



## PATENT CHALLENGES FOR STANDARD-SETTING IN THE GLOBAL ECONOMY

### Lessons from Information and Communications Technology (2013)

To download a free PDF, visit  
[http://www.nap.edu/catalog.php?record\\_id=18510](http://www.nap.edu/catalog.php?record_id=18510)

#### Background

Standards are technical specifications that describe means of achieving certain beneficial features of products and services. One of their most important functions is to enable components and products designed and produced by different firms to operate and communicate with one another. Such interoperability standards are crucial in information and communications technology (ICT), enabling specialization and economies of scope and scale.

The technologies that enter into ICT standards are often protected by patents owned by firms active in industry-led voluntary standard-setting organizations (SSOs) that may be headquartered in one country but generally operate internationally. SSOs have to manage the tension between owners of technologies, often seeking economic returns on their R&D investments, and technology users seeking access on affordable terms. In general, SSOs encourage or require member firms to disclose patents essential to a standard under development (standard-essential patents or SEPs) and license them to standards implementers under terms commonly referred to as fair, reasonable, and non-discriminatory (FRAND).

#### Study Charge

The U.S. Patent and Trademark Office (USPTO) asked the National Research Council (NRC) to survey a sample of SSO patent or intellectual property policies, evaluate their effectiveness in practice, and recommend improvements. The USPTO also asked the NRC to report on policies and practices in countries with large markets for technology and aspiring to move their economies into higher value-added production. In addition, the NRC undertook to determine if Patent Office-SSO cooperation might improve both patent examination and the standard-setting process.

#### SSO Patent Policies

The study committee appointed by the NRC chose to examine 12 SSOs<sup>1</sup> operating in the ICT arena and dealing with standards for consumer electronics, microelectronic products and their associated software and components, and communications networks including the Internet. Because these organizations have

<sup>1</sup> International Organization for Standardization (ISO), International Electrotechnical Commission (IEC), International Telecommunications Union (ITU), Institute of Electrical and Electronics Engineers (IEEE), European Telecommunications Standards Institute (ETSI), American National Standards Institute (ANSI), Internet Engineering Task Force (IETF), Organization for the Advancement of Structured Information Standards (OASIS), VMEBus International Trade Association (VITA), World Wide Web Consortium (W3C), High Definition Multimedia Interface Forum (HDMI), and the Nearfield Communications Forum (NCF)

diverse stakeholders and constituents with divergent interests, few articulate clear objectives for their intellectual property rights (IPR) policies or clear criteria for FRAND licensing commitments. Moreover, often the policies lack guidance for litigation over the infringement of SEPs and changes in SEP ownership. In particular, SSO policies often do not address whether a SEPs holder with a FRAND commitment should be able to seek injunctive relief or an order barring import of an allegedly infringing product into the United States and whether FRAND licensing commitments transfer with changes in patent ownership.

## **Recommendations for SSO and Government Policies**

Taking into account the positions of government regulators, evolving case law, and economic theory as well as the SSO survey results, the report recommends that SSOs consider a number of policies with regard to patent disclosure, licensing, litigation and transfer. In some cases, it also recommends actions by government authorities to support these policies.

### ***Interpretation of FRAND***

A FRAND licensing commitment represents more than the patent owner offering a license on terms of its own choice. Both the SEP holder and prospective licensees are expected to negotiate in good faith towards a license on reasonable terms and conditions that reflect the economic value of the patented technology.

- SSOs should be more explicit in their IPR policies regarding their understanding of and expectations about FRAND licensing commitments, including guidance regarding multiple royalty demands that could be an excessively large share of product value when many patents are necessary.
- SSOs should include in their policies statements that implementers and the consumers of their products and services are the intended beneficiaries of licensing commitments made by SSO participants.
- SSOs should clarify that prospective licensees may request a license to some or all FRAND-encumbered SEPs owned or controlled by a patent holder. Licensors may not tie the FRAND commitment and SEPs availability to a demand that a licensee accept a package or portfolio license that includes non-SEPs or SEPs for unrelated standards. Nor may the licensors tie these factors to a requirement that the licensee agree to license back unrelated SEPs or non-SEPs.
- SSOs should clarify that a holder of FRAND-encumbered SEPs may require a licensee to grant a license in return under FRAND terms to the SEPs it owns or controls covering the same standard or, as specified by the SSO, related standards.

### ***Patent Disclosures***

Many aspects of disclosure are subject to tradeoffs for both SSOs and member companies. Although more transparency can reduce uncertainty and legal exposure, disclosures can also entail significant effort and compliance costs. Nevertheless, the report recommends that

- SSOs that do not have a policy requiring FRAND licensing commitments from all participants should have a disclosure element as part of their IPR policy.
- SSOs with disclosure policies should articulate their objectives and define the preferred timing and specificity of disclosures.
- SSOs should make disclosure information available to the public.
- SSOs should consider measures to increase the quality and accuracy of disclosure data, for example, by including updating requirements.

### ***Transfer of Patents with Licensing Commitments***

Changes in ownership of patents, including SEPs, are increasingly common through both market sales and bankruptcy proceedings. Statutes and judicial rulings provide only partial guidance regarding the obligations and rights of transferors and transferees along an extended chain of transactions. The report agrees with U.S. and European competition authorities that a FRAND licensing commitment, once made by a SEP owner, should travel with the patent when it is transferred.

- SSOs should have policies by which successors in interest are bound to whatever licensing commitment the SEP owner made to the SSO and this obligation should cascade through succeeding transfers.
- Legislation, case law, or other legal mechanisms should tie licensing commitments to FRAND-encumbered patents needed to implement SSO standards.
- Legislation or regulation should require public recordation with the USPTO of all patent transfers, and the record should identify the real party in interest.
- SSOs should develop guidelines to ensure that the licensing assurances made to them remain with the patent in bankruptcy proceedings and support legislation, if necessary, to that end.

- National competition authorities and negotiators should seek to reduce inconsistencies across national jurisdictions in patent-transfer issues, including in bankruptcy processes.

### ***Injunctive Relief for SEPs Subject to FRAND***

A FRAND commitment should limit a licensor's ability to seek injunctive relief, including a U.S. International Trade Commission exclusion order. To help avoid or resolve disputes and prevent anti-competitive conduct but still ensure reasonable compensation to SEP holders whose patents are infringed, the report makes these recommendations:

SSOs should clarify their policies regarding the availability of injunctions for FRAND-encumbered SEPs to reflect the following principles:

- Injunctive relief conflicts with a commitment to license SEPs on FRAND terms and injunctions should be rare in these cases.
- Injunctive relief may be appropriate when a prospective licensee refuses to participate in or comply with the outcome of an independent adjudication of FRAND licensing terms and conditions.
- Injunctive relief may be appropriate when a SEP holder has no other recourse to obtain compensation.

A majority<sup>2</sup> of study committee members further recommend that

- SSOs should clarify that disputes over proposed FRAND terms and conditions should be adjudicated at a court, agency, arbitration or other tribunal that can assess the economic value of SEPs and award monetary compensation.
- SSOs should also clarify that before a SEP holder can seek injunctive relief, disputes over proposed FRAND terms and conditions should be adjudicated at a court, agency, arbitration, or other tribunal that allows either party to raise any related claims and defenses (such as validity, enforceability and non-infringement).

### **Patent Office-SSO Information Sharing**

Up-to-date information on claims in issued patents and the status of applications can be useful to SSO working groups, and documentation submitted to SSOs represents a potentially valuable collection of prior art for consideration by patent examiners. The European Patent Office (EPO) has agreements with three international standards bodies (ETSI, ITU, and IEEE-SA) to share such information in standardized format. Subject to consideration of how the America Invents Act of 2011 defines prior art for the United States, the report recommends that the USPTO consider making similar arrangements and undertaking joint education programs with leading SSOs.

### **Standards Processes and Policies in China, India and Brazil**

The study committee commissioned papers on how standards policies are evolving in China, India, and Brazil because they are rapidly growing economies and their governments are making substantial commitments to improving national innovation capacities and moving into more knowledge-intensive production. In all three cases, standards policies reflect broader industrial goals, but they are also conditioned by multinational trade norms. This is especially evident in China, where the Standards Administration of China is formulating national policy guidelines that endorse disclosure and FRAND licensing terms but leave a number of definitional and procedural ambiguities. India so far has a less strategic orientation to IP management in standards development but there are emerging aspirations to develop standards to "meet national requirements," generate IPRs, and participate more actively in international standards development. Brazil, too, shows less of a strategic orientation. Its standards institutions are only beginning to come to grips with IPR issues and participation in international standards development.




---

<sup>2</sup> A minority of the committee members supported the status quo in these two respects.

**COMMITTEE ON INTELLECTUAL PROPERTY MANAGEMENT IN STANDARD SETTING PROCESSES:** **Keith Maskus**, *Chair*, University of Colorado at Boulder; **Rudi Bekkers**, Eindhoven University of Technology (Netherlands); **Marc Sandy Block**, IBM Corporation; **Jorge Contreras**, Washington College of Law, American University; **Richard J. Gilbert**, University of California, Berkeley (Emeritus); **David J. Goodman**, Polytechnic Institute of New York (Emeritus); **Amy Marasco**, Microsoft Corporation; **Timothy Simcoe**, Boston University; **Oliver Smoot**, International Standards Organization (Past President); **Richard Suttmeier**, University of Oregon (Emeritus); **Andrew Updegrove**, Gesmer Updegrove, LLP. PROJECT STAFF: **Stephen A. Merrill**, Study Director; **Aqila Coulthurst**, Program Coordinator; and **Cynthia Getner**, Financial Officer.

**The Board on Science, Technology and Economic Policy (STEP)** advises federal, state, and local governments and informs the public about economic and related public policies to promote the creation, diffusion, and application of new scientific and technical knowledge to enhance the productivity and competitiveness of the U.S. economy and foster economic prosperity for all Americans. The STEP board and its committees marshal research and the expertise of scholars, industrial managers, investors, and former public officials in a wide range of policy areas that affect the speed and direction of scientific and technological change and their contributions to the growth of the U.S. and global economies. Website: [www.nationalacademies.org/step](http://www.nationalacademies.org/step).



*Twenty years of contributions to the nation's innovation and competitiveness*

**For more information or copies of this report**, contact the Board on Science, Technology and Economic Policy (STEP) at (202) 334-2200 or visit [www.nationalacademies.org/step](http://www.nationalacademies.org/step). Copies of *Patent Challenges for Standard-Setting in the Global Economy: Lessons from Information and Communications Technology* are also available from the National Academies Press, 500 5<sup>th</sup> Street NW, Washington, DC 20001; (800) 624-6242; [www.nap.edu](http://www.nap.edu).