

Not All Grace Periods Are Created Equal: Building a Grace Period From the Ground Up

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COMMENTS

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INTRODUCTION

The grace period—the length of time after disclosure of an invention in which the inventor may still file a patent application and not terminate the inventor’s right to a patent—has been the subject of significant controversy during recent patent reform.¹ Indeed, former President George Bush indicated that his support for recent patent reform efforts was contingent upon other nations’ passage of a grace period.² The gap between the generous grace period seen in the United States and that of major competitors has long been seen as a substantive

1. The House version of the Patent Reform Act of 2007 passed on September 7, 2007. The bill makes the effective date of the Act contingent upon the adoption of a grace period by at least the patenting authorities in Japan and Europe: “The amendments made . . . shall take effect . . . [ninety] days after the date on which the President issues an Executive order containing the President’s finding that major patenting authorities have adopted a grace period having substantially the same effect as that contained under the amendments made . . .” H.R. 1908, 110th Cong., sec. 3 § 146(k) (as placed on Senate calendar, Sept. 11, 2007). The Senate version of the Patent Reform Act, now the Patent Reform Act of 2008, is still in the Senate and does not contain the same contingency. S. 3600, 110th Cong., sec. 16 (as referred to the S. Comm. on the Judiciary, Sept. 25, 2008) (“Except as otherwise provided in this Act, the provisions of this Act shall take effect [twelve] months after the date of the enactment of this Act and shall apply to any patent issued on or after that effective date.”). Note that neither the House nor the Senate versions of the Patent Reform Act of 2009 provide for such a contingency. See S. 515, 111th Cong., sec. 17(a) (as reported in Senate, Apr. 2, 2009); H.R. 1260, 111th Cong., sec. 15(a) (as referred to the H. Comm. on the Judiciary, Mar. 3, 2009). See also *infra* Parts III.A, III.C for international controversy surrounding the grace period.

2. See Letter from Nathaniel F. Wienecke, The Assistant Secretary for Legislative and Intergovernmental Affairs, U.S. Dep’t of Commerce, to the Hon. Patrick J. Leahy, Chairman, Comm. on the Judiciary, U.S. Senate 5 (Feb. 4, 2008), *available at* <http://www.ogc.doc.gov/ogc/legreg/letters/110/S1145020408.pdf>.

Although the Administration supports the bill’s efforts to transition the United States to a first-inventor-to-file patent system, we would like to work with you to address technical issues regarding the scope and application of prior art and the grace period. Further, we believe that the effective date of the first-to-file provisions should be contingent upon a formal determination that specific progress and certain agreements have been reached in relevant international negotiations.

Id.

impediment to international harmonization efforts.³ Grace periods are seen as controversial because they provide an extended period of uncertainty and require that inventors who wish to protect their patents abroad be familiar with the grace period provisions of those countries.⁴ Grace periods, however, serve important societal goals that support the development of innovative technologies by academic and technical communities. Far from being the impediments described by critics, grace periods may be central to supporting the types of disclosures necessary for sustaining academic networks of innovation. Often, however, supporters of grace periods fail to fully articulate *why* these grace periods are necessary.

This Comment hopes to fill a gap in the relevant literature on grace periods in three ways. First, this Comment explores the primary theoretical justifications for a grace period.⁵ Second, this Comment isolates four elements of a typical grace period and then explores how these elements are expressed within different legal regimes.⁶ While the grace period has been typically understood as an innovative feature of American patent law, many different approaches to a grace period are actually apparent in other major patent systems, such as the patent systems of China, Australia, and the European Patent Convention (EPC). Third, this Comment proposes an ideal grace period that can serve as a model in substantive harmonization efforts within the international context.⁷

I. VALUE OF GRACE PERIODS

The goal of a patent system is to encourage innovation,⁸ “the

3. See, e.g., Joseph Straus, Munich WIPO Open Forum on the DRAFT SPLT, Geneva: *Grace Period—First Real Chance After Seventy Years* (Mar. 3, 2006), available at http://www.wipo.int/export/sites/www/meetings/en/2006/scp_of_ge_06/presentations/scp_of_ge_06_straus.ppt; Standing Comm. on the Law of Patents, World Intellectual Prop. Org. [WIPO], *Report*, ¶¶ 51–59, SCP/4/6 (Dec. 7, 2000).

4. JAN E.M. GALAMA, PHILIPS INTERNATIONAL B.V., EXPERT OPINION ON THE CASE FOR AND AGAINST THE INTRODUCTION OF A GRACE PERIOD IN EUROPEAN PATENT LAW, SUBMITTED ON REQUEST OF THE EUROPEAN PATENT ORGANISATION 11–13 (Apr. 30, 2000), available at [http://documents.epo.org/projects/babylon/eponet.nsf/0/07243101217E59B3C125723D00570374/\\$File/galama_en.pdf](http://documents.epo.org/projects/babylon/eponet.nsf/0/07243101217E59B3C125723D00570374/$File/galama_en.pdf). See also *infra* Parts III.A, III.C.

5. See *infra* Part I.

6. See *infra* Part II.

7. See *infra* Part III.

8. See, e.g., U.S. CONST. art. I, § 8 (“Congress shall have power . . . To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries. . .”).

reconfiguration of elements into a more productive combination. . . .”⁹ Without subsequent disclosure of such innovation, however, a patent system does not achieve another important objective—betterment of society through economic growth. Grace periods play an important role in accomplishing both.

A. Cultivating Innovation

Grace periods aid in cultivating innovation, the primary goal of a patent system, by sheltering and promoting interaction among individuals. Interactions among individuals are crucial to innovation because “[i]deas beget ideas.”¹⁰ If one accepts the view that ideas beget ideas, that is, the sharing and discussing of ideas leads to more ideas, one should also accept the view that interaction among individuals is the driving force behind innovation.¹¹ Innovation, however, is not cultivated by these “local interactions” alone, but rather is the result of multi-level networks of interaction.¹²

For a better understanding of multi-level networks, describing and drawing an analogy between Randall Collins’ general theory of interaction rituals and scientific development is useful. According to Collins, the lowest level of interaction, and of intellectual networks, is the “local situation.”¹³ In the realm of scientific development, a local situation would be comparable to a scientist in an academic research

9. HENRY ETZKOWITZ, *THE TRIPLE HELIX: UNIVERSITY-INDUSTRY-GOVERNMENT INNOVATION IN ACTION* 4 (2008).

10. RANDALL COLLINS, *THE SOCIOLOGY OF PHILOSOPHIES: A GLOBAL THEORY OF INTELLECTUAL CHANGE* 1 (First Harvard Univ. Press paperback ed. 2000) (“The tradition of intellectual historians is to enter into arguments and concepts, showing how one set of ideas leads to another.”).

11. *Cf. id.* at 5–6 (stating, for example, that one “pattern of creativity is intergenerational networks,” “[c]reativity is not random among individuals,” and that “[t]he pattern of contemporaneous creativity by opponents of comparable stature is nearly universal across history”).

12. *See id.* at 2–3.

Economic and political macro-structures do not explain much about abstract ideas, because such ideas exist only where there is a network of intellectuals focused on their own arguments and accumulating their own conceptual baggage train. It is the inner structure of these intellectual networks which shapes ideas, by their patterns of vertical chains across the generations and their horizontal alliances and oppositions. Reduction is an error not because we are making a primitive category mistake about ideas and things, but because we look for a pattern of communicative action that is too remote from the focus of attention where the intellectual action is going on.

13. *Id.* at 20 (“No one has ever been outside of a local situation; and all our views of the world, all our gathering of data, come from here.”).

laboratory interacting on an individual, experimental level.¹⁴ These local situations are the basis of an “interaction ritual.”¹⁵ Collins describes an interaction ritual as “a group of at least two people . . . physically assembled . . . focus[ing] attention on the same object or action.”¹⁶ In addition, individuals in an interaction ritual “share a common mode or emotion,” “are temporarily united in a shared reality,” “feel they are members of a group, with moral obligations to one another,” and “are filled with emotional energy, in proportion to the intensity of the interaction.”¹⁷ Examples of interaction rituals in the scientific realm would be discussions among two or more scientists from a research group and the attendees of a lecture or conference.

Collins then applies his general theory of interaction rituals to intellectuals. Unlike other interaction rituals, “[interaction rituals] of intellectuals are those occasions on which intellectuals come together for the sake of their serious talk. . . .”¹⁸ Although intellectuals tend to be focused on the written word,¹⁹ “[i]ntellectual life hinges on face-to-face situations because interaction rituals can take place only on this level.”²⁰ The importance of discussions, conferences, and lectures is that they assemble intellectuals focused on a particular area of study and provide a medium for the interaction rituals.²¹ Because a speaker’s presentation or lecture at a conference is typically based on an already published or soon to be published text, it is important for both the text and the presentation itself to be protected.²²

Collins’ interaction rituals theory provides a foundation for understanding the merit of interactions in innovation and growth and

14. See *id.* at 21 (“[E]mphasis on the primacy of the local [situation] . . . has been picked up by the branch of sociologists of science who study the local production of scientific knowledge in laboratory sites.”).

15. *Id.*

16. *Id.* at 22.

17. *Id.* at 22–23.

18. *Id.* at 25.

19. *Id.*

Intellectuals are especially oriented toward the written word. Especially in the modern world, they experience their creativity alone and on paper, though they may at some point report it orally. And if the earliest moments of creation may sometimes be vocal or mental, intellectuals nevertheless feel the compulsion to get their ideas on paper, and not only that but “in print.”

20. *Id.* at 26.

21. See *id.*

22. See *id.* at 26–27 (“Lectures and texts are chained together: this is what makes the distinctiveness of the intellectual community, what sets it off from any other kind of social activity.”).

the important players.

B. Innovation and Growth: The Roles of University, Industry, and Government

“The interaction among university, industry, and government is the key to innovation and growth in a knowledge-based economy.”²³ Protecting innovation at the university level is crucial because in knowledge-based societies, universities are the principle generators of knowledge.²⁴ Industry is responsible for production, i.e., transforming the knowledge and expertise generated at universities into a marketable product.²⁵ The Government contributes by “setting the stage for university-industry interactions through changes in the patent law. . . .”²⁶

1. Protecting Innovation at the University Level

In order to cultivate innovation resourcefully, protection must start at the university level. As incubators of knowledge, it is important to provide a nurturing environment for universities—one that promotes the necessary interactions and provides appropriate incentives. To protect adequately the interactions in a “publish or perish” academic environment, both written disclosures and, to some extent, oral disclosures must be protected.

The necessity of publication and the aptitude and luxury of discussing one’s research with colleagues are both important aspects of a scholar’s research and career. “Academic researchers have historically been compelled to publish the fruits of their scientific research, as publications are the primary basis for promotion, tenure and research funding.”²⁷ Thus, the success of a professor in a research-based field

23. ETZKOWITZ, *supra* note 9, at 1.

24. *See id.* (“The competitive advantage of the university, over other knowledge-producing institutions, is its students. Their regular entry and graduation continually bring in new ideas, in contrast to the research and development (R&D) units of firms and government laboratories that tend to ossify, lacking the ‘flow-through of human capital’ that is built into the university.”).

25. *See id.* at 27 (“It is important for a medical university to be surrounded by an adequate infrastructure in the form of companies that create applications for research, so that such research may benefit the public.”).

26. *Id.* at 7 (“The Government also contributes by designating “‘public venture capital’ for start-ups in the form of research grants.”).

27. John A. Tessensohn & Shusaku Yamamoto, *Japan’s Novelty Grace Period Solves the Dilemma of ‘Publish and Perish,’* 25 *NATURE BIOTECHNOLOGY* 55, 55 (2007). Take the University of Wisconsin-Madison, Division of Biological Sciences, as an example. In the University’s biological sciences division, research plays an important part in determining

seems to stem from the professor's ability to publish, as publications lead to grants, grants sustain additional research, and more research leads to further publications, all guiding the professor down the path to tenure. Due to the pressure of publishing and the likelihood that the professor is unfamiliar with patent law, a publication may forfeit the right to a patent. Therefore, it is important for a grace period to protect printed publications and written disclosures of all forms.

In addition to publishing, discussing with colleagues and presenting one's research are significant facets in furthering a professor's research and career. As discussed in Part I.A, *supra*, valuable interactions occur on all levels. Members of the same research team must be able to speak candidly with one another regarding their research as well as with other colleagues. The ability to present one's research is also an important part of the presenter's individual research progression and advancement of the respective technology. In addition, "[a]n invitation to speak, like journal publications and external funding, is another indicator of a professor's success in research."²⁸

2. University-Industry Links and Transfer of Technology

In addition to interactions on the university level, interactions among university and industry also play an imperative role in innovation. "[U]niversity-industry links . . . [serve] as a vehicle for supporting, if not accelerating, technology development."²⁹ Academic scientists span the bridge between university and industry by founding start-ups from their research.³⁰ Other interactions between university and industry take the form of a licensing agreement wherein a company

whether a faculty member will receive tenure, *see* FACULTY DIV. OF THE BIOLOGICAL SCIENCES, UNIVERSITY OF WISCONSIN-MADISON, GUIDELINES FOR RECOMMENDATIONS FOR PROMOTION OR APPOINTMENT TO TENURE RANK 2 (2008), *available at* <http://www.secfac.wisc.edu/divcomm/biological/TenureGuidelines.pdf>, and publications are the key criteria in demonstrating whether a faculty member "has developed an original and significant research program of high quality," *id.* at 7. Applicable publications include papers published or accepted by journals, papers published in conference proceedings, books or chapters published, technical reports and other publications, and patents. *Id.* at 8. Although the University does not require a set number of publications, the faculty member must show a "consistent and continuing publication record." *Id.*

28. Sean B. Seymore, *The "Printed Publication" Bar After Klopfenstein: Has the Federal Circuit Changed the Way Professors Should Talk About Science?*, 40 AKRON L. REV. 493, 497 (2007).

29. Shahid Yusuf, *University-Industry Links: Policy Dimensions*, in HOW UNIVERSITIES PROMOTE ECONOMIC GROWTH 1, 7 (Shahid Yusuf & Kaoru Nabeshima eds., 2007).

30. ETZKOWITZ, *supra* note 9, at 7.

will license patented technology from a university through a technology transfer office. “The push toward research and its commercialization . . . has acquired greater force, because governments are trimming their contributions to university budgets and requiring them to supplement their earnings from the fruits of their research, whether through knowledge transfer, spinoffs, or equity stakes in start-ups.”³¹

More than 200 US [sic] universities currently maintain technology transfer offices to facilitate the commercialization of research. Patents and licenses based on academic discoveries contribute over 40 billion dollars to the US [sic] economy and more than 300 firms were established based directly upon academic research in 1999. These economic outcomes were based on disclosures of commercial potential in research findings that academic scientists made to their universities.³²

As universities rely more heavily on the “capitalization of knowledge,” they become more entrepreneurial.³³

An entrepreneurial university rests on four pillars: (1) academic leadership able to formulate and implement a strategic vision; (2) legal control over academic resources, including physical property such as university buildings and intellectual property emanating from research; (3) organizational capacity to transfer technology through patenting, licensing, and incubation; and (4)

31. Yusuf, *supra* note 29, at 10.

32. ETZKOWITZ, *supra* note 9, at 31. For examples of the impact university patents have on industry, consider the University of California Office of Technology Transfer (UC OTT) and the Wisconsin Alumni Research Foundation (WARF). In the 2007 fiscal year, the UC OTT filed 1208 patent applications (first and second filings) and was issued 331 patents, OFFICE OF TECHNOLOGY TRANSFER, UNIVERSITY OF CALIFORNIA, UC TECHNOLOGY TRANSFER ANNUAL REPORT 6 exhibit 4 (2007), available at <http://www.ucop.edu/ott/genresources/documents/OTTRptFY07.pdf>, bringing the total number of patents in its portfolio to 3425 (U.S.) and 3757 (foreign), *id.* at 7 exhibit 6. UC OTT also entered into 440 licenses and related technology transfer agreements. *Id.* at 8. WARF, since its inception in 1925, has obtained 1900 U.S. patents on inventions created by University of Wisconsin-Madison faculty and staff and has completed over 1600 license agreements with companies all over the world. WARF—Quick Facts, <http://www.warf.org/about/index.jsp?cid=27> (last visited Apr. 14, 2009). Today, WARF offers more than one thousand technologies for licensing, maintains more than 500 active commercial licenses, and holds equity in forty spin-off companies. *Id.* For the economic impact that technology transfer offices have on university research, consider WARF, which in 2007–2008 gave \$83 million to the University of Wisconsin-Madison for research. *Id.*

33. See ETZKOWITZ, *supra* note 9, at 27.

an entrepreneurial ethos among administrators, faculty, and students.³⁴

Such entrepreneurialism has the ability to generate “new scientific fields and new industrial sectors, each cross-fertilizing the other.”³⁵ These fields and industrial sectors promote economic growth—biotechnology is one example.

“Biotechnology products enhance economic productivity by reducing the duration of disease and disability. . . . [When compared] with older technologies, [they can] sav[e] the patient and his or her insurance company thousands of dollars . . . [resulting in an] immense value both to individual patients and to society.”³⁶ The growth and success of the biotechnology industry are closely intertwined with that of entrepreneurial universities. “Biotechnology firms often originate as extensions of university research groups, incorporate academic practices such as postdoctoral fellowships, and contribute to the expansion of academic research, directly through research contracts and indirectly through university participation in ownership.”³⁷

While universities and industry play important roles in innovation, a third actor, the Government, also plays an essential role. The Government sets the stage for innovation through the shaping of initiatives. The Bayh-Dole Act and the Patent Act are two examples.

3. The Government’s Role in Innovation: Bayh-Dole and the Patent Act

“[T]he Bayh-Dole Act³⁸ was one of several factors that contributed to the growth of patenting and licensing by U.S. universities during the 1980s and 1990s.”³⁹ The Bayh-Dole Act was passed in 1980 partially as

34. *Id.*

35. *Id.*

36. James H. Davis & Michele M. Wales, *The Effect of Intellectual Property on the Biotechnology Industry*, in PERSPECTIVES ON PROPERTIES OF THE HUMAN GENOME PROJECT 427, 428 (F. Scott Kieff ed., 2003).

37. ETZKOWITZ, *supra* note 9, at 52.

38. Bayh-Dole Patent and Trademark Amendments Act of 1980, 35 U.S.C. §§ 200–212 (2006).

39. DAVID C. MOWERY, RICHARD R. NELSON, BHAVEN N. SAMPAT & ARVIDS A. ZIEDONIS, *IVORY TOWER AND INDUSTRIAL INNOVATION 1* (Martin Kenney & Bruce Kogut eds., 2004). The objective of the Bayh-Dole Act was

to promote the utilization of inventions arising from federally supported research or development; to encourage maximum participation of small business firms in federally supported research and development efforts; to promote collaboration

the result of lobbying by U.S. research universities;⁴⁰ it became effective on July 1, 1981,⁴¹ giving researchers with federally funded research the right to patent any resulting invention and the subsequent right to license the patent.⁴² The Bayh-Dole Act aided in the growth of patenting and licensing because it provided a uniform policy for the patenting of government-funded research by universities, it supported the licensing of university technology to industry, and it removed the government's input from licensing negotiations between university and industry.⁴³

Although many commentators characterized the Bayh-Dole Act as "the critical catalyst to growth in U.S. universities' innovative and economic contributions," there was little support for such acclaim.⁴⁴ David Mowery et al. performed a much needed empirical analysis of the Bayh-Dole Act's effect on patenting and licensing. To determine the effect of the Bayh-Dole Act, the study looked at the patenting and licensing data from three universities: two universities that were active in patenting and licensing before 1980 and one that became active on a

between commercial concerns and nonprofit organizations, including universities; to ensure that inventions made by nonprofit organizations and small business firms are used in a manner to promote free competition and enterprise without unduly encumbering future research and discovery; to promote the commercialization and public availability of inventions made in the United States by United States industry and labor; to ensure that the Government obtains sufficient rights in federally supported inventions to meet the needs of the Government and protect the public against nonuse or unreasonable use of inventions; and to minimize the costs of administering policies in this area.

35 U.S.C. § 200.

40. David C. Mowery, *University-Industry Research Collaboration and Technology Transfer in the United States since 1980*, in *HOW UNIVERSITIES PROMOTE ECONOMIC GROWTH*, *supra* note 29, at 163, 166.

41. MOWERY, NELSON, SAMPAT & ZIEDONIS, *supra* note 39, at 92.

42. *See* 35 U.S.C. § 202. *See also* Mowery, *supra* note 40. The right to license is not exclusive; the federal agency under whose funding agreement the invention was made retains march-in rights and can mandate licensing in a limited number of circumstances. 35 U.S.C. § 203. The federal agency may exercise those march-in rights if

(1) action is necessary because the contractor or assignee has not taken, or is not expected to take within a reasonable time, effective steps to achieve practical application of the subject invention . . . ; (2) action is necessary to alleviate health or safety needs which are not reasonably satisfied . . . ; [or] (3) action is necessary to meet requirements for public use specified by Federal regulations and such requirements are not reasonably satisfied. . . .

Id.

43. *See* Mowery, *supra* note 40.

44. *See* MOWERY, NELSON, SAMPAT & ZIEDONIS, *supra* note 39, at 93-94.

large-scale after 1980.⁴⁵ The resulting data suggests “that for universities already active in patenting and licensing, Bayh-Dole resulted in expanded efforts to market academic inventions. The Act also led . . . research universities formerly inactive in this area, to enter into large-scale patenting and licensing of faculty inventions.”⁴⁶ The authors also note that several other factors were instrumental in the increase of patenting and licensing activity and that it was difficult to separate the effects of those from that of Bayh-Dole.⁴⁷ “Although the Bayh-Dole Act was not [solely] responsible for the quickening of innovation, it certainly did stimulate patenting and paved the way to greater commercialization.”⁴⁸

Other countries, such as Japan, have followed suit and implemented legislation that promotes university research and university-industry links. The Japanese government’s version of the Bayh-Dole Act, the Industrial Revolution Law, effective in October 1999, allowed researchers the right to patents resulting from government-sponsored research.⁴⁹ The government hoped that the Industrial Revolution Law would “reform the dysfunctional university-industry relationship, facilitate technology transfer and transform Japanese universities into incubators of biotech ventures. . . .”⁵⁰ Increased cooperation between universities and industry was an immediate effect of the adoption of the Industrial Revolution Law.⁵¹

Just as the Bayh-Dole Act has facilitated the patenting and licensing of university technology, patent law also facilitates the university-industry link through the inclusion of a grace period.

II. THE USE OF GRACE PERIODS

A. *Structural Elements of a Grace Period*

The literature on grace periods is extensive, but tends to suffer from a key flaw: treating grace periods as if they were all alike and operate in

45. *See id.* at 99. The three universities studied were the University of California (active pre-1980), Stanford (active pre-1980), and Columbia University (active post-1980). *Id.*

46. *Id.* at 126.

47. *Id.*

48. Yusuf, *supra* note 29, at 11.

49. *See* Tessensohn & Yamamoto, *supra* note 27.

50. *Id.*

51. John A. Tessensohn, *Publish and Not Perish: Japan’s Universities Designated to Enjoy Patent Novelty Grace Period Amidst Promethean Changes in Biotechnology & University Patenting*, 8 ASIAN-PAC. L. & POL’Y J. 292, 324 (2007).

an identical manner.⁵² This Comment, however, contends that the types of grace periods are much more diverse than commonly understood. Given this diversity of grace periods, a structural perspective that focuses on each individual element is necessary to illuminate the choices outlined in designing a grace period.

Grace periods can be broken down into four elements. Each regime chose to express these elements in a different way resulting in grace periods as unique as the regimes themselves. When drafting a grace period or exception to novelty provision, a legislature or drafting body usually addresses four elements: (1) the type or form of disclosures the grace period will protect; (2) the range of medium in which the disclosures may be made; (3) the party that can make the disclosures; and (4) the time in which the disclosures may occur (which I will refer to as the temporal element). How these elements are defined and restricted will determine the level of protection afforded by the grace period.

1. Element One: Type of Disclosures Protected

The first element of a grace period relates to the type of disclosures protected. A grace period may protect disclosure of an invention in the form of an oral or written statement, displaying of the invention, public use of the invention, offering of the invention for sale, or any combination thereof.⁵³ This Comment will focus mainly on disclosure in the form of oral and written statements, as those are the two most applicable to universities and the university-industry link.

52. See, e.g., Daniel N. Chrisus, A. Jose Cortina, Robert E. Wagner & John T. Winburn, *Practicing Law in the Americas: The New Hemisphere Reality*, 13 AM. U. INT'L L. REV. 1095, 1109 (1998) (“[A] number of countries have grace periods. . . . If you become aware of a wrongful disclosure and you have not yet filed, you still have the ability to preserve your rights. Thirty-two countries, including Canada, afford this protection.”); Louis S. Sorell, *A Comparative Analysis of Selected Aspects of Patent Law in China and the United States*, 11 PAC. RIM. L. & POL'Y J. 319, 327 (2002) (“A grace period exists [in Chinese patent law] to prevent certain acts from barring patentability if these acts occur within six months prior to the filing date of a patent application. Analogous grace periods exist under American patent law, although the grace periods are for one year rather than six months.”) (emphasis added). Another misconception, despite the fact that most, if not all, countries provide for some sort of grace period, is that most patent systems do not include a grace period. See, e.g., Kelly C. McKinney, Comment, *The Patent Reform Act of 2007 and International Patent Law Harmonization*, 31 HOUS. J. INT'L L. 125, 148 (2008) (“[M]ost patent systems abroad do not provide for a grace period.”). Perhaps this is because the grace period provisions of other regimes tend to be more limiting; therefore, they may not be perceived as “grace periods.”

53. See *infra* Part II.B.

The type of disclosure may be further limited statutorily, through case law, or both. For example, a legislature may choose to restrict grace period coverage to written publications accessible to the “public.”⁵⁴ This suggests that disclosures in a form not accessible to the public are not encompassed within the scope of the grace period, and would destroy novelty.⁵⁵

2. Element Two: Range of Medium

The second element of a grace period is the range of medium in which a disclosure may be made. The range of medium may be definite or indefinite. A grace period having an indefinite range of medium is one that does not restrict the locale of the disclosure, that is, whether the invention enters the state of the art is independent of where the disclosure was made.⁵⁶ By contrast, a grace period with a definite range of medium is one that explicitly limits the venues at which applicable disclosures may be made; if the disclosure is not made at an approved venue, it will not be covered by the grace period and the disclosure may be used as prior art against the applicant.⁵⁷

3. Element Three: Who Can Disclose

The third element of a grace period pertains to whose disclosures fall within the boundaries of the grace period. A grace period may protect disclosures made only by the applicant⁵⁸ or it may protect disclosures made by an individual(s) other than the applicant, for example, an individual who received the information directly or indirectly from the applicant.⁵⁹ A grace period may also protect a disclosure made under circumstances of evident abuse, that is, without the consent of the applicant.⁶⁰

4. Element Four: Temporal Limit

The fourth element of a grace period designates the length of time prior to the filing date in which the inventor may disclose his or her

54. *See infra* Part II.B.2.b.

55. Although note that such disclosures, despite not being protected by the grace period, may not destroy novelty because they do not rise to the level of prior art for novelty purposes.

56. *See infra* Parts II.B.1.a–b.

57. *See infra* Parts II.B.2.a–c, II.B.3.

58. *See infra* Part II.B.1.b.

59. *See infra* Part II.B.1.a.

60. *See infra* Parts II.B.2.a–c.

invention without destroying novelty, literally, the period of grace. The most common durations of grace periods are six and twelve months.⁶¹

B. How Regimes Have Addressed the Elements of a Grace Period

Each regime must individually address and define the boundaries of the four elements of a grace period. How a regime chooses to define each element is important; however, the benefit of a grace period does not derive from the confines of each element, but rather the interplay of these individual choices. These four elements, taken together, determine a grace period's benefit to an individual inventor and to society as a whole. A regime may choose to broadly define the boundary of each element; narrow the boundary of one or more, but not all, of the elements; or narrow all four of the elements.

In addition to these statutorily placed boundaries, a regime's courts may choose to tweak the boundary of one or more elements through case law, resulting in a grace period with a broader or narrower scope. A pro-inventor regime is one that broadly defines the boundaries of substantially all of the elements statutorily, through case law, or both. When the regime narrowly defines one or more elements either statutorily or through case law, the regime becomes more restrictive as the benefits to society weigh against the inventor's interests. The most restrictive regime is one that narrowly defines every element, resulting in a regime that esteems the benefit of the society over the benefit of an inventor.

1. Pro-Inventor Regimes

A pro-inventor regime is a regime having a grace period comprised substantially of broadly defined elements. As a result, the grace periods of pro-inventor regimes are the most protective of an inventor's interests and thus, as discussed *infra*, are the most innovation friendly. Canada and the United States are examples of pro-inventor regimes. Neither Canada nor the United States restrict the type of disclosure or the range of medium for disclosures, the first and second elements of a grace period. The two regimes, however, differ slightly on the third element of a grace period: who may disclose.⁶² Interestingly, Canada, to

61. See *infra* Parts II.B.2.

62. Canada's grace period protects any disclosure made by the inventor or anyone who received the information directly or indirectly from the inventor. See *infra* Part II.B.1.a. The U.S. grace period protects only disclosures made by the inventor; it does not protect disclosures by others simply because they obtained the information from the inventor. See

some extent, may be more pro-inventor than the United States.

a. Canada

Canada broadly statutorily defines each of the grace period elements. Section 28.2 of the Canadian Patent Act provides that,

[t]he subject-matter defined by a claim in an application for a patent in Canada. . . must not have been disclosed a more than one year before the filing date by the applicant, or by a person who obtained knowledge, directly or indirectly, from the applicant, in such a manner that the subject-matter became available to the public in Canada or elsewhere. . . .⁶³

Concerning the first and second elements, the type of disclosures protected and the range of medium, the grace period provision in the Patent Act of Canada does not expressly limit the type of disclosure or the range of medium for a disclosure.⁶⁴ Canada's grace period covers all written and oral disclosures. The court in *Baker Petrolite Corp. v. Canwell Enviro-Industries Ltd.* stated, "there is no need to prove that anybody actually saw the disclosure provided the relevant disclosure was in public."⁶⁵ The disclosure condition is satisfied "whenever subject-matter described in the prior disclosure is capable of being performed and is such that, if performed, it must result in the patent being infringed . . .";⁶⁶ it is irrelevant whether the disclosure was apparent to anyone when made.⁶⁷

For the third element, who can disclose, Canada's grace period encompasses disclosures made by the applicant or any other individual who received the information directly or indirectly from the applicant.⁶⁸

infra Part II.B.1.b.

63. Patent Act, R.S.C. ch. P-4, § 28.2 (1985) (Can.).

64. *Id.*; see also ELLIOTT STIKEMAN, INTELLECTUAL PROPERTY LAW OF CANADA 4-16 (Stuart McCormack ed. 2004). Section 28.2(1)(a) states that the disclosure must be made "in such a manner that the subject-matter became available to the public in Canada or elsewhere. . . ." Patent Act, R.S.C. ch. P-4, § 28.2(1)(a) (Can.). See *supra* Part II.A.1.

65. [2003] 1 F.C. 75 (Can.).

66. *Calgon Carbon Corp. v. North Bay*, [2006] F.C.J. 63 (Can.).

67. *Id.*

68. Patent Act, R.S.C. ch. P-4, § 28.2(1)(a) (Can.). Section 28.2 also provides that disclosures made by a person other than the applicant or a person who obtained the knowledge directly or indirectly from the applicant are not covered by the grace period. This does not narrow the "who can disclose element," but rather speaks of a situation in which an independent inventor makes a disclosure about his or her invention.

Lastly, Canadian patent law provides for a twelve-month grace period.⁶⁹ Thus, the Canadian grace period protects all disclosures related to the applicant's invention made within twelve months of the filing of a patent application.

b. The United States

The United States is another example of a pro-inventor regime. Section 102(b) of the U.S. Patent Act provides that, "A person shall be entitled to a patent unless . . . the invention was patented or described in a printed publication in this or a foreign country . . . more than one year prior to the date of the application for patent in the United States. . . ."⁷⁰ The first element of a grace period has been interpreted to apply broadly, part of which is the result of case law. Statutorily, the United States provides a grace period for disclosures in the form of patent

69. Patent Act, R.S.C. ch. P-4, § 28.2(1)(a) (Can.).

70. 35 U.S.C. § 102(b) (2006). The U.S. grace period also protects inventions in public use or on sale in the United States. Section 102, as proposed by the Patent Reform Act of 2009, varies substantially from the current § 102.

(a) Novelty; Prior Art. A patent for a claimed invention may not be obtained if (1) the claimed invention was patented, described in a printed publication, or in public use, on sale, or otherwise available to the public (A) more than [one] year before the effective filing date of the claimed invention; or (B) [one] year or less before the effective filing date of the claimed invention, other than through disclosures made by the inventor or a joint inventor or by others who obtained the subject matter disclosed directly or indirectly from the inventor or a joint inventor; or (2) the claimed invention was described in a patent . . . or in an application for patent published or deemed published . . . in which the patent application . . . names another inventor and was effectively filed before the effective filing date of the claimed invention.

(b) Exceptions. (1) Subject matter that would otherwise qualify as prior art based upon a disclosure under subparagraph (B) of subsection (a)(1) shall not be prior art to a claimed invention under that subparagraph if the subject matter had, before such disclosure, been publicly disclosed by the inventor or a joint inventor or others who obtained the subject matter disclosed directly or indirectly from the inventor or a joint inventor. (2) Derivation, Prior Disclosure, and Common Assignment Exceptions. Subject matter that would otherwise qualify as prior art only under subsection (a)(2) shall not be prior art to a claimed invention if (A) the subject matter was obtained directly or indirectly from the inventor or a joint inventor; (B) the subject matter had been publicly disclosed by the inventor or a joint inventor or others who obtained the subject matter disclosed, directly or indirectly, from the inventor or a joint inventor before the effective filing date of the application or patent set forth under subsection (a)(2); or (C) the subject matter and the claimed invention, not later than the effective filing date of the claimed invention, were owned by the same person or subject to an obligation of assignment to the same person.

S. 515, sec. 2 § 102; H.R. 1260, sec. 3(a) § 102.

applications and printed publications.⁷¹ Neither the novelty nor the grace period provisions of the U.S. Patent Act provide any insight as to what constitutes a “printed publication,” but the issue has been addressed by the courts. In *In re Hall*, the Federal Circuit interpreted printed publication to constitute all documents accessible to the public,⁷² and held that a single cataloged thesis was sufficient to establish public accessibility.⁷³ In *In re Klopfenstein*, the Federal Circuit held that a printed slide presentation “prominently displayed” for three days at a scientific meeting was sufficiently accessible to the public to constitute a printed publication even though no copies were distributed to the public and it was not later cataloged.⁷⁴ In addition, an oral presentation based on a paper constitutes a printed publication if given in a forum open to the public and written copies were distributed without restriction.⁷⁵ Although the first element does not expressly include oral disclosures, its applicability is far-reaching because most, if not all, disclosures cited against the applicant as prior art will likely constitute a printed publication.

Unlike the first element of a grace period, which case law has broadly interpreted, the second element of a grace period, the range of medium, is defined broadly in Section 102(b). The United States does not restrict the range of medium, and the grace period is applicable

71. 35 U.S.C. § 102(b).

72. 781 F.2d 897, 898–99 (Fed. Cir. 1986).

The statutory phrase “printed publication” has been interpreted to give effect to ongoing advances in the technologies of data storage, retrieval, and dissemination. Because there are many ways in which a reference may be disseminated to the interested public, “public accessibility” . . . [is important] in determining whether a reference constitutes a “printed publication. . . .”

Id. (citations omitted); see also U.S. PATENT & TRADEMARK OFFICE, U.S. DEP’T OF COMMERCE, MANUAL OF PATENT EXAMINING PROCEDURE § 2128 (8th ed., rev. 2008) [hereinafter MPEP] (“A reference is proven to be a ‘printed publication’ ‘upon a satisfactory showing that such document has been disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence can locate it.’”) (citations omitted).

73. *In re Hall*, 781 F.2d at 900.

74. 380 F.3d 1345, 1350, 1352 (Fed. Cir. 2004).

75. *Mass. Inst. Tech. v. AB Fortia*, 774 F.2d 1104, 1109 (Fed. Cir. 1985) (holding that a printed publication existed where “between 50 and 500 persons interested and of ordinary skill in the subject matter were actually told of the existence of the paper and informed of its contents by the oral presentation, and the document itself was actually disseminated without restriction to at least six persons”); see also MPEP § 2128.01. On the other hand, the court in *In re Klopfenstein* found that “an entirely oral presentation . . . that includes neither slides nor copies of the presentation is without question not a ‘printed publication’ for the purposes of 35 U.S.C. § 102(b).” *In re Klopfenstein* 380 F.3d at 1349 n.4.

regardless of where the disclosure was made, including in a foreign country.⁷⁶

The third element of a grace period, who may disclose, is even less clear. The grace period provision, Section 102(b), does not expressly state whose disclosures fall within the grace period.⁷⁷ When Section 102(b) is read in view of Section 102(a), a novelty provision, it becomes apparent that a disclosure made “by others” will place the applicant outside the scope of the grace period.⁷⁸ Therefore, during the grace period, disclosures by the inventor will forfeit the inventor’s patent rights. Disclosures by another, however, will result in a loss of right.⁷⁹ As a result, the third element of a grace period is somewhat limiting, particularly when compared with the grace period statutes of other countries.⁸⁰

The United States has broadly interpreted the fourth element of a grace period—an applicant has one year to file an application after disclosing his or her invention (provided the disclosure falls within the boundaries of the first three elements).⁸¹

Although the third element of a grace period is narrower than other more restrictive or less inventor friendly regimes,⁸² the scope of the U.S. grace period, in its totality, makes it a pro-inventor regime.

76. See 35 U.S.C. § 102(b) (providing that the grace period applies to any invention “patented or described in a printed publication in *this or a foreign country*”) (emphasis added).

77. See 35 U.S.C. § 102(b) (“A person shall be entitled to a patent unless . . . (b) the invention was patented or described in a printed publication in this or a foreign country . . . more than one year prior to the date of the application for patent in the United States.”).

78. See 35 U.S.C. § 102(a) (“A person shall be entitled to a patent unless . . . (a) the invention was known or used *by others* in this country, . . . patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant.”) (emphasis added).

79. See U.S. PATENT & TRADEMARK OFFICE, U.S. DEP’T OF COMMERCE, REQUEST FOR COMMENTS ON INTERNATIONAL EFFORTS TO HARMONIZE SUBSTANTIVE REQUIREMENTS OF PATENT LAWS (2007), available at <http://www.uspto.gov/go/og/2007/week22/patcomm.htm>.

80. Canada’s grace period covers disclosures made by the applicant or any other individual who received the information directly or indirectly from the applicant. Patent Act, R.S.C. ch. P-4, § 28.2(1)(a) (Can.); see also *supra* Part II.B.1.a. The grace periods of China, Japan, Australia, and the EPC cover disclosures made without the consent of the applicant, albeit not in all circumstances. See *infra* Parts II.B.2(a)–(c), II.B.3.

81. See 35 U.S.C. § 102(b).

82. The grace periods of China, Japan, and Australia protect disclosures made without the consent of the applicant. See *infra* Parts II.B.2.a–c.

2. Harmonizing Regimes

A harmonizing regime is a regime that takes societal interests into account and balances those interests with an inventor's interests through narrowly defining one or more elements of its grace period. However, unlike potentially pro-inventor regimes, a harmonizing regime limits the range of medium in all or a limited number of circumstances, but broadly defines one or more of the remaining three elements of a grace period. As a result, the grace period is less protective and less hospitable to innovation than that of a pro-inventor regime. China, Japan, and Australia are examples of harmonizing regimes. One probable advantage of harmonizing regimes is the date on which an invention enters the public domain. If an inventor or another makes a disclosure that is not covered by the regime's grace period, the invention is no longer patentable, causing the invention to enter the public domain. Without the greater protection provided by a more liberal grace period, an inventor has an incentive to file a patent sooner so as not to forfeit his right should a disclosure inadvertently be made.

a. China

China is a harmonizing regime because it narrowly defines the range of medium and temporal limit, the second and fourth elements of a grace period. Article 24 of the Patent Law of the People's Republic of China provides,

An invention-creation for which a patent is applied for does not lose its novelty where, within six months before the date of filing, one of the following events occurred: (1) it was first exhibited at an international exhibition sponsored or recognized by the Chinese Government; (2) it was first made public at a prescribed academic or technological meeting; (3) it was disclosed by any person without the consent of the applicant.⁸³

Addressing the first, second, and third elements of a grace period together, type of disclosures protected, range of medium, and who can disclose, China's grace period applies in three instances: (1) inventions "first exhibited at an international exhibition sponsored or recognized

83. Patent Law art. 24 (promulgated by the Standing Comm. People's Cong., Aug. 25, 2000) CHINALAWINFO (last visited Oct. 18, 2008) (P.R.C.). See ROBERT H. HU, RESEARCH GUIDE TO CHINESE PATENT LAW AND PRACTICE 164-65 (2002) for a translation of the Patent Law of the People's Republic of China (2000).

by the Chinese Government”;⁸⁴ (2) inventions “first made public at a prescribed academic or technological meeting”;⁸⁵ and (3) inventions “disclosed by any person without the consent of the applicant.”⁸⁶ In these three instances, novelty is not destroyed if the applicant files an application within six months of the disclosure.⁸⁷

China’s grace period is pro-inventor in that it encompasses inventions, written publications, and oral disclosures. The regime, however, restricts the ways in which such information is disclosed. The grace period does not apply unless the disclosure is made at a conference sponsored or recognized by the Chinese Government or at a prescribed academic or technological meeting. Rule 31 of the Implementing Regulations of the Patent Law of the People’s Republic of China defines such “academic or technological meeting” as “any academic or technological meeting organized by a competent department concerned of the State Council or by a national academic or technological association.”⁸⁸ Thus, with the exception of disclosures made without the consent of the applicant, all other “public” disclosures made in China, or any other country, destroy novelty.⁸⁹ This restriction allows China to play a censorship role—China can choose which conferences and meetings to sanction thereby authorizing protection of disclosures only in approved fields of technology. Whether China’s grace period is advantageous to inventors is dependent upon the rate of

84. Patent Law art. 24(1) (P.R.C.).

85. *Id.* art. 24(2).

86. *Id.* art. 24(3).

87. *Id.* art. 24.

88. Implementing Regulations of the Patent Law rule 31 (promulgated by the State Intellectual Property Office of the People’s Republic of China, July 1, 2001) (P.R.C.), reprinted in HU, *supra* note 83, at 188.

89. Patent Law art. 22 (P.R.C.); see also PETER GANEA & THOMAS PATTLACH, *INTELLECTUAL PROPERTY LAW IN CHINA* 10 (Christopher Heath ed., 2005) (stating that novelty requires that “no identical technical solution has been published worldwide before the filing date; no identical technical solution has been publicly used or made known by any other means in the domestic context before the filing date; [and] no identical technical solution . . . has been filed before and published after the filing date”). To add complexity to the issue,

[w]hether an identical invention-creation has been “published”, “publicly used” or “made publicly known” by other means, depends on the circle to which the invention-creation has been disclosed. If this circle consists of an interrelated group of persons who know each other, the staff of a certain engineering department for example, the invention-creation is not publicly known. “Public” in the sense of the [Chinese] Patent Act means that an undetermined circle of people knows about the respective invention.

Id. at 10–11 (citation omitted).

exhibitions and academic/technological meetings sanctioned by the Chinese Government.

In summary, China is a harmonizing regime because, although China's grace period protects all disclosures made without the applicant's consent, China restricts the forum for disclosures made by the applicant or with the applicant's consent to government-sanctioned conferences and meetings. By providing only a six-month grace period, China also restricts the temporal limit.

b. Japan

Japan is a harmonizing regime because it narrowly defines the range of medium, albeit for only one form of disclosure, and temporal elements of a grace period, the second and fourth elements. Article 30 of the Japanese Patent Act provides,

(1) In the case of an invention which has fallen under any of the items of Article 29(1) by reason of the fact that the person having the right to obtain a patent has conducted a test, has made a presentation in a printed publication, has made a presentation through electric telecommunication lines, or has made a presentation in writing at a study meeting held by an academic group designated by the Commissioner of the Patent Office, such invention shall be deemed not have fallen under any of the items of Article 29(1) for the purpose of Article 29(1) and (2) for the invention claimed in a patent application which has been filed by the said person within six months from the date on which the invention first fell under any of those items.

(2) In the case of an invention which has fallen under any of the items of Article 29(1) against the will of the person having the right to obtain a patent, the preceding paragraph shall also apply for the purposes of Article 29(1) and (2) to the invention claimed in the patent application which has been filed by the said person within six months from the date on which the invention first fell under any of those paragraphs.

(3) In the case of an invention which has fallen under any of the items of Article 29(1) by reason of the fact that the person having the right to obtain a patent has exhibited the invention at an exhibition held by the Government or a local public entity . . . , an exhibition held by those who are not the Government, etc. where such exhibition has been designated by the Commissioner of the Patent Office, an international exhibition held in the territory of a country of the Union of the Paris Convention or a member of the World Trade Organization

by its Government, etc. or those who are authorized thereby to hold such an exhibition, or an international exhibition held in the territory of a state which is neither of a country of the Union of the Paris Convention nor a member of the World Trade Organization by its Government, etc. or those who are authorized thereby where such exhibition has been designated by the Commissioner of the Patent Office, paragraph (1) shall also apply for the purposes of Article 29(1) and (2) to the invention claimed in the patent application which has been filed by the said person within six months from the date on which the invention first fell under any of those items.⁹⁰

Regarding the first element, the type of disclosures protected, Japan's grace period makes an exception to novelty for disclosures in the form of printed publications, publications via a telecommunication line, and publications in documentary form, that is, presentations in writing.⁹¹ Although the first element has been broadly defined in the sense that the grace period applies to publications both in print and online and to presentations in writing, Japan's grace period can also be interpreted as being somewhat narrow because it does not apply to oral

90. Patent Act art. 30 (Japan) (unofficial translation); *see also* Patent Act art. 29 (Japan). Article 29(1) provides,

[a]n inventor of an invention that is industrially applicable may be entitled to obtain a patent for the said invention, except for the following: (i) inventions that were publicly known in Japan or a foreign country, prior to the filing of the patent application; (ii) inventions that were publicly worked in Japan or a foreign country, prior to the filing of the patent application; or (iii) inventions that were described in a distributed publication, or inventions that were made publicly available through an electric telecommunication line in Japan or a foreign country, prior to the filing of the patent application.

Id. For a different translation of Article 29(1), see HIROYA KAWAGUCHI, *THE ESSENTIALS OF JAPANESE PATENT LAW: CASES AND PRACTICE* 24 (2007):

An inventor of an invention capable of industrial application may obtain a patent excepting the following. (1) An invention which has been known to the public in Japan or foreign countries before the patent application. (2) An invention which has been exercised in public in Japan or foreign countries before the patent application. (3) An invention which has been described in distributed printed publications or which has been accessible to the public via telecommunication lines before the patent application.

Id.

91. Patent Act art. 30 (Japan). Article 30 of the Japanese Patent Act also provides an exception to novelty for "conduct of experiments" and for exhibiting the invention in Japan at a government-held or Japan Patent Office designated exhibition or in a foreign country at a government-held exhibition in a Union or WTO country or a Japan Patent Office designated exhibition. Patent Act art. 30 (Japan); *see also* KAWAGUCHI, *supra* note 90, at 29–30. This paper will focus on the publication and presentation forms of Japan's grace period.

disclosures—an oral disclosure made at a university symposium anywhere in the world will destroy novelty regardless of the timing.⁹²

A publication in documentary form is also subject to a range of medium restrictions, unlike the other forms of protected disclosures, which are not subject to such restrictions. In order for a publication in documentary form to fall within the grace period, disclosure must be made at a study meeting held by an academic organization designated by the Japan Patent Office. Although this is indeed a restriction, it is likely not very restrictive as “[t]he number of designated bodies as of March 31, 2008 included 171 universities, 55 technical colleges, 14 inter-university research institute corporations, 26 independent administrative institutions, 56 public testing laboratories and 654 academic societies.”⁹³ Therefore, Japan, like China, restricts the range of medium for disclosures. Japan’s range of medium restriction, however, is certainly less stifling because it applies only to publications in documentary form and not to all publications, whereas China’s restriction applies to all disclosures made by or with the consent of the applicant.⁹⁴ In addition, as evidenced by the number and forms of designated bodies (e.g., universities, academic societies, public testing laboratories), it seems that most, if not all, forums where a publication in documentary form would be made have been deemed designated. China, on the other hand, seems to be less amenable to sanctioning conferences and meetings.⁹⁵

Japan broadly defines the third element of a grace period, who may disclose. Japan’s grace period is applicable if the disclosure was made by either the applicant or another individual who made the disclosure against the will of the applicant.⁹⁶ Although Japan has provided protection for an applicant whose invention was disclosed against his

92. Tessensohn & Yamamoto, *supra* note 27, 55–56 (2007).

93. INT’L AFFAIRS DIV., JAPAN PATENT OFFICE, JAPAN PATENT OFFICE ANNUAL REPORT 2008 83 (2008), available at http://www.jpo.go.jp/shiryu_e/toushin_e/kenkyukai_e/annual_report2008.htm. Compare the number of available meetings/organizations designated by the Japan Patent Office with those designated by the European Patent Convention, *infra* Part II.B.3. For more information on how to become a Japan Patent Office designated academic organization or exhibition, see Japan Patent Office, Procedures for Designation of Scientific Bodies and Exhibitions Under Section 30 of the Patent Law (2001), available at http://www.jpo.go.jp/cgi/linke.cgi?url=/torikumi_e/hiroba_e/toku30e_0117.htm.

94. See *infra* Part II.B.2.a.

95. The language of article 24 of China’s Patent Law and rule 31 of the Implementing Regulations suggests a high standard for sanctioning (e.g., meetings organized by a competent department of the State Council). See *infra* Part II.B.2.a.

96. See Patent Act art. 30(1)–(2) (Japan).

will, this added protection may not be that useful as it is likely that the applicant will be unaware that his invention was disclosed.⁹⁷ If the disclosure is sufficient to destroy novelty,⁹⁸ the applicant must file an application within six months, the temporal limit of Japan's grace period.

In summary, Japan is a harmonizing regime because it protects only written disclosures and if the disclosure is in documentary form only if disclosed at a designated study meeting. Japan protects disclosures made by the applicant or any other individual regardless of whether such disclosure was made with the consent of the applicant. In addition, Japan restricts the temporal limit by providing only a six-month grace period.

c. Australia

Australia is a harmonizing regime as section 24 of the Patents Act 1990 protects disclosures in only a limited number of circumstances.

For the purpose of deciding whether an invention is novel . . . , the person making the decision must disregard: (a) any information made publicly available, through any publication or use of the invention in the *prescribed circumstances*, by or with the consent of the nominated person or patentee, or the predecessor in title of the nominated person or patentee; and (b) any information made publicly available without the consent of the nominated person or patentee, through any publication or use of the invention by another person who derived the information from the nominated person or patentee or from the

97. See KAWAGUCHI, *supra* note 90, at 30.

98. Not all disclosures destroy novelty. First, in order for a disclosure to destroy novelty, the description must be enabling, that is, the publication must describe the invention in sufficient detail so that a person of ordinary skill in the art can "realize" the invention. *Id.* at 26. Second, the Supreme Court of Japan and the Tokyo High Court have liberally interpreted "publication" to encompass any *reproduced* document in which "the original is open to the public and copies thereof are available on request," even if the document was not intended for distribution. *Id.* at 27 (stating that decisions of the Supreme Court of Japan and the Tokyo High Court have found that (1) a copy of a utility model specification was a publication because the original was available to the public and copies were obtainable; and (2) microfilms located at the patent office of another country were "distributed publications" because the patent office was open to the public allowing public access to the microfilms). Third, the reproduced requirement for a publication does not apply if the document is available on the internet; if the document is accessible to the public, it qualifies as a publication. In contrast, documents which are available to a limited number of individuals (e.g., members of an organization), are coded, or are public only for a short period of time do not constitute a publication for novelty purposes. *Id.* at 27-28.

predecessor in title of the nominated person or patentee; but only if a patent application for the invention is made within the prescribed period.⁹⁹

Australia's grace period protects disclosures in the form of a publication made in "prescribed circumstances."¹⁰⁰ Regulation 2.2 of the Patents Regulations 1991 substantiates what constitutes a prescribed circumstance. Only two prescribed circumstances for the purposes of Australia's grace period provision relate to a publication. The first prescribed circumstance is publication at "an official or officially recogni[z]ed international exhibition"¹⁰¹ or "an international exhibition recogni[z]ed by the Commissioner by a notice published in the *Official Journal* before the beginning of the exhibition."¹⁰² The second prescribed circumstance is "publication . . . in a paper written by the inventor and [] (i) read before a learned society [] or (ii) published with

99. Patents Act, 1990, § 24(1) (Austl.) (codified as amended by Act No. 106, 2006) (emphasis added). Section 24(2) further provides,

For the purpose of deciding whether an invention is novel . . . , the person making the decision must disregard: (a) any information given by, or with the consent of, the nominated person or the patentee, or his or her predecessor in title, to any of the following, but to no other person or organi[z]ation: (i) the Commonwealth or a State or Territory, or an authority of the Commonwealth of a State or Territory; (ii) a person authori[z]ed by the Commonwealth or a State or Territory to investigate the invention; and (b) anything done for the purpose of an investigation mentioned in subparagraph (a)(ii).

Id. § 24(2).

100. *See* Patents Act, 1990, § 24(1)(a) (Austl.). Note that Australia's grace period also protects the showing or use of the invention and the working of the invention provided that it falls under prescribed circumstances. *See* Patents Regulations, 1991, reg. 2.2(2)(a), (d) (Austl.) (codified as amended by S.L.I. No. 178, 2008).

101. Patents Regulations, 1991, reg. 2.2(1)(a), (2)(b) (Austl.) ("[A]n official or officially recogni[z]ed international exhibition" is one within the meaning of Article 11 of the Paris Convention or Article 1 of the Convention relating to International Exhibitions.) Article 11(1) of the Paris Convention provides "[t]he countries of the Union shall, in conformity with their domestic legislation, grant temporary protection to patentable inventions, utility models, industrial designs, and trademarks, in respect of goods exhibited at official or officially recognized international exhibitions held in the territory of any of them." Paris Convention for the Protection of Industrial Property art. 11(1), Mar. 20, 1883 (as amended on Sept. 28, 1979) [hereinafter Paris Convention]. Article 1 of the Convention Relating to International Exhibitions provides "[a]n exhibition is a display which, whatever its title, has as its principal purpose the education of the public: it may exhibit the means at man's disposal for meeting the needs of civilization, or demonstrate the progress achieved in one or more branches of human endeavor, or show prospects for the future." International Convention Relating to International Exhibitions art. 1, Nov. 22, 1928.

102. Patents Regulations, 1991, reg. 2.2(1)(b) (Austl.).

the inventor's consent by or on behalf of a learned society. . . ."¹⁰³ While each of these prescribed circumstances limits the forum in which these disclosures can be made, the method—oral or written—is not limited.

An oral disclosure may nevertheless be protected. For example, an oral disclosure made by the inventor may be protected by the grace period if subsequently published by or on behalf of a learned society provided the inventor has consented to the publication.¹⁰⁴

Significant restrictions, however, accompany disclosures, even those disclosures made under the prescribed circumstances. First, addressing the third element of a grace period, who can disclose, a disclosure is protected (1) if made by the applicant or with the consent of the applicant in an prescribed circumstance described above or (2) if made by another individual who derived the information from the applicant or the applicant's predecessor in title and he or she disclosed the information without the consent of the applicant.¹⁰⁵ Unlike disclosures made by the applicant, disclosures made by another without the consent of the applicant are not limited to disclosures made in prescribed circumstances.¹⁰⁶

The fourth element further complicates Australia's grace period. Australia's grace period contemplates a very unusual time period. An applicant has twelve months to file a patent application if the applicant makes the disclosure or the disclosure is made with the consent of the applicant under the first of the two prescribed circumstances, that is, publication during a recognized exhibition.¹⁰⁷ In contrast, for publication in a paper written by the inventor and either read before a learned society or published by or on behalf of a learned society, the second of the two prescribed circumstances, the applicant has six months after the first reading or publication.¹⁰⁸ If the applicant files a provisional application within six months after the first reading or publication, the applicant then has an additional twelve months from

103. *Id.* reg. 2.2(2)(c) (emphasis added).

104. See MARK J. DAVISON, ANN L. MONOTTI & LEANNE WISEMAN, *AUSTRALIAN INTELLECTUAL PROPERTY LAW* 431 (2008) ("A broad meaning of 'read' is likely so that it would include an oral explanation of the contents of the written paper with reference to that paper.").

105. See Patents Act, 1990, § 24(1)(b) (Austl.); see also DAVISON, MONOTTI & WISEMAN, *supra* note 104, at 433.

106. See DAVISON, MONOTTI & WISEMAN, *supra* note 104, at 433–34.

107. See Patents Act, 1990, § 24(1)(a) (Austl.); Patents Regulations, 1991, reg. 2.2(1A) (Austl.).

108. See Patents Regulations, 1991, regs. 2.2(2)(d), 2.3(1)(b)(ii) (Austl.).

the filing of the provisional application to file a complete application.¹⁰⁹

Australia is a harmonizing regime because, although it protects both oral and written disclosures, Australian patent law restricts which disclosures the grace period protects. If an individual makes a disclosure without the consent of the applicant, the disclosure is protected regardless of the medium of disclosure. On the other hand, if an applicant or another individual having the consent of the applicant makes a disclosure, the disclosure is protected only if made under one of the two prescribed circumstances. The temporal limit of Australia's grace period is dependent on the medium of the disclosure.

3. Most for the Benefit of Society Driven Regime—European Patent Convention

The EPC, a patent treaty among European Union Member States¹¹⁰ as well as other contracting states,¹¹¹ is the most restrictive regime because it statutorily narrows all of the grace period elements. The EPC provides for only two instances of “non-prejudicial disclosures,”¹¹² that is, a grace period.¹¹³ The first instance of non-prejudicial disclosures encompasses oral disclosures occurring due to “an evident abuse in relation to the applicant or his legal predecessor.”¹¹⁴ This instance is one

109. See *id.* regs. 2.2(2)(d), 2.3(1)(b)(i); see also DAVISON, MONOTTI & WISEMAN, *supra* note 104, at 385–86 (describing generally provisional and complete applications).

110. The European Union is comprised of twenty-seven Member States. GUY TRITTON ET AL., *INTELLECTUAL PROPERTY IN EUROPE* 9 (3d ed. 2008). For a list of the European Union Member States, see European Union—Member States, http://europa.eu/abc/european_countries/index_en.htm.

111. *Id.* at 84–85 (“The EPC provides for a centrali[z]ed prosecution up to grant at the European Patent Office (EPO) of patent applications in respect of Member States. Once granted, it results in the grant of national patents in those Member States which were designated by the applicant.”).

112. Convention on the Grant of European Patents art. 55, Oct. 5, 1973, as amended by the Act Revising the European Patent Convention, Nov. 29, 2000.

113. Some believe that the EPC does not provide a grace period. *E.g.*, IP AUSTRALIA, AUSTRALIAN GOVERNMENT, *REVIEW OF PATENT GRACE PERIOD* 5 (2005); Michael S. Mireles, Jr., *States as Innovation System Laboratories: California, Patents, and Stem Cell Technology*, 28 *CARDOZA L. REV.* 1133, 1174 (2006) (“Currently, the European countries do not have a grace period. . . .”); DANIEL C.K. CHOW & EDWARD LEE, *INTERNATIONAL INTELLECTUAL PROPERTY: PROBLEMS, CASES, AND MATERIALS* 330 (2006) (“Because European patent law currently lacks a grace period and requires absolute novelty, any form of publication, even by the inventor, will destroy novelty and no longer allows for an invention to be patented.”). Others correctly recognize that the EPC provides for a grace period, but find that the “provision is of little practical benefit to inventors who have knowingly disclosed the result of their research before filing an application.” Candi Soames, *Grace Periods and Patentability*, 5 *NATURE REVS. DRUG DISCOVERY* 275, 275 (2006).

114. Convention on the Grant of European Patents, *supra* note 112, art. 55(1)(a); see

of narrow applicability for two reasons. First, the grace period applies only if someone other than the patentee makes the disclosure. Second, the patentee must show a relationship between himself or herself and the discloser.¹¹⁵ Further complicating the analysis, in cases of “evident abuse,” the state of mind of the discloser is important.¹¹⁶

The second instance of non-prejudicial disclosure provides a six-month grace period for disclosures in the form of “display[ing] the invention at an official, or officially recogni[z]ed, international exhibition falling within the terms of the Convention on international exhibitions. . . .”¹¹⁷ Like the first instance, this instance has limited applicability because of the small number of “officially recognized” international exhibitions. For example, there was only one officially recognized international exhibition in 2008.¹¹⁸

The narrowness of the EPC’s grace period is also evident in its novelty provision, which expressly includes in the state of the art types of disclosures that fall inside the grace period boundary of other countries. Article 54(2) of the EPC provides that “[t]he state of the art shall be held to comprise everything made available to the public by means of a written or oral description, by use, or in any other way, before the date of filing of the European patent application.”¹¹⁹

The EPC has the most restrictive and least inventor friendly grace period. The EPC’s grace period protects only “non-prejudicial disclosures.” Because of the strict confines of the EPC’s grace period, one could argue that it is more beneficial to society than any other of the regimes discussed *supra*.¹²⁰ By not encompassing a greater array of

also TRITTON ET AL., *supra* note 110, at 96–97.

115. See TRITTON ET AL., *supra* note 110, at 97 (noting that this requirement can work hardship and stating that the Technical Board of Appeal (TBA) “held that a premature disclosure of an application of the closest prior art document by the Brazilian Patent Office was not an evident abuse . . . because there existed no relationship between the patentee and the Brazilian Patent Office and the disclosure was a mere error”).

116. See Case T-585/92, *Unilever PLC v. Bayer AG*, 1996 E.P.O.R. 579 (“In the case of an abuse, . . . the state of mind of the ‘abuser’ is of decisive importance.”).

117. Convention on the Grant of European Patents, *supra* note 112, art. 55(1)(b).

118. Ancillary Regulation to the European Patent Convention, International Exhibitions as referred to in art. 55 EPC O.J. 2006, 326. The 2008 officially recognized international exhibition was the Water and Sustainable Development Expo held in Zaragoza, Spain from June 14 through September 14, 2008. There are currently no officially recognized international exhibitions slated for 2009 and one for 2010. *Id.* A list of past and future officially recognized international exhibitions for 1981–2010 is available at http://www.epo.org/patents/law/legal-texts/html/anc_reg/en/ap_i_a55_1_b_1979_159.htm.

119. Convention on the Grant of European Patents, *supra* note 112, art. 54(2).

120. But see *supra* Part I.B for a discussion on the role of grace periods in innovation

disclosures, inventions disclosed before the filing of a patent application will enter the public domain.

While many regimes have enacted a grace period, no two grace periods are alike—a few regimes broadly define all the elements of a grace period providing a high level of protection to inventors, and other regimes choose to define narrowly one or more of the elements taking away some of that protection. Grace periods have international implications; therefore, a common grace period is imperative to patent law harmonization.

III. A MODEL GRACE PERIOD: SOLVING THE GRACE PERIOD PROBLEM ON AN INTERNATIONAL LEVEL

A. *Grace Periods and International Law*

Grace periods have patentability implications of great consequence not only at a national level, but also at an international level. An inventor is entitled to protection from an infringer only in the country or countries in which he or she has obtained a patent;¹²¹ thus, an inventor wanting more than just national protection must file multiple applications. An inventor who discloses his or her invention or files a patent application in one country, however, may be barred from subsequently filing an application in another country whose patent law does not provide for a grace period or provides only for a limited grace period.¹²² Although efforts to obtain an international grace period for non-patent application disclosures have not been successful,¹²³ progress has been made when the initial disclosures are in the form of a patent

and growth.

121. See, e.g., 35 U.S.C. § 154(a)(1) (2006) (“Every patent shall contain . . . a grant to the patentee, his heirs or assigns, of the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States or importing the invention into the United States. . . .”); Convention on the Grant of European Patents, *supra* note 112, art. 64(1), (3) (“A European patent shall . . . confer on its proprietor . . . in each Contracting State in . . . which it is granted, the same rights as would be conferred by a national patent granted in that State . . . [and] [a]ny infringement . . . shall be dealt with by national law.”).

122. For example, a U.S. inventor who discloses his or her invention in the United States in a printed publication and files a patent application in the United States five months later cannot subsequently obtain a patent in China, Australia (assuming the second of the two prescribed circumstances does not apply), and under the EPC. See *supra* Parts II.B.2.a, II.B.2.c., II.B.3. A patent may, however, be subsequently obtained in Canada and Japan. See *supra* Parts II.B.1.a, II.B.2.b. If the same inventor waits eight months before filing a U.S. patent application, he would no longer be able to obtain a patent in Japan, which has a six month grace period. See *supra* Part II.B.2.b.

123. See generally Straus, *supra* note 3.

application.

1. Paris Convention

The Paris Convention for the Protection of Industrial Property (Paris Convention)¹²⁴ embodies the “first efforts of several countries to adopt a common approach to intellectual property.”¹²⁵ Article 4 of the Paris Convention provides,

Any person who has duly filed an application for a patent, or for the registration of a utility model, or of an industrial design. . . . in one of the countries of the Union, or his successor in title, shall enjoy, for the purpose of filing in the other countries, a right of priority during the periods hereinafter fixed.

. . . .

Consequently, any subsequent filing in any of the other countries of the Union before the expiration of the periods referred to above shall not be invalidated by reason of any acts accomplished in the interval, in particular, another filing, the publication or exploitation of the invention. . . .

The periods of priority referred to above shall be twelve months for patents and utility models, and six months for industrial designs. . . .¹²⁶

Therefore, the Paris Convention allows an inventor who has filed a patent application in a member country twelve months to file a subsequent application in another member country or countries.¹²⁷ In addition, any disclosures made during the period in between the initial application and any subsequent application do not destroy novelty and cannot be used against the applicant as prior art. As a result, this provision is invaluable for an inventor whose first disclosure of an

124. The Paris Convention was the founding patent convention and embodies the first attempts to harmonize intellectual property. The Paris Convention was first entered into in 1883 and has undergone subsequent amendments, the Stockholm Treaty being the latest in 1967. All European countries and most other countries have acceded. TRITTON ET AL., *supra* note 110, at 62.

125. *Id.*

126. Paris Convention, *supra* note 101, art. 4(A)(1), (B), (C)(1).

127. This twelve-month period is not equivalent to a “grace period” as used in the novelty context. *See supra* INTRODUCTION. This twelve-month period is, instead, often referred to as a “priority period” because the subsequently filed application(s) obtains the filing or priority date of the initial application. *See, e.g.*, JANICE M. MUELLER, AN INTRODUCTION TO PATENT LAW 420 (2d ed. 2006).

invention is in the form of a patent application; however, it is of no value to an inventor who filed a patent application after disclosing his invention.¹²⁸ In summary, under the Paris Convention, an inventor's initial application will not destroy novelty for any application filed in another member country during the subsequent twelve months.

2. The Patent Cooperation Treaty

In addition to the opportunity for an inventor to file subsequent applications under the Paris Convention, an inventor can also file a single international application under the Patent Cooperation Treaty (PCT).¹²⁹ The PCT is an international treaty that “provides a procedural framework for efficiently exploiting the right of priority created by the Paris Convention.”¹³⁰ This option for filing a single international application is available to any inventor who resides in one of the PCT Contracting States.¹³¹ The PCT, like the Paris Convention, permits an inventor who files an international application to claim priority to an application filed in another contracting state during the preceding twelve months.¹³² After filing an international application, the inventor then has eighteen months to determine which contracting state(s) he or she would like to have the application prosecuted in and to fulfill the national requirements of the state(s)—that is, the inventor has eighteen months to transition from the international phase to a national phase.¹³³ Any disclosures made by the inventor or an independent third party between the filing of the application to which priority is claimed and the filing of the international application and between the filing of the international application and entry into national phase would not be

128. This provision prevents any subsequent disclosures by the inventor and any patent applications or disclosures on the same invention made by a third-party from destroying the novelty of the invention disclosed in the initial patent application. See MUELLER, *supra* note 127, at 421. Conversely, any disclosures made prior to the filing of the first patent application that were within the boundaries of a grace period, thus allowing patentability, could be used against the applicant as prior art.

129. The PCT was signed on June 19, 1970, and became effective on June 1, 1978. Over one hundred countries have acceded to the PCT. TRITTON, *supra* note 110, at 69.

130. MUELLER, *supra* note 127, at 428.

131. World Intellectual Prop. Org., *Protecting Your Inventions Abroad: Frequently Asked Questions About the Patent Cooperation Treaty (PCT)* 5 (2006), available at http://www.wipo.int/freepublications/en/patents/433/wipo_pub_433.pdf.

132. *Id.* at 7–8 (“Generally, patent applicants who wish to protect their invention in more than one country first file a national or regional patent application with their national or regional patent Office, and within [twelve] months from the filing date of that first application . . . they file their international application under the PCT.”).

133. *Id.* at 7–8.

used against the inventor as prior art. In the national phase, each designated contracting state examines the application in accordance with its national or regional patent laws (for example, the EPC).¹³⁴ As a result, any disclosures made prior to the filing of the application to which the inventor claims priority, may destroy novelty if the designated contracting state does not provide a grace period that covers the disclosure made.¹³⁵

Together the Paris Convention and the PCT have traveled a sizable distance down the road to international harmonization by making it more efficient for an inventor to obtain patent protection in multiple countries. However, without the collective recognition of a grace period, an inventor who takes advantage of the grace period provided by his or her resident country (or country of initial filing) cannot realize the full benefit of these treaties.

B. Harmonization

Substantive harmonization of the world's patent laws is an aspiration of the World Intellectual Property Organization (WIPO).¹³⁶ The apparent need for patent law harmonization led WIPO to appoint a Standing Committee on the Law of Patents (SCP) in 1998.¹³⁷ The main achievement of the SCP was the negotiation of the Patent Law Treaty, which addresses patent formalities and procedures.¹³⁸ Shortly after the Patent Law Treaty was adopted, the SCP began discussions on the draft of a Substantive Patent Law Treaty (SPLT).¹³⁹ The SCP released a draft of the SPLT in September 2003. Article 9(1), the grace period provision of the draft, provides,

An item of prior art with respect to a claimed invention shall not affect the patentability of that claimed invention, in so far as that item was included in the prior art on a date during the [12][six] months preceding the priority date of the claimed invention, (i)

134. *Id.* at 7.

135. Novelty is destroyed because the prior art would have an earlier date than the priority date of the application.

136. *See, e.g.*, World Intellectual Property Organization—Substantive Patent Law Harmonization, <http://www.wipo.int/patent-law/en/harmonization.htm>.

137. *See* World Intellectual Property Organization—Standing Committee on the Law of Patents, <http://www.wipo.int/patent-law/en/scp.htm>.

138. *Id.* The Patent Law Treaty was adopted in June 1, 2000, and took effect on April 28, 2005.

139. *Id.*

by the inventor, (ii) by an Office and the item of prior art was contained (a) in another application filed by the inventor [and should not have been made available to the public 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 contained in the item of prior art directly or indirectly from the inventor, or (iii) by a third party which obtained the information contained in the item of prior art directly or indirectly from the inventor.¹⁴⁰

During the tenth session of the SCP in 2004, the United States, Japan, and the European Patent Office drafted a proposal that made harmonization of the definition of grace period one of its four focuses.¹⁴¹ No agreement has been reached on an international grace period; however, the SCP continues to recognize that “unless a uniform grace period at the international level is established, an applicant cannot fully enjoy the benefits of the grace period at the national level, since the disclosure made under certain conditions in one place might affect patentability in other countries.”¹⁴²

Many regimes have recognized the value of grace periods and included some form of a grace period in their patent act. Why have the remaining regimes not followed suit?

C. Arguments against a Grace Period

Opponents of a grace period see a grace period as having a detrimental effect on both the inventor and on third parties.¹⁴³ The grace period is viewed as having a detrimental effect on the inventor because in first-to-file regimes there is a risk that an unrelated inventor will file a patent application during the grace period.¹⁴⁴ The risk is most

140. Standing Comm. on the Law of Patents, World Intellectual Prop. Org. [WIPO], *Draft Substantive Patent Law Treaty*, 23, SCP/10/2 (Sept. 30, 2003) (prepared by the Int'l Bureau) (alterations in original). The brackets in the provision indicate alternate texts. *Id.* at 24.

141. The other three priority items include the definition of prior art, novelty, and inventive step. *Id.*; see also Standing Comm. on the Law of Patents, World Intellectual Prop. Org. [WIPO], *Report*, ¶ 19, SCP/10/11 (June 1, 2005).

142. Standing Comm. on the Law of Patents, World Intellectual Prop. Org. [WIPO], *Report on the International Patent System*, 62–63, SCP/12/3 (Apr. 15, 2008) (prepared by the Secretariat).

143. GALAMA, *supra* note 4, at 11–13.

144. *Id.* at 11; INTELLECTUAL PROP. OFFICE, UNITED KINGDOM, UK CONSULTATION ON PATENTS GRACE PERIODS 6 (2002), available at <http://www.ipo.gov.uk/grace.pdf> [hereinafter UK CONSULTATION ON PATENTS GRACE PERIODS].

prevalent in “hot” fields of technology and in publish or perish environments.¹⁴⁵ Those who oppose the grace period believe that the risk becomes more serious when an inventor wants to file a patent application in another country having another model of a grace period or no grace period at all.¹⁴⁶

The grace period is seen as detrimental to third parties because it prolongs the time of uncertainty, i.e., the time period between the filing of a patent application and when the application is made public.¹⁴⁷ Opponents think that increasing the eighteen-month period of uncertainty by an additional six or twelve months would disrupt the fair balance between the inventor and the public.¹⁴⁸

A few of the major criticisms of grace periods stem from the complexity and lack of understanding of the scope of the grace period in the inventor’s own country and those of other countries in which the inventor wishes to protect his or her invention.¹⁴⁹ Inventors who wish to protect their inventions abroad need to understand both the grace period of their own country and those of the other countries in which they want to file a patent application. Considering the various models of grace periods that regimes have adopted and the intricacies of each individual grace period, this is no small feat. A common grace period, followed by guidance from the world’s intellectual property offices, would solve this problem.

D. A Model Grace Period

When drafting a common grace period, the drafting body (e.g., the SCP) will need to address each of the four elements of a grace period: (1) the type or form of disclosure the grace period will protect; (2) the range of medium in which disclosures may be made; (3) the party that can make the disclosures; and (4) the time in which the disclosures may occur.

1. Element One: Type of Disclosures Protected

When addressing the type of disclosures, the drafting body has a number of options: it can draft a grace period provision that protects

145. GALAMA, *supra* note 4, at 12.

146. *Id.*; UK CONSULTATION ON PATENTS GRACE PERIODS, *supra* note 144.

147. GALAMA, *supra* note 4, at 13; UK CONSULTATION ON PATENTS GRACE PERIODS, *supra* note 144.

148. GALAMA, *supra* note 4, at 13.

149. *See* UK CONSULTATION ON PATENTS GRACE PERIODS, *supra* note 144, at 6.

only written disclosures, only oral disclosures, or both written and oral disclosures. After selecting the type of disclosures it wants to protect, the drafting body then has to decide whether the grace period will encompass all of such type(s) of disclosure(s) or only certain categories within the selected type(s).

In order to support innovation at its roots, i.e., at universities, and above ground, a model grace period would cover both oral and written disclosures; however, it need not absolutely protect both written and oral disclosures. Of the regimes discussed *supra*, Canada and the United States protect both oral and written disclosure without further precincts. China, Australia, and the European Union restrict the form of disclosures in part via element two, the range of medium. Japan's grace period, although it does not protect all oral disclosures, provides adequate protection where it is needed most. Japan's grace period protects presentations in writing, i.e., a presentation at a conference based on a printed publication. Using Japan's grace period as a foundation, a model grace period would protect all written disclosures and limit the protection of oral disclosures to lectures and presentations. These types of oral disclosures typically also include a written disclosure component, such as visual slides, a poster on display, or a handout given to attendees, which would also be protected. In addition, lecturers and presenters usually base their talks on a piece they have authored. In such cases, protecting the written component would be futile if the oral component was not similarly protected, as the oral component would destroy novelty. For all other types of oral disclosures, the burden for protection would shift to the inventor. An inventor would still be able to discuss his or her research with colleagues without forfeiting his or her right to a patent provided those discussions occur under the cloak of confidentiality.

In summary, a model grace period would protect all written disclosures and oral disclosures in the form of lectures or presentations.

2. Element Two: Range of Medium

When addressing the range of medium, the drafting body can choose not to restrict the range of medium or, alternately, to restrict the range of medium to one or more forums. If the drafting body elects to restrict the range of medium to, for example, certain "officially recognized" forums, it will also have to determine who gets to decide which forums are officially recognized, the procedure for obtaining official recognition, and how to inform inventors which forums have been so designated.

The range of medium is the grace period element with the most variance among regimes; therefore, it also imparts the most uncertainty. Neither Canada nor the United States limit the range of medium; therefore, disclosures are protected regardless of where they are made. The grace periods of China, Japan, Australia, and the European Patent Convention all limit the forums where disclosures may be made without destroying novelty, albeit to varying degrees. Japan's range of medium restriction is the least restrictive of the regimes discussed *supra* because the Japan Patent Office has deemed a large number of various types of organization "designated bodies."¹⁵⁰ The European Patent Convention restricts the range of medium the most, limiting the forum for disclosures to "officially recogni[z]ed international exhibition[s]."¹⁵¹ Although the European Union's directory of officially recognized international exhibitions is easily accessible by the public, the number of officially recognized international exhibitions is so limiting that it essentially provides no forum for disclosures.¹⁵²

In order to support innovation at the necessary levels, a model grace period would not restrict the range of medium. In all the regimes that restrict the range of medium discussed *supra*, a division of each regime's government decides which forums are worthy of official recognition.¹⁵³ By allowing the regime's government to determine which forums it wants to recognize, we permit the government, a body likely far removed from science, to play a censorship role. It would be far more beneficial to leave that decision to the scientific community. In the case of written disclosures, which a model grace period would surely protect, the scientific community determines which works of an author will be published in a scientific journal through peer assessment. The research community is also responsible for symposiums on emerging technologies; here, peer assessment plays a role in deciding who should present, another type of disclosure that the proposed grace period would encompass. If a government was the one deciding, a

150. See *supra* note 93 and accompanying text.

151. Convention on the Grant of European Patents, *supra* note 112, art. 55(1)(b).

152. See *supra* note 122 and accompanying text.

153. For example, in China, an "international exhibition sponsored or recognized by the Chinese Government," Patent Law art. 24 (P.R.C.), or "any academic or technological meeting organized by a competent department concerned of the State Council," Implementing Regulations of the Patent Law rule 31 (P.R.C.). In Japan, "at a study meeting held by an academic group designated by the Commissioner of the Patent Office," Patent Act art. 30(1) (Japan), "exhibition held by the Government or a local public entity," *id.* art. 30(3)(1), or an exhibition designated by the Commissioner of the Patent Office, *id.* art. 30(3).

technological field would likely need to be established before it is officially recognized. Therefore, the grace period would not cover presentations made during a gathering of researchers in an emerging field of technology. The researchers in these budding areas of technology are the ones who will benefit the most from interaction with their peers. In addition, a decision whether to officially recognize must be considerate of all fields of technology, even if some regimes do not approve of a particular field.¹⁵⁴

In summary, the model grace period would not restrict the range of medium.

3. Element Three: Who Can Disclose

The drafting body, when addressing the third element of a grace period, who can disclose, may decide to protect only disclosures made by the applicant. Alternatively, the drafting body may broaden the scope of the grace period beyond disclosures made by the applicant and protect disclosures made by someone other than the applicant, with or without requiring that the individual make the disclosure without the consent of the applicant or against the will of the applicant. Regimes such as Canada protect all disclosures made by the applicant or any other individual who received the information directly or indirectly from the applicant.¹⁵⁵ The grace period of other regimes, e.g., Australia, China, and Japan, explicitly includes disclosures made without the consent of the applicant or against the will of the applicant.¹⁵⁶ A model grace period would encompass all disclosures made by the applicant. A grace period that encompasses disclosures made by the applicant allows an applicant to publish and present her research providing an individual benefit, i.e., furthering one's career, and a benefit to society, i.e., releasing the information into the public domain.

The proposed grace period would not protect disclosures made by someone other than the applicant. Although this places an additional burden on the applicant to protect his or her research from others who may disclose the information without consent, the inventor should already be taking the necessary precautions. In addition, it provides an

154. For example, the United States allows the patenting of stem cells while other regimes do not. *See, e.g.*, Convention on the Grant of European Patents, *supra* note 112, art. 53.

155. Patent Act, R.S.C., ch. P-4, § 28.2(1)(a) (Can.).

156. *See* Patents Act, 1990, § 24(1)(a)–(b) (Austl.); Patent Law art. 24(3) (P.R.C.); Patent Act art. 30(1)–(2) (Japan).

incentive for the applicant to disclose his or her research and to file a patent application in a timely fashion. In summary, a model grace period would protect disclosures made only by the applicant.

4. Element Four: Temporal Limit

A model grace period will provide for a temporal limit that addresses both the needs of the inventor and the concerns of the critics of a grace period. In academia, where the pressure to publish is great, a researcher may need the twelve-month grace period in order to discuss the feasibility of obtaining a patent and the invention's commercial potential with the university's technology transfer office. In addition, a twelve-month grace period may encourage the researcher to disclose sooner than he or she would if the grace period was six months. On the other hand, the critics of a grace period are concerned that a twelve-month grace period is more detrimental to third parties than a six-month grace period because it increases the time of uncertainty.¹⁵⁷

Most countries seem to favor a six-month grace period over that of a twelve-month grace period.¹⁵⁸ There is some concern, however, that a six-month grace period is not enough to support the needs of university researchers: "The one-year grace period provides important flexibility to university researchers, many of whom become entrepreneurs through commercializing research initiated in an academic setting."¹⁵⁹ The benefit of a twelve-month grace period outweighs the harm caused by having another six months of uncertainty; therefore, I propose a twelve-month grace period.

5. Proposed Grace Period Provision

An invention will not lose its novelty if, during the twelve months preceding the priority date of the application, one of the following occurs: (1) the applicant discloses the invention in a printed publication; or (2) the applicant presents the invention and the presentation is based on a printed publication or presented in combination with a printed publication.

157. GALAMA, *supra* note 4.

158. See Straus, *supra* note 3. Thirty-seven out of fifty-nine countries are in favor of a six-month grace period. *Id.*

159. Margo Bagley, *The Need for Speed (and Grace): Issues in a First-Inventor-to-File World* 20 (University of Virginia Law School Pub. Law & Legal Theory Working Paper Series, Paper No. 100, 2008), available at <http://law.bepress.com/cgi/viewcontent.cgi?article=1158&context=ualwps>.

CONCLUSION

Grace periods serve important societal goals. Most, if not all, regimes have conceded to the value of a grace period as evidenced by enactment of a grace period. A substantive patent law treaty must include a grace period that balances societal interests with the interests of the inventor. When drafting a grace period provision, the drafting body must address each of the four grace period elements: type of disclosures protected, range of medium, who can disclose, and temporal limit. The contour of each of the individual elements together signifies the level of protection and the resulting cultivation of innovation.

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