

An International Patent Utopia?

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We habitually speak of the “international patent system”. Let us rather call this the “old patent regime”, for the simple reason that it dates back to the Paris Convention, already more than a century old. This old regime is in crisis, as seen in the difficulties with which patent offices are now processing filings. This article will here undertake a thought-experiment, asking: how can the Internet be used to help resolve the crisis?¹

The Old Regime Out of Step

The old patent regime has fallen out of step with technological progress. Mankind started with trial-and-error tinkering and shifted to cumulative experimentation.² In modern times, applied science has helped to industrialise research and development.³ Paradoxically, as this progress has accelerated, it has precipitated the patent crisis. Ever-increasing numbers of ever-more complex filings are swamping patent offices.⁴

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1 Sundry projects to meet the crisis are under study. For examples, see “WIPO Patent Agenda: Options for Development of the International Patent System”, Doc. A/37/6, August 19, 2002 www.wipo.int/eng/document/govbody/wo_gb_ab/pdf/a37_6.pdf; US Patent and Trademark Office, “The 21st Century Strategic Plan”, June 3, 2002 www1.uspto.gov/web/offices/com/strat2001/index.htm.

2 For overviews, see Arnold Pacey, *Technology in World Civilization: A Thousand-Year History* (1990); Paul A. David, “From Keeping ‘Nature’s Secrets’ to the Institutionalization of ‘Open Science’”, Draft of March 23, 2001 www-econ.stanford.edu/faculty/workp/swp01006.pdf.

3 For further analysis, see William Kingston, *Innovation: the Creative Impulse in Human Progress* (1977), pp.91–97; for examples, see Charles Bazerman, *The Languages of Edison’s Light* (1999); Jürgen G. Backhaus, ed., *The Economics of Science Policy: An Analysis of the Althoff System* (1993) 20 *Journal of Economic Studies*, no.4/5.

4 For details, see “WIPO Patent Agenda”, n.1 above, at pp.2–4; Setsuko Asami, “A View toward the Global Patent—Mutual Exploitation of Examination Results” (2002) 27 *A.I.P.P.I. (Japan)* 12 at pp.14–16.

The old regime has not kept pace on critical points: efficiency and transparency.

Patentability criteria and efficiency

The crisis of the old regime can be seen, to start, in the difficulty of efficiently applying patent criteria. In the seventeenth and eighteenth centuries, patent laws were to provide incentives for bringing “new” technologies to a country.⁵ Moving into the nineteenth century, as research and development industrialised, new technologies proliferated and became increasingly entangled with each other. It was then only normal to ask: just how different from prior art should a technology be to attract patent rights, a routine twist in the state of the art or some greater leap forward?⁶ Alongside novelty, non-obviousness or an inventive step began to be required.⁷

This is not the place to debate the theoretical merits of diverse patent criteria.⁸ Here we rather address the practical question: how does applying criteria of non-obviousness or of the inventive step make it difficult to run patent offices efficiently? For example, it becomes all the more difficult to make such delicate determinations credibly in the increasingly dynamic contexts of technological progress.⁹ It is also doubtful that such determinations need to be made for all filings when only a fraction of these filings concern commercially viable technologies.¹⁰ These problems become acute as filings grow in volume and intricacy.

Patent filings and transparency

The crisis also affects the transparency of the old regime. In the eighteenth century, patent applicants began specifying their inventions for public disclosure.¹¹ Such disclosures were to enhance the feedback of technological information that promotes the “progress” of the “useful arts”.¹² Unfortunately, patent law itself can

5 UK Statute of Monopolies, Statutes at Large, 21 James 1, ch. 3, § 6 (1624). For background, see Jeremy Phillips, “The English Patent as a Reward for Invention: The Importation of an Idea” (1982) 3 *Journal of Legal History* 71.

6 See Brad Sherman and Lionel Bently, *The Making of Modern Intellectual Property Law: The British Experience 1760–1911* (1999), pp.150–157 and 176–180.

7 See Hans Ullrich, *Standards of Patentability for European Inventions: Should an Inventive Step Advance the Art?* (1977).

8 For critical analyses, see Dan Burk and Mark A. Lemley, “Is Patent Law Technology-Specific?” (2002) 17 *Berkeley Technology and Law Journal* 1155; John Barton, “Reforming the Patent System” (2000) 287 *Science* 1933.

9 For data on patent procedures in these contexts, see John R. Allison and Mark A. Lemley, “Empirical Evidence on the Validity of Litigated Patents” (1998) 26 *American Intellectual Property Law Association Quarterly Journal* 185; John L. King, “Patent Examination Procedures as Inputs to Patent Quality”, The National Academies, STEP Conference on New Research on the Operation and Effects of the Patent System, October 22, 2001, www7.nationalacademies.org/step/King_paper.doc.

10 For details, see Mark A. Lemley, “Rational Ignorance at the Patent Office” (2001) 95 *Northwestern University Law Review* 1495.

11 For background, see John N. Adams and Gwen Averly, “The Patent Specification: The Role of *Liardet v Johnson*” (1986) 7 *Journal of Legal History* 156.

12 US Constitution, art.I, §8, cl.8. For one Enlightenment view, see Thomas Jefferson, Letter to Isaac McPherson, August 13, 1813, <http://odur.let.rug.nl/~usa/P/tj3/writings/brf/jeft220.htm>.

inhibit disclosures outside filings: patents turn on priority, but pre-filing publications are disfavoured in that they might undercut such priority.¹³ Furthermore, patent offices do not themselves disclose innovations quickly: once a patent application is filed, it normally remains eclipsed under a veil of confidentiality, until it is laid open some 18 months from filing.¹⁴

Different parties often have diverging interests in transparency.¹⁵ Lawyers have to maximise protection, whether by patents or trade secrets. Research directors have to look to the prospective income from innovations. Researchers often gain professional advancement in making their results public. Accordingly, to avoid the forfeiture of priority through disclosure, lawyers all too often have to place researchers in the dilemma: either patent or publish!¹⁶ Some patent laws have instituted legal devices for dulling the horns of this dilemma, such as grace periods and provisional applications.¹⁷ But such exceptions only highlight the general rules of priority and confidentiality that tend to slow down the feedback of innovations into research.¹⁸

Patent offices themselves face a related bind as they are increasingly beset with filings. Indeed, these offices find their vocation as current and complete public libraries of innovations put into question by the proliferation of the very technologies that they are to make transparent.¹⁹ In particular, they risk being caught between delays in processing patent applications and obligations to open patent files in 18 months. Some solution is called for to defuse these pressures.

The Interim Regime: Some Proposals

To distinguish the old patent regime from what is proposed here, call the latter the "interim regime". For the sake of feasibility, we shall try to dovetail the interim regime with the Patent Cooperation Treaty ("PCT") and related practices.²⁰

13 For an example, see the "Allopurinol" decision, *Dr Georg Henning GmbH v The Wellcome Foundation Ltd*, Federal Court of Justice (Germany), October 15, 1974, [1975] G.R.U.R. 131, in English translation in (1976) 7 I.I.C. 105.

14 For examples, see Patent Cooperation Treaty, Arts 21, 30; European Patent Convention, art.93; Japan, Law no.121 of April 13, 1959, as last amended by Law no. 220 of December 22, 1999, §64.

15 For further analysis, see Clarisa Long, "The dissonance of scientific and legal norms" (1999) 13 *Social Epistemology* 165.

16 For a graphic formulation, see European Patent Office, "The seven deadly sins of the inventor: 2. The invention is not kept secret until the date of filing", www.european-patent-office.org/epo/sin/index.htm.

17 For an international example, see Paris Convention for the Protection of Industrial Property, Art.11 (Stockholm Act); for a national example, see United States, Patent Act, 35 U.S.C. §§102(b), 111(b) (2002).

18 For examples, see E.G. Campbell, "Data withholding in academic genetics" (2002) 287 *Journal of the American Medical Association* 473; NHGRI Policy Regarding Intellectual Property of Human Genomic Sequence, April 9, 1996, www.genome.gov/page.cfm?pageID=10000926.

19 Note that inefficiencies in the patent process, and resulting costs, sometimes lead enterprises to engage in so-called defensive publication, which outflanks patent offices as libraries of technologies. For further analysis, see text accompanying n.71 below.

20 For examples, see Asami, n.4 above, at pp.16–18, 20–25; Charles Berman, "A global patent solution comes into view", *Managing Intellectual Property*, October 1999, p.70.

A global first-to-post system

In the old regime, patent offices take filings, hold them locally in closed files for some time, and, typically on successful examination, grant patents effective within national territories. The interim regime would overlay all such systems, both the first-to-invent system and first-to-file systems, with an international first-to-post system.

Research and development set the pace for the interim regime. Research results can now be disclosed via the World Wide Web on globally distributed databases. For example, in the Human Genome Project, new information is posted at local websites tied together into such a global database.²¹ In the interim regime, new technologies would be posted at any of a number of websites that, administered by designated search authorities, would be linked to form a global database. The postings would be dated and accessible on the World Wide Web as soon as they were made.²²

Standards of completeness and novelty

The interim regime would require linking and programming local patent databases into a globally distributed database to facilitate global searches. Only on the request of the poster, coupled with appropriately modest fees, would a search authority examine a posting on the global database.²³ If the data so warranted, the search authority would issue an "interim certificate" that would provide evidence of the completeness of the posting and of the novelty of the posted technology.

Global standards would govern the form of postings. Such standards would be designed to allow the indexing and searching of technologies, including prior art, within the global patent database.²⁴ Meeting the standards would facilitate both the certification contemplated here and private searches, for example, to gather evidence for opposing rights asserted in disputed matters. An interim certificate would, for courts and other decision-makers, provide evidence that a posting was formally complete. Of course, such certification could not *a priori* assure that the posted technology would meet real-world criteria such as enablement. But a certificate of complete disclosure could be weighed as evidence that such criteria were met.²⁵

The interim certificate would also constitute *prima facie* evidence of the global novelty of a technology at

21 For examples, see www.ncbi.nlm.nih.gov and www.ensembl.org/.

22 Such disclosure would moot the need for grace periods, provisional filings, etc. For a critical analysis, see Sven J. R. Bostyn, "International Harmonization of the Patent System" (2002) 27 A.I.P.P.I. (Japan) 310 at pp.385–394.

23 For parallels, see European Patent Convention, Arts 90–96; Japan, Law no. 121 of April 13, 1959, §§48bis–48ter.

24 For information on the International Patent Classification and the Trilateral Concurrent Search Project, moving toward such standards, see respectively www.wipo.int/classifications/en/ipc/preface.htm and www.jpo.go.jp/saikine/tws/twsindex.htm.

25 In any event, controversial requirements, for example, for best-mode disclosures, could be left out. For analysis, see Toshiko Takenaka, "The Best Patent Practice or Mere Compromise: An Overview of the Current Draft of the Substantive Patent Law Treaty and a Proposal for a 'First to Invent' Exception for Domestic Applicants" (2003) 11 *Texas Intellectual Property Law Journal* 259.

posting. To expedite inquiry, it would not be asked whether elements of any prior technology or of the posted technology would have implicitly prompted a hypothetical person of ordinary skill in the art to draw any inference for or against novelty. It would only be necessary to compare the posting to prior art worldwide, element by element, to see whether any new element appeared against the background of "standards for what constitutes prior art [that] are generally already extremely close".²⁶ For reasons already indicated, notably to avoid complicating examinations, the interim regime would not call for any finding of non-obviousness or inventive step.²⁷

Those readers who smell a fine French perfume wafting about the interim regime have good noses. The classic French patent system, born in the 1790s, dated and acknowledged the receipt of filings, but with the caveat that the "Government . . . does not intend to guarantee in any way property in, the merit of, or the success of any invention".²⁸ This French system, granting no presumptively valid patents, left it up to the courts to dispose of infringement and other disputed issues, and litigation was remarkably infrequent.²⁹ What we have chosen to call the "old regime" was internationally based on the Paris Convention of 1883, and its purpose was to co-ordinate national systems for granting patents. The interim regime proposed here would itself grant no patents, but rather co-ordinate data to help deal with infringement and disputes worldwide.

The overall scope and time-scale for remedies

To understand these proposals, consider the stakes of the old regime. This regime puts the patent owner in a position to win the entire jackpot of royalties to be earned in a local jurisdiction for a given invention. Innovators who do not obtain patents may well be cut out of these stakes: most notably, nothing may be left for researchers whose publicly disclosed results might have helped patentees to win jackpots. Nor may much be left for researchers whose comparable technologies were developed at much the same time.³⁰

This old, winner-take-all regime can thus be inequitable. Furthermore, as already indicated, it can discourage the rapid disclosure of research results.³¹ Such counter-productive consequences of the old regime could be aggravated if its stakes were unconditionally globalised. The interim regime would start avoiding such consequences at the level of posting. The old patent regime is comparable to a game of poker, in which claimants first bet with their cards largely hidden. Claimants file applications that normally remain confidential for some time, and not all filings include all

relevantly useful elements. The interim regime would be more like a game of poker that forces one to put all one's cards on the table at once. Recall that global novelty would be certified on the basis of newly disclosed elements of a technology.³² Thus the chances of assuring novelty would go up as more elements were posted.

How to take account, in the interim regime, of such rapid and full disclosure? To understand the remedies needed to this end, we have to look at a larger context. Patent law is just one branch within the entire law of industrial property that protects technologies. Patent law admittedly provides the strongest remedies in the field, but these remedies only cover selected technologies. It is not possible to reform patent law systematically without taking into account the rest of this law of industrial property. For example, a party may now rely on the law of trade secrets to protect a secret technology in initially applying for a patent, but that protection lapses once a patent application has been laid open to the public. Some readers have surely already asked themselves: what would fill in for such trade-secret protection in the interim regime, with its global disclosure upon posting?

Consider so-called hybrid industrial-property rights in sub-patentable technologies. Since the nineteenth century, such rights have been granted in designs and utility models. In the twentieth century, they have been instituted in such diverse subject-matters as integrated-circuit designs and plant varieties.³³ Hybrid rights normally arise in novel technologies that do not necessarily have to be inventive; they generally have shorter terms than do patents; and they call for injunctive and compensatory relief. If such protection covers sub-patentable technologies, *a fortiori* it should cover a technology which, posted with global novelty in the interim patent regime, displays a modicum of utility. On that basis, a safety-net of remedies, substituting for trade-secret protection, could be provided to protect the technology, even across borders. Such a safety-net could extend for a short term, say, five years from posting with novelty, without prejudice to the full patent term of 20 years.³⁴

Some current laws of industrial property are illustrative. Cumulatively with their patent systems, some countries, such as Germany, have instituted utility-model or like systems.³⁵ While patent systems take time to process filings, utility-model and like systems grant

26 "WIPO Patent Agenda", n.1 above, at p.6.

27 See text accompanying nn.5-10 above.

28 Quoted in Jean Foyer and Michel Vivant, *Le droit des brevets* (1991), p.28 (author's translation).

29 See *ibid.* pp.207-208.

30 For another analysis, see John S. Leibovitz, "Inventing a Nonexclusive Patent System" (2002) 111 *Yale Law Journal* 2251.

31 See text accompanying nn.11-19 above. For further analysis, see Mark R. Patterson, "Patent Races with No Entrants", Fordham University School of Law, Research Paper 22, October 2002 http://papers.ssrn.com/paper.taf?abstract_id=336220.

32 See text accompanying nn.26-27 above.

33 For a seminal analysis, see J.H. Reichman, "Legal Hybrids Between the Patent and Copyright Paradigms" (1994) 94 *Columbia Law Review* 2432, and "Charting the Collapse of the Patent-Copyright Dichotomy: Premises for a Restructured International Intellectual Property Regime" (1995) 13 *Cordozo Arts & Entertainment Law Journal* 475.

34 There is nothing magic about this number, which is proposed to provide interim protection while local patent filings are processed. Note that a PCT application, laid open 18 months from a Paris-priority filing date, need not lead to some national filings for up to 30 months from that date, possibly leaving the technology in question without trade-secret protection for some time. See Patent Cooperation Treaty, Arts 21-23.

35 Germany, Utility Model Law of August 28, 1986, as last amended September 2, 1994.

certificates either on filing or on an expedited examination. Thus, “[w]hen an applicant fears [that] his invention may not meet the patentability requirements or when he requires protection until [the] granting of a patent, the possibility of ‘falling back’ on utility model protection provides a useful safety-net for him”.³⁶ Similarly, protection under the global system of the interim regime would continue during a shorter term, while protection under purely local patent systems would, upon proof of requisites like non-obviousness or inventive step, be available for the longer term.

Injunctions against misappropriators

Injunctions give “industrial property” the force of property. They exclude others from that slice of the market which the law reserves to the property owner. In theory, it remains controversial how far injunctive and related relief should extend and where solely compensatory liability should be imposed.³⁷ In practice, in the interim regime, this article proposes a bifurcated approach: courts would enjoin and otherwise sanction misappropriation, while quasi-arbitral instances would settle royalty disputes.

Distinguish between a duplicative infringer, on the one hand, and a contributor to a technology, on the other.³⁸ By a “duplicative infringer” is meant a party who makes, utilises, or markets a protected technology without developing any element of the technology or without improving on that technology. By “contributor” is meant a party who, relative to the claimant, either previously developed and disclosed at least one indispensable element of the technology at issue or subsequently improved on that technology. The interim regime would entitle the first poster of a technology to commence judicial proceedings for infringement, but it would allow for injunctive relief only against duplicative infringers of the technology.³⁹

Ideally, injunctions and other sanctions should not impede the processes of innovation that patent law is to promote. Of course, imposing injunctions only against duplicative infringers would not stifle new technological elements for the simple reason that, by definition, such infringers bring forth no such elements. We have already touched on how present patent rules may discourage contributors to technologies from making their research results public⁴⁰; the threat of injunctions against contributors could keep innovations off the market. Previously contributing parties to a field of technology should therefore be allowed to continue their uses,

much as some prior users may in some first-to-file systems.⁴¹ By the same token, improvements that attract patent rights should not necessarily be enjoined.⁴²

This approach would affect burdens of proof. A poster could give its own evidence of novelty, for example, its own search results. Or the poster could expedite matters, notably in applying for a preliminary injunction, by presenting an interim certificate. In response, a prior contributor could offer evidence of having previously made public a novel element that is incorporated into the posted technology. That prior contributor could then, absent proof to the contrary, defend against an injunction limiting its uses of its novel element, but not against an injunction stopping the use of the entire technology at issue. A later contributor could, on proof of its improvement, defend against an injunction limiting uses of the improvement.

These defences would lie only against injunctions, but not against compensatory awards. Of course, whether or not one is a contributor to a technology, one must pay to use others’ innovations. The first poster of a technology could sue later contributors to that technology and, in theory, in the resulting judicial proceeding, hold such a contributor financially liable for using what the poster had innovated. However, as we shall now argue, litigation is not necessarily the most practical arena for dealing with such monetary issues. Indeed, we shall have to ask: how can we co-ordinate defences to judicial relief with procedures for settling royalty disputes?⁴³

Settling royalty disputes

We thus come to the other task of our bifurcated remedies: shepherding contributors to a technology into settling their disputes. Technologies tend to form “thickets” in which technological elements are so tightly intertwined that one or a number of such elements cannot be properly exploited without licensing others. For this reason and others, patent markets sometimes break down, for example, when a claimant relative to a key element of a technology holds out for unacceptable royalties.⁴⁴

Dispute settlement would help to forestall such market breakdowns. It should also help to level the playing field between contributors, who might not all equally

36 Michael Kern, “Towards a European Utility Model Law” (1994) 25 I.I.C. 627 at pp.644–645.

37 For a framework of analysis, see Guido Calabresi and A. Douglas Melamed, “Property Rules, Liability Rules, and Inalienability: One View of the Cathedral” (1972) 85 *Harvard Law Review* 1089.

38 For a comparable analysis in copyright law, see Paul Edward Geller, “*Hiroshige v Van Gogh*: Resolving the Dilemma of Copyright Scope in Remediating Infringement” (1998) 46 *Journal of the Copyright Society of the USA* 39.

39 In egregious cases of duplicative infringement, injunctions and compensatory awards could be supplemented with deterrent monetary awards. For a comparative analysis, see Gunnar W.G. Karnell, “Gedanken zur Bemessung von Schadensersatzansprüchen bei Patentverletzungen” [1996] G.R.U.R. Int. 335.

40 See text accompanying nn.11–19 above.

41 For examples, see France, Law no. 92–597 of July 1, 1992, on the Intellectual Property Code, as last amended by Law no. 96–1106 of December 18, 1996, art.L. 613–7; Japan, Law no. 121 of April 13, 1959, §79. For further analysis, see John Neukom, “A Prior Use Right for the Community Patent Convention” [1990] E.I.P.R. 165.

42 For an example of US case law with comparable effects, see Robert P. Merges, “Intellectual Property Rights and Bargaining Breakdown: The Case of Blocking Patents” (1994) 62 *Tennessee Law Review* 75 at pp.91–94, 102–105. For an example of a statutory licence to comparable effect, see Japan, Law no. 121 of April 13, 1959, §92.

43 See text accompanying nn.46–47 below.

44 For examples, see Michael A. Heller and Rebecca Eisenberg, “Can Patents Deter Innovation? The Anticommons in Biomedical Research” (1998) 280 *Science* 698; Carl Shapiro, “Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard-Setting”, in Adam B. Jaffe, Josh Lerner, and Stern Scott, eds., *Innovation Policy and the Economy* (2001), Vol.1, p.119, also at <http://faculty.haas.berkeley.edu/shapiro/thicket.pdf>.

afford litigation.⁴⁵ To commence a proceeding to settle royalty disputes, a first poster or other contributor to a technology could specifically serve a notice on still other contributors to that technology. As a further hedge against hold-outs, a general notice could be posted worldwide to call for the settlement of all royalty disputes relative to the technology at issue. On appropriate notice, the other contributors would have a reasonable time to respond and enter dispute settlement. Contributors who fail to enter the proceeding could be made to suffer estoppel effects. For example, they could be precluded from invoking contributors' defences to judicial relief.⁴⁶ In addition, they could be precluded from challenging any dispute-settlement award.

Courts and dispute-settlement panels could shepherd contributors through this process. For example, adjudicating a suit against a party who has entered but then obstructed dispute settlement, a court could respond to that party's bad faith by withdrawing its contributor's defences to judicially granted injunctions; for good-faith participants, the court could suspend imposing monetary awards pending the outcome of dispute settlement. By the same token, a dispute-settlement panel could require a bond to secure eventually awarded royalties, or it could deem its own requirement of such a bond to be satisfied by a bond posted in a prior pending judicial proceeding.

Dispute settlement could include claims in both sub-patentable and patentable technologies. Imagine, for example, the developer of a new but sub-patentable spring used in a pair of mouse-traps attracting patent rights, the prior trap being improved in the later one. The developer of the spring could seek royalties for each inventor's use of the spring; by the same token, the inventor of the prior mouse-trap could seek royalties from the inventor of the improved mouse-trap for use of its prior innovations. Absent agreement between contributors, the dispute-settlement panel could set royalties for the use of all pertinent elements.⁴⁷

Transitional Issues

Any interim regime raises transitional issues. To follow through on our proposals, we now have to analyse such issues and offer solutions. We must ask: how could the old patent regime best be enhanced, if not superseded, by the interim regime?

How to make the changes?

The interim regime could be partially implemented without any change in treaty or statutory law. To start, the computerisation of patent files could be increasingly focused on integrating these files, as well as the postings of new technologies, within a globally distributed database. In addition, WIPO or other agencies could build

up the machinery necessary to settle royalty disputes in all fields of technology.

Assuming a sufficient infrastructure, what treaty provisions, with adequate implementation, would assure the proposed legal effects? A simplified PCT option could result in certifying the completeness of a posting and the novelty of the posted technology, as well as in fixing a priority date.⁴⁸ Note that the interim regime, not making any patent grant, would not predicate the validity of any such grant, so that the issue of validity would not trouble cross-border enforcement.⁴⁹ Accordingly, treaty language could be adapted from general Brussels provisions to assure that an injunction, once issued by a court in one jurisdiction against duplicative infringement that crosses borders, would be enforced by courts in other jurisdictions.⁵⁰ Treaty language adapted from the New York Convention could authorise courts to enforce the awards of dispute-settlement panels.⁵¹ Other provisions could co-ordinate judicial and dispute-settlement remedies.⁵²

Relation back to national systems

Assume that treaty and statutory provisions implemented the interim regime. What consequences would continue to follow from locally granted patents? The interim regime would only overlay the old regime with remedies triggered by interim certificates. Thus, on points where international provisions for the interim regime, or statutes implementing these provisions, were not expressly dispositive, national and regional patent laws and grants would remain the default predicates of protection. Full terms and remedies, as well as limitations and defences, would continue in effect for local patents on the respective territories covered by such patents. For example, an exclusion from patentable subject matter under a local law would preclude full patent protection on the territory governed by that law.⁵³

A technology which has been globally posted in the interim regime could represent prior art relative to subsequent filings in local patent systems. At the same time, the prima facie novelty of such a globally posted technology could eventually fail to overcome the novelty of a technology which was the subject-matter of a filing

48 *Quaere* whether a new rule of global priority should be fashioned more appropriately for the new world of instantaneously global internet postings? See text accompanying n.54 below. The one-year Paris priority period was, of course, developed for the old world of delayed cross-border filings. See Paris Convention, Art.4; Patent Cooperation Treaty, Art.8.

49 For a comparative analysis, see Cláudio R. Barbosa, "From Brussels to The Hague—The Ongoing Process Towards Effective Multinational Patent Enforcement" (2001) 32 I.I.C. 729.

50 That is, Arts 31 *et seq.*, not Art.22(4), of the Council Regulation 44/2001 ([2001] O.J. L12), which supersedes the Brussels Convention on Jurisdiction and the Enforcement of Judgments in Civil and Commercial Matters of September 27, 1968.

51 That is, the Convention on the Recognition and Enforcement of Foreign Arbitral Awards.

52 See text accompanying nn.40–47 above.

53 For an example, see *Harvard College v Canada (Commissioner of Patents)*, Supreme Court (Canada), December 5, 2002, Cite no. 2002 SCC 76, File no. 28155, www.lexum.umontreal.ca/csc-scc/en/rec/html/harvard.en.html.

45 For analysis and data, see William Kingston, "The Case for Compulsory Arbitration: Empirical Analysis" [2000] E.I.P.R. 154.

46 See text accompanying nn.41–43 above.

47 For criteria for setting royalties, see J. H. Reichman, "Of Green Tulips and Legal Kudzu: Repackaging Rights in Sub-patentable Innovation" (2000) 53 *Vanderbilt Law Review* 1744 at pp.1783–1787.

previously made in a local system, even though the posting was made before that filing was laid open to the public.⁵⁴ This result would not necessarily undercut the safety-net of injunctive and related relief that is contemplated here to protect a novel technology for five years from posting. Such protection is based on the availability of comparable remedies for sub-patentable technologies, and such remedies do not everywhere predicate novelty in any absolute sense.⁵⁵ For example, rights in industrial designs typically call for novelty of the designs to be protected, but that novelty may relate only to what has been disclosed to the public.⁵⁶

Ultimately, we have to question the sense of maintaining complicated registration systems for designs, utility models, and other sub-patentable technologies. The interim regime proposed here for patents could be eventually co-ordinated with a comparable first-to-post system adapted to sub-patentable technologies. Articulating rights in patentable and sub-patentable technologies into one regime would help dispute-settlement panels to determine royalties across any given field where both types of rights come into play.⁵⁷

Harmonisation in the case law

Global uniformity among patent laws has become a holy grail.⁵⁸ The interim regime would fall short of such uniformity: it would decentralise procedures among different patent offices and leave the resolution of substantive issues to different courts and dispute-settlement panels. It would represent a compromise with regard to the question: would global uniformity undercut local competence or experimentation?⁵⁹

How much harmonisation could nonetheless be expected? European experience in the domain of patents is edifying in this regard. The Europeans regionalised patent procedures and directed courts to harmonise their substantive readings of patent laws and claims.⁶⁰ Nonetheless, a decade ago, different European courts clashed in reading patent claims in virtually identical cases because, ostensibly, of entrenched jurisprudential differences.⁶¹ Recent case law now takes better account of the need to interpret patents with an eye to

“strengthening co-operation between the signatories to the [European Patent] Convention”.⁶²

The interim regime could similarly harmonise judge-made law. Consider key terms of patent law, for example, “abstract ideas”, “scientific theories”, “mental steps”, “technical character”, “inventive step”, etc. The difficulties surrounding these notions betray uncertainties about basic patent distinctions and criteria that lead into the conceptual black-hole of the patent crisis. There is no assurance that either treaty-makers or legislators can dissipate such uncertainties with purely verbal formulae.⁶³ It is submitted that the courts and dispute-settlement panels would be best left to their own devices on such matters. With time and experimentation, their analyses could well converge on appropriate solutions.⁶⁴

Return to the practical exigencies bearing on a court faced with a petition for a preliminary injunction in a case of cross-border infringement. In this quick-order kitchen, the heat is likely to be intense: there might be hard evidence of infringement in multiple jurisdictions, but only cursory showings of the laws applicable in all these jurisdictions under the facts of the case.⁶⁵ In exercising discretion to fashion remedies on the spot, judges could well base relief on harmonised views of all applicable laws, if only by presuming these laws to conform to shared regional or international standards.⁶⁶ Turn to royalties: dispute-settlement panels would have the chance to harmonise standards on point in decisions that, unlike arbitration decisions, need not be confidential. The panels’ jurisprudence could then be subject to critical refinement by legal scholars and, eventually, by the courts.⁶⁷

Language, litigation, and loose ends

In what language or languages would the interim regime work? A poster could be required to translate basic

54 That is, defensively, the global posting would not necessarily serve as prior art for a previously made but undisclosed filing which, offensively, could be asserted in some systems against the posting. For an example, see US Patent Act, 35 U.S.C. §102(e). Some account has to be taken of Paris priority here. See n.48 above.

55 See text accompanying nn.33–36 above.

56 For an example, see Council Regulation 6/2002, Art.5, [2002] O.J. L3.

57 See text accompanying n.47 above.

58 For diverse points of view, see “WIPO Patent Agenda”, n.1 above, at pp.5–6; Charles Berman, “Moving the patent process into the 21st century”, *Managing Intellectual Property*, March 1997, p.24.

59 For a critical analysis, see John F. Duffy, “Harmony and Diversity in Global Patent Law” (2002) 17 *Berkeley Technology Law Journal* 685.

60 For background, see Dieter Stauder, “The History of Art.69(1) EPC and Art.8(3) Strasbourg Convention on the Extent of Patent Protection” (1992) 23 I.I.C. 311.

61 For this analysis, see Brad Sherman, “Patent Claim Interpretation: The Impact of the Protocol on Interpretation” (1991) 54 *Modern Law Review* 499.

62 *Pharmacia Corporation v Merck & Co Inc*, Court of Appeal (Civil Division) (United Kingdom), December 14, 2001, [2001] EWCA Civ 1610, para.159 (Arden L.J.).

63 For critical analyses, see Burk and Lemley, n.8 above; Allen Newell, “The Models Are Broken, The Models Are Broken!” (1986) 47 *University of Pittsburgh Law Review* 1023.

64 For examples, see Toshiko Takenaka, “Harmonizing the Japanese Patent System with Its U.S. Counterpart Through Judge-Made Law: Interaction Between Japanese and U.S. Case Law Developments” (1998) 7 *Pacific Rim Law & Policy Journal* 249; Graeme B. Dinwoodie, “International Intellectual Property Litigation: A Vehicle for Resurgent Comparativist Thought?” (2001) 49 *American Journal of Comparative Law* 429.

65 On the choice of laws in such cases, see Paul Edward Geller, “International Intellectual Property, Conflicts of Laws, and Internet Remedies” [2000] E.I.P.R. 125.

66 For an example, see *Applied Research Systems Holding NV v Organon*, Court of Appeals, The Hague (Netherlands), February 3, 1994, in English translation in (1997) 28 I.I.C. 558. Note that preliminary injunctions, which would be available only against duplicative infringement under the interim regime, would not typically present many issues, such as equivalents or validity, on which it would be difficult to harmonise laws. See text accompanying nn.38–42 and n.49 above.

67 In this regard, the interim regime would follow the regime for settling disputes concerning domain names. For further analysis, see Laurence R. Helfer and Graeme B. Dinwoodie, “Designing Non-National Systems: The Case of the Uniform Domain Name Dispute Resolution Policy” (2001) 43 *William and Mary Law Review* 141.

information into a linguistically neutral code and to provide an abstract in a commonly used language. This information and abstract would give searchers some basis for deciding whether to have the entire posting translated.⁶⁸

Would the absence of a formal patent grant in the interim regime lead to increased litigation? The interim regime would only facilitate suing for injunctive relief in a small range of cases, those against duplicative infringers. The fact that an enterprise ran the risk of incurring sanctions for misappropriating a technology without due consent would speak well of the commercial viability of the technology. In order to exploit such commercial promise expeditiously, contributors to a technology would do well to compromise their differences. The interim regime would then prompt the contributors to agree among themselves while shepherding them into dispute settlement to set royalties.⁶⁹

Any interim regime leaves loose ends. For example, how would postings, some inevitably flawed or overtaken by a poster's further research, be corrected or amended? Some readers might be tempted to take such loose ends as hooks onto which to add complications to the foregoing proposals. It inevitably takes time and costs money to deal with complexity, for example, to specify references to prior art or to negotiate amendments. Such further procedures, calling for higher fees, could remain as add-ons that particular search authorities could offer at their discretion. It could remain open to third parties to post oppositions that would be linked to posted technologies. Anyone sued or called into dispute settlement could then easily find and invoke these oppositions.⁷⁰

Conclusion

Why would claimants use the interim regime? Consider the phenomenon of defensive publication. Given the costs of patenting in the old regime, many enterprises reveal their technologies to constitute prior art that precludes their competitors from patenting.⁷¹ By posting under the interim regime, innovators could accomplish the same purpose, while they would at the same time hedge their bets with regard to the prospects of protection. They would have recourse to remedies to defend their technologies globally and to procedures to settle royalty disputes expeditiously, and they would preserve their chances to obtain local patents. With increased disclosures, the public would benefit from the more rapid and massive feedback of innovations into research.

But there is a deeper reason for our thought-experiment than providing new, more global options for innovators. This article is intended to provoke reflection about how to prepare for an increasingly volatile future in the field of patents. Whenever we have written "the old regime" above, we have thought: the political *ancien régime* on the eve of the French Revolution. The old patent regime now faces, as that *ancien régime* once did, the threat that its constituents might simply refuse to pay the inexorably rising costs of all its long-held formalities. However utopian, our experiment seems more realistic than attempts to globalise all the old, complicated formalities.

68 A posting could be required to be in a designated language or in one of a number of designated languages. See Patent Cooperation Treaty, Art.3(4)(i); Regulations under the PCT, r.12.

69 For business reasons to reach patent agreements, see Peter C. Grindley and David J. Teece, "Managing Intellectual Capital: Licensing and Cross-Licensing in Semiconductors and Electronics" (1997) 39 *California Management Review* 8.

70 Since the interim regime includes no patent grant, it does not give rise to problems of pre-grant and post-grant oppositions. For further analysis, see Jay P. Kesan, "Carrots and Sticks to Create a Better Patent System" (2002) 17 *Berkeley Technology Law Journal* 763.

71 For one source, see <https://my.ip.com/?ipcomAffiliate=derwent>. For a more expansive analysis, see Oren Bar-Gill and Gideon Parchomovsky, "The Value of Giving Away Secrets", Harvard Law School, Law & Economics Discussion Paper 417, April 2003 http://papers.ssrn.com/paper.taf?abstract_id=404260 and www.law.harvard.edu/programs/olin_center/.