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IP5 HEADS MEETING

13 JUNE 2019

SEOUL, REPUBLIC OF KOREA

SUBJECT:

Final Report of Citation of Prior Art

PROJECT:

Citation of Prior Art – PHEP & WG2

DOCUMENT NUMBER:

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AUTHOR:

KIPO, USPTO

RESPONSIBLE:

KIPO, USPTO

I . Background

- i. During the PHEP meeting in October 2014, KIPO and the USPTO as lead Offices on the topic of citation of prior art proposed to focus on the following two prioritized sub-topics chosen by analyzing the five IP Offices (IP5) comparison table and input from IP5 Industry: What legal or procedural changes would be required to allow for an IT based solution to submission of prior art previously cited by another office, and
- ii. What legal or procedural changes would be required to adopt a common form for the citation of prior art?

The IP5 report identifying potential barriers and solutions for the two specific topics was endorsed at the IP5 Heads and Deputy Heads meetings in 2015. In addition, the IP5 Industry proposed that, among other things, the IP5 Offices should adopt an automatic, electronic prior art practice, whereby prior art that is already cited with respect to the application in any IP5 Office, and is available to an Office, does not need to be further submitted by applicants to that Office.

Although offices have different citation of prior art practices, the IP5 PHEP recognizes the benefits of developing a system that enables each office to easily view prior art previously cited by another office with respect to commonly filed applications. In early 2016, the IP5 PHEP submitted business requirements for an IT system for citation of prior art to the IP5 WG2. An initial feasibility study to find potential solutions to implement the IT system was reported to the IP5 Deputy Heads in March by the IP5 WG2.

In January 2017, the PHEP group revised the business requirements based on each office's opinion. The newly revised business requirements stress the goal of this project, that is, reduction of user burden for submission of prior art references and improving work-sharing efficiency. At the ICG, the

IP5 received productive feedback from the industry groups regarding the revised business requirements. The feedback received from the industry groups was primarily as follows:

- i. Reduction of user burden remains a priority
- ii. Clear definition of IT solution requirements is necessary.

The industry group's feedback seems to show the way forward for this project. Therefore, at the Deputy Heads meeting held in April 2017, it was reported that the PHEP and WG2 would cooperatively consider and evaluate potential IT solutions against the background of the applicable legal frameworks. This was approved at the Heads meeting held in June 2017. Furthermore, IP5 has completed an in-depth survey on its own legal basis, IT system regarding citation of prior art and reported the final analysis report of the survey to the Heads meeting held in June 2018 (See annex 1).

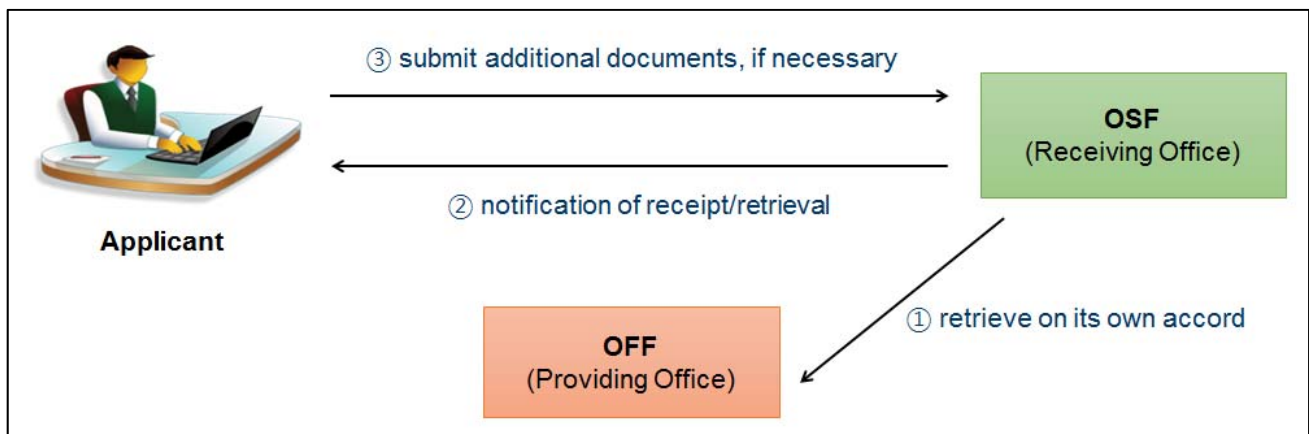
In addition, by sharing workflow models for submission of prior art with users at 2019 ICG meeting, IP5 made an in-depth discussion regarding the final goal of this project.

IP5 made an agreement on the outcomes and its conclusion plan of this project at 2019 IP5 Offices Deputy Heads Meetings, and IP5 established a final report based on the agreement.

II. Objective and Outcome of the Project

1. Objective

The project is aimed at reducing the applicant's burden of submitting prior art via the IT system and activating work-sharing between IP5 Offices. The leading office has presented the workflow model for exchanging prior art between the Offices, and the suggested model may lay the foundation for achieving the ultimate goal of the project.



2. Outcome

The agreement on the final outcome of this project made by IP5 is as follows.

2-1. Consensus to reduce the applicant's burden of submitting prior art

The first outcome is to reduce the applicant's burden of submitting prior art. Through the achieved outcome of the project where IP5 Offices have all made consensus, the applicant may have

substantial benefits, that is, the reduced burden of prior art submission, as cross filing to other offices. Of course, the specific IT system should be implemented based on continual cooperation between the Offices after the conclusion of the project. As the IT system, however, should be implemented based on IP5 WG3-level consensus between the Offices, the project should be concluded based on mutual agreement between the Offices with respect to the outcome of the project at the upcoming 2019 June Heads meeting, and the development of the IT system should be followed based on the consensus.

2-2. Momentum to maximize the usability of work-sharing through the IT system

The second outcome is to maintain the momentum to maximize the usability of work-sharing through the IT system embodied through this project. This achievement is also as much important as the reduced burden of prior art submission for the applicant. IP5 Offices may further activate patent cooperation through the IT system that enables to more efficiently exchange prior art between the Offices, and thereby the cooperation scope between the Offices may be further expanded.

2-3. A vision for cooperation among WGs to accomplish the goals of IP5 projects

The final outcome is to suggest a vision for cooperation among WGs to accomplish the goals of IP5 projects. It's sure to be said that close cooperation with WG2 has brought about evidentially fruitful results. Constructive discussions with user groups, such as GDTF and ICG, have been made, while productive communication with experts from each WG has been smoothly progressed. Therefore, this project achieved successful results, and this would suggest a desirable vision of collaborative works between WGs within IP5.

III. Follow-up task

The project is announced to be concluded at the upcoming 2019 June IP5 heads meeting. All offices have agreed on the aforementioned three outcomes, meaning that the project has successfully made it.

A consensus was made among the members of the WG3 regarding submission of prior art. In other words, a cooperation agreement has been made, as such, “IP5 Offices agree to cooperate on promote to reduce the burden of prior art submission for the applicant and maximize the usability of work-sharing through continual cooperation regarding prior art submission”.

Based on the achievement of the project, WG3 should make best efforts to embody the IT system after the conclusion of the project. The IT system development of the project may be carried out based on continual cooperation between WG3 and WG2. The WG2 will take specific steps for the IT system implementation, based on law and system studies, and the outcomes of the projects.

<Annex>

Final Analysis Report of the In-depth Survey on Patent Laws and IT System of IP5

I. Objective of the in-depth survey

This project will be advanced based on the results of the in-depth study so as to achieve the goals of reducing the burdens on the applicant for submission of prior art references and improving work-sharing efficiency. The IP5 offices have their unique patent laws and examination systems related to the submission of prior art references, and have, in this regard, used different IT solutions at each office. Therefore, the IP5 Offices should investigate which documents related to prior art at each office could be exchanged electronically at this stage, and which documents could be prepared for electronic exchange in the near future for the completion of this project. In fact, a fact-finding study on the citation of prior art was endorsed at the Heads meeting held in May 2015. However, an additional fact-finding study is required at this stage before designing a prototype of a potential IT system because the patent laws and examination systems/practices may be revised, reflecting the trading system, as well as technological development. With regard to KIPO, based on the revised Korean Patent Act which went into effect from March 2017, a new system was introduced to request the results of patent examination conducted by other IP offices on an application on which priority is claimed. Therefore, it seems necessary to conduct an in-depth survey on the current status quo, in this regard, of each office, and this will be one of the core activities for the successful output of this project.

II. Main contents of this survey

To achieve the goals of this project, this survey focused mainly on patent examination systems, practices, IT systems, and solutions. There are two parts in this survey. The first is a survey on business processes including practices which will be primarily dealt with by PHEP experts at each office. The second part is a survey on IT systems which will be primarily dealt with by WG2 experts at each office. The responsibility for both groups in terms of what needs to be evaluated for the survey is listed below:

- **(PHEP)** The patent laws, examination systems and practices of each office related to citation of prior art will be investigated. The survey will also focus on the scope of documents that patent applicants have to submit and a new business process highly related to IT system design, specifically regarding applicants' submission of prior arts.

- **(WG2)** IT systems and the preparation of data exchange at each office with respect to citation of prior art will be investigated. The survey will also concentrate on details, such as creation of prior art information/data and data exchange between offices.

It is desirable that the PHEP experts and WG2 experts at each office should work closely on this survey and complete the questionnaire because the business processes, including practices and IT systems, are dependent and highly connected.

This survey was conducted as a collaboration of the PHEP and WG2 experts at KIPO, and then reviewed by the PHEP and WG2 experts at the USPTO.

III. Main contents of this report

The survey data was collected in a matrix format, resulting in varying kinds of responses to the survey. As the survey questions had varying types of formats, and uniform responses were not received from the offices. Therefore, the analysis report presents each office's response as it is. Further, by analyzing each category specifically, we believe that only meaningful results were included. To ensure that the analysis results were presented with an unbiased viewpoint, we attempted to provide analysis results based on the facts of the responses. The data submitted by each office and annexed to this report will become a basis of the future operations.

IV. Final results of the survey

1. Business process

a) Survey result

a-1) Necessity of applicants' request for providing documents (Y/N)

A survey result of whether applicants' request is essential before prior art is being provided through an IT system and of relevant reasons is as follows:

	Necessity (Y/N)	Preferable method of submission
EPO	Y	The Applicant has to provide under Rule 141 EPC.
	N	A secure delivery of citation data preferably via a Web Service. The data shall be transmitted in an XML formatted way.
JPO	Y	Unpublished phase : Applicants themselves submit prior art references.
	N	Published phase : No restrictions
KIPO	Y	Check-box form
CNIPA	N	Not increasing the burden of the users on the transmission
USPTO	N	Automatically retrieving/receiving, but one possibility is to allow the applicant to build an IDS on-demand in Global Dossier.

a-2) Necessity of notification of the receipt to applicants

As prior art is provided/exchanged through an IT system, a relevant survey was conducted with respect to 1) whether the transmission of the prior art should be noticed to applicants and 2) which office should provide submission status to applicants, if needed.

EPO: The EPO currently does not foresee a check mechanism from the applicant to see if what has been transmitted is complete. This greatly simplifies the process. This transmission will not be overly prone to mistakes if the tools are properly designed.

JPO: If prior art citations are in published applications, the JPO considers that there is no need to notify patent applicants. When prior art citations are in unpublished applications, and if exchanging information of prior art citations requires approval from patent applicants, the JPO can be flexible on sending notices to applicants. Since receiving offices will have better information in this regard, the receiving offices should notify applicants.

KIPO: Necessary. Citation of prior art transmitted by a providing office could not be expected to be matched with the prior art that a receiving office receives, due to either error in data processing or system delay. Therefore, it is much better for each office to directly notify patent applicants.

CNIPA: Unnecessary. The citation of prior art should be considered as the internal function within each office.

USPTO: Necessary. It is important to notify applicants as to which references have been imported into the application, so that they are aware of which references are being considered by the examiner and so that the applicant does not otherwise provide those citations to the USPTO via an IDS. The USPTO prefers that the Receiving Office notify patent applicants, since the Receiving Office would be responsible for determining whether references are placed into an application for consideration by the examiner.

a-3) 'To be Model' among business model cases

Each office made a preference among Business Model cases 1-3 that were previously proposed by the leading offices. CNIPA and the USPTO have selected case 3, and KIPO chose cases 1 and 2 but also mentioned that case 3 would be a proper alternative. The JPO and the EPO did not indicate any preferences.

b) Analysis

Based on survey results, each office's opinion on new business models will be analyzed. With respect to whether applicants have to agree on the submission of prior art, each office is in a different position: For example, whether or not an application has been published should be factored in. Additionally, with regard to transmitting prior art references, burdens on applicants should be minimized. Further, each office has a different opinion on the necessity of providing an application with submission status. Among business model cases 1-3 that were previously proposed, business

model case 3 was best preferred by the IP5 offices. To put it all comprehensively, the most important aspect is to minimize the burden on the applicant with respect to the submission of prior art while, at the same time, considering matters raised by whether an application is in a prepublication or published status.

2. In-depth survey of law & practice

2.1. Survey on the patent laws and the patent examination system of each office

a) Survey result

a-1) Legal basis regarding submission of prior art

The following are the legal basis of each office for the submission of prior art references. The survey was conducted by entity, i.e., whether it is the applicant or a third parties.

	Concerned Party	Legal Basis
EPO	applicants	Art 83 EPC, Rule 42(1)(b) EPC, Rule 141 EPC
	third parties	Art 115 EPC
JPO	applicants	Article 36 (4) (ii) of the Patent Act in Japan
	third parties	Article 13bis of the Regulations under the Patent Act in Japan
KIPO	applicants	Article 42(4)ii, 63(3), 61 of the Patent Act of Korea
	third parties	Article 63(2) of the Patent Act of Korea
CNIPA	applicants	Article 36 of Chinese Patent Law, Rule 17 of Chinese Patent Implementing Regulations
	third parties	Rule 48 and related 4.9, Chapter 8, Section 2 of Guideline
USPTO	applicants	37 CFR 1.56, 37 CFR 1.97 and 1.98
	third parties	35 U.S.C. 122(e), 37 CFR 1.290

a-2) The case where the applicants or third parties submit prior art

A survey was conducted on the specific cases as to whether prior art references should be submitted based on the specific legal basis.

	Legal Basis	
EPO	Art 83	The applicant must disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art.
	Rule 42(1)(b)	The description should indicate any background art.
	Rule 141	An applicant claiming priority must file a copy of the search results carried out on the priority application.
	Art 115	Third parties can present observations regarding the patentability of the invention claimed in a European patent application or patent.
JPO	Article 36 (4) (ii)	The source of the information concerning the inventions known to the public through publication should be described in the detailed description of the invention when the person requesting the grant of a patent has knowledge of any inventions related to said invention, which is known to the public through publication at the time of filing of patent application.
	Article 13bis	Third parties can present information showing that the invention claimed in the patent application has no novelty nor inventive step, and the like, in the patent application pending in the Patent Office.
KIPO	Article 42(4)ii	Prior art information in the “background art” section in the specification in filing an application.
	Article 63(3)	A patent applicant can submit citation information of other offices if an examiner considers that the examination results of other offices are necessary.
	Article 61	As for an accelerated examination, the patent applicant should submit prior art information and references.
	Article 63(2)	Third parties can submit prior art information and references regarding the application.
CNIPA	Article 36	When the applicant for a patent for invention requests examination as to substance, he or it shall furnish pre-filing date reference materials concerning the invention. If an application has been filed for an invention patent in a foreign country, the patent administration department under the State Council may require the applicant to submit prior art. However, it is not mandatory to separately submit cited documents of foreign offices.
	Rule 17	The description of an application for a patent for invention or a patent for utility model shall state the title of the invention or utility model, which shall be the same as it appears in the request. The description shall include the following:

		<p>[...]</p> <p>(2) background art: indicating the background art which can be regarded as useful for the understanding, searching and examination of the invention or utility model, and when possible, citing the documents reflecting such art;</p> <p>[...]</p>
	Rule 48	Any person may, from the date of publication of an application for a patent for invention till the date of announcing the grant of the patent right, submit to the patent administration department under the State Council his observations, with reasons therefor, on the application which is not in conformity with the provisions of the Patent Law.
USPTO	37 CFR 1.56, 37 CFR 1.97 and 1.98	<p>The Office encourages applicants to carefully examine:</p> <p>(1) Prior art cited in search reports of a foreign patent office in a counterpart application, and</p> <p>(2) The closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.</p> <p>Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and</p> <p>(1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or</p> <p>(2) It refutes, or is inconsistent with, a position the applicant takes in:</p> <p>(i) Opposing an argument of unpatentability relied on by the Office, or</p> <p>(ii) Asserting an argument of patentability.</p>
	35 U.S.C. 122(e), 37 CFR 1.290	A third party may submit, for consideration and entry in the record of a patent application, any patents, published patent applications, or other printed publications of potential relevance to the examination of the application if the submission is made in accordance with 35 U.S.C. 122(e) and 37 CFR 1.290.

a-3) Time limit of submission

The following table is a survey result for time limit for submission according to the specific legal basis:

	Legal Basis	
EPO	Rule 42(1)(b)	When filing the application.
	Rule 141	When filing the subsequent application with the EPO.
	Art 115	Third party observations can be filed after publication of the European patent application and will be taken into account, provided that the application is still pending.
JPO	Article 36 (4) (ii)	When filing an application.
	Article 13bis	When the patent application is pending in the Patent Office. After granting a patent, the submission of information under Article 13ter of the Regulations under the Patent Act is possible.
KIPO	Article 42(4)ii	When filing the application.
	Article 63(3)	During examination.
	Article 61	When filing the accelerated application.
	Article 63(2)	When the application is pending.
CNIPA	Article 36(1)	When the applicant requests examination as to substance
	Article 36(2)	Within a specified time limit, laid down by the examiner
	Rule 17	When filing the application.
	Rule 48	Before the notice of grant
USPTO	37 CFR 1.56, 37 CFR 1.97 and 1.98	<p>In order for an applicant for a patent, or for a reissue of a patent, to have an information disclosure statement in compliance with § 1.98 considered by the Office during the pendency of the application, the information disclosure statement must satisfy one of paragraphs (b), (c), or (d) of this section;</p> <p>(b) An information disclosure statement shall be considered by the Office if filed by the applicant within any one of the following time periods:</p> <p>(1) Within three months of the filing date of a national application other than a continued prosecution application under § 1.53(d);</p> <p>(2) Within three months of the date of entry of the national stage as set forth in § 1.491 in an international application;</p> <p>(3) Before the mailing of a first Office action on the merits;</p> <p>(4) Before the mailing of a first Office action after the filing of a request for continued examination under § 1.114; or</p> <p>(5) Within three months of the date of publication of the international registration under Hague Agreement Article 10(3) in an international design application.</p> <p>(c) An information disclosure statement shall be considered by the Office if filed after the period specified in paragraph (b) of this</p>

		<p>section, provided that the information disclosure statement is filed before the mailing date of any of a final action under § 1.113, a notice of allowance under § 1.311, or an action that otherwise closes prosecution in the application, and it is accompanied by one of:</p> <p>(1) The statement specified in paragraph (e) of this section; or</p> <p>(2) The fee set forth in § 1.17(p).</p> <p>(d) An information disclosure statement shall be considered by the Office if filed by the applicant after the period specified in paragraph (c) of this section, provided that the information disclosure statement is filed on or before payment of the issue fee and is accompanied by:</p> <p>(1) The statement specified in paragraph (e) of this section; and</p> <p>(2) The fee set forth in § 1.17(p) .</p>
	35 U.S.C. 122(e), 37 CFR 1.290	37 CFR 1.290, any third-party submission must be filed prior to the earlier of: (1) The date a notice of allowance under §1.311 is given or mailed in the application; or (2) The later of: (i) Six months after the date on which the application is first published by the Office under 35 U.S.C. 122(b) and § 1.211, or (ii) The date the first rejection under §1.104 of any claim by the examiner is given or mailed during the examination of the application.

a-4) Minimum number of prior art to be submitted

The following results are the minimum number of prior art references that may be cited according to the specific legal basis:

	Legal Basis	
EPO	Rule 42(1)(b)	One or more.
	Art 115	One or more.
JPO	Article 36 (4) (ii)	One or more.
	Article 13bis	One or more.
KIPO	Article 42(4)ii	One or more.
	Article 63(3)	One or more.
	Article 61	More than four.
	Article 63(2)	One or more.
CNIPA	Article 36(2)	One or more.
	Rule 17	One or more.
	Rule 48	One or more.
USPTO	37 CFR 1.56, 37	One or more.

	CFR 1.97 and 1.98	
	35 U.S.C. 122(e), 37 CFR 1.290	At least one. More than three incurs fees in accordance with 37 CFR 1.290.

a-5) Legal restraints of prior art not being submitted

The following table is the survey results of legal restraints where prior art references are not submitted:

	Legal Basis	
EPO	Rule 42(1)(b)	For later identified relevant documents, the applicant may be invited by the examiner. Otherwise, the application will be refused (Art. 97(2) EPC) or the patent revoked (Art. 101(2) EPC).
	Rule 141	Where the applicant fails to reply in due time, i.e. either provide the search results or furnish the statement of non-availability, the European patent application will be deemed to be withdrawn (Rule 70 b(2) EPC).
JPO	Article 36 (4) (ii)	The decision of refusal in the case (1) or (2) below, (1) Where the information on prior art documents has not been disclosed, and the written opinion does not provide a rational explanation that there is no invention known to the public through publication (2) Where the information on prior art documents is disclosed by the amendments, but appropriate information on prior art documents is not disclosed
KIPO	Article 42(4)ii	The decision of rejection.
	Article 61	An accelerated examination is dismissed.
CNIPA	Article 36(2)	Deemed to have been Withdrawn.
	Rule 17	May be rejected.
USPTO	37 CFR 1.56, 37 CFR 1.97 and 1.98	No patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct.

a-6) Additional prior art to be submitted

A survey of whether other prior art references should be additionally submitted is also conducted with respect to the specific legal basis:

	Legal Basis	
EPO	Art 115	Supporting documents, e.g. prior art citations, can be written in any language. The Office may require the third party to file a translation into an official language. If the required translation is not filed in due time, the EPO may disregard the document in question.
USPTO	37 CFR 1.56, 37 CFR 1.97 and 1.98	The Office encourages applicants to carefully examine: <ul style="list-style-type: none"> (1) Prior art cited in search reports of a foreign patent office in a counterpart application, and (2) The closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office
	35 U.S.C. 122(e), 37 CFR 1.290	Any third-party submission under 37 CFR 1.290 must include: <ul style="list-style-type: none"> (1) A document list identifying the documents, or portions of documents, being submitted in accordance with paragraph (e) 37 CFR 1.290; (2) A concise description of the asserted relevance of each item identified in the document list; (3) A legible copy of each item identified in the document list, other than U.S. patents and U.S. patent application publications; (4) An English language translation of any non-English language item identified in the document list; and (5) A statement by the party making the submission that: <ul style="list-style-type: none"> (i) The party is not an individual who has a duty to disclose information with respect to the application under § 1.56; and (ii) The submission complies with the requirements of 35 U.S.C. 122(e) and 37 CFR 1.290.

b) Analysis

The patent system of each office has been surveyed with regard to prior art submission. Each office prescribes that applicants should, in principle, submit prior art references, and that third parties could also submit prior art references. Regarding a time limit for prior art submission and legal restraints where prior art is not submitted, each office applies a different legal basis, while the minimum number of prior art references to be submitted is almost the same between offices. In this regard, in designing a prior art submission model, each office should focus on minimizing the gap, and to this end, the legal demands of a receiving office should also be factored in.

2.2. Documents to be submitted

a) Survey result

a-1) Required documents

In section 2.1, a survey on the legal basis regarding prior art submission was conducted. In this section, substantive information on prior art references to be submitted is surveyed on the specific legal basis, and the results are as follows:

	Legal Basis	
EPO	Rule 42(1)(b)	Background, i.e. prior, art which as far as known to the applicant can be useful to understand the invention, draw up the European search report and examine the European patent application
	Rule 141	Search results of the priority application.
JPO	Article 36 (4) (ii)	The detailed explanation of the invention.
	Article 13bis	The Information Statement.
KIPO	Article 42(4)ii	Information of prior art in the specification.
	Article 63(3)	Citation information related to examination results of other offices.
	Article 61	Prior art information and references related to the patent application.
	Article 63(2)	Prior art references which can be used as supporting documents to reject the patent application.
CNIPA	Article 36(1)	Pre-filing date reference materials concerning the invention
	Article 36(2)	Search results of the priority application
	Rule 17	The background art
	Rule 48	Prior art information
USPTO	37 CFR 1.56, 37 CFR 1.97 and 1.98	Information Disclosure Statements.
	35 U.S.C. 122(e), 37 CFR 1.290	Prior art references which can be used as supporting documents to reject the patent application.

a-2) A specific scope of the documents

In this section, the specific scope of prior art references to be submitted is surveyed:

	Legal Basis	
EPO	Rule 42(1)(b)	The provision does not differentiate between patent and non-patent literature.
	Art 115	Observations that concern substantive requirements of the EPC.
JPO	Article 36 (4) (ii)	All of the cases shown in (i) to (iv) below, (i) To be inventions known to the public through publication (ii) To be inventions relating to the invention for which patent is sought (iii) To be inventions known to applicant (iv) To be inventions known to applicant at the time of filing of the patent application
	Article 13bis	Information that can be submitted is the following (1) - (9), (1) Information that a patent shall not be granted for the claimed invention of the subject application according to the provisions of respective items of Article 29(1) of the Patent Act (Novelty) (2) Information that a patent shall not be granted for the claimed invention of the subject application according to Article 29(2) of the Patent Act (Inventive step) (3) Information that a patent shall not be granted for the claimed invention of the subject application according to the provision of Article 29bis of the Patent Act (Secret prior art) (4) Information that a patent shall not be granted for the claimed invention of the subject application according to the provisions of Article 39(1) to (4) of the Patent Act (Prior application) (5) Information that the claimed invention of the subject application is not an invention of the main paragraph in Article 29(1) of the Patent Act or an industrially applicable invention (6) Information that the subject application does not satisfy the description requirements provided in Article 36(4) or (6) of the Patent Act (excluding information related to Article 36(6)(iv) of the same Act) (7) Information that the amendments of the description, claims or drawings, attached to the request of the subject application do not satisfy the requirements provided in Article 17bis (3) of the Patent Act (including new matter) (8) Information that matters stated in description, claims or drawings attached to a request for application in foreign language are not within a range of matters stated in the original language text

		(including new matter as to the original text) (9) Information that matters stated in description, claims or drawings attached to a request for foreign language patent application, etc. are not within a range of matters stated in description, claims or drawings on the international filing date, etc. (including the constructive international filing date) (foreign language patent application, etc. including new matter as to the original text)
KIPO	Article 42(4)ii	Prior art which patent applicants understand well in filing the patent application.
	Article 63(3)	Examination results of the country where the patent application claims priority.
	Article 61	For prior art information and references that patent applicants consider to be relevant to the patent application or that an outsourced searcher discovers.
	Article 63(2)	Prior art references that are used as supporting documents to deny patentability of the patent application and were published before the date of the filing of the patent application.
CNIPA	Article 36(1)	Pre-filing date reference materials concerning the invention
	Article 36(2)	Search results of the priority application
	Rule 17	The background art
	Rule 48	Prior art information
USPTO	37 CFR 1.56, 37 CFR 1.97 and 1.98	(1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or (2) It refutes, or is inconsistent with, a position the applicant takes in: (i) Opposing an argument of unpatentability relied on by the Office, or (ii) Asserting an argument of patentability.
	35 U.S.C. 122(e), 37 CFR 1.290	Prior art references which can be used as supporting documents to reject the patent application.

b) Analysis

In this section, the specific scope of prior art references to be submitted is surveyed. Followed by a survey of each office's patent system, the specific scope and reason for submission are surveyed on the specific legal basis. A streamlined model should be conceived by taking into consideration that

each office's patent system and submitted prior art references are different from each other. It is primarily considered in designing a proper model to minimize the difference, and to this end, it should be prioritized as to what kinds of documents a receiving office demands.

2.3. Details of documents to be submitted

a) Survey result

Through this section, matters under section 2.2 above are more specifically surveyed. In effect, among prior art references to be submitted on the legal, desirable and essential documents are separately surveyed on the specific legal basis. The results are as follows:

	Legal Basis	
EPO	Art 115	Desirable: Prior art citation which is translated into one of the EPO official languages.
JPO	Article 36 (4) (ii)	Desirable: It is enough to describe the source of the information concerning the inventions known to the public through publication that were known to the applicant at the time of filing the patent application. Also, the information on prior art documents is required to be described in the detailed description of the invention.
	Article 13bis	Optional: The information provider can submit "documents" for the purpose of certifying that the information that he/she intends to submit is correct. The "documents" that can be submitted include publications, a copy of descriptions, claims of the patent or utility models registration or drawings, attached to a request for a patent application or an application for a utility model registration, and certificate such as experimental report.
KIPO	Article 42(4)ii	Essential: Exact and detailed information of prior art in the specification (Application No., Publication No. and Registration No.) Desirable: Copy of prior art references.
	Article 63(3)	Desirable: Citation information related to examination results of other offices.
	Article 61	Essential: Copy of prior art references.
	Article 63(2)	Essential: Copy of prior art references.

CNIPA	Article 36	Essential: Copy of prior art references
	Rule 17	
	Rule 48	
USPTO	37 CFR 1.56, 37 CFR 1.97 and 1.98	Essential: Copy of prior art reference, except U.S. patent documents Desirable: Translation of foreign references
	35 U.S.C. 122(e), 37 CFR 1.290	Essential: Copy of prior art reference, except U.S. patent documents Desirable: Translation of foreign references

b) Analysis

Section 2.3 more specifically divides the survey results of section 2.2. In effect, the EPO and the JPO do not demand essential documents, but other offices partially demand essential documents. In the case of desirable documents, as it is not necessarily demanded by each office, in designing a prior art submission model, a desirable document does not have to be essentially considered, but is deemed to be in a buffer zone.

2.4. Prior art references stored in the IT system of each office

a) Survey result

As with an IT system of each office, documents that include prior art references and entities are surveyed as such:

	Document	Entities
EPO	The question requires some clarifications. ① Search Report	
JPO	① Notification of reasons for refusal ② Decision of refusal ③ Report of reconsideration by examiner before appeal ④ Decision to decline the amendment	Examiner Examiner Examiner Examiner
KIPO	① Search report ② Decision of refusal ③ Notification of reason for refusal	Outsourcing Examiner Examiner Examiner Examiner

	<ul style="list-style-type: none"> ④ Notification of Preliminary examination result ⑤ Decision of patent grant ⑥ Submission of documents ⑦ Third party observation ⑧ Request for accelerated examination 	<ul style="list-style-type: none"> Applicant Third party Application
CNIPA	<ul style="list-style-type: none"> ① Search Report 	<ul style="list-style-type: none"> Examiner
USPTO	<ul style="list-style-type: none"> <input type="checkbox"/> Information Disclosure statements(IDS) ② PTO-892 ③ Third-party Preissurance submissions ④ Non final rejection ⑤ Final rejection ⑥ Notice of allowance 	<ul style="list-style-type: none"> Applicant USPTO Third party USPTO USPTO USPTO USPTO

b) Analysis

The EPO, KIPO and CNIPA noted that prior art is enclosed in the search report. Further, the JPO, KIPO and the USPTO noted that prior art is also enclosed in the first office action (non-final rejection) and the final rejection.

2.5. Others

Besides the aforementioned surveys, each office responded to other supplementary surveys. The results are as follows:

a) Survey result

a-1) Examination information of unpublished application

Each office’s position was surveyed on whether information of non-published applications should be included in the business scope of the project.

EPO: Examination information could also be shared as being part of the patent grant process and being relevant to other IP5 Offices for work sharing purposes.

JPO: Exchanging examination information on unpublished applications will enhance our chances of advancing work sharing. On the premise that patent applicants' agreements exist, the JPO considers that it would be useful for us to discuss this matter. However, we should also take into account possible burdens on our systems

KIPO: As the examination proceeding of each IP office is completed before the publication of a patent application, the demand for unpublished patent applications is largely increasing. Therefore, KIPO considers that it is desirable to include unpublished patent applications in the current project, provided, however, that 1) patent applicants agree and that 2) security of an IT system is guaranteed.

CNIPA: There are certain legal and security constraints that must first be addressed regarding unpublished data.

USPTO: For applications where applicants have given permission to allow the exchange of unpublished application data, the USPTO is open to considering this possibility of providing certain limited application data, but notes that there are certain legal and IT security constraints that must first be addressed before the USPTO is able to commit to this possibility

a-2) The information exchange mode of NPL

As prior art references, Non-patent literature (NPL) is as important as patent documents. However, as NPL is inter-related with the copyright issues and the form of NPL documents is different from that of patent documents, serious consideration should be taken in exchanging NPL documents. In this regard, in this survey, among the following items (a)~(c), each office's preferable position on the mode for NPL exchange is surveyed.

(a) Exchange bibliographic data of the NPL only

(b) Exchange of a copy of the NPL (a copyright problem could occur)

(c) Please suggest other exchange modes

EPO: The IP5 Offices have established an NPL exchange practice under the PCT procedure. NPL bibliographic data shall be exchanged and every Office is in charge of retrieving the complete record

from its NPL collections. For cases that are impossible to retrieve, an exchange mechanism of the complete NPL records shall be put in place. This happens via regular document requests sent to partner IP5 offices. Additionally, the EPO would like to note the use of Digital Object Identifiers (DOI) as a means to facilitate and streamline the exchange of NPL.

JPO: (a), the JPO believes that each and every office should take into consideration the importance of copyrights (rights of reproduction) to non-patent literature (NPL). Therefore, offices should obtain NPLs on their own responsibility.

KIPO, CNIPA: (a)

USPTO: (b) if copyright issues can be addressed; otherwise (a).

b) Analysis

The survey item is created by considering usability and expandability of this project. As for whether information of unpublished applications should be included in this project, IP5 offices share the view of availability and usefulness, but they, in general, are in agreement that applicants' consent and data security should be guaranteed. Further, in the case of NPL, most of the offices note that bibliographic items only should be exchanged, but only if copyright issues are resolved, the USPTO mentions that NPL could be exchanged between offices. The EPO does not express a preference, but in exchanging NPL documents, it makes a reasonable opinion on basic requirements.

3. In-depth survey of IT system related to WG2

3.1. Generation of citation data in an XML format

a) Survey result

In an IT system of each office, a survey result of system improvement feasibility is as follows, especially in cases regarding whether documents that include prior art references can be created in

XML format or if they are not be compatible with XML:

	Document	XML	IT system improvement
EPO	① Search Report	Y	
JPO	① Notification of reasons for refusal	Y	
	② Decision of refusal	Y	
	③ Report of reconsideration by examiner before appeal	Y	
	④ Decision to decline the amendment	Y	
KIPO	① Search report	Y	
	② Decision of refusal	Y	
	③ Notification of reason for refusal	Y	
	④ Notification of Preliminary examination result	Y	
	⑤ Decision of patent grant	Y	
	⑥ Submission of documents	N	Difficult (image or PDF)
	⑦ Third party observation	N	Difficult (image or PDF)
	⑧ Request for accelerated examination	N	Difficult (image or PDF)
CNIPA	① Search Report	Y	
USPTO	① Information Disclosure statements(IDS)	Y(partial)	Variable(depend on the format)
	② PTO-892	Y(partial)	Normal
	③ Third-party Preissuance submissions	Y(partial)	Variable(depend on the format)
	④ Non final rejection	N	Normal
	⑤ Final rejection	N	Normal
	⑥ Notice of allowance	N	Normal

b) Analysis

The survey results show that the EPO, KIPO and CNIPA noted that a search report can be created in XML format, and based on the responses of the JPO, KIPO and the USPTO, it is determined that notification of a reason for refusal and the final rejection are already changed into XML format, or can be changed into XML format with minimal issues. All things considered, it is determined that documents that are produced by each office can be changed into XML format, but conversion of image format documents provided by the applicant or the third party into XML is difficult.

3.2. Detailed information of prior art data described in XML

a) Survey result

In an IT system of each office, specific information of documents that can be converted into the XML format is as follows:

	Document	N P L	Publication date	Relevance	Relevant claim	Relevant passage	entity	Generation date	Notified date
EPO	① Search Report	Y	Y	Y	Y	Y			Y
JPO	① Notification of reasons for refusal ② Decision of refusal ③ Report of reconsideration by examiner before appeal ④ Decision to decline the amendment	Y	Y (only for NPL)	Y	Y	Y	Y	Y	Y
KIPO	① Search report	N	Y	Y	Y	Y	Y	Y	N
	② Decision of refusal	N	Y	N	Y	Y	Y	Y	Y
	③ Notification of reason for refusal	N	Y	N	Y	Y	Y	Y	Y
	④ Notification of Preliminary examination result	N	Y	N	Y	Y	Y	Y	Y
	⑤ Decision of patent grant	N	N	N	N	N	Y	Y	Y
CNIPA	① Search Report	Y	Y	Y	Y	Y	Y		Y
USPTO	① IDS	N	Varies	VariesY	VariesY	Varies	VariesY	Y	Y
	② PTO-892	N	Y	N	N	Y	N	Y	Y
	③ Third-party Preissuance submissions	N	N			N		N	N

b) Analysis

XML data of almost all documents include publication date, relevancy and relevant claims, etc, and in some offices, there is a limitation in establishing NPL data.

3.3. Documents and their prior art data available via OPD

a) Survey result

The survey results of whether XML data of a document are used in OPD and a time limit for converting documents into the XML format for OPD are as follows:

	Document	XML for OPD	XML generation timing	Available timing via OPD	1 week requirement	IT system improvement
EPO	① Search Report	Y	-	1-2 day	Y	-
JPO	① Notification of reasons for refusal ② Decision of refusal ③ Report of reconsideration by examiner before appeal ④ Decision to decline the amendment	Y	When OPD user retrieve citation data of published applications	1 day from the dispatch to the applicant	Y	-
KIPO	① Search report	Y	Delivery time	Delivery time	Y	-
	② Decision of refusal ③ Notification of reason for refusal ④ Notification of Preliminary examination result ⑤ Decision of patent grant	Y	When OPD user retrieve citation data of published applications	A couple of hours after examiners send notifications or invitations to applicants	Y	-
CNIPA	① Search Report	-	-	-	-	-
USPTO	① IDS	Y(partial)	When OPD user retrieves citation data of published applications	Input time into file wrapper	N/A	Nomal
	② PTO-892 ③ Third-party Preissuance submissions			Within 48 hours after mailing of documents	Y(partial)	Variable

b) Analysis

Almost all the documents that are converted into XML format can be transmitted to the applicant, or within one week from the date of publication, citation data can be utilized in the XML format.

3.4. Documents and their prior art data delivered to CCD

a) Survey result

The survey results of whether XML data of a document are used in CCD and a time limit for converting into the XML format for CCD are as follows:

	Document	XML for exchange	XML generation timing	Transmission to EPO for CCD	Transmission timing	1 week requirement	IT system improvement	Reason
EPO	① Search Report	Y	1 week	-	-	-	-	-
JPO	① Notification of reasons for refusal ② Decision of refusal ③ Report of reconsideration by examiner before appeal ④ Decision to decline the amendment	N but CSV	1-2 months from the examiner's drafting	Y	1-2 months from the examiner's drafting	N	Unclear	Not estimate the difficulty yet
KIPO	① Search report ② Decision of refusal ③ Notification of reason for refusal	Y	Twice per month	Y	Twice per month	N	Impossible	*
	④ Notification of Preliminary examination result ⑤ Decision of patent grant	N	-	-	-	-	-	-
CNIPA	① Search Report	Y	-	Y	-	N	Difficult	-
USPTO	① IDS	Y	Variable	Variable	Variable	-	Variable	Legal and IT constraints
	② PTO-892	Y	Variable	Variable	Variable	Variable	Variable	
	③ Third-party Preissuance submissions	Y	Variable	Variable	Variable	-	Variable	

* KIPO's reason on one-week requirement: Data standardization and validation take more than a week.

b) Analysis

It is determined that even if XML data for documents citing prior art references are created and transmitted through CCD, it will be very hard to meet the 1 week requirement under the current patent system.

3.5. Transmission timing of patent family information to EPO OPS

a) Survey result

The survey results of the time period between creation of family information from the documents that include family information and transmission to OPS of the EPO are as follows:

	Document	Family information generation time	Transmission timing to EPO
EPO	If this question relates to the priority number delivery that is used to constitute patent families, the EPO can indicate that this data is usually delivered with the patent bibliographic data delivered by Patent Offices to us. 4 weeks after publication a patent family can be considered as complete in OPS. The Korean data are the ones where we face the longest delay between publication and availability in OPS: 3 to 4 weeks.		
JPO	①Patent gazettesl	around 18 months from the date of application	FTP server upload as soon as the application is published
	②Seiri-Hyojyunka data	2-3 weeks later than the data entry at the JPO	The EPO can download the data as soon as the data is ganarated
	③PAJ: patent abstract japan	3-4 months later than the publication	FTP server upload as soon as the data is generated
KIPO	①Publication	After 18 months or after patent granted	FTP server upload within 10~25 days after generation
	②KPA: patent abstract	Within 2 months after publication	FTP server upload with 1 day after generation
CNIPA	CNIPA doesn't provide patent family information to EPO OPS		
USPTO	Bibliography data only	Storage only internally	
	Publication including bibliographic data	Weekly, with the publication	Weekly

The survey results of whether family information can be transmitted within one week to OPS and of each office's opinion on information exchange before publication are as follows:

	Document	1 week requirement	Opinion about patent family information needs to be exchanged before publication
EPO	-		
JPO	① Patent gazettesl	Y	the JPO is concerned about exchanging unpublished information including patent family information before its publication
	② Seiri-Hyojyunka data	N	
	③ PAJ: patent abstract japan	N	
KIPO	① Publication	N	KIPO believe that exchanging unpublished information would be a good approach to solve 1 week requirement if cyber security issues are addressed.
	② KPA: patent abstract	N	
CNIPA	We could exchange the bibliographic data in a week using current system		
USPTO	Bibliography data only	N	there may be legal and cybersecurity issues that need to be addressed before this is possible
	Publication including bibliographic data	Y	

b) Analysis

It is determined that most of the documents that include family information can be transmitted to OPS only after the prescribed time passes following the publication of family information, with family information being created. Under the current system, family information cannot be transmitted to OPS within one week, and each office is concerned with family information being exchanged before the disclosure of an application due to data security, etc.

3.6. Business method for notification and delivery of data among IP5 offices

a) Survey result

With respect to business method for notification and transmission of prior art data between the five IP offices, each office responded as such:

EPO: The EPO collects and centralizes the citation data of all Offices who provide data to our Office. This is done for published citation data. The EPO strives at improving the comprehensiveness and the timeliness of this data. Such a system does not exist for the unpublished phase and would be quite complex to create for both legal and technical reasons. It remains unclear which entity could play

this role that requires important resources. For unpublished data it would therefore seem more natural to have a notification system push or pull that would transmit the relevant search results to other offices in the unpublished phase. Such a system has been put in place for the priority document exchange under PDX and DAS. However, this system is not timely as priority documents do not need to be exchanged at the moment an application is filed at another Office. Several weeks can lapse before the priority document is requested as a priority document does not need to be in the file before (at the EPO) 14 months after the first filing date. Citations shall be delivered/available at the moment they are produced if we want an efficient and timely work sharing mechanism.

JPO: The JPO does not have a preference for the options. Either of them should be selected according to the requirements. However, the JPO prefers the method in which receiving offices voluntarily retrieve the citation information from the providing offices or "another entity," as shown in case 3 of Figure 2.

KIPO: Either of them could be selected. However, if option 2 (indirect) cannot solve the one-week requirement, then it is desirable to consider option 1 (direct) rather than option 2.

CNIPA: CNIPA prefers option 1(direct).

USPTO: USPTO prefers that one Office gathers data from all the Offices, curates the data, and redistributes to the other Offices via APIs.

b) Analysis

Each office is not in the same position regarding how to exchange data between offices. After it is specifically determined what data should be exchanged, IP5 offices have to accordingly determine the most proper mode for data exchange.

3.7. Technical method for data exchange

a) Survey result

With respect to a business method of data notification and transmission between IP5 offices, each office responded as such:

Office	Entities of data exchange	Preferable method
EPO	-	Web services, i.e. OPS, is the preferable method for the EPO.
JPO	Providing office ↔ receiving office	Web service, i.e. OPD

	Providing office ↔ receiving office(EPO CCD)	Another entity download the data
	Another entity(EPO CCD) ↔ receiving office	no preference
	Others : The JPO prefers utilizing present IT systems, rather than building new infrastructure	
KIPO	Providing office ↔ receiving office	EDI preferred (cost-effective, rapidly implementable)
	Providing office ↔ receiving office(EPO CCD)	
	Another entity(EPO CCD) ↔ receiving office	
CNIPA	Others : disk for back file, FTP for front file	
USPTO	Providing office ↔ receiving office	Web service is preferred
	Providing office ↔ receiving office(EPO CCD)	If transmission to EPO, USPTO would prefer to utilize the existing transmission mechanisms
	Another entity(EPO CCD) ↔ receiving office	API web services (such as OPS) is preferred for EPO transmission of data to receiving Office; if examiners/applicants are expected to use CCD interface, this is not preferred
	Others : one Office gathers data from all the Offices, curates the data, and redistributes to the other Offices, either in bulk or via APIs	

b) Analysis

As previously mentioned, after specifically determining which data should be exchanged is, the most proper business mode and technical methods should then be determined.

3.8. Considerations of published and unpublished applications

a) Survey result

As for survey results of future direction and suitability of data exchange regarding published/unpublished applications, each office responded as such:

EPO: EPO's priority is to improve its published citation collection. If a decision is made to exchange data in the unpublished phase, there will be a choice between a decentralized approach and a centralized one. The decentralized approach is likely to be the cheapest and the simplest to implement as not requiring a central entity to maintain a new type of unpublished data database.

JPO: Although the JPO prefers option 1, considering the legal issue and burden for IT system development, option 3 is preferred among options 2-4. Published data and unpublished data should be processed separately. However, it will cost a lot to realize this IT system architecture.

KIPO: KIPO believes that it is desirable that the family information in unpublished applications needs to be exchanged for "Citation of Prior Art" and prefers option 2.

CNIPA: Since the legal restraints should be first resolved regarding unpublished applications, CNIPA feels it premature to discuss about the related IT system at the current stage.

USPTO: USPTO prefers option 2.

b) Analysis

KIPO and the USPTO noted that to get un-published applications' data to be exchanged in the future, a new system should be set up to be extended to un-published applications. The EPO, the JPO and CNIPA are deemed to basically prefer a system applied only to published applications. Further, if the system is extended to un-published applications, legal and cost issues should be handled.

3.9. How to access citation of prior arts by applicants

a) Survey result

A survey result of applicants' approach to the citation of prior art references is as follows:

EPO: The EPO offers access to citation under its DOCDB database it distributes in bulk and through public search services like OPS, CCD, ESPACENET, The European Patent Register, Global Dossier (OPD). Each system fulfills a certain user need. The EPO is keen on improving the quality (comprehensiveness-timeliness-correctness) of the published data.

JPO: Global Dossier (OPD) & CCD are preferred.

KIPO: KIPO prefers each office's file inspection system. It is known that each office has its own file inspection system and applicants can securely check the status of published and unpublished applications.

CNIPA: The examiners provide the documents to the applicants.

USPTO: USPTO prefers Global Dossier (OPD) & each office's file inspection system.

b) Analysis

The EPO and the JPO prefer the current system that includes the Global Dossier (OPD) and the CCD. KIPO prefers each office's file inspection system, while the USPTO prefers the Global Dossier (OPD) and the file inspection system.

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