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# Ending Unnecessary Novelty Destruction: Why Europe Should Adopt the Safety-net Grace Period as an International Best Practice

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**ENDING UNNECESSARY NOVELTY DESTRUCTION:  
WHY EUROPE SHOULD ADOPT THE SAFETY-NET  
GRACE PERIOD AS AN INTERNATIONAL BEST  
PRACTICE**

Frederik W. Struve<sup>†</sup>

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## I. INTRODUCTION

The debate regarding international harmonization of a grace period in international patent law is not new.<sup>1</sup> The recent change from first-to-invent to first-to-file<sup>2</sup> in the United States under the Leahy-Smith America Invents Act (AIA)<sup>3</sup> offers a renewed opportunity to call for the adoption of a novelty grace period as an international best practice—specifically in Europe.

A novelty grace period allows an invention to become publicly known prior to the invention's application filing date, where that disclosure otherwise would bar the invention's patentability.<sup>4</sup>

1. See Joseph Straus, *Grace Period and the European and International Patent Law: Analysis of Key Legal and Socio-Economic Aspects*, in 20 STUDIES IN INDUSTRIAL PROPERTY AND COPYRIGHT LAW (Gerhard Schricker ed., 2001) (describing the debate of a European grace period as far back as 1968); Margo A. Bagley, *The Need for Speed (and Grace): Issues in a First-Inventor-to-File World*, 23 BERKELEY TECH. L.J. 1035 (2008); Charles R.B. Macedo, *First-to-File: Is American Adoption of the International Standard in Patent Law Worth the Price?*, 1988 COLUM. BUS. L. REV. 543 (1988).

2. First-to-file is referred to as first-inventor-to-file in the America Invents Act and in common usage in the United States. For simplicity, this note will refer to first-to-file when referring both to first-inventor-to-file in the United States and first-to-file in the rest of the world.

3. The first-to-file provision took effect March 16, 2013. See Leahy-Smith America Invents Act, Pub. L. No. 112-29, sec. 3(n)(1), 125 Stat. 284, 293 (2011).

4. 2 R. CARL MOY, MOY'S WALKER ON PATENTS § 8:199 (4th ed. 2012). A more in depth description is provided by Emmanuel Roucouas:

The term . . . grace period . . . is understood as a *period of time* (six or twelve months) *preceding the filing of a patent application*, during which disclosures by any means (in writing, orally, by use, on exhibitions, etc.) of the invention for which the patent application is filed by the inventor or his/her successor in title do not constitute *prior art* in respect of the patent application at hand. In principle, such 'non-prejudicial'

United States patent law operates with a one-year grace period,<sup>5</sup> whereas the patent offices under the European Patent Convention require absolute novelty.<sup>6</sup> In patent systems with absolute novelty, any disclosure making the invention publicly known prior to filing a patent application will preclude the inventor from obtaining a patent on that invention.<sup>7</sup>

Introducing a grace period under the European Patent Convention as a limited safety net against disclosures by unsophisticated applicants will protect the ability of applicants to meet university research publication requirements or evaluate the commercial potential of an invention before committing resources to patenting.<sup>8</sup>

The grace-period concept is a controversial feature of the patent system to some because it abrogates the fundamental notion that a powerful monopoly should only be granted to inventions not previously disclosed to the public.<sup>9</sup> That is, “[i]nventors are never entitled to take from the public subject matter that deemed [sic] already known or merely obvious from what is deemed to be known.”<sup>10</sup> Absolute novelty is practical to administer by patent

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disclosures do not establish a priority date, *i.e.* do not provide for *immunity* for the inventor/applicant against *parallel or later* independent disclosures, including patent applications of third parties. *Immunity is granted to the inventor himself* against inconsiderate or rash publication. In spite of previous disclosure of the invention by the applicant or his/her predecessor in title, *novelty* is not destroyed. An invention is novel when it does not form part of the state of the art.

Emmanuel Roucouas, *The Debate Regarding the Grace Period in International Patent Law: A Reminder*, in ALLEA BIENNIAL Y.B. 2006 31, 31 (Jüri Engelbrecht & Johannes J.F. Schroots eds. 2007) (footnote omitted).

5. Roucouas, *supra* note 4, at 31–33.

6. *See, e.g., id.* at 37.

7. Straus, *supra* note 1, at v. Article 55 of the European Patent Convention does allow for two types of nonprejudicial disclosures that will not destroy an invention’s novelty—evident abuse and exhibition at an internationally recognized exhibition. *See infra* Part III.B.1.

8. *See infra* Parts V.A–B.

9. *See* ROBERT A. ARMITAGE, AN ANALYSIS OF THE MAJOR “PRIOR ART” DISTINCTIONS AMONG PATENT SYSTEMS: INSIGHTS INTO A BALANCED, HARMONIZED PATENT SYSTEM 1 (2003), *available at* [http://www2.aipla.org/Content/ContentGroups/Meetings\\_and\\_Events1/International\\_Symposia1/ArmitagePaper.pdf](http://www2.aipla.org/Content/ContentGroups/Meetings_and_Events1/International_Symposia1/ArmitagePaper.pdf); JAN E.M. GALAMA, EXPERT OPINION ON THE CASE FOR AND AGAINST THE INTRODUCTION OF A GRACE PERIOD IN EUROPEAN PATENT LAW 13 (2000), *available at* <http://web.archive.org/web/20000817072657/http://www.epo.co.at/news/headlns/pdf/galama.pdf>.

10. ARMITAGE, *supra* note 9, at 1.

offices because the filing date of the application may not be preceded by any disclosure of the invention's subject matter.<sup>11</sup> Absolute novelty, however, is a rigid concept apart from the reality of modern research, capital, and inventors' knowledge of the patent system.<sup>12</sup>

The major patent offices in the United States, Japan, and Korea recognize the need to balance the strict nature of the novelty requirement with the demands of a healthy patent system, to make it accessible to all users by allowing pre-filing disclosures.<sup>13</sup> The European Patent Convention<sup>14</sup>—and thereby the European Patent Office—however, lacks a mechanism to protect unsophisticated applicants, who disclose the invention by need or mistake, prior to filing a patent application or entering into a nondisclosure agreement.<sup>15</sup> The disproportionate result is the complete destruction of novelty, and a loss of all rights by the inventor.<sup>16</sup>

While international harmonization of substantive<sup>17</sup> patent law has so far been pursued through grand-bargain treaty negotiations, this note argues that international harmonization is adequately achieved by incremental adoption of best practices by each national or regional patent office.

The United States' adoption of first-to-file is the leading example of a unilateral adoption of international best practices. The switch to first-to-file simplified United States patent law for both domestic and foreign applicants. While retaining a grace period similar to that in Japan and Korea, the switch at the same time necessarily removed features of the first-to-invent system

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11. GALAMA, *supra* note 9, at 13.

12. See MOY, *supra* note 4, § 8:213; Kate H. Murashige, *Harmonization of Patent Laws*, 16 HOUS. J. INT'L L. 591, 609–10 (1994).

13. See *infra* Parts III.A–B.

14. The European Patent Convention (EPC) is a multilateral treaty initially signed in 1973, under which the European Patent Office operates. *History*, EUR. PAT. OFF., <http://www.epo.org/about-us/office/history.html> (last visited Feb. 21, 2013). The treaty instituted a patent grant procedure, in which a patent granted by the EPO when validated in a member country has the effect of a patent under national patent law in that country. Convention on the Grant of European Patents, art. 2(2), Oct. 5, 1973, 1065 U.N.T.S. 199 [hereinafter *European Patent Convention*] (amended Nov. 29, 2000).

15. See *European Patent Convention*, *supra* note 14, art. 55; Straus, *supra* note 1, at xi; Roucounas, *supra* note 4, at 34.

16. MOY, *supra* note 4, § 8:213.

17. Substantive (patent) law is “the law that creates, defines, and regulates the rights, duties, and powers of parties,” as opposed to procedural law. BLACK'S LAW DICTIONARY 1567 (9th ed. 2009).

benefitting larger companies and other sophisticated applicants.<sup>18</sup>

A limited safety-net grace period protecting against an inventor's own otherwise novelty-destroying disclosures is a best practice. Yet, until recently, only the concept of a broad general grace period has been negotiated internationally.<sup>19</sup> The general grace period is incompatible with first-to-file patent systems and rightfully failed to be adopted under the European Patent Convention.<sup>20</sup> The safety-net grace period instead ensures the participation of unsophisticated applicants and upholds the bargain that all inventors will receive a patent as a reward for their disclosure, where the subject matter is not already known.

This note will first compare and distinguish the features of the safety-net grace period to the concept of the general grace period.<sup>21</sup> The note will then review grace periods as they exist in the United States, the other four major patent offices, and sixty-seven other countries worldwide.<sup>22</sup> Next, it evaluates the arguments asserted against grace periods<sup>23</sup> and analyzes how the absence of a grace period impacts European university researchers, small and middle-sized enterprises, and the general public.<sup>24</sup> This analysis shows that a safety-net grace period would be beneficial to the users of the European patent system and that a suggested model safety-net grace period can be implemented through multilateral negotiations between the major patent offices.<sup>25</sup> Finally, this note concludes that the member countries must act without delay to amend Article 55 of the European Patent Convention.<sup>26</sup>

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18. See 157 CONG. REC. S1089–90 (daily ed. Mar. 2, 2011) (statement of Sen. Patrick Leahy) (“[The interference] process is lengthy, complex, and can cost hundreds of thousands of dollars. Small inventors rarely, if ever, win interference proceedings.”); Mark A. Lemley & Colleen V. Chien, *Are the U.S. Patent Priority Rules Really Necessary?*, 54 HASTINGS L.J. 1299, 1322–23 (2003) (finding that interference proceedings, adjudicating which inventor was first to invent, are more often initiated by large companies against small companies).

19. See *infra* Part III.D.

20. See *infra* Part IV.

21. See *infra* Part II.

22. See *infra* Part III.

23. See *infra* Part IV.

24. See *infra* Part V.

25. See *infra* Part VI.

26. See *infra* Part VII.

## II. THE GENERAL GRACE PERIOD AND THE SAFETY-NET GRACE PERIOD

The policy goals of a grace period—allowing unintended or necessary prefiling disclosures to perfect the invention and prepare it for application—stand in contrast to the policy goals of patent law that (1) the public should have certainty in knowing which inventions are open to free competition, (2) that patent terms should not be extended beyond their statutory limits, and (3) that inventors are to be compelled to apply for patent rights promptly.<sup>27</sup>

Grace periods, however, vary significantly in the scope of protection they afford. This article separates grace periods into two distinct concepts—the general grace period and the safety-net grace period—to properly analyze the safety-net grace period as an international best practice, notably absent under the European Patent Convention.

### A. *The General Grace Period*

The concept of a general grace period includes (1) a time period during which an inventor's disclosure does not constitute prior art, (2) an enumeration of the types of disclosures permitted by the inventor, (3) a protection against disclosures of subject matter derived from the inventor, and (4) a right to claim priority under the Paris Convention to first-filed national applications invoking the grace period.<sup>28</sup>

The grace period proposed as Article 12 in the Basic Proposal of the Patent Law Treaty (PLT) illustrates a general grace period:

#### Disclosures Not Affecting Patentability (Grace Period)

(1) [Circumstances of Disclosure Not Affecting Patentability] Disclosure of information which otherwise would affect the patentability of an invention claimed in the application shall not affect the patentability of that invention where the information was disclosed, during the 12 months preceding the filing date *or, where priority is claimed, the priority date of the application,*

(i) by the inventor,

(ii) by an Office and the information was contained

27. See generally MOY, *supra* note 4, § 8:207 (quoting TP Labs., Inc. v. Prof'l Positioners, Inc., 724 F.2d 965, 968 (Fed. Cir. 1984)) (discussing the policy justifications for the novelty requirement).

28. See *infra* note 29 and accompanying text.

- (a) in another application filed by the inventor and should not have been disclosed by the Office, or
  - (b) in an application filed without the knowledge or consent of the inventor by a third party which obtained the information direct or indirectly from the inventor, or
  - (iii) by a third party which obtained the information direct or indirectly from the inventor.
- (2) [“Inventor”] For the purposes of paragraph (1), “inventor” also means any person who, at the filing date of the application, had the right to the patent.
- (3) [No Time Limit for Invoking Grace Period] The effects of paragraph (1) may be invoked at any time.
- (4) [Evidence] Where the applicability of paragraph (1) is contested, the party invoking the effects of that paragraph shall have the burden of proving, or of making the conclusion likely,<sup>29</sup> that the conditions of that paragraph are fulfilled.

When adopted unilaterally, the general grace period, including priority rights, presents a significant problem.<sup>30</sup> It confers benefits not only to applicants disclosing prior to filing an application but also to applicants of national offices with a grace period filing applications within the twelve months under the Paris Convention. This creates an imbalance between offices with a general grace period that allow priority under the Paris Convention and offices that do not offer priority under the Paris Convention—allowing some users up to two years from disclosure to application filing.<sup>31</sup> The disparate treatment of applicants in the national offices has been a driver in the demand that a general grace period can be introduced by international consensus only—and contributed to its failure.

The priority requirement, however, does not contribute directly to the above stated policy goals of a grace period—allowing unintended or necessary pre-filing disclosures to perfect the

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29. Diplomatic Conference for the Conclusion of a Treaty Supplementing the Paris Convention as far as Patents are Concerned, The Hague, Neth., June 3–28, 1991, *The “Basic Proposal” for the Treaty and the Regulations*, WIPO Doc. PLT/DC/3 (1990) [hereinafter Patent Law Treaty Diplomatic Conference of June 1991] (emphasis added).

30. See GALAMA, *supra* note 9, at 12.

31. *Id.*



invention and prepare it for application. Therefore, the general grace-period concept can rightfully be criticized for being susceptible to use as a strategy to delay the filing of an application and creating third-party uncertainty as to what subject matter is publicly available.<sup>32</sup> That is, it directly contravenes the purpose of first-to-file.

*B. The Safety-Net Grace Period*

The safety-net grace period is simple, and more limited, when compared with the general grace period. Safety-net grace periods, where they exist, do not grant priority rights under the Paris Convention and do not protect against intervening disclosures not derived from the original invention, but they do protect a broad range of disclosures. For example, the grace period under the AIA, the Korean grace period, and the recently amended Japanese grace period all protect all acts disclosing an invention.<sup>33</sup>

The purposes of a safety-net grace period are to protect unsophisticated applicants against mistakes and to balance the needs of the various users of the patent system by allowing necessary pre-filing disclosures. The limited scope of subject matter protected compels the disclosing inventor to file a patent application as soon as possible to avoid intervening disclosures that will be deemed prior art.<sup>34</sup> The safety-net grace period, then, cannot be used as a filing strategy because the risk of an intervening disclosure is too great.

The safety-net grace period therefore encourages prompt disclosure, while also reasonably meeting the policy goals of non-interference with statutory term limits and clear delineation as to which knowledge belongs in the public domain. It is therefore consistent with first-to-file because it is easy to administer and does not create unreasonable legal uncertainty to third parties.<sup>35</sup>

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32. See U.K. INTELLECTUAL PROP. OFFICE, ANALYSIS OF THE RESPONSES TO THE UK CONSULTATION ON GRACE PERIODS FOR PATENTS 33 (2002); GALAMA, *supra* note 9, at 13–14.

33. See *infra* Parts III.B.2–3.

34. GALAMA, *supra* note 9, at 7–8.

35. According to the Japan Patent Office (JPO), the examination process is not negatively affected by the existence of a safety-net grace period. TEGERNSEE EXPERTS GRP., STUDY MANDATED BY THE TEGERNSEE HEADS: GRACE PERIOD 11 (2012). Instead, there is “no significant difference” in how the JPO examines applications using the grace period and applications not using the grace period. *Id.* The grace period available to applications filed in Japan is discussed *infra* Part III.B.2.

### III. GRACE PERIODS—THE UNITED STATES, THE MAJOR OFFICES, AND THE REST OF THE WORLD

#### A. *The United States*

##### 1. *Brief Background*

United States patent law has evolved from requiring absolute novelty to a system in which the policy needs of all users are balanced by allowing pre-filing disclosures.<sup>36</sup> United States patent law requires prompt disclosure and limits patent rights to the statutory term but allows inventors the opportunity to perfect and test the invention.<sup>37</sup>

Yet, the United States' grace period—as it existed until March 16, 2013—was much more generous than grace periods in first-to-file countries in that it protected against independent third-party disclosures.<sup>38</sup> This was a necessary protection under a first-to-invent system because the original inventor's invention date was controlling.<sup>39</sup> Grace periods under first-to-file laws instead protect against only third-party disclosures where they are derived from the original invention.<sup>40</sup> Given this contrast, grace-period harmonization assumed a prominent role as Congress deliberated patent reform—including a change to first-to-file.<sup>41</sup>

36. MOY, *supra* note 4, §§ 8:209–:212 (citing *Tone Bros., Inc. v. Sysco Corp.*, 28 F.3d 1192, 1198 (Fed. Cir. 1994)). The Patent Act of 1836 required absolute novelty. *Id.* § 2:209. While the patent acts of 1790 and 1793 did not explicitly require an invention to be novel, the Supreme Court held that the Act of 1793 did require novelty as of the filing date. *Id.* (citing *Pennock v. Dialogue*, 27 U.S. 1, 7 (1829)). The absolute novelty requirement, however, was replaced in the Patent Act of 1839 with a two-year grace period, motivated by the need for employers to use employees' inventions prior to an application being filed. *Id.* § 8:210. As the distribution of knowledge increased, so did the need to bar inventions based on publicly available information that had not yet been put into use or on sale. *Id.* § 8:211. The Patent Act of August 5, 1939, therefore reduced the grace period to one year. *Id.* § 8:212 (“In particular, the Senate Report accompanying that act observed that the grace period allowed the inventor to file a valid patent application ‘even when the public may have come to believe that the invention is open to anyone.’” (quoting S. REP. NO. 76-876, at 1–2 (1939))).

37. *See infra* Parts III.A.2.

38. *See, e.g., GALAMA, supra* note 9, at 8 (questioning if grace period is an appropriate term in a first-to-file system because “there is not a ‘grace,’ it is the first inventor who is entitled to a patent”).

39. *See* MOY, *supra* note 4, § 8:35.

40. *See infra* Parts III.B–C.

41. *See* Bagley, *supra* note 1, at 1058. International negotiations on the topic predicated a quid pro quo, trading grace period harmonization in Europe (and

The House of Representatives, in passing the Patent Reform Act of 2007, stipulated that the act was only to take effect “90 days after the date on which the President issues an Executive order containing the President’s finding that [the Japanese and European] authorities have adopted a grace period having substantially the same effect as that contained under the amendments made by this section . . . .”<sup>42</sup> The efforts to exchange the United States first-to-invent regime for a grace period were ultimately unsuccessful.<sup>43</sup> The AIA was passed without a similar requirement, and the new grace period contains significant limitations that closely align with grace periods in other first-to-file countries.

## 2. *The AIA Grace Period*

The adoption of first-to-file on March 16, 2013, entails changes to the grace period due to amendments of 35 U.S.C. § 102.<sup>44</sup> First-to-file was adopted to reduce legal uncertainty resulting in interference proceedings and litigation regarding invention dates.<sup>45</sup> Deeming first-to-invent to be “costly and complex,” first-to-file was touted to create legal certainty “necessary to raise capital, expand businesses and create jobs.”<sup>46</sup> As a result, three important aspects pertaining to the grace period—the date from which the grace period is calculated, the scope of disclosures protected, and the

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the rest of the world) for the United States’ adoption of first to file. See GALAMA, *supra* note 9, at 6; H. Bardehle, *Decisive Phase in the Discussion of the Grace Period*, 3 EPI INFORMATION 106, 108 (1999).

42. H.R. 1908, 110th Cong., sec. 3(k)(1)(a) (2007); see also Bagley, *supra* note 1, at 1058; Renee E. Metzler, Comment, *Not All Grace Periods Are Created Equal: Building a Grace Period from the Ground Up*, 13 MARQ. INTELL. PROP. L. REV. 371, 372 n.1 (2009).

43. The Senate companion bill to House Bill 1908 (Senate Bill 1145) failed to come before the Senate for full consideration. *Comprehensive Patent Reform Legislation: The Road Ahead in the 111th Congress*, KING & SPALDING, 1 (Sept. 30, 2008), <http://www.kslaw.com/Library/publication/ca093008.pdf>. Further, Senate Bill 1145 did not contain a similar enactment provision to H.R. 1908 sec. 3(k)(1)(a). S. 1145, 110th Cong. (2007).

44. See, e.g., DONALD S. CHISUM, AMERICA INVENTS ACT OF 2011: ANALYSIS AND CROSS-REFERENCES § 2 (2011), available at <http://www.chisum.com/wp-content/uploads/AIAOverview.pdf>.

45. See, e.g., *Talking Points: Patent Reform*, U.S. HOUSE OF REP. JUDICIARY COMM., 1–2, <http://judiciary.house.gov/issues/Patent%20Reform%20PDFS/Patent%20Reform%20Talking%20Points.pdf> (last visited Mar. 31, 2013).

46. *Id.*

scope of subject matter protected—are amended. The result is a more limited grace period, one that is well within the safety-net grace period parameters.<sup>47</sup>

*a. The Effective Filing Date*

At the center of the AIA is the change to use the effective filing date of an application to determine whether disclosures constitute prior art. This change eliminates the aforementioned uncertainty resulting from invention date disputes. Instead, under the AIA an inventor first to invent may not receive a patent if an independent inventor of the same subject matter was the first to file an application.

Pre-AIA, the grace period was calculated as twelve months from the date of disclosure by the inventor *or by a third party*.<sup>48</sup> Therefore, the grace period not only protected the inventor from his own disclosures, but where the inventor could establish an invention date prior to the third party's disclosure, the disclosure would not constitute prior art if the inventor filed his application within twelve months.<sup>49</sup> This principle clearly follows from a first-to-invent system by protecting the rights of the original inventor.<sup>50</sup>

The change to first-to-file under the AIA necessarily eliminates protection against independent third-party disclosures of nonidentical subject matter made prior to the patent application

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47. It must be noted that at the time of writing this note, discussions remain regarding the final interpretation of § 102(b). Post-vote colloquy shows an intent to retain the pre-AIA grace period. 157 CONG. REC. S1496–97 (daily ed. Mar. 9, 2011) (statement of Sen. Orrin Hatch).

[T]his provision ensures that an inventor who has made a public disclosure . . . is fully protected during the grace period. The inventor is protected not only from the inventor's own disclosure being prior art against the inventor's claimed invention, but also against the disclosures of any of the same subject matter in disclosures *made by others* being prior art against the inventor's claimed invention . . . .

*Id.* (emphasis added). The pre-AIA grace period, however, is not consistent with effective use of first-to-file because the ability to preserve priority for broad subject matter contravenes the policy of reducing legal uncertainty by abandoning use of the invention date.

48. 35 U.S.C. § 102(b) (2006); CHISUM, *supra* note 44, § 3.3.4.

49. See Ann McCrackin et al., *Comparison of the Current U.S. First-to-Invent System with the First-Inventor-to-File System Proposed in the Patent Reform Act of 2011* (S.23), PATENTLY-O (Mar. 2, 2011), <http://www.patentlyo.com/patent/2011/03/mccrackinpatentreform.html>, for a brief comparison.

50. See CHISUM, *supra* note 44, § 3.3.2.3.

date by an inventor with an earlier disclosure or invention date.<sup>51</sup> Therefore, the subject matter of any third-party disclosure not derived from the inventor made prior to the inventor's effective filing date will constitute prior art.<sup>52</sup>

*b. Scope of Disclosures Protected*

The changes to section 102(a) broaden the definition of prior art, but by implication of the amended section 102(b), the amended section 102(a) also broadens the scope of disclosures that are protected by a one-year grace period.<sup>53</sup> The amended novelty provision under section 102(a)(1) states, "A person shall be entitled to a patent unless—the claimed invention was patented, described in a printed publication, or in public use, on sale, or *otherwise available to the public* before the effective filing date of the claimed invention . . . ."<sup>54</sup>

For the purpose of the grace period, an important change has been made to section 102(a). A "catch-all" provision has been included in the amended section 102(a), making prior art anything "otherwise available to the public."<sup>55</sup> According to the final Examination Guidelines, the "otherwise available to the public" provision's focus is whether a disclosure was "available to the public" and not "the means by which the claimed invention became available to the public or on whether a disclosure constitutes a 'printed publication' or falls within another category of prior art as defined in AIA 35 [§] U.S.C. 102(a)(1)."<sup>56</sup> That is, all acts disclosing an invention constitute prior art.

By implication of the amended section 102(b), the amended section 102(a) also broadens the scope of disclosures that are protected by a one-year grace period.<sup>57</sup> While section 102(a) enunciates disclosures considered prior art—including the "catch-

51. *Id.*

52. *See* Leahy-Smith America Invents Act, Pub. L. No. 112-29, sec. 3(b)(1), § 102(b), 125 Stat. 284, 286 (2011) (to be codified at 35 U.S.C. § 102(b)).

53. *See* Examination Guidelines for Implementing the First-Inventor-to-File Provisions of the Leahy-Smith America Invents Act, 78 Fed. Reg. 11,059, 11,075 (Feb. 14, 2013) (to be codified at 37 C.F.R. pt. 1).

54. Leahy-Smith America Invents Act, sec. 3(b)(1), § 102(a)–(a)(1) (to be codified at 35 U.S.C. § 102(a)(1)) (emphasis added).

55. *Id.*

56. Examination Guidelines for Implementing the First-Inventor-to-File Provisions of the Leahy-Smith America Invents Act, 78 Fed. Reg. at 11,075.

57. *See id.*

all” provision—section 102(b) only refers to “disclosures.”<sup>58</sup> The final Examination Guidelines emphasize that “the Office is treating the term ‘disclosure’ as a generic expression intended to encompass the documents and activities enumerated in AIA 35 U.S.C. [§] 102(a).”<sup>59</sup> Therefore, acts disclosing an invention are protected by the grace period, including future means for dissemination of information.

*c. Scope of Subject Matter Protected*

The proposed Examination Guidelines contained a significant (and controversial)<sup>60</sup> limitation on subject matter:

Even if the only differences between the subject matter in the prior art disclosure that is relied upon under 35 U.S.C. [§] 102(a) and the subject matter publicly disclosed by the inventor before such prior art disclosure are *mere insubstantial changes, or only trivial or obvious variations*, the exception under 35 U.S.C. 102(b)(1)(B) does not apply.<sup>61</sup>

Subsequent clarification is provided in the final Examination

58. See Leahy-Smith America Invents Act, sec. 3(b)(1), § 102(b)(1) (to be codified at 35 U.S.C. § 102(b)).

59. Examination Guidelines for Implementing the First-Inventor-to-File Provisions of the Leahy-Smith America Invents Act, 78 Fed. Reg. at 11,075.

60. It is unclear whether members of Congress understood the narrow scope of subject matter that can effectively be protected under first-to-file. As a result, subsequent discussion by practitioners and academia of the intended scope of subject matter protection was based primarily on a postvote colloquy between Senators Kyl and Hatch. See *supra* note 47 and accompanying text; *infra* notes 61, 66.

61. Examination Guidelines for Implementing the First-Inventor-to-File Provisions of the Leahy-Smith America Invents Act, 77 Fed. Reg. 43,759, 43,767 (proposed July 26, 2012) (to be codified at 37 C.F.R. pt. 1) (emphasis added). Many organizations, international government agencies, research institutions, corporations, and individuals voiced their concern with the proposed guidelines. See, e.g., Letter from Carl E. Gulbrandsen, Managing Director, Wisconsin Alumni Research Foundation, to Commissioner for Patents (Oct. 5, 2012), available at [http://www.uspto.gov/patents/law/comments/warf\\_20121005.pdf](http://www.uspto.gov/patents/law/comments/warf_20121005.pdf). Specifically, commenters are dissatisfied that the grace period under first-to-file will no longer protect against intervening independent third-party disclosures of substantially the same subject matter, questioning whether the statutory language is rendered superfluous by the current U.S. Patent and Trademark Office interpretation. Letter from William G. Barber, Am. Intellectual Prop. Law Assoc. President, to David J. Kappos, Under Sec’y of Commerce for Intellectual Prop. and Dir. of the U.S. Patent & Trademark Office (Oct. 5, 2012), Comments to the USPTO on First-Inventor-to-File, available at [http://www.uspto.gov/patents/law/comments/aipia\\_20121005.pdf](http://www.uspto.gov/patents/law/comments/aipia_20121005.pdf).

Guidelines, which moderate the language used but maintain that subject matter in a prior art disclosure must be the same—not “substantially” the same—subject matter to fall within the grace period.<sup>62</sup> The amended grace period under section 102(b) thereby limits grace-period protection narrowly for subject matter—that is, it effectively operates as a safety net for subject matter actually disclosed by the inventor or another with a right to the invention only. Any independent intervening third-party disclosure may destroy the first disclosure’s novelty if minor variations exist in the subject matter disclosed.<sup>63</sup> Therefore, U.S. applicants can no longer rely on the grace period to exclude a subsequent disclosure of similar subject matter, even where a prior invention date can be proved.<sup>64</sup> This may significantly impact the prior filing practices of sophisticated applicants and require stricter control mechanisms in large organizations to control disclosures by publication, sale, or use.<sup>65</sup> As a result, to avoid constituting prior art under the AIA, any pre-filing disclosure should be evaluated for patentability and an application should be filed as soon as possible.

This is a clear break from first-to-invent, necessary to enforce a true first-to-file system.<sup>66</sup> It eliminates the discrepancy that exists

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62. Examination Guidelines for Implementing the First-Inventor-to-File Provisions of the Leahy-Smith America Invents Act, 78 Fed. Reg. at 11,066. The final Examination Guidelines clarify that the grace period under section 102(b) will apply where the same subject matter in an intervening disclosure is not verbatim and where the intervening disclosure is a general description of the same subject matter previously disclosed. *Id.* at 11,077.

63. See *id.* at 11,067, 11,077; Robert A. Armitage, *Understanding the America Invents Act and Its Implications for Patenting*, 40 AIPLA Q.J. 1, 74–81 (2012).

The statutory provisions were not drafted to permit an inventor to wiggle out of prior art and recover patentability for an invention once dedicated to the public through publication of the work of an independent, unrelated inventor even if that work amounts to an obvious variation of what the first-publishing inventor made public.  
*Id.* at 76–77.

64. Examination Guidelines for Implementing the First-Inventor-to-File Provisions of the Leahy-Smith America Invents Act, 78 Fed. Reg. at 11,073.

65. See Paul Craane, *IP: Does Your Invention Disclosure Form Send the Right Message?*, INSIDE COUNSEL (Aug. 14, 2012), <http://www.insidecounsel.com/2012/08/14/ip-does-your-invention-disclosure-form-send-the-right-message?ip&page=2> (encouraging early disclosure of inventions to in-house legal departments to facilitate prompt filing of patent applications); John Villasenor, *Commentary: To Protect Your Next Bright Idea, Mind What You Say and When You Say It*, CHRON. HIGHER EDUC. (Nov. 6, 2011), <http://chronicle.com/article/To-Protect-Your-Next-Bright/129653/> (discussing appropriate measures to be taken by universities to comply with the AIA grace period).

66. It is, however, unclear if Congress intended to completely abandon the

internationally where different people can own patents on the same invention due to the ability in the United States to prove an earlier invention date.<sup>67</sup> It also evidences the sacrifice United States' patent law made as to features beneficial to sophisticated applicants in favor of small and unsophisticated applicants—both domestic and foreign—who benefit from a simpler system free from the high cost of interference proceedings.<sup>68</sup>

*d. Invoking the Grace Period*

Unlike the grace periods in Korea and Japan,<sup>69</sup> there is no requirement under the AIA that the applicant must invoke the grace period at the time of filing.<sup>70</sup> The applicant may do so in the specification of the application and must provide documentation to overcome a rejection based on the prefiling disclosure or to disqualify an intervening third-party disclosure.<sup>71</sup>

*B. Grace Periods in the Major Offices*

Before proceeding with an analysis of the viability of international harmonization of a safety-net grace period, the grace periods in force in the other four major patent offices must be evaluated. These offices are the European Patent Office (EPO), the Japanese Patent Office (JPO), the Korean Intellectual Property Office (KIPO), and the State Intellectual Property Office of the People's Republic of China (SIPO). Including the United States Patent and Trademark Office (USPTO), these five offices account for ninety percent of all patent applications filed, and together they constitute the IP5—a forum independent of any international treaties.<sup>72</sup>

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ability to receive rights as the “first-to-publish.” Joe Matal, *A Guide to the Legislative History of the America Invents Act: Part I of II*, 21 FED. CIR. B.J. 435, 482–85 (2011).

67. See NAT'L RESEARCH COUNCIL, NAT'L ACAD. OF SCI., *A PATENT SYSTEM FOR THE 21ST CENTURY* 124 (Stephen A. Merrill et al. eds., 2004).

68. *Id.*

69. See *infra* Parts III.B.2–3.

70. Examination Guidelines for Implementing the First-Inventor-to-File Provisions of the Leahy-Smith America Invents Act, 78 Fed. Reg. 11,059, 11,076 (Feb. 14, 2013) (to be codified at 37 C.F.R. pt. 1).

71. *Id.*

72. See *The Five IP Offices (IP5) and Its Vision*, FIVE IP OFFS., <http://www.fiveipoffices.org/about-us.html> (last visited Feb. 21, 2013).



### 1. *Europe*

Since the enactment of the European Patent Convention in 1973, European applicants have effectively been without protection against disclosures made by applicants unaware of, or unable to comply with, the absolute novelty requirement.<sup>73</sup>

In place of a grace period, the European Patent Convention provides for two types of nonprejudicial disclosures under Article 55 where disclosure is made within six months of the application filing date.<sup>74</sup> First, disclosures are protected from “evident abuse” by third parties.<sup>75</sup> “Evident abuse” requires actual intent to cause harm or, alternatively, constructive knowledge that harm could ensue from the disclosure.<sup>76</sup> A breach of a nondisclosure

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73. Applicants in Spain continue to have a limited grace period available only to applicants when filing a patent application directly in each country. Straus, *supra* note 1, at 37, 40. In addition, both Germany and the United Kingdom had grace periods prior to joining the European Patent Convention. *Id.* at 15–20. There is no data indicating that the grace period in Germany caused “uncertainty of law” to third parties—the argument asserted against the introduction of a grace period under the European Patent Convention. *Id.* at 16; Heinz Bardehle, *Movement in the Dispute About Again Introducing the Novelty Grace Period?* (2010) (unpublished manuscript) (on file with author). Further, German law provides a grace period for utility model applications. GER. UTIL. MODEL LAW, § 3(1) (2009) (“Description or use within the six months preceding the date relevant for the priority of the application shall not be taken into consideration if it is based on the conception of the applicant or his predecessor in title.”).

74. European Patent Convention, *supra* note 14, art. 55(1). Article 55 reads in full:

(1) For the application of Article 54, a disclosure of the invention shall not be taken into consideration if it occurred no earlier than six months preceding the filing of the European patent application and if it was due to, or in consequence of:

(a) an evident abuse in relation to the applicant or his legal predecessor, or

(b) the fact that the applicant or his legal predecessor has displayed the invention at an official, or officially recognised, international exhibition falling within the terms of the Convention on international exhibitions signed at Paris on 22 November 1928 and last revised on 30 November 1972.

(2) In the case of paragraph 1(b), paragraph 1 shall apply only if the applicant states, when filing the European patent application, that the invention has been so displayed and files a supporting certificate within the time limit and under the conditions laid down in the Implementing Regulations.

*Id.* art. 55.

75. *Id.* art. 55(1)(a).

76. TRILATERAL OFFICES, CATALOGUE OF REMAINING DIFFERENCES 39 (2012), available at <http://www.trilateral.net/catalogue/catalogue2012.pdf>.

agreement may not meet this standard.<sup>77</sup> Second, an invention displayed at an “official, or officially recognized international exhibition”<sup>78</sup> will be deemed nonprejudicial, if the applicant states at the time of filing that the invention was so displayed<sup>79</sup> and within four months provides a certificate of exhibition.<sup>80</sup> However, only ten exhibitions have had this designation since 2002.<sup>81</sup>

It follows that the protection for disclosures prior to the application filing date is extremely narrow both in terms of scope of disclosures and scope of subject matter. There are no mechanisms for an inventor to cure an unintended pre-filing disclosure or for a researcher to present his findings to a journal prior to filing an application. Applicants must strictly adhere to the principle of filing first and publishing later—if a patent is desired.<sup>82</sup> This illustrates the “philosophical difference”<sup>83</sup> between Europe and the United States, Korea, and Japan in pursuing policies that accommodate the needs of all users.<sup>84</sup>

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77. See *Cutting Tools/ACMC*, Case No. T436/92, at 18 (Bds. of App. of the EPO 1995), available at <http://www.epo.org/law-practice/case-law-appeals/pdf/t920436eu1.pdf> (holding that the “mere negligence or breach of confidentiality does not suffice” to constitute evident abuse under Article 55 of the European Patent Convention).

78. European Patent Convention, *supra* note 14, art. 55(1)(b).

79. *Id.* art. 55(2).

80. *Id.*; see European Patent Office, *Guidelines for Examination in the European Patent Office*, pt. A, ch. IV, § 3.1 (2012).

81. Therefore, the protection afforded inventions displayed at official, or officially recognized international exhibitions is practically moot. See EPO OFFICIAL J. (2002–2012). The fourth issue of the journal in each year lists official, or officially recognized international exhibitions under “International Treaties.” The themes of the recognized exhibitions have primarily been horticultural and sustainability. *Id.*

82. GALAMA, *supra* note 9, at 21; GERMAN PATENT & TRADE MARK OFFICE, PATENTS: AN INFORMATION BROCHURE ON PATENTS 19 (2010) [hereinafter GERMAN PATENT BROCHURE], available at [http://www.dpma.de/docs/service/veroeffentlichungen/broschueren\\_en/patents\\_engl.pdf](http://www.dpma.de/docs/service/veroeffentlichungen/broschueren_en/patents_engl.pdf) (“A patent can only be granted for innovations that have not yet been communicated to the public, neither in writing nor orally. The right way is to file before publishing.”).

83. See SYLVIE A. STROBEL, THE AMERICA INVENTS ACT 2011 AND SUBSTANTIVE PATENT LAW HARMONIZATION: A EUROPEAN PERSPECTIVE 5 (2012), available at [http://www.brevet.lu/cms/brevet/content.nsf/0/17351D95C6E657D3C12579F90048431C/\\$file/PresentationStrobel\\_26042012.pdf](http://www.brevet.lu/cms/brevet/content.nsf/0/17351D95C6E657D3C12579F90048431C/$file/PresentationStrobel_26042012.pdf).

84. The EPO has maintained its philosophy of “legal certainty” in rejecting attempts to incorporate a grace period to accommodate academic researchers and unsophisticated applicants. See Straus, *supra* note 1, at 22; see also *infra* Part IV.A. In contrast, the American, Japanese, and Korean grace periods have all expanded to adjust to modern knowledge-sharing and invention processes. See *supra* Part

## 2. *Japan*

Japanese patent law includes a six-month grace period.<sup>85</sup> Under the Patent Act's Article 30, all acts (disclosures) which otherwise constitute prior art under Article 29 are protected by the grace period.<sup>86</sup> The scope of disclosures protected was significantly expanded in 2011, and the new Japanese grace period is closely aligned with the scope of disclosures protected by the grace periods in the United States and Korea.<sup>87</sup> The previous Japanese grace period was found not to be able to "sufficiently respond to other diversifying forms of publications that can be used to announce inventions,"<sup>88</sup> and therefore its application did "not match the purpose of the Patent Act, which is to contribute to the development of the industry."<sup>89</sup>

As with the grace period in Korea, the Japanese grace period cannot be used as a strategic filing mechanism because intervening third-party disclosures or patent applications will constitute prior art.<sup>90</sup> The grace period is therefore only a safety net, and inventors

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III.A.; *infra* Part III.B.

85. Tokkyohō [Japan Patent Act], Law No. 121 of 1959, art. 30(1) (2012), translated in JAPAN PATENT OFFICE, OPERATIONAL GUIDELINES FOR APPLICANTS TO SEEK THE APPLICATION OF EXCEPTIONS TO LACK OF NOVELTY OF INVENTION, CORRESPONDING TO THE PATENT ACT ARTICLE 30 REVISED IN 2011, at 1 (2011) [hereinafter JPO OPERATIONAL GUIDELINES], available at [http://www.jpo.go.jp/tetuzuki\\_e/t\\_tokkyo\\_e/pdf/e\\_pae\\_paa30/e\\_tebiki.pdf](http://www.jpo.go.jp/tetuzuki_e/t_tokkyo_e/pdf/e_pae_paa30/e_tebiki.pdf).

86. See JPO OPERATIONAL GUIDELINES, *supra* note 85, at 1. The types of disclosures protected under the grace period, however, were significantly expanded in 2011 by the amendment to Article 30 of the Japan Patent Act—effective April 1, 2012. *Id.* Prior to the 2011 amendment to the Japan Patent Act, the grace period was available only to certain enumerated types of disclosures: disclosures "made public through the implementation of a test, a printed publication, an electric telecommunication line, writing presented at an academic conference designated by the Commissioner of the Patent Office, or display at a specific exhibition, etc." *Id.*

87. See Leahy-Smith America Invents Act, Pub. L. No. 112-29, sec. 3(b)(1), § 102(a)(1), 125 Stat. 284, 285–86 (2011) (to be codified at 35 U.S.C. § 102(a)(1)) (protecting any disclosure "otherwise available to the public"); Patent Act, Act No. 11117, Dec. 2, 2011, art. 1 (S. Kor.).

88. JAPAN PATENT OFFICE, ANNUAL REPORT 2011, at 89 (2011) [hereinafter JPO ANNUAL REPORT 2011], available at [http://www.jpo.go.jp/shiryoku\\_e/toushin\\_e/kenkyukai\\_e/pdf/annual\\_report2011/part2.pdf](http://www.jpo.go.jp/shiryoku_e/toushin_e/kenkyukai_e/pdf/annual_report2011/part2.pdf).

89. JPO OPERATIONAL GUIDELINES, *supra* note 85, at 1; see JPO ANNUAL REPORT 2011, *supra* note 88, at 89.

90. JPO OPERATIONAL GUIDELINES, *supra* note 85, at 1 ("[I]f, for example, a third party had filed a patent application for the same invention or had published such invention prior to the filing date of your patent application, then you can't obtain a patent for your invention."). See also TEGERNSEE EXPERTS GRP., *supra* note

are strongly encouraged to file a patent application as soon as possible after disclosing.<sup>91</sup> Applicants are also required, at the time of filing, to submit a statement of intention to take advantage of the grace period and within thirty days file documentation proving that the application meets the requirements under Article 30.<sup>92</sup>

### 3. Korea

Korea's grace period was expanded from six months to twelve months under the Free Trade Agreement between the United States of America and the Republic of Korea effective March 15, 2012.<sup>93</sup> This change to Korean law was a product of mutual agreement between Korea and the United States as to the purpose of patent law.<sup>94</sup>

35, at 50.

91. JPO OPERATIONAL GUIDELINES, *supra* note 85, at 1 (“[I]t is strongly recommended that the patent application should be filed as early as possible.”).

92. Japan Patent Act art. 30(3) (2012); JPO OPERATIONAL GUIDELINES, *supra* note 85, at 2–4. Extensive examples of the documentation to be submitted when invoking the grace period can be found in the “Operational Guidelines.” *Id.* at 2–27. From the declarations invoking the grace period, Japan is able to keep detailed statistics on the use of its grace period (although public access to the statistics is limited). Recent statistics show that in 2011, only 0.44% of Japanese applications invoked Article 30(2). TEGERNSEE EXPERTS GRP., *supra* note 35, at 29. In April through June of 2012, 28.7% were filed by large Japanese corporations, around 35% by Japanese government and research institutes, and 22.1% by small and middle-sized enterprises. *Id.* at 31. These numbers clearly show that a grace period benefits universities and small- and middle-sized enterprises, but also large corporations, which are otherwise opposed to a grace period in Europe.

93. United States-Republic of Korea Free Trade Agreement, U.S.-S. Kor. art. 18.8(1), June 30, 2007, available at [http://www.ustr.gov/Trade\\_Agreements/Bilateral/Republic\\_of\\_Korea\\_FTA/Final\\_Text/Section\\_Index.html](http://www.ustr.gov/Trade_Agreements/Bilateral/Republic_of_Korea_FTA/Final_Text/Section_Index.html); *U.S.-Korea Free Trade Agreement: New Opportunities for U.S. Exporters Under the U.S.-Korea Free Trade Agreement*, OFF. U.S. TRADE REPRESENTATIVE, <http://www.ustr.gov/trade-agreements/free-trade-agreements/korus-fta> (last visited Feb. 21, 2012). The extension of the grace period to twelve months was the only amendment to Article 30 of the Korean Patent Act—all other provisions remain unchanged. Hyejung Lee & Stephen T. Bang, *Patent Law Amendment: Extension of Safe Harbour Grace Period for Novelty*, INT'L L. OFF. (June 25, 2012), <http://www.internationallawoffice.com/newsletters/Detail.aspx?g=5e3753ae-2ee2-4473-8a8d-df22d38c538b>.

94. The grace period was extended to twelve months to harmonize with the United States' grace period because six months “was not long enough to evaluate sufficiently market value, patentability or other factors crucial to deciding whether to file a patent application.” Lee & Bang, *supra* note 93. The purpose of the grace period under Article 30 of the Korean Patent Act “is to encourage an applicant to obtain a patent even after he or she publishes his or her own invention and to encourage early publication of an invention to help development of the national industry.” KOR. INTELLECTUAL PROP. OFFICE, REQUIREMENT FOR PATENTABILITY, ch. 2, § 5.2 (2012) [hereinafter KIPO REQUIREMENTS], available at <http://www.kipo.go>

Under Article 30 of the Korean Patent Act, any prior art, as defined under Article 29(1), does not anticipate the application, provided that: (1) the disclosure is made by a person having a right to file the patent application, or (2) the disclosure was made “against the intention of the person having the right to obtain a patent.”<sup>95</sup> The disclosures protected by the grace period thereby include any “[i]nventions publicly known or worked in . . . Korea or in a foreign country prior to the filing of the patent application; [or] [i]nventions described in a publication distributed in . . . Korea or in a foreign country . . . or inventions made accessible to the public through telecommunication lines,” including the Internet.<sup>96</sup>

Therefore, the scope of disclosures protected under Article 30 is broad and enables Article 30 to be used as a safety net for unintentional disclosures.<sup>97</sup> “The purpose of [the grace period] is to encourage an applicant to obtain a patent even after he or she publishes his or her own invention and to encourage early publication of an invention to help development of the national industry.”<sup>98</sup>

Similar to the provisions of the Japanese grace period, the Korean Examination Guidelines state that Article 30 cannot be taken advantage of where an identical disclosure is made between the original disclosure and the application filing date.<sup>99</sup>

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.kr/upload/en/download/RequirementsforPatentability.pdf.

95. Patent Act, Act No. 11,117, Dec. 2, 2011, art. 30(1) (S. Kor.).

96. *Id.* art. 29(1). “A telecommunication line includes public bulletin board, e-mail group using a telecommunication line as well as Internet. Moreover, a new electric or electronic telecommunication method which would appear in the future as the technology advances, shall also be included.” KIPO REQUIREMENTS, *supra* note 94, ch. 2, § 3.4.2.

97. “Whether an invention is publicly known by a person with the right to apply for a patent or by a person against the intention of a person with the right to apply for a patent, the type of disclosure is not restricted.” KIPO REQUIREMENTS, *supra* note 94, ch. 2, § 5.3.3(3).

98. *Id.* ch. 2, § 5.2.

99. *Id.* ch. 2, § 5.5.3(2).

When there are [sic] an invention (A) which is filed for claiming that it is not considered to be publicly known and another invention (B) which is the same as invention [(A)] but laid open by a third person between the date of disclosing the invention (A) under Article 30 paragraph (1) subparagraph (1) and the filing date of the invention (A), an examiner shall refuse the application of invention (A) for the reason of lacking novelty, except the obvious fact: the laying open of the invention (B) was made by learning from the disclosure (A).

*Id.*

To take advantage of Article 30, an applicant having self-disclosed must, at the time of filing the application, state that the application intends to claim advantage under Article 30 and submit a document proving the “relevant facts” within thirty days of filing the application.<sup>100</sup>

#### 4. *China*

Compared to Japan and Korea, the grace period in Chinese patent law is much more narrow. The grace period, however, does offer additional protection that is not available to applicants before the EPO.

Namely, while Article 24 of the Patent Law of People’s Republic of China extends grace-period protection to disclosures at recognized international exhibitions and involuntary third-party disclosures, it also protects first-time publications at “a specified academic or technological conference.”<sup>101</sup> Even if this provision is far from the scope of disclosures permitted in the United States, Japan, and Korea, it still more appropriately recognizes the need for public disclosure of certain knowledge prior to the filing of a patent application, as compared to the nonprejudicial disclosure protection under Article 55 of the European Patent Convention.<sup>102</sup>

The Chinese government has shown strong willingness to harmonize its patent law to international standards through

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100. Patent Act, art. 30(2) (S. Kor.). Where a disclosure is made by a third party without title to the invention, the applicant with the legal right to file the application is not required to declare the intention to claim advantage under Article 30(1). KIPO REQUIREMENTS, *supra* note 94, ch. 2, § 5.4.2.

101. Patent Law of the People’s Republic of China (promulgated by the Standing Comm. Nat’l People’s Cong., Mar. 12, 1984, amended by the Standing Comm. Nat’l People’s Cong., Dec. 27, 2008) (China). Article 24 reads in full:

Within six months before the date of application, an invention for which an application is filed for a patent does not lose its novelty under any of the following circumstances:

- (1) It is exhibited for the first time at an international exhibition sponsored or recognized by the Chinese Government;
- (2) It is published for the first time at a specified academic or technological conference; and
- (3) Its contents are divulged by others without the consent of the applicant.

*Id.* art. 24.

102. Critics may find that the protection granted to disclosures made at officially recognized academic or technological conferences is subject to determinations that may be made based on political considerations. *See Metzler, supra* note 42, at 390–91.

negotiations with the United States Trade Representative and the USPTO at various international forums, including the IP5.<sup>103</sup> Therefore, while China has a very limited safety-net grace period at present, one can reasonably expect the grace period to be aligned with United States, Japanese, and Korean law in the future.<sup>104</sup>

### C. Other Countries with a Grace Period

Grace periods are not limited to the major offices. In addition to the United States, Japan, Korea, and China, sixty-eight countries' national laws offer grace period protection more generous than Article 55 of the European Patent Convention.<sup>105</sup> The protection offered varies in scope from publication of disclosures made to scientific societies, to protection from all acts constituting a disclosure by the inventor, including the right to claim priority under the Paris Convention (i.e., a general grace period). In fact, forty-six countries' national laws provide for a general grace period with Paris Convention priority.<sup>106</sup>

Although Article 12 of the "Basic Proposal"<sup>107</sup> was not included in the PLT as adopted, many countries incorporated a similar article into national law.<sup>108</sup> As a result, out of the top fifteen patent offices in the world, when measured by total applications filed,<sup>109</sup>

103. See *The Summary of the 11th Trilateral Policy Dialogue Meeting Among JPO, KIPO and SIPO*, JAPAN PAT. OFF. (Dec. 16, 2011), [http://www.jpo.go.jp/torikumi\\_e/kokusai\\_e/11th\\_meeting.htm](http://www.jpo.go.jp/torikumi_e/kokusai_e/11th_meeting.htm); *U.S. and China Conclude 22nd Session of the Joint Commission on Commerce and Trade*, OFF. U.S. TRADE REPRESENTATIVE, (Nov. 21, 2011), <http://www.ustr.gov/about-us/press-office/press-releases/2011/november/us-and-china-conclude-22nd-session-joint-commissi>.

104. Considering Chinese patent law was only enacted in 1984, it has been through a remarkable development, in which the Chinese government has proven that it will continue to improve its patent system and enforcement of patent rights. See generally Rachel T. Wu, Comment, *Awakening the Sleeping Dragon: The Evolving Chinese Patent Law and Its Implications for Pharmaceutical Patents*, 34 FORDHAM INT'L L.J. 549 (2011).

105. The seventy-two countries are those countries with national laws allowing a broader scope of disclosures than Article 55 of the European Patent Convention (i.e., permits pre-filing disclosures by the inventor not strictly confined to official, or officially recognized international exhibitions). See Frederik Struve, *Novelty Grace Periods: A National Law Survey*, MITCHELL OPEN ACCESS 1 (Jan. 1, 2013), <http://open.wmitchell.edu/stusch/3>.

106. *Id.*

107. See *supra* Part II.A.

108. Straus, *supra* note 1, at 30–31.

109. WORLD INTELLECTUAL PROP. ORG., 2012 WIPO IP FACTS AND FIGURES 17 (2012), available at [http://www.wipo.int/export/sites/www/freepublications/en/statistics/943/wipo\\_pub\\_943\\_2012.pdf](http://www.wipo.int/export/sites/www/freepublications/en/statistics/943/wipo_pub_943_2012.pdf).

only the European offices—the EPO, Germany, France, and Great Britain—do not afford any grace period protection for at least some type of prefiling disclosure.<sup>110</sup> Australia, Brazil, Canada, India, Mexico, and Russia are all first-to-file systems operating with a variation of a grace period.<sup>111</sup> It can therefore be intimated that although some countries offer a general grace period, the safety-net grace period at a minimum is already an international best practice, which remains to be adopted by the EPO and the European Patent Convention member countries.

*D. A Brief Overview of the Failure to Reach Agreement on a Harmonized General Grace Period*

Since nearly half of the members of the Patent Cooperation Treaty have a grace period with broader rights than Article 55 of the European Patent Convention,<sup>112</sup> the question must be asked: Why has Article 55 persisted in its current form?

The discussion on the introduction of an internationally harmonized grace period has been ongoing for the past thirty years as part of negotiations on broad substantive patent-law harmonization.<sup>113</sup> But the grace period negotiations have primarily focused on adoption by treaty of a general grace period.<sup>114</sup> The incongruence between the United States as a first-to-invent system and the first-to-file systems in all other countries became a long-held excuse for heels to be dug in on both sides of the argument.<sup>115</sup>

The requirement of a quid pro quo—exchanging first-to-invent for European adoption of a general grace period—allowed the negotiations and discussions between patent offices and non-governmental organizations (NGOs) to remain abstract and unnecessarily focused on an unlikely grand bargain in which all national and regional patent offices would adhere to the exact

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110. See generally Straus, *supra* note 1 (evaluating the arguments for and against the introduction of a grace period in European patent law).

111. Struve, *supra* note 105.

112. *Id.*

113. Efforts to include a grace period in European patent law have been underway since 1982. See Straus, *supra* note 1, at 7–8.

114. Various forums have been employed in attempts to reach international agreement—most recently the Substantive Patent Law Treaty. See *id.* at 7–15; Jerome H. Reichman & Rochelle Cooper Dreyfuss, *Harmonization Without Consensus: Critical Reflections on Drafting a Substantive Patent Law Treaty*, 57 DUKE L.J. 85, 89–90 (2007).

115. See GALAMA, *supra* note 9, at 6–7.



same general grace period.<sup>116</sup>

Therefore, the quid-pro-quo approach<sup>117</sup>—advocated both by United States law makers and users of the European Patent Office, each fearful of forfeiting the strengths of their respective patent systems<sup>118</sup>—faced an insurmountable task of reaching international agreement on detailed issues.<sup>119</sup>

In the end, negotiations on substantive patent-law harmonization failed primarily due to considerations not related to the adoption of a general grace period.<sup>120</sup> This failed process, however, should not discourage the major offices from pursuing a best practice safety-net grace period that appropriately limits its scope to preclude its use as a filing strategy.

#### IV. REFUTING THE TRADITIONAL ARGUMENTS AGAINST GRACE PERIODS

##### A. *Legal Uncertainty*

The primary argument against a general grace period is fairly straightforward, citing “legal uncertainty” to third parties, individual inventors, and small- and middle-sized enterprises (SMEs).<sup>121</sup> Legal uncertainty is—unfortunately—an uncertain concept.<sup>122</sup> The argument (presupposing priority rights will be

116. An international grace period thus required agreement as to several aspects, including (1) length of the grace period, (2) type of disclosures protected, (3) the people permitted to make protected disclosures, (4) ability to claim priority in subsequent international applications, (5) if the grace period could be invoked after filing the application, and (6) the evidentiary standard when invoking the grace period—by the inventor or by a third party. *See* Patent Law Treaty Diplomatic Conference of June 1991, *supra* note 29, at 21–22; GALAMA, *supra* note 9, at 5–10; Straus, *supra* note 1, at 13.

117. *See supra* note 41.

118. GALAMA, *supra* note 9, at 6–7.

119. *See supra* note 116 and accompanying text.

120. Straus, *supra* note 1, at 13.

121. SMEs are companies that employ fewer than 250 persons and have an annual turnover not exceeding EUR 50 million, and/or an annual balance sheet total not exceeding EUR 43 million. *Small and Medium Sized Enterprises (SMEs): What is an SME?*, EUR. COMM’N, [http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/sme-definition/index\\_en.htm](http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/sme-definition/index_en.htm) (last updated Feb. 2, 2013).

122. *See* Harry Surden, *Efficient Uncertainty in Patent Interpretation*, 68 WASH. & LEE L. REV. 1737, 1768 n.100 (2011); Kelly Casey Mullally, *Legal (Un)certainty, Legal Process, and Patent Law*, 43 LOY. L.A. L. REV. 1109, 1120 (2010). Often, at the request of the EPO, the expert opinion of Jan Galama is cited as spelling out the arguments against a grace period. *See* Bagley, *supra* note 1, at 1056–57; Roucouas, *supra* note 4, at 35; *The Controversial “Grace Period,”* EUR.

included), however, is decidedly circular in its professed desire to protect university researchers, individual inventors, and SMEs.<sup>123</sup>

The thrust of the argument is that a grace period, whether six or twelve months, will add a time period—in addition to the eighteen months from application until publication—in which third parties cannot know whether an invention is protected by patentable rights. It is claimed that because a grace period allows disclosed inventions to be publicly known, an undue burden is placed on third parties to either wait or ascertain whether the invention will later be claimed in a published patent application.<sup>124</sup> Prior-art searches therefore would not be as efficient compared to those carried out under systems with absolute novelty, and freedom-to-operate analysis would face similar obstacles.<sup>125</sup> The argument further reasons that these impediments will drive up the cost of investment decisions and result in delays in commercialization of inventions.<sup>126</sup>

The international patent system, however, is inherently uncertain.<sup>127</sup> The argument against the introduction of a grace period therefore promotes the illusion that without a grace period, certainty is preserved. There is no documentation that patent systems with a grace period have created legal uncertainty to third parties resulting in impeded decisions on commercialization of inventions or driven up the cost of investment decisions.<sup>128</sup> Third

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COMM'N, [http://ec.europa.eu/research/infocentre/article\\_en.cfm?item=Result%20of%20search&id=/comm/research/infocentre/export/02-07-soc03\\_105.html&artid=105](http://ec.europa.eu/research/infocentre/article_en.cfm?item=Result%20of%20search&id=/comm/research/infocentre/export/02-07-soc03_105.html&artid=105) (last updated Jan. 7, 2002).

123. Mr. Galama argues that a grace period would not be beneficial to university researchers and SMEs because their inventions might be appropriated by third parties through early disclosure or that the early disclosure would cause loss of rights under the Paris Convention. GALAMA, *supra* note 9, at 11–14. It is questionable, however, if Mr. Galama truly believes university researchers have any role to play in the patent system: “[I]n a business environment it is widely accepted that the personal freedom of scientist [sic] has to have its constraints.” *Id.* at 20. Mr. Galama further states that “if scientists, universities etc. wished to become players in the economic world, they would have to disregard some old habits.” *Id.* at 23.

124. *Id.* at 13.

125. *See id.*

126. *See id.*; Roucounas, *supra* note 4, at 34–35.

127. *See* Stuart MacDonald, *When Means Become Ends: Considering the Impact of Patent Strategy on Innovation*, 16 INFO. ECON. POL'Y 135, 138–39 (2004).

128. *See* Bardehle, *supra* note 73, at 2–3. Considering that seventy-two countries have a grace period with broader protection than Article 55 of the European Patent Convention—and no reports exist documenting adverse effects—the argument of legal uncertainty appears untenable.

parties, and large companies especially, already operate in a reality in which the scope of an invention's patentable rights are initially determined at the grant of a patent but ultimately can only be considered certain following opposition proceedings or litigation.<sup>129</sup> The eighteen-month publication date, then, does not serve as a benchmark for third parties to start engaging in use of disclosed inventions with full certainty of non-infringement.

Further, the mechanics of the safety-net grace period, including the grace periods employed in the United States, Japan, and Korea, rarely will allow an inventor to take advantage of the full temporal scope of a grace period—whether six or twelve months—due to the risk of intervening prefiling publications constituting prior art.<sup>130</sup>

### B. *Detrimental Reliance*

The second argument is that absolute novelty is preferable since it protects inventors from their own mistakes.<sup>131</sup> That is, if a grace period were in place, inventors could rely on it to their detriment because intervening disclosures might constitute prior art.<sup>132</sup> Therefore, inventors risk deteriorating the exploitability of their inventions by disclosing under a grace period.<sup>133</sup>

In general, when a powerful industry purports to speak on behalf of smaller actors, it should be cause for concern.<sup>134</sup> So, too, is the case when the patent counsel of one of the largest filers in the EPO<sup>135</sup> claims to advocate in the best interest of university researchers, individual inventors, and SMEs.<sup>136</sup> Even so, it is

129. Straus, *supra* note 1, at 91; Mullally, *supra* note 122, at 1113.

130. The scenario of an invention remaining unpublished for up to thirty months therefore seems unfounded because inventions under a safety-net grace period must be filed as soon as possible after the initial disclosure to avoid the potential loss of rights. As described in Part IV.B., this further eliminates Mr. Galama's concern that unsophisticated users of the patent system will detrimentally rely on a grace period.

131. See GALAMA, *supra* note 9, at 12–13.

132. *Id.* at 11–12.

133. *Id.* at 18, 21.

134. See MacDonald, *supra* note 127, at 136.

135. Mr. Galama is listed on the expert opinion at Philips International B.V. GALAMA, *supra* note 9, at 1. In 2011, Philips filed the second most applications in the European Patent Office. EUROPEAN PATENT OFFICE, ANNUAL REPORT 2011—TOP APPLICANTS 1 (2012), available at [http://documents.epo.org/projects/babylon/eponet.nsf/0/8AA0C5EA5DB73EAEC12579C2002B829B/\\$File/top\\_applicants\\_en.pdf](http://documents.epo.org/projects/babylon/eponet.nsf/0/8AA0C5EA5DB73EAEC12579C2002B829B/$File/top_applicants_en.pdf).

136. GALAMA, *supra* note 9, at 11–14. The insincerity of this alleged concern is

advocated that granting inventors additional rights under a grace period *may* result in those same rights not always being available if intervening disclosures are made.

This argument fails because it disregards that the inventor, at the very least, had an opportunity to remedy the prefiling disclosure—an opportunity not available under absolute novelty. Further, a safety-net grace period does not encourage reliance because its purpose is to provide no more than a limited opportunity for an applicant to remedy the prefiling disclosure.

### C. *Nondisclosure Agreements and Provisional Applications*

It follows naturally that those in favor of strict adherence to absolute novelty also advocate that the best way to avoid novelty-destroying disclosures is to file a patent application first.<sup>137</sup> While nondisclosure agreements and provisional patent applications are advocated as alternative means of protection prior to the filing of a patent application, they do not provide adequate protection.

A nondisclosure agreement is a contract, the breach of which is actionable. But, a disclosure resulting from breach of confidentiality may become prior art under the European Patent Convention if the party in breach did not deliberately intend to cause harm.<sup>138</sup> This may cause a disclosure to be deemed prior art, even where someone skilled in the art could not access the disclosed information.<sup>139</sup> Unsophisticated applicants may not know that a nondisclosure agreement is required before revealing the invention to potential collaborators, buyers, or investors. While nondisclosure agreements will remain extremely important under a safety-net grace period, the grace period will provide inventors an opportunity to avoid complete novelty destruction of their inventions.

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not well disguised. “[P]ersonal freedom of scientist[s] has to have its constraints[,]” and “[t]he question whether or not a grace period should be introduced has to be answered by the business, i.e. the management responsible for investments etc.” *Id.* at 20.

137. *Id.* at 18–19, 21.

138. Cutting Tools/ACMC, *supra* note 77, at 18. A disclosure made in breach of a confidentiality agreement constituted prior art because it was not made with the “[d]eliberate intention to harm the other party,” or with “probabl[e] . . . knowledge of the possibility of harm resulting from a planned breach” of the confidentiality agreement, and therefore did not meet the “evident abuse” standard under Article 55 of the European Patent Convention. *Id.*

139. ARMITAGE, *supra* note 9, at 5.

Provisional patent applications are not available to EPO applicants. Provisional applications may provide an initial filing date, but the application must be able to fully enable later non-provisional applications to preserve the earlier filing date.<sup>140</sup> Inventions may not be developed adequately to disclose the subject matter, so as to fully support the claims included in the non-provisional application.<sup>141</sup> Therefore, for provisional applications to be as effective as a safety-net grace period, the European Patent Convention would have to be amended both to include provisional applications and to allow for much broader claim interpretation—a far more complex change in national law and the European Patent Convention than the introduction of a grace period.<sup>142</sup>

#### V. THE SAFETY-NET GRACE PERIOD'S POSITIVE IMPACT

The major opponents to the introduction of a grace period under the European Patent Convention have traditionally been large companies.<sup>143</sup> These companies—at least in theory—derive several advantages from a patent system without a grace period in Europe. First, they benefit from a patent system that discourages European academia from fully pursuing the commercial potential of its inventions, often foregoing commercialization if publication has occurred.<sup>144</sup> Second, large companies benefit where an inventor takes advantage of a grace period in one jurisdiction but is unable to seek protection in the EPO, leaving the subject matter open to free exploitation.<sup>145</sup>

It is also likely, however, that large companies themselves will benefit from a safety-net grace period. Following the 2011 amendment to Japanese law, statistics show that large corporations increased their share of applications invoking the grace period.<sup>146</sup>

140. Where the disclosed invention in a provisional application cannot adequately enable the described invention in a nonprovisional application, the earlier filing date of the provisional application may be lost. Straus, *supra* note 1, at 70. The utility requirement in Canadian patent law strictly enforces the enablement of the earliest disclosure, effectively rendering certain pharmaceutical technologies unpatentable. See Jay Erstling et al., *Usefulness Varies by Country: The Utility Requirement of Patent Law in the United States, Europe, and Canada*, 3 *CYBARIS INTEL. PROP. L. REV.* 1, 13–19 (2012).

141. Straus, *supra* note 1, at 69–70.

142. *Id.*

143. See Bardehle, *supra* note 73, at 1.

144. See Roucouas, *supra* note 4, at 32.

145. See Bardehle, *supra* note 73, at 1–2.

146. TEGERNSEE EXPERTS GRP., *supra* note 35, at 31.

In Europe, the “evident abuse” standard of Article 55 equally subjects large companies and SMEs to novelty destruction where confidentiality agreements are breached by negligence or without intent to harm.<sup>147</sup> And, while the legal certainty argument is prevalent, movement can be registered among industry associations representing various large corporations in Europe. At least “unintentional disclosures” by an inventor have been conceded as acceptable,<sup>148</sup> and BusinessEurope (formerly UNICE) has voiced itself in favor of a safety-net grace period where it cannot be used as a “systemic practice.”<sup>149</sup> As with the switch to first-to-file in the United States that primarily benefitted small and unsophisticated applicants by simplifying the patent system,<sup>150</sup> the concerns of large European companies need to reasonably yield to the benefits conferred to SMEs and university researchers by the introduction of a safety-net grace period.

#### A. *Publishing Academia*

Balancing the needs of large companies with those of university research will realize several benefits. European university researchers will be able to publish when absolutely necessary without relinquishing their patent rights. University researchers must “publish or perish.”<sup>151</sup> Publishing is vital to the professional reputation of a researcher, and publishing first may be crucially important.<sup>152</sup> With a safety-net grace period, researchers will have

147. See *supra* notes 75, 135 and accompanying text.

148. GALAMA, *supra* note 9, at 26.

149. Mike Barlow, UNICE, Address at Roundtable of NGOs: Patent Law Harmonization: Is There a Way Forward? (Nov. 11, 2003), available at [http://www2.aipla.org/Content/ContentGroups/Meetings\\_and\\_Events1/International\\_Symposia1/UNICIE2.pdf](http://www2.aipla.org/Content/ContentGroups/Meetings_and_Events1/International_Symposia1/UNICIE2.pdf). It can be inferred that the systemic practice referred to is the ability to use the grace period as a strategic patenting tool in claiming priority without risking loss of rights to intervening disclosures. See also Walter Holzer, European Patent Institute (EPI), Address at Roundtable of NGOs: Patent Law Harmonization: Is There a Way Forward? (Nov. 10, 2003), available at [http://www2.aipla.org/Content/ContentGroups/Meetings\\_and\\_Events1/International\\_Symposia1/epi1.pdf](http://www2.aipla.org/Content/ContentGroups/Meetings_and_Events1/International_Symposia1/epi1.pdf) (voicing support for a grace period that cannot be taken “actively advantage of”).

150. See *supra* Part III.A.

151. See, e.g., *The Controversial “Grace Period,” supra* note 122.

152. Chiara Franzoni & Giuseppe Scellato, *The Grace Period in International Patent Law and Its Effect on the Timing of Disclosure*, 39 RES. POL’Y 200, 203 (2010). Enabling researchers to present their findings without the pressure to pursue patenting immediately will “smooth[] the trade off between a quick disclosure to the scientific community and the timings of a patent procedure.” *Id.*

the opportunity to commercialize the research as well.

In one German study, 32.4 percent of university researchers responded that because of the lack of a grace period they were unable to pursue patent rights where they initially had planned to do so.<sup>153</sup> Additionally, 54 percent found that the lack of a grace period was a problem in their work.<sup>154</sup> To avoid loss of patent rights, the advice to the academic community thus far has been to file first and publish later.<sup>155</sup> The experiences in other countries with grace periods, however, clearly prove that academic publications and patent rights are not mutually exclusive.<sup>156</sup>

Even more so, inventions resulting from university research that utilize the grace period in the United States were found to be published ten months prior to the application filing date in the United States, whereas academic publications in Europe are not made available to the public until sixteen months after the application filing date.<sup>157</sup> Clearly, with a grace period the goal of sharing inventions with the general public is then better achieved.<sup>158</sup>

#### B. *Small- and Medium-Sized Entities*

European SMEs are also limited in their ability to succeed under Article 55 of the European Patent Convention. SMEs are often financially constrained and unsophisticated in patent law.<sup>159</sup> Therefore, SMEs often need time to evaluate, develop, and seek funding for inventions before deciding whether to seek patent rights.<sup>160</sup>

Compared to large companies, SMEs by nature have fewer resources available—whether human or financial—to develop inventions and to patent them.<sup>161</sup> The result is that SMEs file

153. BUNDESMINISTERIUM FÜR BILDUNG UND FORSCHUNG, ZUR EINFÜHRUNG DER NEUHEITSSCHONFRIST IM PATENTRECHT – EIN USA-DEUTSCHLAND-VERGLEICH BEZOGEN AUF DEN HOCHSCHULBEREICH 64 (2002) (Ger.) [hereinafter BUNDESMINISTERIUM].

154. *Id.* at 115.

155. See GALAMA, *supra* note 9, at 21; GERMAN PATENT BROCHURE, *supra* note 82, at 19.

156. See Franzoni & Scellato, *supra* note 152, at 206.

157. *Id.*

158. Straus, *supra* note 1, at 73.

159. See MOY, *supra* note 4, § 8:605 n.7; Paul-Alexander Wacker, *Milestones for Improving the Protection of SME Innovations*, IP VALUE 2012, Jan. 20, 2012, at 39.

160. See Gaétan de Rassenfosse, *How SMEs Exploit Their Intellectual Property Assets: Evidence from Survey Data*, 39 SMALL BUS. ECON. 437, 447 (2012).

161. *Id.* at 449.

patent applications on a smaller ratio of their inventions than large companies.<sup>162</sup> In turn, European SMEs also utilize a higher ratio of the patents that they are granted when compared to large companies.<sup>163</sup> This highly selective process used by SMEs to determine which inventions to patent often depends on whether the SME can acquire the necessary capital to commercialize the invention and to acquire patent rights.<sup>164</sup> Traditional bank lending is not available for this purpose because European banks are unwilling to accept intangible assets as collateral.<sup>165</sup> Risk-willing capital must therefore be sought from venture-capital companies.<sup>166</sup>

An unsophisticated European SME is then at risk if it does not recognize that it must enter into a nondisclosure agreement with the capital partner prior to disclosing the invention—whether publicly or confidentially. Disclosing the invention to investors not only helps the SMEs raise capital for commercially viable inventions, it also saves the SMEs capital by not filing patent applications for those inventions with limited or no commercial potential.<sup>167</sup> In Japan, SMEs filed nearly four times as many applications under the grace period following its expansion in 2011, and applications filed by joint applicants not including a university more than doubled<sup>168</sup>—clearly showing the benefits private business can derive from a safety-net grace period.

Therefore, the absolute-novelty requirement of European patent law disproportionately punishes SMEs who are

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162. Marcus Holgersson, *Patent Management in Entrepreneurial SMEs: A Literature Review and an Empirical Study of Innovation Appropriation, Patent Propensity, and Motives*, R&D MGMT. (forthcoming) (manuscript at 5), available at <http://www.ip-research.org/wp-content/uploads/2012/09/PAM11-20120814a-with-publ-info.pdf>.

163. Rassenfosse, *supra* note 160, at 444. European SMEs utilize a higher ratio of their patents—either through the SMEs' own use or through licensing—because the high cost of obtaining a patent forces SMEs to be selective in the patents applied for. *Id.* The lower utilization ratio by larger companies is also influenced by defensive patenting strategies in building patent portfolios with “sleeping” patents. *Id.*

164. *See id.* at 447.

165. *Id.* at 441 (“[A] survey of about 50 European commercial banks found none that routinely accept intangible assets as collateral for loans to new technology-based firms.” (citing EUROPEAN COMM’N, FUNDING OF NEW TECHNOLOGY BASED FIRMS BY COMMERCIAL BANKS IN EUROPE (2000))).

166. Holgersson, *supra* note 162, (manuscript at 10). The majority of the SMEs surveyed by Holgersson stated that “patenting is crucial to attract venture capital.” *Id.*

167. *See* Franzoni & Scellato, *supra* note 152, at 203.

168. TEGERNSEE EXPERTS GRP., *supra* note 35, at 31.



unsophisticated in patent law, commercial transactions, or both. Absolute novelty strips away any opportunity for SMEs to redeem themselves from an ill-advised disclosure made in the process of perfecting the invention or raising capital for its commercialization. The anachronistic limitations of Article 55 of the European Patent Convention therefore have the potential to result in a knowledge loss to the SMEs and a financial loss to both the SMEs and the European economy as a whole. It is no solution to instruct SMEs to “file first and publish later.”<sup>169</sup>

Ninety-nine percent of European companies are SMEs.<sup>170</sup> Patent law must be structured to at least take into account the needs of the predominant business model. Further, European SMEs suffer from conditions restricting their ability to grow that are not present in the United States.<sup>171</sup> Labor laws often make it difficult for SMEs to hire new employees because they may not be terminated easily.<sup>172</sup> In addition, bankruptcy laws often do not discharge the borrower for several years—if ever—causing SMEs to be less risk tolerant.<sup>173</sup>

Given these barriers to economic growth, unnecessary patent-law limitations should not hold back economic activity by European SMEs any further. At a minimum, a safety-net grace period would afford SMEs the opportunity to raise capital without risking the intangible asset attracting the investment, potentially resulting in economic growth from a commercialized invention.

169. See GALAMA, *supra* note 9, at 21; GERMAN PATENT BROCHURE, *supra* note 82, at 19.

170. *Small and Medium-Sized Enterprises (SMEs): Facts and Figures About the EU's Small and Medium Enterprise (SME)*, EUROPEAN COMMISSION, [http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/index\\_en.htm](http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/index_en.htm) (last visited Feb. 21, 2013).

171. See, e.g., *European Entrepreneurs: Les Misérables*, ECONOMIST, July 28, 2012, available at <http://www.economist.com/node/21559618>.

172. *Id.*

173. PAUL WYMENGA ET AL., ARE EU SMES RECOVERING? ANNUAL REPORT ON EU SMALL AND MEDIUM SIZED ENTERPRISES 2010/2011 35–36 (2011), available at [http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/performance-review/files/supporting-documents/2010-2011/annual-report\\_en.pdf](http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/performance-review/files/supporting-documents/2010-2011/annual-report_en.pdf).

Most entrepreneurs are not willing to start-up their own company if they know in advance that they would not be given a second chance. If given the chance, failed entrepreneurs do learn from their mistakes and are generally more successful the second time round creating more jobs and a higher turnover than first[-time entrepreneurs].

*Id.* at 36 (footnotes omitted); see also *European Entrepreneurs: Les Misérables*, *supra* note 171.

C. *General Public*

Patents are often compared to strong monopolies.<sup>174</sup> They are too powerful to be granted to subject matter or inventions already publicly known.<sup>175</sup> The monopoly is granted in return for public access to the disclosure of the invention—benefitting development of future inventions.<sup>176</sup> A limited protection for pre-filing disclosures, only granted to the inventor or his successor in title therefore does not controvert the exchange of a monopoly in return for public access to the invention. To the contrary, it grants the public access to the invention sooner, facilitating the process of new inventions drawing use from the disclosure at an even earlier stage.<sup>177</sup>

Article 55 of the European Patent Convention, however, limits the benefits that can be drawn from university research and SME ingenuity. The public funds university research through taxes. It follows that restricting the ability to commercialize technology resulting from the taxpayer-funded research also limits the public's return on investment.<sup>178</sup> For example, the application for the “Cohen/Boyer Patent” filed under the United States grace period generated more than \$200 million in revenue for the University of California and Stanford University.<sup>179</sup>

Further, there is no public policy gain in harshly penalizing SMEs in their effort to create new products, new jobs, and economic growth. Novelty destruction is an absurd outcome, especially where “a single non-confidential disclosure can represent prior art even if persons skilled in the art have no capability of reasonably or effectively accessing that disclosure.”<sup>180</sup>

The public benefits of a limited grace period have been

174. GALAMA, *supra* note 9, at 13; Straus, *supra* note 1, at 46–47.

175. See ARMITAGE, *supra* note 9, at 1 (“Inventors are never entitled to take from the public subject matter that deemed [sic] already known or merely obvious from what is deemed to be known.”).

176. See MOY, *supra* note 4, § 7:2; Straus, *supra* note 1, at 73.

177. Straus, *supra* note 1, at 73; Franzoni & Scellato, *supra* note 152, at 201 (finding evidence that U.S. inventions appear in open science journals earlier than European inventions even where the applications were not filed under the United States grace period).

178. See Joseph Straus, *Intellectual Property and Science: A Complex Partnership*, in ALLEA BIENNIAL Y.B. 2004 19, 25 (Pieter J.D. Drenth & Johannes J.F. Schroots eds., 2004), available at [http://www.allea.org/Content/ALLEA/Themes/IPR/Straus\\_IPR\\_Complex\\_Partnership.pdf](http://www.allea.org/Content/ALLEA/Themes/IPR/Straus_IPR_Complex_Partnership.pdf).

179. Straus, *supra* note 1, at 69.

180. ARMITAGE, *supra* note 9, at 5.

noticed. The German Patent Office, a German government advisory council, and German parliament members have all endorsed the notion of a grace period to permit pre-filing disclosures by university researchers and inventors seeking to commercialize their inventions.<sup>181</sup>

## VI. BEST-PRACTICE MODEL SAFETY-NET GRACE PERIOD AND ITS IMPLEMENTATION

Previous efforts at creating a harmonized grace period have failed.<sup>182</sup> There are too many stakeholders internationally—with interests too diverse—to reasonably believe that substantive patent-law harmonization is attainable among all World Intellectual Property Organization (WIPO) member countries. Instead, the major offices can and should agree to best practices that can be adopted by willing national offices.

### A. *Model Grace Period*

As a best practice, the safety-net grace period must take into account the interests of all users of the patent system—to the degree that it is possible. As explained above, legal uncertainty and alleged possible detrimental reliance on a grace period are not valid arguments to exclude the publishing academia, individual inventors, and SMEs.<sup>183</sup> Because legal uncertainty is a nonfactor, the most effective grace period would be twelve months and would protect all acts deemed to be a disclosure—similar to the grace periods in the United States, Japan, and Korea.<sup>184</sup> There should be no reason to limit a grace period from evolving with technology and society by attempting to predict how disclosures will be made in the future.

The grace period in turn must be limited in the subject matter that it protects to promote its use as a safety net only and preserve the true nature of a first-to-file system. This solution appropriately balances the concern of larger users in determining what constitutes prior art, while protecting academic publications and

181. DEUTSCHER BUNDESTAG: DRUCKSACHEN UND PROTOKOLLE [BT] 17/1052, at 2; BUNDESMINISTERIUM, *supra* note 153, at 116; EXPERTENKOMMISSION FORSCHUNG UND INNOVATION, RESEARCH, INNOVATION AND TECHNOLOGICAL PERFORMANCE IN GERMANY: 2009 REPORT, 42–43 (2009).

182. *See supra* Part III.D.

183. *See supra* Part IV.

184. *See supra* Parts III.A, B.2–3.

unsophisticated applicants from being harshly and disproportionately punished with a total loss of rights.<sup>185</sup>

Equally important to protect the rights of unsophisticated applicants, a grace period should not require a formal requirement to invoke the grace period at the time the application is filed. This corresponds with the safety-net grace period's purpose to accommodate unsophisticated applicants. Unsophisticated applicants may not be aware of the requirement and should not be punished for their lack of knowledge. If a patent office later questions the invention's novelty, the burden should be on the applicant to prove his right.

### B. *Implementation*

With the enactment of the AIA, the USPTO has been able to reengage the major international patent offices in talks regarding substantive patent law.<sup>186</sup> The United States, however, cannot force harmonization of substantive patent law on other patent offices. The member countries of the European Patent Convention must take it upon themselves to amend Article 55 and adopt a safety-net grace period as a best practice. In switching to first-to-file, the United States clearly demonstrated how best practices can be adopted to make patent systems easier to use—for both domestic and foreign applicants—by reducing legal uncertainty caused by the ability of a third party to establish an earlier invention date. Amending Article 55 of the European Patent Convention will similarly simplify international patent law and substantially benefit its member states' applicants. The EPO—"stimulated" by not being

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185. In this regard, the United States unilaterally adopted the safety-net grace period as a best practice by switching to first-to-file and limiting the subject-matter protection of the grace period under section 102 (b). See *supra* Part III.A.2.

186. *Oversight over the United States Patent and Trademark Office: Implementation of the Leahy-Smith America Invents Act and International Harmonization Efforts: Hearing Before the S. Comm. on the Judiciary*, 112th Cong. 3–4 (2012) (statement of David Kappos, Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office) ("Passage of the AIA has provided an opportunity to restart long-stalled discussions with our foreign counterparts toward substantive harmonization"), available at <http://www.judiciary.senate.gov/pdf/12-6-20KapposTestimony.pdf>; see Benoit Battistelli, *The Road to Patent Law Harmonisation*, EUR. PAT. OFF. (July 12, 2011), <http://blog.epo.org/patents/the-road-to-patent-law-harmonisation/> ("[T]he impressive legislative activity recently seen in the [United States], which should be completed next autumn, has given the process a new boost.").

invited to the Asia-Pacific Forum in March 2011<sup>187</sup>—appears to understand the seriousness of the commitment by the other major offices to pursue harmonization through best practices. The EPO followed quickly in July 2011 by hosting the heads of the national offices of the United States, Great Britain, France, Germany, Japan, and Denmark.<sup>188</sup> Known as the Tegernsee Group, these offices have decided to focus on substantive harmonization of four areas, including the grace period.<sup>189</sup> The Tegernsee Group is therefore a favorable vehicle to agree on the grace period as an international best practice.<sup>190</sup>

And, while the Tegernsee Group has wisely developed its program in detail prior to seeking industry input,<sup>191</sup> the abandonment of a general grace period should further eliminate the concerns of European industry. It is quite clear that German lawmakers prefer a grace period,<sup>192</sup> and with the previous Danish and French support of a safety-net grace period,<sup>193</sup> they must be considered to be in favor of the adoption of a grace period under the European Patent Convention as well.<sup>194</sup>

Amending Article 55 of the European Patent Convention to include a safety-net grace period will be of sufficient strategic importance to encourage remaining national offices around the

187. TOMOKI SAWAI, UPDATE ON HARMONIZATION DISCUSSION FROM THE JPO'S PERSPECTIVE 5 (2012), *available at* <http://www.aipla.org/resources/intlip/Documents/Other-International-Events/US-Bar-JPO-Liaison-Council-2012/Update-on-Harmonization-Discussion-from-JPO-Perspective.pdf>.

188. Battistelli, *supra* note 186.

189. *Heads of Office Discuss Patent Law Harmonisation*, EUR. PAT. OFF. (Apr. 25, 2012), <http://www.epo.org/news-issues/news/2012/20120425.html>. The four areas of substantive patent law harmonization focused on are a grace period, eighteen-month publication, prior art effect of secret prior art, and prior user rights. *Id.*

190. The Tegernsee group will be unencumbered by the diverse agendas of the national offices previously participating in WIPO negotiations on substantive patent law harmonization.

191. AM. INTELLECTUAL PROP. LAW ASS'N, WIPO ASSEMBLIES 2012 REPORT 5 (2012), *available at* <http://www.aipla.org/resources/intlip/Documents/Other-International-Events/WIPO%20Assemblies%20Report%202012.pdf>.

192. DEUTSCHER BUNDESTAG, *supra* note 181.

193. *See* GALAMA, *supra* note 9, at 10; Straus, *supra* note 1, at 11.

194. The momentum of harmonization in terms of best practices is further advanced by the proactive role of the JPO under the auspices of the IP5. The JPO—already having facilitated the tremendously successful Patent-Prosecution Highway system—has not let up on its international counterparts to reduce inefficiencies caused by the lack of best practices for a grace period. *See* SAWAI, *supra* note 187, at 5–7.

world to follow this best practice. The safety-net grace period as a best practice, adopted by the United States, Europe, Japan, Korea, and hopefully China—in addition to the other sixty-eight countries already with some type of grace period—effectively will provide unsophisticated applicants the opportunity to internationally exploit the commercial value of their inventions when a pre-filing disclosure occurred.

## VII. CONCLUSION

The European allegiance to absolute novelty has so far been unyielding to the legitimate needs of applicants who disclose unintentionally or cannot refrain from making a pre-filing disclosure. The complete destruction of novelty is a harsh and disproportionate result. It is an outcome that unnecessarily penalizes inventors and unsophisticated users and is contrary to the basic bargain that inventors will be rewarded with a patent for disclosing a novel invention.<sup>195</sup> Novelty destruction unduly favors large sophisticated applicants who benefit from free access to inventions that, with a grace period, would be exploited by the “original” inventors—applicants that ultimately may be more likely to put the patented invention into actual commercial use in Europe.<sup>196</sup>

As demonstrated in this note, a limited safety-net grace period that protects against otherwise novelty-destroying disclosures is a best practice. It effectively protects the interests of unsophisticated inventors and applicants without harming the legal rights of third parties. No quid pro quo is required, but European leaders should take notice of the American willingness to create international best practices. Thirty years have already been wasted by the attempts to achieve a grand bargain. Unilaterally adopting a safety-net grace period as a best practice to harmonize with the other major offices can be achieved without such delay.

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195. See GERMAN PATENT BROCHURE, *supra* note 82, at 4 (stating that patentable rights are the reward to inventors for disclosing information); Bardehle, *supra* note 41, at 107–08.

196. See *supra* Part V.B.