

THE PCT SYSTEM – OVERVIEW AND POSSIBLE FUTURE DIRECTIONS AND PRIORITIES

Memorandum by the Director General of WIPO

INTRODUCTION

On February 2, 2017, the International Bureau of the World Intellectual Property Organization (WIPO) published the 3 millionth international patent application filed under WIPO's Patent Cooperation Treaty (PCT), an important milestone in the history of the Treaty and of WIPO. From very modest beginnings in 1978, with initially 18 Contracting States, the PCT has grown into the central pillar of the international patent system, the primary vehicle for applicants seeking patent protection internationally in any of the PCT's current 151 Contracting States and one of the best examples of successful multilateral work sharing and cooperation. In its almost 39 years of operations, the number of international applications filed has steadily increased from 459 applications filed during its first year to almost 220,000 applications filed in 2015 (with provisional figures for 2016 showing another year of strong growth), far exceeding even the most optimistic expectations of the founders of the PCT who created the system in the 1960s. Today, it is one of WIPO's key assets, accounting for 76 per cent of its revenue and enabling the financing of the development cooperation program of the Organization and of many of its other programs, and there is every expectation that its growth and vitality will continue.

The PCT's success is a tribute to the vision of the PCT's founders who, more than four decades ago, foresaw the potential value in providing a global service to assist innovators in seeking multinational patent protection for their inventions. Building on that vision, the PCT system will need to further evolve to continue to function as the tool to support innovation, investment and development that those founders envisaged it to be. This paper is intended to provide "food for thought" on broad directions and priorities for future work aimed at further improving the system, to the common benefit of Contracting States, national Offices¹, applicants and third parties. It is not intended as a comprehensive guide to the issues – many more detailed matters are the subject of discussion through circulars or PCT Working Group papers. Nor is it intended to replace the "Roadmap" papers which were discussed between 2009 and 2011; most if not all of the matters raised in those "Roadmap" papers remain relevant.

¹ In this paper, references to national patent Offices and laws also include regional patent Offices and laws.

The paper provides an overview of the PCT system and some of the issues which it faces. The first two parts of the paper provide a brief outline of the international patent system and the PCT's evolving place within it, including some historical facts where it may be useful to know how the current system came to be. The third part of the paper deals with some of the main issues the PCT system currently faces and measures which could be considered to address them. In particular, it suggests that the primary route to achieve this aim is to put renewed emphasis on the "Cooperation" element of the Treaty, mostly requiring changes to the behaviors and actions of Offices (including the International Bureau) rather than significant changes to the legal framework.

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I. PATENTS WORLDWIDE

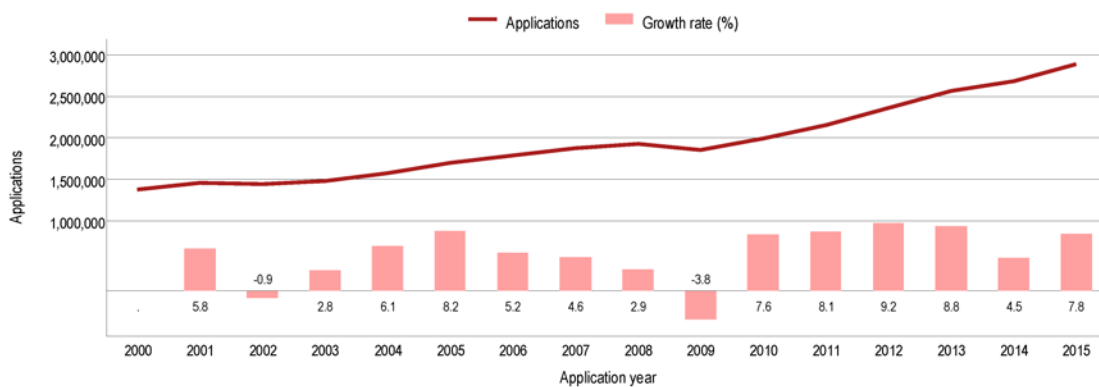
NUMBERS OF APPLICATIONS

1. Around 2.9 million patent applications were filed worldwide in 2015, up 7.8% from 2014. Driving that strong growth were filings in China, which in 2015 received about 174,000 of the nearly 208,000 additional filings and accounted for 84% of total growth, and filings in the United States of America and with the European Patent Office, which combined contributed 8.6% of total growth.

Figure 1: Trend in Patent Applications Worldwide

Patent applications and grants worldwide

A1 Trend in patent applications worldwide



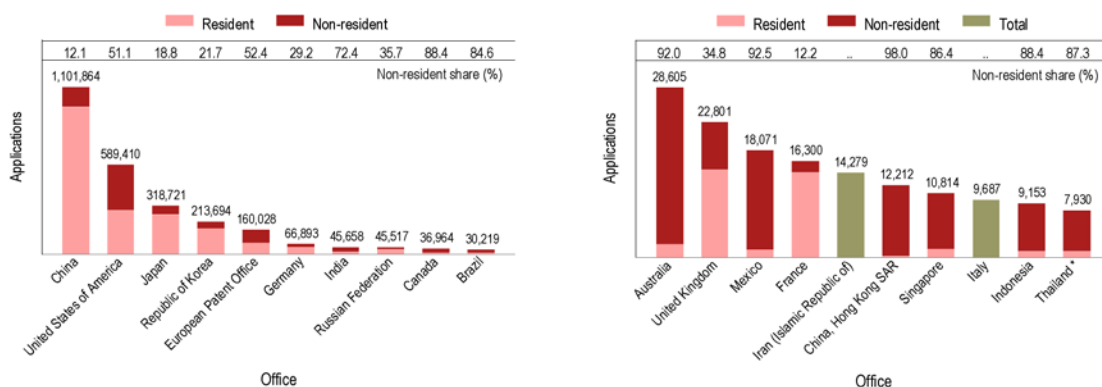
Note: World totals are WIPO estimates using data covering 150 patent offices. These totals include applications filed directly with national and regional offices and applications entering offices through the Patent Cooperation Treaty national phase (where applicable).

Source: WIPO Statistics Database, October 2016.

USE OF THE PATENT SYSTEM BY NON-RESIDENTS

Figure 2: Patent Applications for the Top 20 Offices, 2015

A8 Patent applications for the top 20 offices, 2015



* indicates 2014 data.
 .. indicates not available.

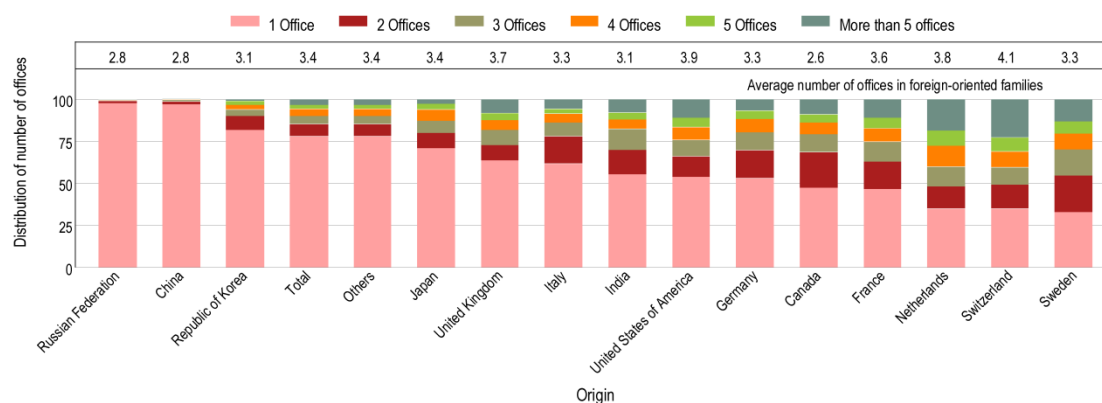
Note: In general, national offices of European Patent Office (EPO) member states receive lower volumes of applications because applicants may apply via the EPO to seek protection within any EPO member state. Resident and non-resident breakdown are not available for the Islamic Republic of Iran or Italy.

Source: WIPO Statistics Database, October 2016.

2. In most national Offices (with a number of notable exceptions), a majority of applications are filed by non-residents who are typically also seeking protection in their home country. Thus, a patent application filed in one country will frequently be part of a larger family of equivalent applications filed in other countries around the world.

Figure 3: Patent Families by Number of Offices, 2011 to 2013

A25 Patent families by number of offices, 2011-13



Note: A patent family is defined as patent applications interlinked by one or more of: priority claim, Patent Cooperation Treaty national phase entry, continuation, continuation-in-part, internal priority and addition or division. Patent families here include only those associated with patent applications for inventions and exclude patent families associated with utility model applications. This figure shows the distribution of total patent families for selected origins by the number of offices at which they exist. For example, 97% of families originating from China and the Russian Federation are single-office families, whereas around one-third of families originating from the Netherlands, Switzerland and Sweden are single-office families.

Sources: WIPO Statistics Database and EPO PATSTAT database, October 2016.

PARIS CONVENTION FILINGS VS. PATENT COOPERATION TREATY FILINGS

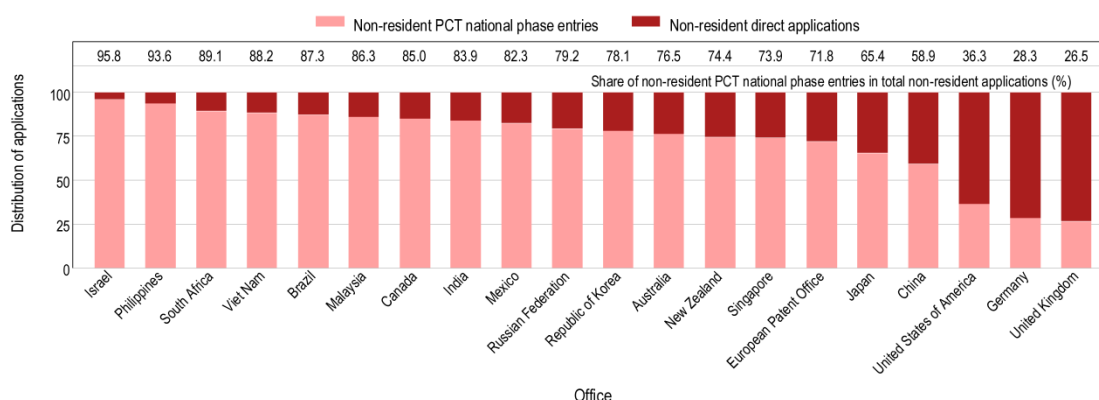
3. Such multinational filings may either be a direct national application to a national patent Office, normally based on a priority claim² from a first filing in the applicant's home country, or else an international application filed under the PCT, which is equivalent to an application in each of the PCT Contracting States (151 States at the end of January 2017). The most common filing scenario is that one or more national applications are filed in the applicant's home country and then, just prior to the expiration of 12 months from the filing date of the earliest application, either an international application is filed through the PCT or else a number of foreign national applications are filed directly with the national Offices concerned, in either case claiming priority of one or more earlier national applications.

4. In most Offices (the main exceptions being the United States of America and the national Offices of members of regional patent systems, such as the European Patent Convention), the PCT is the route taken by a majority of non-resident applicants.

² To be patentable, inventions need to be new and inventive at the time that a patent application is filed. The Paris Convention in 1883 introduced a system of "priority" whereby a later application could receive the benefits of the filing date of an application filed in another country up to 12 months earlier.

Figure 4: Non-Resident Applications by Filing Route for Selected Offices, 2015

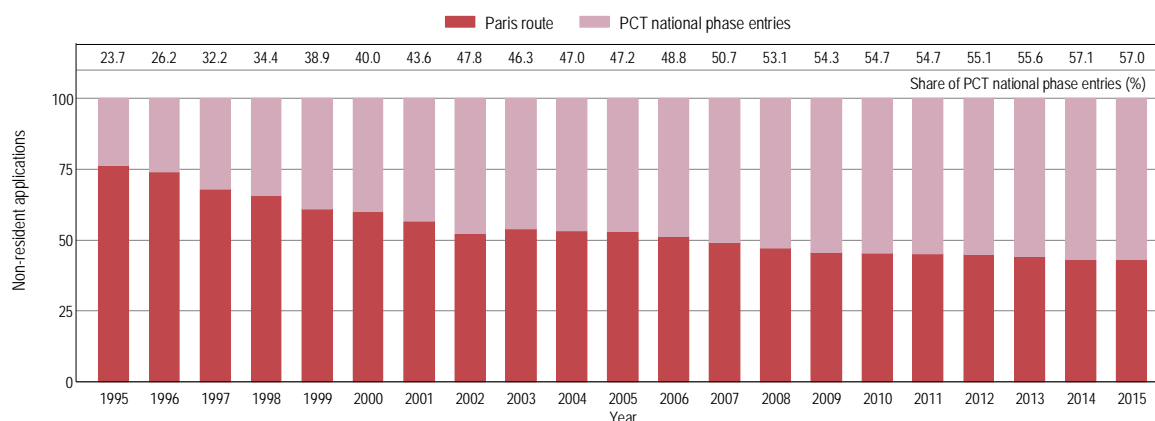
A51 Non-resident applications by filing route for selected offices, 2015



Note: A patent office may receive patent applications filed either directly with the office (the “Paris route”) or through the Patent Cooperation Treaty System (Patent Cooperation Treaty national phase entries).

Source: WIPO Statistics Database, October 2016.

Figure 5: Share of Non-Resident Applications by Filing Route, 1995 to 2015



ADVANTAGES OF THE PCT FOR APPLICANTS

5. The PCT route holds many advantages over the direct “Paris Convention” route for applicants. While the PCT does not grant patent rights, it begins and advances the process of applying for such rights in multiple countries, in preparation for eventual processing and decisions on whether or not to grant such rights by national Offices. One of the most important advantages is that it allows applicants a much longer period (at least 30 months from the priority date instead of 12 months under the Paris Convention) in which to decide whether an invention is of sufficient commercial value and has sufficient chance of being patentable for the application to be worth pursuing in other countries, as well as for smaller applicants to seek financial backing.

6. Furthermore, the PCT improves the basis for that decision by applicants. During the period starting with the international filing date and ending with the expiration of 30 months from the priority date, generally known as “the international phase”, an international search report and at least one written opinion are provided, which will be of benefit to applicants in deciding whether or not to proceed with the application into what is called the “national phase” before the national Offices which eventually, based on their national law, will decide whether or not to grant patent rights. Given that the largest costs in using the international patent system are typically

not the official Office fees but the translations and national agents' fees, the benefits in putting off the payment of those fees for at least 30 months – and avoiding paying them at all where it is decided not to proceed into the national phase – can greatly outweigh the cost of the international phase fees. The system also allows many formality requirements to be addressed just once, to a common standard, while leaving issues of substance to the national laws of the PCT Contracting States.

ADVANTAGES OF THE PCT FOR NATIONAL OFFICES AND CONTRACTING STATES

7. The PCT route is also beneficial for national Offices. The opportunity for the applicant to “work” on the application during the international phase, by way of correcting formal defects and amending the application, means that those applications which enter the national phase are more likely to be of higher quality. Applications entering the national phase will be accompanied by a high quality international search report and written opinion, ready to be exploited by national Offices to assist the national processing. Consequently, the national processing (which typically costs a national Office more than the fees it charges up to the time of grant and thus often is “subsidized” by renewal fees on granted patents) gets a “head-start”, can be cheaper and will more likely result in faster and more efficient decision making by national Offices whether or not to grant a patent. This can be particularly important for small and medium-sized Offices with limited numbers of examiners and resources. The receipt of a search report and written opinion for a significant proportion of incoming applications can offer not only a significant saving in examiner time and in use of expensive search databases, but also effectively provide useful tips on how to search effectively across different types of subject matter.

8. At a national level, the reasons for supporting the patent system vary from country to country. Key objectives will typically include supporting local innovation and allowing inventors to move more effectively to a worldwide market; attracting foreign investment into local manufacturing and distribution; and simply gaining access to international trade agreements which require effective patent protection as a condition.

9. Whatever a country's priorities are for its patent system, effective use of the PCT system can assist national innovators, reduce the cost of running the national patent system, reduce the number of poor quality applications being received by an Office and increase the confidence in the quality of examination which has been made on those applications for which patents are eventually granted. In this regard, each country can make a variety of choices to optimize its national patent system with a view to deriving the most benefits from the PCT system. On the other hand, improvements to the PCT system can also be foreseen at the international level, to the mutual advantage of all Contracting States.

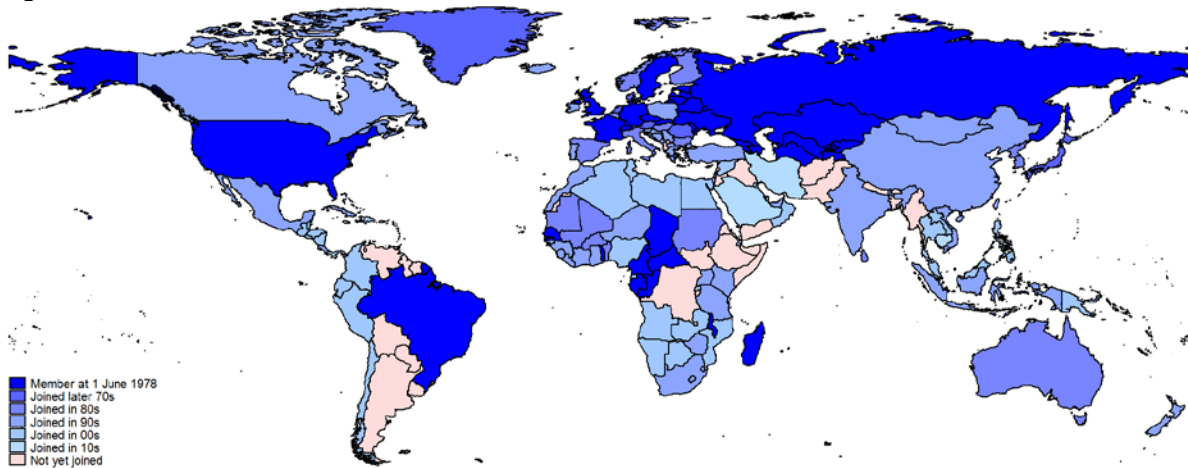
II. THE PCT: ITS DEVELOPMENT AND CURRENT STATE

GEOGRAPHICAL SCOPE OF THE TREATY

10. The PCT began accepting international applications on June 1, 1978, with 18 Contracting States. That number has now grown to 151. Nearly 80 per cent of Contracting States are developing and least-developed countries³. In total, PCT Contracting States represent an estimated 95% of the world's economic activity by GDP and 87% of the world's population.

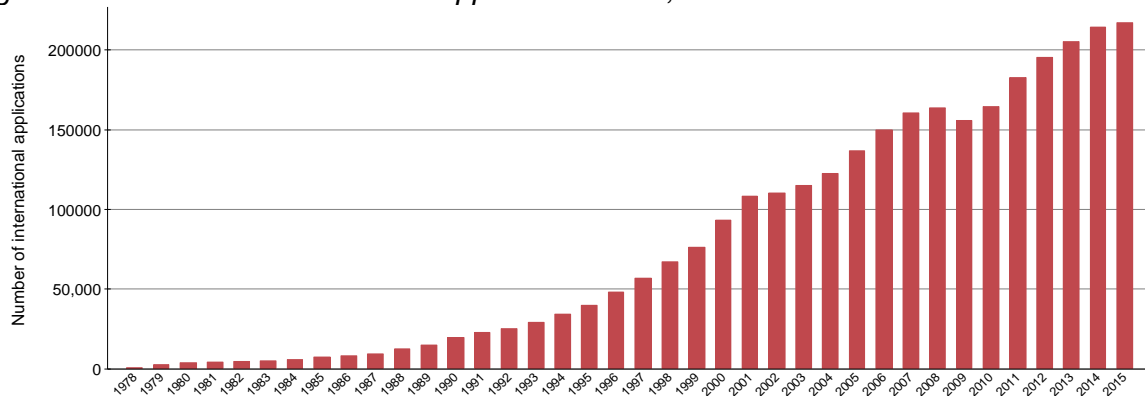
³ Based on the criteria for eligibility for a 90 per cent fee reduction.

Figure 6: Accessions to the PCT, 1978 to Present



NUMBERS OF APPLICATIONS

Figure 7: Number of International Applications Filed, 1978 to 2015

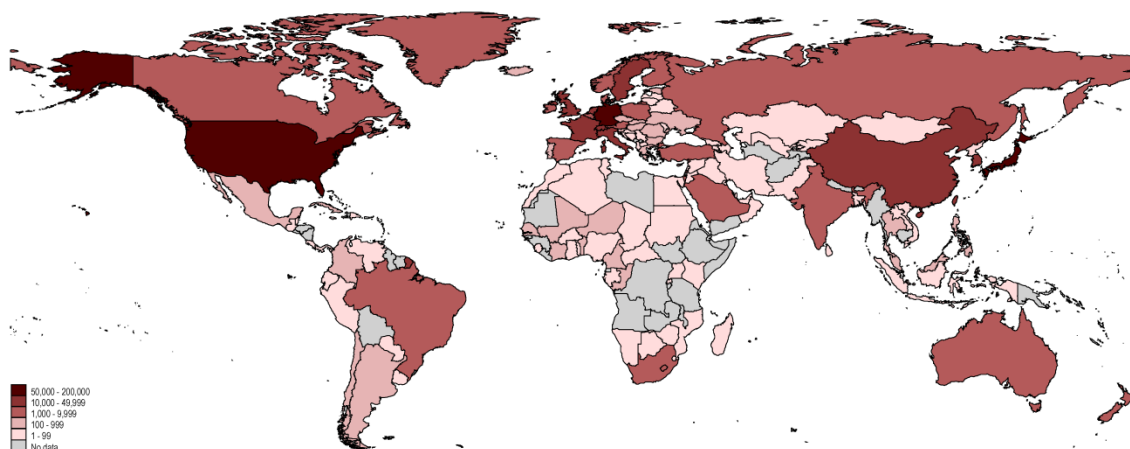


11. Nearly every year since the system began operation there has been a strong increase in volumes of international applications. From around 2,700 international applications filed in 1979, the first full year of operations, by 2015, almost 220,000 were received (with provisional figures for 2016 showing another year of strong growth).

12. The source of applications is also diversifying. In 2015, international applications were filed at 86 receiving Offices (59 from developing and least-developed countries), compared to 78 in 2005 (49 from developing and least-developed countries). As discussed under “Languages”, below, growth has been particularly strong in Asia. Even excluding China, which dominates figures on growth, international applications from developing and least-developed countries have almost doubled in the period 2005 to 2015, compared to a growth of approximately 60 per cent overall. Data on national phase entries is less complete, but it appears that national phase entries based on applications from developing and least-developed countries are also increasing significantly.

Figure 8: PCT National Phase Entries by Country of Origin, 2014

Figure B.2.1: PCT national phase entries by country of origin, 2014



Source: WIPO Statistics Database, May 2016.

INSTITUTIONS' ROLES AND RESPONSIBILITIES

13. The PCT is an inherently decentralized system, based on cooperation and work sharing among Offices of Contracting States fulfilling different roles. While a single Office may play more than one role, every international application must be processed by at least two different Offices, frequently three and occasionally four or more. The international phase roles are:

Receiving Office (RO): Receives the international application and required fees, performs a number of formality checks, assigns the international filing date and sends copies to the International Bureau and to the International Searching Authority. The receiving Office may be a national or regional Office or the International Bureau. The receiving Office has responsibilities to the international community in terms of performing its functions accurately and impartially and passing on the correct documents and fees in a timely manner to the International Bureau and the International Searching Authority, but is essentially performing a function for the benefit of the nationals and residents of the Office's country or region.

International Searching Authority (ISA): Conducts a search to find prior art relevant to novelty and inventive step of the claimed invention. The role of the International Searching Authority is an inherently international one – while many Authorities perform the functions primarily on applications filed by nationals or residents of the Office's country or region, the key consumers of the international search report and written opinion are not only the applicant but also third parties and the national or regional Offices, in their role as designated Offices, of all Contracting States where the applicant enters the national phase.

International Preliminary Examining Authority (IPEA): Very similar role and responsibilities to those of the ISA, but involving an (optional) interactive process, taking into account comments and amendments by the applicant before establishing the international preliminary examination report.

International Bureau (IB): Coordinates the activities of the other Offices, checks that formalities standards are being met, translates key information, maintains reliable independent records, publishes applications and associated documents, ensures that documents and data are reliably provided to the Offices which require them, and provides an electronic platform (ePCT) for electronic filing of applications and carrying out many of the functions of the Offices in their various PCT roles.

DESIGNATIONS – GEOGRAPHICAL SCOPE OF INDIVIDUAL APPLICATIONS

14. Initially, applicants were required to explicitly specify which countries were “designated” in the international application at the time of filing and to pay a fee for each country so designated. As the number of Contracting States grew, this process became ever more difficult, expensive and error-prone for the applicant and both the receiving Offices and the International Bureau. Furthermore, as electronic processing systems and electronic distribution of documents progressed, the marginal cost of processing additional designations decreased to the point where it is now negligible. From 1985, the designation fee was capped so that a maximum of 10 fees was payable. From 1992, a system of “precautionary designations” was introduced, whereby the final decision and payment of designation fees could be delayed until 15 months from the priority date. Over time, the maximum number of designation fees was reduced until finally, in 2004, the designation system was, for all practical purposes, eliminated. Since then, filing of an international application automatically constitutes the designation of all States which are party to the Treaty on the date of filing, leaving only limited opt-outs necessary to avoid “self-collision” problems where parallel national applications are being pursued.

INTERNATIONAL SEARCH AND INTERNATIONAL PRELIMINARY EXAMINATION

15. PCT processing is divided into two main parts. Chapter I of the Treaty sets out processes which are required to be carried out in respect of all international applications, including an international search and international publication. Chapter II sets out an optional process of international preliminary examination.

International Search

16. The international search is carried out by an International Searching Authority, which is a national Office or intergovernmental organization which meets certain minimum criteria and is appointed by the PCT Assembly to act in this role. Each receiving Office designates one or more International Searching Authorities as “competent” to carry out international searches in respect of applications which are filed with it. Where there is more than one, the applicant selects from the competent Authorities.

17. The international search is conducted according to internationally agreed PCT criteria intended to make the information useful to any designated Office, irrespective of the details of its national law. Notably, it is intended to include a wide range of documents which are potentially relevant to novelty and inventive step in any PCT Contracting State, even if their date and nature are such that they could not be considered under the national law of the Office acting as International Searching Authority. The results of this search are published, in the form of the international search report, together with the international application to help third parties assess the likelihood that a patent will be granted in Contracting States which are relevant to them.

International Preliminary Examination

18. The international preliminary examination under Chapter II of the Treaty involves providing a written opinion, explaining in more detail the relevance of the documents cited in the international search report and also commenting on other issues, such as clarity or lack of support for the claimed invention. The applicant has an opportunity to respond and make amendments to the application with a view to obtaining a positive report and the Authority establishes an international preliminary examination report (IPER) on the application, taking any such comments and amendments into account.

19. In 1970, international preliminary examination was seen as quite radical and included many safeguards for both applicants and Contracting States. Notably, the Treaty provides very strict conditions of confidentiality regarding the process of international preliminary examination, even though this normally occurs only after the international application has been published. Further, the Treaty permitted Contracting States to make a reservation from the applicability of

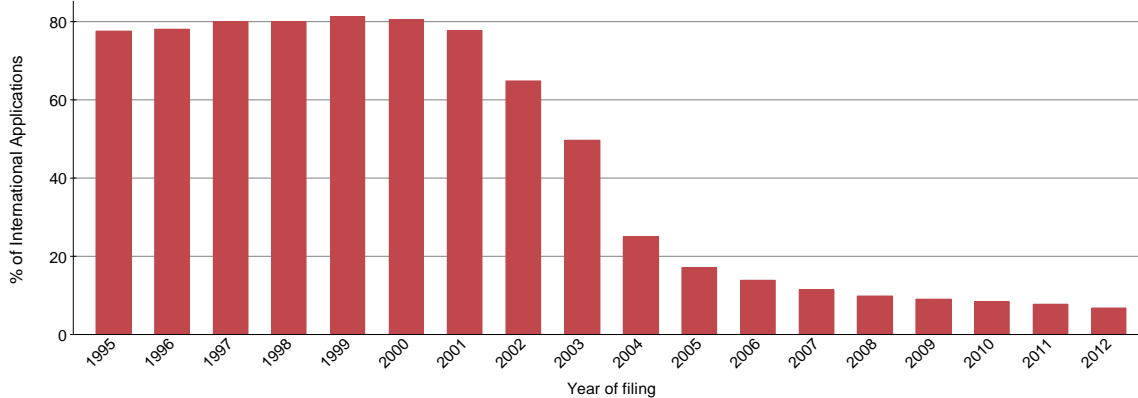
Chapter II, even though the effects of the IPER were explicitly “preliminary and non-binding”. Four of the 18 States party to the Treaty on 1 June 1978 chose to make that reservation (France, Luxembourg, Switzerland and the United States of America), as did six other States joining later. Over time, the Chapter II process was found to be useful and without adverse consequences and, by 1997, all of the reservations had been withdrawn.

Written Opinion of the International Searching Authority

20. Time is needed to conduct the international preliminary examination, which includes the possibility of interactive discussions between the applicant and the examiner, who may be located in different countries. Under the original terms of Article 22 of the Treaty, applicants would normally have to begin national processing at 20 months from the priority date. However, if the applicant filed a “demand” for international preliminary examination, Article 39 extended this time limit to 30 months from priority.

21. The result was that, while the international preliminary examination was useful to many applicants and where it was actively used, the quality of the international application could be significantly improved before national processing began, many applicants filed the demand simply to “buy” 10 months of additional time in which to make the decision on where to enter the national phase without, however, actually providing comments or amendments and thus improving the quality of the application. As a consequence, International Preliminary Examining Authorities were being overloaded with examination work the results of which were not acted on by the applicants with a view towards improving the application and thus did not improve the quality of the applications entering the national phase. Consequently, with effect from 2002, Article 22 was modified to make the time limit for national phase entry 30 months in all cases, irrespective of whether there had been a demand for international preliminary examination.

Figure 9: Proportion of Applications Using Chapter II, Before and After 2002 Changes



22. However, in isolation, this change would have resulted in a major loss of patentability-related information to designated Offices. Whereas 82 per cent of international applications filed in 2000 had been the subject of international preliminary examination, the proportion quickly dropped until by 2010 less than 9 per cent of international applications entered Chapter II. Because many designated Offices used the international preliminary examination reports to assist with their first national phase action, it was agreed that the International Searching Authorities would, in all cases, establish a written opinion to the same standard as the first stage of international preliminary examination. Because this was done at the same time as the international search, the additional workload for the Authorities was considerably less than was the case when it was done as a separate action. This written opinion would then be made available to designated Offices in place of the IPER in the event that no international preliminary examination took place. Where international preliminary examination did take place, the written opinion of the International Searching Authority could take the place of the first written opinion of the International Preliminary Examining Authority.

23. To emphasize that the final reports under Chapter I and II were of the same nature and quality, differing only in whether the applicant had taken the opportunity to respond and amend, the reports were given equivalent names: both are called “international preliminary report on patentability”, one under “Chapter I of the Patent Cooperation Treaty”, the other under “Chapter II of the Patent Cooperation Treaty”.

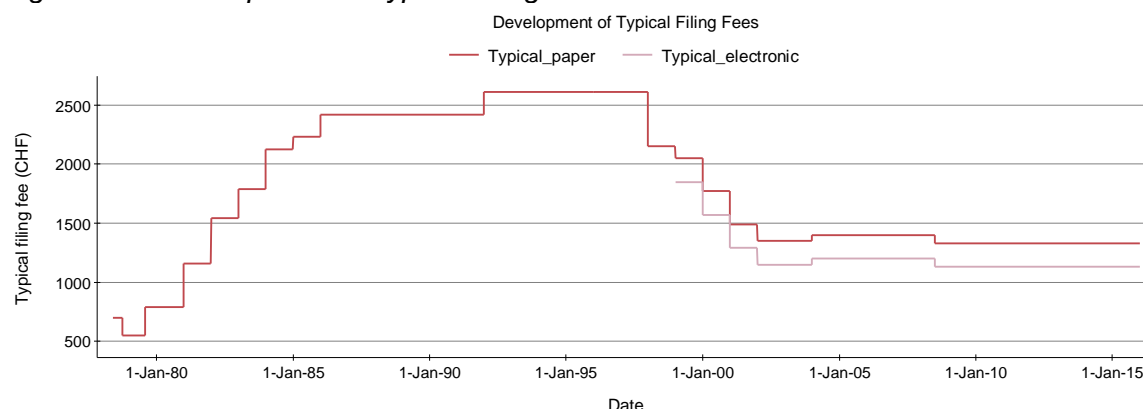
FEES

24. The fees payable in respect of every international application (international filing fee, transmittal fee and search fee) are currently paid to the receiving Office. A number of further fees payable in certain cases only need to be paid to the International Bureau (for example, the special fee for correction of priority claims or early publication prior to the availability of the international search report) or to the International Preliminary Examining Authority (preliminary examination fee and handling fee). The levels of the international filing fee and, in some cases, the search and preliminary examination fees are reduced for natural persons from developing countries and all applicants (including legal entities) from least developed countries.

25. The fees paid to the receiving Office and the Office acting as the International Preliminary Examining Authority contain components for the benefit of that Office and components for the benefit of one or more other Offices, which need to be transmitted appropriately. In many cases, the fees for other Offices are set in the currency of the Office which is to benefit, but paid in the local currency of the receiving Office to which they are paid, according to equivalent amounts which are set periodically by the International Bureau (in the case of currencies which are freely exchangeable) or by the receiving Office to which they are paid (in the case of currencies which are not freely exchangeable). Where the equivalent amount is set by the International Bureau, the International Bureau bears the risk of exchange rate fluctuations between the currency in which the fees are paid and the currency in which the fees have been set and, in the case of the search fee, has to reimburse the International Searching Authority for any loss in fee income where the amount finally received by that Authority is less than the amount set by that Authority.

26. As indicated in relation to designations, above, the structure of the international filing fee has changed over the years, so a simple comparison of fee levels over the years is not possible. However, noting that the average number of designations was 5 in 1978 and had risen to 10 by 1984 (before the maximum number of designation fees had been introduced), a typical fee can be estimated for each time the fees have changed, assuming a steady rise from 5 to 10 designations by 1984 and an international application which is, on average, 30 pages long. In the chart below, separate lines are shown for the amount of the typical international filing fee in the case of a paper filing and in the case of a filing in electronic form, taking into account the most common fee reduction for electronic filing (200 Swiss francs). It can be seen that the typical international filing fee is now only half what it was in 1992. Taking into account that most applicants benefit from a fee reduction of at least 200 Swiss francs for electronic filing and that, with inflation, 2,612 Swiss francs in 1992 is equivalent to around 3,100 today, the effective fee has reduced to about a third of its level in the early 1990s. The fact that the International Bureau managed to continue administering the system despite the effective fee income per application having been reduced to about a third of its levels in the early 1990s is testament to the efficiency savings which have been achieved at the International Bureau through better management practices and the introduction of electronic processing systems over the years.

Figure 10: Development of Typical Filing Fees from 1978 to Present



LANGUAGES

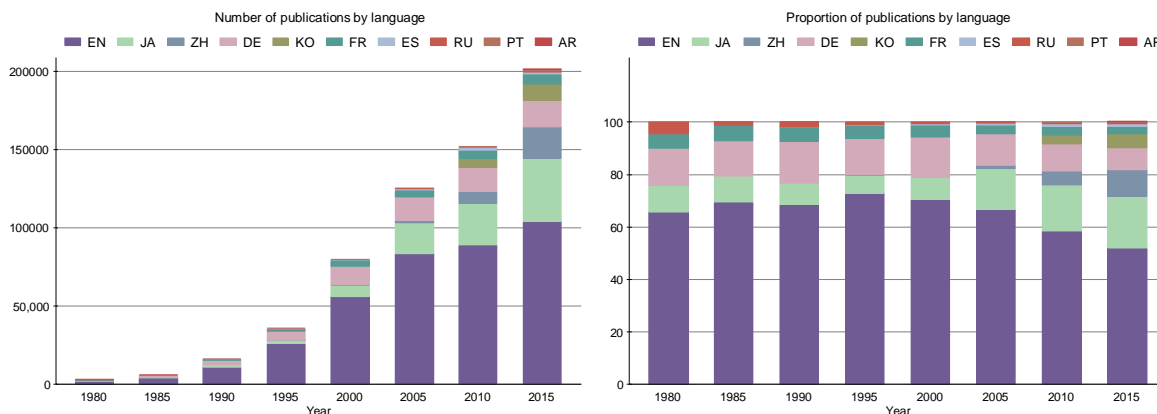
Filing and Publication

27. In 1978, PCT applications were published in one of five languages (English, French, German, Japanese and Russian). Over time, additional languages were added and, since 2009, there are 10 languages of publication (Arabic, Chinese, English, French, German, Japanese, Korean, Portuguese, Russian and Spanish). Depending on the receiving Office, the international application may be filed in other languages, but a translation is required for publication and, depending on the competent International Authority, international search and/or international preliminary examination. In practice, 98.5 per cent of international applications are currently filed in a language of publication.

28. For the entire history of the PCT so far, English has been the majority language of publication. This is in part because of the large proportion of applications filed in that language by applicants from the United States of America and Europe, but also a reflection of the fact that many inventions are now the product of international collaborations done largely in English, together with the need to minimize translation costs in the countries in which applicants expect to enter the national phase. Consequently, in 2016, the receiving Offices of China and the Republic of Korea received the fourth and sixth largest number of international applications in English – more than the receiving Offices of Canada, Australia or, in the case of China, that of the United Kingdom.

29. Nevertheless, the distribution of languages of filing and publication is changing. From a height of 73 per cent of the total in 1993 to 1996, English now represents only just above 50 per cent of the total publications. The Asian languages are increasing rapidly in use, with Japanese, Chinese and Korean language publications representing 20 per cent, 12 per cent and 6 per cent of the total in 2015, respectively. This needs to be understood, however, in the context of rapidly increasing volumes of filings. English language publications in 2016 were over five times the number of those in 1993 and continue to follow a generally rising trend. However, Asian language publications have generally been rising faster. Chinese language publications, for example, rose from zero in 1993 to over 26,000 in 2016.

Figure 11: Breakdown of publication languages in different years, by volume and by proportion of total

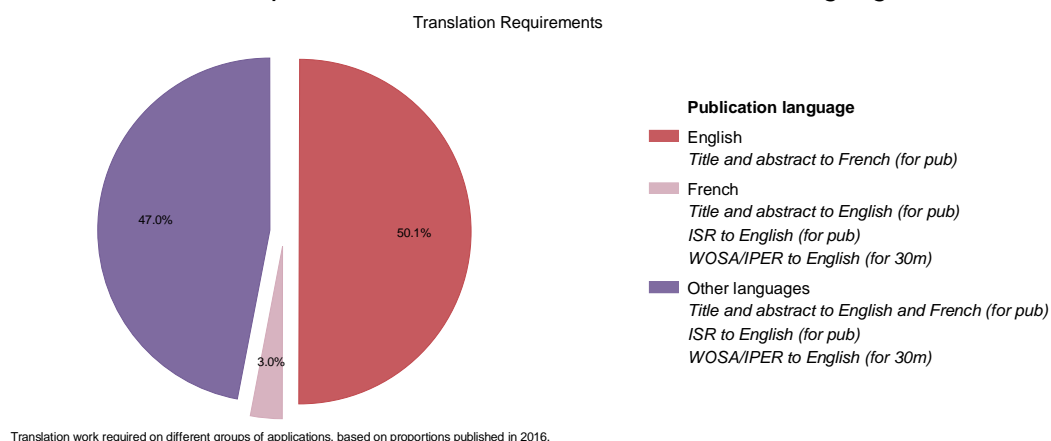


Translation by the International Bureau

30. To ensure that published applications and related information can be used effectively by designated Offices, third parties and patent information users and the applicants themselves, the International Bureau provides high quality translations of certain documents and pieces of information where they are not originally in the language as determined by the Treaty (to ensure accessibility and thus improve the overall usefulness of the system):

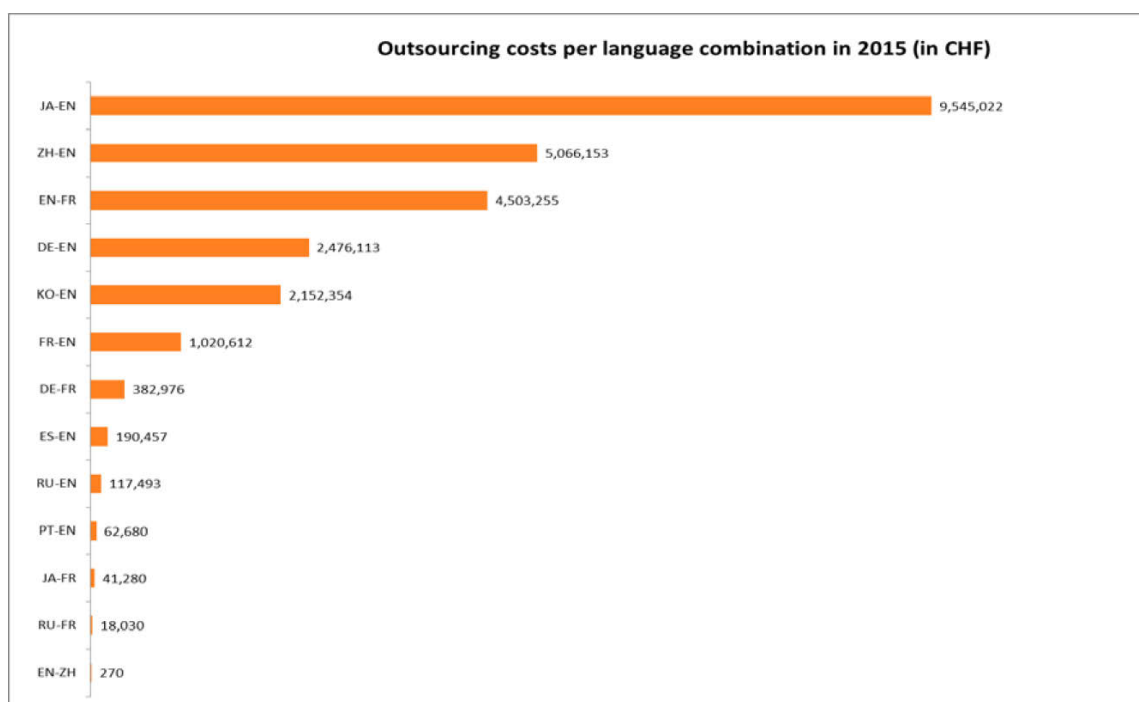
- the title of the invention and the abstract are translated into French and English for inclusion in the published international application;
- the international search report and the international preliminary report on patentability (whether under Chapter I or Chapter II) are translated into English by 30 months from the priority date.

Figure 12: Translation Requirements for Publications in Different Languages



31. The cost of these translations constitutes a significant proportion of the International Bureau's costs in administration of the PCT system, but also represents a major part of the value which is added. It is essential that the costs of translation are kept under control and that the quality of and benefits from the translations are commensurate with the costs. To this end, up to the minute translation technology and tools have been adopted and an aggressive outsourcing approach has been pursued, with 93% of the 126 million words of translation performed in 2015 being outsourced.

Figure 13: Outsourcing Costs of Translation



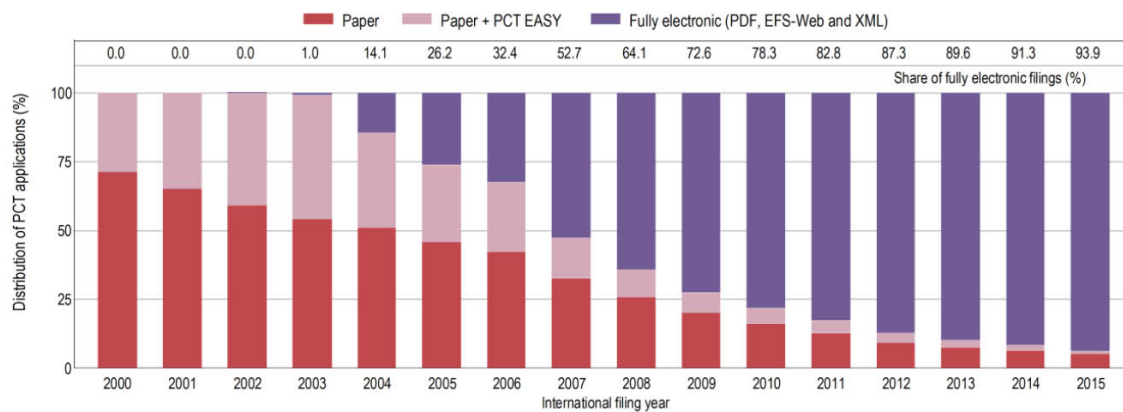
32. In addition to the above-indicated human translations, the abstract and the application body are provided in full text format. This enables machine translation into an ever-increasing range of languages, use of sophisticated linguistic search tools, such as the PATENTSCOPE Cross-Lingual Information Retrieval system, and interaction with terminology databases, such as WIPO Pearl.

33. Further consideration may be given to means by which WIPO might continue its very important role of ensuring that PCT application content is accessible to potential users of that valuable technological information in a manner that reflects the reality of its changing user-base, while containing costs and perhaps likewise expanding the language coverage of application elements such as abstracts titles or reports to further improve accessibility and usefulness of the system.

ELECTRONIC ENVIRONMENT

34. The PCT was originally written at a time when electronic communications were unusual. Now, electronic communications are the normal route. Fully electronic filing was introduced in 2003 and quickly became popular as a result of fee incentives and convenience to applicants. In the second half of 2015 (after the discontinuation of PCT-EASY, which provided a “halfway house” where the applicant submitted the international application on paper accompanied by a diskette containing the bibliographic data in machine-readable form), 94.5 per cent of international applications were filed in electronic format; in 2016, that figure has risen to more than 95%.

Figure 14: Take-up of Electronic Filing



35. All PCT applicants have been able to use electronic filing since it was introduced in 2003, if not by filing their application with their local receiving Office then by filing their application with the receiving Office of the International Bureau. However, until recently, most national receiving Offices found it impractical to offer electronic filing to “their” applicants – it was only a number of the larger national and regional receiving Offices which offered electronic filing. Today, the International Bureau is in a position to offer “hosted” ePCT filing and processing services to any receiving Office which wishes to use these services and to offer them to “their” applicants, allowing the filing and processing of international applications in electronic form at those Offices. At the time of writing, ePCT-filing allows applicants to file their international applications in electronic form with 45 different receiving Offices, the majority of which did not previously allow electronic filing. Several other receiving Offices offer their own, independent electronic filing systems but do not yet accept applications through ePCT-filing.

36. ePCT also allows applicants and Offices to view any documents in the file of the International Bureau. Applicants can also submit post-filing documents to the International Bureau or to 47 Offices in their roles as receiving Office, International Searching Authority or International Preliminary Examining Authority. In the environment of the PCT, where some actions are subject to short deadlines and applicants may be located in a country – or across several countries – different from the receiving Office or especially the International Authority, the ability to collaborate on-line with other individuals listed in an application, and the elimination of postal delays is extremely important.

37. ePCT and various data standards also provide for passing information in machine-readable formats which have the potential to significantly improve processing quality and efficiency. However, apart from the bibliographic data which accompanies the international application as filed, these standards are not yet used as widely as might be hoped. The International Bureau has begun to receive international search reports and written opinions in XML format from three ISAs, but implementation across all Authorities remains a long way off.

NATIONAL PHASE ENTRY

38. In the national phase, designated Offices begin to process international applications to determine whether to grant a patent in compliance with national law. This typically begins 30 months from the priority date, though applicants may request national processing to begin earlier and Offices may offer the opportunity to leave this choice until later – 31 months is a commonly set period and many Offices offer extensions to the deadline on payment of an additional fee or if certain other conditions are met.

39. To enter the national phase, the applicant need usually only pay any fee required by the national Office and provide any required translation (a copy of the international application may be required in certain unusual cases). The other documents and data needed to begin national processing are supplied by the International Bureau directly to the designated Office.

40. Offices are not permitted to require the use of a special form for national phase entry, though the optional forms provided are normally used and generally make the process easier. Provided that the applicant has met the PCT formalities requirements in the international phase (notably the form and content of the international application itself, copies of priority documents, declarations concerning inventorship, right to apply and right to claim priority), there should be no further formal barriers to overcome. The Office can move directly to addressing the substantive issues of patentability, assisted by the international search report and international preliminary report on patentability.

OTHER SIGNIFICANT DEVELOPMENTS

41. The system has adapted over the years to meet the changing needs and expectations of applicants, Offices and third parties. Probably the most significant changes are those which have been described above, namely, to the designation system, the length of the international phase, the establishment of written opinions as part of Chapter I and the fee structure. Some other significant changes have been the introduction of procedures for sequence listings to meet the special difficulties of disclosing and searching genetic sequences; consistent declarations concerning inventorship and other issues, to reduce the burden of providing the same information in different forms for each Office; and “missing parts” and “restoration of the right of priority” to allow applicants to recover from accidental errors which might otherwise be fatal to their applications.

III. FURTHER DEVELOPMENT OF THE PCT SYSTEM

LEGAL AND INSTITUTIONAL ISSUES

Major Reforms Completed

42. As described above, the PCT has evolved very effectively to meet many of the changing needs of applicants, Offices and third parties through modification of the time limits in the Treaty and major amendments to the Regulations.

43. Various further changes (such as greater credence given to international reports in the national phase) might be valued by some users of the system but do not necessarily require changes to the PCT legal framework. Other changes (such as greater transparency in Chapter II processing) might in principle be welcomed by all, but do not seem possible to implement, even if there were general agreement among Contracting States in principle, noting two main practical barriers:

- Many features of the PCT are fixed in the Articles of the Treaty and appear impossible to change without a diplomatic conference. Given that there are now 151 Contracting States, even if a new Treaty could be adopted, it would need to deliver an enormous benefit to all Contracting States if it were to be ratified within a meaningful period by enough States for it to come into force. In the meantime, it is difficult to see how a system could work with two different versions of the Treaty in force which require different drafting standards or different processing steps to be taken to have effects in different designated Offices in anything other than exceptional cases.
- Some of the features set out in the Regulations are implemented in the national laws of Contracting States in ways which mean that they would similarly take a long time to change.

44. Consequently, while there will be an ongoing need for minor modifications, for example, to support improved IT-based workflows and quality initiatives, as discussed in later sections of the present paper, to encourage further sharing of national search and classification information, or to allow new forms of disclosure appropriate to new technologies (as has previously been introduced for sequence listings), it would appear that major reforms of the system through development of the international legal framework can be considered more or less complete.

Continued Improvement of Existing Features of the PCT System

45. On the other hand, there remain great opportunities to improve already existing features of the PCT system, notably with regard to work sharing among Offices, and to make the system more effective through procedural and institutional efforts to ensure that the international phase work effectively supports the national phase processing. Notably, a combination of further efforts to improve the linkage between national first filings, international applications and national phase processing, further efforts to improve quality (as discussed below) and further efforts to set national incentives for good practice by applicants could result in simultaneously reducing processing costs for national Offices and reducing the risk of invalid patents being granted. Two examples of such efforts are set out in the following paragraphs.

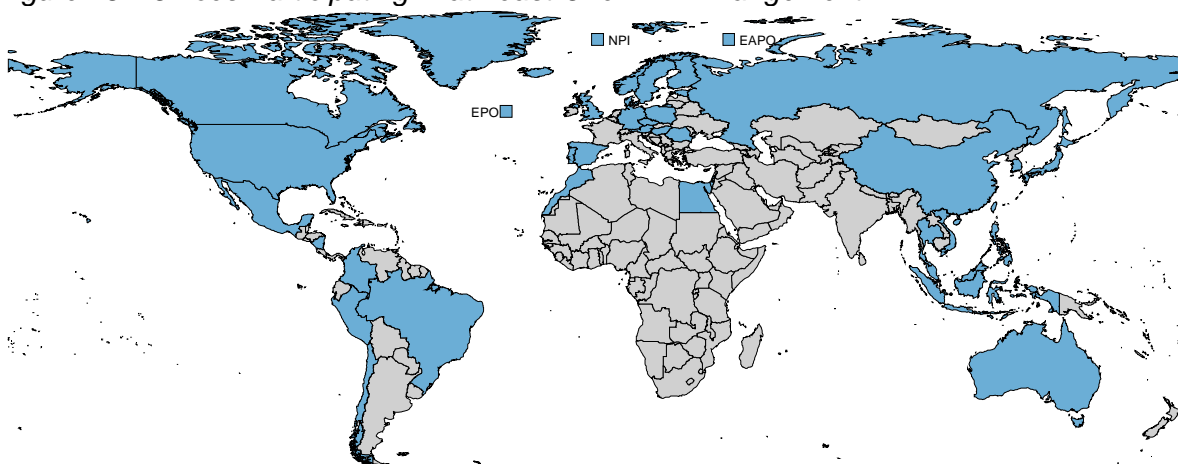
Responses to Negative International Phase Reports

46. In 2010, the European Patent Office started to require applicants to provide a response to negative written opinions of the International Searching Authority (if established by the European Patent Office). This procedure was discussed in the PCT Working Group and has inspired similar arrangements at other Offices. The result was a significant increase in the proportion of applications which were amended prior to consideration by an examiner in the national phase and, as a result, a significant reduction in the amount of work required during the national phase.

Patent Prosecution Highway

47. The Patent Prosecution Highway (PPH) provides another form of incentive to file higher quality international applications or to eliminate defects at an early stage, in this case by offering accelerated national examination if the claimed invention has been found by another Office to have claims which are novel and inventive. In the case of PCT-PPH, this means a written opinion of the International Searching Authority or an international preliminary examination report with positive preliminary findings concerning novelty and inventive step. PPH requires participating Offices only to accelerate procedures where the relevant conditions are met; the second Office is not required to come to the same conclusion as the first Office.

Figure 15: Offices Participating in at Least One PPH Arrangement



48. The Patent Prosecution Highway began as a small-scale bilateral pilot between the Japan Patent Office and the United States Patent and Trademark Office but has continued and grown over the past ten years. Now, 41 Offices from developed and developing countries alike in all regions of the world participate in at least one bilateral or in the Global PPH plurilateral arrangement and feedback has been positive. It may therefore be an opportune time to again discuss its potential role in the context of the PCT and the international patent system as a whole. Such discussions might include:

- how PPH can be used in combination with other work sharing tools such as WIPO-CASE (Centralized Access to Search and Examination – see under “Non-PCT IT Platforms”, below) to assist national Offices in reducing their workload and improving the quality of their examination without relinquishing sovereignty over the decision whether or not to grant a patent; and
- whether it would be appropriate to support this system within WIPO, such as by offering direct integration within the PCT (as was proposed by the United States of America and the United Kingdom at the fifth, sixth and seventh sessions of the PCT Working Group) or else by assisting harmonization of the conditions and procedures involved to reduce the complexity for applicants and the administrative overhead for Offices.

Other National Incentives

49. Other initiatives could also be considered, such as fee-based incentives upon national phase entry to encourage the applicant to improve the quality of applications during the international phase. While setting such incentives would in the end be a matter of national law and policy, it would appear worth considering such initiatives in the international context, since a concerted approach by many States with similar goals will generally provide a greater effect on applicant behavior than any one State acting alone.

TECHNICAL (IT) ENVIRONMENT

Opportunities

50. Electronic filing now accounts for over 95% of international applications and electronic processing is the norm at the International Bureau and many receiving Offices and International Authorities. The International Bureau’s ePCT system has opened up a new, real-time window on the filing and processing of international application in electronic form and offers national Offices in their capacities as RO, ISA and IPEA the opportunity to provide sophisticated online services for applicants, and to support internal workflows both of which may potentially reduce costs without the overhead of maintaining the associated IT infrastructure. Building on ePCT and WIPO global infrastructure projects such as IPAS (WIPO’s Industrial Property Automation System – see under “Non-PCT IT Platforms”, below) and WIPO-CASE, similar opportunities exist to provide electronic services which assist applicants and Offices in the preparation of national phase entry and subsequent national phase work.

51. These electronic services have great potential to improve the PCT system for applicants, Offices and the public alike, by reducing costs and delays, eliminating duplication of work by entering data just once and passing it in machine-readable format, eliminating transcription errors, reducing the potential for many other errors, giving greater transparency to processing and improving the quality and timeliness of patent information.

52. The use of electronic services has already achieved enormous efficiencies, but greater cooperation is needed between national Offices and the International Bureau to unlock their full potential. Systems and standards exist for exchanging most of the information concerning the processing of international applications in near-real time and in machine readable formats. However, they are not yet implemented or used to the extent necessary to take international cooperation to its next level. 70 national Offices use ePCT services or provide their own electronic services which are compatible with the ePCT services to a greater or lesser extent. Yet, electronic processing across the whole of the international phase remains out of the reach of most applicants. Further, most of the post-filing services which are used in practice are based on upload and exchange of traditional documents, mostly in an image format (PDF), which eliminates postal and scanning delays but does not fundamentally improve the procedures as a whole.

53. The records which are available to applicants and other Offices relating to the processing of international applications at most receiving Offices and International Authorities are incomplete and not necessarily up to date, limited to only those documents which have been transmitted to the International Bureau.

Key Issues for the PCT International Phase

54. To unleash the full potential of electronic tools and services, key issues which should be further considered include:

- Processes should be optimized for the 95 per cent and increasing of electronically filed applications, while continuing to support the need to file and process paper where necessary.
- More workflows should be initiated by self-service arrangements, where data is entered just once, at the earliest stage practical (whether by the applicant or by the Office which is competent for a particular function). Any required checks should be performed as soon as possible. Ideally, most data passed on to other interested parties should be in machine-readable format and be validated electronically before it is ever officially submitted to the file.
- Within the limitations of the Treaty, it may be desirable to review the functions to be performed by different Offices to ensure that tasks are performed quickly and consistently. This might involve a review of some of the functions traditionally performed by the International Bureau, which might change as the result of data entry by applicants or receiving Offices; a review of some of the functions traditionally performed by receiving Offices which, as a result of new electronic tools and services, might benefit from being centralized at the International Bureau; and a review of other services which might be fully automated, under the responsibility of the relevant competent Office and only brought to the attention of staff where problems need to be resolved. Ideally, the work of both receiving Offices and the International Bureau should be able to move away from checking for basic formalities errors and more towards giving practical assistance to the application process.
- Unpublished data should be held and processed securely, while ensuring that all Offices involved in the international phase processing or early national phase entries work with consistent and up-to-date information. Published data should be made available as quickly and freely as possible, but with great care to its accuracy and integrity.
- Applicants should be able to both view files and data and communicate electronically with all the Offices involved in processing their international applications throughout the international phase (and into the national phase), whether those Offices are “their own” national Offices or Offices located on a different continent.
- The application body formats should be optimized to allow more effective disclosure of technical information. Current discussions surround XML formats to support availability of the full text of the application and chemical and mathematical formulae and color drawings to allow photographs and more modern diagrams where this is useful. However, vector graphics, 3D graphics, videos and other forms of disclosure might in principle be considered as well.

55. To support the above goals, the normal assumption should be that the applicant or Office responsible for an action should enter all relevant data in a consistent, machine-readable format and that the data should be immediately available, not only for the record but to support any further actions which other Offices need to take as a consequence. Underpinning such an approach is a need for the various systems used by applicants, national Offices and the International Bureau to become more sophisticated in their ability to share functionality and

data, and ePCT is foreseen as a significant enabler of this. National Offices, in their roles as receiving Offices, International Authorities and designated Offices, should review their means of sending and receiving data to ensure that they are appropriate to current needs, especially when they act for applicants in many different countries. The remaining paper document exchanges between Offices should be replaced with electronic exchanges of documents and usable data. Offices should consider the possibilities of web services to allow near-real-time exchange of certain documents and data instead of the use of batches in which documents are in some cases sent only weekly.

56. The further-reaching goals imply a significant effort in identifying new workflows, defining data standards and implementing effective data validation systems. A strong commitment to “quality at source” is required so that data entered can be made available quickly without fear of errors propagating – much of the work currently performed by the International Bureau is essentially checking for issues which are not handled reliably or consistently by different receiving Offices. The expected benefits would be not only more efficient processing, but reduced errors (which can be very difficult and costly to correct for Offices as well as applicants if not identified and dealt with immediately) and improved patent information services. This would offer third parties and designated Offices a wider and more accessible range of information, including the possibility of most information being available in formats which are either language-neutral or else able to be machine translated, in addition to the human translations which are provided.

Non-PCT IT Platforms

57. In addition to ePCT browser-based services, PCT-EDI⁴, Patentscope and Patentscope Web Services, all of which allow sharing of information directly relevant to the international phase processing of an international application, the International Bureau offers a number of other services to assist the work of national Offices.

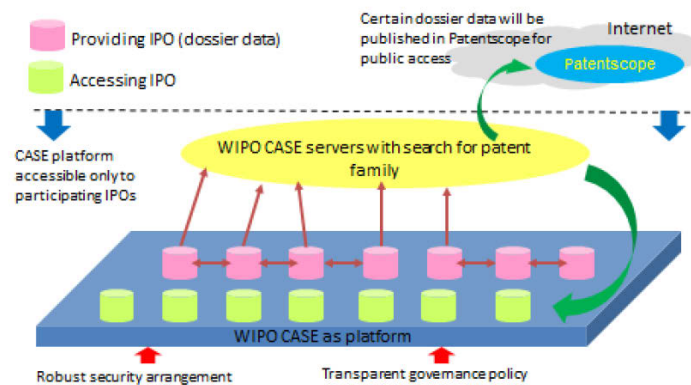
58. The WIPO Digital Access Service for Priority Documents (DAS, also known as PDAS) offers a secure means for transmitting priority documents (which are usually unpublished national applications) between Offices at the request of the applicant. The service currently has 11 participating Offices and, being supported by PCT-SAFE and closely integrated into ePCT, is greatly used by applicants at some of those Offices for PCT purposes. However, it requires wider membership to achieve its potential for its originally intended Paris route purpose.

59. IPAS provides national Offices with a means for automating national processes for patents, utility models, industrial designs and trademarks, which includes options for sending national phase information to the International Bureau as well as for retrieving on demand documents required for national phase processing of published international applications.

60. The WIPO-CASE system offers Offices the opportunity to see search and examination results from equivalent applications in other Offices, including the national phase processing of international applications. While it is always hoped that the international search is of a high quality and reveals all the most relevant prior art, CASE offers the opportunity to ensure that relevant prior art found at later stages, during the national phase processing of international applications, can also be taken into account, minimizing the risk of granting invalid patents.

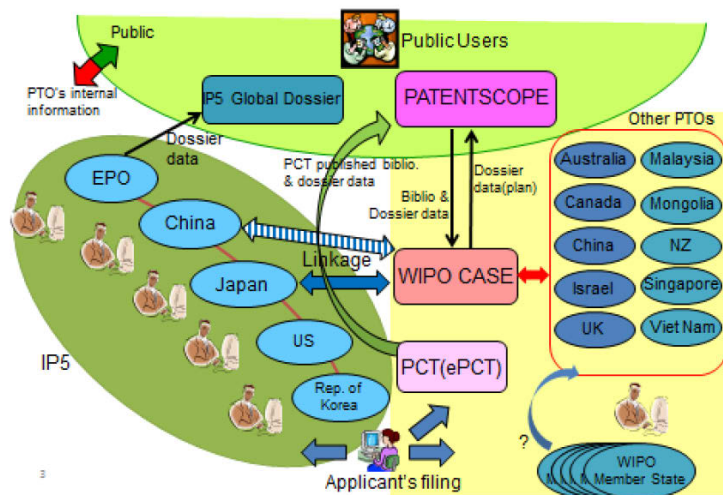
⁴ PCT Electronic Data Interchange – a secure electronic service used for the transfer of documents between the International Bureau and many national Offices’ automated systems, typically on the basis of daily or weekly batches.

Figure 16: Access to WIPO-CASE



61. The WIPO CASE system is integrated with information from Patentscope and from the Global Dossier service run by the IP5 Offices. Wider use of the service by national Offices will significantly increase the benefits available to all users.

Figure 17: Relationship of WIPO-CASE with Global Dossier



FINANCIAL ISSUES

Fee Structure

62. The international filing fee presently has, in essence, three components: a main fee, a page fee payable for each page of the application over 30 and reductions of various levels which are available for filing in electronic form and to applicants from countries which meet certain criteria (primarily developing countries).

63. As noted above, the typical international filing fee paid by applicants is presently around half (or a third, adjusted for inflation) of what it was in the mid-1990s. The efficiencies which have been achieved at the International Bureau in processing mean that this remains affordable for the present. However, a number of issues may need to be considered:

- When 95 per cent of applicants pay a reduced fee (because they benefit from electronic filing-related fee reductions), the “normal” fee is no longer normal. The original objective of encouraging electronic filing has been accomplished and the benefits to applicants of electronic filing are such that few if any applicants would return to paper filing even if the fee levels were the same. A readjustment of the levels might be proposed in the coming years, but is not yet urgent.

- The highest level of reduction for electronic filing (300 Swiss franc for filing in XML format) is offered to achieve a service-oriented goal of being able to provide 100% accurate full text application bodies for the benefit of designated Offices and patent information providers, rather than because they are cheaper to process than filings in PDF format (provided that the bibliographic data from the request is in XML format). While XML filing tools are being improved and this route promoted, financial projections assume a gradual move towards XML.
- While the “typical” international filing fee is significantly lower than the levels in the mid-1990s, the rate is greater than would have been paid for the (old) basic fee and up to four designation fees. This can be seen as a small disincentive to use the system when intending to enter the international phase in only a small number of countries, particularly if the applicant is certain of the countries where protection will be sought and does not need to prepare translations. In principle, it would be desirable to ensure that the system is valuable to *any* applicant considering international patent protection. However, given that processing costs are now almost entirely independent of the number of designations or national phase entries, it is difficult to see how this can be affordably achieved by means of a meaningful fee incentive based on limitation to a small number of designations.

64. Regarding the other fee components, now that few paper copies are printed and mailed, the processing cost of lengthy international applications for the International Bureau is only marginally greater than for short ones. However, there is a public policy value in encouraging disclosures to be concise, rather than burying the important information in a large volume of less relevant text. Consequently, while there may be scope for making adjustments to the extent to which the per page fee component applies to the PCT request form, it is desirable not to make any fundamental reforms to this part of the fee.

65. In the case of the reductions for certain applicants from certain countries, the method for determining the States to which the benefit applies has only recently been updated and given its own review cycle – the principles therefore appear to be agreed for the short to medium term. Following a proposal by the Delegation of Brazil, an analysis has been prepared, for consideration by the PCT Working Group at its May 2017 session, of the effect of various possibilities for extending similar discounts to some or all universities and research institutes⁵.

66. In summary, the levels of fees will need to be monitored carefully and changes to the structure may be appropriate or indeed required in the future. However, in view of the sensitivity of any change and to avoid multiple sets of negotiations over different issues, it is proposed to postpone any consideration of structural change until a revision becomes necessary, for example because the projected level of use of the XML filing option suggests that the current model will become unsustainable.

Fee Payment Means, Equivalent Amounts and Reconciliations

67. As noted above, many fees are paid to receiving Offices and International Preliminary Examining Authorities with components for the benefit of other Offices as International Searching Authority or of the International Bureau. This means that many Offices are both transmitting money to, and receiving money from, other Offices with a wide variety of currencies and according to different procedures and timetables. There is a considerable amount of administrative work required to ensure that payments have been made correctly. Offices typically need to maintain financial relationships with several different Offices, even though the volumes of transactions between some pairs may be very small. It also has significant risks for all Offices in that the timing of payments from different Offices can be uncertain. For the International Bureau, in particular, the late transfer of fees from receiving Offices to International

⁵ See document PCT/WG/10/2 at http://www.wipo.int/edocs/mdocs/pct/en/pct_wg_10/pct_wg_10_2.docx

Searching Authorities increases the risk that the exchange rate has deviated significantly from that at which the equivalent amount was set, leaving the International Bureau potentially exposed to make up any shortfall.

68. A closely related issue is that payable functions (such as the filing of international applications and the submission of demands) are being hosted by the International Bureau on behalf an increasing range of Offices, but with payment still needing to be made directly to the receiving Office or the International Preliminary Examining Authority. To improve efficiency, it is important that a centralized payment service can be provided, allowing payments to be made to the International Bureau on behalf of the RO or IPEA. Consideration might also be given to the question as to whether such centralized payment of PCT fees to the International Bureau should indeed replace the current decentralized model under which fees are paid to receiving Offices, International Authorities and the International Bureau.

69. These issues are being studied with a view to beginning “netting” services, calculating total amounts payable between two Offices over a period and then exchanging only the difference. This should permit Offices to minimize transaction costs and allow the International Bureau to better control the timing of currency exchanges and optimize the rates obtained. For these to work effectively, it seems necessary to meet three key conditions:

- Fee transfers between Offices need to be made according to a more reliable timetable (for example, transfers might need to be made for transactions occurring in one calendar month by the third week of the following calendar month).
- A consistent accounting approach needs to be adopted by all participating Offices to ensure that the reconciliations of amounts can reliably be done within the necessary period of time to achieve the payment timetable, in a manner which satisfies audit requirements.
- For centralized payments, it must be clear that payment is considered legally made once the amount has been received by the International Bureau, even though the amount might only be transferred to the account of the relevant Office the following calendar month. A reliable and consistent real time notification system would be needed to ensure that the Office was aware that the relevant fee had been paid, for example, in order to trigger required processing. Where noticeable transaction fees are incurred (such as credit card transactions), it needs to be clear whether these are borne by the International Bureau, the relevant Office or added as a surcharge for the applicant.

70. At the outset, the International Bureau intends to pilot such netting arrangements on the basis of bilateral arrangements between the International Bureau and the relevant Offices. However, if the process is successful, it will need to be codified in the form of consistent Administrative Instructions and potentially in the form of Rule changes concerning the handling of fees.

QUALITY

71. For the PCT to live up to its aim to actively assist the national phase processing of patent applications and to result in higher quality patents being granted and unpatentable inventions not having patents granted, it is essential that its main work products be well designed to be useful to designated Offices, be delivered on time and be of a quality which makes them effective. The quality of the international search report is paramount; without a high quality search, the international preliminary report on patentability cannot be meaningful as its most important feature is to explain the relevance of the results of the international search to the main patentability criteria of novelty and inventive step. However, other work products are also very important and an effective result requires a joint effort by applicants and all Offices involved.

International Search Reports

72. The definition of the documents to be cited in an international search is deliberately broader than can be relevant under the national law of most Contracting States. Most notably, it is required that the international search report should cite documents according to the filing date rather than the priority date and that “earlier patent documents” should be indicated even if they would not be citable under the ISA’s national law, for example, because the cited application did not have effect or an equivalent application in the ISA’s country. This means that designated Offices should have the essential information available to take a decision on patentability according to its national law, even if it comes to a different conclusion from the ISA on the validity of any priority claims.

73. However, at least anecdotally, the quality of international search reports is not deemed sufficient by many designated Offices to rely on the search for national purposes. Some designated Offices offer a discount on national search fees to recognize that in most cases the international search *usually* allows the examiner the “flying start” on search and examination which the system is intended to provide. A few Offices dispense with the need for a national search report in the national phase of applications for which they acted as ISA. But many designated Offices give no credit to the international search report, even if it was established by themselves as ISA. This is particularly unfortunate as it adds an expense to the system which should clearly be unnecessary and gives a poor impression of the ISA’s level of confidence in its own work.

74. Since 2004, a quality framework has been in place, requiring International Authorities to have a quality management system meeting certain criteria. Since 2010, the work on consistent quality of international searches, which has for many years been addressed in the Meeting of International Authorities, was reinvigorated by the creation of a quality subgroup, seeking to address quality issues at an expert level. However, while significant steps have been made, much remains to be done to ensure that quality management systems contribute effectively to ensuring final product quality which is recognized by applicants and designated Offices as fit for the intended purpose.

75. Key issues to be considered in this area include:

- Full faith and credit by designated Offices to international search reports which they themselves established as International Searching Authority – if the producer will not stand behind its product’s quality, why should others have confidence in it?
- Can international quality metrics be identified and publicly applied? Reliable measures of the substantive quality of an individual search report are essentially impossible, but serious consideration needs to be given to whether ways can be found to provide a meaningful international indicator of overall quality of work by the Authority as a whole. Such an indicator ought to be evaluated independently of the ISA concerned in order to give broad confidence in the value of the results.
- Where quality management systems recognize problems, do Offices respond effectively to address those problems?
- Designated Offices are the key users of international search reports and international preliminary reports on patentability and should consider:
 - (i) helping to define what quality levels they expect;
 - (ii) providing incentives, such as reduced fees, which correspond to the benefits the designated Offices will receive once the required quality has been demonstrated;

- (iii) providing constant feedback to the Authority concerning the quality of the reports that it receives.

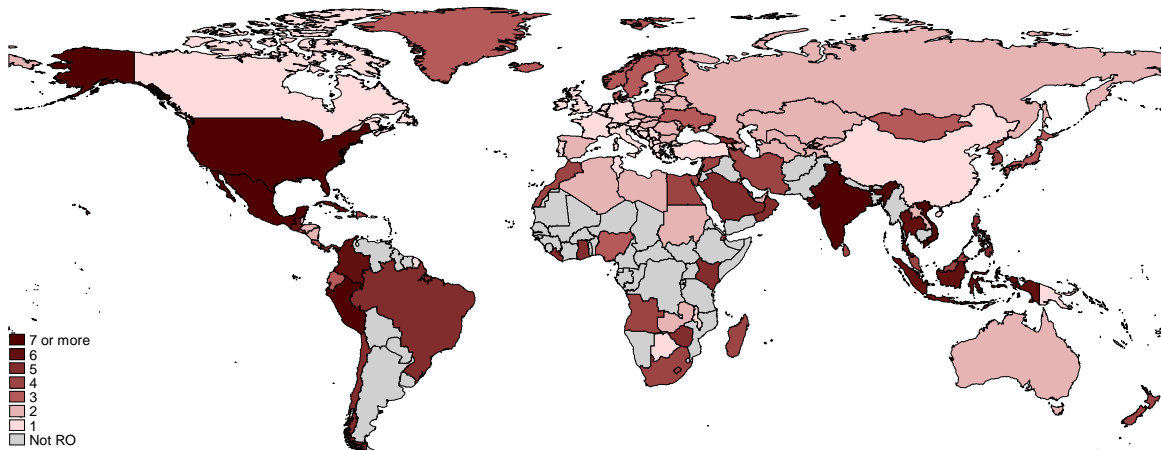
76. Of course, it will likely never be practical for any Office – ISA or otherwise – to provide a guarantee of a truly comprehensive search. Measures should continue to be taken to extend the scope and usability of search databases available to examiners, to provide cross-lingual searching and to explore ways of effectively drawing on language or technical skills in other Offices, whether by means such as the collaborative search and examination pilot⁶ or by tools to efficiently bring together the results of additional searches (such as WIPO-CASE) to the extent that they continue to be considered necessary in both the international phase (supplementary international search) and national phase.

Other International Phase Work

77. While the quality of the international search report and international preliminary reports on patentability are the most important single factors to be considered, for the system to be effective, all parts of it need to work well. For some years, the International Bureau has been publishing metrics concerning the timeliness of a variety of receiving Office, International Authority and International Bureau actions and, in general, the levels of timeliness have tended to improve. However, further work needs to be done on measurable aspects of quality by all Offices concerned, including but not limited to pure timeliness. It would not be practical to suggest that receiving Offices, many of which do not employ even a single person full time on the relevant tasks, should have quality management systems of the nature of those required for the International Authorities. Nevertheless, further consideration needs to be given to ensuring that the processes of all Offices – receiving Office, International Authority and International Bureau alike – are effective and produce results which are timely and accurate, so that they can be relied on for the later stages of international and national phase processing.

ISA Choice

Figure 18: Number of ISAs designated as competent for international applications filed at different ROs



78. One issue which is quite marked is the extent to which different PCT receiving Offices offer their applicants a choice as to the International Authority to carry out the international search and/or the international preliminary examination of international applications filed with them. Some receiving Offices only permit applicants a single choice of International Authority. Others offer many options. Some International Authorities act only for a very small range of receiving Offices, others for many. Articles 16(2) and 56(3) of the Treaty point at the vision

⁶ A third pilot of collaborative search and examination is expected to begin in the course of 2017, involving the IP5 Offices (the State Intellectual Property Office of the People's Republic of China, the European Patent Office, the Japan Patent Office, the Korean Intellectual Property Office and the United States Patent and Trademark Office) – see document PCT/WG/9/20.

shared by some of the drafters of the Treaty that there should eventually be a single International Authority to establish reports in a consistent manner for all international applications. However, with the number of International Authorities having increased from seven in 1978 to 22 at the time of writing (with more interested in seeking appointment), a single Authority now seems unlikely. Consideration thus needs to be given to how to maintain quality and consistency and whether competition between Authorities might serve a role to achieve this goal. While some Offices have a natural role for some applications as a result of language competence, a review in principle of how competence as an ISA is defined may be opportune at this stage.

Search Systems and Examiner Training in Designated Offices

79. The quality of the international search is very important, but it is only truly relevant in achieving the overall aims of the PCT if the PCT work products can be understood and used effectively by designated Offices. There is an ever-increasing demand for examiner training and access to effective search systems for smaller national Offices to ensure that the international reports can genuinely be used to improve the quality of national examination. Addressing this need is difficult, but important to the acceptance of the system as a whole and so that it can achieve the objectives of its founders.

SUMMARY

80. The past 15 years have seen enormous improvements to the PCT system driven by changes to the legal framework. However, the further progress which can be driven by such changes is limited. The key to future improvements lies in putting renewed emphasis on the “Cooperation” aim which underpins the Treaty. No doubt, changes to the legal framework will continue to play a supportive role. However, in the view of the International Bureau, it is now mainly up to the Contracting States and the national and regional Offices which perform roles under the Treaty to put further life into that “Cooperation” aim with a view towards making the PCT system fully effective as the tool to support innovation, investment and development that those same Contracting States designed it to be.

81. Key issues to be addressed in this context include:

- the need for Offices to perform their assigned roles in a timely way and to the quality necessary to allow other Offices and the public at large to trust in the work performed by them, even though this might involve costs for which the main benefits are received by others;
- the need for Offices to accept closer public scrutiny of their work;
- the need for IT systems to be developed with a view towards sharing usable information with others more effectively and to common standards, even though that may increase initial development costs and lengthen development timetables;
- the need to convince applicants, and to set incentives accordingly, to ensure that applicants play a more effective part in the “cooperation”;
- the need to provide training and assistance necessary to ensure that Offices from all Contracting States are able and willing to perform their roles effectively.

[Annex follows]

ANNEX – TABLE OF FILING FEES

<i>Date</i>	<i>Basic fee</i>	<i>Designation fee</i>	<i>Max Designation fees</i>	<i>Page fee</i>	<i>Typical paper filing fee</i>	<i>Typical fee with reductions</i>
1 June 1978	300	80		6	700	
3 October 1978	250	60		4.50	550	
1 August 1979	325	78		6	793	
1 January 1981	432	104		8	1160	
1 January 1982	527	127		11	1543	
1 January 1983	566	136		13	1790	
1 January 1984	623	150		13	2123	
1 January 1985	654	158	10	13	2234	
1 January 1986	706	171	10	14	2416	
1 January 1992	762	185 ⁷	10	15	2612	
1 January 1996	762	185	11	15	2612	
1 January 1998	650	150	11	15	2150	
1 January 1999	650 ⁸	140	10	15	2050	1850
1 January 2000	650	140	8	15	1770	1570
1 January 2001	650	140	6	15	1490	1290
1 January 2002	650 ⁹	140	5	15	1350	1150
1 January 2004	1400 ¹⁰			15	1400	1200
1 July 2008	1330			15	1330	1130

[End]

⁷ In July 1992, a “confirmation fee” was introduced, being a supplement payable in the event of the confirmation after the international filing date of designations which were made provisionally at the time of filing.

⁸ PCT-EASY filing fee reduction introduced.

⁹ Full electronic filing fee reduction introduced.

¹⁰ Distinction between PCT-EASY, PDF and XML filing fee reductions introduced.