

Trends in Dealing with Patent Problems Involving Standardized Technology

In recent years, a number of judicial decisions have demonstrated the legal enforceability of IPR policy concerning essential patents established by standardization organizations, and policy revision has gained momentum. At the same time, publication of guidelines clarifying the interpretation of anti-trust law with respect to patent pools has facilitated their establishment.

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1. Introduction

Standardization of telecommunications technology such as IMT-2000 and wireless Local Area Network (LAN) is indispensable for cost reduction through equipment interoperability and for roaming. As technology advances and becomes more complex, essential patents^{*1} generally increase in number. When there are many essential patent holders, obtaining rights to use a standardized technology becomes complex, and cumulative licensing fees may become a significant cost burden. Many standardization organizations have formulated rules concerning the handling of intellectual property rights (hereinafter referred to as "IPR policy") to solve patent problems involving standardized technology. Among these is the obligation of

participants to license their essential patents under reasonable conditions.

In recent years, the legal enforceability of IPR policy, established by standardization organizations, has been demonstrated in a number of legal decisions, and decisions against unreasonable exercise of rights are also appearing. However, since anti-trust law rules out the possibility of standardization organizations from specifying licensing conditions, the problem of high cumulative licensing fees must be solved outside of the standardization organizations. Patent pools, in which a group of patent holders jointly license their patents, are attracting attention as a solution to this problem. They are particularly convenient for essential patent licensing because joint licensing reduces the burden of complex individual negotiations. At the

same time, the establishment of guidelines that clarify the interpretation of anti-trust law with respect to patent pools by anti-trust law authorities in Japan, the United States, and Europe has further encouraged their establishment.

In this article, we review the latest trends in IPR policy and patent pools.

2. Trends in IPR Policy in Standardization Organizations

Standardization organizations include public organizations, such as the International Telecommunications Union (ITU), and independently organized industrial forums. The main standardization organizations in the field of telecommunications are shown in **Table 1**. If after the establishment of a standard the holders of patents essen-

^{*1} **Essential patent:** A patent whose usage cannot be avoided when implementing a particular standard specification.

tial to that standard refuse to license those patents or demand exorbitant licensing fees, the standard becomes essentially unusable, and industrial development is hindered. To forestall such patent problems, nearly all standardization organizations establish an IPR policy that members are required to observe. Generally, under the IPR policy members are required to declare essential patents they hold, and whether or not they are willing to license them to other companies, dur-

ing the standardization process. If a patent holder is unwilling to license an essential patent, they are encouraged to reconsider. If they are still unwilling to license even after such encouragement, then the technology in question is not included in the standard. Regarding their willingness to license, each member selects one of the following three cases that have been adopted by the ITU, ARIB and other standardization organizations.

Case 1: Consent without compen-

sation (or waiving of rights)

Case 2: Consent with compensation under fair, reasonable and non-discriminatory conditions

Case 3: Other (not covered by 1 or 2)

The “Fair, Reasonable And Non-Discriminatory” conditions in Case 2 above are also known as FRAND. Unfortunately, even after a Case 2 declaration, patent “hold-up,” where a

Table 1 Main standardization organizations and IPR policies

Classification	Organization name	Standardization field	IPR policy
Public standardization organizations	ARIB (Association of Radio Industries and Businesses)	Telecommunications and broadcasting	Cases 1, 2 and 3
	TTC (The Telecommunication Technology Committee)	Telecommunication networks	Cases 1, 2 and 3
	TIA (Telecommunications Industry Association)	Telecommunications	Cases 1, 2 and 3
	ITU-T (International Telecommunication Union-Telecommunication Standardization Sector)	Telecommunications	Cases 1, 2 and 3 (common IPR policy adopted)
	IEC (International Electrotechnical Commission)	Electricity and electronics	
	ISO (International Organization for Standardization)	Other than telecommunications, electricity or electronics	Cases 2 and 3 (There is no clear mention of Case 1)
	ETSI (European Telecommunications Standards Institute)	Telecommunications	
Forums, etc.	3GPP (3rd Generation Partnership Project)	W-CDMA, LTE, etc.	According to the Organizational Partners (OP)*
	IEEE (Institute of Electrical and Electronics Engineers)	Telecommunications, electricity, electronics, software, etc.	Cases 1, 2 and 3
	IETF (Internet Engineering Task Force)	Internet	Cases 1, 2 and 3
	W3C (World Wide Web Consortium)	Web technology	Case 1
	OMA (Open Mobile Alliance)	Mobile Internet	Case 2
	WiMAX Forum	WiMAX	Case 2
	MWIF (Mobile Wireless Internet Forum)	Mobile Internet	Cases 1, 2 and 3
	Bluetooth SIG (Special Interest Group)	Short range communication	Case 1
	Femto Forum	Femtocell	Case 2

*The 3GPP Organizational Partners (OP) are ETSI, ATIS, TTA (Korea), TTC, ARIB and CCSA (China)

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member refuses to license under FRAND conditions following publication of a standard, can still occur [1]. To deal with this problem, a number of standardization organizations have revised their IPR policies. ETSI, for example, revised their policy in March 2007 to allow all essential family patents to be declared in one declaration and to preclude revocation of FRAND obligations [2]. Additionally, measures to preclude the revocation of FRAND obligations by a third party after patent rights have been assigned to them are also being studied. Also, since the ISO and IEC policies previously allowed only Case 2, the handling of intellectual property rights was ambiguous when ITU standards were adopted as ISO or IEC standards. This ambiguity was resolved when the three

standardization organizations established a common policy in March 2007 [3].

A number of judicial and administrative decisions have demonstrated the legal enforceability of the IPR policies of standardization organizations. The European Commission issued a Statement of Objections (SO) to Rambus Incorporated (hereinafter referred to as “Rambus”) for not honoring its FRAND obligations with respect to its Synchronous Dynamic Random Access Memory (SDRAM)^{*2} essential patents, and for abusing its dominant position by demanding exorbitant licensing fees (in violation of Article 82 of the EC Treaty 82). In the United States, the Federal Trade Commission (FTC) similarly ruled against Rambus, but in April 2008 the District of

Columbia Circuit Court of Appeals overturned the FTC’s ruling as insufficiently substantiated. As matters stand, opinion is divided on the illegality of Rambus’ actions. In December 2008, the U.S. Circuit Court of Appeals adjudged in the case of Qualcomm Incorporated (hereinafter referred to as “Qualcomm”) vs. Broadcom Corporation that Qualcomm violated its declaration obligation with respect to patents held when the H.264 video encoding system standard was established [4]. Other important decisions concerning standardized technology related patents are listed in **Table 2**.

IPR policy refinement, such as outlined above, has led to the formation of a certain level of judicial and administrative precedents with respect to standardization process participants that

Table 2 Other important decisions concerning standardized technology related patents

Plaintiff	Defendant	Technology	Date of procedure filing	Jurisdiction	Plaintiff's charges	Outcome
FTC	Dell	Computer	1995	FTC	The defendant concealed the existence of essential patents during the standard-setting process	Arbitrated resolution based on the condition that Dell did not enforce its rights with respect to the concerned patents.
Ericsson and four other companies	Qualcomm	W-CDMA	2005	European Commission	The defendant demanded an exorbitant licensing fee after its FRAND declaration	In October 2007, the European Commission announced the beginning of its investigation. One of the plaintiffs, Nokia, settled with Qualcomm in July 2008, but the investigation continues.
Nokia	Interdigital	W-CDMA	2005	English High Court	The defendant's claimed essential patents are nonessential	The essentiality of some of the patents was rejected. This was the first example of a court ruling on patent essentiality.
eBay	MercExchange	WWW	2006	Supreme Court of the United States	An injunction based on the defendant's patents is not warranted	It was determined that there are cases in which an injunction should not be issued, even if patent infringement has occurred. A restraint was placed on demands for high licensing fees based on a threat of an injunction.

^{*2} **SDRAM**: A specification for computer memory. It is an improvement on DRAM in which the device is driven by an external bus interface clock. It is used for the main memory of PCs, etc.

assert their patents in violation of their FRAND obligations. Unfortunately, however, it is ineffective against patent holders who do not participate in the standardization process. In addition, the fact that whether or not to declare patents individually is left up to the patent holder, and the fact that concrete licensing conditions are not established in advance remain as issues.

3. Environment of Patent Pools

Businesses that want to obtain licenses for patents essential to a standard normally must negotiate licenses individually with each of the essential patent holders. When there are many patent holders, however, much time and effort is required to complete all the individual negotiations. Furthermore, even if all patent holders license their patents at what they consider a reasonable license fee, the cumulative licensing fees may still be very large. Patent pools are one solution to these problems. They are a mechanism that allows a group of essential patent holders to jointly license their patents through an agent known as a License Administrator (LA). The main patent pools active in the field of telecommunications and their corresponding licensing organizations are shown in

Table 3.

Essential patent holders are in a strong position in that other companies cannot use a standardized technology unless they license those patents. Consequently, when establishing a patent pool, patent holders must take care to ensure that they are not seen to be abusing their dominant position when setting license conditions. Formerly, patent pools were regarded as barriers

to fair competition. However, the role that patent pools can play in enabling the widespread use of standardized technologies has gained wide recognition, and consequently guidelines for avoiding infringement of anti-trust laws when establishing and operating patent pools have been published by anti-trust authorities. In Japan, the Fair Trade Commission published guide-

Table 3 Main patent pools and their licensing organizations

Organization Name	Technology	Number of licensors
3G Licensing Ltd.	W-CDMA	12
MPEG-LA	MPEG-2 Video and Systems	25
	MPEG-2 Systems	9
	MPEG-4 Visual	29
	ATSC	7
	AVC/H.264	23
	VC-1	17
	IEEE 1394	10
VIA Licensing	MPEG-2 AAC	5
	AAC	15
	Digital Radio Mondiale	14
	IEEE 802.11	8
	MHP	7
Sipro Lab Telecom	G.729 voice codec	5
	G.723.1	4
	G.729.1	8
DVD-6c	DVD	9
DVD-3c	DVD	4
Sisvel	DVB-T	3
	MPEG AUDIO	6

AAC : Advanced Audio Coding
 ATSC : Advanced Television Systems Committee
 AVC : Advanced Video Coding
 DVB : Digital Video Broadcasting
 DVB-T : Digital Video Broadcasting-Terrestrial
 MHP : Multimedia Home Platform
 MPEG : Moving Picture Experts Group
 VC : Video Codec

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lines on September 9, 2007 [5]. In Europe, the European Commission published guidelines similarly in 2004 [6]. In the United States, the Department of Justice and the FTC jointly published guidelines in 1995 [7] and, with specific examples, in 2007 [8].

4. Anticipated Benefits of and Issues for Patent Pools

While an acknowledged benefit of patent pools is their ability to greatly reduce the burden of individual license negotiations through joint licensing, they can for the following reasons also be effective against the hold-up problem.

Firstly, patent pools may effectively set a benchmark for FRAND. Patent licenses are generally negotiated between two parties, the licensor and the licensee, and it is rare for licensing conditions to be made public. This makes determination of FRAND conditions difficult. With patent pools, however, the licensors establish licensing conditions that are acceptable to both licensors and licensees through discussion, and such conditions are often made public. Such conditions can to a certain degree constitute a “going-rate” for patents essential to the relevant standard, and can be a yard-

stick for judging whether conditions offered by patent holders outside the pool are FRAND or not. Secondly, patent pools can effectively aggregate essential patents by offering to small patent holders the incentive of avoiding negotiation costs through joining the pool.

A new problem arising from the increasing number of patent pools being established is that of high cumulative licensing fees. Information appliances, including mobile phones, now incorporate many different standardized technologies in one product. Thus, even if separate patent pools are established for each standardized technology, the total cumulative licensing fees can contribute significantly to the product cost. To counter this problem, cooperation among patent pools is being discussed.

5. Conclusion

We have reviewed trends in IPR policy and patent pools aimed at dealing with standardized technology patent problems. Increasing numbers of essential patents due to technology advances, and aggressive use of intellectual property rights as assets are leading to new problems. Continued international collaboration towards industrial development based on bal-

ancing protecting the rights of inventors and facilitating widespread use of standardized technologies is imperative.

REFERENCES

- [1] “Report on Investigative Research on Policies for Harmonious Use of Patented Inventions,” 2005 Report on Investigative Research on Issues Concerning the Intellectual Property System of the Patent Office, Institute of Intellectual Property, Mar. 2006 (In Japanese).
- [2] “ETSI Rules of Procedure Annex 6: ETSI Intellectual Property Rights Policy,” ETSI IPR Policy, Mar. 2007.
- [3] “Guidelines for Implementation of the Common Patent Policy for ITU-T/ITU-R/ISO/IEC,” Mar. 2007.
- [4] United States Court of Appeals for the Federal Circuit, 2007-1545, 2008-1162.
- [5] “Guidelines on Standardization and Patent Pool Arrangements,” Fair Trade Commission, revised Sep. 2007.
- [6] “COMMISSION NOTICE: Guidelines on the application of Article 81 of the EC Treaty to technology transfer agreements,” Official Journal of the European Union, C 101/02, 2004.
- [7] “Antitrust Guidelines for the Licensing of Intellectual Property,” U. S. Department of Justice and the Federal Trade Commission, Apr. 1995.
- [8] “ANTITRUST ENFORCEMENT AND INTELLECTUAL PROPERTY RIGHTS: Promoting Innovation and Competition,” U.S. Department of Justice and the Federal Trade Commission, Apr. 2007.