

Harmonization of patent laws

Rajendra K. Bera

Intellectual property is already a big component of global trade and rising. Consequently, the number of cross-border disputes and multiple infringement suits related to patents is also increasing^{1,2}. Their resolution is complicated because the scope and coverage of patent protection differs from country to country. For example, software and business method patents are permitted in some countries but not in others. Even when patent laws are similar in two countries, their interpretation by the courts can vary widely. Furthermore, technologically advanced countries tend to support strong patent protection to encourage further innovation, while others argue that strong patent protection restricts access to new goods and reduces welfare. Thus, under the principle of territoriality, the same set of facts in a patent dispute can lead to conflicting judgments and arguably irreconcilable outcomes when adjudicated in different countries. Consequently, the cost of acquiring, protecting and enforcing patents in multiple countries is high.

National patent laws of most countries embody premises and concepts that were shaped by the Industrial Revolution; they are ill-suited for our information-driven age. Our age deals with inventions that spring from such exotic technologies as nanotechnology, information technology, biotechnology and robotics. Universities, especially in the United States, and to a modest degree in Germany, Japan and South Korea, are no longer bystanders but aggressive seekers and licensors of patents. These new developments plus the necessity to mitigate frictions generated by the territorial nature of patent protection in global trade has created an acute need for harmonization of patent laws and their enforcement. Other perceived benefits include liberalized technology transfer and increased foreign direct investment from developed countries to the developing and underdeveloped countries. Ideally, harmonization would improve the world's capacity to innovate as a whole, which would be greater than the sum from its parts. The World Intellectual Property Organization's proposed Substantive Patent Law

Treaty (SPLT) is an exploratory step in this direction.

Tentative harmonization efforts

The Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) of 1994 is the most notable step taken towards harmonization. It introduced intellectual property law into the international trading system for the first time and nudged signatory countries towards a level of uniformity which most are still struggling to cope with. For example, art. 1.1 leaves member states 'free to determine the appropriate method of implementing the provisions of this Agreement within their own legal system and practice', and a November 2005 decision of the Council for TRIPS allowed least-developed country members to postpone implementation of many TRIPS obligations until 2013. Countries can refuse to patent diagnostic, surgical and therapeutic methods (art. 27(3)(a), as well as those inventions that are required to protect *ordre public*, morality, and human health (art. 27(2)).

TRIPS contains provisions that allow nations some leeway in tailoring their patent system according to their domestic needs, present state of development, and their potential for growth. While it lists an 'inventive step' as one of the requirements for patentable subject matter (art. 27(1)), it does not define the term. Likewise, it defines scope in terms of the nature of the rights conferred (art. 28), but does not set out the breadth of the technological terrain a patent must cover. Such omissions provide space to member states to supply their own definitions of 'inventive step' and determine the scope of patent protection. Subsequent to the trade-negotiation round of the World Trade Organization which commenced in November 2001 in Doha, Qatar, to lower trade barriers around the world, generally known as the Doha Round, TRIPS permits countries to issue compulsory licenses to meet the health needs of nations unable to produce locally needed medicines. In retrospect, the TRIPS Agreement greatly underestimated the

technological catch-up abilities of developing countries in terms of social, administrative, infrastructural and other costs due to their uneven stages of technological advancement. This is particularly true for pharmaceutical products in countries lacking local manufacturing ability.

Aside from TRIPS, the Patent Cooperation Treaty, and various regional agreements, such as the Convention on the Grant of European Patents and the African Intellectual Property Organization are attempts to harmonize various procedural matters. They do not affect the functioning of national patent systems. A draft European Patent Litigation Agreement is under consideration too.

In 1983, the patent offices of the US, Europe and Japan (Trilateral Offices), which together process the vast majority of patent applications filed in the world, entered into a Trilateral Cooperation. The objective: 'Through harmonization and development of industrial property administration and protection of industrial property rights, the Trilateral Offices strive to contribute to an increasingly efficient worldwide patent system in the 21st century'. Regular trilateral meetings are held to discuss sets of representative cases and compare examination practices. Keeping in mind their respective domestic laws, they identify applications where the same examination standards can be applied.

The successes and experiences gained in the patent examination harmonization practices in the Trilateral Cooperation initiative have spawned a set of bilateral initiatives, generally known as the Patent Prosecution Highway agreements, between patent offices of different countries, whereby the participating patent offices share information during patent prosecution with the goal of reducing examination workload and improving the quality of granted patents. Under the Patent Prosecution Highway agreements, if claims of an application have been found acceptable by a first intellectual property office (Office of First Filing), an accelerated examination can be requested at a second intellectual property office (Office of Second Filing). Each

patent application is examined in accordance with the patent act and patent office practice of the respective country conducting the examination. Such pilot bilateral arrangements between the USPTO and patent offices of Australia, Canada, Europe and South Korea were started in 2008; and between the Japan Patent Office and patent offices of UK, Germany and Denmark were started in 2007–08.

Obstacles of harmonization

Experience with the TRIPS Agreement shows that SPLT will need to overcome many hurdles. At the very least, member states would have to agree upon what is 'patentable subject matter', and settle upon common definitions of and articulated standards for terms such as 'novelty', 'non-obviousness' (or 'inventive step'), 'useful invention', 'doctrine of equivalents', 'infringement', etc. They would also have to agree upon how much a patent application must reveal about the invention, how to assign priority of invention to inventors (such as the first-to-file or first-to-invent), whether inventors should be accorded a grace period permitting public disclosure of the invention for a certain period prior to filing of the patent application, settle on guidelines for research exemption, and establish standards for analysing infringement and awarding relief. Furthermore, before any implementation of full-scale harmonization occurs, infrastructure capable of interpreting and amending the 'harmonized' law must be in place. This will take many years. On the positive side, even modest levels of harmonization can dramatically lower costs and make sharing of information and examination procedures among national patent offices substantially feasible.

At the implementation level, each member country must be able to internalize agreed-upon intellectual property standards rapidly enough without legally discriminating against other countries, and without disrupting its local needs for products and services and quality of life. This it must achieve irrespective of its location, population size, economic development, history, culture, human or natural resources, R&D infrastructure, ability to provide education, public health, environmental safety, or its ability to compete in the marketplace. Any

missteps could easily lock out for years many states from development opportunities, while locking in current competitive advantages for a few developed nations.

National interests vs harmonization

SPLT is futuristic. Even the US, which possesses unique institutional infrastructure needed to build and administer a strong patent system, is struggling to revamp its national patent system. It has completed three studies – two by the National Academies³ and another by the Federal Trade Commission⁴. In addition, it receives suggestions for change from scholars and judges. So far, the only point of agreement has been the need for reform! Attempts in the last several years to establish a new patent act are yet to succeed. Compounding the problem are the thousands of 'silly' patents granted by the US Patent and Trademark Office since the 1980s, which has left many wondering about the non-obviousness standard followed by it⁵. These patents have jeopardized the smooth functioning of market economies and overburdened the courts. One can only imagine how difficult attaining SPLT would be where non-obviousness would be only one of the many contentious issues and the US would be an important participant. Reichman and Dreyfuss⁶ have succinctly summarized the larger problem:

[T]he worldwide intellectual property system has entered a brave new scientific epoch, in which experts have only tentative, divergent ideas about how best to treat a daunting array of emerging new technologies. The existing system has become increasingly dysfunctional because it operates with a set of rudimentary working hypothesis that have not kept pace with technical change.

For SPLT to succeed, it would be necessary to first set down those fundamental principles that will form the backbone of patent law for all member countries. These principles, *inter alia*, should establish definitions and minimum standards for statutory subject matter, novelty, non-obviousness and utility, the level at which the invention must be described and how claims must be written, the scope of patent protection and adjudicat-

ing procedures. The principles must carefully establish a boundary that will separate the regime that creates exclusive rights from one that controls monopolies. The agreed-upon fundamental principles must then be made difficult to amend. The commercially and economically salient specifics should be left to member nations. This, in principle, can provide the desired continuity and predictability as well as the flexibility needed to respond to economic and societal changes. TRIPS, in its present form, lacks a solid legislative basis for amending intellectual property law to changing needs.

To implement SPLT we propose the creation of two world bodies: one that would decide whether a patent application satisfies the fundamental principles of patentability or not, before national patent offices process it; and the other that would decide whether the fundamental principles of adjudication are satisfied or not before a case goes to a national court. Such an arrangement will provide greater legitimacy to national patent office actions and judicial decisions. The arrangement makes even greater sense when we look at developmental statistics of various countries and how rapidly they are changing⁷. It is then that we realize that seeking global harmonization on all aspects of patent law is a futile exercise, because it will take many years before any form of consensus emerges. And during those years the world would have undergone a dramatic change well beyond the predictive capabilities of any econometric model.

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Rajendra K. Bera is in the International Institute of Information Technology, 26/C, Electronics City, Hosur Road, Bangalore 560 100, India.
e-mail: rbera@iiitb.ac.in