

Patent Cooperation Treaty (PCT) Committee for Technical Cooperation

Thirtieth Session
Geneva, May 8 to 12, 2017

EXTENSION OF APPOINTMENT OF THE KOREAN INTELLECTUAL PROPERTY OFFICE AS AN INTERNATIONAL SEARCHING AND PRELIMINARY EXAMINING AUTHORITY UNDER THE PCT

Document prepared by the International Bureau

1. All of the existing International Authorities were appointed by the PCT Assembly for a period ending on December 31, 2017. In 2017, the Assembly will therefore need to make a decision on the extension of the appointment of each existing International Authority that wishes to seek an extension of its appointment, having first sought the advice of this Committee (see PCT Articles 16(3)(e) and 32(3)). Information concerning this process and the role of the Committee is set out in document PCT/CTC/30/INF/1.

2. On March 7, 2017, the Korean Intellectual Property Office submitted its application to extend its appointment as an International Searching Authority and International Preliminary Examining Authority under the PCT. This application is reproduced in the Annex to this document.

3. *The Committee is invited to give its advice on this matter.*

[Annex follows]

APPLICATION OF THE KOREAN INTELLECTUAL PROPERTY OFFICE
FOR EXTENSION OF APPOINTMENT
AS AN INTERNATIONAL SEARCHING AND
PRELIMINARY EXAMINING AUTHORITY UNDER THE PCT

1 – GENERAL

Name of Office or intergovernmental organization: Korean Intellectual Property Office (KIPO)

Date on which application for appointment was received by the Director General:
March 7, 2017

Session of the Assembly at which appointment is to be sought:
2017 PCT Union

Expected date at which operation as ISA/IPEA could commence:
KIPO could immediately operate as ISA/IPEA

Existing ISA/IPEA(s) assisting in assessment of extent to which criteria met:
KIPO has no assistance Authorities. Member states of PCT/MIA decided to delete a requirement that in the re-appointment process, two other authorities have to assist in assessment of the extent to which criteria meet.

2 – SUBSTANTIVE CRITERIA: MINIMUM REQUIREMENTS FOR APPOINTMENT

KIPO runs the internal search system known as the 'Korean Multifunctional Patent Search System (KOMPASS)'. As of the end of November 2016, KOMPASS provided search services with respect to patent literature: Specifically, 4,119,991 Korean patents, 3,305,136 European patents, 10,344,952 U.S. patents, 16,737,482 Japanese patents and 8,135,955 Chinese patents were searched via the service. KIPO holds patent literature under the PCT Minimum Documentation according to Rule 34 under the PCT in an electronic form and has electronically exchanged patent literature with the USPTO, the EPO, the JPO and SIPO on a regular basis.

KIPO is authorized to search and download non-patent literature (NPL) under the PCT minimum documentation on the condition that it shall pay relevant fees to the National Assembly Library of Korea, the National Digital Science Library (NDSL) and Science Direct, and etc. and annually renew the contracts so as to maintain the authorities concerned.

2.1 – SEARCH AND EXAMINATION CAPACITY

Rules 36.1(i) and 63.1(i): The national Office or intergovernmental organization must have at least 100 full-time employees with sufficient technical qualifications to carry out searches and examinations.

Employees qualified to carry out search and examination:

(As of December 31, 2016)

| Technical field | Number (in full-time equivalent) | Average experience as examiners (years) | Breakdown of qualifications |
|-----------------------|----------------------------------|---|---|
| Mechanical | 227 | 6.7 | Civil service examination (18.6%), Ph.D (44.4%), Patent attorney (2.7%), Others (34.3%) |
| Electrical/electronic | 344 | 8.2 | |
| Chemistry | 251 | 6.3 | |
| <i>Total</i> | <i>822</i> | <i>7.2</i> | |

Training Programs:

KIPO has annually run a total of 51 courses, such as 4 General Courses (5 times), 17 Law Courses (17 times), 15 Examination Practice Courses (15 times), 14 Capability Building Courses (14 times), State of the Art Courses (67 times), by setting up a step-by-step professional training system so as to improve expertise of examiners and trial examiners and to strengthen their capacity.

A 4-step 'Work Experience-based Training System' was set up and run for KIPO examiners: Starting from general courses for junior examiners, KIPO provides legal and technical training, (Primary Examiner Courses, Litigation System and Trial Examiner Courses) for the patent examiners. In General Courses, KIPO provides basic knowledge relevant to patent examination for junior examiners for 20 days: The Patent Act, the PCT International Treaty, Patent Requirements (e.g. novelty and obviousness) and Examination Cases are mainly covered in the courses. The course attendees should finally pass the tests for the three courses (the Patent Act, Evaluation of Novelty and Evaluation of Inventive Step). Upon the completion of the courses, junior examiners are assigned to each examination division and trained on the job for two years under the guidance of a supervisor. Then, they are given full signatory authority and can sign all of their own office actions (e.g. allowances, rejections) without review and approval by a supervisor.

In Primary Examiner Courses, the office provides in-depth programs for seven days for examiners having more than one year's examination experience: Study and Analysis of the Latest Examination/Trial Cases and Discussion on the Patent Act/Examination Guidance are mainly dealt with in the courses. The examiners should finally pass the test for Analysis of Judicial Precedents to complete the courses.

The Litigation System Course is subject to examiners having two years' examination experiences and having completed primary examiner courses and generally covers Trials and Appeal Proceedings. This Course is run for seven days.

Trial Examiner Courses, which are open for examiners having three years' examination experiences and having completed primary examiner courses (a requirement to be a trial examiner), train the qualified examiners about the Patent Act/Examination System related to Trials and Appeal Proceedings, Judicial Precedents and Practice of Writing of a Trial Decision for seven days. The attendants should be trained on the job for one month and pass the test for Analysis of Judicial Precedents.

Starting from basic theory with respect to Laws and Regulations on IPRs (the Patent Act, the Trademark Act, the Design Protection Act and the Civil Action Act) applied to examination and trials, Law Courses have provided step-by-step training and in-depth program for examiners, specifically regarding Disputing Issues and Cases, Arising Issues and Relevant Discussions. Further, the courses additionally cover Civil Law, Unfair Competition Prevention and Trade Secret Protection Act and the Copyright Act.

Examination Practice Courses cover various subjects relevant to patent examination, specifically regarding Study of Examination Cases (basic/intensive), PCT Examination (basic/intensive), Examination/Search based on CPC classification, Prior Art Search and Interpretation of the Scope of Claims and of the Specification so as to improve capacity of examiners and trial examiners.

In response to the recent trend of convergence/integration of art in the science and technology field, around 70 relevant courses are run for 2-5 days annually to help the understanding of examiners and trial examiners of the latest technology trend.

Examiners are required to be trained for the aforementioned courses for more than 90 hours annually, and to be advanced as a senior examiner, a primary examiner and a supervisory primary examiner, they have to pass one or more elective courses as well as one or more required courses.

<Table 1: Detailed Training Plan of KIPO in 2016 >

| Courses | | Applicants | Period (Days) | Times | Persons /semester |
|-----------------|--|--|---------------|-------|-------------------|
| General Courses | 4 Courses | | 41 | 5 | 240 |
| | Junior Examiners | Newly Recruited Examiners (higher than G5 and candidates for promotion to G5) | 20 | 2 | 70 |
| | Primary Examiners | G4 completing Junior Examiner Courses, G5 having more than 1 year's Examination Experience | 7 | 1 | 70 |
| | Litigation System | G4 completing Primary Examiner Courses, G5 having more than 2 years' Examination Experiences | 7 | 1 | 50 |
| | Trial Examiners | G4 completing the Litigation System, G5 having more than 3 years' Examination Experiences | 7 | 1 | 50 |
| Exam. Practice | 15 Courses | | 33 | 15 | 420 |
| | Case Study (Basic) | Examiners completing Junior Examiner Courses | 3 | 1 | 30 |
| | Case Study (Intensive) | Examiners completing Primary Examiner Courses | 3 | 1 | 30 |
| | Supervisor course | Examiners completing Primary Examiner Courses | 2 | 1 | 30 |
| | Exam. Decisions/ Judicial Precedents Study | Examiners completing the Litigation System | 3 | 1 | 30 |

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|-------------|---|--------------------------------|----|----|-----|
| | Interpretation of the Specification and the Scope of Claims | Patent/Utility Model Examiners | 2 | 1 | 30 |
| | IPRs Practitioners | Lower than G6 | 3 | 1 | 30 |
| | Prior Art Search | Public Officials (KIPO) | 3 | 1 | 30 |
| | PCT Exam. (Basic) | Public Officials (KIPO) | 2 | 1 | 30 |
| | PCT Exam. (Intensive) | Public Officials (KIPO) | 2 | 1 | 30 |
| | International Trademark | Public Officials (KIPO) | 1 | 1 | 20 |
| | International Design | Public Officials (KIPO) | 1 | 1 | 20 |
| | Capacity Building of Examiners in charge of Formality Check | Lower than G6 | 4 | 1 | 20 |
| | CPC Classification Exam. | Patent/Utility Model Examiners | 1 | 1 | 30 |
| | CPC Classification Search | Patent/Utility Model Examiners | 1 | 1 | 30 |
| | STN Search | Patent/Utility Model Examiners | 2 | 1 | 30 |
| Law Courses | 17 courses | | 56 | 17 | 690 |
| | The Patent Act (Theory) | Public Officials (KIPO) | 5 | 1 | 70 |
| | The Patent Act (Disputing Issues and Cases) | Public Officials (KIPO) | 3 | 1 | 50 |
| | The Patent Act (Issues and Discussion on Disputing Issues) | Public Officials (KIPO) | 2 | 1 | 40 |
| | The Trademark Act (Theory) | Public Officials (KIPO) | 5 | 1 | 50 |
| | The Trademark Act (Disputing Issues and Cases) | Public Officials (KIPO) | 3 | 1 | 40 |

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|--|-------------------------|---|---|----|
| The Trademark Act (Issues and Discussion on Disputing Issues) | Public Officials (KIPO) | 2 | 1 | 40 |
| The Design Protection Act (Theory) | Public Officials (KIPO) | 5 | 1 | 50 |
| The Design Protection Act (Disputing Issues and Cases) | Public Officials (KIPO) | 3 | 1 | 40 |
| The Design Protection Act (Issues and Discussion on Disputing Issues) | Public Officials (KIPO) | 2 | 1 | 40 |
| Understanding of the Civil Law | Public Officials (KIPO) | 5 | 1 | 40 |
| The Civil Law of Patent | Public Officials (KIPO) | 3 | 1 | 40 |
| Civil Law (Basic) | Public Officials (KIPO) | 2 | 1 | 40 |
| The Civil Proceedings Act (Theory) | Public Officials (KIPO) | 5 | 1 | 30 |
| The Civil Proceedings Act (Disputing Issues and Cases) | Public Officials (KIPO) | 3 | 1 | 30 |
| The Civil Proceedings Act (Issues and Discussion on Disputing Issues) | Public Officials (KIPO) | 2 | 1 | 30 |
| Understanding of Unfair Competition Prevention and Trade Secret Protection | Public Officials (KIPO) | 3 | 1 | 30 |
| Understanding of the Copyright Act | Public Officials (KIPO) | 3 | 1 | 30 |

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|-------------------------------|---|---|----|----|-----|
| Patent Admin. | 14 courses | | - | 14 | 340 |
| | Newly Emerging IPRs | Public Officials (KIPO and relevant Government Offices/Departments) | 2 | 1 | 30 |
| | IPRs System of Foreign Countries | Public Officials (KIPO and relevant Government Offices/Departments) | 3 | 1 | 30 |
| | Professor Training Courses (IPRs) | Public Officials (KIPO) | 3 | 1 | 30 |
| | Technology Commercialization (IPRs) | Public Officials (KIPO) | 2 | 1 | 30 |
| | OJT for Junior Examiners | New and Transferred Public Officials | 5 | 1 | 20 |
| | Capacity Building in PR | Public Officials (KIPO) | 2 | 1 | 20 |
| | Capacity Building in Document Writing | Public Officials (KIPO) | 3 | 1 | 20 |
| | Official Documents Writing | Public Officials (KIPO) | 2 | 1 | 20 |
| | Social Network Course | Public Officials (KIPO) | 2 | 1 | 20 |
| | Utilization of Digital Camera and Photoshop | Public Officials (KIPO) | 2 | 1 | 20 |
| | Motion Picture Production and Utilization | Public Officials (KIPO) | 3 | 1 | 20 |
| | PowerPoint | Public Officials (KIPO) | 3 | 1 | 30 |
| | Excel | Public Officials (KIPO) | 3 | 1 | 30 |
| HANGUL* | Public Officials (KIPO) | 3 | 1 | 20 | |
| State of the Art (67 courses) | Examiners (KIPO) | 1~5 (under discussion) | 67 | 25 | |

▷ HANGUL*: word processor: a proprietary word processing application

Rules 36.1(ii) and 63.1(ii): That Office or organization must have in its possession, or have access to, at least the minimum documentation referred to in Rule 34, properly arranged for search purposes, on paper, in microform or stored on electronic media.

Access to the minimum documentation for search purposes:

(O) Full access

KIPO has the following PCT Minimum Documentation in accordance with Rule 34 under the PCT and utilizes the documents in the international search and the international preliminary examination.

Patent literature: As around 63 million patent documents of 2 authorities and 11 countries published in the patent or utility model gazette are stored in the database in the form of SGML, XML and TIFF to get to be electrically accessible, key word-based search thereon is enabled.

To guarantee security in accessing the patent documents (unpublished documents included) stored in the database, KIPO uses of its own database, the 'Korean Multifunctional Patent Search System (KOMPASS)'. To the system, authorized persons only, namely patent examiners, are permitted to access. Further, for more security, KIPO has moved KOMPASS to the internally operated cloud computing system where Internet access is unable and a separate sign up is required (as of January 2012). KOMPASS provides machine translation services for English, Japanese and Chinese, as well as search services based on the publication of patent/utility model applications provided by 13 countries and relevant authorities. KOMPASS also provides such programs as FASTA format (a text-based format for representing either nucleotide sequences or peptide sequences) and BLAST (an algorithm for comparing primary biological sequence information) to support search of sequence listings KIPO holds internally.

<Table 2: list of patent literatures obtained in KIPO >
(As of November 30, 2016/Unit: case)

| Division | | Acquired | Literature DB | Service Cases (Index) | Note |
|--|----------------------------------|---|---------------|-----------------------|--|
| Korea | Un-disclosed | KIPO | '48~ | 222,446 | Abstract, Claim(s) ¹⁾ |
| | Disclosed | | | 3,897,545 | Full text ¹⁾ |
| | Total (Korean Patent Literature) | | | 4,119,991 | - |
| Japan | | JPO | '71~ | 16,737,482 | Full text ¹⁾ |
| U.S. | | USPTO | '20~ | 10,344,952 | Full text ¹⁾ |
| EP | | EPO | '78~ | 3,305,136 | Full text ¹⁾ |
| WO | | WIPO | '78~ | 2,925,971 | Full text ¹⁾ |
| U.K. | | The Intellectual Property Office (IPO) | '79~ | 284,343 | Full text ²⁾ |
| Canada | | Canadian Intellectual Property Office | 1869~ | 2,093,347 | Full text ³⁾ |
| Australia | | IP Australia | '80~ | 1,973,672 | Full text ²⁾ |
| Taiwan | | Taiwan Intellectual Property Office | '00~ | 879,064 | Abstract ¹⁾ |
| China | | SIPO | '85~ | 8,135,955 | Full text ¹⁾ |
| Germany | | DocDB (EPO) and Full text (patent offices of the three countries) | '77~ | 7,443,030 | Full text (DOCDB Abstract + Full text IMG) |
| France | | | '37~ | 3,095,213 | |
| Russia | | | '75~ | 1,151,785 | |
| Total (foreign patent literature) | | | | 58,369,950 | |
| Total (Korean and foreign patent literature) | | | | 62,489,941 | |

¹⁾ As data is stored in the form of XML or SGML, all data can be retrieved through key word-based search.

²⁾ Full document is stored in the database, but as 'bibliography' only is stored in the text form, bibliography only can be retrieved through key word-based search.

³⁾ Full document is stored in the database, but as 'bibliography and abstract' only are stored in the text form, bibliography and abstract only can be retrieved through key word-based search.

Non-patent literature (NPL): All NPL and 145 journals (8 discontinued) listed up in the following table [Handbook on Industrial Information & Documentation] could be used for international searching and examination in KIPO. Out of 145 journals in the Handbook, 44 are printed ones, 93 electronic version and 8 discontinued. 44 journals out of 145 journals (8 discontinued) listed up in the following table [Handbook on Industrial Information & Documentation] are printed journals and 93 e-journals, and full text search is possible from the year indicated in the following Table 3.

Where KIPO examiners access the web page of electronic journals of non-patent literatures on a local network, they are authorized to search abstracts and download the full text without separate sign up⁴⁾ (Unlike the internal cloud computing system, internet access is possible over a local network)

⁴⁾ KIPO is authorized to search the full text on the condition that KIPO shall renew the contract with the journal concerned on an annual basis.

<Table 3: list of non-patent literatures obtained in KIPO>

| PCT No. | Title | Document management | Note |
|---------|--|--|--------------|
| 1 | J. of the Acoustical Society of America | Printed J. ('98~) | |
| 3 | Acta Chemica Scandinavica | Printed J.('93.1~'99.2) | Discontinued |
| 5 | Bioscience, Biotechnology and Biochemistry | Printed J. ('93~) | |
| 7 | J. of the American ceramic society | Printed J. ('93~'09) E-J. (2010~) | |
| 8 | J. of the American Chemical Society | Printed J. ('80~'08) E-J. ('06~) | |
| 10 | Analytical Chemistry | Printed J. ('93~'08) E-J. ('06~) | |
| 11 | Angewandte Chemie | Printed J. ('93~'07) E-J. ('08~) | |
| 13 | Applied Optics | Printed J. ('97~'15) E-J. ('06~) | |
| 14 | Applied Physics Letters | Printed J. ('93~'16) E-J. ('10~) | |
| 17 | Automobiltechnische Zeitschrift(ATZ) | Printed J. ('94~) | |
| 20 | Avation Week & Space Technology | Printed J. ('93~) | |
| 27 | Chemical & Engineering News | Printed J. ('80~) | |
| 28 | Chemical & Pharmaceutical Bulletin | Printed J. ('86~) | |
| 29 | Chemical Engineering | Printed J. ('80~) | |
| 31 | Chemical Reviews | Printed J. ('82~'90, '99~'08) E-J. ('06~) | |
| 32 | Chemical Society J. ; Chem. Communications; Dalton transactions; physical chemistry chemical physics; Organic & Biomolecular Chemistry | Printed J. ('82~'90, '93~'12) E-J. ('13~) | |
| 33 | Bulletin of the Chemical Society of Japan | Printed J. ('85~'86, '93~'05) E-J. ('06~) | |
| 35 | Chemie-Ingenieur Technik | Printed J. ('98~'07) E-J. ('08~) | |
| 38 | Chemistry and Industry | Printed J. ('83~'11) E-J. ('12~) | |
| 41 | Collection of Czechoslovak Chemical Communications | Printed J. ('98~'09) | Discontinued |

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|----|---|-------------------------------------|--------------|
| 45 | Control Engineering | Printed J. ('84~) | |
| 47 | Alcatel Telecommunications Review | Printed J. ('83~'09) E-J. ('10~) | |
| 48 | J.of the Electrochemical Society | Printed J. ('97~'15) E-J. ('16~) | |
| 49 | Electronic Design | Printed J. ('80~) | |
| 50 | Electronic Engineering Design | Printed J. ('97~'02) | Discontinued |
| 62 | IBM J.of Research & Development | Printed J. ('97~'08) E-J. ('09~) | |
| 64 | IEEE J. of Quantum Electronics | E-J. ('88~) | |
| 65 | IEEE J. of Solid State Circuits | E-J. ('88~) | |
| 66 | Proceedings of the IEEE | E-J. ('88~) | |
| 67 | IEEE Spectrum | E-J. ('88~) | |
| 68 | IEEE Transactions on Aerospace and Electronic Systems | E-J. ('88~) | |
| 69 | IEEE Transactions on Signal Processing | E-J. ('88~) | |
| 71 | IEEE Transactions on Biomedical Engineering | E-J. ('88~) | |
| 72 | IEEE Transactions on Consumer Electronics | E-J. ('88~) | |
| 73 | IEEE Transactions on Communications | E-J. ('88~) | |
| 74 | IEEE Transactions on Computers | E-J. ('88~) | |
| 75 | IEEE Transactions on Electron Device | E-J. ('88~) | |
| 77 | IEEE Transactions on Instrumentation and Measurement | E-J. ('88~) | |
| 78 | IEEE Transactions on Microwave Theory and Techniques | E-J. ('88~) | |
| 79 | IEEE Transactions on Components and Packaging Technology; IEEE Transactions on Advanced Packaging; IEEE Transactions on Electronics Packaging Manufacturing | E-J. ('88~) | |
| 81 | IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control | E-J. ('88~) | |
| 83 | Industrial & Engineering Chemistry Research | Printed J. ('87~'05) E-J. ('06~) | |
| 85 | IEICE Transactions on Fundamentals of Electronics, Communications and Computer Science; IEICE Transactions on Communications; IEICE Transactions on Electronics ; IEICE Transactions on Information and Systems | Printed J. ('71~'13) E-J. ('14~) | |
| 90 | Japanese Journal of Applied Physics | Printed J. ('93~'04) E-J. ('05~) | |
| 91 | Kobunshi Ronbunshu/japaneses J. of Polymer Science & Engineering | Printed J. ('83~) | |
| 92 | J. of Agricultural and Food Chemistry | Printed J. ('93~'05) E-J. ('06~) | |

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| 95 | Russian J. of Applied Chemistry | Printed J. ('93~'07) E-J. ('08~) | |
| 96 | J. of Applied Physics | Printed J. ('83~'09) E-J. ('10~) | |
| 97 | J. of Applied Polymer Science | Printed J. ('83~'07) E-J. ('08~) | |
| 98 | J. of Chromatography B., Analytical Technologies in the Biomedical & life Sciences | E-J. ('02~) | |
| 100 | Russian J. of General Chemistry | Printed J. ('93~'07) E-J. ('08~) | |
| 102 | JOM(= J. of Metals) | Printed J. ('83~'07) E-J. ('08~) | |
| 103 | J. of Organic Chemistry | Printed J. ('86~'05) E-J. ('06~) | |
| 104 | J. of Organometallic Chemistry | Printed J. ('93~'05) E-J. ('02~) | |
| 106 | Measurement Science and Technology | Printed J. ('93~'16) E-J. ('12~) | |
| 107 | J. of Polymer Science ; Polymer Chemistry | Printed J. ('85~'07) E-J. ('08~) | |
| | J. of Polymer Science ; Polymer Physics | Printed J. ('80~'07) E-J. ('08~) | |
| 108 | European J. of Organic Chemistry | Printed J. ('93~'07) E-J. ('08~) | |
| 110 | Kunststoffe | Printed J. ('94~) | |
| 112 | Machine Design | Printed J. ('83~) | |
| 117 | Metal Finishing | Printed J. ('83~'05) E-J. ('02~) | |
| 122 | Modern Plastics International | Printed J. ('83~'11) | Discontinued |
| 126 | J. of Optical Society of America: Optics, Image Science & vision | Printed J. ('93~'05) E-J. ('06~) | |
| | J. of Optical Society of America: Optical Physics | Printed J. ('95~'05) E-J. ('06~) | |
| 127 | Optics and Spectroscopy | Printed J. ('98~'07) E-J. ('08~) | |
| 129 | Philips Journal of Research | Printed J. ('95~'96, '98~'05) E-J. ('02~) | |
| 131 | Physical Review and Physical Review Letters Index; Physical Review. B, Condensed Matter and Materials Physics; Physical Review. C, Nuclear Physics; Physical Review. D, Particles | Printed J. ('93~'16) E-J. ('10~) | |
| 132 | Plastverarbeiter | Printed J. '94~ | |
| 133 | Playthings | Printed J. '98~ | |
| 134 | Polymer Science Series A, Series B | Printed J. ('98~'07) E-J. ('08~) | |
| 135 | Power | Printed J. '83~ | |
| 139 | Review of Scientific Instrument | Printed J. ('93~'16) E-J. ('10~) | |
| 141 | Rubber Chemistry and Technology | Printed J. ('97~) | |
| 144 | Automotive Engineering International | Printed J. '86~ | |
| 145 | Scientific American | Printed J. ('93~) | |
| 147 | SMPTE Journal | Printed J. ('98~) | |

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| 148 | Coloration Technology | Printed J. ('83~'16) E-J. ('10~) | |
| 149 | Solid State Electronics | Printed J. ('83~'05) E-J. ('02~) | |
| 150 | Solid State Technology | Printed J. ('94~) | |
| 156 | Stahl and Eisen | Printed J. ('97~) | |
| 157 | Steroids : Structure, Function and Regulation | Printed J. ('93~'05) E-J. ('02~) | |
| 158 | TAPPI Journal | Printed J. ('57, '82~'08) E-J. ('09~) | |
| 159 | Tetrahedron | Printed J. ('93~'05) E-J. ('02~) | |
| 160 | Tetrahedron Letters | Printed J. ('96~'05) E-J. ('02~) | |
| 163 | Textile Research J. | Printed J. ('80~'11) E-J. ('12~) | |
| 164 | VDI-Z Integrierte Produktion | Printed J. ('94~) | |
| 165 | Water Environment Research | Printed J. ('83, '94~'11) E-J. ('12~) | |
| 168 | Electronics World | Printed J. ('95~) | |
| 169 | Chemical Abstracts | Printed J. (1908~ '99) CD('00~'11), E-J. ('12~) | |
| 171 | REE. Revue de l'Electricite et de l'Electronique | Printed J. ('94~) | |
| 177 | J. of Crystal Growth | Printed J. ('83~'05) E-J. ('02~) | |
| 178 | Russian J. of Organic Chemistry | Printed J. ('93~'07) E-J. ('08~) | |
| 180 | Optics Communications | Printed J. ('92~'05) E-J. ('02~) | |
| 181 | RFE | Printed J. ('98~) | |
| 183 | Semiconductors | Printed J. ('93~'07) E-J. ('08~) | |
| 185 | Technical Physics Letters | Printed J. ('93~'07) E-J. ('08~) | |
| 189 | Xerox Disclosure J. | Printed J. ('76~'96) | Discontinued |
| 195 | Nature | Printed J. ('86~'07) E-J. ('08~) | |
| 196 | Proceedings of the National Academic of Science, U.S.A | Printed J. ('86~'11) E-J. ('12~) | |
| 197 | Gene | Printed J. ('86~'05) E-J. ('02~) | |
| 198 | Nucleic Acids Research | Printed J. ('93~'10) E-J. ('11~) | |
| 199 | Science | Printed J. ('86~'07) E-J. ('08~) | |
| 202 | Electronics Letters | Printed J. ('94~) | |
| 204 | Elektronik | Printed J. ('97~) | |
| 205 | IEEE Transactions on Device Letters | E-J. ('88~) | |
| 206 | Thin Solid Films | Printed J. ('93~'05) E-J. ('06~) | |
| 207 | WESCON Conference Proceedings | Not possessed | Discontinued |
| 208 | IEEE Transactions on Nuclear Science | E-J. ('88~) | |

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|-----|--|--|--------------|
| 209 | J. of Biological Chemistry | Printed J. ('93~'11) E-J. ('12~) | |
| 210 | BBA Biochemica et Biophysica ACTA | Printed J. ('98~'05) E-J. ('02~) | |
| 211 | Biochemistry | Printed J. ('94~'05) E-J. ('06~) | |
| 212 | Cancer Research | Printed J. ('93~'11) E-J. ('12~) | |
| 213 | Methods in Enzymology | Printed J. ('01~) | |
| 214 | Biochemical & Biophysical Research Communications | Printed J. ('93~'05) E-J. ('02~) | |
| 215 | Clinical Chemistry | Printed J. ('93~) | |
| 216 | J. of Immunology | Printed J. ('93~) | |
| 217 | EMBO J. | Printed J. ('93~'07) E-J. ('08~) | |
| 218 | Cell | Printed J. ('96~) | |
| 219 | Popular Science | Printed J. ('84~) | |
| 220 | Popular Mechanics | Printed J. ('95~) | |
| 221 | Byte | Printed J. ('95~'05) E-J. ('02~) | |
| 223 | Plant Physiology | Printed J. ('93~'11) E-J. ('12~) | |
| 224 | TR Transfer | Printed J. ('98~) | |
| 225 | MPA - Messen, Pruefen, Automatisieren | Printed J. ('96~'97) | Discontinued |
| 226 | VDI-Nachrichten | Printed J. ('98~) | |
| 227 | Konstruktion | Printed J. ('94~'99, '06~) | |
| 228 | Elektor | Printed J. ('98~) | |
| 229 | Derwent Biotechnology Abstracts | Printed J. ('95, '98~'05) E-J. ('06~) | |
| 230 | EDN | Printed J. ('97~'13) | Discontinued |
| 231 | Bell Labs Technical J. | Printed J. ('98~'07) E-J. ('08~) | |
| 232 | European J. of Inorganic Chemistry | Printed J. ('98~'07) , E-J. ('08~) | |
| 233 | Nature Biotechnology | Printed J. ('93~'07) E-J. ('08~) | |
| 234 | Research Disclosure | Printed J. ('71~) | |
| 235 | Acta Pharmaceutica | Printed J. '06~ | |
| 236 | Economic Botany | Printed J. ('05~'07) E-J. ('08~) | |
| 237 | J. of Chinese Medicine | Printed J. ('05~) | |
| 238 | J. of Ethnopharmacology | E-J. ('02~) | |
| 239 | Pharmaceutical Biology | Printed J. ('05~'11) E-J. ('12~) | |
| 240 | Fitoterapia | E-J. ('02~) | |
| 241 | J. of Natural Products | Printed J. ('97~'02) E-J. ('06~) | |
| 242 | J. of Nutrition | Printed J. ('06~) | |
| 243 | Phytochemistry | Printed J. ('97~'05) E-J. ('02~) | |
| 244 | Phytotherapy Research | Printed J. ('06~'07) E-J. ('08~) | |
| 245 | Planta Medica | Printed J. ('96~) | |

| | | | |
|-----|---|-------------------|--|
| 246 | Indian J. of Traditional Knowledge | Printed J. ('06~) | |
| 247 | Medicinal and Aromatic Plants Abstracts | Printed J. ('06~) | |
| 248 | Korean J. of Traditional Knowledge | E-J. ('09~) | |

Search systems:

The Korean multifunctional patent search system (KOMPASS) is an information search system, which has been set up exclusively for examiners, so as to rapidly, accurately and conveniently retrieve foreign and domestic patents, trademarks, designs, trial decisions and non-patent literature used by KIPO examiners, patent administrative judges and prior art search institutes supervised by KIPO. This search tool provides various kinds of search strategies: for example, search is based on a patent application number, the title of the invention, contents of the invention and patent classification information. Further, the system has supplied user-friendly functions, such as, tabulating the citation relations, translating foreign patent gazettes, providing the patent family information, and etc. KIPO has continuously expanded IP information to support high-quality international search since KIPO developed an internal search system in 1999, and that has improved the system by reflecting users' needs.

Rules 36.1(iii) and 63.1(iii): *That Office or organization must have a staff which is capable of searching and examining the required technical fields and which has the language facilities to understand at least those languages in which the minimum documentation referred to in Rule 34 is written or is translated.*

Language(s) in which national applications may be filed and processed:

National applications could be filed and processed in Korean or English, and PCT applications could be filed and processed in Korean, Japanese or English

Other languages in which large numbers of examiners are proficient:

Most examiners could fully understand English as well as Japanese. Some examiners could understand Chinese, German, French, Spanish and Russian.

Services available to assist search or understanding of prior art in other languages:

KIPO provides machine translation services for search of or understanding of prior art.

2.2 – QUALITY MANAGEMENT

Rules 36.1(iv) and 63.1(iv): *That Office or organization must have in place a quality management system and internal review arrangements in accordance with the common rules of international search.*

National quality management system: The annual report on quality management systems is available from the WIPO website at <http://www.wipo.int/pct/en/quality/authorities.html>.

KIPO has about 822 PCT examiners (KIPO employees) and about 200 PCT searching personnel (outsourcing company employees). Expertise in natural sciences and/or engineering is required for all PCT examiners and PCT searching personnel. While making effort to hire PCT examiners with needed skills, KIPO has provided incumbent examiners with continuing educational opportunities such as specialized lectures and seminars, helping them widen their knowledge and expertise.

PCT examiners and searching personnel, who carry out international search and preliminary examination, also possess high levels of language skills – in particular terms of English proficiency – that are necessary to comprehend foreign PCT documents and prepare ISR/IPER. In an effort to help them sharpen their language skills and stay away from potential linguistic obstacles, KIPO has encouraged examiners to attend an in-house language programs: English, Japanese, Chinese, Spanish, German, French, and Russian classes are available. Or, examiners may take foreign language courses run by various universities commissioned by KIPO. KIPO has taken one step further by equipping its self-constructed search system called Korean Multi-functional Patent Search System (KOMPASS) with machine translation software. Presently Japanese-Korean, English-Korean and Chinese-Korean translation of foreign patent documents are available.

A draft version of ISR/IPER made by an examiner is primarily reviewed by the head of the unit and then Director of the Division as a way of quality management. After issuing the ISR/IPER, a sample of the issued ISR/IPER is extracted and checked against the established standards set by the Examination Quality Assurance Division for the sake of quality control. As the unit head and Director of the Division are responsible for approving the ISR/IPERs established by the examiners, they naturally serve as the final checker that the ISR/IPERs adhere to the quality standards set out by PCT International Search and Preliminary Examination Guidelines. Deficiencies found in the ISR/IPERs are ordered by the Director and unit heads to be corrected, and necessary measures are then taken to prevent those deficiencies from recurring.

The quality of PCT ISR and written opinion made by the PCT International Search and Preliminary Examination Division I & II should go through a three-tier quality control mechanism: starting from outsourcing agency, through the PCT International Search and Preliminary Examination Division, and finally by Examination Quality Assurance Division. To breakdown, the ISR outsourcing agencies internally go through a two-tier quality assurance process that engages mentor and team manager in. When it comes to the PCT International Search and Preliminary Examination Division, examiner, unit head, and Division Director review the reports in order. KIPO also employs English Editors who give linguistic advice on expressions, grammar and vocabularies frequently used in ISR/IPER and correct errors or awkward expressions.

3 – INTENDED SCOPE OF OPERATION

Language(s) in which services would be offered: English, Korean

State(s) or receiving Office(s) for which Authority would offer to be competent:

Korean Intellectual Property Office (KIPO), Intellectual Property Office of the Philippines (IPOP HL), National Office of Intellectual Property Of Vietnam (NOIP), Patent Office in Indonesia, Intellectual Property Office of Mongolia, Intellectual Property Office of Singapore, Intellectual Property Office of New Zealand, United States Patent and Trademark Office (USPTO), Intellectual Property Corporation of Malaysia, National Intellectual Property Office of Sri Lanka, IP Australia, Thailand Patent Office, Chile Patent Office, Peru Patent Office, Saudi Arabia Patent Office, Mexican Patent Office

Limitations on scope of operation: None

4 – STATEMENT OF MOTIVATION

KIPO joined the PCT in 1984 and was approved as an international authority in 1997. Korea and KIPO have made remarkable achievements over the last 30 years in the PCT:

Korean was chosen as PCT publication language in 2009 and Korean traditional knowledge was included under the PCT minimum documentation in 2007.

In 2015, 14,626 PCT international applications were filed with KIPO (ranked the 5th in the world) and carried out international search of 29,285 PCT applications (ranked the 4th in the world). KIPO implemented international search of the PCT applications filed by around 16 countries, including the United States of America, Australia, Saudi Arabia and Mexico, as of December 2016, and has cooperated with the five IP offices (IP5), PCT/MIA and WIPO to advance the development of the PCT through the e-Search system and PCT CS&E and by strengthening the linkage between the international phase and the national phase.

In the appointment process of the Turkish Patent and Trademark Office as the twenty-second International Authority in 2016, KIPO supported and consulted the Office about specific conditions to be fulfilled to become an international authority, including requirements to abide by and criteria for a quality management system (QMS), and has passed over international search know-how, which KIPO examiners have accumulated over the last 20 years through years-long searches, to Turkish Patent and Trademark Office examiners.

KIPO has run the Korea Trust Fund (KTF) and plans to provide PCT international search and preliminary examination know-how to examiners in the developing countries from 2017.

KIPO has financially supported 10.8 billion Korean won (around 8.94 million United States dollars, based on an exchange rate as of December 2016) through the 13th project by December 2016 after concluding a MOU with WIPO to set up the Funds-In-Trust in 2004, signed a MOU to establish WIPO KTF in the education field in September 2011, and plans to provide training to patent examiners in the developing countries with respect to PCT international search/preliminary examination know-how based on the fund from 2017.

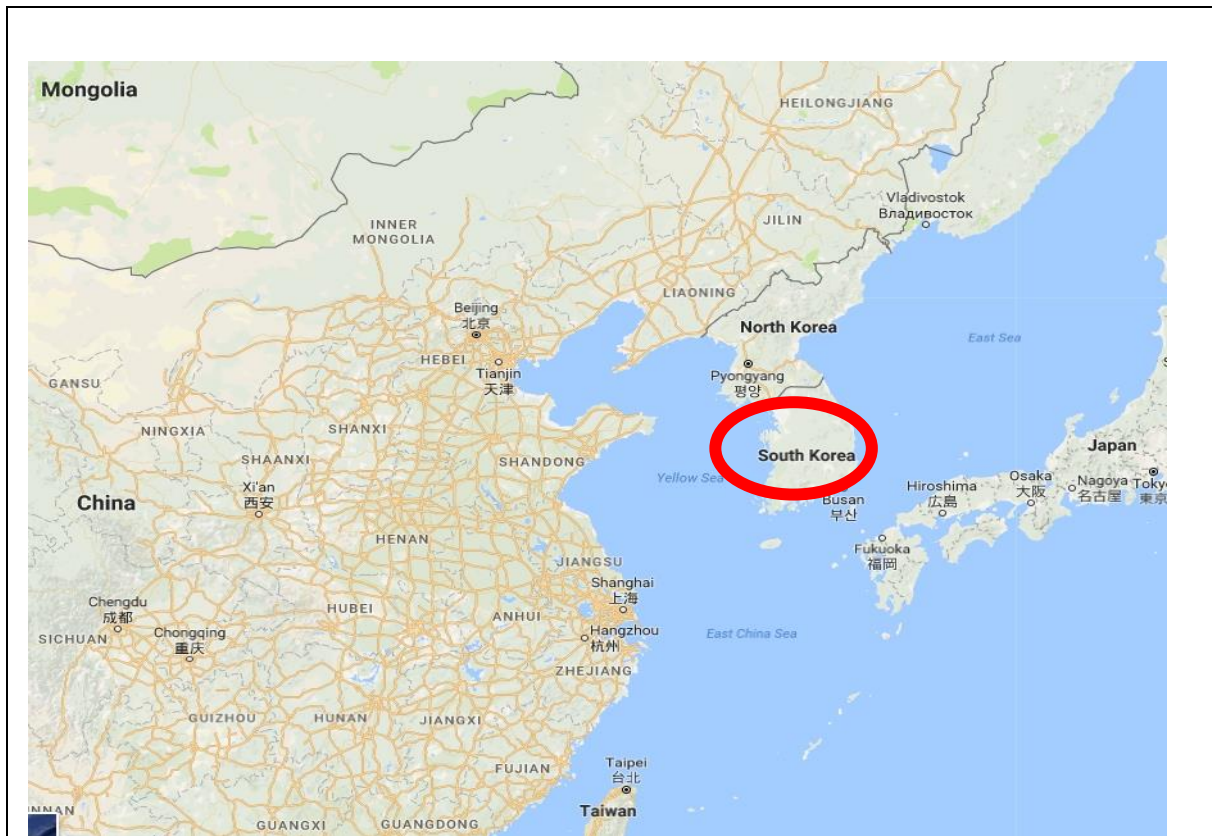
As such, KIPO has continuously exerted efforts to get the international IPRs market to be advanced in the right direction and supported the Korean patent applicants to obtain IPRs in the overseas market, by taking advantage of the accumulated experience in the field and based on the well-established infrastructure. Physical boundary of the world continues to be weakened, and it is expected that cooperation and harmonization between countries in the IPRs field will become a driving force behind the growth in the future society.

KIPO hopes that it can be reappointed as an International Authority in 2017 and promises it will more actively work and support for the development of the PCT system.

5 – APPLICANT STATE(S)

Regional location

South Korea occupies the southern portion of the Korean Peninsula. The Peninsula is surrounded by the East Sea (bordered by Japan) to the East, and the West Sea (bordered by China) to the West. The Military Demarcation Line (MDL), sometimes referred to as the Armistice Line, divides the Peninsula into two separate countries, South Korea and North Korea. The total area is around 99,720 square kilometres and it is called South Korea or officially the Republic of Korea.



Map showing State(s) and neighboring States

Regional organization memberships: Asia Cooperation Dialogue(ACD), Asia-Pacific economic Cooperation(APEC), Asia Europe Meeting(ASEM), East Asia Summit(EAS), Forum for East Asia-Latin America Cooperation(FEALAC), G20, United Nations Economic and Social Commission for Asia and the Pacific(UN ESCAP), Korea-Japan-China Trilateral Cooperation, etc. (Source: the Ministry of Foreign Affairs, as of January 2017)

Population: 51,696,216 (based on the data from the Ministry of the Interior, as of December 2016)

GDP per capita: 27,633 United States dollars (Source: IMF 2016)

Estimated national R&D expenditure (% of GDP): 19 trillion and 100 billion Korean won (based on 2016 National Annual Budget)

Number of research universities:

As of April 1, 2016, higher education institutions totalled 432, composed of 189 universities or colleges, 46 graduate schools, 138 junior colleges and 59 others. The statistics are sourced by the Korean Education Statistics Service (<http://kess.kess.kedi.re.kr>)

Major local industries:

- Source: <http://stat.kita.net/stat/kts/ktsMain.screen>
- Statistics: January 1, 2016 ~ November 30, 2016

(Unit: Million United States dollars)

| Item | Export |
|------------------------------------|--------|
| Semiconductor | 56,364 |
| Automobile | 36,070 |
| Ship and Offshore Structure/ Parts | 32,095 |
| Intercommunication Apparatus | 27,127 |
| Petroleum Product | 23,912 |

Major trading partner States/Regions:

- Source: <http://stat.kita.net/stat/kts/ktsMain.screen>
- Statistics: January 1, 2016 ~ November 30, 2016

(Unit: Million United States dollars)

| Trading partner | Export | Import |
|--------------------------|---------|--------|
| China | 112,402 | 79,016 |
| United States of America | 60,732 | 39,016 |
| Hong Kong SAR | 29,519 | 1,471 |
| Viet Nam | 29,438 | 11,473 |
| Japan | 22,138 | 42,931 |

6 – PROFILE OF PATENT APPLICATIONS

Number of national applications received – by technical field

| Year \ Technical Field | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------|----------------|----------------|----------------|----------------|----------------|
| Mechanical | 61,126 | 66,135 | 65,098 | 65,015 | 56,494 |
| Electrical/electronic | 81,646 | 84,075 | 86,122 | 85,108 | 73,974 |
| Chemistry | 55,849 | 58,985 | 61,592 | 63,521 | 57,995 |
| Unclassified | 2,718 | 6,362 | 6,664 | 8,761 | 28,134 |
| Total | 201,339 | 215,557 | 219,476 | 222,405 | 216,597 |

Source: KIPO's internal Statistical data

Number of national applications received – by route

| Year \ Route | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---------|---------|---------|---------|---------|
| National first filing/internal priority | 155,934 | 169,679 | 171,939 | 174,669 | 169,693 |
| Paris priority | 11,011 | 10,657 | 10,363 | 10,510 | 9,746 |
| PCT national phase entry | 34,394 | 35,221 | 37,174 | 37,226 | 37,158 |

Source: KIPO's internal Statistical data

Number of international applications received as RO

| Year \ Technical Field | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------|---------------|---------------|---------------|---------------|---------------|
| Total | 11,869 | 12,349 | 13,138 | 14,594 | 15,595 |

Source: KIPO's internal Statistical data

The IPC of the PCT application is granted after Receiving Office has sent the PCT applications to the International Searching Authority. Therefore, it is hard for Receiving Office to classify all the PCT applications into each technical field (IPC). In this regards, KIPO use the number of PCT applications.

Average time taken for national patent processing

Source: KIPO's internal Statistical data

| Indicator | Measured from | Time (months) |
|----------------------|---------------------------------------|---------------|
| To search | Request for examination ⁵⁾ | 10.6 |
| To first examination | Request for examination | 10.6 |
| To grant | Request for examination | 16.2 |

⁵⁾ Applicant should request for examination in KIPO within 3 years from the filing date and then all the process by KIPO's examiner would be started from that point forth.

National workload

| Measure | Number of applications |
|--|------------------------|
| All pending applications | 541,132 ⁶⁾ |
| Applications awaiting first examination (where relevant fees paid) | 160,246 ⁷⁾ |

Source: KIPO's internal Statistical data

⁶⁾ National applications of which the final disposal (e.g., allowance or refusal) is yet made. It included the national application for which examinations are not requested, the national application for which examinations are requested and the first office action is yet issued and the national application of which first office action is issued but the final disposal is yet made.

⁷⁾ Among the national applications for which examinations are requested, the first office action isn't yet issued.

7 – SUPPORT REQUIRED

N/A

8 – OTHER

N/A

9 – ASSESSMENT BY OTHER AUTHORITIES

N/A

[End of Annex and of document]