

Current Status of PlatformWCDMA and its Joint Patent Licensing

Because standardized technologies incorporate many patents, high cumulative patent royalties are a major concern. To address this concern for the W-CDMA technology, PlatformWCDMA, an organization that enables patent holders to jointly license their essential patents, has been established and has conducted its licensing business since 2004.

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1. Introduction

Standardization of technology has long been conducted in diverse fields and has contributed to the widespread use of products and services. At the same time, standardized technical specifications for mobile communications and other advanced technologies generally incorporate the patented inventions of many different parties. It is thus necessary to obtain permission to use such patented inventions, that is, licenses from the patent holders when practicing a standardized technology. In order to promote the spread of a standardized technology, it is desirable that anyone is able to enter the market and operate under the principles of competition to ensure superior products and services are made available at low cost. At the same time, it is under-

standable that parties that have invested in the R&D of that technology, and that have contributed to the standardization of that technology, want to obtain patents to enable them to recover their costs from other parties. For these reasons, most standard-setting organizations require their members to issue a declaration pledging to license those essential patents^{*1} that are included in the technical standards either without compensation or under Fair, Reasonable And Non-Discriminatory (FRAND) conditions [1]. In practice, however, license negotiations involve a great amount of time and effort because the criteria for the FRAND conditions are not uniform across all patent holders. Another problem is that the existence of many patent holders can lead to high cumulative royalties. One specific way to deal with these

problems is the “patent pool” [2]. A patent pool is an arrangement in which a group of holders of patents essential to a specific standardized technology licenses those patents together as a single package. When many patent holders participate in a patent pool and anyone can obtain a license under reasonable conditions, the standardized technology becomes easier to utilize, and thereby its widespread use is encouraged. An advantage for patent holders is that while participating in a patent pool limits the royalty that can be received per patent, the resultant increase in the number of users accompanying widespread use of the technology results in higher royalty income without the cost and effort of bilateral license negotiations. With respect to W-CDMA, one member of the family of IMT-2000 mobile communication

*1 **Essential patent:** Patents whose usage cannot be avoided when implementing a particular standard specification.

system standards, solutions to the problem of high cumulative royalties were studied from early on in the standardization process. The result was the formation in 2003 of PlatformWCDMA, an organization for the joint licensing of essential patents by multiple patent holders. Here, we explain the current status of PlatformWCDMA and a new Joint License Agreement (JLA) that was announced in April 2008.

2. Patent Platform

Work to clarify the handling of the many essential patents that are incorporated in the Third-Generation mobile communication system standards and to address patent issues began in 1998, while the standard specifications were still being studied. In February 1998, the Universal Mobile Telecommunication System Intellectual Property Right (UMTS IPR) working group was formed through the voluntary participation of telecommunication equipment manufacturers and operators with the objective of studying solutions to patent issues. In January 1999, the basic concept of a new licensing mechanism differing from the conventional patent pool and known as a “patent platform” was proposed. In October of the same year, the 3G Patent Platform Partnership (3G3P) was formed. Dis-

cussion was focused on specifically how the patent platform should be structurally organized to realize efficient management of the licensing of patents essential to the IMT-2000 specifications. The resulting patent licensing mechanism was revised to meet the requirements of the Japanese, European and the United States anti-trust authorities during anti-trust law clearance procedures in these jurisdictions. As a result, a basic structure in which each of the five IMT-2000 standards^{*2} has its own patent platform whose license conditions are set exclusively by the holders of essential patents for that specific standard was established [3]. In September 2003, PlatformWCDMA Ltd. was established as the first patent platform and the study of detailed license conditions

for patents essential to the W-CDMA specifications began. Subsequently, PlatformWCDMA took over 3G3P’s activities, and in October 2004 began its licensing operations. As of September 2008, no patent platforms for any of the other IMT-2000 standards have yet been established.

3. Structure of PlatformWCDMA

The PlatformWCDMA organizational structure for patent licensing is shown in **Figure 1**. PlatformWCDMA Ltd. was established as a Company Limited by Guarantee^{*3} under British law and comprises W-CDMA essential patent holders. Each patent holder assigns a representative to PlatformWCDMA and the representatives establish the license conditions for the

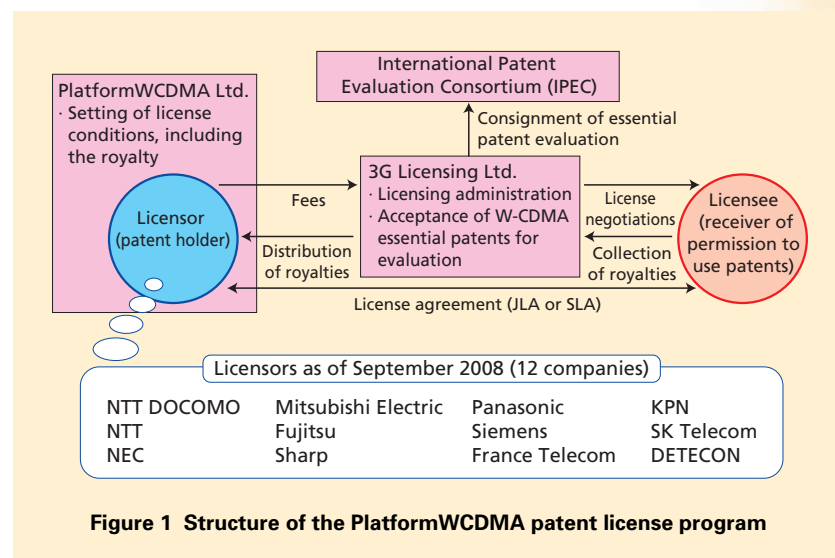


Figure 1 Structure of the PlatformWCDMA patent license program

*2 **The five IMT-2000 standards:** W-CDMA (generally referred to in ITU-R Recommendations as IMT-2000 CDMA Direct Spread), cdma2000 (IMT-2000 CDMA Multi-Carrier), UTRA TDD (IMT-2000 CDMA TDD), UWC-136 or EDGE (IMT-2000 TDMA Sin-

gle-Carrier), and DECT IMT-2000 FDMA/TDMA). There are now six standard specifications, with the addition of WiMAX to IMT-2000 in October 2007.

*3 **Company Limited by Guarantee:** A form of incorporation, under British law, in which

there is no stock capital and the responsibilities of the composing members when the corporation is dissolved is limited to small values that are set in advance when the corporation was established. This corporate entity is used for non-profit organizations and so on.

Standardization

W-CDMA essential patents. The patent licensing program established by PlatformWCDMA is implemented by a License Administrator (LA). The main duties of the LA are to collect royalties from licensees and distribute them to the patent holders (licensors) and to solicit and negotiate with new licensors and licensees. PlatformWCDMA's current LA is 3G Licensing Ltd. of the UK. Additionally, an organization comprising patent lawyers and attorneys from various countries and known as the International Patent Evaluation Consortium (IPEC) was formed to evaluate and certify W-CDMA essential patents worldwide. The LA consigns the evaluation work to IPEC, but the patent evaluation fees are paid by the applicants. More importantly, patent evaluation is performed independently of PlatformWCDMA and the LA. Certified essential patents are published on the 3G Licensing Ltd. Web site.

4. Joint License Agreement

4.1 Establishing the JLA

The main features of patent platform licensing are the transparency of its license conditions and its flexibility to allow bilateral agreements. The approach adopted when PlatformWCDMA Ltd. was first established was for the licensors and licensees to

bilaterally conclude contracts using a Standard License Agreement (SLA). The SLA sets a Standard Royalty Rate (SRR) of 0.1% per patent, but in the case that an increase in the number of certified essential patents results in the cumulative royalty rate exceeding 5%, the royalty rate per patent is recalculated so that the cumulative royalty does not exceed 5% [4]. This approach guarantees a transparent royalty rate for every patent, and also flexibly allows the conclusion of contracts other than an SLA with the licensor. However, since each licensee has the extra burden of having to conclude separate agreements with each licensor, a patent pool-like bundling mechanism was seen as desirable. Accordingly, PlatformWCDMA investigated

ways in which licenses could be obtained en bloc from multiple patent holders whilst at the same time retaining the basic SLA framework, and in October 2004, Version 1.0 of the JLA was released. Subsequently, PlatformWCDMA commenced essential patent license activities for W-CDMA terminals under this JLA in early 2005. Since then, the numbers of participating licensors, licensees and essential patents have increased yearly (Figure 2). As of September 2008, PlatformWCDMA has 12 licensors holding a total of 203 patent families*⁴ essential to W-CDMA terminals. Further, since JLA Version 1.0, PlatformWCDMA has revised the JLA license conditions approximately every two years. Version 4.0, which will come into opera-

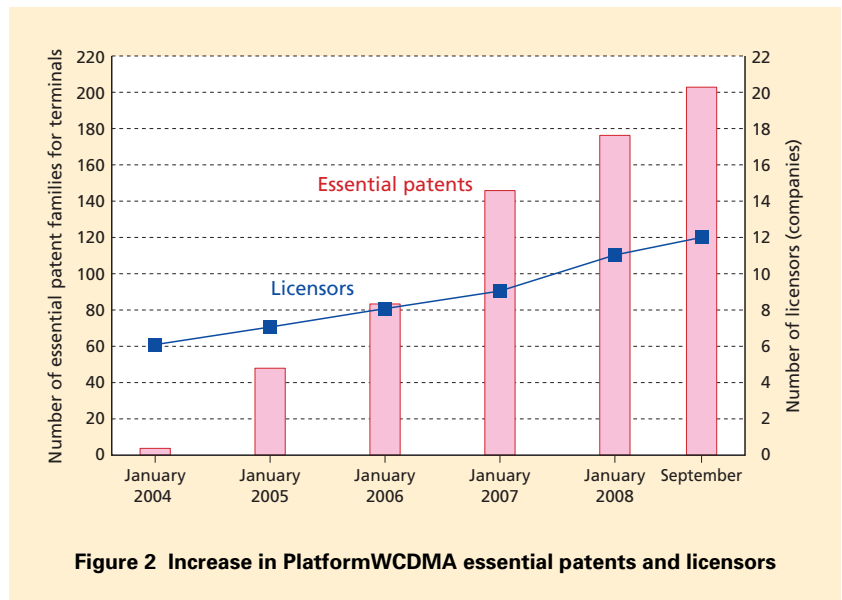


Figure 2 Increase in PlatformWCDMA essential patents and licensors

*⁴ **Patent family:** A group of patents of the same invention in different countries. Since a single invention is, as a general rule, applied for and granted as separate patents independently in each country, such multiple patents are counted and treated as a single patent family.

tion in January 2009, was announced in April 2008.

4.2 Features of the JLA

In a conventional patent pool, the LA typically obtains sublicensing rights^{*5} from the licensors and concludes agreements with the licensees under such rights. This approach, however, cannot handle situations where there are separate bilateral licensing agreements between licensees and licensors in the pool. In a conventional patent pool, it is therefore necessary for a licensee to pay the full royalty set by the pool even for patents for which they have already concluded license agreements outside of the pool. In such cases the concerned licensors must later settle with the licensee by refunding part of the royalties they have received to that licensee. Contrastingly, the PlatformWCDMA JLA allows

a licensee to conclude license agreements with multiple licensors using a single contract document. Under this approach, the burden of refunds can be eliminated by allowing licensors and licensees that have concluded cross licenses^{*6} or other such bilateral agreements to submit joint notices to the LA instructing the LA to wholly or partially exempt the royalties to be paid by the concerned licensees and distributed to the concerned licensors. Since cross licensing agreements are often concluded amongst manufacturers, this feature of the JLA allowing setoff of payments under bilateral agreements is highly convenient. In addition, when a licensee is itself a licensor, it is also possible to, exempt royalties with respect to essential patents held by that licensee. Manufacturers that hold essential patents thus effectively pay a reduced JLA royalty.

4.3 JLA License Conditions

The basic license conditions of the JLA apply to the worldwide manufacture and sale of W-CDMA terminals (including modules). The royalty has been revised twice since Platform-WCDMA was established. The changes in the royalty conditions from JLA Version 1.0 to Version 4.0 are shown in **Table 1**. When revising the royalty conditions, consideration is given to ensuring that existing licensees are not disadvantaged by the new conditions and that consistency with respect to back royalties is maintained. Version 4.0's royalty is essentially one percent of the terminal's Net Selling Price (NSP), with upper and lower limits on the per terminal royalty (Table 1). In addition, the upper limit is reduced stepwise from two US dollars to one US dollar in accordance with the number of years the contract

Table 1 License conditions for the various JLA versions

JLA version	Effective period	Certified essential patents	Terminal price (NSP)	Royalty	Notes
1.0	January 1, 2004 to December 31, 2006	Patents ≤ 50	—	2.00 USD/unit	
		50 < patents < 101		3.00 USD/unit	
		Patents ≥ 101		4.00 USD/unit	
3.0	January 1, 2007 to December 31, 2008	—	NSP ≤ 100 USD	1.50 USD/unit	Licensees who conclude a contract up until October 31, 2006 receive a royalty discount of 33%
			100 USD < NSP < 200 USD	NSP × 1.5%	
			NSP ≥ 200 USD	3.00 USD/unit	
4.0	January 1, 2009 to December 31, 2013	—	NSP ≤ 100 USD	1.00 USD/unit	*Royalty is discounted by reducing the upper limit per unit according to the number of years the contract has been in effect. 1 year or more: 1.60 USD upper limit 2 years or more: 1.00 USD upper limit
			100 USD < NSP < 200 USD	NSP × 1.0%	
			NSP ≥ 200 USD	2.00 USD/unit*	

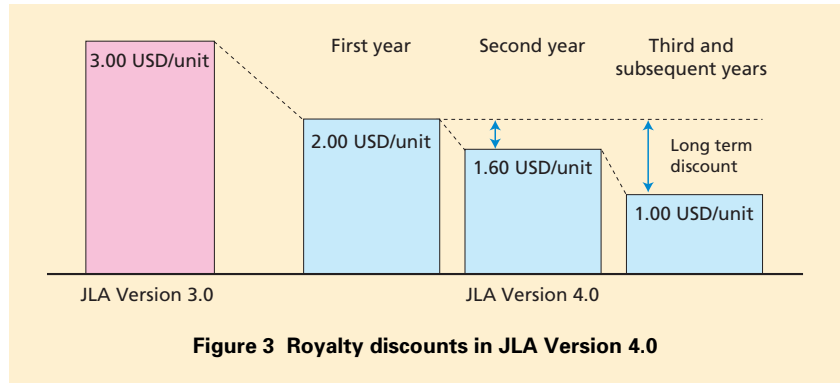
Note: Version 2.0 is omitted because it was not implemented in practice

*5 **Sublicensing right:** A right granted by a patent holder to a licensee to allow that licensee to further grant a right to a third party to use a patent.

*6 **Cross license:** A type of patent license agreement in which patent holders mutually grant each other rights to use each other's patents.

Standardization

has been in effect (**Figure 3**). This new discounting mechanism offers fair conditions to all licensees while at the same time encouraging early participation in PlatformWCDMA. Given that manufacturers' terminal sales are increasing year by year, a manufacturer that concludes the JLA while sales volumes are still low can enjoy the royalty discount with respect to larger future sales volumes, and thus reduce its total royalty payments. In addition, the royalty has been substantially lowered despite an increase in the number of essential patents. This policy is a result of consideration of conditions acceptable to the market that will further increase the number of JLA licensees. The trend is for non-wireless related functions such as camera and multimedia functions to account for higher proportions of the W-CDMA terminal manufacturing cost. Since the W-CDMA essential patents mainly pertain to wireless functions, the corresponding royalty should be imposed only with respect to such wireless functions. Based on this reasoning, Version 4.0 attributes the value above a certain selling price of the terminal to non-wireless functions. This policy is practically implemented by



an upper limit to the royalty. Additionally, while the license term was two years up until Version 3.0, Version 4.0 has an extended five-year term from 2009 to 2013.

5. Conclusion

We have described the current status of PlatformWCDMA, which conducts the licensing of the W-CDMA essential patents. We have also described the latest version of the JLA, Version 4.0, focusing on the license conditions. While the number of licensors is still limited, the announcement of Version 4.0 with its restrained royalties has raised interest amongst potential licensees, including leading manufacturers. Accordingly, further efforts to expand the membership are planned. Finally, it is anticipated that the cumulative royalties for the W-CDMA evo-

lutionary successor Super 3G (Long Term Evolution (LTE)) may also rise to high levels similarly to W-CDMA. It is thus hoped that in the future PlatformWCDMA will be further expanded to cover such future technologies as well.

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