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Chapter 4:
Standards and Intellectual Property Rights Policies

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Standards and Intellectual Property Rights Policies

Richard Taffet[1] and Phil Harris[2]

To effectively navigate the standards process, those involved in standards development must understand the role and mission of the relevant standards setting organization. It is also important to know how best to work within the structure of the applicable intellectual property rights (IPR) policies and satisfy the related requirements. This chapter highlights how standards influence technology development. Additionally, the chapter discusses and analyzes various IPR policies, and provides examples of requirements (e.g., disclosure, licensing) to further inform patent professionals, engineers, and others involved standards development.

[1]Morgan, Lewis & Bockius LLP.
[2]Holland & Hart LLP.

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This chapter discusses policies followed by standards setting organizations (SSOs)[3] in connection with the use of intellectual property in standards developed under their authority. These policies, typically, are referred to as "patent policies" or "IPR policies." For traditional open voluntary SSOs—i.e., those with broad memberships that address a wide-array of technical issues relating to a specific field[4]—IPR policies define contractual terms for disclosure and licensing of patents that are essential for standard implementation. Less formal organizations, such as consortia or special interest groups (SIGs)—i.e., those that may be more limited in their membership and focus[5]—may include requirements in their membership agreements that maintain specific obligations and rights of patent holders regarding the availability of their patented technology for use in connection with implementing a standard or specification developed by the organization.

First, this chapter discusses background information concerning the importance of patented technologies in standards to support economic development and innovation, and the role and purposes of SSO IPR policies as well as the relationship of these policies to the standards. Second, this chapter discusses specific terms of IPR policies used in certain SSOs as non-exhaustive examples to illustrate various related aspects and procedures, and provide an overview of different IPR policy models and practices.

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[3]For purposes of this chapter, the term SSO includes standards setting organizations (SSOs) and standards developing organizations (SDOs).

[4]*See* Chapters 2 and 3 of this treatise (discussing standards and standards setting bodies generally).

[5]*See* Chapter 2 of this treatise.

I. The Role and Purposes of Standards-Setting Organizations Intellectual Property Rights Policies

A. Standards Drive Technological Advancement and Innovation

As observed by the United States Department of Justice and Federal Trade Commission:

> Industry standards are widely acknowledged to be one of the engines driving modern economy. Standards can make products less costly for firms to produce and more valuable to consumers. They can increase innovation, efficiency, and consumer choice; foster public health and safety; and serve as a 'fundamental building block for international trade.' Standards make networks, such as the Internet and wireless telecommunications, more valuable by allowing products to interoperate. The most successful standards are often those that provide timely, widely adopted, and effective solutions to technical problems.[6]

The European Commission has similarly explained that "standards support market-based competition and help ensure the interoperability of complementary products and services. They reduce costs, improve safety, and enhance competition. Due to their role in protecting health, safety, security, and the environment, standards are important to the public."[7]

Likewise, SSOs themselves recognize the pro-competitive role played by technical standards. For example, in testimony to the Department of Justice and Federal Trade Commission, then General Counsel of the American National Standards Institute (ANSI) commented:

> The benefits and pro-competitive effects of voluntary standards are not in dispute. Standards do everything from solving issues of product compatibility to addressing consumer safety and health concerns. Standards also allow for the systemic elimination of non-value-added product differences (thereby increasing a user's ability to compare competing products), reduce costs and often simplify product development. They also are a fundamental building block for international trade.[8]

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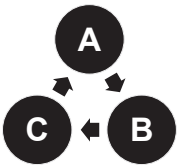
[6]U.S. Dep't of Justice & Fed. Trade Comm'n, Antitrust Enforcement and Intellectual Property Rights: Promoting Innovation and Competition, 33 (Apr. 2007) [hereinafter *2007 IP Report*] (internal citations omitted); *see also* Microsoft Corp. v. Motorola, Inc., 795 F.3d 1024, 1030, 116 USPQ2d 1001 (9th Cir. 2015) ("Standardization provides enormous value to both consumers and manufacturers. It increases competition by lowering barriers to entry and adds value to manufacturers' products by encouraging production by other manufacturers of devices compatible with them.").

[7]European Commission, *Standardisation Policy*, *available at* https://ec.europa.eu/growth/single-market/european-standards/policy_en; *see also* Neelie Kroes, European Commissioner for Competition Policy, Speech at the OpenForum Europe: Being Open About Standards (June 10, 2008), *available at* http://europa.eu/rapid/press-release_SPEECH-08-317_en.htm ("Standards are clearly more important than ever. They often facilitate economies of scale but their real impact on technology markets is with interoperability.... Interoperability encourages competition on the merits between technologies from different companies, and helps prevent lock-in.").

[8]Amy A. Marasco, *Standards Development: Are You At Risk?*, American National Standards Institute, *available at* https://www.ansi.org/news_publications/other_documents/risk?menuid=7#1; *see also* Allied Tube & Conduit Corp. v. Indian Head, Inc., 486 U.S. 492, 501 (1988) ("When ... private associations promulgate safety standards based on the merits of objective expert judgments and

Similarly, as highlighted in Figure 4.1, the International Telecommunication Union (ITU) has extolled the pro-competitive virtues of standards because these standards:

Fig. 4.1. Pro-Competitive Virtues

	Lower the costs to start a company or develop a product;
	Incentivize competitors to innovate both in differentiating their products and streamlining their production methods; and
	Support a "continuous process in markets for standards-based products result[ing] in lower costs to producers and lower prices to consumers."[9]

B. Standards and Intellectual Property Rights Policies Must Balance Competing Interests

For standards to achieve their full pro-competitive potential, it is also widely recognized that they must offer various groups (e.g., implementers, consumers) reasonable access to those technologies that a consensus of SSO members determine to be best suited to provide the technical solution sought, especially in connection with standards relating to high-tech industries—such as those in the information, communications, and technology (ICT) industries.[10] Reliance on and use of patented

through procedures that prevent the standards setting process from being biased by members with economic interests in stifling product competition those, private standards can have significant pro-competitive advantages"). The benefits and pro-competitive effects of standards are many, and users interact with real-world examples daily. As one example, smartphones interoperate with our computers, laptops, home automation or security systems, cars with sophisticated technology, or wearable devices almost constantly. This example, among others, further emphasizes that standards increase competition, increase compatibility, and add value in many ways.

[9]International Telecommunication Union Telecommunications Standardization Bureau, Understanding Patents, Competition & Standardization in an Interconnected World, 8–9 (2014) [hereinafter *ITU Report*], *available at* https://www.itu.int/en/ITU-T/Documents/Manual_Patents_Final_E.pdf (defining the International Telecommunication Union (ITU) as a specialized agency responsible for issues relating to information and communication technologies).

[10]Although this chapter references, analyzes, and discusses various documents, IPR policies, and SSOs related to wireless communications as one example, as the reader will clearly appreciate other non-wireless communications documents, IPR policies, and SSOs (e.g., National Institute of

technology has become imperative. This is because, as recognized by a court in the United Kingdom, "[a]s a society we want the best, most up to date technology to be incorporated into the latest standards and that will involve incorporating patented inventions."[11] And, further, technical standards "seek to reflect the state of the art and … draw[] on the best available technologies to formulate specifications that ensure groundbreaking innovations can be shared across the world."[12]

Consistent with this goal, the European Telecommunications Standards Institute (ETSI)—one of the leading SSOs for developing cellular communications standards—has a long-term strategy to "work[] at the forefront of developing and emerging technologies,"[13] seeking to "support[] the development of new technologies," "encourag[ing] [its] members to bring the results of their research activities [] for standardization,"[14] and "address[ing] the technical issues which will drive the growth and economy of the future and improve life for the next generation."[15]

II. Balancing Interests for Standards and Patents

The reliance on patented technology for successful (i.e., pro-competitive) standards development creates the need to balance two overarching interests: first, ensuring that technology owners are sufficiently incentivized to contribute their patented inventions to the standards development process and to allow their use by standards implementers in making and selling standard-compliant products, and second, ensuring that standards implementers have reasonable access to the patented technology so the pro-competitive attributes of new downstream entry, follow-on innovation, and consumer benefits mentioned above can be realized. Effective SSO IPR policies attempt to balance these different motivations by accommodating the interests of both technology contributors and standards implementers.[16] The Global

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Standards and Technology (NIST)) are also important and highly relevant. These non-wireless communications aspects should also be considered and further analyzed in the context of standards development, but are not analyzed in detail here.

[11]Unwired Planet Int'l Ltd. v. Huawei Tech. Co., Ltd., 2017 EWHC 711 (Pat), No. HP-2014-000005, ¶83 (Apr. 5, 2017); *see also* Microsoft v. Motorola, 696 F.3d 872, 876, 104 USPQ2d 2000 (9th Cir. 2012) ("The catch with standards 'is that it may be necessary to use patented technology in order to practice them.' ").

[12]*ITU Report* at 3.

[13]European Telecommunications Standards Institute, *Vision, Mission & Strategy*, *available at* http://www.etsi.org/about/what-we-do/vision-mission-strategy (defining the European Telecommunications Standards Institute (ETSI) as a "leading standardization organization for Information and Communication Technology (ICT)").

[14]ETSI, *What We Do, Research*, *available at* http://www.etsi.org/about/what-we-do/research.

[15]ETSI, *About ETSI*, *available at* http://www.etsi.org/about.

[16]American National Standards Institute, American National Standards Institute (ANSI) Comments in Response to Public Consultation on Proposed Guidelines for the Assessment of Horizontal Cooperation Agreements Under EU Competition Law, 6 ("The ANSI Patent Policy attempts to strike a balance among the rights of patent holders, the interests of competing

Standards Collaboration (GSC)—a global collaboration of the world's leading SSOs from Europe, North America, Canada, China, Japan, Korea, and Australia—has resolved that its participating SSOs:

> Strongly support the adoption of IPR policies that are transparent, widely accepted and encourage broad-based participation and contribution of valuable technical solutions by respecting intellectual property rights, including the right of the intellectual property holder to receive reasonable and adequate compensation for shared use of its technology.[17]

Some, however, posit that the inclusion of patented technology in a standard creates the potential for anticompetitive "hold-up"—i.e., once a patented technology is included in a standard and is "essential" to implement the standard, it has no substitutes, and the owner of that standard-essential patent (often called an SEP) theoretically could cause anticompetitive harm by seeking to enforce its rights contrary to its commitment to make licenses available.[18] To mitigate this risk, SSO IPR policies typically address disclosure of potentially essential patented technology and seek to obtain licensing commitments from owners of SEPs—i.e., patents that are in fact essential, as described through examples later in this chapter.[19]

If an SSO by its IPR policy, however, were to impose onerous conditions on a SEP owner's ability to benefit from its patents, the ability to have valuable and technology contributed to standards would be inhibited. Outside of the standards arena, a patent holder is not obligated to make its patented technology available. As the Supreme Court has stated, "[a] patent owner is not in the position of a quasi-trustee for the public or under any obligation to see that the public acquires the free right to use the invention. He has no obligation either to use it or to grant its use to others."[20] This is the case, even if the patent owner possesses market power in an antitrust sense.[21]

Accordingly, to achieve the goal of attracting the best available technology, SSO IPR policies must permit patent owners who contribute their technologies to standards the opportunity to realize at least

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manufacturers seeking to implement standards, the consensus of technical experts from different stakeholder groups on the desired content of standards, the concerns and resources of SDOs, the impact on consumer welfare, and the need to avoid unnecessary restrictions that would discourage participation in the standards development process."), *available at* https://www.ftc.gov/sites/default/files/documents/public_comments/request-comments-and-announcement-workshop-standard-setting-issues-project-no.p111204-00006%C2%A0/00006-60458.pdf.

[17] Global Standards Collaboration, GSC #10 Meeting: Partners for Collaboration (2005), *available at* https://www.itu.int/md/T05-SG16-060403-TD-PLEN-0195.

[18] *2007 IP Report* at 35–36.

[19] *2007 IP Report* at 36.

[20] Hartford-Empire Co. v. United States, 323 U.S. 386, 432, 64 USPQ 18 (1945).

[21] Intergraph Corp. v. Intel Corp., 195 F.3d 1346, 1362, 52 USPQ2d 1641 (Fed. Cir. 1999) (even the possession of market owner "'does not impose on a patent owner an obligation to license on specific terms—or to license at all'") (quoting U.S. Dep't of Justice and the Fed. Trade Comm'n, *Antitrust Guidelines for the Licensing of Intellectual Property*, §2.2 (1995), *available at* https://www.justice.gov/atr/archived-1995-antitrust-guidelines-licensing-intellectual-property#t22).

adequate returns on their investment in research and development (R&D) and innovation to promote additional investment. This is commonly understood:

> [It] is vital to reward R&D investment and innovation that would otherwise not be made. The patent system is a tremendously effective mechanism to create incentives to innovate, and reward successful innovation.... Intellectual property protection for technology will always be necessary to give just rewards for investment in R&D. There will always be an important place for proprietary technology and formal proprietary standards.[22]

Supporting these rewards in the standards context is even more vital. Investment in R&D is always risky. It requires significant investment of risk capital, without a guarantee of commercial success, and the exclusivity afforded by patent laws is specifically intended to encourage such investment.[23] When the overlay of standards development occurs, these risks are heightened because an SEP by definition has no substitutes (i.e., no non-infringing alternative that still allows an entity to practice the standard), and thus for a patent owner to succeed in having its technology selected by consensus as "essential" to a standard it must triumph in a winner-take-all contest. The reward for making a technology available for standardization must, therefore, be sufficient enough to incentivize the patent owner to contribute the related technology.

In this regard, Assistant Attorney General for Antitrust, Makan Delrahim, stated that in his view, in fact, the risk of "hold-out"—i.e., threats by implementers to under-invest in the implementation of a standard or to not take a license at all unless their royalty demands are met—is a bigger risk than "hold-up." This is because, he emphasizes, hold-up and hold-out are asymmetric:

> [I]nnovators make an investment before they know whether that investment will ever pay off. If the implementer holds out, the innovator has no recourse, even if the innovation is successful. In contrast, the implementer has some buffer against the risk of hold-up because at least some of its investments occur after royalty rates for new technology could have been determined. Because this asymmetry exists, under-investment by the innovator should be of greater concern than under-investment by the implementer.[24]

Effective SSO IPR policies thus balance the dual goals of ensuring reasonable access to essential technologies for end-implementers and the equally important incentive for innovative companies to contribute their technologies for standardization. Indeed, the need to support SEP

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[22]Neelie Kroes, European Commissioner for Competition Policy, Speech at the OpenForum Europe: Being Open About Standards (June 10, 2008), *available at* http://europa.eu/rapid/press-release_SPEECH-08-317_en.htm.

[23]*See* Paltex Corp. v. Mossinghoff, 758 F.2d 594, 599, 225 USPQ2d 243 (Fed. Cir. 1985) ("[T]he encouragement of investment-based risk is the fundamental purpose of the patent grant....").

[24]Makan Delrahim, Assistant Attorney General, Remarks at the USC Gould School of Law's Center for Transaction Law and Business Conference (Nov. 10, 2017), *available at* https://www.justice.gov/opa/speech/assistant-attorney-general-makan-delrahim-delivers-remarks-usc-gould-school-laws-center.

owner incentives is especially important given the voluntary nature of and participation in standards development. If SEP owners are expected to bind themselves contractually to an SSO's IPR policy,[25] there must be motivation for them to do so.

With limited exception, SSOs strive to achieve the foregoing balance, including expressly in their IPR policies. For example, "the ETSI IPR POLICY seeks a balance between the needs of standardization for public use in the field of telecommunications and the rights of the owners of IPRs."[26] Put differently, its "objective … is to balance the rights and interests of IPR holders and the need for implementers to get access to the technology defined in our standards…."[27] Similarly, the ITU's IPR policy is deliberately intended to "strike a working *balance* between the interests of SEP owners and implementers … by ensuring that owners of intellectual property will be motivated to contribute their patented technologies to the standards-development process and that the standards incorporating these technologies will remain widely available to implementers."[28]

Where at least one SSO has taken a different path, an immediate and observable decrease in a willingness to license essential technology occurred. As part of its efforts to obtain a Business Review Letter from the U.S. Department of Justice in connection with proposed revisions to its Patent Policy, the Institute of Electrical and Electronic Engineers Standards Association (IEEE-SA) clearly clarified to the Department of Justice that "the entire [IEEE-SA] patent policy is itself intended to protect implementers against the risk of holdup…."[29]

Since the IEEE-SA's revised Patent Policy became effective in 2015, many organizations that had disclosed ownership of potentially essential patents have declined to make licensing assurances under the IEEE-SA's revised policy. During the 18-month period from January 1, 2016, to

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[25] *See* Microsoft v. Motorola, 696 F.3d 872, 884–85, 104 USPQ2d 2000 (9th Cir. 2012) (finding that Motorola's licensing commitment to the International Telecommunication Union (ITU) was a contract between it and the SSO, which was enforceable by a third party standards implementer).

[26] ETSI, *Intellectual Property Rights Policy*, §3.1 (Apr. 2017), *available at* http://www.etsi.org/images/files/IPR/etsi-ipr-policy.pdf.

[27] ETSI, *Intellectual Property Rights (IPRs)*, *available at* http://www.etsi.org/about/how-we-work/intellectual-property-rights-iprs.

[28] ITU News, *Balancing Innovation & Intellectual Property Rights In a Standards-Setting Context*, No. 9 (2012), *available at* https://itunews.itu.int/en/3049-Balancing-innovation-and-intellectual-property-rights-in-a-standards-setting-context.note.aspx (emphasis added); *see also* Institute of Electrical and Electronics Engineers Standards Association, *Standards Board Bylaws*, §6.2(b), *available at* http://standards.ieee.org/develop/policies/bylaws/sect6-7.html (defining the Institute of Electrical and Electronics Engineers Standards Association (IEEE-SA) as an organization that develops and advances global technologies, and provides process making SEPs "available … to an unrestricted number of Applicants on a worldwide basis"); ITU, *Intellectual Property Rights (IPR), Common Patent Policy for ITU-T/ITU-R/ISO/IEC*, *available at* http://www.strategicstandards.com/files/ITUPolicy.pdf ("[A] patent embodied fully or partly in a [standard] must be accessible to everybody without undue constraints.")

[29] Letter from Michael A. Lindsay to The Honorable William J. Baer, Assistant Attorney General, U.S. Department of Justice, 2 (Nov. 7, 2014).

June 30, 2017, more than half (53.2 percent) of the Letters of Assurance (LOAs) submitted to the IEEE-SA were "negative LOAs"—i.e., license commitments on the authorized IEEE-SA letter of assurance form in which disclosure was made by the submitter that it owned a potentially essential patent, and indicated that submitter would *not* make licenses available under the terms of the IEEE-SA policy.[30] And, when only letters of assurance related to the IEEE 802.11 (Wi-Fi) standard—the IEEE's most significant standard—are considered, the percentage of negative LOAs is 73.3 percent.[31] How these developments may affect the quality or success of IEEE-SA's standards going forward is unknown at this point. One point of view, however, is that the observable reaction to what IEEE itself has represented is an IPR policy intended to *more likely benefit* standards implementers, which from this point of view appears inconsistent with the generally acknowledged pro-competitive goal of organizations supporting IPR policies that facilitate *reasonable access* to standard-essential patents for implementers.[32] In addition, SSO IPR policies that tip the balance in favor of one interest over another could raise the possibility of greater antitrust risk, among other concerns.[33]

The consequences of the changed IEEE-SA Patent Policy also illustrate the important relationship that SSO IPR policies have with the actual technical content of standards. In short, as illustrated by the developments in IEEE, the scope and requirements of an SSO's IPR policy can influence the technology that will be included in a standard

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[30] *See, e.g.*, Ron D. Katznelson, *The IEEE Controversial Policy on Standard Essential Patents—The Empirical Record Since Adoption* (Oct. 29, 2016, updated Mar. 2017), *available at* https://works.bepress.com/rkatznelson/80/download/ (providing content on new IEEE patent policy and records of IEEE standards); *see also* IEEE-SA, *Records of IEEE Standards-Related Patent Letters of Assurance, available at* https://standards.ieee.org/about/sasb/patcom/patents.html (listing IEEE Standards "for which Letters of Assurance (LOA) have been received from patent owners in accordance with the IEEE-SA Patent Policy").

[31] IEEE-SA, *Records of IEEE Standards-Related Patent Letters of Assurance, available at* https://standards.ieee.org/about/sasb/patcom/patents.html (listing IEEE Standards "for which Letters of Assurance (LOA) have been received from patent owners in accordance with the IEEE-SA Patent Policy").

[32] Under an alternative point of view, it is debatable whether the revised Patent Policy benefits only standards implementers and it would be improper to assume that the revised Patent Policy hinders access to standards essential patents for implementers without evidence indicating reduced access. Additionally, from this alternative point of view, it is important to consider the effect the revised policy will have on the quality of standards, participation in the standard, and adoption of the standard by implementers. At least one study has indicated that there has been no reduction in standardization work. *See* IPlytics, *IEEE Remains Very Active After Patent Policy Change* (Mar. 13, 2017), *available at* http://www.iplytics.com/general/ieee-active-patent-policy-change/ (analyzing how patent policy change has affected the IEEE). This view would also further suggest that there has been no indication that the quality of standards would be reduced under the revised Patent Policy, and it seems likely that alternative designs would be considered more under the revised Patent Policy—thereby enhancing innovation.

[33] Makan Delrahim, Assistant Attorney General, Remarks at the USC Gould School of Law's Center for Transaction Law and Business Conference (Nov. 10, 2017), *available at* https://www.justice.gov/opa/speech/assistant-attorney-general-makan-delrahim-delivers-remarks-usc-gould-school-laws-center (stating "[t]he Antitrust Division will … be skeptical of rules that SSOs impose that appear designed specifically to shift bargaining leverage from IP creators to implementers, or vice versa.").

including participation by different organizations, or at least the terms upon which implementers will be able to gain access to included technology under a license and use that technology without infringement risk. In this sense, IPR policies are inextricably linked to the development of standards because they can determine—either directly or indirectly—the technical content of the standard and the ability of firms to make, use, and sell compliant products.

III. Intellectual Property Rights Policy Examples

A. Overview

To balance the equally important interests of technology innovators and standards implementers, SSOs rely on their IPR policies. SSO IPR policies generally seek the disclosure of patents or patent claims that may be essential for implementation of a standard. Such patents or patent claims, if they are in fact "essential" for such purposes, are typically called "standard-essential patents" or "SEPs" as highlighted above. If a potential SEP is disclosed, SSOs then typically require, or in some cases request, that the SEP owner make a commitment to license the SEP or affirmatively state that it will not make licenses available. A commitment to license creates a contract between the SEP owner and the SSO, the terms of which are defined by the commitment and the terms of the SSO's IPR policy. Standards implementers are third-party beneficiaries under such contracts and can seek appropriate remedies as such.[34]

As the Ninth Circuit has explained in the context of Motorola's participation in an ITU standard,

> Motorola made promises to the ITU to license its standard-essential patents worldwide to all comers. In exchange, it received the benefit of having its patents implicated in the standards. Motorola could have withheld the promise at the price of having the ITU avoid its patents when setting standards, but chose not to.... [I]t is clear that there is a contract, [and] that it is enforceable by [a third party].[35]

Similarly, when the European Commission considered ETSI's IPR policy, it found that "[t]he [fair, reasonable, and non-discriminatory (FRAND)] commitment is a *quid pro quo* for a patented technology to be included in [a] standard."[36]

IPR policies often obligate participants to make certain commitments as a condition of their participation. Thus, although participation in

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[34] *See, e.g.*, Microsoft v. Motorola, 696 F.3d 872, 884, 104 USPQ2d 2000 (9th Cir. 2012) ("Motorola's [reasonable and non-discriminatory (RAND)] declarations to the ITU created a contract enforceable by Microsoft as a third-party beneficiary ....").

[35] *Id.* at 885.

[36] EUR-Lex, *Summary of EU Commission Decision AT. 39985, Motorola—Enforcement of GPRS Standard Essential Patents*, ¶9 (Apr. 29, 2014), *available at* http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52014XC1002(01) (defining fair, reasonable, and non-discriminatory (FRAND) aspects).

many SSOs is voluntary, once membership is attained, adherence to IPR policies associated with the SSO is required. In some cases, these policies require participants to disclose patents that are known to potentially be related to or that may be covered by the standard in development, to commit to license those SEPs to various entities, and to license the patent on FRAND terms.[37] SSO IPR policies and these FRAND terms have been found by courts to be enforceable under contract law.[38]

As enforceable contracts, IPR policies—like other contracts—should clearly reflect the intent of the parties and beneficiaries of the contract. Indeed, that is how they will be interpreted and applied, as the "touchstone of contract interpretation is the parties' intent."[39] It is critical, then, that the specific terms of IPR policies reflect what all valid contracts represent—a consensus of all interested parties that ensures and balances the obligations and rights of stakeholders to serve IPR policy purposes.

Many existing IPR policies have been largely successful in establishing a baseline requirement for the bilateral, commercial negotiation of the licensing of intellectual property rights of technologies that have become the subject of standards. Although some disputes are inevitable and some have led to high-profile litigation, most negotiations have been successful. Thousands of licenses for standards-based intellectual property rights have been negotiated on FRAND terms.

B. Intellectual Property Rights Policies, Negotiation, and Royalty Setting

IPR policies have been generally successful because the FRAND framework has provided participants in standards-setting activities with a workable standard that has some legal certainty. The few courts that have had to interpret and apply FRAND licenses have confirmed that it requires the determination of royalty rate with an unbiased approach that does not tip the analysis toward either accused infringer or innovator; and they have used, as a starting point, the familiar patent reasonable royalty framework of conceptualizing a negotiation between a "willing

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[37] *See, e.g.*, *id.* ("The rules of ETSI impose two main obligation on companies participating in the standard-setting process: (i) to inform ETSI of their essential intellectual property ('IP') in a timely fashion before the adoption of the standard, and (ii) to give a commitment to make their IP available on FRAND terms and conditions.").

[38] *See, e.g.*, Microsoft Corp. v. Motorola, Inc., 795 F.3d 1024, 1056, 116 USPQ2d 1001 (9th Cir. 2015) (finding FRAND-related damages are contractual—not patent—so Federal Circuit precedent not controlling); *see also* TCL Communication Technology Holding Ltd. v. Telefonaktieholaget LM Ericsson, Case Nos. 8:14-CV-00341 JVS-DFMx, 2:15-CV-02370 JVS-DFMx (C.D. Cal. Dec. 22, 2017) (awarding contract damages in enforcement of FRAND commitment). *See generally* Unwired Planet Int'l Ltd. v. Huawei Tech. Co., Ltd., 2017 EWHC 711 (Pat), No. HP-2014-000005, ¶89 (Apr. 4, 2017).

[39] *See, e.g.*, Brief for Qualcomm, Inc. as Amici Curiae Supporting Neither Party, Microsoft Corp. v. Motorola, Inc., 795 F.3d 1024, 1030 (9th Cir. 2015) (No. 14-35393), 2014 WL 4802385, at *9 ("[I]nterpreting what constitutes RAND royalties for a particular SEP must 'give effect' to the mutual intent of the parties at the time they formed their agreement.") (citing Baldwin v. Trailer Inns, Inc., 266 F.3d 1104 (9th Cir. 2001)).

buyer" and "willing seller"—a mechanism that has been in use in some form for more than a century.[40]

For example, in 2013, *Microsoft v. Motorola* found that FRAND royalties should be determined with reference to the evidentiary factors provided for in the seminal *Georgia-Pacific* case, with minor modifications made to adjust for the purpose of a FRAND commitment.[41] Later that year, the *In re Innovatio IP Ventures, LLC Patent Litigation* decision applied the same standard.[42]

In 2014, the Federal Circuit also affirmed the district court's instruction that a jury should determine FRAND royalties, as in all patent infringement cases seeking a reasonable royalty, with reference to the *Georgia-Pacific* factors, unmodified, but also held that courts "must inform the jury what commitments have been made [by a patent holder pursuant to an SSO IPR policy] and of [the jury's] obligation (not just option) to take those commitments into account when determining a [FRAND] royalty award."[43] And in 2017, the United Kingdom determined that FRAND royalties are "terms which a truly willing licensor and truly willing licensee would agree upon in the relevant negotiation in the relevant circumstances absent irrelevant factors such as hold-up and hold-out."[44]

Despite the often-successful negotiations that take place under FRAND, there continues to be much commentary and debate regarding *how* FRAND royalty rates are determined. That debate centers around whether FRAND negotiations unfairly provide intellectual property rights holders with a disproportionate negotiation advantage. But as long as the royalty meets the FRAND requirements (i.e., is fair, reasonable, and non-discriminatory), the risk of hold-up should be sufficiently mitigated.

As described, some objectors believed that the 2015 IEEE IPR policy amendments favored implementers of a standard and upset the critical balance that must be achieved through an IPR policy. Indeed, many

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[40] *Compare* McKeever v. United States, 14 Ct. Cl. 396, 425 (1878) (setting patent damages as "the fair and reasonable value of a license" based upon "such a royalty as it may reasonably be presumed the defendants would have been willing to pay and the claimant to accept if the matter at the outset had gone to an express agreement") *with* Georgia-Pacific Corp. v. U.S. Plywood Corp., 318 F. Supp. 1116, 1120, 166 USPQ 235 (S.D.N.Y. 1970) (establishing evidentiary facts relevant to determining patent reasonable royalties along with reference to the "amount that a licensor (such as the patentee) and a licensee (such as the infringer) would have agreed upon (at the time the infringement began) if both had been reasonably and voluntarily trying to reach an agreement; that is, the amount which prudent licensee—who desired, as business proposition, to obtain a license to manufacture and sell a particular article embodying the patented invention—would have been willing to pay as a royalty and yet be able to make a reasonable profit and which amount would be have been acceptable by a prudent patentee who was willing to grant a license.").

[41] Microsoft Corp. v. Motorola, Inc., No. C10-1823JLR, 2013 WL 2111217, *18–20 (W.D. Wash. Apr. 25, 2013).

[42] *In re* Innovatio IP Ventures, LLC Patent Litig., No. 11 C 9308, 2013 WL 5593609, *4–5 (N.D. Ill. Sept. 27, 2013).

[43] Ericsson, Inc. v. D-Link Sys., Inc., 773 F.3d 1201, 1231, 113 USPQ2d 1001 (Fed. Cir. 2014).

[44] Unwired Planet Int'l Ltd. v. Huawei Tech. Co., Ltd., 2017 EWHC 711 (Pat), No. HP-2014-000005, ¶156 (Apr. 5, 2017).

have argued that these changes went beyond simply providing standards implementers with an unfair advantage and the amendments have the potential for actual *anticompetitive harm*—reflecting an environment that shows the potential for buyers' cartels among potential implementers.[45] This is because the 2014 proposed amendments (resulting in the 2015 IEEE IPR policy amendments) were viewed by some as being the result of an unfair and anticompetitive process—whereby a group of implementers colluded to drive IEEE committee votes to approve the implementer-favorable rules.[46] Indeed, implementers have the ability to engage in anticompetitive behavior by agreeing to force SEP holders to low royalty amounts, or to withhold agreement for the adoption of a standard unless an SEP holder agreed to provide favorable license terms (e.g., sometimes termed "hold-out").[47,48]

The 2015 IEEE amendments, however, are generally viewed as an outlier among SSO IPR policies. Neither ANSI nor ETSI, as other examples, has attempted to overtly define considerations for a FRAND negotiation, nor do they limit the ability of a rights holder from seeking types of relief in a court of law. Nonetheless, the change in policy of IEEE highlights the importance of ensuring that IPR policies safeguard and facilitate negotiations that ensure FRAND royalties.

C. Overview: Intellectual Property Rights Policy Models

SSOs take many forms. They may be regional, national, or international. They may be focused on specific industries or technologies. They may have open membership or may be closed and limited to designated industry participants, special interests, or consortia. In some cases, SSOs have costs associated with membership that also may influence who participates in and in what capacity others participate in the SSO's activities.

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[45] *See* Hill B. Wellford, *Antitrust Issues in Standard Setting*, China Electronics Standardization Institute 2d Annual Seminar on IT Standardization and Intellectual Property, 15 (Mar. 29, 2007), *available at* www.justice.gov/atr/public/speeches/222236.pdf (stating "Buyer-cartel behavior has the real potential to damage innovation incentives, and therefore is properly the subject of antitrust scrutiny.").

[46] Letter from J. Gregory Sidak, Chairman, Criterion Economics, to Reneta B. Hesse, Deputy Assistant Attorney General, re: Business Review Letter for the Institute of Electrical and Electronics Engineers (IEEE) Concerning Proposed Bylaw Amendments Affecting FRAND Licensing of Standard−Essential Patents (Jan. 28, 2015), *available at* //www.criterioneconomics.com/proposed-ieee-bylaw-amendments-affecting-frand-licensing-of-seps.html.

[47] *See, e.g.*, Makan Delrahim, Assistant Attorney General, Remarks at the USC Gould School of Law's Center for Transaction Law and Business Conference (Nov. 10, 2017), *available at* https://www.justice.gov/opa/speech/assistant-attorney-general-makan-delrahim-delivers-remarks-usc-gould-school-laws-center (describing patent "hold-out" as more likely and of greater concern than patent "hold-up").

[48] As an alternative point of view, the IPR policy amendments can also be considered as remedying or mitigating a specific harm—namely patent hold-up—and this goal was cited by IEEE itself. Patent hold-up may be associated with specific harms such as causing possible overcharges to implementers or by causing implementers to "eschew the best technology just because it is patented." Joseph Farrell et al., *Standard Setting, Patent, and Hold-Up*, 74 Antitrust L.J. 604, 608 (2007), *available at* https://faculty.haas.berkeley.edu/shapiro/standards2007.pdf.

SSO IPR policies—like SSOs themselves—similarly vary. This section highlights brief examples and excerpts of some SSO IPR policies and is intended to provide information to patent professionals and others about example IPR policy requirements, structures, mechanisms, and other aspects that may inform advising others, standards development activities, and patent preparation associated with standards.[49] The specific policies highlighted below serve as examples, and are not intended as an exhaustive list, but instead illustrate some relevant objectives, procedures, and methods related to these policies and the parties involved in standards development.

The primary form of an SSO is an open SSO that allows participation in the standardization process by anyone and that publicly discloses its processes, activities, and the related results. Among other aspects, IPR policies for these open, voluntary SSOs have two significant components: (1) rules governing the disclosure of standards essential patents as part of the standards development process, and (2) rules governing the licensing and enforcement of intellectual property related to a standard. Examples of each are addressed in turn.

D. Disclosure

SSO IPR Policies generally require some level of patent disclosure—some are more permissive while others are more stringent. Often IPR Policies address the obligation that the SSO member or participant (e.g., an organization) has to disclose certain information regarding SEPs and the procedure or process that the SSO itself will undertake in conjunction with this disclosure and related activities.[50] A few examples of disclosure requirements included here highlight how different SSOs address this obligation.

First, ANSI's IPR policy states that "[p]articipants in the [] standards development process are *encouraged* to bring patents with claims

[49]Although this section focuses on examples of IPR policies related to different voluntary SSOs, similar analyses and related IPR policy obligations and requirements relate to special interest groups (e.g., often termed SIGs) previously discussed in chapter 3 of this treatise. The primary difference between the voluntary and open SSOs described in this section, and other standards-setting consortia or special interest groups is that the latter are usually private groups with closed memberships and often use private, undisclosed processes and activities. As patent professionals and others may appreciate, many SIGs—like voluntary SSOs—attempt to balance the rights and obligations of promoters, contributors, and adopters using governance documents that have various proscribed requirements, obligations, procedures, and related methods to resolve disputes. Although not specifically analyzed here, patent professionals and others involved in standards development processes should become familiar with SIGs, their IPR policies, and overall positions and strategies—including the interplay of such policies compared with related SSOs.

[50]On a related note, there are costs associated with obtaining standards-essential patents (e.g., research and development, attorney and institutional time and energy required, and government filing fees) as well as the costs of membership and participation in various SSOs. In some cases, the costs associated with these potential activities may influence how an entity or company participates (or elects not to participate) in various SSO and standards-development activities by undertaking a cost-benefit analysis—along with consideration of the various obligations (e.g., disclosure, licensing) that are also addressed here.

believed to be essential to the attention of the ANSI-Accredited" SSO.[51] On its face this policy liberally "encourages" participants to notify the SSO based on the participant's "belief" that patent claims are "believed to be" essential to the standard.[52] The SSO procedure in response to such a notification by a participant and the participant's related obligation, however, are more direct. The policy states that when the SSO receives notice of a patent with potentially essential claims, the SSO:

> *shall* receive from the patent holder … in written or electronic form, either: (a) assurance in the form of a general disclaimer to the effect that such party does not hold and does not currently intend holding any essential patent claim; or (b) assurance that a license to such essential patent claim(s) will be made available to applicants to utilize the license for the purpose of implementing the standard.[53]

Thus, from a disclosure perspective, this procedure requires either a general disclaimer of the patent owner's (e.g., the participant's) otherwise enforceable patent rights or licensing assurance that the patent owner will grant at least limited licenses "for the purpose of implementing the standard."[54]

Second, IEEE's IPR policy in general is more rigorous. It requires that:

> If a Submitter becomes aware of additional Patent Claim(s) … that are [1] owned, controlled, or licensable by the Submitter, and that [2] may be or become Essential Patent Claim(s) for the same IEEE Standard, then such Submitter shall submit a Letter of Assurance stating its position regarding enforcement or licensing of such Patent Claims.[55]

This requirement explains the scope of the Patent Claims[56] that shall be disclosed as those "owned, controlled, or licensable by the Submitter," which extends the disclosure obligation beyond just legal ownership to include those that might be "controlled" or "licensable" by a Submitter.[57]

On a related note, some SSOs have affirmative disclosure-related obligations or knowledge that may be imputed from a company's representative to an organizational member or company itself based on the individual representative's knowledge about relevant patents and related standards. As an example, IEEE's IPR policy states that:

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[51] American National Standards Institute, *ANSI Essential Requirements: Due Process Requirements for American National Standards*, §3.1. (Jan. 2017), *available at* https://share.ansi.org/shared%20documents/Standards%20Activities/American%20National%20Standards/Procedures,%20Guides,%20and%20Forms/2017_ANSI_Essential_Requirements.pdf. (emphasis added) (outlining the patent policy of the American National Standards Institute (ANSI)).

[52] *Id.*

[53] *Id.* at §3.1.1., *available at* https://share.ansi.org/shared%20documents/Standards%20Activities/American%20National%20Standards/Procedures,%20Guides,%20and%20Forms/2017_ANSI_Essential_Requirements.pdf.

[54] *Id.*

[55] IEEE Standards Association, *IEEE-SA Standards Board Bylaws*, §6.2, [hereinafter *IEEE-SA Bylaws*], *available at* http://standards.ieee.org/develop/policies/bylaws/sect6-7.html.

[56] *See IEEE-SA Bylaws* at §6.1 (defining "Patent Claim(s)" to mean one or more claims in issued patent(s) or pending patent application(s)).

[57] *IEEE-SA Bylaws* at §6.2.

> the Submitter [e.g., the company] is deemed to be aware [of potential Essential Patent Claims] *if any of the following individuals who are from, employed by, or otherwise represent the Submitter have personal knowledge of additional potential Essential Patent Claims, owned or controlled by the Submitter, related to a [Proposed] IEEE Standard* and not already the subject of a previously Accepted Letter of Assurance: *(a) past or present participants in the development of the [Proposed] IEEE Standard, or (b) the individual executing the previously Accepted Letter of Assurance.*[58]

Specifically, the policy states that the Submitter is deemed to be aware of the "personal knowledge" of "(a) past or present participants in the development of the [Proposed] IEEE Standard, or (b) the individual executing the previously Accepted Letter of Assurance."[59] The requirement imposes this knowledge on the Submitter, and, in turn, may as a result lead various organizations (e.g., Submitters) to reconcile institutional knowledge with the specific knowledge of the relevant individuals.

Third, the IPR policy of ETSI—one of the Organizational Partners of the 3rd Generation Partnership Project (3GPP)[60]—likewise includes a more affirmative approach to disclosure. ETSI requires that "each MEMBER[61] *shall* use its reasonable endeavours, in particular during the development of a standard or technical specification where it participates, to inform ETSI of essential IPRs in a timely fashion."[62]

This requirement imposes a "reasonable endeavours" standard on each member—although this policy specifically calls out a focus on "the development of a standard or technical specification where [the MEMBER] participates." From an interpretation perspective, the policy states that each specific member shall use *its* reasonable endeavours—which some may argue correlates with what would be reasonable to the specific member itself as opposed to other dissimilar members.

In contrast to ANSI's policy, the proscribed obligation of the member in ETSI's policy is more direct as illustrated by the use of "shall" and ETSI's policy levies a reasonable endeavor burden based on a bona fide (i.e., good faith) basis to notify ETSI.[63] Moreover, this IPR policy goes further than ANSI's by stating that members who submit standards proposals "shall … draw the attention of ETSI to any of that member's IPR[64] which *might be essential if that proposal is adopted*"—as opposed to ANSI's requirement

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[58] *IEEE-SA Bylaws* at §6.2.

[59] *IEEE-SA Bylaws* at §6.2.

[60] *See* Chapter 5, Section II of this treatise for a case study discussing various aspects and information related to 3rd Generation Partnership Project (3GPP).

[61] *See* ETSI, *ETSI Intellectual Property Rights Policy*, §15(9), 43 (Apr. 5, 2017) [hereinafter *ETSI Policy*], *available at* http://www.etsi.org/images/files/IPR/etsi-ipr-policy.pdf (defining "Member" as a member or associate member of ETSI).

[62] *ETSI Policy* at §4.1.

[63] *ETSI Policy* at §4.1.

[64] *See ETSI Policy* at §15(7) (defining "IPR" to mean "any intellectual property right conferred by statute law including applications therefor other than trademarks. For the avoidance of doubt rights relating to get-up, confidential information, trade secrets or the like are excluded from the definition of IPR."). For the purposes of this section, the terms IPR and SEPs are used interchangeably unless otherwise noted.

based on IPR are *believed to be essential* to a standard.[65] Thus, although ANSI's IPR policy requires that participants are encouraged to bring patents with claims "believed to be essential"—which arguably relates to standards that have been sufficiently developed to allow for such a determination—ETSI casts a broader disclosure net that captures more member IPR (e.g., SEPs) that "*might* be essential if that proposal is adopted."

Fourth, on a related note, one interesting subtext of different organizational IPR policies includes the extent of the obligation imposed by distinct, intersecting policies and requirements, and what is actually expected of participants. For example, in certain cases, one organization may have an IPR policy with specific requirements of a certain breadth, while a distinct group (e.g., a regional or international group) may have another IPR policy that imposes different, conflicting—or potentially more permissive—obligations than the first.

A specific example of these intersecting-yet-distinct IPR policies can found in the wireless communications context. As highlighted above, ETSI has its own IPR policy with a specific disclosure requirement.[66] 3GPP—which is composed of several national and regional mobile communication industry groups and standards organizations, including ETSI—has its own IPR policy principles, including a disclosure obligation.[67] But these distinct policies, unfortunately, do not plainly reconcile the differences between themselves. Figure 4.2 contrasts the terms of these disclosure aspects.[68]

Fig. 4.2. Disclosure Requirement Comparison

3GPP Disclosure Requirement	ETSI Disclosure Requirement
The Organizational Partners shall undertake to encourage that their IPR policies are respected by their members (i.e., encourage their members to declare at the earliest opportunity any Intellectual Property Rights which they may have and believe to be essential, or potentially essential, to any ongoing work within 3GPP).	If a Submitter becomes aware of additional Patent Claim(s) that are not already covered by an Accepted Letter of Assurance, that are [1] owned, controlled, or licensable by the Submitter, and that [2] may be or become Essential Patent Claim(s) for the same IEEE Standard, then such Submitter shall submit a Letter of Assurance stating its position regarding enforcement or licensing of such Patent Claims.

[65] *ETSI Policy* at §4.1.

[66] *ETSI Policy* at §4.1.

[67] 3GPP, *Third Generation Partnership Project Agreement*, §3.1, *available at* http://www.3gpp.org/ftp/Inbox/2008_web_files/3gppagre.pdf.

[68] *Compare* 3GPP, *Third Generation Partnership Project Agreement*, §3.1, *available at* http://www.3gpp.org/ftp/Inbox/2008_web_files/3gppagre.pdf (encouraging members to declare any essential intellectual property rights) *with ETSI Policy* at §4.1 (requiring a letter of assurance for claims that are, or may become, essential).

Notably, although 3GPP begins with a more forceful "shall" requirement (i.e., "shall undertake to …"), the affirmative duties are less clear and the actual "obligation" laden on the Organizational Partners is fairly faint. In part, the policy states that the Organizational Partners[69] "shall undertake *to encourage* that their IPR Policies *are respected by their members*." Although unclear from the plain wording of this provision, this requirement—based on the "their" recited in context in this section and other sections of the 3GPP Agreement—suggests that the IPR policy of each Organizational Partner (e.g., ETSI) is or should be respected by that particular Organizational Partner's members (e.g., ETSI shall encourage that its policy is respected by its members).

3GPP's policy further refines this more-permissive obligation by clarifying that it means to "encourage their members to declare *at the earliest opportunity* any Intellectual Property Rights *which they may have and believe to be essential, or potentially essential,* to any ongoing work within 3GPP)."[70] Again, interpreting this description, ETSI appears to be "required" to *encourage* its members to declare essential or potentially essential—which includes a broader base of potentially disclosed—intellectual property rights, including SEPs. The different wording of 3GPP and ETSI, however, as illustrated by the "earliest opportunity" term versus ETSI's "reasonable endeavor" requirement and good faith basis obligation highlighted above, leaves members, standards participants, patent professionals, and others involved in this process to decide how to proceed in the face of these two, distinct obligations.

E. Mechanisms Related to Disclosure

As highlighted by the examples above, SSOs vary in the level of disclosure required for known SEPs. Mechanically, an SSO participant is often required to disclose the existence of standard-essential patents using a formal document, such as a "Letter of Assurance" or a "Declaration" form.[71] The disclosure may require the identification of specific patents that may be covered by a standard, or, in some cases, it may simply allow for a general statement that the participant believes it may own an SEP. For example, ETSI's SEP declaration form requires the identification of specific patents,[72] while, by contrast, ITU does not require the identification of specific patents so long as the participant also agrees

[69]As further discussed in chapter 5 of this treatise, the current Organization Partners include: Alliance for Telecommunications Industry Solutions (ATIS) from the United States, the Association of Radio Industries and Business (ARIB), Telecommunication Technology Committee (TTC) from Japan, China Communications Standards Association (CCSA), the European Telecommunications Standards Institute (ETSI), Telecommunications Standards Development Society, India (TSDSI), and Telecommunications Technology Association (TTA) from Korea.

[70]3GPP, *Third Generation Partnership Project Agreement*, §3.1, *available at* http://www.3gpp.org/ftp/Inbox/2008_web_files/3gppagre.pdf.

[71]*IEEE-SA Bylaws* at §6.2.

[72]*ETSI Policy* at §6.1; *see also* ETSI, *Intellectual Property Rights (IPRs)*, *available at* http://www.etsi.org/about/how-we-work/intellectual-property-rights-iprs (providing information

to license the disclosed patents on a royalty free basis or for a FRAND royalty.[73] Declaration forms or similar documents, in some cases, also require participants to affirm when they do not know of any SEPs in an effort to promote clarity.

Importantly, identifying intellectual property that is or may be essential to a standard may be a timely and costly endeavor—especially for organizations with robust patent portfolios and that invest significantly in R&D. Recognizing the expense involved, many SSOs affirmatively do not require members to conduct patent searches as part of their participation.[74] Although this may introduce uncertainty regarding what intellectual property rights may be covered by a standard, this is by design, and serves as part of the balancing act to incentivize innovator participation in the standards process by avoiding otherwise overly burdensome restrictions.

On a related note, like ETSI, most SSOs do not have official processes or mechanisms for determining whether disclosed patents are truly "essential" to a standard or not.[75] Rather, SSOs depend on patent owners' commitments to license on FRAND terms—in a requirement that complements the disclosure requirement (and is discussed in the next section)—to ensure that even undisclosed patents will be licensed at fair and reasonable rates.

As highlighted by the examples shown here, among others that exist, SSO disclosure obligations are designed to balance the efforts of innovators required to identify relevant intellectual property rights with the need to disclose these rights to others for standards development in a way that is sufficient enough to protect and encourage the standards development process.

F. License Terms

The complementary component of an SSO's IPR policy related to disclosure is the requirement that an SEP holder commits to licensing the intellectual property related to the relevant standards. In broad terms, this licensing—often referenced as FRAND or RAND licensing[76]—alters

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regarding ETSI IPR Online Database and link to "IPR Information Statement and Licensing Declaration Form").

[73] International Telecommunications Union, *General Patent Statement and Licensing Declaration for ITU-T or ITU-R Recommendation*, *available at* https://www.itu.int/dms_pub/itu-t/oth/04/04/T04040000030004PDFE.pdf.

[74] *See, e.g.*, *ETSI Policy* at §4.1 (providing that each member use its "reasonable endeavours" during the development of a standard).

[75] In some cases, some SSOs even affirmatively disclaim such processes related to the SSO's operation and directly state that the SSO will not engage in determining whether any patent is essential to any standard. *See, e.g.*, *IEEE-SA Bylaws* at §6.2 (stating "The IEEE is not responsible for 1. Identifying Essential Patent Claims for which a license may be required; [or] 2. Determining the validity, essentiality, or interpretation of Patent Claims;").

[76] *E.g.*, Unwired Planet Int'l Ltd. v. Huawei Tech. Co., Ltd., 2017 EWHC 711 (Pat), No. HP-2014-000005, ¶89 (Apr. 5, 2017) ("FRAND" is often referred to as "RAND," but "there is no material difference between the two.").

the ordinary licensing rights of a patent holder by (1) altering the right to set a price, because the price must be "fair" and "reasonable"; and (2) altering the ordinary licensing right to exclude others and discriminate between licensees because the licenses must be "non-discriminatory." Most SSOs require owners of IPR (e.g., SEPs) to make licenses available to implementers of the standard on either FRAND or royalty-free (i.e., with zero royalties and often called "FRAND-z" licenses) terms. FRAND-z licenses essentially amount to a disclaimer of certain aspects of the licensors rights (e.g., the right to set a monetary price for the right to practice the intellectual property rights), although a valid, otherwise-enforceable agreement with separate requirements and obligations still exists under the FRAND-z license terms. In addition, SSO IPR policies often accommodate declarations by the owner of even a standard-essential patent that no license will be made available. As such, SSO IPR policies do not create compulsory licensing scenarios. How SSOs deal with such situations is discussed further in this chapter.

This section discusses examples of licensing terms that inform SSO procedures related to these licenses, resolution of potential disputes regarding FRAND licenses, and other aspects.

ANSI, as a first example, provides options for FRAND and FRAND-z licensing. ANSI-accredited standards must include "assurance that a license to such essential patent claim(s) will be made available to applicants desiring to utilize the license for the purpose of implementing the standard."[77] This assurance must be either "under reasonable terms and conditions that are demonstrably free of any unfair discrimination" or alternatively "without compensation [e.g., FRAND-z] and under reasonable terms and conditions that are demonstrably free of any unfair discrimination."[78]

As another example, IEEE requires that the Submitter shall submit the Letter of Assurance associated with licensing regarding "Patent Claim(s) that are not already covered by an Accepted Letter of Assurance [i.e., an earlier-submitted disclosure document and related licensing pledge]."[79] More specifically, the licensing assurance shall be either:

> a) A *general disclaimer* to the effect that the Submitter … will not enforce any present or future Essential Patent Claims against any person or entity making…. any Compliant Implementation[80] that practices the Essential Patent Claims for use in conforming with the IEEE Standard; or,

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[77] ANSI, *ANSI Essential Requirements: Due Process Requirements for American National Standards*, §3.1.1. (Jan 2017), *available at* https://share.ansi.org/shared%20documents/Standards%20Activities/American%20National%20Standards/Procedures,%20Guides,%20and%20Forms/2017_ANSI_Essential_Requirements.pdf.

[78] *Id.* On a related note, ANSI's policy also provides an option to provide "assurance in the form of a general disclaimer to the effect that such party does not hold and does not currently intend holding any essential patent claim(s)." *Id.*

[79] *IEEE-SA Bylaws* at §6.2.

[80] *See IEEE-SA Bylaws* at §6.1 (defining "Compliant Implementation" to mean any product (e.g., component, sub-assembly, or end-product) or service that conforms to any mandatory or optional portion of a normative clause of an IEEE Standard).

> b) A *statement that the Submitter will make available a license for Essential Patent Claims to an unrestricted number of Applicants* … without compensation or under Reasonable Rates, with other reasonable terms and conditions that are demonstrably free of any unfair discrimination to make … any Compliant Implementation that practices the Essential Patent Claims for use in conforming with the IEEE Standard.[81]

This directive—at least on its face—does not require additional disclosure of Patent Claim(s) that were previously disclosed in a Letter of Assurance associated with previous standards development—presumably even if such Patent Claims would additionally apply to other current or future standards development. Additionally, this policy provides some basis for calculating "Reasonable Rates"[82] under the FRAND licensing terms.

ETSI, as an additional example of an IPR policy requiring FRAND licensing related to various aspects,[83] states that:

> When an ESSENTIAL IPR relating to a particular STANDARD or TECHNICAL SPECIFICATION is brought to the attention of ETSI, the Director-General of ETSI shall immediately request the owner to give … an *irrevocable* undertaking in writing that it is prepared to grant *irrevocable* licences on [FRAND] terms and conditions.[84]

Unlike other IPR policies, this requirement enumerates a specific time limit—three months—for the patent owner to provide *irrevocable* written assurance that it is prepared to grant *irrevocable* licenses.[85]

Similar to the interplay between 3GPP and its Organizational Partners related to the disclosure requirement described, 3GPP's licensing principles permissively state that "The Organizational Partners shall undertake to: encourage their respective members to declare their willingness to grant licenses on [1] fair, reasonable terms and conditions on a non discriminatory basis, and [2] consistent with their IPR policy." Of note, the 3GPP FRAND requirement asks members to merely declare a *willingness* to grant licenses—not to actually grant licenses, although some may argue this may be implied based on members' understanding.

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[81] *IEEE-SA Bylaws* at §6.2 (emphasis added).

[82] The calculation of these Reasonable Rates or related reasonable royalties is a topic that has and will continue to receive extensive attention and comment. As one example of calculating these Reasonable Rates, IEEE's policy states in part: " 'Reasonable Rate' shall mean appropriate compensation to the patent holder for the practice of an Essential Patent Claim excluding the value, if any, resulting from the inclusion of that Essential Patent Claim's technology in the IEEE Standard." Moreover, IEEE's policy highlights some factors that the determination of such Reasonable Rates should include, but need not be limited to; *see IEEE-SA Bylaws* at §6.1 (defining "Reasonable Rates").

[83] This policy specifies that the FRAND terms require licensing of standards essential patents for manufacturing, sales or leases, repairs, uses, or operations related to EQUIPMENT as well as methods; *see ETSI Policy* at §6.1 (providing the details of when an essential IPR is brought to the attention of ETSI); *see also ETSI Policy* at §15 (providing definition of "EQUIPMENT" and other terms).

[84] *ETSI Policy* at §6.1 (emphasis added).

[85] *ETSI Policy* at §6.1. Notably, this provision doubly emphasizes the "irrevocable" aspect required by the intellectual property owner, including the *irrevocable* written assurance and the later *irrevocable* FRAND licenses.

These FRAND licensing examples illustrate various contrasting points important to the standards process and resulting licensing endeavors. A few noteworthy aspects include:

- Whether licenses *must* be granted or whether licensing assurance is optional;
- The form of the licensing assurance (e.g., using a form, irrevocable writing);
- Conditions for licensing at reasonable rates (e.g., a similar "fair" and "reasonable" amount); and
- To whom licenses must be granted and the extent of the rights granted (including avoiding unfair discrimination compared to those implementing the standard including those making "Compliant Implementations").

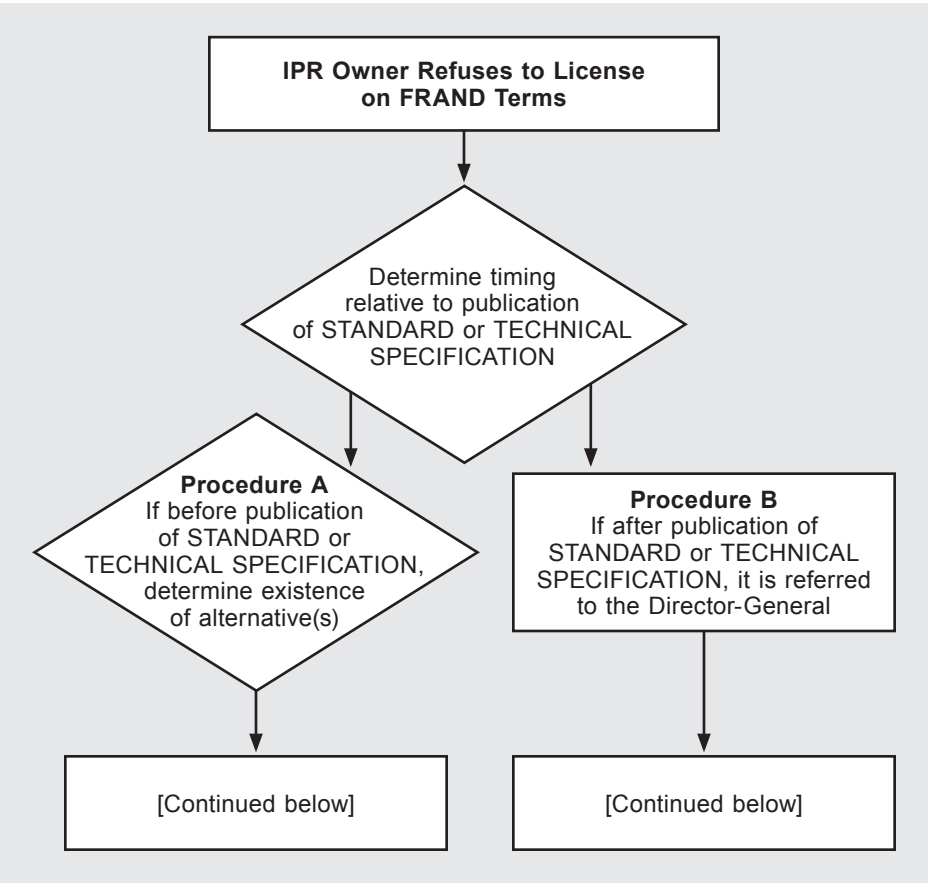
G. Refusal to Grant Licenses on FRAND Terms

In some cases, a patent owner may refuse to make a FRAND commitment to license the standards-essential intellectual property (e.g., SEPs), and often IPR policies provide a mechanism or a procedure for resolving this situation. These mechanisms or procedures often vary based on the timing of the relevant standards development, the existence of alternative technology to proposed standards features (before actual adoption of the features into the standard), the structure of the SSO to deal with these disputes including sub-groups that may provide guidance, and whether the SEP owner is a member of the SSO or not, among other factors.[86]

For example, a main motivating factor may be based on the timing of the refusal to license essential IPRs (e.g., SEPs) relative to publication of the standard. This timing matters because if a standard has *not* been published (which includes the standard being agreed upon and finalized), then alternative avenues may be pursued. Alternatively, if the standard has published, then a different protocol—with different strategies and procedures—may be implemented given the potential difficulties of identifying viable "alternatives" to the published standard.[87] One example that illustrates how these procedures can be organized and implemented comes from ETSI's IPR policy, summarized in Figures 4.3–4.5.

[86]E.g., *ETSI Policy* at §8 (providing details of the procedure for the non-availability of Licenses).
[87]*ETSI Policy* at §8.2.

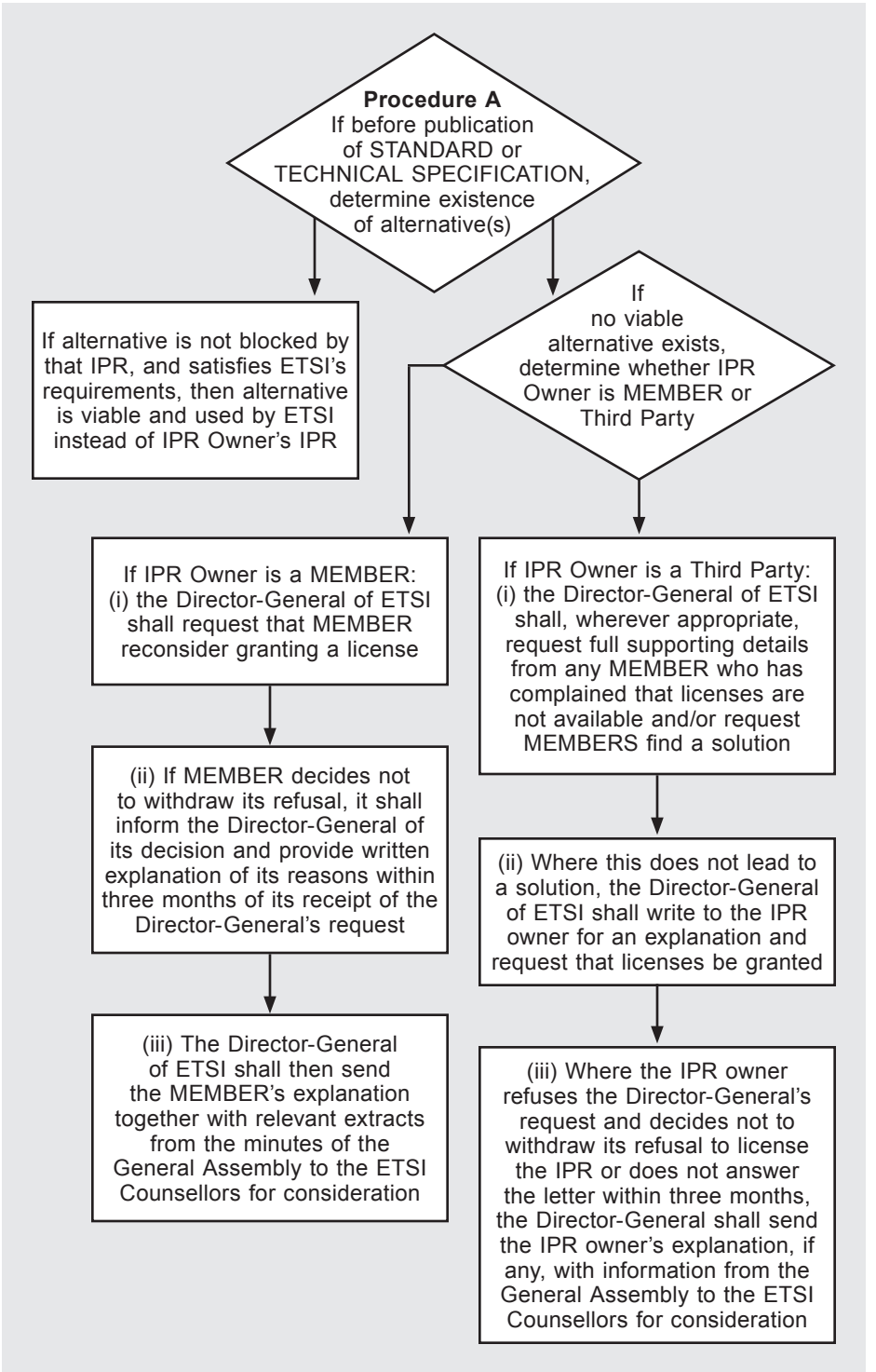
Fig. 4.3. ETSI License Refusal Procedure—Section 1



As highlighted above, once notice has been received that the patent owner refuses to grant a license on FRAND terms for the relevant IPR (e.g., SEPs), the timing relative to publication of the standard (e.g., technical specification) should be examined.[88] Based on this timing, one of two procedures (Procedure A versus Procedure B)—as described in ETSI's IPR policy—may be followed in an effort to resolve this dispute, as described more below.

[88] *See ETSI Policy* at §§8.1 and 8.2 (discussing alternative procedures based on timing).

Fig. 4.4. ETSI License Refusal Procedure—Section 2



Procedure A, highlighted above, illustrates ETSI as one example of pursuing technical alternatives to circumvent and replace the IPR that the IPR Owner has refused to license when the refusal occurs before standard publication. In short, if a viable alternative can be found—and meets the relevant criteria, which here are ETSI's criteria—then the alternative may[89] be adopted instead of the Owner's refused IPR.[90] If no viable alternative exists, however, like some other SSOs, ETSI may determine the IPR Owner's relationship to ETSI (i.e., the SSO) itself—and a resulting procedure may be based on whether the IPR Owner is member of the SSO or a third party.[91] Among other differences highlighted above and explained in detail in ETSI's policy, when the IPR Owner is a third party, ETSI involves other MEMBERS in the process in an effort to collect information about the circumstances surrounding the refusal as well as hopefully further resolving the licensing dispute.[92]

Procedure B, described below, involves ETSI's Director-General coordinating with those who have been unable to obtain a license and the IPR Owner refusing to license the IPR, among others.[93] ETSI's policy gives the IPR Owner a specific, limited duration (i.e., three months) to respond to the Director-General.[94]

Additionally, another note illustrated by ETSI's procedure includes the Director-General's ability to refer this dispute to an overseeing body (i.e., the General Assembly) for a vote and other measures designed to resolve the issue as well as other activities involving the European Commission itself.[95]

Although ETSI's procedure described here provides one example that has some similarities (and differences) to other SSOs and their related procedures, this discussion is meant to be illustrative. It serves as one example to inform patent professionals and others involved in standards development and related activities of the structure and procedures SSOs use to resolve FRAND licensing disputes, exemplary protocols and procedures that may be pursued—including escalation to certain oversight individuals or groups, and different methods and practices involving more members or subgroups of the SSO (or others) to resolve the dispute. Moreover, in some cases, informal, practical steps used to facilitate the approval of a standard where a potential standard

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[89]As discussed in this chapter, the SSO (here ETSI) *may* follow these procedures in some cases, but the SSO may not follow these procedures in every case for various reasons, including certain practical reasons (e.g., the SSO does not have the required resources or the SSO does not want to get into the business of product clearance). The fact that these procedures are not always followed is an important point because some have made competition law claims premised on the fact that these or similar procedures are *always* followed (i.e., an argument that the SSO would have searched for and adopted alternative technology "but for" the patent owner failing to disclose the SEP or making a FRAND commitment it did not intend to keep), which is not the case.

[90]*ETSI Policy* at §8.1.1.

[91]*ETSI Policy* at §8.1.2.

[92]*ETSI Policy* at §8.1.2.

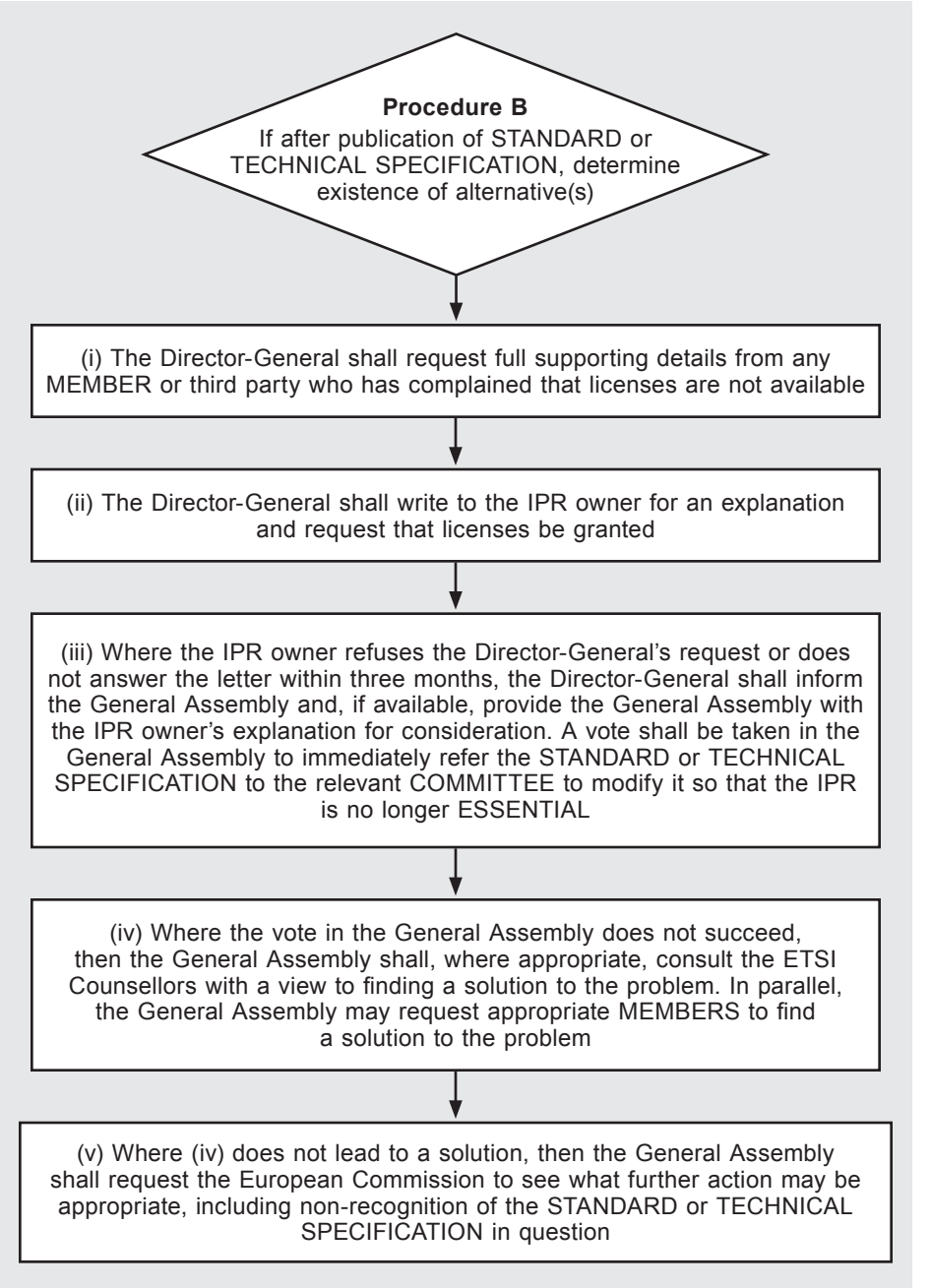
[93]*ETSI Policy* at §8.2.

[94]*ETSI Policy* at §8.2.

[95]*ETSI Policy* at §8.2.

essential patent has been identified, but no license commitment has been received. These may include disclaimers in the published standard giving notice of potential standards essential patents and outreach to identified owners of potential standard-essential patents, among other steps.

Fig. 4.5. ETSI License Refusal Procedure—Section 3



H. Other Licensing Aspects

Regardless of whether SSOs set forth FRAND or FRAND-z terms, many SSOs allow licensors to obtain a reciprocal license to the licensee's essential intellectual property (e.g., SEPs) as part of the license transaction.[96] As an example of an IPR policy that extends even further, ETSI allows a licensor to *condition a FRAND license* on receipt of a reciprocal license from the licensee.[97] As a result, FRAND negotiations or licenses among multiple implementers may not be equal, as multiple implementers are often the developers of SEPs for a given standard. This creates a potential incentive imbalance where a first party may gladly grant a FRAND license to a second party in exchange for a reciprocal license that is more advantageous for the first party.

Most SSOs require that a FRAND license continues even if the subject SEPs are subsequently sold or otherwise transferred and, in some cases, impose licenses related to essential, related intellectual property.[98] For example, ETSI's policy states that "FRAND licensing undertakings made … shall be interpreted as encumbrances that bind all successors-in-interest" and requires licensors to include "appropriate provisions in the relevant transfer documents to ensure that the [FRAND] undertaking is binding on the transferee and that the transferee will similar include appropriate provisions in the event of future transfers" in any intellectual property ownership transfer.[99] ANSI has a similar requirement.[100]

IV. Practice Tips

A. Recognize Competing Interests Involved in Standards Development

The patent professional and others involved in the standards process will benefit from understanding the relationship between standards

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[96] *See IEEE-SA Bylaws* at §6.2 (providing that the Submitter may indicate a condition of reciprocal licensing on a Letter of Assurance); *see also IEEE-SA Bylaws* at §6.1 (defining "Reciprocal Licensing" to mean that "the Submitter of an LOA has conditioned its granting of a license for its Essential Patent Claims upon the Applicant's agreement to grant a license to the Submitter with Reasonable Rates and other reasonable licensing terms and conditions to the Applicant's Essential Patent Claims, if any, for the referenced IEEE Standard, including any amendments, corrigenda, editions, and revisions. If an LOA references an amendment or corrigendum, the scope of reciprocity includes the base IEEE Standard and its amendments, corrigenda, editions, and revisions.").

[97] *ETSI Policy* at §6.1.

[98] *See ETSI Policy* at §6.2 (stating "[a]n undertaking pursuant to Clause 6.1 with regard to a specified member of a PATENT FAMILY shall apply to all existing and future ESSENTIAL IPRs of that PATENT FAMILY unless there is an explicit written exclusion of specified IPRs at the time the undertaking is made. The extent of any such exclusion shall be limited to those explicitly specified IPRs.").

[99] *ETSI Policy* at §6.1bis.

[100] *See* ANSI, *ANSI Essential Requirements: Due process requirements for American National Standards*, §3.1.1 (Jan. 2017), *available at* https://share.ansi.org/shared%20documents/Standards%20Activities/American%20National%20Standards/Procedures,%20Guides,%20and%20Forms/2017_ANSI_Essential_Requirements.pdf (providing the details on transferring ownership of patents subject to assurance).

themselves, related IPR policies, and the motivations of different groups involved (e.g., contributors versus implementers). As highlighted, these groups often have distinct objectives and concerns, and in turn execute standards development tasks differently. IPR policies often vary in their focus regarding these different groups and the related, competing motivations. Honing in on motivations for the most relevant group and understanding related strategic points and avenues is key.

B. Understand the Disclosure Requirement

The rules and procedures of various SSOs—including the disclosure requirement—vary widely. Some are more permissive whereas others have specific requirements and require adherence to formalities, including using forms and specific timelines. Each standard develops differently, and the patent professional and others involved should understand what IPR (e.g., SEPs) should be disclosed, to whom, using which procedures or mechanisms, and when the disclosure must be made. The patent professional and others involved should also anticipate and be cautious regarding the knowledge or awareness that may be imputed to organizations based on individuals' involvement in the standards development process. The patent professional involved in this process should also analyze competing disclosure requirements or principles that may overlap—or at least be in tension with each other—in an effort to adhere to the requirements that have been laden on those involved in standards development.

C. Recognize and Appreciate Licensing Terms, Mechanisms for Agreement, and Related Procedures for Resolving Disputes

The patent professional and others involved in standards development should appreciate the interplay between disclosure of IPRs and the potentially resulting FRAND licenses. Although these terms should be "fair" and "reasonable," many aspects can vary—based on IPR policies themselves or due to the parties' actions. By understanding SSO policies, those involved will be better equipped to carefully navigate the licensing arena. Additionally, the patent professional and others involved in related aspects should understand the strategic points associated with and the procedures in place for relevant SSOs to resolve licensing refusals or disputes from either perspective—including being the patent owner refusing to license or a would-be licensee. As illustrated by the example aspects described herein, understanding the related procedures can dictate what action is taken and the strategic methods used.