Patent Pools

Japan Patent Office
Asia-Pacific Industrial Property Center, JIII

CONTENTS

I. Introduction to Patent Pools

1. What are patent pools?

There are several definitions of patent pools, but according to the United States Patent and Trademark Office, a patent pool is "an agreement between two or more patent owners to license one or more patents to one another or a third parties[1]." According to this definition, patent pools can be illustrated as in Figure 1.

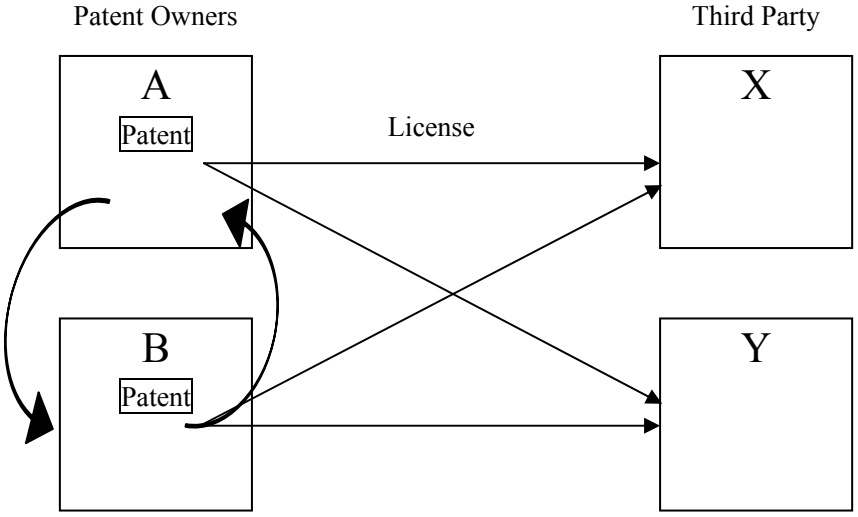

Figure 1: Patent Pools Based on the Definition by the US Patent and Trademark Office

At the same time, according to the Japan Fair Trade Commission[2], patent pools "set up companies or organizations to which multiple holders of patents and other rights delegate the authority to grant licenses on their own patents and other rights (these organizations can take various forms) and from which members obtain the requisite licenses.[3,4]" Figure 2 is a graphic representation of this.

1 USPTO (2000), *Patent Pools: A Solution to the Problem of Access In Biotechnology Patents?*

2 An administrative commission established to run the manage Anti-monopoly Law. It runs under a council system, with a chairman and four committee members, and conducts its duties independently, without direction or supervision from any other body. It is an extra-ministerial bureau of the Cabinet Office.

3 Japan Fair Trade Commission (1999), *Guidelines on Anti-monopoly Law in Relation to Patents and Know-how License Agreements*

4 Japan Fair Trade Commission (2005), *Approaches to the Formation of Patent Pools as a Result of Standardization Under the Anti-monopoly Law*

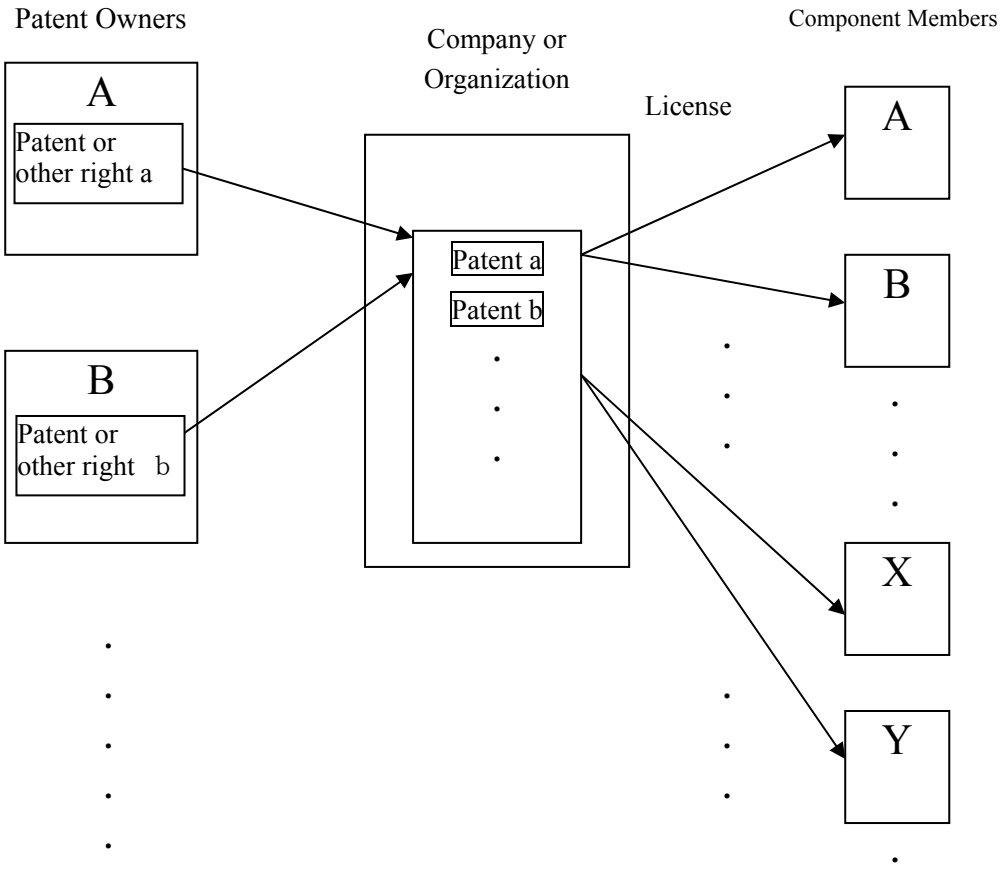

Figure 2: Patent Pools Based on the Definition of the Japan Fair Trade Commission

If we compare these two definitions, we can see that while the US Patent and Trademark Office definition is a more comprehensive concept in terms of the basic structure of the patent pool, the definition of the Japan Fair Trade Commission is broader in terms of the rights on which it focuses. If we take a broad overview of the patent pools that have been formed until now, we can say that both definitions are based more or less on the same situation, seeing as they each consist of a comprehensive bundle of patent licenses and contractual relationships concerning the transfer of the value of those licenses, through an organization consisting of multiple parties, including those who own the patents.

2. The current state of and background to patent pools

Present patent pools that ordinary consumers are familiar with and influenced by relate to MPEG and DVD specifications[5]; the technological realms which patent pool encompass

5 This document stipulates rules, guidelines and characteristics concerning activities and their outcomes for common, repeated use, with the aim of achieving the optimum degree of order in a given set of circumstances, which is formed through agreements and approved by an accredited body (definition in ISO/IEC17000). It is a

include areas such as audio or image compression technology, mobile communications technology, computer connectivity technology, and voice coding technology for mobile phones and IP telephony.

At present, patent pools are the focus of a great deal of interest from industry; the background to this includes such factors as the increasing complexity of technology, pro-patent trends, and the globalization of the economy, as detailed below.

(1) The increasing complexity of technology

Hitherto, when product development and technological development were conducted, it was normal for all processes to be completed within the one company; when selling a new product, companies strove systematically to establish their rights over related technologies, and conventional patent management involved enhancing one's own corporate patent portfolio through a network of patents.

However, in recent years, as expressed by the term open innovation, technological development can no longer be completed in a closed environment involving only one's own company; accordingly, it has become necessary to actively use resources outside one's own company, such as by seeking access to technologies developed by other companies, or through joint development and technological collaboration from the outset.

In particular, if we examine the flow of technology relating to specifications or standards[6], in rapidly spreading CD (Compact Disc) technology for example, was launched in 1982 as the outcome of joint development by Sony of Japan and Philips of the Netherlands. The license regarding CD technology took the form of a joint license from Sony and Philips, and was granted under the condition of economic royalty[7]. In other words, companies wishing to use CD technology had to clear the relationship with both Sony and Philips, no matter where they were based.

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document that regulates, for general and repeated use, the rules, guidelines and characteristics regarding the product, related production process or production method, which is approved by a recognized institution, but there is no obligation to comply with it. Voluntary specifications can include requirements concerning signs using specialist terminology, symbols, packaging, vouchers or labels, and can include those that are applied to products, production processes or production methods; moreover, they can consist of only one of these items (voluntary specifications: WTO/TBT definition. Source: http://www.jisc.go.jp/dictionary/index.html

6 This is an agreement established through standardization. It is also called a specification. There are compulsory and voluntary standards, but this generally indicates a voluntary standard. Source: http://www.jisc.go.jp/dictionary/index.html

7 This is the value of obtaining a license for a patented invention. It is also called a license fee. Normally, it is set as a percentage of the product price or an amount per unit of the product.

Subsequently, with regard to DVD technology developed in the same field, companies seeking licenses for the manufacture and sales of related products had to obtain consent from the 6C patent pool, the 3C patent pool and Thomson. If we compare CD technology and DVD technology, this means that the number of companies involved in the development of the latter was significantly greater than the number of companies involved in the development of the former, but if we look at it another way, we can say that, as a result of the increasingly sophisticated and complex nature of technology, this is a technological field where commercialization was possible for the first time as a result of the accumulation of various elemental technologies.

Against this as background, shift towards standardizing advanced technologies[8] at an early stage has become increasingly apparent in recent years.
Thus, patent pools have been attracting more attention because increasing complexity in technology requires open innovation as well as greater standardization.

(2) The pro-patent trend

In US, the Young Report[9] advocated a pro-patent policy as a prescription for the economic slowdown of the 1980s, and this is said to have led to the subsequent economic boom; in Japan as well, a pro-patent approach attracted attention as a means of making up for the so-called "lost decade". Since Japan became established as a nation built on intellectual property and this stance was advocated in the Intellectual Property Policy Outline formulated in 2002, pro-patent trends have continued to the present legislative, judicial and administrative matters.

Furthermore, in the Intellectual Property Strategic Program[10] 2006, published in June 2006, the third chapter, entitled Exploitation of Intellectual Property, contains a section entitled II.

8 Whether actual or potential, this act establishes an agreement for common, repeated use so that maximum order can be achieved under the given circumstances (ISO/IEC Guide 2). It reduces, simplifies and creates order with regard to things that could become diverse, complex and disordered if left to develop freely. More specifically, it involves setting certain standards with regard to various tangible and/or intangible items, with objectives such as "ensuring quality or performance", "ensuring safety", "ensuring compatibility" and "integrating testing and evaluation methods". Source: http://www.jisc.go.jp/dictionary/index.html

9 A report on the competitiveness of the United States, published in 1985 by the President's Commission on Industrial Competitiveness, a council of special advisors to the President of the USA. The official title of the report was "Global Competition: The New Reality", but it became known as the Young Report, after the chairman of the commission, J.A. Young. It advocated the creation, practical application and protection of new technologies, so it is looked upon as the turning point when the USA shifted towards a pro-patent policy.

10 This is an action plan set by the government's Intellectual Property Strategy Headquarters and was first published in July 2003 under the official title "Plan for the Promotion of the Creation, Protection and Utilization of Intellectual Property", based on Clause 23 of the Basic Law on Intellectual Property. It has been revised each year since then.

Supporting International Standardization Activities; this section demonstrates an awareness of the problem, stating that, "International standardization activities are helpful and important for enabling Japanese products to be widely used overseas and maximizing the value of intellectual property owned by Japanese companies, universities, and other research institutes. Therefore, Japan should change its conventional passive stance, i.e. using international standards developed by foreign countries, and strengthen international standardization activities strategically through industry-academia-government collaboration with the aim of having Japan's original technical standards adopted as international standards. It is also important to facilitate licensing of intellectual property related to technical standards smoothly. Therefore, it is necessary to develop rules for handling intellectual property rights by achieving a balance between protection of the licensor's rights and assurance of the licensee's problem-free use of technologies." It then lists four specific targets: 1. Formulating a comprehensive strategy on international standardization; 2. Carrying out international standardization activities; 3. Developing human resources for standardization; and 4. Establishing rules for the treatment of intellectual property rights relating to technical standards.

The pro-patent trend signifies a general strengthening of rights for patent right holders[11], so while it enhances legal protection for developed technologies, it has the adverse effect of raising the barrier to participation that companies wishing to use those technologies face. However, in the age of open innovation, as it is rare for the patent rights for a particular technology to be held by one company alone - and because there are many patent rights holders involved with the technological standards as a result of standardization, it is difficult to conduct industrial activities just by asserting patent rights bolstered as a result of pro-patent policies. Based on this, one can say that even if one develops a core technology in the field of cutting-edge technology, it is doubtful whether one can commercialize it without obtaining licenses from other companies. Just by carrying out standardization, problems concerning the handling of many related patent rights arise, and it becomes difficult to use the technological standards that have been formulated. Accordingly, as a means of balancing the interests of rights holders and users in relation to a particular technology, patent pools have come to play an important role.

11 These are exclusive rights granted to a party who has created a novel invention, as compensation for publishing that invention. In order to acquire patent rights, one must submit a patent application to the patent office and receive registration of the establishment of the patent after the invention has been examined. The main conditions for registration are novelty and inventive steps. Inventions that have receive registration of the establishment of the patent are called patented inventions. The technological scope of patented inventions is stipulated on the basis of the scope of the patent claim.

(3) The globalization of the economy

There are no borders to technology, and as regions where goods are manufactured and sold become internationalized, international rules relating to trade have developed and evolved irrespective of the nationality of the company concerned through the GATT framework and subsequently the WTO system. In the TRIPs agreement[12], the minimum conditions for exercising intellectual property rights, including patents, are set forth, but approaches to the exercise of rights by patent rights holders under the so-called principle of territoriality have been left up to the laws of each country. However, as well as being an unnecessary obstacle to international trade, the act of making domestic standards that differ from international standards obligatory risks contravening the WTO/TBT Agreement[13]. Amidst this kind of situation, conflicts of interest could arise between the holders of patent rights over a technology and the users of that technology.

One can say that the patent pool structure, approved of internationally, is appropriate as a means of harmonizing the interests of those concerned. In particular, compulsory patent pooling and RAND conditions (Reasonable and Non Discriminatory Licensing), which are common rules for patent pools as detailed below, can be described as rules that can be internationally accepted.

3. Characteristics of patent pools and their advantages and disadvantages

Opinions differ regarding the question of whether the characteristics of patent pools are advantageous or disadvantageous, depending on one's standpoint. The following explains the advantages and disadvantages of each patent pool characteristic, from the perspective of both the licensor and licensee.

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12 This is an agreement on trade-related aspects of intellectual property rights. It is an agreement prescribed in Annex 1C of the Marrakesh Agreement Establishing the World Trade Organization. With regard to its content, it prescribes the scope of protection, establishing protection standards for a wide range of intellectual property rights, including patents, design rights, trademarks, copyright, the layout of integrated circuits, and the protection of unpublished information, as well as stipulating rules for the exercise of intellectual property rights. Source: http://www.tokugikon.jp/dic/index.html

13 This is an international framework relating to the standards certification system, including standardization. It aims to ensure that the standards certification systems of each country [compulsory laws (technological standards in compulsory laws), voluntary standards and compatibility evaluation systems] are not more restrictive from a trade perspective than is necessary to achieve legitimate objectives (safety, health protection, etc.) Accordingly, this framework obliges member countries to ensure transparency when formulating specifications, and to respect the principle of non-discrimination between domestic and international companies when utilizing international specifications and applying systems. Source: http://www.jisc.go.jp/dictionary/index.html

(1) Streamlining license-related duties

With regard to valuable technologies, particularly technologies relating to standards, there are cases where numerous companies wish to use those technologies as licensees. In such situations, identifying potential licensee companies and then negotiating license conditions, formulating contracts, auditing the number of items worked under the license and collecting royalty fees, all of which has to be done with regard to each individual potential licensee company, entails a significant administrative cost burden on licensor companies, so it is a factor that effectively reduces the income from licenses.

In the case of patent pools, the license company takes on the whole of this administrative burden, so the licensor company just has to conclude a contract with the license company, and then receives income from royalties.

This kind of reduction in the administrative burden is a major advantage for licensor companies.

Moreover, conducting negotiations regarding license conditions, formulating contracts, reporting the number of items worked under the license and paying royalty fees, all of which has to be done with regard to each individual patent holder, also entails a significant administrative burden on licensee companies, which is a factor that effectively increases the cost of introducing technologies, so the reduction of this administrative burden also has major advantages for licensee companies.

(2) Conflict prevention

If a company with a particular patent right seeks to conduct negotiations regarding license contracts individually with potential licensee companies, the first point at issue before entering contract negotiations is whether the license for the patent right in question is even necessary for the technology that the potential licensee company will use (or is using) and, if it is necessary, whether or not this patent right will be effective for that technology.

Patent rights pooled in patent pools are based on the premise that they will be effective, and this means they ought to be essential for the technology in question and the license must be formulated with reasonable conditions that encompasses the whole pool. Accordingly, for potential licensee companies, even if non-essential and non-effective patent rights are included in the pool, they can obtain at a stroke a license with reasonable conditions, so rather than splitting hairs regarding these matters, in most cases, it is actually more economically rational to accept them.

As a result, the advantage here is that conflicts arising from license negotiations can be avoided.

(3) Market expansion

In general, when technological standards are determined and a patent pool is formed, products that meet those technological standards and specifications are put on the market by multiple companies, and it can be expected that they will proliferate rapidly due to their compatibility and mutual connectivity, as guaranteed by those technological standards and specifications.

The effect of this kind of market expansion is an increase in license income for the licensor and an increase in sales for the licensee, so both can be viewed as benefiting from advantages.

This perspective, rather than being a characteristic of patent pools, can actually be seen as an advantage of setting technological standards, but as will be detailed below: i) to incorporate into technological standards patent-related technologies with little possibility of being licensed or patents for which a high license fee would be required is a barrier to the implementation of those standards, and would lead to the technological standard becoming a dead letter, so this would generally entail the formation of a patent pool; and ii) judgments concerning which technologies held by a company should be opened up as a technological standard and to what extent (and, furthermore, delivered to a patent pool) and to what extent a company should secure exclusivity through patent rights are important issues that relate to competition strategy under specific technological standards. As such, there is a close relationship between the formulation of technological standards and the formation of patent pools, so it is necessary to bear this factor in mind when considering advantages and disadvantages.

(4) Reduction of royalty fees

There are multiple patent rights relating to technological standards, so if companies that are seeking to use related technologies (licensee companies) simply add up the royalty fees that they should pay for a single patent right, this would come to an immense sum of money. Accordingly, in order to avoid losing incentives for potential licensee companies to participate, patent pools generally have a mechanism stipulating a ceiling for the rational scope within which the remuneration to be paid can be set.

If we look at the situation from the perspective of the licensor company, if we compare the royalty income maximization with the strategy for which it aims (that is , choosing to act in a

way that ensures maximum royalty payments are received individually from each licensee company), we can say that this point alone is a disadvantage because the income that is received from each licensee company is relatively low.

On the other hand, from the perspective of the licensee company, compared with a situation in which the licensee company conducts negotiations regarding license contracts with each patent holder and then introduces technology, patent pools have the advantage that the total amount of royalty fees to be paid is lower.

Incidentally, what about the perspective of the consumer? The cost of the royalties paid by the licensee company as a result of the formation of a patent pool is reduced and the cost of introducing the requisite technology is reflected in the product price, and so patent pools are believed to be advantageous for consumers because they generally reduce the price of products.

Thus, companies with patent rights relating to technological standards decide whether or not to participate in patent pools after considering the advantages and disadvantages of becoming a licensor company.

In general, delivering patent rights concerning a technology and forming a patent pool, and choosing to encourage potential licensee companies to participate in the patent pool means that companies can standardize the technology that they have developed themselves and pursue a competitive edge in the market; this has the advantage that, as a result of the expansion of related markets, companies will also be able to pursue royalty income.

If the holder of the relevant patent right is a company that is manufacturing and selling a product, it also becomes a licensee company in the patent pool, and they can also use the patent rights that other companies have delivered under rational conditions, so this is believed to further increase incentives to participate in patent pools.

On the other hand, if the patent right owner is a company specializing in research, the aforementioned advantages and disadvantages as a licensor company may inhibit it, and it is not necessarily the case that the company will choose to participate in the patent pool. The standpoint of Thomson in relation to DVD specifications is believed to correspond to this situation.

At the same time, from the perspective of the potential licensee company, one can say that there are generally no major disadvantages to participating in a patent pool.

4. The flow of patent pool formation

With regard to the process for forming a patent pool, there are no particular rules. The following refers to the formulation process for ISO[14] standards and, in parallel with this, introduces the general process by which patent pools are formed.

<The process of formulating ISO standards>

ISO standards are formulated after going through the following six steps, with the final draft of the international standard being compiled within 36 months[15].

(1) New Work Item Proposal (NP)
(2) Working Draft (WD) Formulation
(3) Committee Draft (CD) Formulation
(4) Draft of International Standard (DIS) Referral and Formulation
(5) Final Draft of International Standard (FDIS) Formulation
(6) International Standard Publication

(1) New Work Item Proposal (NP)

In a new work item proposal (NP), a member institution from a country, or secretaries of the Technical Committee (TC) / Subcommittee (SC) propose the formulation of a new standard or the revision of an existing standard. In this case, the Central Secretariat requests each country to vote on whether they agree with or object to each proposal within three months. If the results of the vote fulfill certain conditions, the proposal is approved.

(2) Working Draft (WD) Formulation

The formulation of the Working Draft (WD) involves a draft for consideration that responds to the NP being presented at the time of registering the proposal; if the WD is not submitted at the time of the proposal, it should be presented within six months of NP approval.

After the proposal is approved TC/SC secretaries hold a Working Group (WG) meeting to

14 One of the leading international standardization organizations. It is a worldwide federation of national standards organizations in which each country can participate as a single member. The Central Secretariat is located in the Swiss city of Geneva. The objective of the ISO is to facilitate international cooperation in goods and services, and to promote worldwide standardization and the development of related activities, in order to foster international cooperation in fields of intellectual, scientific, technological and economic activity. The scope of activity includes all fields except electrical and electronic technology standards, which are dealt with by the International Electrotechnical Commission (IEC) and telecommunications technology standards, which are dealt with by the International Telecommunication Union (ITU). Source: http://www.jisc.go.jp/dictionary/index.html

15 Website of the Japanese Industrial Standards Committee: http://www.jisc.go.jp/international/iso-prcs.html

discuss issues and appoint experts in the formulation of the WD as P Members. Here, P Members refers to participants who participate actively in specialist duties of the ISO/IEC[16] and are obliged to vote on the formally proposed WD and draft standard. These P Members consider and formulate the WD in the WG.

(3) Committee Draft (CD) Formulation

The WD is registered as the CD and is then referred to TC/SC P Members for their opinion. Then, the secretaries take a central role in considering the CD on the basis of the opinions of the P Members, and revise the CD if required.

If a consensus is obtained at a general meeting, or if more than two-thirds of the P Members are in agreement in the vote, the CD is deemed to have been approved; if it is approved, the CD is registered as a Draft of International Standard (DIS).

(4) Draft of International Standard (DIS) Referral and Formulation

The registered DIS is referred to TC/SC members and all member countries for a vote, and if the vote meets certain requirements, the DIS is deemed to have been approved.

If the DIS is approved, it is registered as a Final Draft of International Standard (FDIS).

(5) Final Draft of International Standard (FDIS) Formulation

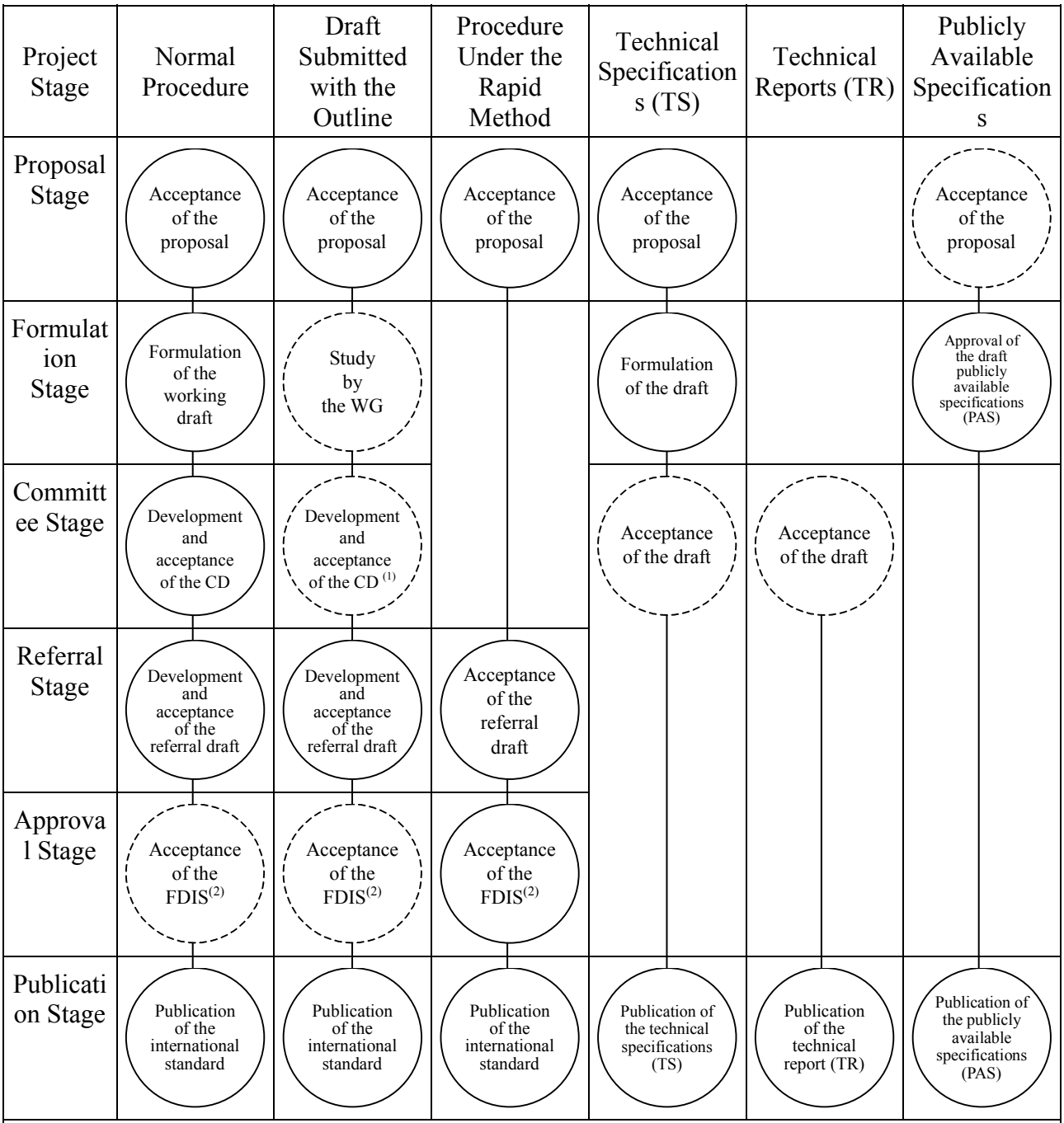
The registered FDIS is referred by the Central Secretariat to all member countries for a vote, and if the vote meets certain requirements, the FDIS is deemed to have been approved as an international standard.

If the FDIS is not approved, subsequent procedures are taken such as a revised draft being submitted for the CD, DIS and FDIS approval process.

(6) International Standard Publication

The international standard is officially published after the FDIS approval. The publication period is set at within 36 months of the NP approval.

16 IEC: One of the leading international standardization organizations, which is involved in standardization relating to the fields of electrical and electronic technology. Each country can participate as a single member. The IEC, which has its Central Secretariat in the Swiss city of Geneva, aims to promote international cooperation relating to all issues concerning standardization in technological fields connected with electricity and electronics, as well as associated matters, thereby promoting international communication. Moreover, as well as the development of international standards, it implements accreditation systems using these standards, such as the CB scheme. Source: http://www.jisc.go.jp/dictionary/index.html



The stages in italics within the circles with dotted lines can be omitted.

(1) Depending on the results of voting on the draft new item, the formulation stage and the committee stage can be omitted.

(2) If the referral draft is approved without any objections, this can be omitted.

Figure 3: Procedure for Formulating an ISO Publication

Source: Website of the Japanese Industrial Standards Committee

http://www.jisc.go.jp/international/iso-prcs.html

<Patent policy>

In general, standardization organizations, such as ISO, are uninvolved in patent pools, or adopt a neutral position; with regard to essential patents, their involvement is confined to promoting the submission of patent statements to participants. Here, a patent statement refers to a written declaration submitted to a standardization organization when a participant in the formulation of a standard is believed to have an essential patent relating to the standard in question.
Conventionally, the ITU[17] and JIS[18] have selected one of the following three types when submitting written declarations.

Type 1: Granting royalty-free use of essential patents.

Type 2: Granting RAND (Reasonable And Non-Discriminatory)19 use of essential patents.

Type 3: Neither Type 1 nor Type 2.

In contrast, the ISO and IEC only granted RAND use. Consequently, the stances on intellectual property of standardization organizations differed, which was the cause of inconsistencies in the handling of intellectual property in the technological field, depending on the type, amidst a globalizing economic situation.

Amidst this, with regard to the formulation of JIS, for example, the document entitled *Concerning Procedures Relating to the Formulation of JIS, Including Patent and Other Rights* was set forth in February 2001 by the Standards Subcommittee of the Japanese Industrial Standards Committee. Subsequently, there were moves to develop a common patent policy stipulating the handling of intellectual property relating to standardization by international standardization organizations in the form of ISO/IEC and ITU. In response to this, the procedures for JIS formulation were revised in April 2006, in order to promote the development of a common policy.

The following is an overview of the common ITU/ISO/IEC patent policy as it stands at present[20].

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17 This is an international institution established by the United Nations that handles matters relating to telecommunications. The Telecommunication Standardization Sector (ITU-T), which is part of the ITU, mainly deals with standardization. Source: http://www.jisc.go.jp/dictionary/index.html

18 This is a standard that was formulated on the basis of the Industrial Standards Law. It prescribes regulations concerning such elements of industrial products as types, forms, dimensions, structures and quality, as well as methods relating to industrial products, such as production methods, design methods and usage methods, in addition to testing and inspection methods, with the aim of improving the quality of industrial products, increasing production efficiency, rationalizing production, making trade simpler and more equitable, and rationalizing usage and consumption. Source: http://www.jisc.go.jp/dictionary/index.html

19 Reasonable and non-discriminatory conditions.

20 Japanese Industrial Standards Committee (2007), *Concerning the Publication of the ITU/ISO/IEC Common*

i) The objective of international standards is to ensure worldwide compatibility between systems and technologies, and anyone must be able to use the standard. Consequently, even if patent rights are included in the standard, anyone must be able to use the standard, without facing excessive restrictions.

ii) ISO, IEC and ITU are not in the position of providing authorization or information to facilitate understanding regarding evidence, validity or the scope of application of patent and other rights.

iii) It is preferable for information concerning patent and other rights that can be obtained to be disclosed to the maximum degree possible.

iv) Participants in the development of standards should, from the outset when developing standards, pay attention to the patent rights held by their own or other companies that are included in the standard (including those for which applications are currently ongoing).

v) When standards are developed and patent and other rights included in those standards are disclosed, one of the following three can be disclosed by the holder of the patent and other rights in question.
   a) They are prepared to negotiate regarding the granting of a license to use the patent right free of charge.
   b) They are prepared to negotiate regarding the granting of a license to use the patent right under RAND conditions.
   c) They are prepared to do neither a) nor b).

vi) When undertaking disclosure as in v) above, holders of patent and other rights must submit to the ISO, IEC or ITU secretariat a written patent statement on a standard form, and they may not add to this written patent statement any clauses or conditions other than the options given on the standard form, nor may they append any exceptions.

vii) If c) in item v) above is selected, the standard cannot include any provisions that depend on the disclosed patent and other rights.

viii) ISO, IEC and ITU do not become involved in negotiations relating to the granting of licenses to work patent and other rights.

<The patent pool formation process>

If there are participants who select Type 3 in the written declaration above [v) c) in the ITU/ISO/IEC Common Patent Policy] (that is to say, if there are participants who will determine license conditions regarding essential patents on the basis of individual license

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Patent Policy and Implementation Guidelines.

negotiations, or if there are participants who do not wish to permit licensing), the standardization organization will generally respond by excluding the technology relating to the essential patent in question from the standard being formulated; if this is impossible, the standardization itself may be aborted. Accordingly, the ITU/ISO/IEC Common Patent Policy Implementation Guidelines set forth a policy on how to deal with situations where there are patent rights relating to technologies involved with technological standards, as shown in the outline below[21].

i) The disclosure of information concerning patent and other rights is sought at as early a stage as possible in the development of the standard.

ii) The provision of information concerning patent and other rights takes place on a good faith and best effort basis. However, patent searches are not a requirement.

iii) If it is deemed that a party who is not participating in the development of the standard has a patent or other right, the standardization organization requests that the rights holder submit a written patent statement.

iv) Whether before or after the formulation of the standard, if it is deemed that there are patent or other rights that the rights holder will not grant a license for free of charge or on a RAND basis, each standardization organization reports this to the relevant TC, so that the TC in question can take the appropriate action.

v) The written patent statement is submitted by the holder of the patent or other rights to the secretary-general of the relevant standardization organization.

vi) If the written patent statement submitted states that the patent holder has no intention of granting a license free of charge or on a RAND basis (i.e. it is a "declination" patent statement), the patent holder in question is obliged to submit the information regarding the patent or other right to the ITU, and is strongly urged to submit this information to the ISO and IEC.

vii) When the committee meets, the chairman of the TC asks a question verifying the existence of the patent or other rights required in order to implement the standard, and the fact that the chairman asked the question and that there was an answer concerning the existence of the patent or other rights is recorded in the minutes of the meeting.

viii) The written patent statement submitted by the rights holder is recorded in the database and published.

21 *Ibid*.

ix) The General Patent Statement and Licensing Declaration is used only by the ITU.

x) Three tick boxes are provided on the written patent statement form: free of charge; reasonable and non-discriminatory; and “declination”.

Against this background, the formation of patent pools are carried out, in parallel with standardization activities by companies participating in such activities, as voluntary activities that are separate from the standardization activities themselves.

If we explain the formation of patent pools in comparison with the aforementioned process for formulating an ISO standard, we can see that the related essential patents are identified around the time when the Draft of International Standard (DIS) is submitted, so the general flow around this time is as follows: (1) the body considering the patent pool voluntarily (IPR Deliberation Group) is organized from among the participants in standardization activities; (2) the essential patents are selected; (3) the license company is selected or established; (4) the license conditions are determined; and, if necessary (5) advance screening procedures are conducted with regard to the authorities administering the Anti-monopoly Law[22].

22 This is a law that prohibits private monopolies, unjust trade restrictions and unfair trade methods; prevents excessive consolidations of business power; and eliminates unreasonable restrictions on production, sale, price and technology through such methods as mergers and agreements, or any other kind of unfair obligations in relation to business activity, thereby aiming to promote free and fair competition, enable businesspeople to exercise their originality, ensure that business activity flourishes, and increase the level of employment and national income, in order to secure the interests of ordinary consumers and promote the sound, democratic growth of the national economy. In order to work harmoniously with Patent Law, which gives rise to exclusive rights, it has a provision that stipulates that the exercise of rights based on industrial property rights, such as the Patent Law, is not governed by the Anti-monopoly Law (Clause 23).

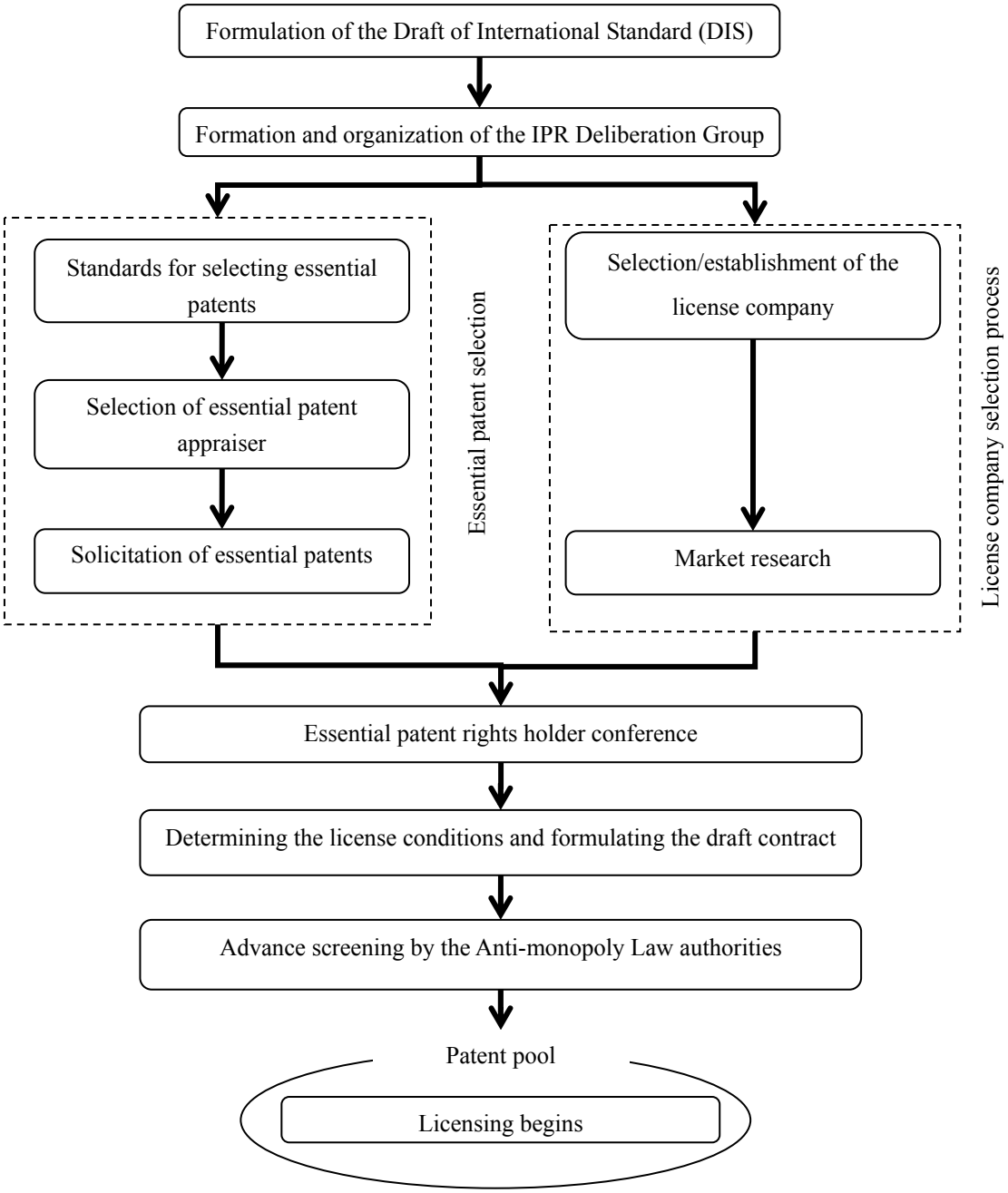

Figure 4: The Patent Pool Formation Process

Source: Hisashi Kato (2006), *An Introduction to Patent Pools*, Japan Institute of Invention and Innovation

(1) Organizing the IPR Deliberation Group

As stipulated in ii) of the ITU/ISO/IEC Common Patent Policy, international standardization groups (ISO, IEC and ITU) generally maintain a firm stance that they are "not in the position of providing authorization or information to facilitate understanding regarding evidence, validity or the scope of application of patent and other rights". Where it has been ascertained that a patent is included in the standard, they just strongly request that the holder of the patent rights submits a written patent statement. Accordingly, the processes listed below from ii) are promoted primarily by the IPR Deliberation Group, which is established as a voluntary group consisting of potential licensors and licensees.

The first issue that the IPR Deliberation Group faces is the decision on scope, that is to say, the question of on which part of the technological standard the patent pool will focus; furthermore, once the scope has been determined, it is necessary to formulate selection standards for essential patent rights in the patent pool in question.

(2) Selecting essential patents

When selecting the essential patents, the question arises of whether only technically essential patents will be adopted, or whether commercially essential patents will also be included.

Moreover, it is necessary to decide whether different responses to the standard will be adopted according to the type of product, or whether the response will be uniform.

These issues instantly give rise to a conflict of interests between the potential licensor and the potential licensee, and there may be occasions when the interests of the various potential licensors do not coincide, so complex adjustments are repeatedly made.

In parallel with the decision on the selection criteria, the essential patent appraiser, who selects essential patents from a fair perspective, must also be selected. To date, in patent pools, lawyers, patent attorneys and neutral appraisal organizations have taken this role. Such appraisal organizations include the IPEC (International Patent Evaluation Consortium), which was formed as a consortium of patent attorneys from Japan, the USA and Europe in the 3G Patent Platform, and the essential patent judgment system of the Japan Intellectual Property Arbitration Center23, which began in May 2006.

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23 This alternative dispute resolution (ADR) organization was established by the Japan Patent Attorneys Association and the Japan Federation of Bar Associations in March 1998 under the name Industrial Property Rights Arbitration Center, with the aim of dealing with conflicts in the field of industrial property rights, and began

(3) Selecting or establishing the licensing company

If there is an existing license company that can deal with the technological field on which the patent pool focuses, it is possible to outsource all the tasks to this company, if all the interested parties agree. But in many cases, the license company is established on the basis of financial contributions by interested parties in the patent pool, primarily those with the rights to the essential patent. Examples of this include MPEG LA LLC (USA) in the MPEG2 patent pool, and 3G Licensing Ltd. (UK) in the 3G Patent Platform.

(4) Determining the licensing conditions

Through the selection of essential patent rights as detailed in (2) above, the holders of the essential patent rights are determined; the license conditions must be determined through an agreement between the holders of the essential patent rights. If the license company or members of the IPR Deliberation Group other than the essential patent rights holders are involved in this decision-making process, there is a risk that problems could arise in relation to the Anti-monopoly Law.

(5) Advance screening procedures by the Anti-monopoly Law[24] authorities[25]

The formation of patent pools is a legal and economic venture carried out jointly by companies who may be rivals under ordinary circumstances, but have determined the license conditions under an agreement. Consequently, there are occasions when stipulations as contained in Anti-monopoly Law may come into play, depending on specific arrangements and operating methods. In general, if it is deemed that the arrangements and operations are competitively restrictive overall, they may become subject to regulation by the anti-monopoly authorities.

With regard to this point, while deeming that standardization activities themselves do not directly pose problems in relation to the Anti-monopoly Law, the Japan Fair Trade Commission stipulates that problems connected with the Anti-monopoly Law could arise with

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operating on 1 April that year. In August 2000, it concluded a contract with the Japan Network Information Center (JPNIC) and became the JP Domain Name Approval Dispute Resolution Organization, which focused on resolving conflicts regarding JP domain names used on the internet that were registered with the JPNIC; then, in April 2001, its name was changed to the Japan Intellectual Property Arbitration Center and broadened its scope of operations from industrial rights (industrial property rights) to intellectual property rights. Source: http://www.ip-adr.gr.jp/enkaku/index.html

24 Law focused on prohibiting private monopolies and ensuring fair trade (1947 Law No.54)

25 Japan: Japan Fair Trade Commission; USA: Justice Department; Europe: European Commission

some restrictions, for example i) arrangements relating to sales price; ii) the elimination of competing standards; iii) the unfair extension of the scope of standards; iv) the unfair elimination of technical proposals; or v) restrictions on participation in activities[26].

Moreover, with regard to the competition-promoting effect of patent pools, while generally permitting: i) the integration of complementary technologies; ii) the reduction of trade expenses; iii) the removal of barriers to entry through patents; and iv) the avoidance of lawsuits regarding infringements on patent rights[27], the US Justice Department stipulates that there could be doubts about legitimacy[28] where patent pools adopt measures such as price cartels or the division of markets.

Thus, in forming patent pools, it is necessary to decide upon specific arrangements and operations that do not have a competition-restricting effect, and see that a system of advance screening by anti-monopoly authorities has been introduced.

Firstly, in Japan, advance screening concerning patent pools is conducted under the Advance Consultation and Screening System Concerning Business Activities established by the Japan Fair Trade Commission. This is a system whereby an application form is submitted by a company on the premise of providing consent for its publication; after receiving it, the Japan Fair Trade Commission will respond within 30 days, as a general rule, giving its thoughts on the application in relation to the Anti-monopoly Law. The legal effects of using this system are said to be that, "If the response is that the matter does not touch upon legal provisions, the act that was the subject of the consultation in question will not be the focus of legal measures taken on the grounds that the matter does touch upon legal provisions." This system goes further than the principle under the framework of a Cabinet decision[29] concerning prior verification procedures, whereby the views of government agencies do not constrain investigating authorities or the courts[30].

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26 See footnote 3

27 The act of working technologies included within the technological scope of a patented invention, as stipulated in the scope of the patent claim, without authorization or consent from the holder of the patent rights.

28 US Justice Department and the Federal Trade Commission (1995), *Antitrust Guidelines for the Licensing of Intellectual Property,* http://www.usdoj.gov/atr/public/guidehnes/0558.htm

29 *Concerning the Introduction of Prior Verification Procedures by Government Institutions Relating to the Application of Laws* (Cabinet Decision dated March 27, 2001)

30 However, it should be borne in mind that, if a change occurs in the situation relating to the premise of the judgment after a decision that the matter does not come into contact with the Anti-monopoly Law, such as marked changes in the market situation, then legal measures may be taken in relation to the action regarding which the Commission was consulted, after written notification of the withdrawal of the response has been provided to the parties in question.

In the case of the US, the Business Review Letter framework, which falls under the jurisdiction of the Justice Department, is a prior screening procedure with legal effect that involves the same procedure as is used in Japan.

Moreover, in Europe, under the European Commission's Comfort Letter procedure, it is possible to obtain an unofficial opinion that prosecution under the provisions of the European Competition Law will not take place.

Thus, we can see that the aforementioned three anti-monopoly authorities have adopted broadly similar procedures with legal effects for judging in advance the legality of patent pools; the views of these anti-monopoly authorities can broadly be summarized as follows[31]:

i) They should have a complementary action based on the integration of technology.
ii) They should be restricted to essential patents.
iii) Essential patents should be selected by a fair and neutral third party.
iv) Individual licensing should be possible.
v) Participation in the patent pool should be voluntary.

Today, with the globalization of the economy, the aforementioned five points should be of great reference for forming patent pools legal in the eyes of authorities in Japan, the US and Europe.

5. Forms of license company and the composition of contracts

There are no particular institutional restrictions on the form of patent pools, but in general, a license company is established to control patent licenses and the flow of money.

Patent pools can be broadly classified into two types, based on license contracts: (1) whether the license company is involved as a party concerned (concerned party type); or (2) whether the license company is involved as an agent (agent type).

(1) Forms associated with involvement as a party concerned (concerned party type)

In this form, the holders of the rights to the pooled patents (the licensors) issue the license company with a license containing sublicense rights, and based on this premise, the license

31 Hisashi Kato (2007), Technology Standards and Patent Pools, *Problems Relating to Standardization: The Current Situation and Future Prospects* (Materials Distributed at the FY2007 Autumn Symposium of the Intellectual Property Association of Japan)

company then concludes contracts with licensee companies as a licensor itself. These relationships are shown in Figure 5.

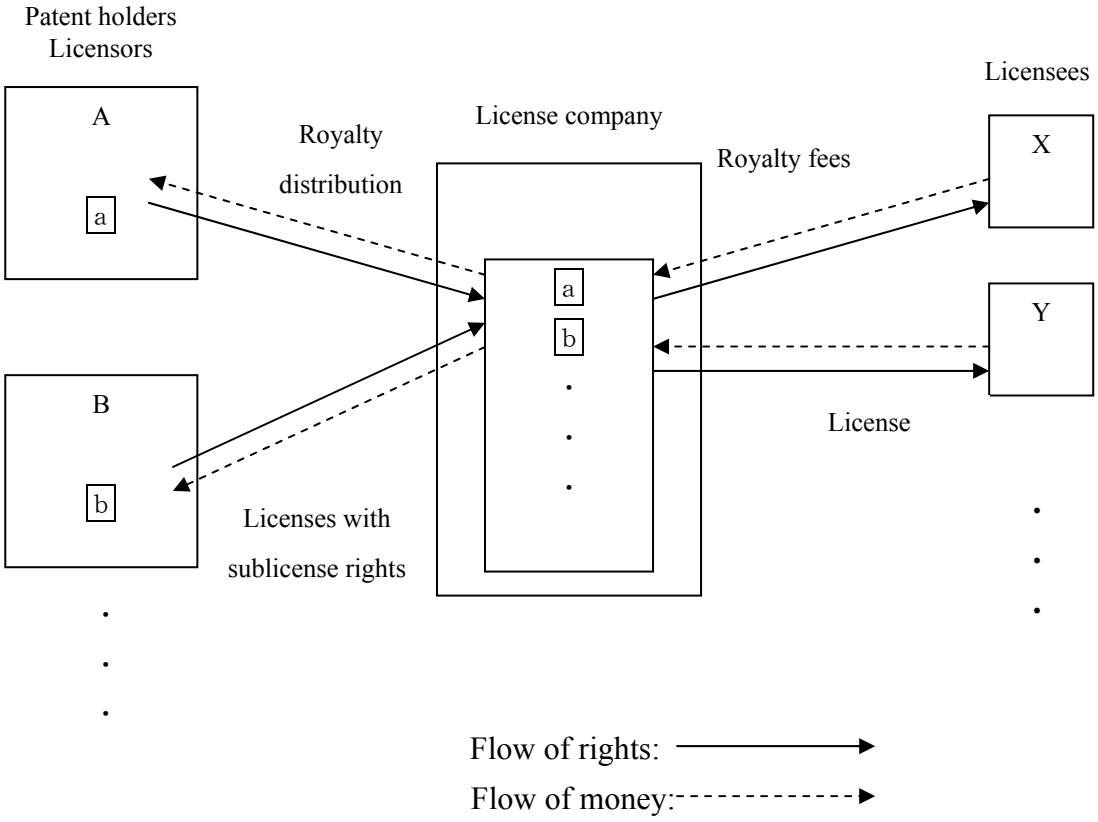

Figure 5: Patent Pools Formed by Concerned Party Type License Companies

(2) Forms associated with involvement as an agent (agent type)

In this form, the license company acts as an agent for the right holders to the pooled patents, so the licensor companies holding the rights to pooled patents are central to concluding contracts with the licensee companies. These relationships are shown in Figure 6.

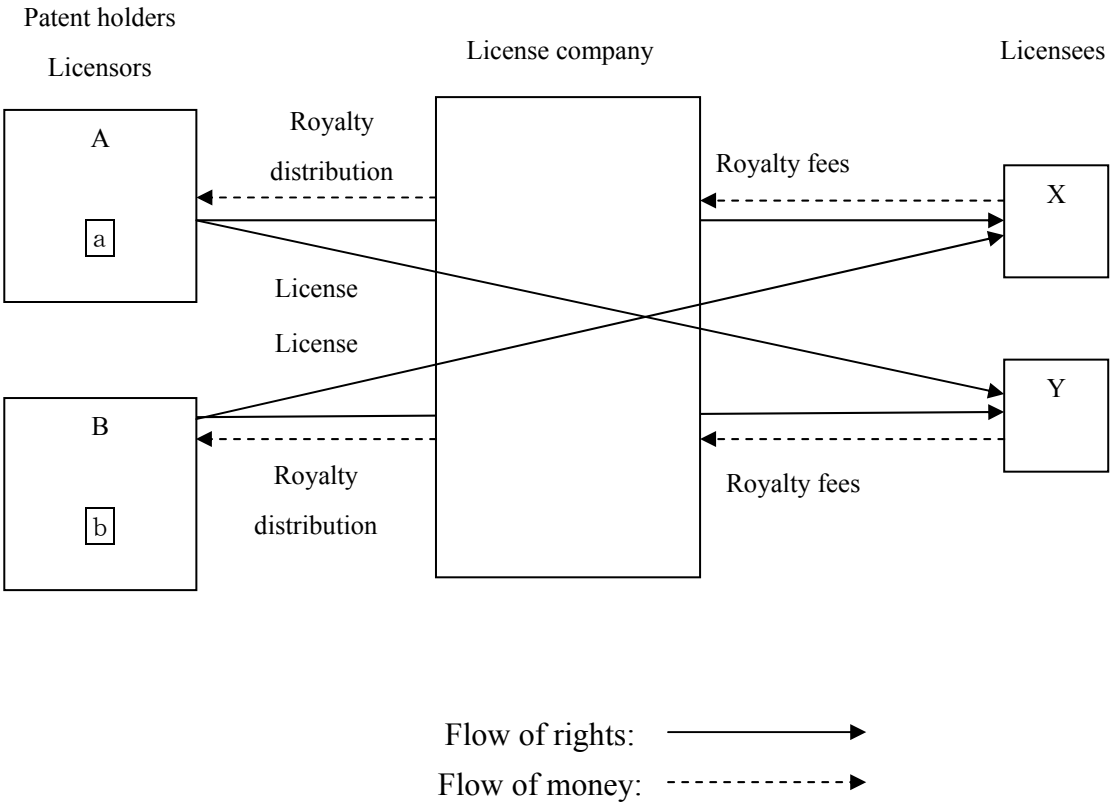

Figure 6: Patent Pools Formed by Agent Type License Companies

The content of the contracts in these two forms have points in common, as well as points that differ, and the following provides an explanation of these commonalities and differences.

i) Contract content that both have in common

Contracts agreed to between licensors that hold the pooled patent rights are common to both the "Agent" and "Concerned Party" type of contracts. The content of these contracts includes the following:

a) Conditions for the grant of working license related to patent pools
b) Conditions for the distribution of royalties obtained
c) The involvement and selection of the license company
d) The method of selecting essential patents and the appraiser
e) Conditions and procedures for the addition and approval of new licensors

The next common contract is the contract between the licensor and the license company:

a) Commissioning/accepting duties relating to license activities (the specific content of these duties differs according to whether it is a concerned party type or agent type license company)
b) The specific content and scope of the license activities in question
c) The amount or method of calculating the handling fee to be paid to the license company.

Furthermore, there is the license contract between the main actor in the licensing activities (the main actor differs according to whether it is a concerned party type or agent type license company) and the licensee company:

a) Agreement on grant of working license
b) Scope of the license[32] granted
c) Conditions for the payment of royalties
d) Obligation to maintain confidentiality, contract termination conditions, and other matters deemed necessary in relation to a contract regarding the grant of working license

ii) Contract content that differs depending on the contract type

On the other hand, contracts that differ depending on the contract type include contracts relating to the relationship between the licensor and the license company.

<Concerned party type>

In the event that the license company is involved as a party concerned (concerned party type), a contract regarding the grant of a working license with sublicensing[33] rights is concluded between the holder of the patent rights and the license company, and the license company becomes the main party involved in concluding license contracts with licensee companies.

<Agent type>

In contrast, with regard to the form where the license company is involved in license contracts as an agent (agent type), the contract concluded between the licensor company and the license company is an outsourcing/consignment contract where the license company is just a negotiating agent. Consequently, in this form, the main party concluding the license contract with the licensee company remains the licensor company.

32 The right to work a patented invention.

33 This is where a party who has obtained the right (license) to work an invention then grants the right to work that invention to a third party. It is also called re-licensing rights.

Due to this situation, from the perspective of the licensee company, the partner from which it receives the license differs depending on the form.

<Concerned party type>

In the case of the concerned party type, the licensee company's partner in the license contract (that is to say, the licensor in the contract) is the license company. To state this in greater detail, each licensee company concludes the license contract with the license company, which has obtained sublicensing rights from the licensor company.

<Agent type>

On the other hand, in the case of the agent type, the licensee company's partner in the contract is the licensor company. In practice, the partner in the administration of the contract is the license company, but this company is just an agent and the actual partner in the contract is the licensor company.

6. The roles of license companies

The legal position of license companies depends on whether the company is involved in the license contract as a concerned party or as an agent, but the administrative role of license companies does not differ greatly between the two. The roles expected of license companies can be broadly classified into the following four categories: (1) Negotiation; (2) Royalty management; (3) Marketing; and (4) Providing solutions.

(1) Negotiation

Negotiation involves duties relating to identifying potential licensee companies, and negotiating and convincing the parties involved with regard to participation in patent pools. The negotiation ability of a license company is one major factor determining the success or failure of patent pool operations. Consequently, it is necessary that the specific structure of the license company be determined with extreme caution. In the case of technologies that will be used internationally, it is necessary to consider the matter from the perspective of whether the company has a network or branch office (or can establish one) that will enable it to approach potential licensee companies around the world.

(2) Royalty management

Royalty management refers to duties involving the collection and distribution of royalty fees within the patent pool.

With regard to collection, it is necessary to check the royalty report compiled by each licensee company regarding the status of the working of the invention, and to manage the situation with regard to the payment of royalty fees according to the contract conditions.

At the same time, the royalty fees collected have to be allocated to the licensor companies according to conditions determined by them in advance. More will be said about the allocation conditions below, but where there are many parties involved, there are a number of factors that need to be taken into consideration with regard to the specific allocation, such as the number of patent rights provided and whether the working of the invention is taking place domestically or internationally, so a great deal of work is involved.

(3) Marketing

License companies are required to take on duties focused on maximizing the payment of royalty fees to the pool, so that the patent pool can operate successfully. In order to do this, it is important that they identify potential licensee companies, and, in conducting efficient negotiations and concluding the contract, develop an understanding through independent routes of what products will be manufactured and sold on what kind of scale, without relying merely on the information provided by the licensee company. Moreover, in identifying potential licensee companies, it is vital that the license company forecast the degree to which the technologies involved in the patent pool (mainly standard technologies) and the pooled patent rights will be utilized in the future.

(4) Providing solutions

Patent pools are a bundle of contracts concluded between multiple parties with differing interests, and are established through a very delicate balance. Consequently, if a change in circumstances occurs from the outset after their formation, friction can arise regarding changes to the contract conditions. Above all, with regard to royalty fee rates, the interests of license companies and licensee companies naturally conflict with each other. Furthermore, even in the case of license companies, the effects of changes in license conditions differ depending on whether the company is an implementing company (manufacturer) that is itself in the position

of a licensee company, or whether it is a company focused solely on research (just providing patent rights, without actually manufacturing and selling products itself), so reactions to proposals for changes in conditions differ as well.

With this situation as the basic premise, if a problem does arise, it is expected that the license company will propose solutions from a neutral standpoint that will be acceptable to all parties, and which will resolve the problem.

From this perspective as well, the effective operators of the license company need to be neutral, have the ability to provide solutions, and be trusted by the other companies involved.

7. Selecting target patents

The pooled patents are essential patents for related technological standards. This is because, in the event that non-essential patents are also pooled and a scheme involving the licensing of these as a single bundle were adopted, there would be a risk that they would be eliminated by the Anti-monopoly Law authorities as a so-called "tie-in sale" [34]. Incidentally, there are two concepts within essential patents: Technically Essential Patents and Commercially Essential Patents.

Technically Essential Patents are patents for technology that will inevitably be worked when implementing a technological standard. This relationship can be judged in the same way as that between the defendant articles in normal infringement lawsuits and the scope of claims.
In contrast, Commercially Essential Patents are patents that effectively have to be worked from a commercial perspective, such as securing the specifications or from a cost perspective, even if there are ways of circumventing them technologically when working the technological standard.

There are also patents that are selectively included in essential patents; these are a somewhat atypical genre. If there is remarkable technological progress after the patent pool is formed and patents for achieving the technological standard are filed, it will become necessary to consider selective action if existing essential patents can no longer necessarily be described as essential. An example of such selective essential patents is the W-CDMA patent platform.

In a situation like the one at present, where the economy has become globalized, patents across the globe can become the focus of patent pools. Consequently, when determining essential

34 Anti-monopoly Law Clause 2 Paragraph 9

patents in the patent pool, it is necessary to consider not only patents in the specified country, but also the handling of patent families that contain foreign patents that relate to these.

Under normal circumstances, the patent families pooled as essential patents consist of essential patents that have already been internationally registered and patents that have been registered or applied for in another country with the same priority date as these essential patents and which essentially have the same content in terms of rights.

8. Determining and allocating royalties

(1) Determining royalties

In almost all patent pools, royalties are not a percentage of the price, but are determined as a fixed value (amount per unit). The background to this is that there is a philosophy that the value of the patent in question (that is to say, the royalty that should be paid) when working essential patents as a package remains constant, irrespective of the sales price. Moreover, one actual issue faced is that it is easy to grasp the number of items sold of an individual product, but it is comparatively difficult to gain an idea of the retail price.

Table 1 shows the application royalties of leading patent pools.

Table 1: Application Royalties of Leading Patent Pools

Importance of the Technology	Name of the Patent Pool	Leading Model (Shipping Price)	Application Royalty	Converted Royalty Rate
Fundamental Technology	MPEG2	DVD ($100 USD)	$2.5 USD / unit	2.5%
	DVD-6C	As above	$3.0 USD / unit	3.0%
	DVD-3C	As above	$3.5 USD / unit	3.5%
	3G Patent Platform	3rd Generation Mobile Phones ($250 USD)	$2-4 USD / unit	1.2%
Improvement Technology	G.729	2nd Generation Mobile Phones ($200 USD)	$1.5-0.3 USD / unit	0.4%
Value-added Technology	MPEG4 Visual	3rd Generation Mobile Phones ($250 USD)	$0.25 USD / unit	0.1%
	AVC/H.264	3rd Generation Mobile Phones ($250 USD)	$0.25 USD / unit	0.1%
	IEEE1394	PC ($500 USD)	$0.25 USD / unit	0.05%
	MPEG4 Audio	3rd Generation Mobile Phones ($250 USD)	$0.5-0.12 USD / unit	0.12%
Note: The shipping price is a reference value that undergoes major fluctuations. Where a range of values is given for the application royalty, the median value has been used.				

Source: Hisashi Kato (2006), *An Introduction to Patent Pools*, Japan Institute of Invention and Innovation, p.63

According to Hisashi Kato's table, the converted royalty rate shown in the right-hand column is around 1-3% in the case of fundamental technology, which "more or less corresponds to the average application license fee rate in individual patent license contracts for ordinary mass-produced items (such as radios, televisions and other telecommunications and

audiovisual equipment)". Moreover, in the case of value-added technology, most have a rate of around 0.1%, which shows that they have been designed at a level that will not impose an extreme cost burden even if, in addition to working essential patents, other licenses are required in order to adopt and work these technologies.

As a result, existing patent pools can be designed with an adequate awareness of the "RAND condition for essential patents as a whole" to which Mr. Kato habitually refers.

(2) Allocating royalties

Broadly speaking, there are three techniques for royalty allocation. To be more specific, the basis for allocation is either i) the number of essential patents; ii) whether or not the patent has been worked in the area in question; or iii) the market share.

i) Allocation method based on number of essential patents

As the name suggests, this method involves the holders of the rights to the essential patents allocating royalties (usually as a proportion) based on the number of patents selected as essential patents. In general, the degree of contribution to the working of a patent differs according to the quality of the patent rights, so there is a school of thought that is uncertain about using numbers as the basis for allocating royalties, but this technique is appropriate in situations where the focus is on allocating royalties based on simple, objective criteria, rather than incurring financial and time costs in auditing the quality of the rights, thereby reducing the total amount allocated.

ii) Allocation methods based on whether or not the patent has been worked in the area in question

This is a technique whereby the proportion of royalties allocated is determined on the basis of whether or not the essential patents were worked (through manufacture or sale) in the market of the country to which those patents are attributed, and is called the country-by-country principle. This technique can be adopted in situations where there is an awareness of explaining a given level of rationality with regard to financial transactions among tax authorities in each country, in order for patent rights and economic activities to be distributed globally. To be more specific:

a) In the event that the essential patent is worked within a country to which it is attributed, the holders of the essential patent rights in the country in question will allocate the

royalties relating to the patent working in question.

b) In the event that the essential patent is worked in two countries to which it is attributed (for example, where it is manufactured in Country A and sold in Country B), 50% of the royalties are distributed by the holders of the essential patent rights in Country A and 50% by the holders of the essential patent rights in Country B (and are then allocated in each country).

c) In the event that the essential patent is worked in a country to which the rights are attributed and a country to which the rights are not attributed, the holders of the patent in the country to which the essential patent rights are attributed allocate the royalties relating to the patent working in question.

The MPEG2 Patent Pool adopted this technique.

iii) Allocation method based on market share

This technique involves the allocation of royalties based on the market share of each company as determined through surveys conducted by the license company, multiplied by the number of essential patents held by each company in each country. Compared with the technique in ii) above, while it has the advantage that burdens associated with filing declarations concerning manufacture and sale by those working the patent rights, there is a possibility that problems could arise with regard to the need to conduct surveys of market share and the reliability of such surveys. The 3G Patent Platform adopted this technique.

9. Deductions from royalties

Royalties paid by licensees participating in the patent pool are not all allocated to the licensors, with some items being deducted.

The first item is the handling fee of the license company; this depends on the scale of the patent pool, but in most cases is set at somewhere between 5% and 20% of license income. This item is a deduction that inevitably arises when duties are outsourced to license companies.

The second item is the payment of incentives to founder members of the patent pool. Establishing a patent pool entails a burden in terms of time and financial costs, so there are occasions where remuneration is deducted to be paid as an incentive to those members who were members at the time the pool was initially established, in order to compensate them for this burden. This is not an essential deduction, but it is an item that is important for the formation of patent pools.

The third item is a reserve fund to cover any lawsuits that may arise. In the event that a third party who is not a participant in the patent pool infringes the pooled essential patent rights, a collective-action lawsuit is usually launched, as it is a problem that affects the interests of all holders of essential patent rights. The costs of such lawsuits are deducted in advance.

II. Specific Examples of Patent Pools

This chapter provides an introduction to representative patent pools currently effective, focusing on leading cases of large, successful patent pools, namely the MPEG2 Patent Pool and the 3G Patent Platform.

<The MPEG2 Patent Pool>

1. Background to the establishment of the license company

MPEG was originally the name of a joint expert committee formed by the ISO and the IEC, called the Moving Picture Experts Group. In 1990, this committee determined the required specifications for MPEG2, and the standard on video and audio used for transmission for television broadcasts was formulated in 1994 as the MPEG2 Recommendation on S-13818. The MPEG2 standard was stipulated on the basis of free discussions, as a result of which, while it was technically ideal, problems relating to patents had been put to one side, so responses to the matter of patents were discussed intensively during the final stages.

As of 1993, the MPEG committee had stipulated a stance that it was desirable to consider measures that would enable essential patents to be worked by means of one-stop licenses. Based on this stance, the MPEG IPR WG was convened and began holding meetings as a voluntary organization for considering patent-related problems. Through the efforts of Dr Kenneth Rubenstein, a patent practitioner from the US, who became a supervisor of the patent survey at the recommendation of the working group chairman, Baryn S. Futa, more than 20 patents essential to MPEG2 were selected. The holders of these essential patents [Sony, Fujitsu, Matsushita Electric Industrial, Mitsubishi Electric, Columbia University, AT&T Corporation (now known as Lucent Technologies Inc.), General Instrument Corporation, Scientific Atlanta Inc., and Philips Electronics NV] were asked to state whether or not they were willing to license their patents and participate in the working group. As a result of deliberations by these nine groups with the rights to the essential patents, it was agreed that, i) a structure that pooled the patents would be adopted; ii) it was necessary to establish an independent license company in order to do this; iii) each holder of an essential patent would grant the license company sublicensing rights, with all third parties who desire a license being granted a worldwide license under fair and uniform conditions; and iv) the pooled patents would be restricted to essential patents.

As a result, the license company MPEG-LA (MPEG Licensing Administrator, LLC) was established in May 1996 with equity participation by eight of the nine companies (AT&T was the exception) that comprised the MPEG IPR WG (AT&T did not participate in the patent pool as a licensor either, due to concerns about the Antitrust Act). This working group began licensing activities in July 1997, having received advance confirmation from various anti-monopoly authorities in Japan, the USA and Europe to the effect that formation of the patent pool did not contravene anti-monopoly laws in those countries.

At this point in time, MPEG-LA has sublicensing rights for 33 patents relating to MPEG-2, and uses these as the cornerstone of one-stop license contracts. It has been decided that, if the licensors participating in the patent pool acquire essential patents in the future, they will pool these other essential patents in the same way and will include them in this one-stop license.

2. Structure and conditions of the licenses

Figure 7 shows an overview of the license structure. With regard to the license company forms referred to in Chapter I, MPEG-LA is a concerned party type license company, so it is possible for the license company to operate flexibly, as it has sublicensing rights.

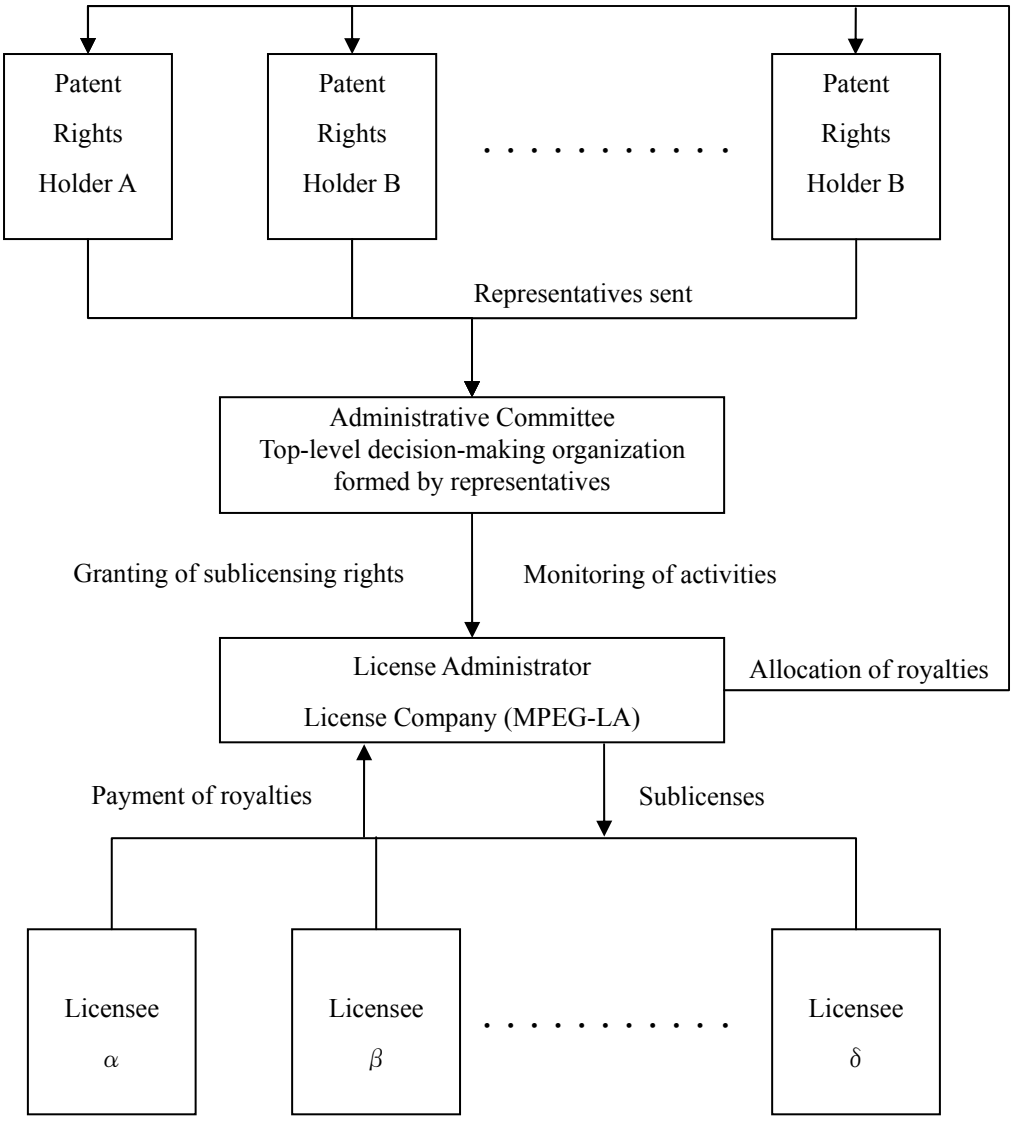

Figure 7: License Structure of the MPEG2 Patent Pool

Source: Wataru Kato (2006), *An Introduction to Patent Pools*, Japan Institute of Invention and Innovation, p.117

Regulations stipulated at the time of the patent pool was established stated that the period for the one-stop license ran from June 1, 1994 to January 1, 2000, with the license to be renewed every five years after that. It was stipulated that, at the time of the license renewal, even if the license conditions had changed, the royalty would not be increased by more than 25%.

One of the items in the agreement at the time of establishment, when the license began, stipulated that the royalty fee per unit of equipment would be $4 USD, but this was subsequently reduced to $2.50 USD.

Moreover, there are stipulations to protect existing licensors that are vulnerable due to their provision of essential patents.

One of these stipulates that, in the event that a party participating in the patent pool as a licensee has an essential patent, that party can enter that essential patent into the pool and become a licensor, or can grant it back to the licensors on condition of the payment of a basic license fee rate per essential patent.

Furthermore, it is stipulated that, in the event that a licensee exercises patent rights (concerning a patent that relates to MPEG2 but which is not an essential patent) in relation to a licensor, the licensor that is the focus of the lawsuit can terminate the license for the pooled essential patent, but only in regard to that particular licensee.

3. Allocation of royalties

In the MPEG2 Patent Pool, royalties are allocated based on whether or not the patent has been worked in the area in question, which is detailed in Chapter I above. Consequently, the licensees have to provide a royalty report to MPEG-LA, concerning countries where the product in question has been manufactured and/or sold, and the quantities thereof.

4. Current situation

As of January 2009, the MPEG2 Patent Pool has expanded to encompass a total of 25 licensors and 1,414 licensee companies.

In addition, MPEG-LA also operates a patent pool as the license company for the MPEG4 standard that was subsequently developed (standard for the digitalization of moving pictures and sound).

<The 3G Patent Platform>

(a) Background to the formation of the patent platform

3G refers to the third generation of mobile telecommunication systems, and the draft plan agreed by the International Telecommunication Union (ITU) as IMT-2000 (International Mobile Telecommunication 2000) marks the beginning of the 3G common worldwide standard.

The standard for second-generation mobile telecommunications differed in each of Japan, the US and Europe. In addition, there was conflict and rapprochement between Ericsson, which was promoting the W-CDMA method, and Qualcom, which was promoting the cdma2000 method, during the deliberation process for third-generation standardization, meaning that this may be an example of significant reference with regard to mechanisms for resolving issues concerning standardization and patents in the event that a multiplicity of essential patents exist, since this field is one in which technological innovation takes place at a rapid pace.

(b) Course of the formation of the patent platform

It was anticipated that there would be numerous essential patents, so the handling of essential patents was considered in the UMTS (Universal Mobile Telecommunication System) IPR Working Group, which was formed voluntarily in 1998 by approximately 30 companies manufacturing mobile telecommunications equipment to the 3G standard.

In this working group, various response measures were considered and it was decided that the results of an expert survey should be adopted, concluding that maximum royalties commercially rational for a business is 5%.

Furthermore, an open structure called a patent platform was also adopted. This is a mechanism whereby a patent evaluation organization selected by means of an agreement between licensees and patent rights holders wishing to participate certifies essential patents, with participants concluding a contract based on a set of standard license conditions. In addition, it was deemed that the total royalties paid by licensees should not exceed the aforementioned 5%. However, it was stipulated that, in the event that the relevant parties were in agreement, it was possible to conclude cross-license contracts that were not bound by the standard license conditions.

This patent evaluation organization consists of a panel of three lawyers and patent attorneys who are knowledgeable in the field of mobile telecommunications and who have been selected in advance from among lawyers and patent attorneys affiliated with specified offices in Japan, the US, Europe, the Korea and China. This panel determines whether or not the patent for which an application has been submitted is essential to the 3G standard.

The patent platform is a system that differs from the patent pool, but since it involves licensing multiple patent rights as a package, it is still necessary to overcome problems relating to anti-monopoly laws. After conducting prior screening with anti-monopoly law authorities in Japan, the US and Europe, two concerns were voiced by the US Justice Department. These

were: i) the risk that the involvement of licensees in determining license conditions could unfairly lower the value of the patents; and ii) the possibility that, although the five sub-standards contained in IMT-2000 each have essential patents particular to them, having all of these included in a single package could inhibit technological competition. As a result, it was decided to adopt a structure for the 3G Patent Platform with changes that responded to these concerns, with the five sub-standards separated out from the main standard (Figure 8).

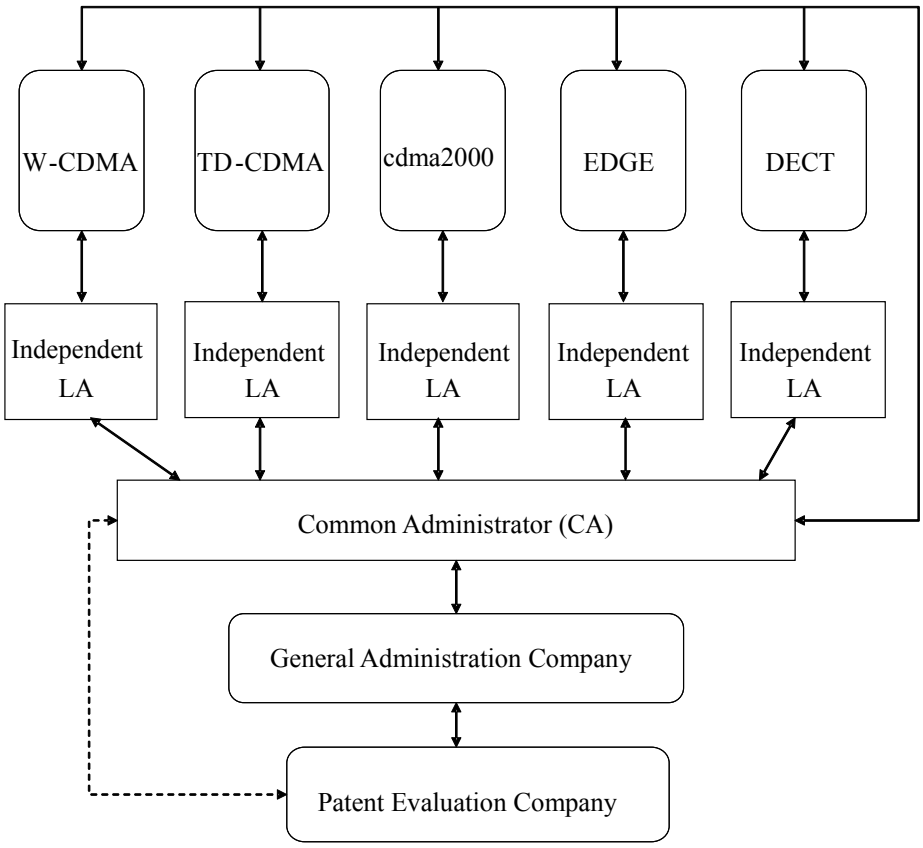

Figure 8: The Structure of the 3G Patent Platform

Source: Wataru Kato (2006), *An Introduction to Patent Pools*, Japan Institute of Invention and Innovation, p.131

(c) Composition of the patent platform

Of the five sub-standards, the W-CDMA platform was the first to be established. At that time, rather than having the licensee conclude a standard license contract with each individual essential patent rights holder, it was also possible for the licensee to select a one-stop joint license system for essential patents held by multiple patent rights holders (Figure 9).

In the standard license contract, the royalty rate per essential patent (the standard royalty rate, or SRR) was set at 0.1% of the value of products shipped from factories. However, if both participants hold essential patents, the royalty received from the participant with fewer patents should offset this.

Furthermore, as the maximum amount to be paid is set at 5%, the concept of the maximum cumulative royalty (MCR) is set forth, as detailed above, so if the simply cumulative royalties are in excess of 5% when working multiple essential patents, these are considered as 5% across the board, with the holders of the essential patents receiving a proportion commensurate with the number of patents concerned.

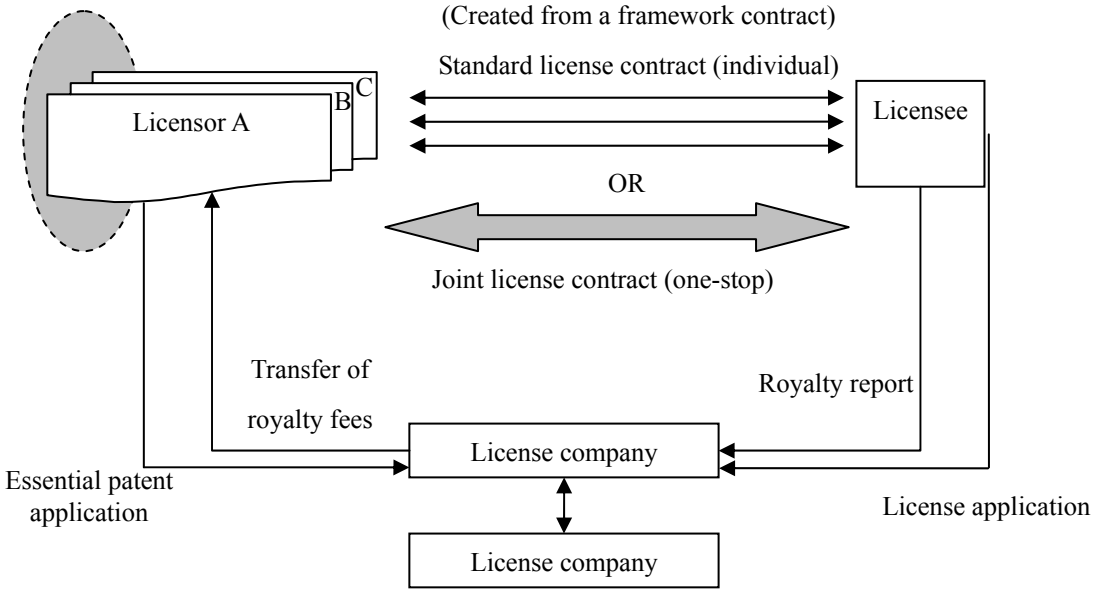

Figure 9: License Structure of the 3G Patent Platform

Source: Wataru Kato (2006), *An Introduction to Patent Pools*, Japan Institute of Invention and Innovation, p.133

III. Issues Concerning Patent Pools

As has been explained above, patent pools are a system that have a number of advantages for participants, but there do remain a number of issues that are yet to be resolved. This chapter introduces the main issues.

1. Outsider problems

Outsiders are holders of essential patents who do not participate in patent pools at the time of their establishment. Specific examples include Lucent and IBM in MPEG2, Thomson in DVD-3C and 6C, and Qualcom, Motorola, Ericsson and Nokia in 3G.

Lucent and IBM are not participating in the MPEG2 Patent Pool, but have adopted a stance of concluding individual license contracts with each member of the pool. Consequently, those who wish to work the standards can do so but are faced with the burden of individual royalties and contracts for the particular things.

With regard to Thomson, although the company participated in discussions regarding the standardization of DVD, it did not participate in the patent pool.

In this situation, outsiders can conclude licenses for essential patents with more advantageous conditions than the essential patent holders participating in the patent pool, so problems arise with regard to the loss of incentives to form and take part in patent pools.

In addition, if there is a party who conceals the fact that they have an essential patent or are applying for one, hold-up problems, which will be explained in the next section, can arise.

2. Hold-up problems

The term hold-up refers to the act in which a party that initially participates in discussions concerning the formulation of technological standards, while intentionally concealing the fact that it held an essential patent, or reconfiguring a patent application currently being filed, or filing a continuation application, but then declines to participate in the patent pool and exercises their patent rights in relation to the parties working the patent after the technological standard has been established. Specific examples of this include the Dell Computer consent

decree case, the JPEG case and the Rambus case.

<The Dell Computer consent decree case>

After Dell joined VESA (Video Electronics Standards Association), a standardization group in which many computer hardware and software manufacturers participated, VESA selected the VL-bus standard for video aggregation software. VESA obliged its member companies to disclose the patents that they held relating to the standard, but during the procedures for adopting the VL-bus standard, the Dell representative stated in writing that, to the best of the representative's knowledge, the standard did not encroach on the patents that Dell held. After the companies concerned had sold a large volume of products using this standard, Dell requested that the other companies in VESA pay a license fee, on the grounds that working the VL-bus card infringed its related patents (481 patents). When the Federal Trade Commission (FTC) began investigating on the grounds that this was suspected to be a violation of Clause 5 of the FTC Law (unfair restrictions on competition), Dell agreed to a settlement by means of a consent decree, based on the premise that it did not acknowledge the violation.

The essential features of the consent decree were as follows: i) Dell would not exercise its rights in relation to the 481 patents for the next 10 years; ii) Dell would not engage in hold-up actions for the next 10 years, including in relation to the 481 patents; iii) a copy of the consent order would be distributed to the VESA members, counterpart companies that had received warnings, and standardization members that participated subsequently, and the details of the order would be made public within Dell; and iv) the FTC would monitor all of these.

<The JPEG case>

In standardization activities conducted by ISO/IEC in relation to the JPEG (Joint Photographic Experts Group) image compression method, the participating companies agreed verbally that the relevant patents would be license-free, so image compression technology (according to the ISO/IEC standards) was widely disseminated.

Against the background of the purchase of related patents (672 patents) by Vtel, a subsidiary of Forgent Networks, from Compression Labs, which had been participating in standardization activities from the outset, Forgent Networks requested in July 2002 that more than 30 companies using JPEG pay license fees, as they were infringing its 672 patents.

There is no legal basis for directly prohibiting hold-up actions, so the validity of the patent

rights became a point of contention, and an expert opinion was provided in a written statement of opinion submitted by the JPEG Committee and Ruedi Seiler, Professor at the Technical University of Berlin, stating that the relevant patents were not essential to the JPEG standard. However, a number of leading companies agreed to pay license fees.

<The Rambus case>

Rambus was a member of the Joint Electron Device Engineering Council (JEDEC), a standardization group focusing on memory technology. The fundamental principle of JEDEC was that the companies participating in standardization meetings would publish not only their established patents, but also those for which member companies were currently filing applications; however, this was not clearly stipulated, but was, so to speak, a gentleman's agreement.

When Rambus launched a lawsuit against a number of companies using this standard, based on the patents secured after the establishment of the JEDEC standard, a trial took place on the grounds that this contravened Clause 5 of the FTC Law (unfair restrictions on competition). But as a result of the fact that deficiencies in JEDEC rules had an impact on the judgment concerning illegality behavior by the company, the direction of the trial changed over and over again. Ultimately, in 2006, the FTC issued the unanimous ruling that Rambus was in breach of the law.

The foregoing problems arise due to the fact that patent policies as stipulated by standardization groups have no binding power in relation to the pooling of essential patent rights.
Parties engaging in hold-ups are, in many cases, companies that specialize in development or patent management companies, and do not manufacture products, and those using standards struggle with their response, because they cannot respond by means of cross-licensing even if they are holders of essential patent rights in the patent pool.

The problems of outsiders and hold-ups are problems that impact upon the success or failure of standardization activities, so in *Approaches to the Formation of Patent Pools as a Result of Standardization Under the Anti-monopoly Law*, which was published in 2005 (revised in 2007), the Japan Fair Trade Commission indicated to a certain extent its thinking about approaches to patent pools, based on the premise of the existence of outsiders.

IV. Basic Knowledge for Understanding Patent Pools

The Intellectual Property Promotion Plan

This is an action plan determined by the Japanese government's Intellectual Property Strategy Headquarters on the basis of Clause 23 of the Basic Law on Intellectual Property. Since its publication in July 2003 under the formal title *Plan for the Promotion of the Creation, Protection and Utilization of Intellectual Property*, it has been revised annually.

The Young Report

A report on the competitiveness of the United States, published in 1985 by the President's Commission on Industrial Competitiveness, a council of special advisors to the President of the United States. The official title of the report was *Global Competition: The New Reality*, but it became known as the Young Report, after the chairman of the commission, J.A. Young. It advocated the creation, practical application and protection of new technologies, so it is looked upon as the turning point when the US shifted towards a pro-patent policy.

Patent Law

This is a law that was enacted in order to grant patent rights to inventors for a set period in order to protect them, therefore promoting the development of industry. The objective of this law is to encourage invention by protecting and promoting the use of inventions, thereby ultimately contributing to the development of industry.
Source: http://www.jpo.go.jp/dictionary/

Patent Rights

These are exclusive rights granted to those who have created novel inventions, in order to compensate them for publishing their invention. In order to acquire patent rights, a patent application must be submitted to the Japan Patent Office and the establishment of the patent registered after examination. The main requirements for registration are novelty and inventive steps. The invention that has had the establishment of its patent registered is called a patented invention. The technological scope of patented inventions is set on the basis of the scope of the patent claim.

Infringement of Patent Rights

This is the act of working a technology included in the technological scope of a patented invention, as stipulated on the basis of the scope detailed in the patent claim, without authority or consent from the holder of the patent rights.

Indirect Infringement

This indicates an act which does not constitute a literal infringement of patent rights, but which can be treated as an effective infringement of patent rights. To be more specific, this can be, for example, the production and/or sale of an item that another party is using solely for the production of a patented product (Clause 101, Paragraph 1 of Patent Law), the production and/or sale of a component constituting the essential part of a patented product while knowing that it can be used to infringe patent rights (Paragraph 2 of the same clause), or the production and/or sale of an item used only in a patented method (Paragraph 4 of the same clause).

Licenses

This is the right to work a patented invention.

Sublicenses

This refers to where a party has obtained a license awarding the right to sub-license (grant a license to a third party to work a patented invention).

Grant-back

This refers to where a licensee who has obtained a license acquires a patent for an improvement technique for a patented technology and grants the right to work that improvement technique to the original licensor.

Royalty

This is remuneration for obtaining a license for a patented invention. It is also called a license fee. Usually it is set as a percentage of the product price or an amount per unit of the product.

Arbitrary Licenses (Compulsory Licenses)

These are normal licenses that are set in a compulsory fashion by means of legal procedures. There are two types: (1) those set by means of a ruling from the Commissioner of the Patent Office for inventions that have been unworked and unused for more than three years; and (2) those set by means of a ruling from the Minister for Economy, Trade and Industry for the sake of the public interest. According to the ministerial declaration made at the WTO Ministerial

Conference in Doha, diseases such as HIV/AIDS can become a condition for recognizing a compulsory license.
Source: http://www.jpo.go.jp/dictionary/

Anti-monopoly Law

This is a law that prohibits private monopolies, unjust trade restrictions and unfair trading practices; prevents excessive consolidations of business power; and eliminates unreasonable restrictions on production, sale, price and technology through such methods as mergers and agreements, or any other kind of unfair obligations in relation to business activity, thereby aiming to promote free and fair competition, enable businesspeople to exercise their originality, ensure that business activity flourishes, and increase the level of employment and national income, in order to secure the interests of ordinary consumers and promote the sound, democratic growth of the national economy. In order to work harmoniously with Patent Law, which gives rise to exclusive rights, it has a provision that stipulates that the exercise of rights based on industrial property rights, such as Patent Law, is not governed by Anti-monopoly Law (Clause 23).

Japan Fair Trade Commission

An administrative commission established to manage Anti-monopoly Law. It is run under a council system, with a chairman and four committee members, and conducts its duties independently, without any direction or supervision from any other body. It is an extra-ministerial bureau of the Cabinet Office.

TRIPs Agreement (Agreement on Trade Related Aspects of Intellectual Property Rights)

This is an agreement prescribed in Annex 1C of the Marrakesh Agreement Establishing the World Trade Organization. It prescribes the scope of protection, establishes protection standards for a wide range of intellectual property rights, including patents, design rights, trademarks, copyright, the layout of integrated circuits, and the protection of unpublished information, as well as stipulates rules for the exercise of intellectual property rights.
Source: http://www.tokugikon.jp/dic/index.html

WTO/TBT Agreement (World Trade Organization Agreement on Technical Barriers to Trade)

This is an international framework relating to standards certification systems, including standardization. It aims to ensure that the standards certification systems of each country [compulsory laws (technological standards in compulsory laws), voluntary standards and

compatibility evaluation systems] are not more restrictive from a trade perspective than is necessary to achieve legitimate objectives (safety, health protection, etc.). Accordingly, this framework obliges member countries to ensure transparency when formulating specifications, to use international standards, and to respect the principle of non-discrimination between domestic and international companies when utilizing international specifications and applying systems.
Source: http://www.jisc.go.jp/dictionary/index.html

ADR (Alternative Dispute Resolution)

This refers to a method of resolving disputes that does not depend on court proceedings, such as judicial verdicts, but rather focuses on civil conciliation or family affairs conciliation, procedural compromise, arbitration or conciliation by government or private sector organizations, or mediation. While dispute resolution by means of judicial verdicts takes place on the basis of legal criteria, ADR is characterized by the fact that it is not necessarily constrained by law and aims to achieve a reasonable resolution in the context of the facts of the conflict.
Source: http://www.jisc.go.jp/dictionary/index.html

Japan Intellectual Property Arbitration Center

This alternative dispute resolution (ADR) organization was established by the Japan Patent Attorneys Association and the Japan Federation of Bar Associations in March 1998 under the name Industrial Property Rights Arbitration Center, with the aim of dealing with conflicts in the field of industrial property rights, and began operating on April 1, 1998.
In August 2000, it concluded a contract with the Japan Network Information Center (JPNIC) and became the JP Domain Name Approval Dispute Resolution Organization, which focused on resolving conflicts regarding JP domain names used on the Internet that were registered with the JPNIC; then, in April 2001, its name was changed to the Japan Intellectual Property Arbitration Center and its scope of operations broadened from industrial rights (industrial property rights) to intellectual property rights.
Source: http://www.ip-adr.gr.jp/enkaku/index.html

Japan Federation of Bar Associations

This is a federation that was established on September 1, 1949 on the basis of the Practicing Attorney Law, amidst a situation in which the judicial system was being revised after the Second World War, as a result of the enactment of the Constitution. It consists of 52 bar

associations throughout the country, individual lawyers as well as lawyers specializing in matters relating to the laws of other countries.
Source: http://www.nichibenren.or.jp/ja/jfba_info/organization/nichibenren.html

Japan Patent Attorneys Association

The Japan Patent Attorneys Association aims to provide guidance, liaison and supervision for its members, in order to promote positive progress in the duties of patent attorneys and maintain the quality in such attorneys, in view of their mission and responsibilities (Clause 56 of the Patent Attorneys Law); it conducts a diverse range of activities, such as the development and improvement of members through training courses, and research and dissemination activities focused on the industrial property rights system. Moreover, it carries out administrative duties relating to the registration of patent attorneys.
Source: http://www.jpaa.or.jp/about_us/about/

Standards (Benchmarks)

These are agreements formulated through standardization. They are also called specifications. There are compulsory and voluntary standards, and generally benchmark standards indicating voluntary standards.
Source: http://www.jisc.go.jp/dictionary/index.html

Standardization

This is the act of establishing agreements for common, repeated use, so that the maximum order can be achieved under the given circumstances, with regard to actual or potential problems (ISO/IEC Guide 2).
It reduces, simplifies and creates order with regard to things that could become diverse, complex and disordered if left to develop freely. More specifically, it involves setting certain standards with regard to various tangible and/or intangible things, with such objectives as “ensuring quality or performance”, “ensuring safety”, “ensuring compatibility” and “integrating testing and evaluation methods”.
Source: http://www.jisc.go.jp/dictionary/index.html

De Facto Standards

De facto standards are used by individual companies or groups of companies that have become dominant in the market through selection and culling in the market. (For example, video recorder systems (Betamax vs. VHS), computer operating systems (Windows vs. MacOS).)
Source: http://www.jisc.go.jp/dictionary/index.html

De Jure Standards

These are official standards, formulated by means of procedures that are public and clearly documented. Japanese standards and international standards fit into this category.

Source: http://www.jisc.go.jp/dictionary/index.html

Forum Standards

These are standards established and formulated by a forum that brings together a number of interested companies. They are not official, but have procedures that are open like de jure standards. In particular, they are often used when formulating standards in the field of cutting-edge technology. (For example, in the field of DVD-ROM.)

Source: http://www.jisc.go.jp/dictionary/index.html

Standards (Specifications)

These are documents that stipulate the regulations, policies or characteristics of various activities or their results in relation to their common, repeated use, with the aim of achieving the maximum degree of order under the given circumstances. They are established by means of agreements and are approved by accredited organizations (definition in ISO/IEC 17000).

They are documents that have been approved by a recognized institution and which stipulate the regulations, policies or characteristics of products, related production processes or related production methods, in relation to ordinary, repeated use, but there is no obligation to comply with them. Voluntary standards can be requirements concerning indications such as specialist terminology, symbols, packaging, certificates or labels, and can include things applied to products, related production processes or related production methods; in addition, they can be created in relation to only one of the foregoing items. (Voluntary standard: WTO/TBT definition)

Source: http://www.jisc.go.jp/dictionary/index.html

JIS (Japanese Industrial Standards)

These are standards that were formulated on the basis of the Industrial Standards Law. They prescribe regulations concerning elements of industrial products such as their types, forms, dimensions, structures and quality, as well as methods relating to industrial products, such as production methods, design methods and usage methods, in addition to testing and inspection methods, with the aim of improving the quality of industrial products, increasing production efficiency, rationalizing production, making trade simpler and more equitable, and

rationalizing usage and consumption.
Source: http://www.jisc.go.jp/dictionary/index.html

IEC (International Electrotechnical Commission)

This is one of the leading international standardization organizations, which is involved in standardization relating to the fields of electrical and electronic technology. Each country can participate as a single member. The IEC, which has its Central Secretariat in the Swiss city of Geneva, aims to promote international cooperation relating to all issues concerning standardization in technological fields connected with electricity and electronics, as well as associated matters, thereby promoting international communication.
Moreover, as well as the development of international standards, it implements accreditation systems using these standards, such as the CB scheme.
Source: http://www.jisc.go.jp/dictionary/index.html

ISO (International Organization for Standardization)

This is one of the leading international standardization organizations. It is a worldwide federation of national standards organizations in which each country can participate as a single member. The Central Secretariat is located in the Swiss city of Geneva. The objective of the ISO is to facilitate international cooperation in goods and services, and to promote worldwide standardization and the development of related activities, in order to foster international cooperation in fields of intellectual, scientific, technological and economic activity. The scope of activity includes all fields except electrical and electronic technology standards, which are dealt with by the International Electrotechnical Commission (IEC) and telecommunications technology standards, which are dealt with by the International Telecommunication Union (ITU).
Source: http://www.jisc.go.jp/dictionary/index.html

ITU (International Telecommunication Union)

This is an international institution established by the United Nations to handle matters relating to telecommunications. The Telecommunication Standardization Sector (ITU-T), part of the ITU, mainly deals with standardization.
Source: http://www.jisc.go.jp/dictionary/index.html

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