Standards, Intellectual Property Rights (IPRs) and Standards-setting Process

"It is virtually impossible today", according to one source, "to develop an audio or video coding standard with a reasonable performance that does not require the use of one or, more likely, several patents."[1] *The statement is not just true for video and audio coding but applies to a number of other products, particularly in the fields of telecommunications and electronics. What this means is that companies willing to manufacture products that comply with certain standards may need to use patented technology, for which prior authorization from the patent holder will be required. This raises several issues for business, patent holders and standard development organizations. This article provides some insights on how IP is treated during the standard-setting process and what implications this may have for business.*

Standards

Standards influence almost every facet of our lives. They influence the food we eat, our means of communication, travel, work, play and endless other activities. Almost every product available in the marketplace has been developed in compliance with one or more voluntary or mandatory standards. Mandatory standards generally pertain to health, safety or the environment and are set and enforced by, or on behalf of, the relevant government. Most standards are voluntary, however.

The International Organization for Standardization (ISO) defines a formal standard as "a document, established by consensus that provides rules, guidelines or characteristics for activities or their results." A standard, therefore, is generally a set of characteristics or qualities that describes features of a product, process, service, interface or material. A standard may also describe how properties are measured, the composition of a chemical, the properties of an interface, or performance criteria against which a product or process can be measured.

Apart from health, safety and environmental concerns, standards are important for a number of other reasons. For example, the existence of standards makes it possible to develop compatible or interoperable products by competing firms. In other words, they ensure the compatibility between complementary products and even between the various parts of a particular product. Product standards are often critical to the effective functioning of markets and play an important role in international trade. For consumers/users, standards provide information and serve a quality assurance function.

Complying with certain standards is generally considered to be in the overall interest of producers of goods and providers of services. By way of illustration, there are unlimited possibilities concerning the shapes and sizes of nuts, screws and bolts which, if they were to proliferate, would mean that no standard screwdrivers or spanners could be manufactured that are fit for their purpose. Similarly, in the digital world, in the absence of standards for CDs, CD-ROMs, DVDs, JPEG and a number of other systems that enable different companies to make products that are compatible, there would be insurmountable problems for products of one company to interface with, connect to, or be used in, equipment made by other

[1] ISO, "MPEG Strides Forward with ISO/IEC 14496-2" in *ISO Bulletin May 2002*. http://www.iso.ch/iso/en/commcentre/isobulletin/articles/2002/pdf/mpeg02-05.pdf

companies. Standards for interoperability are particularly important for network markets, such as railroads, electricity, telegraph/faxes, telephones, cellular phones, and the Internet.

IPRs in Standards and Technical Regulations

In today's competitive context, where companies invest significantly in the development of new technologies and products, which are often protected by intellectual property rights (IPRs), it is not uncommon that the best technology for a technical standard is a proprietary technology, protected by one or more patents. The development of standards more and more frequently anticipates technology rather than following it, leading to conflicts between standards and patents. If patented technology is incorporated into a standard without the patent holder's agreement to share its patent rights, then the patent holder may be the only entity able to comply with the standard.

This raises important questions for companies that own such protected technology, for individuals and companies involved in the standards-setting process as well as for all those enterprises which will then use or adopt the standard for their products or processes. Should a technology protected by IPRs be incorporated in a technical standard? Do companies willing to adopt a standard need to obtain a license from the IPR/patent holder? If so, under what terms and conditions? Do companies involved in the standards-setting process have a duty to disclose information, to the other members of the standards-setting committee, about their patents or patent applications? What happens if the patent holder(s) refuse(s) to provide licenses for the use of patented technology?

Technical standards are generally developed and revised collaboratively by technical committees of Standard Development Organizations (SDOs) comprising a number and variety of stakeholders (including consumer/user interests and experts in the relevant technical fields). The membership of such committees may be open or closed, and is often by invitation only. During the development of technical standards, participants may be required to draw the attention of the committee to the fact that there may be one or more "essential patent(s)" that are needed for meeting the standard, i.e. it would be impossible for someone to comply with the standard without employing the technology protected by the patent(s). So the permission of the patent-holder would be needed and that could mean signing a license agreement and paying royalties to the patent holder.

Obviously, it would not be very productive to adopt a standard if an IPR holder can block the implementation of that standard by either refusing to grant a license or requiring such high royalties as to make it impossible for its dissemination and adoption as a standard. Examples of international ISO standards that include patented technologies abound, such as the MPEG-2 standard for visual and audio compression, for which the number of patents required for implementing the standard is of the order of 100.

Many SDOs discourage the use of proprietary or patented technology in standards; they support it only in "exceptional cases" where justified by "technical reasons". In such cases, the patent holder of a technology considered to be crucial for meeting the requirements of a standard may be contacted by the technical committee of an SDO and asked whether the patent holder would agree to negotiate licenses with users of such standards on fair, reasonable and non-discriminatory terms and conditions (generally referred to as RAND terms and conditions). However, IPR policies of SDOs generally do not really explain as to what may be considered to be RAND terms and conditions. Some SDOs go beyond the

RAND terms and conditions, requiring technologies to be licensed on a royalty-free basis (generally referred to as RF basis); for example, this is true of certain consortia dealing with Internet standards.

Adopting a Standard

Any company, large or small, that plans to adopt a standard for its products, processes or services, should first and foremost verify if there is/are any "essential" patent(s) for which a license is required and the broad terms and conditions under which the license will be granted. This information is generally available from or through the relevant SDO. If the license is to be obtained directly from the patent holder, then the patent holder should be contacted and a licensing agreement negotiated and signed prior to taking any concrete steps to adopt the standard for a company's products or process.

There may also be cases in which, in order to comply with a given standard, a company may have the option of choosing from a series of alternative technologies that could be used, some of which may include the use of protected or patented technology. In all such cases, the patents would not be considered to be "essential patents" but "useful patents", as adopters of the standard have other ways of complying with the standard that do not require use of a patent. Moreover, there may be cases in which there are a number of essential patents which may be pooled by the patent holders (i.e. a "patent pool" is established enabling companies to obtain licenses for a group of patents through a single agreement) to facilitate dissemination of the standard. This was the case, for example, in the case of MPEG-2.

In any case, it is crucial to understand that in order to comply with a given standard or technical regulation, a company may have to (or choose to) use one or more patented technologies. In all such cases, the company is required to obtain a license from the patent-holder and this must be done prior to using the patented technology to conform to the requirements of the standard. On occasions, patent-holders may agree to grant royalty-free licenses, but this may not always be the case. It is important to know the rules of the game so that you are able to negotiate the best possible terms and conditions for use of a proprietary or patented technology that you need for meeting the requirements of a standard.

Participating in the Standards-setting Process

In certain cases, the product specifications of a dominant supplier in the market may become the *de facto* standard for all others if they wish to enter the market. In this article, we are not concerned with these type of standards. Here, we focus on development and use of collaboratively developed standards, which are adopted by consensus. On occasions, however, a proprietary *de facto* standard may be adopted by consensus by the relevant standard-setting body to become the *de jure* standard.

Standards are developed at various levels by standards-setting technical committees created by international, regional, national or subnational Standard Development Organizations (SDOs) and/or by professional, industry or trade associations, alliances or consortia. Most countries have a National Standards Body (NSB), which is accredited to the International Organization for Standardization (ISO). The national NSB, in turn, may accredit a number of public and private SDOs that adhere to the criteria of the NSB (generally including on IP matters) for developing voluntary standards. A standards-setting technical committee of an SDO may have an open or closed membership. In addition to ISO, there are

other multilateral bodies such as the International Electrical Commission (IEC) and the International Telecommunications Union (ITU).

Companies, big or small, may wish to participate in a standards-setting committee in order to influence and steer the standards-setting process in the direction that best serves their interests. However, it may not be possible for a company to participate in the standards-setting process if the membership of the standards-setting committee is closed to, for example, members of an association, alliance or consortium. While the use of an open standards-setting process usually lessens antitrust or competition concerns over the exercise of market power, open standards-setting procedures may lessen efficiency because of the need for consensus among competitors, each of whom may have its own proprietary technology. This means that companies would want to ensure that the standard being adopted does not make any of their own technologies irrelevant and, on occasions, companies may seek to have their own patented technology become essential (or useful) to comply with a standard. This may be especially true for a company that has complimentary assets, which could give it a competitive edge.

While there may be no duty to do a patent search of the patent portfolio of the participating company or of any other companies, yet the participants in the standards-setting process may be required to reveal information about IPRs, especially patents (and, in certain cases, also patent applications) that may be owned by the company and are likely to be essential for complying with the proposed standard. The IPR policies of SDOs vary widely in this respect and have often been revised over the past years. IPRs or Patent policies of SDOs follow different practices about if, when and how much information on IPRs, especially patents (or patent applications) needs to be disclosed.

Therefore, it is important for a company that plans to participate in the standards-setting process to be well informed about the details of the IPR policy of the relevant SDOs. It is important to note that in some cases, non-disclosure of patents or patent applications during the standard-setting process may lead to the patent being unenforceable and/or result in investigations by the anti-trust or competition law enforcement agencies to prevent abusive use of IPRs/patents by participants in the standards-setting process.

There may be situations in which mere membership of an SDO (or, more specifically, membership of a technical committee) creates a “default” licensing of a company’s IPRs. It should also be borne in mind that contributions to a standards-setting process are generally not confidential; so, all technical information revealed to the members of a standards-setting committee may be considered “prior art” for the purpose of examining or invalidating a future patent application pertaining to it.

Concerning copyright, SDOs also have different policies. Many SDO’s policies on IPRs are limited to patents and do not deal with other intellectual property rights, such as copyright, which is generally dealt with on an *ad hoc* basis. The IPR policy of some SDOs clearly states that its policy on patents also applies to any works protected by copyright, which may be required to meet the standard. Other SDOs, however, have decided not to have a policy that addresses proprietary copyrighted material, such as source code. An additional issue is copyright ownership over written contributions to the standards-setting process, on which policies also vary significantly between SDOs.

Conclusions

Whether your company holds patents (or has filed patent applications) that may potentially become essential or useful for meeting a standard, or whether your company intends to manufacture products or deliver services that comply with a given standard, it is advisable to become familiar with the IPR or patent policy of the relevant SDO. If there is a need to obtain a license from a holder of an essential patent, it will generally be necessary to contact the patent holder directly and sign a license agreement under negotiated terms and conditions that are acceptable to both the parties.

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