

Meeting of International Authorities Under the Patent Cooperation Treaty (PCT)

Twenty-Fourth Session
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PCT ONLINE SERVICES

Document prepared by the International Bureau

SUMMARY

1. Development of PCT online services since the last session of the Meeting has focused mainly on:
 - (a) consolidation and improvements to back-end services for reliability, easier maintenance and supporting new services which are expected to become available over the coming months; and
 - (b) preparation of a new “look and feel” for the ePCT browser-based service, which is available in the Demo environment and should be released for live use in the near future.
2. The use of several services by Offices has increased significantly, especially for eSearchCopy, which is the subject of a separate document (see document PCT/MIA/24/10).
3. Suggested priorities for future work in relation to International Authorities are: (i) move towards delivery of international search reports and written opinions in XML format; (ii) ensure that applicants can upload documents to the International Authority; (iii) ensure that key documents from the International Authority are available online; and (iv) evaluate eSearchCopy as a means for receiving search copies in a consistent electronic format from all associated receiving Offices.
4. Several other more general priorities may also be relevant to International Authorities, including work concerning exchange of other information in XML format, development and use of web services for more efficient and timely sharing of documents and data, and improved arrangements for exchange of fees paid to one Office for the benefit of another.

USE OF ePCT

5. At the time of writing, the ePCT browser-based service is open to users from 69 Offices: 67 in their role as receiving Office, 21 in their role as International Searching and Preliminary Examining Authority and 18 in their role as designated Office. The use of the service varies from:

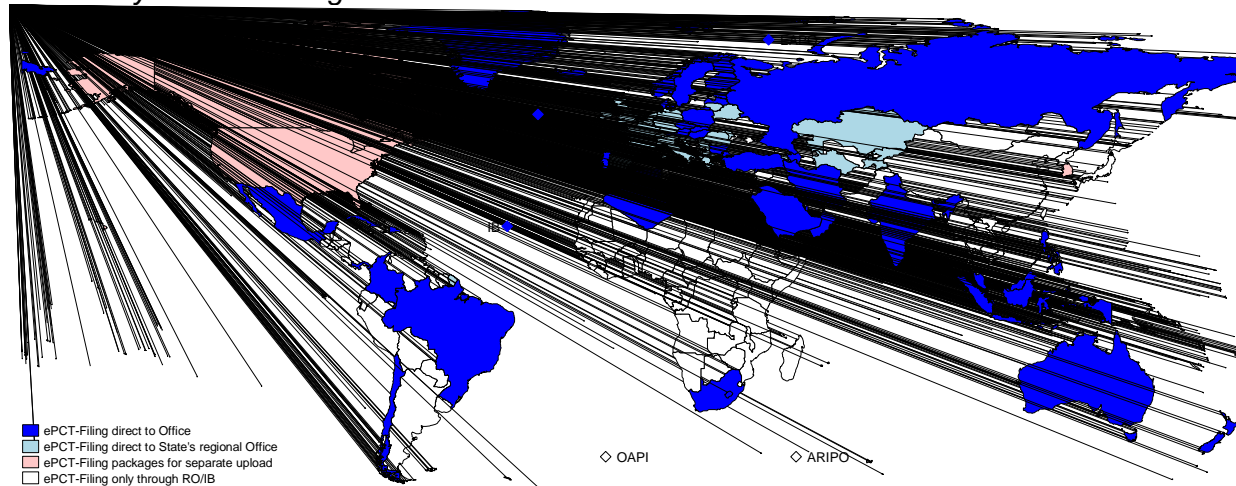
- (a) review and evaluation of options; through
- (b) back-office support to view the International Bureau's file for cases where there appears to be a problem with processing, following up applicant enquiries and transmitting documents which are particularly urgent or which cannot be handled automatically through batch transfers set up using local IT systems; to
- (c) the primary processing tool for international phase and some national phase entry functions.

6. It should be noted that use of ePCT by applicants and by Offices is essentially independent. Although some of the services for applicants can only be enabled with the cooperation of the national Offices concerned, where documents and data need to be processed by national Offices, Offices generally have the choice of delivery through the ePCT browser-based service or as batches of documents through PCT-EDI.

ePCT-Filing

7. ePCT allows for filing to 45 receiving Offices. Thirty-two of these Offices use a server that is hosted for the Office by the International Bureau, nine host a server locally to which filings are made directly, and four use packages provided for download by the applicant and separate upload to a browser-based service hosted by the receiving Office.

Availability of ePCT-Filing



The ePCT-Filing service has received good feedback as being more user-friendly and complete and up-to-date in its validations than PCT-SAFE and similar traditional filing clients. It also has the advantage that applicants using this service are automatically able to see the files of their applications through ePCT without any further action being necessary to demonstrate their right to access. The International Bureau receives the benefit of knowing that the XML representing the request is in a consistent format and has already been subject to all the automated checks it applies. The applicant can also see, prior to filing the international application, the effects of any format conversions which will be performed before international publication. This allows most potential errors to be detected and remedied before filing, reducing costs for the applicant, receiving Office and International Bureau alike.

8. ePCT-Filing now accounts for over 60 per cent of applications to the receiving Office of the International Bureau and a large majority of applications to many of the other participating Offices, in particular IP Australia (which, with the support of its applicant community, has stopped accepting applications filed using PCT-SAFE) and most of the receiving Offices which had not previously offered any form of electronic filing.

9. The International Bureau believes that having common software and standards for the filing of international applications to any receiving Office remains an important goal, despite the move away from the type of client software envisaged in the original e-filing vision set out in Annex F of the PCT Administrative Instructions towards online portals using more generic browser services. It aims to decommission the PCT-SAFE software in due course in order to eliminate the maintenance costs and the risks of divergences in standards which come from maintaining duplicate systems. This would leave ePCT as the sole “software made available for [the preparation and filing of international applications] by the International Bureau”, as referred to in the “Basic Common Standard” (Appendix III to Annex F of the PCT Administrative Instructions).

10. However, in view of practical difficulties which remain for some applicants, either because the e-filing services of several major Offices do not support the basic common standard, or else because of significant restrictions placed on use of the ePCT-Filing system by applicants, no timetable has yet been set. Ample warning will be given to receiving Offices and users before the PCT-SAFE software ceases to be maintained. Receiving Offices have been invited to discuss with the International Bureau possible ways of ensuring that direct filing using ePCT as a common tool can be enabled without undue restrictions on use as soon as possible.

ePCT Subsequently-Filed Documents

11. Documents which applicants need to submit after filing can be uploaded by applicants through ePCT to 48 Offices, including 46 in their role as receiving Office (including most, but not all, of those Offices which accept ePCT-Filings), 13 in their role as International Searching or Preliminary Examining Authority, as well as to the International Bureau. The service recognizes the time-zone of the headquarters of the relevant Office and time stamps the documents accordingly.

12. In addition to applicants using receiving Offices which do not have their own national systems for accepting international phase documents, this service is especially valuable for applicants who file the international application with one Office as receiving Office but nominate a different Office as International Searching Authority. Such applicants are unlikely to have national accounts for direct electronic communication with the International Authority. For this reason, the International Bureau strongly encourages International Searching and Preliminary Examining Authorities to consider receiving subsequently-filed documents by this route.

13. In order to get the best out of such online communications with applicants, it is also important that all applicants – especially those who are not located in the same country as the International Searching Authority – are able to receive key communications in electronic form. Applicants who use ePCT are already able to view (and can choose to be notified of the arrival of) documents which are transmitted to the International Bureau, including documents which have also been sent separately to them by the International Searching Authority.

14. International Authorities are therefore encouraged also to transmit copies of documents which are intended for the applicant but not normally transmitted to the International Bureau. The browser-based ePCT service for Offices can be used for this purpose, but is not required – the documents can be transmitted to the International Bureau in batches using PCT-EDI along with other documents. If appropriately coded, they will be automatically filed and immediately become visible to the applicant without any further action being taken by the International Bureau. It is hoped that, in due course, this type of arrangement can be offered as a complete replacement for paper transmissions, reducing printing, handling and postage costs for Offices.

15. There could be particular benefit for making the following documents which are not traditionally sent to the International Bureau available through ePCT, since a response or decision may be required within a strict time limit:

- (a) written opinions of the International Preliminary Examining Authority (PCT/IPEA/408);
- (b) invitations to pay additional fees due to lack of unity of invention (PCT/ISA/206 or PCT/IPEA/405);
- (c) documents cited in the course of the international search or preliminary examination (these would not be made available on PATENTSCOPE, but would be readily available to the applicant or designated Office in accordance with Article 20(3) without additional work or mailing costs for the International Authority) (see also document PCT/MIA/24/8 Add.);
- (d) other invitations to pay fees, request rectification, furnish documents, correct defects or specify a competent International Authority.

eSearchCopy

16. The eSearchCopy service is working well and increasingly being used for transmission of search copies in cases where different Offices act as the receiving Office and the International Searching Authority. It can offer significant benefits for International Searching Authorities which are competent for applications from multiple receiving Offices. Moreover, it is hoped to move transmission of all of the search copies from the receiving Office of the International Bureau onto this service in the near future. As such, the International Bureau encourages those International Searching Authorities which are not already using the service to consider using it. Further details are provided in document PCT/MIA/24/10.

Forms Transmitted Between the International Bureau and Offices

17. For Offices which do not wish to use PCT-EDI for document transmission, international phase Forms can be sent using ePCT from the International Bureau to Offices in their role as receiving Office or International Searching and Preliminary Examining Authority. A notification is sent to indicate that a new document is available and the Office downloads it through the browser interface.

18. This arrangement is presently used by 42 Offices. It is currently intended primarily for use by small to medium-sized receiving Offices which either use ePCT as their main processing tool, or else do not have a business case to fully automate communications between their systems and those of the International Bureau. However, it is also used by seven International Authorities. Moreover, with the development of web services, it is hoped that International Authorities will progressively implement services to move most document transmissions away from batch-based services to near real time communications.

NEXT STEPS FOR ePCT

19. *Look and Feel* – The next release of ePCT, a late stage test version of which is available in the Demo environment for review by applicants and Offices, will offer a new “look and feel”, which seeks to make the ePCT environment easier and more consistent for users. It is the first step in a program to bring all of WIPO’s online electronic services (including, but not limited to those for the Hague and Madrid Systems) into a consistent online environment. Comments on the new look and feel are welcome and will be taken into account for future releases.

20. *Identity Management and Security* – The ePCT environment needs to be highly secure. Up to now, most of the functions of the system have required users (both applicants and Offices) to log in using “two factor authentication”, involving both a password and an electronic

digital certificate. These digital certificates are expensive for the International Bureau to issue and difficult for users to manage. They represent by far the largest source of calls to the PCT eServices Helpdesk. A new identity management system which is now in use allows the next release to offer alternative “second authentication factors”, specifically one-time passwords, either generated by standard apps or sent by SMS (the alternative authentication means are not yet enabled in the Demo environment referred to above). Digital certificates will continue to be supported, but the move to the new authentication factors should reduce costs for the International Bureau while improving ease of use and maintaining or further improving the security of the system. Various additional checks, transparent to users, have been added and continue to be developed to provide further layers of protection without imposing burdens on legitimate users.

21. *Workflow and Fee Information* – In the longer term, in addition to a wide range of improvements for applicants, work is under way on improving the workflow management and fee information handling for Offices using ePCT as a main processing tool.

22. *Payments* – Another barrier to greater use of ePCT services is the issue of payments (credit card payments can presently only be accepted for international applications filed at or for services provided by the International Bureau). Work is under way to improve mechanisms for transfer of fees between Offices: a new pilot of “netting” arrangements for the exchange of international filing fees and search fees is expected to begin soon (see paragraphs 19 to 24 of document PCT/WG/9/9). It is hoped that this will also enable arrangements for the International Bureau to collect fees on behalf of national Offices and to reconcile the balances on a monthly basis with fees collected by the national Office and due to the International Bureau.

23. *Web Services* – At present, the browser-based ePCT services offer Offices the ability to use common services and data with the International Bureau, allowing significant cost savings and the certainty of real time consistency in data. The new identity management system, which allows new authentication services for users through the browser, should also allow the deployment of secure web services, allowing real time exchange of documents and data with Offices using their own IT systems for international phase processing, as well as for offering improved services to designated Offices following national phase entry.

24. *Reporting and Metrics* – It is desired to provide improved management reports for national Offices in their roles as receiving Office and International Searching and Preliminary Examining Authorities, highlighting current performance against targets and cases which fall outside expected parameters (such as search copies not delivered within specified times from the filing date or priority date). It is likely that the browser-based ePCT service will be the medium for on-demand services giving access to sensitive information, complementing or improving on the reports currently available. It is hoped to “push” overview reports, likely by email, based on the same underlying systems, encouraging Offices to access ePCT where necessary to see more detailed information concerning the specific international applications involved. Comments are welcome on the frequency or triggers for such reports, as well as the information which International Authorities would find useful.

USE OF XML

25. The fact that the bibliographic data from the request form has, for some years, been available in XML for a large majority of international applications has helped to transform the work of the International Bureau, reducing costs and eliminating the risk of transcription errors. Many of the further improvements to the PCT system which Offices and users would like to see are dependent on applicants and Offices delivering more information in machine-processable formats, the preferred one of which for most cases being XML. Interests include:

- (a) greater “self-service” by applicants;
- (b) improved validity checks for actions prior to Forms and letters being formally transmitted by Offices and applicants;
- (c) reduction of costs;
- (d) reduction of transcription errors relating to post-filing processes;
- (e) avoiding errors or unnecessary costs due to delays in receipt and data entry of key information such as withdrawals and changes of name and address;
- (f) language-independent information allowing views to be created in many different languages on demand;
- (g) the ability to provide better services to applicants and Offices, such as by customizing forms and interfaces better to the current status of the international application or providing links to cited documents and related applications;
- (h) improved patent information concerning the substance of patent applications; and
- (i) improved information on which to base metrics concerning processing.

26. XML standards have also long been available for the application body and many other international phase documents and transactions. In recent years, efforts have been made to prepare DTDs for all remaining RO, ISA and IPEA forms¹. Also, for some years, XML has been prepared and made available for almost all Forms issued by the International Bureau. However, while a few national and regional Offices have been working to move Forms into XML format, with the exception of the case of XML application bodies filed with receiving Offices which do not permit the use of PDF, relatively little use has been made of XML beyond the request.

27. Recently, however, interest in XML has been renewed at some national Offices and work is under way in several areas. The International Bureau supports this work, but with limited capacity and a need to exchange information between many national Offices, it is desirable to prioritize work so as to get high quality results in areas which can make a practical difference. To be useful, it is essential that XML information is accurate and provided at the earliest stage possible in formats which are fully consistent between different Offices performing equivalent tasks.

28. The International Bureau encourages International Authorities (as well as receiving Offices, designated Offices and other interested parties) to comment on which areas of international phase processing offer the greatest potential benefits in moving towards an XML-based system and to contribute towards designing and implementing the appropriate systems. While DTDs exist to represent the current Forms, it may well be that some interactions (notably, those where there is no need to notify the applicant or provide a conventional file record of the event) might be better handled using a simple exchange of data with a more task-oriented format. Consequently, the International Bureau is looking at the processes involved more generally. The International Bureau would also be interested in proposals for improvements to processing arrangements which would radically change or even eliminate some of the Forms as they exist today, rather than simply moving to an XML-based format for generating and transmitting Forms directly equivalent to the traditional paper ones.

¹ The DTDs are not formally included in Annex F, but are available on the WIPO website at: <http://www.wipo.int/pct-safe/en/resources>

International Search Reports and Written Opinions

29. One of the areas where XML reports can make the biggest difference in the short term is international search reports, written opinions and the international preliminary examination report. The European Patent Office, the Korean Intellectual Property Office and the State Intellectual Property Office of the People's Republic of China have begun to send international search reports and written opinions of the International Searching Authority to the International Bureau in XML format. This will bring about greater efficiencies, better quality and new value-added services in relation to international applications searched by these Authorities. Most importantly:

- (a) the XML can be imported directly into translation assistance software, which will reduce costs and improve the quality and consistency of translation (the reports will still be translated by human translators, but with no need for retyping and with a greater range of tools to assist their work);
- (b) the end results will also be made available in XML format, offering the possibility of automatic machine translation into a wide range of languages;
- (c) citation information can be extracted directly, offering the ability to generate views of the search report which include links at least to cited patent documents;
- (d) designated Offices can import the information into local systems to assist preparations for national phase search and examination; and
- (e) more information can be automatically extracted from the search reports, allowing for a wider range and improved quality of metrics, so that International Authorities can understand their searches better.

30. The work in this area has been slower than hoped because of significant differences in the ways in which the XML is created (from some Authorities, the XML is the "original" information and a PDF view generated from it; in other Authorities, the XML is created later, based on information extracted from other systems and risks having differences of substance) and because the standard is very flexible and has been implemented in different ways. However, it is expected that XML translations and value-added views of the reports will start to become available in the middle of 2017.

31. The international search reports and written opinions of the International Searching Authority now being received in XML format amount to around 65 per cent of the total. The International Bureau strongly encourages the remaining International Authorities to consider moving towards the use of XML search reports. The ePCT browser-based system includes a facility for preparing international search reports and written opinions of the International Searching Authority in XML format, but this has a number of limitations. International Authorities which are not themselves able to generate reports in standard XML formats are invited to discuss potential improved common systems with the International Bureau.

Application Bodies

32. The basic common standard (Appendix III to Annex F of the PCT Administrative Instructions) envisaged from the outset that electronic filing would allow full text applications to be filed and processed, eliminating the need for OCR of the application bodies for patent information purposes and for publication by Offices which typeset their patent publications, and thereby guarantee the accuracy of the full text patent documents.

33. However, in practice, despite a fee incentive for supplying XML, few applicants submit their applications in XML format other than to those receiving Offices which do not permit filing in PDF format. This is in part because of the difficulty of using XML conversion tools and in part because of applicants' concerns about the need to check the accuracy of the conversion. To

address the question of ease of use, the International Bureau has developed and deployed an online conversion tool, allowing applicants using ePCT-Filing to upload an Office Open XML (docx) file for the application body, which is then converted to Annex F-compliant XML. During this process, the applicant is warned of any difficulties and the original file is attached as a “pre-conversion file” in accordance with Section 706 of the PCT Administrative Instructions. Similar tools are also under development by individual national and regional Offices – it will be important to ensure that the results of conversions are consistent irrespective of which receiving Office receives the docx file.

34. The International Bureau is also working with interested Offices, including the European Patent Office, to determine how this work could be extended to allow the docx file itself to be treated as the application as filed, which may increase applicants’ confidence in the approach.

OTHER ISSUES

National Phase Entry

35. At its forty-seventh session in October 2015, the PCT Assembly approved amendments to PCT Rule 95, requiring designated Offices to transmit timely information concerning national phase entries, national publications and grants of international applications from July 1, 2017. This should greatly improve the quality and completeness of the information concerning national phase entry. A new electronic product containing national phase entry data received from all Contracting States will be made available to Offices and patent information providers. The information will be used to offer links from ePCT and PATENTSCOPE to national publications and patent processing systems as appropriate. This will also potentially allow for the deployment of more targeted services such as notifying designated Offices of events which occur after national phase entry (such as late receipt of international preliminary examination reports), or the availability through WIPO-CASE of new national search reports from other Offices.

36. Work on the proposed pilot for national phase entry (see document PCT/MIA/9/24) has been put on hold pending the implementation of the new “look and feel”. It is intended to contact interested Offices once the new look and feel has been deployed live with a view to continuing the process.

Color Drawings

37. Limited progress has been made in the area of color drawings. The discussions with Offices concerning docx filings have required further consideration of the more general issues, but it is intended soon to announce arrangements concerning the “interim solution” (see paragraphs 11 to 15 of document PCT/WG/9/19).

CONCLUSION

38. PCT online services are now relatively mature and should be easily enabled in relation to the functions performed by any Office, whether or not it has its own local IT services for international phase processing. In view of the more international role that International Authorities play in comparison to their functions as a receiving Office or a designated Office, ePCT can help offer a high level of service to applicants irrespective of their residence and whether they have accounts with the International Authority’s national IT systems.

39. The services provided to applicants and Offices through the browser-based ePCT system use the same underlying services as the processing done internally by the International Bureau. The best results for the PCT System require consistent tools to be adopted by all Offices for their international phase work and the timely exchange of documents and data, where possible in well-standardized XML formats. The International Bureau is ready to work with all International Authorities towards more effective and consistent use of online services in the processing of international applications.

40. *The Meeting is invited:*

(i) to note the developments in PCT online services;

(ii) to comment on the proposed priorities for further development by the International Bureau;

(iii) to comment on the recommendations for International Authorities; and

(iv) to identify other issues which should be given priority in PCT online services to assist the work of International Authorities.

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