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STUDY ON APPROACHES TO THE QUALITY OF PATENT GRANT PROCESS

prepared by the Secretariat

INTRODUCTION

1. The Standing Committee on the Law of Patents (SCP), at its thirtieth session, held in Geneva from June 24 to 27, 2019, agreed that the Secretariat would submit, at the thirty-first session of the SCP, a study based on paragraph 7(b) of document SCP/28/8 on approaches to the quality of patent grant process, taking into account the issues raised during the sharing sessions on that topic, which had been held during the twenty-ninth and thirtieth sessions of the SCP (see paragraph 23 of document SCP/30/10). Paragraph 7(b) of document SCP/28/8 states that such a study would be based on the responses to the questionnaire on the term "quality of patents", sharing sessions and any further information provided by Member States, including relevant aspects of national legislation.

2. The Questionnaire on the Term "Quality of Patents" and Cooperation between Patent Offices in Search and Examination was sent to the Member States and regional patent offices with Notes C. 8625 and C. 8526 dated January 16, 2017. One of the questions contained in that Questionnaire was how each patent office understood the term "quality of patents". The responses to that question was compiled in document SCP/27/4 Rev. (Updated Responses to the Questionnaire on the Term "Quality of Patents" and Cooperation between Patent Offices in Search and Examination (Part 1)). The responses suggest that, in general, the term "quality of patents" involves two main concepts that interrelate to each other, i.e., the quality of a patent itself and the quality in the context of the patent grant process within the IP offices.

3. During the twenty-ninth session of the SCP, held from December 3 to 6, 2018, a Sharing Session on approaches used by delegations to ensure the quality of the patent grant process within IP offices, including opposition systems, any challenges faced and how they have been overcome, was organized. A number of delegations made presentations, provided information from the floor and actively participated in the Sharing Session. The delegations discussed, *inter alia*, the following issues: quality management systems and processes, measures to enhance the quality of patent examination, opposition systems, automatic retrieval of prior art information and international cooperation in prior art search and examination.

4. In addition, a similar Sharing Session was organized during the thirtieth session of the SCP, held from June 24 to 27, 2019. A special attention was given to the capacity building of patent examiners and offices. The issues addressed by the delegations include: quality of examination in emerging technology, quality management systems, capacity building for patent examiners, electronic management systems and IT-assisted workflow, timelines of procedures, opposition systems and supporting applicants, particularly independent inventors and research institutions.

5. In accordance with the decision of the SCP referred to in paragraph 1, this document contains a study on approaches to the quality of patent grant process, and is submitted to the SCP for its consideration. It is based on the responses to the Questionnaire, two sharing sessions and any further information provided by Member States on the topic within the SCP, as decided by the Committee.

6. The study first illustrates the patent grant process in general. It then analyses the high-level principles that might assist in approaching the quality of patent grant process. It is followed by the concrete examples of approaches to the quality of patent grant process in some patent offices.

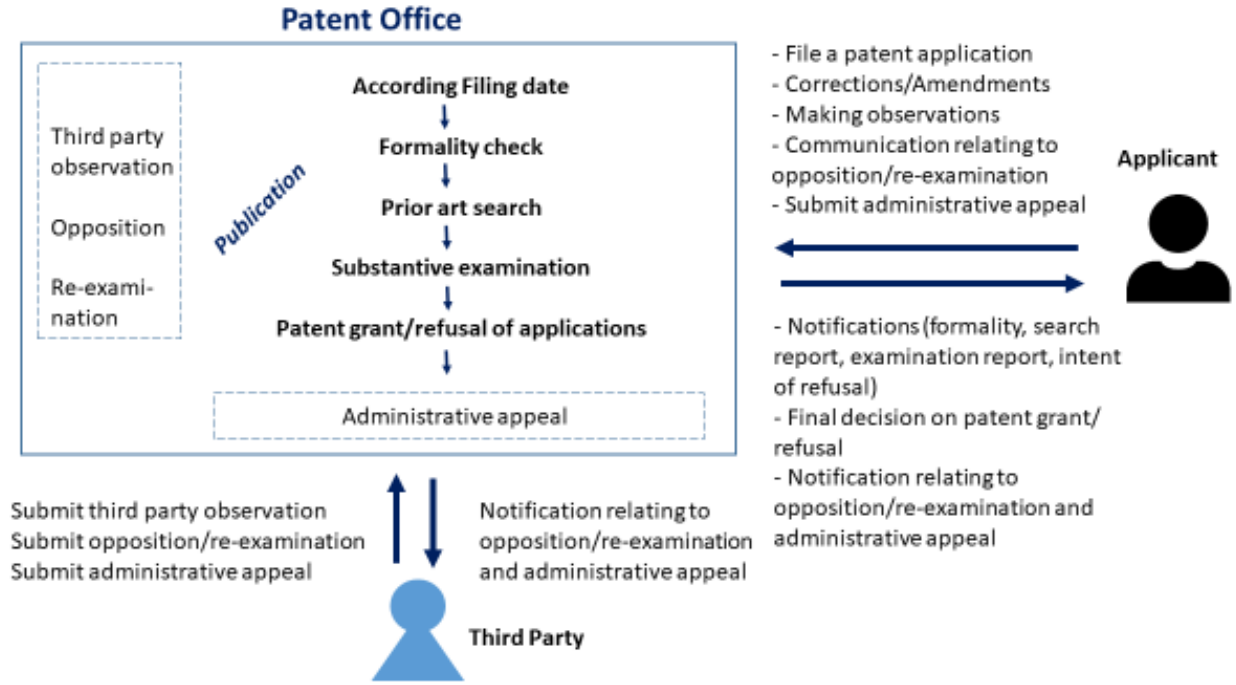
PATENT GRANT PROCESSES WITHIN PATENT OFFICES

7. The patent grant process is underpinned by national/regional patent policy and law that provides the framework of patent grant procedures. At the practical level, the process should adapt to the practical reality of each patent office, in terms of its size, resources and infrastructure. These aspects determine the designing of the patent grant process and steps and the work carried out by each patent office. Therefore, inevitably, there are differences in the patent grant process among patent offices.

8. At the general level, however, the process may be described as shown in Fig.1. Some important differences that can be observed among the patent offices include: (i) the extent to which prior art search and/or substantive examination are carried out by a patent office; (ii) the modality and contents of the publication of patent applications and/or patents; (iii) availability of patent-related information (for example, legal status data); and (iv) possibility for third parties or the applicant to challenge the decisions of the patent office at the administrative level. The patent grant process can be very complex. Although they are not described in Fig.1, in practice, many more detailed procedural steps and notifications/communications are involved in the patent grant process, for example, checking translations, priority documents, declarations and other evidence, payment of fees, etc.

9. Regardless of these differences, in short, the patent grant process encompasses: (i) actions and decisions made within the patent office; and (ii) various notifications to, and communications with, the users of the patent system (i.e., applicants and third parties). For the purpose of this study, it is important to clarify that the patent grant process is more than just prior art search and substantive examination. It covers the entire process, including dispatching notifications and publishing official gazettes.

Fig. 1 Overview of the Patent Grant Process



OVERVIEW OF APPROACHES TO THE QUALITY OF PATENT GRANT PROCESS WITHIN PATENT OFFICES

10. While the patent grant process in patent offices is not the only determinant factor of patent quality, it is apparent that many patent offices regard it as one of the key factors that are important for the improvement of the quality of patents. The responses to the SCP Questionnaire suggest that quality of a patent granting process within the patent office is closely related to quality of a granted patents, since the quality of the process leads to the quality of its outcome (granted patents and rejected applications).[1]

11. Although the patent grant process within each office may not be the same, the *raison d'être* of the patent system are probably not much different around the world, regardless of the respective country's level of socio-economic development. In general, the patent system offers incentives to innovate by grating the limited exclusive rights on inventions that meet certain requirements, and providing inventors the possibility of receiving appropriate returns on their innovative activities. At the same time, publication of patents (and patent applications in many countries) facilitates dissemination of new knowledge and accelerates innovation activities by, for example, avoiding the necessity to "re-invent the wheel".[2]

12. Consequently, to meet that goal, many common features that underpin the quality of patent grant procedures may be identified, while the concrete procedural steps and measures taken by each office to ensure the quality process may vary. As a simple example, some offices grant patents following the formality examination only: the mechanism for inspecting the compliance with the substantive patentability requirements is set in the judiciary system, in the form of *ex parte* proceedings between the patentee and a third party. Nevertheless, those patent offices, among other tasks, also receive patent applications, conduct a formality check, publish patents and maintain a patent registry. Therefore, the features such as making decisions in compliance with the applicable law and regulations, taking actions in a timely manner, effective and efficient interaction with stakeholders and proper management of the process may be also relevant in their work.

13. The quality of patent grant process may also be led by the social function of the patent offices as part of the government institutions. Although their social function may be not necessarily identical, the public service function of the patent offices requires certain functionalities that they are expected to fulfill in the society. In that light, certain common features may be identified, regardless of the differences among the procedures in each patent office.

KEYWORDS FEATURING THE QUALITY OF PATENT GRANT PROCESS

14. During the discussions held within the previous SCP sessions, at the high level, many Member States pointed out that the quality of patent grant process would imply the following: (i) the process should comply with the applicable law and established standards; and (ii) the process should be thorough, complete and reliable/credible. To that end, a number of keywords that feature the quality of patent grant process have often been pronounced by the delegations.

- Validity/Accuracy

  The patent grant process should be in compliance with the applicable law and the established standards so that the actions and decisions taken by the office is legally valid and accurate.

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1 Document SCP/27/4, paragraph 8.

2 https://www.wipo.int/patents/en/faq_patents.html.

- Consistency

The process should render the same outcome under the same circumstances and conditions. Actions and decisions would be consistent to ensure legal certainty of the process.

- Comprehensiveness

Actions and steps throughout the process should be taken in a thorough and comprehensive manner. The quality process would involve both staff and the higher management. Dialogs with stakeholders and users of the patent system would form an integral part of the quality process.

- Timeliness/Efficiency

Actions and decisions taken by the patent office usually have direct or indirect consequences to the applicant and third parties. Inefficient actions and unduly delayed delivery of decisions may create uncertainty and have inadvertent negative effects on both the applicant and third parties.

- Relevance

The internal situation of the patent office as well as external settings surrounding the patent office change with time. The process, therefore, requires continuous improvement and management so that it remains to be valid, consistent, comprehensive and timely.

15. The patent grant process in a patent office consists of a number of actions and decisions taken throughout the process. Since the quality of the entire process and the quality of each action and decision are inseparable, the above keywords may apply to the process at large as well as to each action and decision taken at each step of the process.

OPTIMIZATION OF PROCESS COMPONENTS

16. While the above keywords hint at the important features of the quality of the patent grant process, the process could also be looked at from its components, such as: (i) process design and steps; (ii) patent office staff who carry out those steps; (iii) tools and infrastructures that assist the staff; and (iv) management of the process operation. Optimization of those process components to strive for the valid, consistent, comprehensive, timely and relevant patent grant process may be one way of looking at the quality of the patent grant process.

Optimization of process design and steps

17. While national/regional policy and law establish the policy and legal framework of the patent grant process, detailed practical steps, flow of work and timeframes need to be built into the process in order to be operational. Optimizing the designing of the process and steps for higher validity, consistency, comprehensiveness, timeliness and relevance is a measure taken by many patent offices. Oftentimes, designing an optimal process needs to take into account the available resources, tools and infrastructure as well as practical constraints of each office (see Box 1, below). In that light, there would be no one single process that could be considered optimal in all patent offices.

BOX 1: Examples of practical challenges

"[H]aving full time employee resources to engage in the discussion, review and planning for international collaboration is key. The quality program at CIPO is investigating the need to have a position created where these activities are permanently assigned as having experience and knowledge of a longstanding collaboration is necessary for effective management. However, staffing is difficult to justify as collaborative work fluctuates greatly over the year and is difficult to forecast effectively." (From the response to the Questionnaire by Canada).

"It should be emphasized that, generally, PRH[3] is open to any collaboration projects but due to limited resources, PRH has to prioritize which programs or projects it can join." (From the response to the Questionnaire by Finland).

18. Nevertheless, certain aspects have been highlighted during the SCP sessions, for example, the patent grant process is a due process which ensures the right of parties to be heard. The process should be streamlined yet comprehensive so that it would allow timely actions and decision-making by staff of the office. In addition, as the society evolves and technology develops, the IP landscape and the needs of the stakeholders and the society may constantly change. Therefore, the patent grant process should adapt to these changes in order for it to be continuously valid, consistent, comprehensive, timely and relevant.

19. Within the patent grant process, the prior art search and examination process involves many complex and resource intensive actions and decision-making. Therefore, in many patent offices, much effort has been made to optimize the process design in this area. While more countries introduce substantive examination, it requires significant efforts to recruit and train examiners and to set up sufficient infrastructure and databases to conduct such examination. To maintain well-functioning substantive examination process, patent offices may need to continuously train examiners and maintain/upgrade IT infrastructures and databases.

20. With a view to increasing the validity of decisions and streamlining the process, many patent offices integrate international collaborations in the patent grant process: the most notable collaboration being the Patent Cooperation Treaty (PCT). Various mechanisms have been developed and practical arrangements have been made at the international, plurilateral and bilateral levels, particularly in the area of prior art search and examination. They include: (i) utilization of search and examination reports prepared by other offices and/or patent prosecution information of corresponding foreign applications and patents; (ii) utilization of search and examination expertise and resources available in other offices in order to facilitate the search and examination work; and (iii) collaborative search and examination among patent offices with complementary skills.[4]

21. While some offices consider that work sharing can be done without great expense of resources, in order for examiners to properly contextualize and leverage the search and examination work of other offices and to conduct the cooperation successfully, they should be able to properly understand the examination approaches taken by the examiners of other offices[5] (see Box 2, below).

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3 Finnish Patent and Registration Office.

4 See the WIPO website: International Work Sharing and Collaborative Activities for Search and Examination of Patent Applications" at: https://www.wipo.int/patents/en/topics/worksharing/.

5 See SCP/27/5 Rev., paragraphs 23 to 28.

BOX 2: Challenges for taking advantage of search and examination work product of other offices

"*Noting that the quality of patents depended to a large extent on the capacity and skills of patent examiners and transparent procedures for the grant, the Delegation stated that IP offices in developing countries and LDCs should be assisted in enhancement of the capacity of their patent examiners in the different technological fields to enable them to issue high quality patents and efficient use of shared reports from other offices.*" (Statement made by the Delegation of Ghana in document SCP/30/11 Prov.2, Draft Report of the thirtieth session of the SCP in paragraph 81).

"*In recent experiments conducted with our Office as part of the PPH program […], we have discovered that the main problem in taking advantage of the results of searches and examinations already carried out by other national offices in relation to patent applications is the issue of different languages, […]*". (Comments received from Spain, reproduced in document SCP/18/INF/2, Annex).

22. A patent grant process usually involves various sections in a patent office. In some offices, prior art search and examination work are coordinated with external examiners and other experts in institutions outside the patent office. Effective coordination among the sectors may increase validity, consistency, comprehensiveness, timeliness and relevance of actions and decisions.

23. Furthermore, for higher credibility of granted patents, third parties may be able to contribute to prior art search. Consequently, some patent offices have introduced mechanisms that allows third parties to submit prior art information and/or challenge the validity of patents prior to and/or after patent grant. If other conditions are favorable, such an administrative procedure provides a simpler path than litigation to review the validity of patents. Conversely, as examiners might erroneously reject patent applications which should otherwise be granted, the possibility for applicants to challenge the negative decisions of patent offices through administrative appeal procedures may also offer a simpler route for a party who is negatively affected by erroneous decisions of patent offices.

Optimization of human resources

24. Since actions and decisions throughout the process are taken by humans, optimization of human resources is considered as an important component of the quality patent grant process. Both quantitative and qualitative aspects may be relevant to the quality process. In general, human resource management and leadership as well as management of staff performance are also considered important in the quality process.[6]

25. As well-trained staff having sufficient skills to carry out their duties is key to the quality process, regular training and capacity building activities are conducted in many patent offices for their staff. In many cases, not only experienced staff in the patent office but also external experts, such as experts from other offices, act as trainers. Exchange of examiners with other offices to share and discuss examination practices of the respective offices, on-the-job-training or internship are considered useful, as they are practical trainings closely related to the trainees' daily work. In order to keep up with the development of technologies, some offices organize seminars inviting external lecturers from industry and universities or field trips.

6 Document SCP/27/4 Rev., paragraph 9.

Optimization of tools and infrastructures

26. Various tools and technical infrastructures facilitate patent office staff to take actions and make decisions. They improve validity and efficiency of the actions and decisions to be made during the patent grant process. Computer assisted processes, which have been deployed in many patent offices, streamline the filing, formality check, prior art search, examination and publication of patent applications and patents, among others. Digital communication facilitates communications within the patent office as well as those between the office staff and various stakeholders outside the office.

27. In relation to prior art search and examination, access to patent and non-patent literature databases is critical for examiners to make valid decisions. IT tools and platforms play an important role in sharing and accessing patent applications and patents published by other offices. They also facilitate access to information regarding search and examination work carried out by other offices on the corresponding foreign patent applications. Strong bilateral, regional and international cooperation is present in this regard. For example, some offices share their in-house prior art search systems with other offices or assist their collaborating offices to access paid databases.[7]

28. Beyond the technical tools, guidelines and manuals for carrying out the formality check, prior art search and examination are established in many patent offices, so that the actions and decisions by the office staff are valid and consistent.

29. In addition, as described in Fig. 1, quality of actions by applicants and third parties may also have implications to the patent grant process: for example, to what extent patent applications submitted by applicants meet the legal requirements, or whether the information submitted to the office by a third party is truly relevant prior art or not. Clear, concise and comprehensive guides for users of the patent office may assist them to navigate the complex patent grant process. Particularly in developing countries, support for individual inventors and research institutions are sought (see Box 3, below).

BOX 3: Needs for supporting independent inventors and research institutions

During the sharing session held in SCP/30, the Delegation of Cameroon stated that since independent inventors were generally not trained on patent matters, and had difficulty in drafting claims, the Office was in the stage of putting in place a system of support. The Delegation questioned whether other offices also provided specific support to those inventors.

In the same session, the Representative of OAPI noted that in order to increase the quality of patents, OAPI had been working on raising awareness on patent matters and building capacities of employees of research centers located in its Member states by establishing various guidelines.

Optimization of the public notice process

30. The disclosure function of the patent system is considered as the cornerstone of the patent system. Accessibility to, and timely dissemination of, the technical contents and bibliographic data of patent applications and granted patents is a crucial step in the patent grant

[7] Document SCP/27/5 Rev., paragraph 3. See also the presentation by the Delegation of El Salvador during the sharing session at SCP/29.

process. In addition, the patent grant process generates other types of information which may be useful for stakeholders and the public at large. They may include legal status of patent applications and patents, prior art search and examination reports produced by the patent office, official communications between the patent office and the applicants or third parties.

31. In addition to the accessibility of the relevant information and timeliness of dissemination, accuracy of the disseminated information may be another aspect of the quality. Contents of databases and patent registries need to be credible. They should be updated regularly so that they incorporate the latest data and information concerned. For example, failure to record the payment of a maintenance fee or a change of the patentee might misguide third parties about the enforceability or ownership of the patent concerned, respectively.

32. The quality of communication between the patent office and its users is another aspect that has been highlighted in the SCP discussion. Importance of good communication skills that convey information to others in a clear, concise, comprehensive and unambiguous manner may apply to any dialogue with the users, from a telephone query to a substantive examination report.[8]

Optimization of process management

33. In order to operate the quality patent grant process in a sustainable manner, a systematic and comprehensive quality management, rather than an ad-hoc review of a single step or action in an isolated manner, may be integrated in the operational framework of patent offices. Quality management focuses not only on the outcome of the process, but also on each step in the process.

34. In general, quality management ensures that the process and its output is consistent and predictable. Patent offices need to constantly adapt to the ever-changing external and internal environment to meet their respective goals. For example, opportunities and challenges brought by the evolution of national policies and innovation environment, emergence of new technology, development of office automation tools or increasing workload in the office may require adjustments in the paten grant process to keep and improve its quality standards. Consistent and predictable outputs of the patent grant process can be achieved more effectively and efficiently when actions in the process is understood and managed as interrelated parts that function as a coherent system.

35. The quality management usually involves four main components: quality planning, quality control, quality assurance and quality improvement. Quality assurance refers to the planned or systematic actions necessary to provide enough confidence that a product or service will satisfy the given requirements. Quality control is the ongoing effort to maintain the integrity of a process to maintain the reliability of achieving a desired outcome. Gathering facts enabling the offices to monitor, measure, analyze and adapt planned actions throughout the process as well as to improve the output of the process is an essential part of the quality management. Oftentimes, feedback from the users of the patent office is part of the inputs for the monitoring and review.

36. While there are many methods for quality improvement, some patent offices sought their quality management system being certified by a recognized standard, most commonly the ISO 9001 standard series.[9] It covers the processes and systems of the organization rather than the quality of the service actually delivered. The practical implementation of quality

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8 The response to the Questionnaire by Sweden states that any decision made or any task performed by the Swedish patent office should be explained so that the client fully understand the basis for, and the consequences of the decision or the task.

9 The most recent version is ISO 9001:2015.

management systems vary from one office to another, depending on the size of the office and the type of work involved. However, certain general principles run through any system. In essence, for example: (i) the office should be clear on its functions and provide the necessary resources (staff, premises, equipment and training) to deliver these functions, effectively; (ii) it should have procedures for quality control/assurance with arrangements for effective communications and feedback to staff of the office; and (iii) it provides a review mechanism that monitors, measures analyze and continuously improve its performance.

EXAMPLES OF APPROACHES TO THE QUALITY OF PATENT GRANT PROCESS WITHIN PATENT OFFICES

37. This section describes concrete examples of approaches to the quality of patent grant process taken by some IP offices. In other words, it shows how some offices address the above features and components of the quality patent grant process in their respective settings.

General approaches to the quality of patent grant process

38. As descried in the previous sessions, there are higher level considerations that run through the approaches to the quality of patent grant process among patent offices of different sizes and from various geographical regions. At the same time, at the operational level, improvement of the quality of patents may be not achievable by merely adopting the practice of other patent offices or by merely concluding a collaboration agreement with other offices.[10] Accordingly, the practices of patent offices show that various mechanisms and measures employed by the offices in the national patent grant process are indeed adapted to their respective legal and operational frameworks and strategic goals. In this regard, it may be not surprising to observe that some patent offices highlight the importance of "managing" the process to continuously deliver quality outputs.

39. Many offices take a holistic approach to the improvement of the patent grant process. They usually take measures with respect to all features and components of the patent grant process, i.e., process design, human resources, infrastructures and tools, public notice processes and process management, since they are somewhat linked to each other. The paragraphs below show examples of some offices.

- Quality Management at the Mexican Institute of Industrial Property (IMPI)[11]

  In IMPI, substantive examination is carried out by examiners (122 in total) and nine supervisors who also check the work of examiners. There are six coordinators who assign patent applications to examiners and control the work forwarded from the supervisors. The supervisors check most of the office actions prepared by the examiners, and the coordinators check those files that he/she considers higher priority, such as examination reports prepared by examiners who were recruited recently, immediate grant decisions without any notification of reasons for refusal, or applications in a complex technology area. In certain cases, two Deputy Directors in charge of substantive examination may review the rejection cases. Two internal electronic management systems, the Automated Patent Management System (SAGPAT) and Internal Patent Administration System (SIAI) assist the examiners, supervisors and coordinators to manage the examination workflow.

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10 Statement by the Delegation of Iran at SCP/30 (document SCP/30/11 Prov. 2, paragraph 78).

11 Presentation by the Delegation of Mexico during the sharing session at SCP/30.

For newly recruited examiners, IMPI provides an initial training course of five weeks. The new examiners work under the supervision of a highly experienced examiner until he/she could conduct the examination alone. To provide continuous trainings, a number of face-to-face and on-line courses are conducted in cooperation with other patent offices and training institutions in foreign countries.

Since more than 90% of applications in Mexico constitute the national phase of the PCT international applications, IMPI makes extensive use of the International Search Reports and International Preliminary Examination Reports as well as International Preliminary Report on Patentability. For national applications, EPOQUE and DERWENT INNOVATION are used for prior art search, in addition to the public databases of patent office, including the Mexican national database "Comprehensive Information System of the Industrial Property Gazette (SIGA)". In addition, examiners extensively use the Public Patent Application Information Retrieval (PAIR) of the United States Patent and Trademark Office (USPTO), the European Patent Office (EPO) Register, Advanced Industrial Property Network of the Japan patent Office (JPO), Patentscope, among others

IMPI highlights that the following measures taken in its patent grant process contribute to the quality of its product: (i) all applications are subject to the substantive examination; (ii) a pre-grant procedure for third parties to submit observations as to whether the application complies with Articles 16 and 19 of the Mexican Industrial Property Law is provided; (iii) office actions are checked by supervisors and coordinators; (iv) if the applicant does not agree with a final office action, he/she may request a review with one of the Deputy Directors; and (v) user satisfaction surveys.

In addition to the Industrial Property Law and its Regulations, the Manual of Procedures and several Agreements (*Acuerdo*) have been prepared in relation to patent grant process. For example, the "Agreement establishing the rules for filing applications before IMPI" is a guide for the applicants about how they should draft the applications. The "Agreement establishing the rules and criteria for resolving several procedures before IMPI" provides time limits for the different stages of the processing of applications. In relation to the timeliness of patent grant, more than 70% of the applications that were granted by IMPI in 2017 and 2018 had an estimated processing time of less than three years.

− Approach to the quality patent grant by the Canadian Intellectual Property Office (CIPO)[12]

The importance of quality is well recognized in CIPO, as it is also part of its five-year business strategy. Three high-level objectives of its quality management system are ensuring quality work products, timeliness and efficiency. CIPO sees the quality of patent granting process in a holistic way. It includes the process from filing to grant and the validity of the granted patents. It places the high value on hiring and retaining technically competent staff and patent examiners who are capable of ensuring correct and consistent application of the applicable Canadian law.

CIPO recognizes the quality of search tools as being critical, as searching prior art is one of the core elements of patent examination. It strives to utilize examination resources in the most efficient way possible. This means that CIPO leverages work already done by foreign offices or International Authorities under the PCT, carries out a comprehensive examination at each stage in its process and writes clear and comprehensive examination reports. It also means providing CIPO's quality work products to the world so that it can deliver similar benefits to other offices.

12 Presentation by the Delegation of Canada during the sharing session at SCP/30.

CIPO considers that the important part of its system is the provision of the opposition systems, pre-grant and post-grant. During the pre-grant phase, a third party may protest the granting of a patent or file prior art relevant to the patentability. The post-grant opposition is available through the re-examination process, which is available at any time when the patent can be enforced. For a patentee, there are few ways to amend the granted patent through limitation, disclaimer and reissue. CIPO has embraced the LEAN methodology as a tool to continue improving quality, efficiency and timeliness, with its clients in mind. One of the successful outcome of the LEAN is the reduction of the correspondence processing time from 10 days to two days.

- View of the China National Intellectual Property Administration (CNIPA)[13]

CNIPA considers that patent offices play an important role in improving the quality of patents, and that capacity building of staff is important in improving the quality of patents. CNIPA is also trying to improve the quality control by establishing a comprehensive quality check system and using multiple measures. In addition, it conducts the evaluation of the quality of examiner's work, and has a system to obtain feedback from the applicant and the public. The Office also has developed various manuals on quality.

40. In the Moroccan Industrial and Commercial Property Office (OMPIC), the introduction of substantive patent examination and validation of the European Patents as well as development of various associated tools and indicators have had important impacts on its approach to the quality of patent grant process.

- Legal, technical and managerial aspects of the patent grant process in OMPIC[14]

OMPIC approaches the patent quality from the three aspects: legal, technical and managerial. As regards the legal aspect of the patent granting process, OMPIC highlights the entry into force of Law No. 17-97 in December 2014, which introduced a substantive patent examination system permitting the Office to establish search reports and patentability opinions as well as a validation system[15] that recognizes the corresponding EP patents granted by the EPO.

On the technical aspect, the Office introduced high performance prior art search tools that enable examiners to carry out a thorough examination. Since 2009, examiners have been trained on the use of various databases and tools, such as EPOQUE Net, Orbit, WPI and IEEE. In addition, the Office deployed digital operation system that made it easier to process and manage patent applications, such as IPAS, WIPO Scan, EDMS, WIPO Publish, DAS, and ePCT.

Regarding the managerial aspect, in order to ensure that procedures and the rules are in line with the law, the Office had proceeded to formalizing the working methods and elaborating guidelines and briefing notes. Further, OMPIC has adopted the "Lean Six Sigma" method and uses a specific data analytics platform for management and analysis

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13 Statement made by the Delegation of China during the sharing session at SCP/30.

14 Statement made by the Delegation of Morocco during the sharing session at SCP/30.

15 Since 2010, the EPO has concluded validation agreements with non-EPO Contracting States (not limited to European countries), providing for European patents to have effect in those countries. If an applicant submits a request for validation and pays the validation fee in due time, European patent applications and patents can be validated in these countries, where they will in principle have the same effect as national applications and patents. See https://www.epo.org/law-practice/legal-texts/extension-validation-system.html.

of the administration in order to increase performance, improve productivity, granting high quality patents, optimize the costs, speed up the processing of applications as well as avoid waste of resources and to increase the clients satisfaction. The Office also provides trainings for patent examiners to acquire necessary skills in two ways. First, a basic training of four months is provided to newly recruited examiners, which enables them to learn on-the-job and start to draw up search reports with support from their mentors. The second way of training is follow-up trainings addressed to all examiners to improve their skills and knowledge. These training are provided by partner agencies, such as EPO and WIPO in the form of on-site training, seminars and distance learning.

41. Not only the continuous improvement of the process, but also the continuous improvement of how to approach the quality process is considered by IP Australia.

- Continuous improvement of the quality review system in IP Australia[16]

In order to continuously improve the quality of its examination work, IP Australia takes a number of initiatives. Furthermore, IP Australia has commenced review of its quality review system. The review will look at the various parts of the quality review system to ensure that it provides quality outcomes that are linked to the organizational strategic goals. The review will specifically cover the method of quality sampling as well as attributes of its quality standards.

IP Australia is also working on an overall framework of complimentary initiatives to improve the quality of its work as well as management and incentivization of its staff. It is working on enhancing its examination under the Examination Excellence Program, for which several initiatives are already underway, including improvements to the examination manuals, investigating potential uses of automation and Artificial Intelligence (AI) as well as enhancements of search. It also recognizes the need for culture of trust and collaboration, which enables excellence in all aspects of its work.

The current performance incentivization arrangements are at odds with the contemporary approach. A new performance setting framework will consist of six main components: production, quality, timeliness, corporate contribution, learning and development and behaviors. Managers are encouraged to manage the output of their teams in a more holistic way with regard to those six performance components under a partnership model that focuses on peoples' strengths to get the best outcome for customers, while, at the same time, acknowledging the contribution that people made to their team and the wider strategic outcomes of IP Australia.

Example of approaches to the quality of patent grant process in specific aspects

42. During the sharing sessions held in the previous SCP meetings, some offices presented their approaches to the quality of patent grant process in relation to a specific aspect in the process, such as examiner training, work sharing or opposition systems. The following paragraph, therefore, provides examples of those specific aspects from some offices.

Request for examination system

43. In some countries, patent examination is carried out only where an applicant files a request for examination within a certain period. While the exact time limit depends on the applicable national law, it is often set around three to seven years from the filing date. If no

16 Statement made by the Delegation of Australia during the sharing session at SCP/30.

request for examination is filed, the application is considered withdrawn. On the one hand, applicants are given, after filing, the possibility to review the patentability and commercial relevance of their patent applications so that only those selected applications will further proceed to the examination process. For patent offices, it needs to conduct substantive examination of those applications that have been selected. On the other hand, if the examination is deferred, patent applications can be stayed in the pending status for several years.

- Request for examination by a third party in Germany[17]

Under the German patent system, an applicant shall file a request for examination within seven years from the filing date. If such a request has not been filed, the application is considered withdrawn. According to Section 44(2), first sentence, of the German Patent Act, the request for examination may be filed not only by the applicant but also by any third party within seven years from the filing date of the application. The third party will not become a party to the proceedings through the submission of a request for examination. This provision gives third parties the opportunity to initiate the examination of the application and to speed up the procedure so that their potential commercial activities would not be hampered by the deferral in the process.

Efforts to reduce pending applications: timely grant of patents

44. A number of patent offices recorded large increases in patent applications received over the past two decades, with a threefold increase in patent applications filed worldwide between 1995 and 2016.[18] The rapid growth in filings has led to an increased number of pending applications in some offices. Consequently, they face the challenge of conducting examination and processing patent applications in a timely manner.

- The Patent Backlog Combat Plan of the Brazilian National Institute of Industrial Property (INPI)[19]

Over the years, INPI has been seeking alternatives to reduce the number of pending patent applications, known as backlog. By early 2019, INPI backlog reached around 160,000 pending applications,[20] while the number of examiners and searchers dedicated to patent examination is 332. The biggest impact of the backlog is the extension of patent term beyond 20 years, as stipulated in the sole paragraph of Article 40 of Law 9,279 of 1996 (IPL).[21] In effect, that provision extends the patent term beyond 20 years if INPI is not able to grant a patent within 10 years from the filing date (unless the exceptional circumstances stipulated in the law exist). In 2018, 62% of the applications decided by INPI had the patent term extended under that provision. The long pendency period increases uncertainty as to whether the claims in patent applications are patentable or not, and has negative impacts on third party investments in the commercial exploitation of the claimed subject, particularly where the claims do not meet the patentability requirements.

17 Statement made by the Delegation of Germany during the sharing session at SCP/30.
18 World Intellectual Property Report, WIPO, 2017.
19 Comments received from Brazil in response to Note C.8893 dated July 17, 2019.
20 Patent applications with examination request.
21 Article 40, sole paragraph states that the patent term shall not be less than 10 (ten) years for the invention patents, beginning on the date of granting, unless the INPI has been prevented from examining the merit of the application by a proven pending judicial dispute or for reasons of force majeure.

A number of measures have been taken by INPI, such as increasing the number of examiners, standardization of internal procedures, publication of examination guidelines, automation of the operation and deployment of production-driven telework. While these measures contributed to the increased performance of examination, in 2018, INPI launched a Pre-Examination Pilot Project,[22] which had as its premise the use of search results produced by other patent offices. Under this Project, as a first office action (Pre-Examination Office Action), INPI examiners cite prior art documents found by other offices, and invite the applicants to amend the claims and/or to submit technical arguments demonstrating its patentability over the cited prior art, within the period of 60 days. Of the applications that received the Pre-Examination Office Action, 22% were refused due to non-response. In 88% of the responses received, the applicants amended the claims, which resulted in an increase in the decision after the first office action. At the same time, the low number of appeal against the decisions of INPI is observed.

In view of the outcome of the Pre-Examination Pilot Project, the impossibility of hiring new patent examiners and the contingency of its budget, INPI launched a Backlog Combat Plan in 2019, designed to reduce by 80% the number of pending applications within two years. Use of the search results carried out by other offices as a promising measure to shorten the decision period is the main strategy of the Backlog Combat Plan, which institutionalized the Preliminary Examination Office Action that applies to patent applications with or without previous search report by other offices. It also adopted a more simplified examination methodology to decrease the number of examination steps.[23]

Differently to the Pre-Examination Office Action, the Preliminary Examination prohibits additional search by INPI examiners if there is any search report prepared by another office. For those applications with a previous search report, INPI examiners cite prior art documents found by other offices, and invite the applicants to amend the claims and/or to submit technical arguments demonstrating its patentability over the cited prior art, within the period of 90 days. For patent applications that are filed only in Brazil, applicants receive a Search Report prepared by an INPI examiner and a standard Technical Report in which the applicant is requested to amend the application and/or present arguments to prove the patentability of the claimed invention. Preliminary Examination Office Actions do not apply to fast-track patent applications, applications that have been subject to third party observation or the National Agency of Sanitary Surveillance (ANVISA).

In addition to the above, INPI launched the Task Management Pilot Program in order to encourage the increased performance of patent examiners during the Backlog Combat Plan.

− Measures taken by the Canadian Intellectual Property Office (CIPO) for timely patent grant[24]

CIPO considers that timeliness in the patent examination process is critical to help ensure certainty in the marketplace. While the average pendency of patent application (period between the request for examination and patent grant) was 48.8 months in 2011/12, it was reduced to 32.4 months in 2017/18. In terms of timeliness, a recent initiative called “Patent Pools Pilot Project” has helped making differences across technology areas. The project shifted the way examiners work. Specifically, instead of examiners working from a smaller individualized assignment pool, they work from larger pools of work that are accessed by multiple patent examiners. It helped to reduce the negative impacts of unforeseeable delays in individual performances and targets.

22 Resolution INPI/PT No. 227 of October 25, 2018.
23 Implementing Standard DIPRA No. 7 of 2019.
24 Presentation made by the Delegation of Canada during the sharing session at SCP/30.

Introduction of substantive patent examination

- OAPI: Introduction of substantive examination, publication of applications and administrative recourse[25]

In 2014, OAPI's legislation was amended so as to introduce the substantive examination, publication of patent applications and the possibility of recourse before OAPI. In accordance with the three-year implementation strategy for substantive examination, adopted by the Administrative Council in December 2018, OAPI has been working on three aspects. On the legal aspect, it makes sure that all the search and examination procedures are established. On the material aspect, it will establish the needed databases and access to them. As to the capacity building, generally, examiners will be trained at OAPI with the involvement of other partner institutions and CEIPI in Strasbourg.

Integration of supplementary information from third parties

45. Many offices have introduced mechanisms that allow them to integrate, in their patent grant process, supplementary information received from parties outside the office. Such supplementary information that is otherwise not available to patent examiners, but may be nevertheless relevant to the patentability, is considered useful to improve the validity and timeliness of actions and decisions as well as the completeness of prior art search and examination. One possible approach to this end is to get information from third parties (for example, through third party observations and opposition systems).

46. Information about third party observation systems, opposition systems and other administrative mechanisms in the national/regional patent system and their procedures under the applicable law is compiled on the dedicated WIPO website relating to this topic.[26] In addition, during the twenty-eighth session of the SCP, a sharing session on opposition and administrative revocation mechanisms was held. The Delegations of China, the Czech Republic, the Dominican Republic, France, Japan, Mexico, Spain and the United Kingdom presented their respective national mechanisms. All presentations are made available on the WIPO website, and the discussions during that sharing session are reflected in the Report of the twenty-eighth session of the SCP.[27] Therefore, in this document, information shared during the two sharing sessions in SCP/29 and SCP/30 relating to the quality of the patent grant process within IP offices is presented below.

- Opposition system in the National Institute of Industrial Property (INAPI) in Chile[28]

Law No. 19.039 on Industrial Property (LPI) establishes opposition proceedings.[29] Any interested party may file an opposition within a period of 45 days from the date of publication of the application extract in the Official Journal. In opposition proceedings, parties shall appear represented by an authorized lawyer, in accordance with the provisions of Law No. 18.120 concerning appearance in court. Opposition cases shall be brought before the Director of INAPI in accordance with the formalities laid down in the LPI.

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25 Statement made by the Representative of OAPI during the sharing session at SCP/30.

26 https://www.wipo.int/patents/en/topics/opposition_systems.html.

27 Those presentations and the Report are available at: https://www.wipo.int/meetings/en/details.jsp?meeting_id=46439.

28 Presentation made by the Delegation of Chile during the sharing session at SCP/29.

29 LPI, Title I "Preliminary provisions", paragraph 2 "General procedures for opposition and registration", Articles 4 to 17bis B.

The grounds for filing an opposition are: non-compliance with the patentability requirements, exclusions from patentability, non-patentable subject matter and non-compliance with the sufficiency of disclosure requirement. The filing of the opposition is not subject to the payment of a fee.

Where opposition proceedings entail disputes over relevant substantive matters, evidence shall be submitted within a period of 45 days. All means of evidence and those indicated in the Code of Civil Procedure, excluding testimony, shall be available for the opposition procedure. The period for receiving evidence may be extended by up to 30 days in special cases. Accompanying documents shall be submitted in Spanish or duly translated, should the Institute so requires.

If an opposition is filed, notification of opposition to an application for registration shall be made by sending a registered letter to the address given by the applicant in the file. Notification shall be deemed to have been made three days after the letter has been mailed and shall consist in sending a full copy of the opposition and the interlocutory judgement. The applicant shall have 45 days to respond.

The presentation of evidence shall be followed by a patentability examination (prior art search and assessment of the patentability). An examination report shall be notified to the applicant and the opponent for observation. The ruling shall be accompanied by a statement of reasons and shall conform to the provisions of Article 170 of the Code of Civil Procedure, as appropriate. The basic requirement is that rulings must contain the precise designation of the parties, the declaration of the claimant's petition or actions, the exceptions alleged by the respondent and the considerations of fact and law on which the ruling is based, together with the decision on the disputed matter.

Within 15 days from the notification, INAPI may correct errors of fact. Appeals against the decision of INAPI's ruling on the opposition shall be lodged within a period of 15 days from the time of notification of the decision and shall be heard by the Industrial Property Tribunal specializing in the matter. An appeal in cassation on the merits may be lodged with the Supreme Court against final rulings handed down in the second instance by the Industrial Property Tribunal.

In 2017, INAPI received 3,475 patent applications, while 299 oppositions were filed. The annual opposition rate in 2017 was 8%, compared to that around 11 to 14% in 2013 to 2015. Around half of the opposition decisions made in 2017 was in favor of opponents.

− Third party observation and oppositions in Germany[30]

It is possible to file a post-grant opposition at the German Patent and Trademark Office (DMPA). Up to nine months after the publication of a grant of a patent, any third party may submit a written opposition to the grant of a patent, stating the reasons (Section 59 of the German Patent Act). One of the divisions of DPMA is responsible for handling opposition proceedings. The panel consists of three persons: a chairman of the Division, a rapporteur and an assessor. In the case of several oppositions against the same patent, only one procedure with the participation of all parties takes place. During the period from 2013 to 2017, about 75,000 new patents had been granted by DPMA. Of those, nearly 1,800 patents had been challenged in opposition proceedings between 2014 and 2018, of which about half had been maintained as granted or in limited form. Thus, even after the review in opposition proceedings, more than 98 percent of the patents granted by DPMA remained valid.

30 Statement made by the Delegation of Germany during the sharing session at SCP/30.

In addition, a third party may, at any time during the examination procedure, file a relevant prior art known to him concerning the subject matter of the application, and thus influence the examination procedure as laid out in Section 43(3), second sentence, of the German Patent Act. The third party will not become a party to the proceedings through submissions of the prior art.

− Third party observations and post-grant re-examination before the Intellectual Property Office of Singapore (IPOS)[31]

On August 5, 2019, the Singaporean Parliament passed the Intellectual Property (Dispute Resolutions) Bill.[32] Among others, the Bill formalized the third party observation process and introduced a new, binding re-examination process (*ex parte*) that is available post-grant. Those proceedings are aimed at providing cost effective options for third parties to challenge patents and applications in an effort to ensure that only patentable inventions enjoyed patent protection. New Section 32 of the Patents Act provides the third party observations, and new Section 38A relates to the *ex parte* re-examination procedure.

According to new Section 38A, any person may, at any time after a patent is granted, file a request for the Registrar to conduct a re-examination of a patent. In essence, the grounds for requesting a re-examination are: (i) the claimed invention is not a patentable invention; (ii) the specification does not comply with the sufficiency of disclosure; (iii) the specification contains new matters; or (iv) another patent for the same invention having the same priority date and filed by the same party (or successor in title) exists. A request for re-examination shall be accompanied by the prescribed fee, reasons to substantiate the ground, and any relevant supporting document. Upon re-examination, if the examiner considered that the submitted grounds or any other grounds supported by the submitted document is made out, the examiner must give the patentee a written opinion to that effect. The patentee must respond to the written opinion within the prescribed period. The examiner then prepare a re-examination report, which will be sent to the patentee. Where the re-examination report contains unresolved objection(s), the Registrar must make an order revoking the patent, which may be an order for the unconditional revocation of the patent or an order that the patent should be revoked, unless, within a specified time, the specification is duly amended to the satisfaction of the Registrar.

Integration of supplementary information from other patent offices

47. Supplementary information that is otherwise not available to patent examiners, but may be nevertheless relevant to the patentability, may be possessed by other patent offices. These information may include results of search and examination work by other offices on the corresponding applications and any other information associated with the corresponding applications. To improve the validity and timeliness of actions and decisions as well as the completeness of prior art search and examination, some offices have introduced mechanisms to integrate this type of information in their patent grant process.

48. Information about these mechanisms and arrangements, often called work sharing, have been compiled on the dedicated WIPO webpage.[33] During the previous SCP sessions, sharing sessions dedicated to this topic have been held at:

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31 Statement made by the Delegation of Singapore during the sharing session at SCP/30 and the Comments received from Singapore in response to Note C.8893 dated July 17, 2019.

32 Intellectual Property (Dispute Resolution) Bill No: 17/2019.

33 https://www.wipo.int/patents/en/topics/worksharing/.

(i) Sharing session regarding experiences on international work sharing and collaboration (SCP/21): The Delegations of Australia, China, Ecuador, Germany, Ireland, Japan, Kenya, the Republic of Korea, Spain, the United Kingdom and the United States of America made interventions during the sharing session.

(ii) Half-day information exchange session on cooperation between patent offices in search and examination (SCP/27): The Delegations of Australia, China, the Dominican Republic, El Salvador and Guatemala, Germany, Ireland, Japan, Spain, the United Kingdom and the United States of America presented their respective national mechanisms and arrangements.

(iii) Sharing of experiences by Member States on cooperation between patent offices in search and examination, including sharing of information concerning the corresponding foreign applications and grants (SCP/28): The Delegations of the Czech Republic, the Dominican Republic, Ireland, Japan, Spain, Switzerland, Trinidad and Tobago, the United Kingdom and the United States of America presented their respective national experiences.

All presentations are made available on the WIPO website, and the discussions during those sharing sessions are reflected in the Reports of the respective SCP sessions.[34]

49. The relevant mechanisms and arrangements that have been identified and/or presented in the previous SCP activities are: (i) WIPO CASE; (ii) Patent Prosecution Highway (PPH); (iii) ASEAN Patent Examination Co-operation Program (ASPEC); (iv) European Patent Office Utilization Implementation Project (UIP); (v) International Cooperation for Examination (ICE) service of WIPO; (vi) Support System for the Search of Patent Applications for Central American Countries and the Dominican Republic (CADOPAT); (vii) collaborative search projects; and (viii) other bilateral cooperation between some offices. In this document, information shared during the two sharing sessions at the twenty-ninth and thirtieth sessions relating to the quality of the patent grant process within IP offices is presented below.

- Use of CADOPAT[35] in the National Center of Registries (CNR) in El Salvador[36]

There are two substantive examiners (*examinadores de fondo de planta*) in the CNR and a pool of examiners outside the CNR. The substantive examiners conduct: (i) substantive examination; (ii) a second examination in case where observation or administrative appeal is received because of denial (approximately 40% of the cases have a second examination); and (iii) assessment for the incorporation of examination results coming from CADOPAT or from other offices. On average, in the last two years, the burden of substantive examination has been distributed as 65% by the external examiners, 5% by the substantive examiners and 30% by the support of CADOPAT.

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34 The presentations and the Reports of the relevant session are available as follows:
(i) SCP/21: https://www.wipo.int/meetings/en/details.jsp?meeting_id=32102;
(ii) SCP/27: https://www.wipo.int/meetings/en/details.jsp?meeting_id=42307;
(iii) SCP/28: https://www.wipo.int/meetings/en/details.jsp?meeting_id=46439.

35 Through the Support System for the Search of Patent Applications for Central American Countries and the Dominican Republic (CADOPAT), the Mexican Institute of Industrial Property (IMPI) assists search and substantive examination of patent applications mainly filed in the Latin America and Caribbean region. For detailed information about CADOPAT, see the presentation by the Delegation of Mexico at the twenty-fourth session of the SCP at: https://www.wipo.int/meetings/en/details.jsp?meeting_id=39804&la=EN.

36 Presentation by the Delegation of El Salvador during the sharing session at SCP/29.

Within the framework of CADOPAT, if a patent application filed with the CNR has Mexican priority, the examiner searches an examination report in, and download it from, the CADOPAT platform. If it does not have Mexican priority, the CNR initiates the process so that IMPI will conduct the examination. Due to the workload placed on the substantive examiners of CNR, CADOPAT's support has enabled the CNR to meet its response time, quality and customer satisfaction goals. In addition, CNR shares examination work with INAPI, INPI, ONAPI and INDECOPI, among others.

- Collaborative search in the USPTO[37]

The USPTO participates in the PCT Collaborative Search and Examination pilot with the IP5 Offices.[38] In addition, it carries out a national collaborative search pilot with the JPO and the Korean Intellectual Property Office (KIPO).[39] The collaborative search pilot allows the examiners in each office to benefit from the possible different search databases available in the other office and the different language expertise of the examiner in the partner office. The initial results from the first phase of the program was promising. An increase in the allowance rate and a lower appeal rate, compared with the applications going through the normal prosecution process, is observed. In the second phase of that pilot, which takes place from November 1, 2017 to October 31, 2020, some changes are made to further streamline the process of communication between the examiners and applicants. The USPTO is also evaluating ways to expand the pilot, including working with other IP offices.

- Patent Prosecution Highway (PPH)

In general, the PPH is a scheme enabling an applicant whose claims have been determined patentable/allowable in the Office of First Filing (OFF) or Earlier Examination (OEE) to benefit from the accelerated examination of the corresponding application in another office that agreed to participate in the scheme.

The Intellectual Property Office of the United Kingdom (UKIPO) and the Brazilian National Institute of Industrial Property (INPI) have concluded an agreement to launch a PPH pilot, which has been extended to run until July 31, 2020. The Delegation of the United Kingdom observed that the benefits of the PPH are: (i) it allows a quicker, easier and more efficient examination process; (ii) applicants gain accelerated processing; and (iii) it is easy to set up with agreements with partner offices; and (iv) it provides a good opportunity to work together with other offices.[40] The Delegation of Brazil noted that the PPH project had reduced the amount of examination work, had contributed to the acceleration of examination, and had improved the examination process.[41] PPH agreements can be tailored to specific needs and requirements of each office, such as limiting the field of technology covered and the maximum number of requests that can be accepted per year and/or per applicant. Brazil INPI has concluded PPH pilot agreements with seven offices, the main difference being the technology covered by the agreements. The PPH agreement between UKIPO and INPI Brazil covers applications in the fields of

37 Statement made by the Delegation of the United States of America during the sharing session at SCP/30.
38 For the latest status of the PCT Collaborative Search, reference is made to the draft report of the twelfth session of the PCT Working Group (document PCT/WG/12/25 Prov.), available at: https://www.wipo.int/meetings/en/details.jsp?meeting_id=50410.
39 Further details about the USPTO-JPO Collaborative Search Pilot Program and USPTO-KIPO Collaborative Search Pilot Program are available at: https://www.wipo.int/patents/en/topics/worksharing/collaboration.html.
40 Presentation by the Delegation of the United Kingdom during the sharing session at SCP/30.
41 Statement made by the Delegation of Brazil during the sharing session at SCP/30.

biotechnology, electrical engineering and information technology, whereas it excludes the pharmaceutical field.[42]

The EPO concluded PPH agreements with the offices of IP5, Australia, Brazil, Canada, Colombia, Israel, Malaysia, Mexico, Singapore, the Philippines, the Russian Federation and the Eurasian Patent Office (EAPO).[43] At the end of the third quarter of 2018, the cumulative number of incoming PPH requests are: 5477 from Japan; 4187 from the United States of America; 679 from China; 392 from the Republic of Korea; 132 from Canada; and 90 from Israel. The number of requests from six partner offices are either one digit or zero. The cumulative outgoing requests from the EPO work are: 10,016 to the United States of America; 3,861 to Japan; 2,576 to China; 1,519 to the Republic of Korea; 456 to Canada; 304 to Israel; 258 to Australia 258; and 176 to Mexico. As regards the breakdown of the fields of technology of the applications under the PPH request, ICT, mobility and mechanics, healthcare, biotech and chemistry share approximately the same ratio, i.e. 1/3 each.

In CIPO, 9% of applicants request accelerated examination through the PPH program.[44] Among the PPH applications, the first action allowance rate is 36% (compared with 4% in the cases of regular non-PPH applications). Although the claims contained in the Canadian PPH applications substantially corresponded to those allowable in another PPH partner patent office, non-conformity with the Canadian law is found in 62% of the PPH applications at the first action. Frequent defects noted in the first actions are clarity of claims (58.8%), minor informality (47.4%) and obviousness (18.8%), specification defects (13.1%) and lack of support and lack of novelty (12.0% each).

Training of staff

50. In relation to the optimization of human resources, various types of training activities have been conducted by patent offices for their staff. In particular, various training modalities relating to prior art search and examination have been reported to the SCP. It should be noted that for discussions in the previous SCP sessions in the context of the quality of patents, some Member States already submitted information about training activities in their respective patent office, which is documented in the earlier SCP documents.[45] In this document, therefore, information shared during the two sharing sessions at the twenty-ninth and thirtieth sessions relating to the quality of the patent grant process within IP offices is presented below.

− Spanish Patent and Trademark Office (OEPM)[46]

OEPM establishes an annual training plan for its staff each year. The training needs identified by the Heads of each area are forwarded to the Human Resource sector, which prepare an annual training plan to be approved by the Departments and the Union. It is implemented by the Human Resource sector, which draw up the annual Training Report. The efficiency of the training is evaluated by the Heads of the attendees of the training. The Quality Groups analyze the evaluation during the annual review of the Quality Management System in order to improve future trainings.

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42 *Idem*. It is reported that INPI Brazil published, on October 22, 2019, a new Resolution, which will enter into force on December 1, 2019. It merges the rules and procedures related to the different requirements under the existing PPH agreements (see https://www.lexology.com/library/detail.aspx?g=758767e2-ed31-4d2b-ba96-cef03966c504).

43 Presentation made by the Representative of the EPO during the sharing session at SCP/29.

44 Presentation by the delegation of Canada during the sharing session at SCP/30.

45 See the comments submitted by Denmark in document SCP/17/INF/2, by Portugal in document SCP/18/INF/2 and by Brazil in document SCP/18/INF/2 Add.

46 Presentation by the Delegation of Spain during the sharing session at SCP/30.

− Examiner trainings in the Intellectual Property Office of Singapore (IPOS)[47]

IPOS has in place a robust system to train its examiners, who are given instructions and mentorship to develop their capabilities. In order to maintain knowledge in the technology domain and acquire the state-of-the-art technology, it is supplemented with frequent exchanges and sharing with industrial experts. IP Academy of IPOS covers various topics beyond patent examination, such as IP enforcement, valuation and commercialization.

− Capacity building of patent examiners in the Korean Intellectual Property Office (KIPO)[48]

KIPO provides capacity building activities for patent examiners under the Graduate School Program and the International Intellectual Property Training Institute (IIPTI) Program. For KIPO officials, three universities host special graduate programs on intellectual property law. The IIPTI, a sub-organization of KIPO, is a professional institute that provides education on intellectual property in Korea. Since its establishment in 1987, the Institute has offered professional training programs for national and international trainees, including patent examiners. Legal training for examiners include mandatory courses at the various stages of career development: a new examiner training after the recruitment, an examiner training (after four years), a senior examiner training (after seven years) and a trial examiner training (after 10 years). In addition, law courses and practical examination courses are provided. IIPTI also offers technology training to catch up with the latest technology trends and coordinates field trips to enhance in-class learning effects. In 2018, 66 such courses were organized. E-leaning is also provided by the KIPO Academy.

− Recruitment and training of examiners in the German Patent and Trademark Office (DPMA)[49]

Quality assurance in DPMA begins already with the recruitment of patent examiners. Since autumn 2018, 113 new examiners have been recruited by DPMA, which continues the recruitment in 2019. The German Patents Act specifies that, as a rule, only those who hold a University degree in engineering or science and had at least five years of work experience in one of those fields should be recruited as examiners. Such a requirement is considered to ensure that the examiners could contribute to the examination work with their specific expertise from the very beginning of their careers. The newly recruited examiners receive trainings when they start their work at DPMA. Over a period of three years in total, the participants would be required to obtain essential and profound legal knowledge and learn how to use the IT systems of DPMA. In addition, DPMA trains newly recruited staff in other intellectual property areas, such as trademark or design law, to convey the comprehensive understanding of intellectual property. Such trainings are conducted by judges of the Federal Patent Court and experienced staff of DPMA. At the same time, the daily work of the newly hired examiners is individually supervised by experienced mentors over a period of 18 months. The mentors are available to answer any type of questions new examiners could have.

DPMA also offers optional qualification opportunities for examiners in their further careers. For several years, DPMA has been inviting external lecturers from industry and universities to a “Day of Technology”. In such an event held in May 2019, for example, experts from Toyota, Technical University of Berlin and Friedrich-Alexander-University Erlangen-Nuremberg gave lectures to DPMA examiners on AI, smart homes and

47 Statement made by the Delegation of Singapore during the sharing session at SCP/30.
48 Presentation by the Delegation of the Republic of Korea during the sharing session at SCP/30.
49 Statement made by the Delegation of Germany during the sharing session at SCP/30.

autonomous driving. Further, examiners can also attend numerous language courses in Japanese and Chinese. The exchange of examiners with other patent offices allows the examiners to gain further qualifications, which are useful in patent granting process, in particular, in conducting searches.

- Industrial Property Training Institute under the Czech IP Office[50]

In 1963, the Czech IP Office established its own IP-related educational institution, called the "Industrial Property Training Institute". The institute provides a two-year distance learning program which is designed for professionals in the field of industrial property assistants, patent attorneys, commercial lawyers active in the IP domain, entrepreneurs, research and development experts, students, and the wider public. New employees of the Czech IP Office, including patent examiners, should complete that program. Tutors are mainly employees of the Office or IP experts from other governmental bodies or the private sector. Participants are trained not only about the international, regional and national protection procedures and enforcement of IP rights, but also about the usage of various IP databases, formulation of patent search queries, classification of inventions, IP strategies, IP evaluation and licensing. In the field of patent law, a special attention is drawn to formulation of claims in the technical fields, such as chemical, electric, pharmaceutical and computer-implemented inventions. This study is concluded by the defense of a final IP specialized thesis and by passing the final oral examination on the main subjects. 30 to 45 participants apply for the distance-learning program every year. Patent examiners regularly take part in trainings on the patent grant process with a special focus on search and examination organized by the European Patent Academy for the offices of the EPC Contracting States. They also participate in training workshops or conferences organized by the EPO, WIPO, or other IP offices, dedicated to various patent search and examination elements. In addition, the Office also run a specialized English language course focused on the IP terminology.

- UKIPO-CNIPA patent examiner exchange[51]

Under the framework of the bilateral agreement between UKIPO and the China National Intellectual Property Administration (CNIPA), a patent examiner exchange is held annually. It includes case study discussions in a specific technical field and a seminar focusing on new developments about the policy, law and guidelines. The case study sessions revealed that different approaches taken by each office usually gave the same result. Examiners in both offices mostly use the same search strategy. With respect to the inventive step analysis, there is a potential for occasionally giving different results. It was also found that in general, examiners in both offices faced the same difficulties and challenges.

UKIPO considers these exchanges important, since they develop better understanding of differences in the practice of the two offices. They also build competency to better use search and examination reports from another office, and reinforce confidence among the examiners. Similarly, CNIPA observes that deep case study discussions about differences and commonalities between the examination of two offices have improved the understanding of each office's approach to examination, which has boosted mutual confidence and trust.

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50 Statement made by the Delegation of the Czech Republic during the sharing session at SCP/30.

51 Presentation by the Delegation of the United Kingdom and statement made by the Delegation of China during the sharing session at SCP/30.

- Patent examiner training in the National Institute of Industrial Property (INPI) of France[52]

In INPI, each patent examiner has to undergo eight weeks diploma study at the Center for International Intellectual Property Studies (CEIPI) of the University of Strasbourg. In addition, examiners can take EPO courses in various formats, including in e-learning format, and language courses. Following the legislative changes relating to the opposition system and examination of inventive step criterion, the number of patent examiners has increased over the previous years. INPI is planning to organize trainings relating to the opposition system with the assistance of the EPO and other institutions. Furthermore, internal guidelines will be reviewed, and e-learning modules will be created internally, in order to help capacity building of examiners.

Tools and infrastructures

51. As already mentioned earlier, IT tools and platforms that assist prior art search and examination are reported by some offices.[53] They not only provide prior art search functionality but also allow access to search and examination reports and legal status information, enable file inspection or international sharing of patent information and data. Within the SCP, information about platforms and tools used by patent offices for sharing information relating to search and examination was collected through the Questionnaire. Since the responses to that Questionnaire are summarized in the earlier SCP document,[54] they are not reproduced in this document. In addition, some earlier submissions to the SCP also provide detailed information about such tools and platforms.[55]

- Digital processing in DPMA[56]

During patent examination, the examiners of DPMA work exclusively with an electronic file. Implementation of electronic workflow that controls the process enables a uniform and orderly procedure. The electronic file also accelerates the examination procedure and contributes to a high level of quality.

52. In many actions involved in the patent grant process, what has been done in the paper form and transmitted physically is now replaced by the digital form and digital transmission. Digitization of patent data has brought opportunities for patent offices to retrieve, recompile and re-process such data for their specific needs and purposes.

- Access to Relevant Prior Art Initiative in the USPTO[57]

The USPTO's internal Prior Art Initiative is aimed at leveraging electronic resources to retrieve information (for example, prior art search reports and other information) from relevant sources, including related U.S. applications, counterpart foreign and PCT applications. The Initiative targets to automatically import such information into the file wrapper of a U.S. patent application under examination at the earliest point in time. It is expected that this would potentially reduce applicant's burden under the duty of disclosure in the US law.

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52 Statement made by the Delegation of France during the sharing session at SCP/30.
53 See paragraphs 39 and 40 with respect to IMPI and OMPIC, respectively.
54 See document SCP/27/5 Rev. paragraphs 17 and 18 and the Annex.
55 For example, see the submission by Brazil reproduced in document SCP/18/INF/2 Add.
56 Statement made by the Delegation of Germany during the sharing session at SCP/30.
57 Presentation by the Delegation of the United States of America during the sharing session at SCP/29 and statement made by that Delegation during the sharing session at SCP/30.

At the project research phase, various data sources, such as Global Dossier, Common Citation Document, Patentscope, USPTO internal IT systems etc. were evaluated, and more than 400 application cases were reviewed to consider effects of importing prior art information on prosecution and on examination. The first phase of the project began in November 2018 with a targeted release to certain Art Units. The initial phase has been expanded to eight additional art units which include at least one art unit from each of their Technology Centers. During the first phase, importation of citations is limited from immediate U.S. patent applications to certain pending continuing U.S. applications for consideration by the examiner. A list of imported citations (Master Reference List (MRL)) will be printed on the face of any patent that issues from the continuing application with a new indicator.

Examiners must consider all documents imported from the parent unless they were not compliant with U.S. requirements in the parent application (e.g. no copy filed). Information in the MRL will be considered to the same extent as information submitted by the applicant on an Information Disclosure Statement. When applications are entered into the Relevant Prior Art Initiative, the relevant applicants are informed accordingly and a notice of imported citation is sent to the applicants. As a next step, the USPTO plans to expand the rollout to all examiners and import prior art citations from additional sources, such as counterpart foreign applications and PCT applications.

53. The development of digital technologies and deployment of electronic services have brought a new approach in handling patent matters in patent offices. Patent offices have already started to use artificial intelligence (AI) technology to facilitate office administration and delivery of their service, including in the patent grant process. Rospatent, for example, uses AI in order to carry out the patent examination and automatic translation of applications.[58] More examples about the use of AI in the patent office procedures are found in document SCP/30/5.

54. In general, guidelines and manuals indicate how the relevant law is applied in the patent office practice. When new technology emerges, it often raises questions about practical application of the patentability criteria to inventions from such technical field. In some offices, measures have been taken to clarify those questions.

− Initiative of the JPO on enhancing the quality of patent examination for emerging technology[59]

The JPO has taken several measures to address quality of examination in the emerging technologies, in particular, AI and Internet-of-Things (IoT). First, new case examples in the fields of AI and IoT have been included in the Patent Examination Guidelines and Handbook in 2016, 2018 and 2019. 33 case examples from various industry fields, which are easy to understand even for non-AI experts, are prepared to clarify the examination standard in these technologies. The case examples address the issues such as the disclosure requirement and inventive step analyses of inventions relating to AI and IoT.[60] Second, the JPO created a cross-sectoral examination team for IoT inventions in order to ensure the reliable examination in all fields of technology. Third, the JPO created a new patent classification on IoT, i.e., ZIT. Since the IoT technology may be relevant to a number of different industry sectors, such a cross-sectoral classification may facilitate access to patent information relating to IoT.

58 Statement made by the Delegation of the Russian Federation during the sharing session at SCP/30.
59 Presented by the Delegation of Japan at SCP/30 during the sharing session.
60 Annex A of the Examination Handbook for Patent and Utility Model.

Quality management systems

55. Examples of the quality management systems used in some patent offices are introduced in the following paragraphs. It should be noted that the quality management systems of some patent offices are already described in the earlier SCP documents. Document SCP/17/INF/2 describes the quality management systems in the offices of Denmark and Germany, and document SCP/18/INF/2 provides relevant information relating to the offices in France, Portugal, the Russian Federation and Spain. The quality management system in the USPTO is described in document SCP/17/10. In this document, information shared during the two sharing sessions at the twenty-ninth and thirtieth sessions relating to the quality of the patent grant process within IP offices is presented below.

- Quality management system in the Canadian Intellectual Property Office (CIPO)[61]

From the viewpoint of the institutional structure, CIPO's multi-disciplinary "Quality Group" resides in the Patent Services and Standards Division under the Patent Branch. The Quality Group reports monthly to the Patent Management Committee, which provides the executive oversight of CIPO's quality program. The Quality Group works closely with nearly every aspect of CIPO's work, including administration, examination, patent classification and training.

To deliver high quality patent rights, the Patent Branch maintains an effective quality management system that is designed to deliver continuous quality. To ensure patent quality, CIPO measures the quality of its products (examination reports, office letters, search records, quality assurance/quality control reports), processes (timeliness, inventories, internal and external audits) and services (surveys and feedback).

Quality control occurs before the work products leave the office. Its aim is to identify and correct defects before the product is delivered to clients. On the other hand, quality assurance occurs after the product has left the office. Its focus is to identify the trend in non-conformities with the norms and standards, and to try to take corrective actions to prevent future occurrences of mistakes. For the quality control of national and international products, supervisors control certain percentages of work products according to a predetermined list of questions. The reports of the results are utilized for continuous improvement of quality, such as implementation of additional trainings, improvement of examination tools, update of quality control questions and investigation into any inconsistencies. In respect of patent examination reports, CIPO carries out quality control of approximately 25% of the reports that go out of the office. The level of quality control depends on the volume, as even up to 100% is possible in certain areas of technology with low volume.

CIPO's quality management is certified by ISO 9001:2015, which defines the standard criteria for quality management system based on principles of consistency and meeting customer requirements and continuous enhancement of quality. As part of maintaining the ISO certification, CIPO undergoes regular internal and external audits. Maintaining this internationally recognized standard sends an important message to CIPO's clients and stakeholders of its commitment to the quality of the Canadian patent system.

CIPO documented over 180 processes across examination and administrative divisions. For example, one documented process would be the process to examine a voluntary amendment received on an application. The documentation for each process involves

[61] Presented by the Delegation of Canada during the sharing session at SCP/30.

detailed process flow charts and work instructions. Although these process flow charts are not an ISO requirement, CIPO experienced that they help ensure employees' understanding of what actions are expected at every step in the process. Timely grant of patents is one of the quality criteria. Performance targets have been set for the periods between a request for examination and a first action, the period required for the subsequent actions and for the grant of a patent.

A comprehensive client satisfaction survey is conducted every three years to measure client satisfaction and set a baseline to assess progress in the quality outputs. An online feedback mechanism, a Patent Quality Summit and Patent Quality Conversation webinars help CIPO to engage directly with stakeholders. In response to the client feedback, a Patent Examination Interview Service has been established.

− Quality management in the Spanish Patent and Trademark Office (OEPM)[62]

In the OEPM, search reports, written opinions and examination reports are produced with respect to national applications and PCT international applications under its capacity as the International Search Authority (ISA) and the International Preliminary Examining Authority (IPEA). The control of the quality of the products at the Patent Department is carried out prior to the dispatch of these products and after the dispatch. As regards the control before the dispatch, all reports are submitted to the Heads of Technical Sections, who have the possibility of modifying them or return them to the examiner for reprocessing. An IT system called ALFA is used not only for quality review but also for monitoring the timely issue of the reports with its alert system. In addition, Dataware Reports assist Heads of Technical Sections to control backlog. The Administrative Section and the Documentation Section are also involved in the control prior to the dispatch in terms of formality and documentation checks, respectively.

For the control after the dispatch, a review of representative samples of the reports through the checklist is conducted. The Heads of Technical Sections evaluate every aspect in the checklist, the results are analyzed by the Quality Management Groups, and improvement actions are taken. Feedbacks from users, both through the official and informal channels, are also analyzed to formulate the improvement actions. It may be extracted from complaints as well as meetings and joint activities with users' associations, universities, technology transfer offices, and companies. In addition, OEPM has a Service Charter with a commitment of responding 80% of complaints within 15 working days, and within 19 days for the rest.

− Quality management in the UKIPO[63]

UKIPO employs 95 senior examiners, 76 examiners and 150 associate (trainee) examiners, divided into 23 Examination Groups.[64] The relatively high number of junior examiners reflects the considerable recruitment over recent years, which in turn requires continuous focus on quality. UKIPO has deployed different mechanisms to ensure that the processes lead to high quality patent rights with a high presumption of validity. It considers that, in addition to the quality of the patent itself and the quality of the internal patent grant process within IP offices, the quality of the customer service/journey is of equal importance. In that light, UKIPO plans to do more work in developing new ways of monitoring quality of its customer service.

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62 Presented by the Delegation of Spain during the sharing session at SCP/30.

63 Presentations made by the Delegation of the United Kingdom during the sharing sessions at SCP/29 and SCP/30.

64 Data from August 2018.

The IDQA process is the UKIPO's quality assurance process. It provides basic metrics for a quality of patents, with a target to ensure that 90% of the actions are fit for purpose. UKIPO randomly samples about 1.5% of case actions and have defined criterion against which to assess the quality of those actions. The IDQA process also applies to the formalities administrative actions.

Before a case can be sent to grants, it has to be reviewed by another examiner. Previously, senior examiners could select a case to grant selectively. Although the second-pair-of-eyes process has been rolled out across the Examination Groups, it is still under development. While the results so far are encouraging, it is potentially very resource intensive.

The IDQA assurance process requires determining whether the correct procedures were followed and whether legal requirements have been met. Reviews are carried out on a statistically significant portion of the work. The process, therefore, enables UKIPO to monitor the performance of the office as a whole, and determine what proportion of patents meet legal requirements. Furthermore, the quality management system is linked to other processes within the office. If a recurring issue is identified, this can be fed into training or guidance to prevent further issues arising. The criteria for evaluating an examiner action is a reflection of the guidance which is provided to the examiners in the work manuals and training courses. The examiners will, therefore, know what is expected of them when they perform an action at any stage of the process. For prior art search, cases can be assessed based on, for example, search strategy, classification areas and citations found. For examination, consideration could be given to whether the correct objections have been made or maintained, timeliness and whether adequate use of reports from other offices have been made etc. Once the cases are reviewed by an assessment panel, a report highlighting any recommendations to the Examination Divisions is issued.

Outside of the formal IDQA process, there are a number of other ways in which UKIPO works to ensure high quality of its patent granting process. Trainee examiners have all of their work revised by a senior examiner before it can be issued to customers. Heads of the Examining Groups will also monitor the quality of the work done by their examiners, and will use that to inform performance discussions with their team members. Quality Circles are informal meetings within Examining Groups, in which free discussion of issues and approaches between examiners is encouraged. UKIPO also run internal Practice Forum to search new aspects of examination practice so that it can continuously improve and change processes. To keep examiners up-to-date in their knowledge of law, practice and technology is crucial to ensuring high quality patent grants. Consequently, they undergo significant amounts of training both when they first join the office and throughout their career.

Outcomes of the quality assessment process provide opportunities for rectifying issues and for continuous improvement by identifying (i) any trends in the issue; (ii) training needs; and (iii) best practice. This will lead to improved service for the UKIPO customers. UKIPO also work constantly with other IP offices to share and learn best practices. The patents pre-grant process in UKIPO is ISO 9001:2015 certified. In Examination Groups, for example, LEAN has been a useful tool in the effective management of workload during peaks in demand in particular subject areas.

UKIPO has a dedicated IPO customer feedback unit. It also meets regularly with representatives of stakeholder associations at the UKIPO's quarterly Patent Process Working Group. In view of developing a new quality metric which takes customer perception into account, the UKIPO is working on the introduction of a new method of

measuring customer satisfaction for its quality management. The current method is a telephone survey with a few questions, carried out twice a year. Responses are collected from 200 customers per year. However, the telephone survey is resource intensive, and is limited to high-level questions. It was also observed that while the Office's performance consistently exceed the target, the information gathered is limited in its ability to inform areas for improvement.

A proposed new method is a digital survey emailed to all customers on a quarterly basis. The link to the survey page is also embedded in correspondences, email signatures and digital services. It also includes detailed service-specific questions. The new method, however, introduces a risk that responses will be more candid and critical, because the element of politeness in person-to-person telephone interview has been removed. A pilot survey was sent to 6,596 email addresses in March 2019. In total, 541 responses were received, which could mean that five times more responses than the telephone survey could be collected.

The overall satisfaction score achieved in the digital survey was 8.52 (out of 10), which was slightly lower than the score, 8.75, achieved in the telephone survey. The difference in the scores may be due to reduced interviewer bias, more timely engagement and a wider target population of the digital survey. The digital survey also allowed the UKIPO to identify the areas of its service with lower satisfaction scores and why. This helps the Office to focus its improvement efforts on those problematic areas. The pilot also revealed that there are certain number of customers started but did not complete the survey or opted out, and 5,800 ignored the email invitation. How to improve the customers' engagement is an issue identified for further improvement of the digital survey.

− Quality management system of the Swedish Patent and Registration Office (PRV)[65]

Since 2007, the PRV has had an ISO 9001 certification on quality management. Its work on quality includes steps such as peer controls of first written opinions and annual quality checks. PRV also has a number of patent experts who follows the new case law from both the Swedish Patent and Market Courts and the European Patent Office (EPO) in their respective technical and legal fields. Those patent experts, among other things, check all potential rejections of applications as well as all intensions to grant. Further, a new role called "search expert" has been created in PRV. Those experts evaluate new databases and examine new search tools to establish a best practice. Since best practices could be different depending on the technical field, there are two search experts at each of six technical units. That system has been well received by examiners, who have shown increased interest in trying new search strategies.

− Quality assessment and control in patent search and examination at the Intellectual Property Office of Singapore (IPOS)[66]

The quality management setup of IPOS is an iterative model with four steps, and typically, it starts with the policy setting as well as the setting of quality objectives by the IPOS management. This in turn guides the training of staff, the organization of the staff to perform the work and accruing of resources. The resources are used in IPOS's work, including the processing of patent applications, which has inputs from users of the patent system, and outputs in the form of reports and granted patents. The important aspect in the process is the procedures for checking the quality of IPOS work in order to ensure that they meet the policy and quality objectives. These checking processes generate data on quality, which can be used for managing quality. In case any adjustment is necessary, the

65 Statement made by the Delegation of Sweden during the sharing session at SCP/29.
66 Presentation by the Delegation of Singapore during the sharing session at SCP/29.

quality cycle starts again. The users of the patent system interact with IPOS in two ways: (i) providing customer feedback on IPOS work product; and (ii) involved in the quality objective setting process through consultations. With those efforts, IPOS has achieved recertification to the ISO 9001:2015 standard.

The patenting process in IPOS can be broadly split into three stages: the formality examination stage; substantive search and examination of the application; and notice of decision. At the formality examination and notice of decision stages, formalities checking procedures are put in place to ensure that all particulars relating to the patent application are as accurate as possible. In the search and examination stage, both a quality control process and a quality assurance process are set up. In all the three stages, processes for customer feedbacks on the quality of the IPOS work products and services are integrated.

In relation to search and examination reports, quality of the reports pertains to validity and reliability of the reports. In the case of examination, it is considered valid if there is a correct interpretation of the law by the examiner and a logical application of the law to arrive at a sound decision, which must be clearly communicated to the customer. Examination is reliable if it applies a consistent approach based on a transparent set of guidelines, and the considerations for arriving at the decision have been documented to show that the guidelines have been followed during the examination.

To that end, IPOS set up a quality control process, which consists of three sub-parts, namely, the search team discussion, internal documentation and quality check. In addition, a quality assurance process has been put in place. It primarily functions as an internal audit to determine whether or not the quality control process is in fact functioning as it should. To implement these processes, each Examination Division has a core Quality Group, which consists of a Division Leader and two or three supervisors. The Quality Groups implement the quality control process. Furthermore, a Quality Division was created recently to implement the quality assurance process. It focuses on quality aspects of the work across the Examination Divisions.

Regarding the quality control, the search team discussion is applied primarily in situations where there are no prior search results for a particular application. The team comprises of a main examiner, a buddy examiner and a supervisor. The main objective of the search team discussion is to develop a search strategy to be applied by the main examiner. During the search and examination process, in addition to a search report and a written opinion, the examiner prepares an internal documentation in the form of quality reporting. The internal documentation includes all important information pertaining to the application, including prosecution history of corresponding patent family members, key words and classification for search, search strings etc. It serves as a reference for the examiner’s subsequent actions, for supervisor’s control and for another examiner if the file is transferred. The last stage, quality check, is performed by the supervisor, and in case of non-conformity, the file is sent back to the examiner with his/her feedback.

As to the quality assurance process, it involves a random sampling of all work products of examiners. Sample reports are reviewed by quality assurance examiners who determine whether or not the quality objectives have actually been met. The data generated through the check is shared with the Examination Divisions on a quarterly basis for their improvement. The Quality Division also seeks feedback from examiners about any areas that lack guidance. Applicants can provide feedback to IPOS through a complaints procedure, a satisfaction survey (twice a year) and other direct engagements with IPOS.

The Examination Divisions use the information received from the Quality Division to assess their training needs, and to conduct the relevant training for the examiners. In addition, such information may allow them to determine whether any adjustments are needed to their quality checks during the quality control process. Furthermore, the Quality Division sends feedback to management on potential gaps in procedures identified through the quality assurance process. This would assist the management in considering whether any adjustments in policy or legislation are necessary.

- Quality management system in the JPO[67]

The JPO formulated Quality Policies as fundamental principles for the examination quality management of patent, design and trademark examinations. The Quality Policy on Patent Examination states that "Globally reliable patents of high quality are important for supporting smooth business expansion worldwide and promoting innovation".[68] Based on the Policy, the Quality Management Manual for Patent Examination (Quality Manual)[69] outlines the quality management system (QMS) implemented in the JPO, which has been revised and updated, as necessary. The Manual outlines the Plan-Do-Check-Act (PDCA) cycle for enhancing the quality of patent examination, describes various measures that are included in the PDCA cycle in all areas of patent examination, illustrates activities with external stakeholders to improve quality, and highlights international measures on examination quality. The JPO is working on the three pillars that involve various initiatives dealing with quality management of patent examination: (i) quality assurance; (ii) quality verification; and (iii) external evaluation on quality management.

In relation to the quality assurance, while patent examination is, in general, conducted by one examiner in charge, examiners are encouraged to consult with other examiners either in the same Examination Division or in another Examination Division. Through sharing of knowledge and expertise, it is expected that discrepancies among the examiners decisions would diminish and accuracy and timeliness of patent examination would improve. Each year, examiners must conduct the consultations in certain cases, for example, with respect to applications in the field of IoT. The quality check of examination reports prepared by examiners is conducted by the Director concerned. If there is any deficiency, the report is sent back to the examiner with the feedback from the Director.

As to the quality verification, after the quality check is done by Directors and before sending out the reports, a Quality Management Officer randomly selects some reports to control the quality (quality audit). The Quality Management Officer gives feedback to the Director of the respective Examination Division. The results of quality audit are thoroughly analyzed by the Quality Management Internal Committee and the Quality Management Office. To understand users' needs, the Quality Management Office conducts a user satisfaction survey on patent examination quality each year. Emails are sent to applicants and patent attorneys, and a high response rate of around 90% has been achieved. Questions related to the quality of the overall patent examination procedures as a whole as well as quality of the procedures on specific patent applications are covered by the survey. The Quality Management Office analyzes the survey results, and provides the feedback to the Examination Division, and takes initiatives to deal with the identified issues.

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67 Presentation by the Delegation of Japan during the sharing session at SCP/29.

68 The Policy includes six mission statements: (i) We grant robust, broad and valuable patents; (ii) We meet wide-ranging needs and expectations; (iii) We all dedicate ourselves to improving quality, cooperating with concerned persons and parties; (iv) We contribute to improving the quality of patent examination globally; (v) We continually improve operations; (vi) We raise the knowledge and capabilities of our staff. https://www.jpo.go.jp/e/introduction/hinshitu/shinsa/tokkyo/shinsa_policy.html.

69 https://www.jpo.go.jp/e/introduction/hinshitu/shinsa/tokkyo/document/tokkyo_manual/manual.pdf.

Concerning the external evaluation on quality management, a “Subcommittee on Examination Quality Management”, comprised of a wide range of external specialists, such as business and academic experts, was established in 2014 in order to obtain objective evaluation and recommendations on the quality management of patent examination. The Committee meetings are open to the public, upon request. A yearly report of the Committee is published in Japanese and English.

− Quality check mechanism in the Industrial Property Office of the Czech Republic[70]

Throughout the patent grant procedures, the Industrial Property Office of the Czech Republic incorporates a quality check mechanism in delivering decisions of the Office. With respect to search reports and examination reports (first action), those prepared by junior examiners are checked by senior examiners, who will forward them to the Head of Section. The reports prepared by senior examiners are checked by the respective Head of Section. The final decision of patent grant/refusal of application is also checked in the same manner. With respect to third party observations, conclusion of the analysis by an examiner as to the relevance of the submitted information is checked by a senior examiner/Head of Section. In addition, the Director of Patent Department conducts a random check of selected patent files twice a year. The Quality Management System of the Industrial Property Office of the Czech Republic is ISO 9001:2015 certified.

− Cross-checking of examiners’ work at the Hungarian Intellectual Property Office (HIPO)[71]

As one of the measures for ensuring quality, HIPO conducts randomized additional check of the work of selected examiners twice a year. Each time, one examiner is randomly selected from each of the four technology section, and his/her work is checked by the Head of another technology section with a closer technology area (for example, work of an examiner from the Chemistry and Biotechnology Section is checked by the Head of the Pharmaceutical and Agriculture Section). Five files are randomly selected from the pending cases of each examiner for cross-checking, that is, 40 files per year. The Heads of Sections notify the selected examiners one week in advance, but the selected files are only revealed on the day of the check. The criteria for the check are: (i) use of all relevant databases for prior art search and documentation of search strategy; (ii) reasoning of the first office action and completeness of the notification; (iii) whether, at any point, it was necessary to give the file back to the examiner for correction. This type of internal procedure, which contributes to quality of patent examination. has been carried out for more than 10 years in HIPO. It runs parallel to the routine checks within the Section concerned and the ISO audit (HIPO’s patent grant process is ISO 9001:2008 certified).

56. From the number of examples indicated above, it is observed that patent offices seek international cooperation in order to optimize their various process components. For example, trainings for acquiring expertise and skills are carried out in cooperation with another patent office, or exchange of examiner are organized with other patent offices in order to understand the laws and practices of the other offices. Patent information and databases are shared with other patent offices to facilitate prior art search and examination, or prior art search and examination are conducted in cooperation with other offices. Both small and big offices stated

70 Presentation by the Delegation of the Czech Republic during the sharing session at SCP/29.
71 Presentation by the Delegation of Hungary during the sharing session at SCP/29.

the benefits of the international cooperation, since it supplements or complements the existing resources and available tools, or gain efficiency through collaboration. In essence, these various international cooperation appears to aim at enhancing validity, comprehensiveness and timeliness of decisions taken by the patent office concerned.[72]

[End of document]

[72] As one of the questions asked in the Questionnaire was the impact of international cooperation in the area of search and examination to patent offices, the summary of responses is found in document SCP/27/5 Rev.