# Study of Effectiveness of PCT International Phase Opinions during China National Phase

The Second International Affairs Committee Japan Intellectual Property Association

**Abstract**: In the international phase of examinations of international patent applications filed under the Patent Cooperation Treaty ("PCT applications"), an International Searching Authority or an International Preliminary Examining Authority provides opinions about the patentability of the applications. However, it has not been objectively assessed how effective such opinions are in influencing national examinations conducted in IP developing countries, especially in China. Therefore, to assess the effect of patentability opinions expressed in the international phase on national examinations in China, this Subcommittee conducted research on the consistency between patentability opinions of the International Searching Authority in Japan and patentability judgments given in the national examinations in China, and other related matters. The following is a report of the research results.

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#### 1. Introduction

To assess the effect of ISRs<sup>1)</sup> on the patent application process via the PCT route, this Subcommittee conducted research, from 2008 to 2010, including comparison between ISRs created by ISAs<sup>2)</sup> in Japan, the U.S. and Europe (i.e., the patent offices of the respective regions) for international patent applications received by the respective patent offices and the patentability judgments given in the national examination phase by these patent offices, and prior art documents [1] (hereinafter, this research is referred to as "2010 Research"). In this 2010 Research of the three patent offices, it was found that, in cases where the ISA was a different organization from the patent office that examined the applications in the national phase, positive  $ISRs^{3}$  were not as effective as negative  $ISRs^{4}$  as a means of predicting the patentability of applications.

In 2011, to assess quantitatively how amendments and other similar procedures made in the international phase effectively work after the patent applications proceed to the national examination phase in the U.S. and Europe, this Subcommittee conducted research, including comparison of IPERs<sup>5)</sup> created by the JPO in the capacity of an International Preliminary Examining Authority with patentability judgments given by the USPTO and the EPO in the national phase [2] (hereinafter, "2011 Research"). In the 2011 Research, it was found that the JPO's positive IPERs<sup>6</sup>) were not necessarily supported in the examinations made by the USPTO or the EPO.

The 2010 Research and 2011 Research covered the JPO, the USPTO and the EPO. It can be easily imagined that the effectiveness of ISRs and other documents was not indicated by these researches because these three patent offices possess and use their own patent classifications and data processing systems for searching prior art documents and have established their strong search and examination abilities over many years. On the other hand, in the case of patent offices in IP-developing countries, their search and examination abilities are still in the developing stage. Therefore, it can be easily imagined that the effect of ISRs, and other deliverables IPERs in the international phase is stronger in IP-developing countries than in advanced IP countries. In such situations, many Japanese companies seem to hold the expectation that international-phase deliverables created under the PCT work as effective tools in accelerating the patent granting speed in IP-developing countries.

Looking into global economic conditions, the Chinese market has achieved outstanding growth. In 2010, China overtook Japan to take second rank in the world in terms of GDP, and its growth is still continuing. As the Chinese market grows, the number of patent applications in China is significantly increasing. Under these intellectual property circumstances in China, it seems that quite a few member companies of JIPA are considering using the PCT route or more effective use of the PCT route to obtain patent rights in China.

Therefore, to quantitatively assess the effect that opinions in the international phase have on patent examinations in the national phase "national within China (hereinafter, examinations in China"), a rapidly growing IP-developing country, the Subcommittee conducted research on patent applications examined in the international phase by the JPO in the capacity of an ISA or IPEA and proceeded to the national examinations in China, examining the consistency between written patentability opinions created by ISAs and the patentability judgments given in the national examinations in China, as well as the citation of new documents.

This Report was created by the following members of the Third Subcommittee of the Second International Affairs Committee of JIPA: Yoshihiro Itou (FUJIFILM Corporation), Norio Sakai (Asahi Group Holdings,Ltd.), Iori Kiso (Siemens Japan K.K.), Kuniaki Sakamoto (TOYOTA MOTOR CORPORATION), Tetsunori Minato (IPICS CORPORATION), Takuji Miyamoto (Sharp Corporation), and Akio Yoshioka (2012 Vice Chairman of the Committee, NEC Corporation).

# 2. Research samples and analytical method

## 2.1. Research samples

Considering the purpose of this research to confirm the effect of ISRs on the national examinations in China, the research samples were selected by the following steps:

## (1) First selection

First, 204 patent applications that satisfied the following conditions as of May 2012 were selected from a commercial database:

1) A PCT application whose priority date was included in the first half of 2004 and whose  $RO^{7}$  was the JPO;

2) The application proceeded to the national phase in China, Japan, U.S. or Europe;

3) A decision of refusal or decision of patent grant was issued in Japan; and

4) Substantive examination in China was started in May 2007.

# (2) Second selection

Next, to examine the relationship between the first Office Actions in the national examinations in China (hereinafter, "the first OAs in China") and the opinions issued in the international phase, the statuses of the 204 applications selected in the first selection above (whose RO was the JPO) in the national phase in China were confirmed by a commercial database. As a result, it was found that final decisions of refusal or patent application were given for 155 applications. Of these 155 applications, we selected 133 applications for which patents were granted. This was because we needed to access file wrappers to confirm the patentability judgments given in the first OAs in China. However, as of the time of this research, access to file wrappers in China was allowed only to those for which patents were granted.

Most of these 133 applications had been examined by the JPO as an ISA or IPEA in the

international phase. Accordingly, unless otherwise specified in this Report, references to ISRs or IPERs in this Report are references to ISRs or IPEAs created by the JPO as an ISA or an IPEA.

In the analysis sections of this Report below, we selected several applications whose ISA was not the JPO, for the purpose of comparison. Such cases are identified as they are explained in each analysis section.

## (3) Third selection

Then, we examined the file wrappers of 133 applications selected in the second selection to confirm the identicalness of Claim 1 examined in the ISR or IPER and Claim 1 examined in the first OAs in China. As a result, we excluded those cases for which identicalness was not confirmed. If any voluntary amendment is made when an application proceeds to the national phase in China, it may result in inconsistency in Claim 1. Such cases are inappropriate to be used in the review of correlation between opinions of the ISR or IPER and patentability judgments given in the national examinations in China. As a result of the third selection, 94 samples were selected.

# 2.2. Analytic method

## (1) Collection of basic data

To analyze the effect of international-phase opinions on the national examinations in China, basic data were collected from the samples regarding opinions issued in the international phase and details of refusals given in the national examinations in China.

The 204 samples selected in the first selection were examined to collect basic data related to the international phase: specifically, opinions expressed in ISRs or IPERs regarding patentability; whether or not amendments were made under Article 19 or Article 34 of PCT; and whether or not the identicalness of Claim 1 was maintained after the amendment was made in the international phase. Data on cited documents were also collected. In examining the patentability opinions in ISRs or IPERs, an opinion was regarded as "positive" when the report recognized novelty or an inventive step in Claim 1. An opinion was regarded as "negative" when the report recognized that Claim 1 did not have novelty or inventive steps. Data on industrial applicability was not collected as basic data.

The 94 samples selected in the third selection were examined to collect data on refusals given in national examinations in China. Before we examined the details of refusals in national examinations in China, we checked the format of several Office Actions issued by the Chinese patent office. As a result, it was found that a uniform form of Office Action was used for the samples selected. Thus, we examined these forms to confirm judgments given in the first OAs in China regarding novelty or originality in Claim 1, cited documents, findings of deficient descriptions advised to these applications and applicable Articles, and the sending dates of the Office Action.

In examining the judgments given in the first OAs in China regarding novelty or originality in Claim 1, a judgment was regarded as "positive" when it recognized novelty or originality in Claim 1. A judgment was regarded as "negative" when it recognized that Claim 1 did not have novelty or originality.

It had been known from experience that quite a few applications received advice of findings of deficient descriptions in China. Accordingly, we collected data of findings of deficient descriptions and applicable Articles because decisions of patent grants may not have been given so quickly even if the opinions in ISRs or IPERs were positive.

# (2) Method of data analysis

The effect of opinions issued in the international phase on national examinations in China was analyzed from the perspective below. Focusing on ISRs, analyses were made regarding the consistency between patentability opinions expressed in ISRs and patentability judgments given in the first OAs in China, the status of citation of new documents in the first OAs in China, findings of deficient descriptions, and the relevance of the examination period. When we examined new documents in the first OAs in China, the following criteria were used:

- If a patent document cited in an ISR and that cited in a national examination in China are in the same family, the patent document cited in the national examination in China was not regarded as a new document.
- A document was not regarded as a new document if it was cited as an "A" document in an ISR and subsequently

adopted in a national examination in China as a ground for lack of novelty (X document) or lack of inventive step (Y document). The same applied to opposite cases.

 A document cited in an ISR as a ground for making a judgment on Claim 1 and subsequently cited in a national examination in China as a ground for making a judgment on any other claim than Claim 1 was not regarded as a new document.

In addition, focusing on IPERs, we analyzed the effect of amendments made in the international phase. Specifically, of the 94 samples selected in the third selection, 48 applications proceeded to the national phase in China after receiving a negative ISR and without request for an international preliminary examination, and 9 applications proceeded to the national phase in China after receiving a positive IPER that overturned a negative ISR. These 48 cases and 9 cases were examined to the national compare percentages of examinations that supported the patentability opinions expressed in the relevant ISRs or IPERs.

#### 3. Analysis results

#### 3.1. Consistency between patentability opinions expressed in ISRs and patentability judgments given in the 1st OAs in China

This Section explains the consistency found between the ISRs issued by the JPO as a receiving office and as an ISA, and the first OAs in China.

Fig. 1 shows the percentages of positive and negative judgments given in the first OAs in China for Claim 1 that were judged as positive and negative in ISRs.

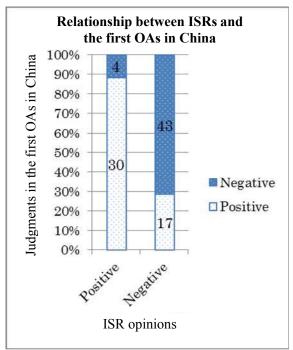


Fig. 1 Relationship between ISRs issued by the JPO and the first OAs in China

As shown in Fig. 1, 88% of applications (30 out of 34 cases) which had received positive ISR opinions received positive judgments in the first OAs in China. On the other hand, 72% of applications (43 out of 60 cases) which had received negative ISR opinions received negative judgments in the first OAs in China. From these results, it seems that the judgments to be given in the national examinations in China could be predicted based on the ISR opinions.

It should be noted that these results included applications which had received negative opinions in ISRs and were subsequently preliminary international reviewed in examinations. As analyzed in detail in Section 3.6 below, assuming that the seven applications that received positive IPERs and then received positive judgments in the first OAs in China had not requested an international preliminary examination and had received negative judgments in the first OAs in China, the percentage would have been at 83% (50 out of 60 cases) and the correlation of negative ISRs to negative judgments in the national phase would have been stronger.

#### 3.2. Citation of new documents

In this Section, we examine the effect of

opinions expressed in the international phase on national examinations in China, from the perspective of citation of new documents in the first OAs in China. Specifically, we examined whether new documents (not cited in ISRs) were cited in the first OAs in China, by comparing cases with positive ISRs on the one hand and cases with negative ISRs on the other.

Fig. 2 shows the status of citation of new documents in the first OAs in China, comparing positive ISRs and negative ISRs.

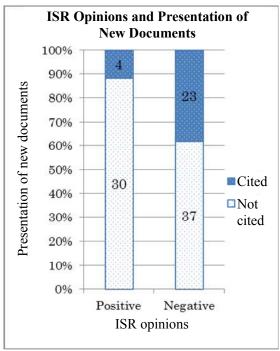


Fig. 2 ISR opinions and presentation of new documents

As shown in Fig. 2, out of 94 samples selected in the third selection in 2.1.(3) above, 29% (27 (24+3) out of 94 cases) cited new documents in the first OAs in China, in addition to documents cited in ISRs. Of these 27 applications, 44% (12 applications) cited new (patent) documents created in Chinese (not shown in Fig. 2).

Comparing cases with positive ISRs and cases with negative ISRs, 12% of cases with positive ISRs (4 out of 34 cases) cited new documents in the first OAs in China, while 38% of cases with negative ISRs (23 out of 60 cases) cited new documents. The percentage for which new documents were cited in the first OAs in China was higher in the cases with negative ISRs than in the cases with positive ISRs.

These results and the results explained in Section 3.1 above indicate that judgments in the first OAs in China tended to support the ISR opinions, while new documents were often cited in the national examinations in China.

#### 3.3. Findings of deficient descriptions

In this Section, we will compare and examine the relativeness of ISR opinions to findings of deficient descriptions pointed out in the first OAs in China (in accordance with Article 25, Article 26.4, Article 31.1, and Article 33 of the Chinese Patent Law, and Articles 2.1, 13.1, 20, 21, 22 and 23 of the Chinese Patent Rules) and look into how ISR opinions affected the judgments given in the national examinations in China regarding deficient descriptions. The bar chart in Fig. 3 shows the relativeness of ISR opinions to findings of deficient descriptions in the first OAs in China.

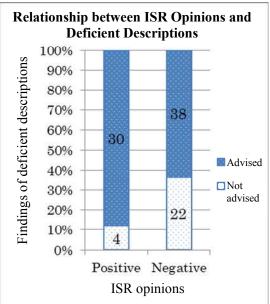


Fig. 3 Relationship between ISR opinions by the JPO and findings of deficient descriptions in the first OAs in China

As shown in Fig. 3, findings of deficient descriptions were advised to 88% of cases with positive ISRs (30 out of 34 cases) in the first OAs in China, while 63% of cases with negative ISRs (38 out of 60 cases) received advice of deficient descriptions in the first OAs in China.

Findings of deficient descriptions were advised mainly on the grounds of the following

provisions in the Chinese Patent Law and the Chinese Patent Rules:

1) Rule Article 20	57 cases
2) Law Article 26.4	23 cases
3) Rule Article 23	23 cases
4) Law Article 25	8 cases
5) Law Article 31.1	7 cases
6) Rule Article 21	7 cases
7) Rule Article 22	4 cases
8) Law Article 33	2 cases
Deficient descriptions	

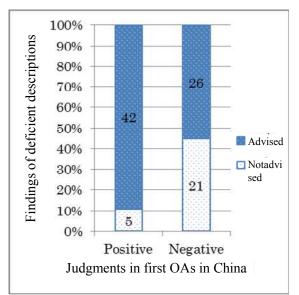
Deficient descriptions were advised most often on the ground of Article 20 of the Rule (Requirements for Independent and Dependent Claims) (83%, or 57 out of 68 cases), followed by Article 26.4 of the Law (Description of Scope of Patent Claim) and Article 23 of the Rule (Summary of Patent Specification) (both 34%, 23 out of 68 cases).

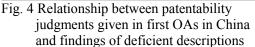
Table 1 shows the relationship between ISR opinions and patentability judgments given in the first OAs in China, for applications that received advice of findings of deficient descriptions in the first OAs in China.

Table 1 Relationship between ISR opinions and patentability judgments in the first OAs in China, for applications that received advice of findings of deficient descriptions in the first OAs in China

		First OAs in China		Total	
		Positive	Negative	Total	
ISR	Positive	27	3	30	
	Negative	15	23	38	
	Total	42	26	68	

As shown in Table 1, when we look into the 68 cases with findings of deficient descriptions to examine the relationship between ISR opinions on the one hand, and findings of deficient descriptions and patentability judgments given in the first OAs in China on the other, 62% of these cases (42 out of 68 cases) received positive patentability judgments in the first OAs in China, which was higher than the percentage of cases that received positive ISRs, at 44% (30 out of 68 cases). The relationship between patentability judgments given in first OAs in China and findings of deficient descriptions was as shown in Fig. 4.

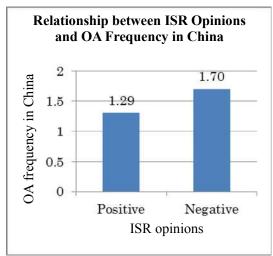


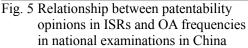


The following are our findings regarding the effect of ISR opinions on the national-phase examinations in China. As shown in Fig. 4, a high rate of the sampled applications received advice of findings of deficient descriptions in the first OAs in China (72%, or 68 out of 94 cases). Regardless of whether the ISR opinions were positive or negative, 89% of the cases for which positive judgments were given by the first OAs in China (42 out of 47 cases) received advice of findings of deficient descriptions. Based on these analyses, it seems that findings of deficient descriptions in the first OAs in China were more affected by the patentability judgments given in the same first OAs in China, rather than the ISR opinions.

#### 3.4. Relationship between the patentability opinions expressed in ISRs and the OA frequencies in national examinations in China

This Section explains the relationship between the patentability opinions expressed in ISRs and the OA frequencies in the national examinations in China.



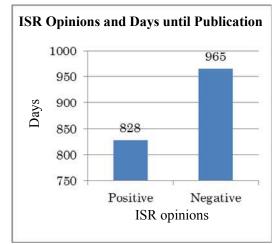


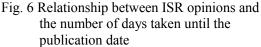
As shown in Fig. 5, the average frequency of OAs during national examinations in China was 1.29 times for cases with positive ISRs, a figure 0.49 lower than the corresponding frequency for cases with negative ISRs (1.70 times). These figures seem to indicate that positive ISR opinions worked to reduce the OA frequencies in national examinations in China to some extent.

# 3.5. ISR patentability opinions and duration of examinations

This Section explains the relationship between the patentability opinions expressed in ISRs and the durations of examinations in China.

Fig. 6 shows the relationship between patentability opinions in ISRs and the average number of days taken within China until the publication dates. Fig. 7 shows the relationship between patentability opinions in ISRs and the average number of days taken until the sending date of the first OA in China.





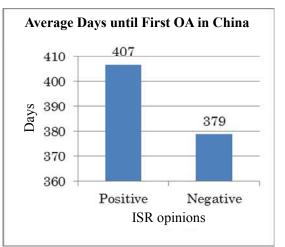


Fig. 7 Relationship between ISR opinions and the number of days taken until the first OA sending date

Fig. 6 shows that the number of days taken until the publication date was 137 days lower on average when ISRs were positive. On the other hand, Fig. 7 shows that 28 more days were taken until the first OA was sent in China on average when ISRs were positive. The number of days taken until the publication date was lower when ISRs were positive, despite the fact that more days were taken until the first OA was sent in China. It seems that this shorter duration until the publication date was due to the fact that the frequency of OAs was lower as shown in Fig. 5. above.

In the cases for which positive ISRs were issued, more days were taken until the first OA was sent in China, compared with cases with negative ISRs (by about 5%). This suggests a tendency for more days to be spent for national examinations in China for patent applications with positive ISRs.

# 3.6. Effectiveness of international preliminary examinations for national examinations in China

In Section エラー! 参照元が見つかりま せん。 above, for cases with positive ISRs, it was confirmed that a high rate of the first OAs in China tended to be positive, while a high rate of cases with negative ISRs tended to be negative.

However, as is evident from the above explanation, ISRs are not always positive. To handle such a situation, the PCT provides for amendments under Article 19, amendments under Article 34, international preliminary examinations, and other procedures. Thus, an international preliminary examination may be requested in order to receive a positive IPER for a claim which is amended under Article 19 or 34 in response to a negative ISR.

To examine the effectiveness of these amendments made in the international phase and the effectiveness of international preliminary examinations, we compared and analyzed the cases which received negative ISRs but then proceeded to the national phase in China, with the cases which underwent an international preliminary examination after a negative ISR, received a positive IPER that overturned a negative ISR, and then proceeded to the national phase in China.

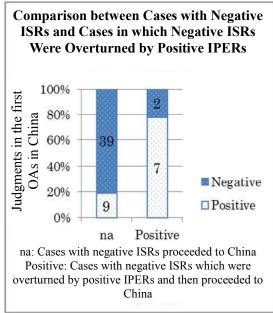


Fig. 8 Effect of a positive IPER overturning a negative ISR

Fig. 8 shows the results of the examinations. As shown in Fig. 8, only 19% of the cases that received negative ISRs and then proceeded to the first OA in China (9 out of 48 cases) received positive judgments in the first OA, with 81% (39 out of 48 cases) supporting the negative judgments. On the other hand, in the cases that proceeded to the national phase in China after having received a positive IPER in the international preliminary examinations that overturned a negative ISR, positive judgments were supported in the first OAs in China in 78% of them (7 out of 9 cases).

Although the number of samples is small, this suggests that there is a strong tendency for cases with negative ISRs to receive positive judgments in the first OAs in China if they make amendments in the international phase and receive positive IPERs. It could be inferred that amendments in the international phase and positive IPERs are highly effective in influencing the national examinations in China.

Moreover, regardless of whether ISR opinions are positive or negative, from Fig. 9, which shows the relationship between IPER opinions and the patentability judgments in the first OAs in China, the tendency can be observed that the patentability judgments in the first OAs in China support the IPER opinions, as with the ISRs discussed in Section 3.1.

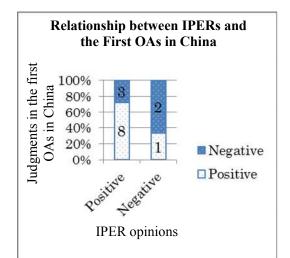


Fig. 9 Relationship between IPERs and the first OAs in China

# 3.7. Comparison with cases for European ISA/IPEA

This Section discusses the patentability judgments given in the first OAs in China for cases with positive IPERs that overturned negative ISRs, by comparing the cases for which the JPO was the ISA and IPEA with cases for which the EPO was the ISA and IPEA. Samples used in the comparison comprised 9 cases for which the JPO was the International Searching Authority and 10 cases for which the EPO was the International Searching Authority. Although the number of samples is small, the results of the comparison show the tendency of the IPER opinions of the JPO to have stronger relativity to the patentability judgments in the first OAs in China than the IPER opinions of the EPO.

Fig. 10 shows the percentages of positive and negative judgments given in the first OAs in China for the sampled cases.

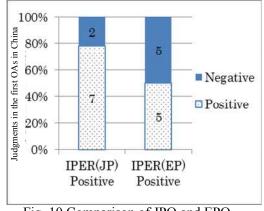


Fig. 10 Comparison of JPO and EPO

In the national examinations in China, OAs were issued to all patent applications for which the JPO's IPERs overturned negative ISRs and gave positive opinions. As shown in Fig. 10, 22% (2 out of 9 cases) were refused on the ground of lack of patentability, while 78% (7 out of 9 cases) were refused on the ground of deficient descriptions or other reasons.

OAs were issued in the national examinations in China to all the applications for which the EPO's IPERs overturned negative ISRs and gave positive opinions, as in the cases with the JPO. As shown in Fig. 10, 50% (5 out of 10 cases) were refused on the ground of lack of patentability, while 50% (5 out of 10 cases) were refused on the ground of deficient descriptions or other reasons.

The two applications which received negative judgments in the first OAs in China despite a positive IPER issued by the JPO were refused with referral to new documents not cited in the ISR and IPER issued by the JPO.

On the other hand, regarding the five applications which received negative judgments in the first OAs in China despite a positive IPER issued by the EPO, three were refused with referral to new documents not cited in the ISR and IPER issued by the EPO, as in the cases with the JPO, while the remaining two applications were refused with citation of the same documents cited in the ISR and IPER issued by the EPO. To be brief, these data show that the national examinations in China gave patentability judgments that were opposite to the opinions expressed in the IPERs issued by the EPO, in some cases with citation of the same documents cited by the EPO.

Because the sample numbers for this comparison were very small, further

examination should be conducted.

# **3.8.** Comparison with the results of three patent offices

This Section discusses the consistency of patentability judgments given in the first OAs in China with the ISR opinions as described in Section 3.1 above, by comparing them with the consistency of patentability judgments given by the JPO, the USPTO and the EPO in their first OAs with ISR opinions, using data collected in research conducted in 2010.

The research paper in 2010 examined the consequences of 60 ISRs after they had proceeded to the national examinations in Japan, the U.S. and Europe. That research paper conducted three-aspect examinations: A, X and Y assessments. To compare these results with the analyses in this report, the results of these three-aspect assessments were converted to two aspects: positive or negative. The results of the comparison are shown below.

[Results of examination of the 2010 research paper]

ISR (by JPO)  $\rightarrow$  National examination (by JPO)

Positive opinions supported: 70% Negative opinions supported: 88%

ISR (by JPO)  $\rightarrow$  National examination (by USPTO)

Positive opinions supported: 37% Negative opinions supported: 88% ISR (by JPO) → National examination (by EPO)

> Positive opinions supported: 48% Negative opinions supported: 91%

Next, adjustments were made to the examination results explained in Section 3. 1 above to make them comparable to these results in the 2010 research paper. Specifically, Section 3.1 examined only applications for which patents were registered, while the 2010 research paper examined both applications for which patent registrations were granted and applications for which patent registrations were granted and applications for which patent registrations were refused. Considering this difference, for refused cases excluded from the present examination (14 cases with positive ISRs (on estimation)) and 36 cases with negative ISRs (on estimation)), we chose the most negative assumption that the first OA judgments in the

national examinations in China were negative.<sup>8</sup> The results of the comparison are shown below.

[Results of the present examination] ISR (by JPO)  $\rightarrow$  National examination (by patent office in China)

> Positive opinions supported: 63% Negative opinions supported: 82%

The comparison of the examination results of the 2010 research paper with the present examination shows the following facts: More than 80% of the negative ISRs were supported after the cases proceeded to the national/regional phase, regardless of whether the region was Japan, the U.S. or Europe. Next, in the U.S and Europe, 37% and 48%, respectively, of the positive ISRs were supported in the national/regional phase, while the consistency was very high in China, with 63% of positive ISRs supported in the national examination phase in China. This consistent percentage in China is close to that for the cases for which the JPO created ISRs and underwent the national examination phase (70%). Accordingly, the results suggest that patentability judgments to be given in the national examinations in China can be predicted with a considerably high degree of probability, based on the ISR opinions.

## 4. Summary

The research present revealed the relationship quantitative between the patentability opinions expressed in ISRs and IPERs and the patentability judgments given in the first OAs in China. Although the number of samples was limited, in cases for which we could access and confirm the first OAs in China. i.e., international patent applications for which patents were granted, it was found that 88% of positive ISRs and 72% of negative ISRs were supported in the first OAs in China.

To compare this tendency with cases for which the EPO or the USPTO conducted the national examinations, we also compared the results of the present research with the research results reported in the 2010 research paper and the 2011 research paper. Unfortunately, exact comparison is not easy. This is because the first OAs in China become accessible only after patents are granted. Thus at present, any patent research related to China cannot examine applications for which final refusal decisions have been given. However, by choosing the most negative assumption for the national examinations in China, we compared the results of the present research with the results of the 2010 research. The results of this comparison show that positive opinions expressed in JPO ISRs were supported at a higher rate in the first OAs issued by the SIPO in China than the first OAs issued by the EPO or the USPTO. This suggests that patentability judgments to be given in the national examinations in China can be predicted with a considerably high degree of probability, based on the patentability opinions expressed in the ISRs.

As the Chinese market expands and the number of patent applications in China is rapidly increasing, it seems quite a few JIPA member companies are planning patent application strategies to rapidly increase the number of patents they own. Considering the high probability suggested by the results of this research that positive ISRs or IPERs will be supported in the patentability judgments given in national examinations in China, it is expected that the time taken until the patent is granted could be shortened by following the process to obtain a positive opinion in the international phase and then quickly proceeding to the national phase in China, while using the PCT-PPH system at the same time, although applicants must be careful in satisfying the requirements for using the system and avoiding deficient descriptions.

As organizations and nations participating in the PCT-PPH system are increasing, it seems that one of the new advantages of using the PCT route is that patent applicants can follow strategic patent acquisition procedures by using this system. Under these circumstances, to carry out the patent acquisition procedures more effectively and strategically as system users, we believe that an environment that further facilitates the acquisition of necessary data should be created, such as data on to what extent the patentability judgments given in the national phases of individual countries/regions can be predicted based on the patentability opinions expressed in ISRs.

We hope this research report will help member companies in their patent acquisition strategies.

Reference Materials

1. Research on International Examination of PCT Applications in Japan, the U.S. and Europe (The Third Subcommittee, the Second International Affairs Committee, JIPA, 2011, IP Management Volume 61, pp. 549-562)

2. Study on Effectiveness of Amendments of PCT Applications in the International Phase (The Third Subcommittee, the Second International Affairs Committee, JIPA, 2012, IP Management Volume 62, pp. 951-959)

<sup>1</sup> International Search Reports. An ISR is created by the end of three months from the receipt of a "search copy" or nine months from the "priority date," whichever comes later, and is sent to the applicant and the International Bureau (Article 18 (1) and (2) of PCT, and Rule 42.1). An ISR for an international application received by the JPO shall be created by the designated JPO or EPO. Strictly speaking, the written opinion of an international searching authority (WO/ISA) is a different document from an ISR, but for the purpose of this Report, they are collectively referred to as ISRs.

<sup>2</sup> International Searching Authority

<sup>3</sup> For the purpose of this Report, any written opinion issued by an International Searching Authority that recognizes novelty or an inventive step for Claim 1 is referred to as a positive ISR, regardless of whether or not the claimed invention is applicable to industrial use.

<sup>4</sup> For the purpose of this Report, any written opinion issued by an International Searching Authority that recognizes no novelty or inventive step for Claim 1 is referred to as a negative ISR, regardless of whether or not the claimed invention is applicable to industrial use.

<sup>5</sup> For the purpose of this Report, International Preliminary Examination Reports (Chapter II, PCT) are referred to as IPERs.

<sup>6</sup> For the purpose of this Report, any International Preliminary Examination Report (Chapter II, PCT) that recognizes novelty or an inventive step for Claim 1 is referred to as a positive IPER, regardless of whether or not the claimed invention is applicable to industrial use.

<sup>7</sup> Receiving Office

<sup>8</sup> Section 3.1 is excluded from the examination some refused cases, totaling 20 cases with positive ISRs and 51 cases with negative ISRs. Of these, we estimated the number of cases whose claim at the time of issuance of the first OAs in China remained the same as at the time of issuance of the ISR was 14 cases with positive ISR (20  $\times$  94 / 133 = 14) and 36 cases with negative ISR (51  $\times$  94 / 133 = 36). Because we assumed that the patentability judgments given to these cases in the first OAs in China were all negative, we estimated that the patentability judgments given in the first OAs in China did not support the positive ISRs for the 14 cases with positive ISRs, but supported the negative ISRs for the 36 cases with negative ISRs.