

A Practical Guide to Patent Policies of Standards Development Organizations

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Abstract

Over the past several years, there has been a surge in litigation over technical standards, standards-essential patents (SEPs), and the patent policies of standards development organizations (SDOs). While this litigation has fueled a cottage industry of commentary by economists, legal scholars, and other pundits, much of this literature is mired in complexity and inaccessible to the engineers and business managers that must make decisions regarding participation in SDOs on a daily basis. This article seeks to explain some of this controversy and the resulting policy decisions that a business manager may be called upon to make for his or her organization when evaluating joining and participating in an SDO.

Decisions, Decisions

One of the most legally significant decisions that a manager must make is whether or not his or her organization should join and participate in a particular SDO. In making this decision, the manager must assess the degree to which the SDO's policies governing patents is consistent with the organization's internal goals, strategy, and policies. In some cases the manager may identify multiple SDOs working in similar areas, and a comparison of their patent policies will be warranted in evaluating which, if any, to join. If an SDO's policies are inconsistent with the organization's policies, then the manager must decide whether he or she should make an exception to normal practice, due to the importance of the standardization effort to the organization's business strategy. Should he or she also provide special instructions or supervision to the organization's participating representatives? Should the organization seek changes to the SDO's patent policy? Should it seek alternative venues for standards development? Or should it perhaps propose the formation of a new SDO having a more acceptable patent policy? To answer these questions, it is critical that managers understand and be prepared to evaluate the implications of SDO patent policies and how they operate in practice.

Background

SDO patent policies began to assume their current shape in the late 1990s, prompted by a settlement that Dell Computer reached with the US Federal Trade Commission (FTC).¹ In the Dell case, the FTC accused Dell of seeking to enforce patents against implementers of a video bus standard after Dell allegedly assured the SDO that it held no such patents. A second wave of policy adoption and updating occurred in the mid-2000s, following litigation involving semiconductor design firm Rambus, Inc.² In this litigation, Rambus was accused of violating the rules of the Joint Electron Device Engineering Council (JEDEC), an SDO in the semiconductor memory field. The *Dell* and *Rambus* cases provided wake-up calls to the standards development community, alerting it both to the possibility of the unscrupulous use of patents by SDO participants, and to the inability of many existing SDO policies to address such conduct. The *Dell* case also highlighted the possible consequences of failing to disclose patents when required by an SDO, even when that failure is inadvertent. In response, many SDOs amended their patent policies to address these issues more clearly. The result is that today, almost all SDO patent policies impose one or both of the following obligations on SDO participants: (1) an obligation to disclose patents essential to implementation of a standard, and/or (2) an obligation to license patents essential to implementation of a standard, either on a royalty-free basis, or on a royalty-bearing basis at rates that are "fair, reasonable and nondiscriminatory" (FRAND).³

Licensing obligations are intended to ensure that standards developers have sufficient information to assess the relative costs and risks of technologies under consideration for standardization. That is, disclosure obligations seek to ensure that standards developers know whether and which patents owned or controlled by their participants cover technologies under consideration, giving them the opportunity to "design around" such patents if they so wish. Likewise, licensing obligations are intended to ensure that such patents will be licensed to implementers of the standard by SDO participants and others on terms that are bounded and understood, at least to some degree. Below we discuss the principal issue that an enterprise should consider when evaluating an SDO's policies in this area.

Disclosure Requirements

Ordinarily, antitrust and competition law risks can arise when groups of competitors share proprietary competitive information. However, due to the widely recognized pro-competitive benefits of interoperability and other standards, SDOs are generally permitted to host groups of competitors who discuss technical issues surrounding standards development. In addition, for many years SDOs have adopted rules requiring or encouraging participants to disclose the existence of patent claims that are likely to cover standardized

technologies developed at the SDO (standards-essential patents or “SEPs”). Often, firms disclosing SEPs are also required to indicate the terms, if any, on which they are willing to license their SEPs to implementers of the SDO’s standards. Within the past decade, a handful of SDOs have also adopted rules requiring or permitting the disclosure of additional licensing terms, including royalty rates, under strictly controlled processes.

Essentiality. In order to comply with antitrust and competition law, almost every SDO patent policy addresses only patents that are deemed to be “essential” or “necessary” to the manufacture or use of products and services conforming to the SDO’s standards. These are called “standards-essential patents” or SEPs. The definition of “essential” is thus critical to determining which patents must be disclosed and licensed. It is important to note, however, that the decision as to whether a particular patent will be deemed essential to a standard is generally left to the patent holder, and the SDO will almost never review or verify whether a patent that a participant declares to be essential actually meets this definition.⁴

Some SDOs restrict the definition of “essential” claims to “required” or “mandatory” elements of a standard, but not to extensions or other optional elements. Some SDOs may consider a patent to be essential only when an implementer implements all of the required elements of a standard, and others may impose obligations even in the case of a partial implementation. Likewise, some SDOs define “essential” to mean “technically essential” to the implementation of a standard (i.e., the relevant product cannot conform to the standard without infringing the patent), whereas others may adopt a broader definition that covers “commercial” essentiality as well (i.e., the standard cannot be implemented in a product in a commercially useful way without infringing the patent).

Scope of Portfolio. The incorporation of disclosure terms into an SDO patent policy represents a classic example of weighing the burdens of an obligation with the benefits anticipated from it. The benefit, as noted above, is the ability for standards developers to choose between alternative technologies on a more informed basis before the marketplace becomes locked in to a standard. The burden is the time and cost for SDO participants to determine whether they have potentially essential claims to disclose. For a small company that participates in only one or a few SDOs and owns only a few patents, the burden may be small. But for companies that own thousands of patents and actively participate in multiple working groups within scores, and even hundreds, of SDOs, the burden can be very great. For such companies, conducting a conscientious patent review in connection with every draft standard could consume the full time of a very large team of attorneys. For this reason, most SDO patent policies state that a complete “patent search” is not required to identify all relevant patents within the participant’s corporate portfolio. Moreover, many SDOs require only that participants disclose patents within the “actual knowledge” of some group of individuals. This group may include the engineers participating in the working group developing the standard, all of the company’s engineers who participate in the SDO, and/or the members of the company’s legal/patent department.

Patents versus Patent Claims. Some SDOs require disclosure of a patent deemed to be essential to a draft standard if the patent contains *any* claim that covers a portion of the relevant standard. Other SDOs require that disclosure be made on a claim-by-claim basis, identifying the specific claim(s) that cover the standard or a relevant sub-part of the standard. While claim-by-claim disclosures may be more useful to SDO working groups, they also impose greater burdens on the organizations making disclosures and introduce more room for inadvertent errors and omissions.

Timing of Disclosure. The timing and formality of disclosure obligations varies among SDOs. While some SDOs require mandatory (participants *shall*) or voluntary (*participants may*, or *are encouraged to*) disclosure as soon as a participant becomes aware of a SEP that it owns or controls, other SDOs require that disclosure be made during a formal review period or “call for patents”, usually around the time that a draft standard is posted for final working group comments or prior to final voting to adopt the standard. Many SDOs also require informal disclosure in response to a statement that is read prior to the start of every in-person and telephonic working group meeting. This is intended to provide early warning of potential essential claims owned by others as well as those owned by participants in the working group. Those making disclosures in response to such “patent calls” are typically not held responsible if their assumptions prove to be false.

Which SEPs Must be Disclosed? Not all SDOs require the disclosure of every SEP held by a participant. Some SDOs only extend disclosure obligations to patent claims that the owner is unwilling to license on a royalty-free or royalty-bearing FRAND basis. In an SDO with only a few working groups, the disclosure obligation may be imposed both on members and non-members of the relevant working group. As SDOs expand the range of their activities, however, they will usually limit disclosure requirements to members of the relevant working group. Once again, this result reflects a balancing of burdens (performing frequent patent reviews in connection with standards in which the participant has no interest) relative to the benefits (desiring to participate in the development of only some of the standards that the SDO creates) associated with participation in a given SDO.

Patent Applications. Some SDOs require that patent applications be disclosed in addition to issued patents. Because patent applications are not public in all jurisdictions, a policy may provide that disclosure can be more general to the extent necessary to avoid the disclosure of trade secrets when an application is not yet public. Disclosure of patent applications requires careful consideration and monitoring, as the claims in an application may be amended before the patent is finally issued. In such cases, some SDOs require a new or updated disclosure, particularly if the changes to the claims impact coverage of the relevant standard.

Licensing Commitments

As noted above, many SDOs require that participants license (or at least offer to license) their SEPs to implementers of the SDO's standards.⁵ The goal of patent licensing commitments is to provide certainty in the marketplace regarding the availability of licenses for essential claims covering a standard. This goal is most often realized by requiring all participants in a given working group (and sometimes all SDO participants) to state whether they will license their SEPs without charge (on terms that are otherwise FRAND), or at rates and other terms that are FRAND. Some patent policies offer the alternative of stating that the participant will not assert its SEPs at all, often referred to as a "non-assertion covenant". Some SDOs do not give their participants a choice regarding which of these approaches to take. Others permit participants to declare that they are unwilling to license certain patent claims (i.e., to "opt out" of the licensing obligation for those claims), which usually results in the relevant working group deciding to avoid or work around those claims.

Duration of Commitments. Patent licensing commitments are generally viewed as perpetual and irrevocable once the relevant standard has been approved by the SDO and published. Such commitments, however, do not typically extend to portions of the same standard that change when the standard is revised, unless the patent holder is still involved with the SDO and bound by its policy.

Rules Applicable to Contributions. Many SDOs distinguish between a participant's SEPs covering its own technical contributions to the SDO, and SEPs that cover *other* participants' contributions. One reason for this distinction is that a contributor is often motivated by an expectation that it will achieve a direct or indirect benefit from the inclusion of its technology or methodologies in a standard, especially in preference to the inclusion of an alternative from one of its competitors. Another reason is that if a participant in a working group were permitted to withhold a license later in the development process, it could result in a long delay while the group backtracked to pursue another course. In order to prevent such tactics, SDO patent policies typically state that once made a contribution cannot be withdrawn, and that a licensing commitment made at the time of that contribution cannot later be changed (for example, from royalty-free to royalty-bearing).

Timing of Licensing Commitments. The disclosure of SEPs and the making of licensing commitments often occur during a formal review period near the end of the standards-development process. That period is often thirty to forty-five days long, and is intended to permit a participant to perform patent portfolio review and business analysis before making a binding commitment to license its SEPs. Sometimes a participant may elect different alternatives for different SEPs, meaning that it might agree to license some of its SEPs for free, some at a reasonable royalty, and some not at all. In order to ensure uniformity of the terms of commitment, many SDOs require participants to make licensing commitments using a standardized "check the box" template to identify its essential patent claims, affected standard sections and desired licensing option(s).

Blanket Disclosures and Commitments. Many SDOs permit their participants to make "blanket" commitments to license their SEPs on FRAND or royalty-free terms, but do not require them to disclose specific patents or claims. Two principal reasons justify this practice. First, if the patent holder is willing to license its SEPs on a FRAND basis, there is less benefit to the marketplace to learn what SEPs that patent holder owns than if such licenses were unavailable. Second, when a participant is permitted to agree to license without disclosure, it is less likely (at least in theory) to review its patent portfolio in detail to determine whether or not it owns any SEPs. Were disclosure required, it is sometimes said, more SEPs would be discovered and more licenses would be required. On the other hand, as noted above, some SDOs require specific disclosure of every SEP, (whether or not the participant has committed to license them) in order to inform working groups and potential implementers about the potential patent landscape of various technical directions, and to enable them to assess the advisability of working around patent-heavy approaches.

Use of Information. SDOs vary in what they do with the information disclosed, and licensing obligations made, during the standards development process. Some restrict access to this data to their participants, while others post the information on a public part of their Web sites. In recent years, pilot efforts have been made in Europe and the US to index such information, not only for the benefit of standards implementers, but also to make it available to patent examiners for use as prior art, thereby helping raise the quality of new patents that are issued. Managers evaluating a given SDO should therefore not only be aware that SDO practices in this regard vary, but also that they may change in the future.

Non-Royalty FRAND Terms. SDOs rarely define the details regarding what FRAND is intended to mean, leaving disagreements on this topic to be resolved in court. Policies will often, however, clarify what is intended in two cases, stating that "defensive suspension (or revocation)" and/or requiring a "reciprocal license," are considered to be consistent with a FRAND licensing obligation. The former term means that an entity with a FRAND licensing obligation may revoke a license if the licensee later asserts one of its own patents against the licensor. Most of these policies permit such "defensive" suspension of a FRAND license if the asserted patent claims would be essential under the same standard as the licensed claims. A few SDOs have gone farther, permitting suspension if the licensor is sued for infringement under any patent at all, but this is uncommon and may raise antitrust/competition law issues. In some cases, all SDO participants with essential claims covering the same standard may be permitted to suspend or revoke their licenses if the licensee asserts its patents against any SDO participant.

Where reciprocal licensing is permitted, the licensor may require that the licensee grant a license-back of its own patents to the licensor. Many SDO policies provide that this requirement extends only to the licensee's SEPs covering the same standard, but some SDO participants have been known to request greater coverage from more patents. Some SDO policies provide that if a participant is

bound by a royalty-free licensing obligation, it may charge a royalty to a licensee that is only willing to extend a royalty-bearing license back to the licensor.

As noted above, some regulators have urged SDOs to provide greater guidance on what a FRAND obligation is intended to mean, and to urge, or require, disputes on this topic to be resolved through alternative dispute resolution mechanisms such as arbitration. One major SDO that has recently updated its patent policy to address some of these concerns is the IEEE-SA. However, the policy amendment process is typically long and contentious, and to date few other SDOs have successfully met this challenge. Managers should nevertheless be alert to the possibility that expanded definitions, and perhaps terms relating to FRAND dispute resolution, may begin to appear with more regularity in the future.

Corporate Family. Managers employed by firms with large and complex corporate structures should pay particular attention to the extent to which the obligations under an SDO patent policy extend to affiliates of their company. Typically, the obligations imposed by the policy will apply in one of two ways. The most common approach is to capture the patents owned only by the entity that participates in the SDO, together with its direct and indirect subsidiaries. Some SDOs, however, apply their policies to the participant's entire corporate family and their aggregate patent portfolios. When a small subsidiary company joins such an SDO, all of its direct and indirect parent and companies will thus be affected. In some cases, the SDO may require the ultimate parent company to enter into a written commitment to be bound by the terms of the patent policy, often by countersigning the membership application or agreement. For a variety of reasons, companies often find that they are unable to obtain such a signature. Some SDOs have mechanisms in place to grant exceptions in such circumstances. Managers should thus pay close attention to an SDO's use of terms such as "Affiliate" and "Related Party."

Controlled Patents. Licensing obligations typically apply to patents that are "controlled" by the SDO participant as well. In this context, "control" usually means that a patent is either owned or co-owned by the participant, or licensed by the participant from a third party with the right to grant sub-licenses. Sometimes, the SDO's policy will limit licensing obligations by excluding patents when the participant is required to obtain the permission of a co-owner, or to pay a third party a royalty, if the patent is sublicensed.

Penalties for Failure to Disclose. Some patent policies specify the consequences of a failure to disclose a SEP within the required time period. Often, the non-disclosing participant will be required to grant a royalty-free or royalty-bearing FRAND license under the non-disclosed SEP(s). If the participant depends on earning licensing revenue from its SEPs, the prospect of granting royalty-free licenses to all implementers of a standard could represent a serious business risk. In addition to licensing penalties, some SDOs will impose other penalties including public reprimand, suspension of participation rights, rejection of the violator's affected technical contribution(s), and, in extreme cases, expulsion from the SDO.

In addition to penalties imposed by the SDO, legal penalties may arise from a failure to disclose an SEP when required by an SDO. In particular, potential licensees may complain to antitrust enforcement agencies that the later assertion of an undisclosed SEP can violate the law (as occurred in the case of Dell Computer, referred to above), or may raise a defense that the non-disclosed SEP(s) are unenforceable when the patent holder seeks to enforce them. For all of these reasons, a firm that discovers that it has failed to disclose an SEP in violation of an SDO's policy may sometimes elect to live quietly with the consequences of this failure and simply refrain from asserting the newly discovered SEP against implementers of the standard in question.

Waivers. Another important issue for managers to note in SDO policies is whether participants are required to waive other rights that they may have. For example, IEEE recently imposed a requirement that participants waive the right to seek an injunction preventing an infringer from making products that comply with the SDO's standards except in certain limited circumstances.⁶ Other SDOs are considering similar measures. The theory behind such requirements is that because FRAND commitments require a SEP holder to agree to grant a license to any implementer of the standard, it is fair to bar the implementer from enforcing its own SEPs against the original licensor when the licensor implements the same standard. Though such waivers are arguably consistent with many of the objectives and policies of SDOs, they can also have a serious impact on the value of an enterprise's patent portfolio. While terms of this nature are currently uncommon, they may become more common in the future.

Patent Transfers. In today's technology marketplace, patents are changing hands with increasing rapidity. It is inevitable that some patents transferred individually or in large portfolio sales, corporate mergers, and other transactions will be subject to commitments regarding licensing or non-assertion in the standards context. The law of various jurisdictions is not entirely settled regarding the effect on such a commitment of the transfer of the underlying patent. Do such pledges automatically travel with patents, binding their new owners, or are they personal commitments binding only on the original promisor unless specifically included in patent transfer documents?

To address the issue of patent transfers, a growing number of SDOs now require that acquirers of SEPs honor commitments made by their previous owners. For example, some SDO policies now require that a participant that wishes to transfer a patent that is subject to a licensing commitment must ensure that the acquirer, and any subsequent holder of the SEP, contractually agree to honor the commitment; other SDOs do not hold the original owner of the SEP responsible if a downstream owner breaks the chain of obligations. While such requirements may benefit the SDO and overall market of firms implementing a standard, they also make it more difficult to sell patents unless careful records of all incurred obligations are created. An organization that is considering joining an SDO with such requirements on transfer should consider the impact, if any, that such requirements could have on its ability to complete an important business transaction that includes SEPs. Such organizations should also take such requirements into account

when evaluating the reliability of potential purchasers of SEPs, as a violation of a patent licensing commitment by a subsequent owner could, under some circumstances, result in liability for the original SEP holder.

Patent Pools. Managers should also be aware that in some cases a “patent pool” may be created in conjunction with (but usually independent of) an SDO. In such a case, the implementer of a standard may be able to acquire the right to license some or all relevant patent claims from a single source and for a single, package price. While such a facility can be useful in a situation where claims essential to the implementation of a standard are owned by multiple parties, only a relatively small number of such pools have been created due to the difficulty of rallying a sufficient percentage of patent owners to the cause and the up-front expense of identifying patents that are “essential” to the standard for inclusion in the pool. Figure 1 illustrates this; the study of standards in a laptop are largely FRAND, secondarily RF (royalty free), and almost no patent pools.⁷

Conclusion

This article summarizes the principal issues that can arise in SDO patent policies, as well as many of the common policy variants that appear throughout the standards-setting field. Familiarity with the common issues, pitfalls and traps for the unwary present in current SDO patent policies can help the manager select which SDOs to participate in, and to manage his or her organization’s participation in multiple SDOs.

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Additional Reading

- American Bar Association Committee on Technical Standardization, *Standards Development Patent Policy Manual*. Chicago: ABA Publishing (Jorge L. Contreras, ed., 2007) – presenting and annotating detailed SDO patent policy provisions for a general audience.
- National Research Council, *Intellectual Property Challenges For Standard-Setting in the Global Economy* (Keith Makus & Stephen Merrill, eds. 2013)—presenting a more detailed analysis of patent issues raised in standards setting.
- The ConsortiumInfo.org MetaLibrary (www.consortiuminfo.org/metalibrary/bycat.php?PID=7), containing (as of this writing) more than 1800 categorized articles relating to standardization, consortia, patent pools and related topics.

¹ *In re. Dell Computer Corp.*, 121 F.T.C. 616 (1996).

² *Rambus, Inc. v. Infineon Technologies AG*, 318 F.3d 1081 (Fed. Cir. 2003), cert. denied, 124 S.Ct. 227 (2003); *In re. Rambus, Inc.*, 2006 WL 2330117, 2006-2 Trade Cas. 75364 at 53 (FTC, Aug. 2, 2006), rev’d, 522 F.3d 456 (D.C. Cir. 2008).

³ Although FRAND is often used to describe royalty rates, the other (non-financial) terms of both royalty-free and royalty-bearing licenses must also be “fair, reasonable and non-discriminatory”.

⁴ This omission may, at first, seem like a dereliction of the SDO’s duty, but SDOs generally have very small staffs who are not technical or patent law experts. Thus, unlike patent pools (discussed below), in which a costly essentiality analysis is conducted for every patent, SDOs allow participants to determine which of their patents are essential, with any disputes left to litigation.

⁵ Of course, SDOs do not have the ability to require non-participants to license SEPs to implementers of their standards on a FRAND (or any other) basis. But because SDO participants are in a position to make contributions to a standard under development and to direct the standard toward their own patent positions, most SDOs view it as important to address SEPs held by participants in order to avoid the unintended inclusion of patented technologies in a standard, especially if licenses to such technology will not be available on acceptable terms.

⁶ IEEE-SA Standards Board Bylaws (2015), <http://standards.ieee.org/develop/policies/bylaws/sect6-7.html>.

⁷ Biddle, Brad and Andrew White & Sean Woods, How Many Standards in a Laptop? (And Other Empirical Questions), 2010 INT’L TELECOMM. UNION SEC. TELECOMM. STANDARDIZATION KALEIDOSCOPE ACAD. CONF. PROC. 123.