future.<sup>140</sup>

*C. Implementation as the Key to Success*

Once a patentable invention is identified as patentable subject matter in both countries, the focus will turn to how much credibility the country's Office of Second Filing is willing to give to the first country's Office of First Filing prior work.

In a future patent work sharing agreement between the United States and Brazil, the most common scenario would be for a patent to be granted first in the United States and then subsequently requested to move to the fast lane in Brazil. This means the USPTO would become the Office of First Filing and the INPI the Office of Second Filing. Therefore, it will be up to INPI as Brazil's patent office to decide how much credit to give to the work already performed at the USPTO, having a direct impact on the ultimate success of the patent work sharing program.

In typical patent work sharing agreements, the local patent office makes the ultimate determination of what is patentable.<sup>141</sup> This means that how Brazil chooses to implement its phase of the PPH Pilot Program, or any other patent work sharing program in the future, will have a great impact on the time efficiencies during Brazil's patent examination stage as the Office of Second Filing. Brazil must conduct a careful comparative analysis of patentability laws between itself and the United States, identifying all intricate scenarios where a patent would be granted in the United States but not in Brazil. The USPTO office has vowed to help Brazil in this effort, but Brazil will still need to make a significant investment if it wants such programs to succeed.<sup>142</sup>

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<sup>140</sup> Office of International Patent Cooperation, *International Patent Cooperation*, UNITED STATES PATENT AND TRADEMARK OFFICE, <http://www.uspto.gov/patents-getting-started/international-patent-cooperation> (last visited Jan. 23, 2016) (discussing the United States Patent and Trademark Office of International Patent Cooperation's strong commitment to the international IP community in moving towards a harmonized patent system).

<sup>141</sup> MOU, *supra* note 7 (as an example of the Office of Second Filing making the final determination of patentability).

<sup>142</sup> *Id.* (noting both offices working together to "monitor progress of the PPH pilot program" and evaluating its results).

Once the key differences and similarities of domestic patent laws are identified, Brazil can implement a domestic examination as the Office of Second Filing that focuses only on the extra steps necessary to also grant the same patent in Brazil. In addition, Brazil will need to give full faith and credit to the work already done by its peers at the USPTO and take their prior examination at face value.

For example, one of the first steps to patent examination after identifying the invention is conducting what is known as a “Search of Prior Art.”<sup>143</sup> This involves conducting a thorough search of all domestic and foreign patents, publications, and other relevant prior art.<sup>144</sup> Conducting a search of prior art can be a time consuming process.<sup>145</sup> This work would already have been completed by the USPTO as the Office of First Filing and reducing its redundancy would be key to lowering Brazil’s examination time.<sup>146</sup>

The next steps the USPTO does after identifying the prior art is to apply its domestic patent laws to determine patentability in relation to the prior art.<sup>147</sup> This includes several steps: a determination of patentable subject matter; an analysis of adequacy in specification and claims, including enablement and best mode requirements; and

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<sup>143</sup> MPEP, *supra* note 130 (section II details the search of prior art as the second step in patent examination).

<sup>144</sup> *Id.*

<sup>145</sup> USPTO Technology Center 2100, *Prior Art Search*, UNITED STATES PATENT AND TRADEMARK OFFICE, <http://www.uspto.gov/patent/initiatives/prior-art-search> (last visited Jan. 23, 2016) (highlighting a current USPTO initiative to improve “the investigation and sharing of search strategies, and the improvement of tools and resources to evolve better techniques to identify prior art”).

<sup>146</sup> A caveat to this is that Prior Art Search work completed by an Office of First Filing is increasingly valuable to an Office of Second Filing only when the realm of the search is the same. For example, the American Invents Act, which took force in 2013, greatly expanded the definition of prior art in the United States in regards to foreign inventions. This change was actually drive by the United States’ desire to better align its definition of prior art between the United States and other countries. Brazil must stride to align its definition of prior art with the United States if it wants to take advantage of Prior Art Search completed by the USPTO. Any differences between what the United States considers prior art versus what Brazil considers prior art could have a potentially drastic effect on the ability to share Prior Art Search results.

<sup>147</sup> MPEP, *supra* note 130 (section III determines whether the claimed invention complies with the statute 35 U.S.C. 101).

the finding of whether the requirements of novelty and non-obviousness have been met.<sup>148</sup> As previously discussed, there is also opportunity for efficiency in this phase, through the proper identification of what relevant work would already have been done at the USPTO, and a focus only to the exceptions.

Therefore, the amount of time savings of a patent work sharing program between the United States and Brazil will be impacted by not only how much trust the INPI gives to the work done at the USPTO, but also how much investment the INPI makes to streamline the productivity of Office of Second Filing's patent examinations.

Consequently, the priority it gives to examinations as an Office of Second Filing in comparison to its standard examinations will also have a tremendous impact due to the current backlog. The INPI would need to prioritize examination of patents that are part of the patent work sharing program or they will face the same fate of existing patents in the system. However, this ultimately raises the question as to how a patent work sharing agreement may affect the existing patent backlog problem.

#### *D. Outsourcing The Backlog Problem*

Brazil is faced with the challenging question of how many resources to dedicate to the success of a patent work sharing program, when it is already facing a significant backlog of work. There is concern that a patent work sharing program will never be successful until the INPI first addresses the backlog, because "there would not be enough patent examiners to cope with the avalanche of expedited examination cases."<sup>149</sup> The concern is rooted in the current workforce of examiners at the INPI, concluding that prior to the successful implementation of a patent work sharing program, the INPI would need to increase substantially the number of examiners.<sup>150</sup>

This concern is sincere, but misguided. A patent work sharing program will not open the doors to expedited examinations to the detriment to Brazil's already unmanageable backlog problem. Although accurate that a successful expedited path to a Brazilian patent

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<sup>148</sup> *Id.*

<sup>149</sup> Gosain, *supra* note 97.

<sup>150</sup> *Id.*

has the potential to significantly increase the number of patents currently filed at the INPI, it would also cause a significant decrease in patents filed at the INPI via the traditional route of initially filing and prosecuting in Brazil.

A decrease in traditional patent filings is possible due to the potential of an enormous time saving in obtaining a patent via an expedited route, such as a PPH route. The number of patents filed in Brazil by non-resident applicants continues to grow.<sup>151</sup> In 2014, out of the 32,395 patent applications, only 14% of them were made by Brazilian residents.<sup>152</sup> Foreign patent filers will already be inclined to take advantage of an expedited route to a Brazilian patent, as they may already be familiar with patent filings in multiple offices. Therefore, if the INPI is successful in its investment to properly implement a program that yields significant time saving in the expedited route, this would cause a large shift in patent filings to that route, thus decreasing the number of patents filed done in the traditional, slower route.

Patents currently sitting in the backlog may also benefit from a successfully implemented expedited route. If one looks at the cumulative period of 2003-2014, which make up the majority of patents in the current eleven-year backlog, the current percentage of resident patents is only about 22%.<sup>153</sup> This means that most patents sitting in the backlog right now are from foreign patent applicants, many which may have the same patent already granted in the United States and could immediately qualify for a more broadly implemented patent work sharing program.

Although the overall number of patents filed in Brazil may increase, if Brazil reaches the level of patent work sharing success that gave rise to the Toronto Pronto, it would yield as much as 70% savings in time. Brazil would grant patents through such an expedited program in only 40.7 months—about three years—instead of the current eleven years for a traditional filing.<sup>154</sup> This result is calculated by adding the current 35.3-month average time it takes to get

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<sup>151</sup> *Statistical Country Profile: Brazil: Patent Applications*, WORLD INTELLECTUAL PROPERTY ORGANIZATION, [http://www.wipo.int/ipstats/en/statistics/country\\_profile/profile.jsp?code=BR](http://www.wipo.int/ipstats/en/statistics/country_profile/profile.jsp?code=BR) (last updated Dec. 2015).

<sup>152</sup> *Id.*

<sup>153</sup> *Id.* (adding together the statistical data from the year 2003-2014).

<sup>154</sup> Associação Brasileira da Propriedade Intelectual, *supra* note 40.

a patent in the United States, to the average 5.4-month pendency realized in Canada from PPH requests to a final decision.<sup>155</sup> Yet, this might be an aggressive goal for Brazil to achieve.

The 35.3-month timeframe is the average amount of time it currently takes to get a patent in the United States today, and is not something that Brazil has any control over. Additionally, the 5.4-month pendency realized in the Toronto Pronto scenario would be difficult for Brazil to duplicate. Canada enjoyed particular advantages as an Office of Second Filing when it entered a patent work sharing program with the United States: a similar legal framework; a shared language, giving way to English claims and examination; and an existing familiarity with the U.S. law and USPTO procedures.<sup>156</sup> Nevertheless, the potential in economic and temporal savings are so significant that even if Brazil's Office of Second Filing examination time is one year—more than double the time achieved by Canada—such a program would still yield a 64% savings in time over traditional filing, with a patent granted in a total of four years as opposed to eleven.

In such a scenario, it's also important to note that the majority of the examination is actually being done by the USPTO in the United States and not the INPI in Brazil. This includes the time consuming prior art search and initial patentability determination. Considering the high number of patent filings in Brazil from foreign entities, this means that nearly 85% of new patent filings, in addition to nearly 78% of patents currently sitting in the backlog, would instead be substantially examined by the USPTO and not the INPI. The result of this is the potential for Brazil to fundamentally outsource the bulk of its patent examination, including a significant part of its backlog, to the United States.

## V. CONCLUSION

Brazil may be on the verge of making significant strides on its plan for domestic economic growth through a functioning patent system. The final results of the PPH Pilot Program currently in place remain to be seen, as well as the results of any future patent work

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<sup>155</sup> Office of Corporate Planning, *supra* note 108; *see also* Simcoe, *supra* note 111.

<sup>156</sup> De Villiers, *supra* note 82, at 31.

sharing agreements entered by the Brazilian Government. The country may be able to successfully implement these programs given its existing challenges, but it will take an appropriate amount of investment and commitment. Nevertheless, it remains clear that Brazil is serious about keeping up with a growing trend towards meeting research and developers' demands of worldwide intellectual property protection, and it is exploring new paths to achieve that goal.