

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

Twenty-First Session
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PCT ONLINE SERVICES

Document prepared by the International Bureau

SUMMARY

1. ePCT now offers a wide range of services to applicants and Offices through a secure web browser interface. The International Bureau (IB) also provides services for integration with automated Office systems.
2. If the service is to be of maximum benefit to applicants and Offices, it is important that as many Offices as possible in their capacity as receiving Office (RO), International Searching Authority (ISA) and International Preliminary Examining Authority (IPEA) agree to receive documents and data uploaded through or created by ePCT and to make timely information available in such a manner that it can be accessed by applicants and other Offices using ePCT.
3. International Authorities are encouraged to try out the services available through ePCT and to discuss with the IB effective strategies for improving the quality and efficiency of processing and the services available to applicants. An operational demo environment is available, offering the possibility of setting different Office options for test purposes.

ePCT BROWSER-BASED SERVICES

ePCT OFFICE SERVICES

4. Depending on the roles played by an Office and the job of a particular user, a user's account can be assigned the roles of RO, ISA, IPEA and/or (expected from mid-2014) designated or elected Office (DO). The user will then be able to view information on international applications in accordance with what roles the Office has for any particular international application.

5. The ePCT system currently allows Offices, amongst other things, to:
 - (a) receive new international applications from ePCT-filing (technically available, but only activated in Demo system at present);
 - (b) create records of new international applications in the IB's systems and transmit record copies to the International Bureau, irrespective of how the international application was filed;
 - (c) exchange other documents with the International Bureau;
 - (d) receive documents uploaded by the applicant through ePCT (option to be selected according to role – for example, an Office can choose to accept uploads as RO but not as ISA/IPEA);
 - (e) receive notifications to indicate that new international applications or documents are available for viewing and action by the Office;
 - (f) perform a number of “actions” (see paragraph 21, below) to transmit data to the International Bureau concerning certain RO tasks;
 - (g) prepare and transmit certain forms to the International Bureau.
6. Offices which have tried it have found the system easy to use. For two way transmission between the Office and the International Bureau, the system is very effective. In several cases, paper document transmission between the Office and the IB has been eliminated overnight.
7. While the system is an effective aid to Offices and can be recommended for live use, a number of enhancements are being prepared in order that it can be considered a near-complete system for ROs and a better aid to ISAs, IPEAs and DOs:
 - (a) More functions will be provided for assisting RO activities, such as requesting corrections and passing corrected sheets to the IB.
 - (b) Indications of fee payments will allow integration with the eSearchCopy system (see paragraphs 32 to 34, below).
 - (c) Better workflow arrangements will allow Offices to ensure that work can be prioritized and no required processing is overlooked.
 - (d) More clear views will be given of which Office (RO, IB, ISA, IPEA) is responsible for any particular document, giving more certainty over the status of documents uploaded to the system which are not traditionally the subject of transmissions between an Office and the IB.
 - (e) The official transmission of documents to applicants or other Offices apart from the IB is foreseen – at present, even though the applicant or another Office is able to view such documents if they use ePCT and applicants may even be notified of their availability, it remains necessary to send paper copies or transmit electronically by agreed alternative means.
 - (f) Services will be provided for designated and elected Offices, including for applications which enter the national phase before international publication.
 - (g) If possible, the International Bureau will offer centralized credit card payment facilities for services provided by participating Offices (notably online filing).
 - (h) More interface languages will be provided (see paragraph 19, below).

8. A proposal is also being developed to assist the process of national phase entry¹, allowing applicants to forward additional documents electronically to national Offices and to prepare additional bibliographic data required for the national phase just once in each relevant language in a manner which allows the Offices to import it directly, minimizing work for Offices and the risk of transcription errors.

ePCT-FILING

9. *ePCT-filing* allows applicants to prepare and file an international application through a web-browser client. Bibliographic data and application documents are uploaded securely to a server which is hosted by the IB but the data remains invisible to the main IB systems. Application drafts can be securely shared between different user accounts for checking and signing by different people before the international application is filed.

10. In essence, this system works like PCT-SAFE or any of the other clients compatible with the interoperability protocol set out in Annex F of the PCT Administrative Instructions, but with data being held on a secure server at the International Bureau, rather than locally. This arrangement has a number of advantages:

(a) There is no client software to install. At present, many applicants have difficulty using or updating the software because they do not have the necessary administrator rights to install the software on their machines.

(b) There is a wider range of pre-filing validations than is possible in PCT-SAFE, including the possibility of detecting problems such as color drawings embedded in PDF files and showing the applicant how the relevant page will look after conversion to black and white, prepared by the same services used to create international publications, so that they can attempt to provide better drawings at the time of filing.

(c) The validations are always up to date, since they rely on the reference data held by the International Bureau for its own processing, which can be updated immediately whenever needed (including setting future effective dates, where appropriate), rather than needing to be included in updates, typically issues quarterly and not installed by all applicants.

(d) Applicants can share draft applications and online address books effectively within teams, irrespective of their location in the world. Different levels of access rights allow the original creator of the relevant resource to keep control.

11. At time of writing, the live service is limited to filing with the receiving Office of the IB. However, technically the system is compatible with the interoperability protocol and can be used as a direct replacement for the PCT-SAFE client without any changes being needed by an Office currently operating a compatible server. Furthermore, the IB can host e-filing servers on behalf of Offices which are not able to support the necessary infrastructure and the IB is willing to discuss alternative options for Offices with different requirements. Consequently, ePCT-filing opens up the possibility of all receiving Offices offering e-filing to their applicants.

12. The ePCT demo environment is set up to permit demo filings to a range of receiving Offices, both to demo servers hosted by the relevant Office itself and to servers hosted by the IB. Further Offices can be added quickly on request.

¹ An informal draft is available from http://www.wipo.int/efiling_standard/en/pre-pfc/

ePCT POST-FILING APPLICANT SERVICES

Access Rights Management

13. After filing, an account holder is able to view any international applications for which they have access. Access is available automatically to a user filing through ePCT (and other users who were given access to the international application prior to filing) or who has embedded their ePCT user details into an application using PCT-SAFE. Various means are provided of claiming access to international applications at later stages, the details of which depend on the circumstances of the international application (whether or not electronically filed, a Rule 92*bis* change has been made, publication having occurred, etc.).

14. The first user given access has “eOwner” rights and is able to delegate “eOwner”, “eEditor” or “eViewer” rights to other users. A user may set default access rights which are automatically set on all international applications for which he is the first owner. The default rights or individually set rights can also easily be applied (individually or simultaneously) to any existing international applications in his portfolio for which he is an eOwner. This flexibility in access rights management is important for effective management of a portfolio for PCT purposes, noting in particular the issues of sharing access rights with partner agents for national phase entries.

15. The International Bureau retains the ability to temporarily or permanently close off access to international applications through ePCT, either by disabling access to an individual international application for one or more accounts, or else by disabling an entire account. Access is automatically suspended in certain cases pending review by the IB, such as on receipt of a document indicated as a Rule 92*bis* change.

Functionality

16. Users with eViewer rights for an international application are able to view bibliographic data, timelines and almost all documents on file at the IB (excluding internal IB file notes and, in future releases, internal RO, ISA or IPEA file notes, which will also be invisible to the IB).

17. Users with eEditor or eOwner rights may also upload documents or perform “actions” (see paragraph 21(a), below). Document uploads (and potentially actions in the future) may be used to transmit documents not only to the IB, but also to the RO, ISA or IPEA if the relevant Office has agreed to accept such documents either through ePCT or using PCT-EDI (see paragraphs 27 and 28, below). The system allows the creation of a demand form for any IPEA. This is transmitted to the International Bureau and forwarded to the competent IPEA under Rule 59.3, irrespective of whether the IPEA has chosen to allow documents to be uploaded directly to it from ePCT.

18. By default, users are notified both by email and using a list within the web browser environment when new documents are added to the file and have been processed, as well as when certain key time limits are approaching. The details of what is notified and how can be selected by the user.

LANGUAGES

19. At time of writing, the ePCT interface for both Offices and applicants is in English only, but the process of translation is well under way into all of the 10 PCT languages of publication. It is expected that most, if not all, language versions will be released to the demo environment in the first quarter of 2014 and will be made available in the live system once the IB is satisfied that the quality is sufficient.

20. Although the language of the interface currently remains limited to English, ePCT-filing to RO/IB already allows filings to be made in any latin language. The non-latin languages require the addition of support for dual-format (latin and non-latin) names and addresses, which should also be ready in the first quarter of 2014. Some post-filing functions (notably the Rule 92*bis* change request action) already support this dual language functionality.

DOCUMENT FORMATS

21. ePCT currently requires documents to be uploaded in PDF format (except for sequence listings, which must be uploaded in ST.25 text format). However, the IB supports a move towards full text and machine-readable formats. Consequently:

(a) “Actions” are offered as an alternative to documents wherever possible. This is the term used in the system for applicants or Office users entering data to be passed on to the IB (or in the future other Offices) as machine-readable information which can be acted on directly, instead of the recipient reading a letter and transcribing information, with the work and potential for errors involved. For a receiving Office, this might be providing details of a priority document received under Rule 17.1(a) or prepared under Rule 17.1(b). For an applicant, this might be entering the details of a change of name and address under Rule 92*bis*.

(b) Support for uploading Annex F-compliant XML application bodies as an alternative to PDF will be added during 2014.

(c) The International Bureau is testing a system for accepting upload of OpenXML documents (the default format for recent versions of Microsoft Word) and performing all necessary conversions to XML and comparison between originally filed and corrected or amended versions transparently to the applicant.

22. The service for detecting features within PDF files which can cause processing difficulties, such as color drawings, will help applicants to prepare international applications which meet the existing requirements of PCT Rule 11 and Annex F of the Administrative Instructions whenever possible. However, the very need for this tool highlights the need to review some of the restrictions, especially those surrounding color drawings. It should here be noted that even “black and white” photographs are in fact many shades of grey – from a technical point of view this is effectively the same as color.

INTEGRATION WITH AND USE OF DAS

23. Like PCT-SAFE and compatible e-filing clients, ePCT and ePCT-filing offer the applicant the opportunity to request that priority documents be retrieved from the WIPO Digital Access Service for Priority Documents (DAS). ePCT and ePCT-filing go beyond the possibilities of PCT-SAFE in that they can in many cases offer applicants feedback prior to submission on whether the request will be successful.

24. The use of DAS offers significant opportunities to improve quality for ISAs and IPEAs. At present, priority documents are frequently not available when the Authority (especially the ISA) needs to check the validity of a priority claim and reports need to indicate that they are established on the assumption of validity. Retrieval of priority documents from DAS is fully automated in successful cases and priority documents should normally be available to the IB (and in turn to the International Authorities) the day after a valid retrieval request is received by the IB. It would be therefore be highly desirable if more national Offices were to make their applications available through DAS and to work to ensure that the processes for applicants to use DAS are sufficiently simple and effective to encourage use of the system.

MACHINE TO MACHINE SERVICES

25. The web browser interface of ePCT is intended to:

- (a) give a common, secure view of international application files for Offices and applicants;
- (b) provide a means of interacting with the international application which does not require any special software to be installed;
- (c) allow ad-hoc communications to take place quickly and securely in circumstances which are not provided for by normal automated services, or where problems have occurred in such a service which cannot be fixed sufficiently quickly.

26. The browser-based service is not intended for high volume use by Offices which support their own local IT systems for international phase processes, if the download, indexing and re-upload of documents to the file of the correct international application is considered to introduce extra work or opportunities for error.

27. At present, the preferred means of document transmission for automated Offices is via PCT-EDI². Traditionally, many Offices send and receive documents in weekly batches. Where possible, the frequency should in future be increased to at least once per day in order to give more up-to-date information to applicants and to minimize processing delays. The minspec³ standard provides a means of indicating the international application number, date, language and type of document and, for certain document types, additional information. The standard includes codes for all document types conventionally shared between the International Bureau and national Offices in international phase processing and can easily be extended to add new document types as required.

28. The PCT-EDI service is simple to implement and effective for transfer of large and small volumes of documents alike. It is compatible with ePCT services delivered through the web browser in the following manners:

- (a) Documents uploaded by applicants (or in future releases, other Offices) for transmission to an Office may be delivered using PCT-EDI if so requested by the Office.
- (b) Documents sent to the IB by an Office using PCT-EDI will (unless the document type is one which limits access rights) become visible to the applicant immediately on import by the IB.
- (c) In addition to images of documents, PCT-EDI transfers may contain data, for example in XML format. Such transfers could trigger fully automated processes in the same way as “actions” through the web browser interface (though at present, no such processes are in place).

29. However, the fact that it is a batch service means that there is no opportunity for real-time interactions. For ePCT services, this means:

- (a) There will always be a delay before the recipient Office can respond to documents or data transmitted, no matter how urgent the matter.

² PCT-EDI is an easily automated secure FTP service, transmitting and receiving documents in simple structured batches. It can be operated using standard SFTP software. Details can be found at <http://www.wipo.int/patentscope/en/pct-edi/>.

³ PCT minimal specifications for transmitting documents to the International Bureau, available from the above address.

- (b) There is no immediate confirmation of receipt of a document by the Office.
- (c) There is no possibility for immediate feedback of information important to effective processing, such as automatic validation of data sent or information about the status of the international application concerned.

30. The last, especially, is a major barrier to eliminating mailing of paper, since it will be essential for an Office hoping to rely on ePCT for official delivery of a document to receive instant feedback telling them when this is not possible and they need to send paper if the system is to give sufficient confidence of timely and reliable delivery in all cases. It also reduces the scope for effective collaboration with national private file inspection systems.

31. Consequently, the International Bureau is willing to develop “web services” for both Offices and applicants, in effect giving secure, automated, near-real-time equivalents of the services available through the web browser interface. The development of such services will depend on Offices clearly indicating which services they would be prepared to implement in this way and according to what timetable.

eSEARCHCOPY

32. It is proposed to offer a service where the IB prepares and transmits search copies electronically to the ISA on behalf of the RO where both RO and ISA so agree. The principle of the service is as follows:

- (a) The RO transmits the record copy and related documents to the IB as usual, though potentially including documents which may previously only have been sent to the ISA, such as copies of sequence listings provided only for the purpose of international search.
- (b) The RO sends information concerning the payment of search fees to the IB.
- (c) When the IB has received all the *essential* documents (such as record copy and any translations required depending on the language of filing and the languages accepted by the ISA) and a notification that the fees have been paid, the relevant documents are transmitted to the ISA, using the record copy to form the basis of the search copy.
- (d) The IB will follow up periodically with the RO in cases where the record copy has been received but other essential documents remain outstanding, or where no indication of payment of search fees has been given and no indication has been given that the international application is considered withdrawn.
- (e) If further documents of significant types (such as substitute sheets or powers of attorney) are received from the RO before the ISR is established, these are forwarded to the ISA in additional batches.

33. A trial of the service in parallel with traditional transmission of the search copy is under way with 4 ISAs (AU, EP, KR and US) based on information held by the IB in relation to filings from a limited number of ROs. Sample batches of data have also been sent to a number of other ISAs for evaluation and can be prepared for other ISAs on request.

34. Once the ISAs involved in the trial have confirmed that the service is working properly, a circular will be sent to ROs and ISAs proposing a method of introducing it for live use between any sets of ROs and IAs which wish to take advantage. ePCT services for ROs will be extended to provide an “action” for ROs to record the payment of fees at the same time as or separately to transmission of the search copy, removing the need for Offices using ePCT for that purpose to prepare separate lists of fees paid.

IMPROVED FEE HANDLING

35. Most of the Offices which act as ISAs also act as ROs and need to handle a web of payments and receipts to and from the International Bureau and the other Offices which act as competent ISAs for their RO and ROs for which they are a competent ISA. The European Patent Office, the United States Patent and Trademark Office and the International Bureau are beginning a pilot from January 1, 2014 of a system where the fees to be transferred between the three Offices are all paid via the International Bureau.

36. This allows the book-keeping concerning the payments and receipts required to be done in a more consistent manner and for the number of actual payments made and number of different bank accounts involved to be minimized. The Offices thus seek to reduce the administrative work involved in ensuring that the correct payments are made and to minimize losses resulting from transfer fees and currency exchanges.

37. If this pilot is successful, it is intended to offer the same scheme to a wider range of Offices. If combined with the improved information on search fee payment required for the eSearchCopy service, this should involve considerable benefits for Offices with few or no additional costs.

OPPORTUNITIES AND PRIORITIES FOR INTERNATIONAL AUTHORITIES

38. The ePCT system offers a number of opportunities which can help International Authorities to improve efficiency and deliver better services to applicants and designated Offices:

(a) Search copies should be delivered faster and with a higher quality, especially of drawings, due to improved pre-filing checks, faster resolution of outstanding defects between applicant and RO, electronic transmission replacing mailing of paper and, in some cases, an additional printing and rescanning step.

(b) eSearchCopy will allow electronic delivery of search copies to ISAs from a single source and in consistent format and irrespective of which receiving Office was used.

(c) Delays during international search and preliminary examination will be greatly reduced if applicants can both read and reply to official notifications using ePCT – this will be particularly important in cases of lack of unity of invention where the applicant is resident in a different country from the International Authority.

(d) Availability of information on the status of processing reduces telephone queries and improves customer confidence.

(e) The risk of loss of documents is essentially eliminated. Active delivery (download of the document by the applicant) can be confirmed and, if necessary, systems could be set up to warn of documents which failed to be downloaded within a certain period.

(f) Postage costs can be greatly reduced, especially when the system can be used as the sole means of delivery of documents to applicants who so request.

(g) Delivery of copies of cited documents to applicants through ePCT would not only eliminate the large cost of printing and mailing sets of documents which are often very bulky, could also make the documents automatically privately available to designated Offices. This would remove the need for ISAs to manually prepare and transmit further copies of documents to DOs to meet obligations in Article 20(3).

39. To help achieve these benefits, it is recommended that all International Authorities:
- (a) start accepting documents uploaded through ePCT as soon as possible, either through ePCT or PCT-EDI, as preferred by the Authority;
 - (b) where using PCT-EDI, increase the frequency of transmission of batches to the IB and processing of batches from the IB to be at least daily where this is not already the case (and request the International Bureau to transmit documents daily).
 - (c) test the eSearchCopy system and indicate that they are willing to accept search copies from that source as soon as possible from any RO for which they are a competent ISA;
 - (d) seek to improve their internal systems towards allowing them to establish and transmit international search reports, written opinions and international preliminary reports on patentability in XML or suitable alternative machine-readable format;
 - (e) investigate options for transmitting documents of key relevance to applicants, designated Offices and third parties (such as copies of cited documents, written opinions of the IPEA, invitations to pay additional fees and search strategies) to the IB and discuss appropriate arrangements for coding and handling with the IB;
 - (f) investigate possibilities for transmitting additional machine-readable information (such as citation information or current RO/ISA/IPEA processing status details) to the International Bureau.
40. It is observed that routine provision of the types of document and information referred to here would also go a long way towards meeting the underlying data requirements of the European Patent Office's PCT Metrics proposals (paragraphs 25 to 28 of Annex II to document PCT/MIA/20/14 and discussions in the quality subgroup) and the Japan Patent Office's PCT Kaizen proposals (document PCT/WG/6/14).
41. The International Bureau will be pleased to receive suggestions from International Authorities of further ways in which the ePCT or other IT systems could be improved or used more effectively to assist them in performing their duties under the PCT effectively, or in giving better services to applicants, designated Offices and third parties.

LEGAL ISSUES

42. The development of the ePCT system has highlighted a number of areas where the legal framework (Regulations, Administrative Instructions and associated guidelines and Office practices) might be reviewed to ensure that online services reach their potential without introducing new pitfalls for applicants or Offices. These include:

- (a) **Signature requirements:** Documents prepared by a responsible agent are often submitted by a paralegal. In many cases, processing can be faster and more accurate if data prepared by the applicant is used directly, which cannot be done from scanned images of traditional letters including "wet" signatures. In principle "/x/" is a valid digital signature according to the current Annex F, but this does not include – and is not necessarily accompanied by – information on whose signature this represents. It is necessary to ensure that the rules and associated technical systems concerning digital signatures allow documents to be signed and delivered easily and effectively in an electronic environment and to understand whose signature has been applied.

(b) Procedures which no longer make sense: Some Rules, Forms and procedures may make little sense in an electronic processing arrangement. At a minimum, the Administrative Instructions should be reviewed to identify matters such as Forms which can be omitted if the relevant information is sent in an accepted alternative manner and there is no need for a formal notification to be made to the applicant. Ideally, opportunities should be sought to set up radically more efficient processing procedures to apply in electronically filed and processed cases, while ensuring that applications which are filed on paper are still treated effectively and without delay.

(c) Safeguards against postal delays and *force majeure*: The existing rules with safeguards for applicants against missing deadlines are built around paper systems, with provision for matters such as delay or loss of a document in the post (Rule 82) an Office being entirely closed or ordinary mail not being delivered on a particular day (Rule 80.5). Consideration needs to be given to whether additional protection is necessary and appropriate for cases where delivery of documents is possible because the relevant IT systems are unavailable, whether as a result of the systems themselves being down or because of a widespread loss of internet connectivity.

(d) Time zone for filing: Applicants in eastern time zones sometimes at present transmit applications to ROs in western time zones in order to benefit from “yesterday’s” filing date when it is past midnight in their local jurisdiction. When the relevant Office is not competent to receive an international application from that person, the application is transmitted to RO/IB under Rule 19.4, which can introduce delays, costs and possibilities for errors and misunderstandings. It may be desirable to overcome this in either of two ways: (i) empower RO/IB to accept electronic filings based on the most westerly timezone within the PCT (that is, the one which results in the earliest date); or (ii) empower (or possibly better, require) *any* RO to accept electronic filings based on that timezone.

(e) Dates of documents visible in different Offices: Where documents “belonging” to an Office other than IB are hosted and visible in ePCT, depending on how they are listed, there may be anomalies in dates. For example, in principle an international application could be electronically filed in an eastern time zone on April 1 local time, processed quickly and the record copy transmitted to the International Bureau on March 31 Geneva time and a Form 301 issued “the day before” the international filing date. This is more likely to be a problem of confusion for applicants looking at ePCT screens and in IT systems with data checking expecting only dates after the international filing date to be permitted. However, it may be useful to check whether any legal issues could arise.

(f) General changes in technology: Annex F of the Administrative Instructions was written to promote a vision of a single piece of client software which would reside on applicants’ machines and permit the transmission of documents relevant to any stage of processing of both national and international patent applications to any Office. While most of the statements concerning underlying requirements concerning security, reliability, interoperability and consistency remain true today, the technical means available to achieve a particular goal have advanced. The general tide is towards more fully online systems which do not require special client software and for the need for standards to be based more around file and package formats and services to be provided. The Administrative Instructions and particularly Annex F require revision to more clearly cover newer means of achieving the desired goals.

(g) Considerations around document formats as highlighted already in paragraphs 21 and 22, above.

GETTING STARTED WITH ePCT AND eSEARCHCOPY

43. International Authorities wishing to discuss ePCT, the eSearchCopy system or any related improvements to online services with the International Bureau are invited to contact the PCT International Cooperation Division at pcticd@wipo.int.

44. The demo ePCT environment is available at <https://pctdemo.wipo.int/epct>. Links for creating a WIPO account and obtaining and uploading a WIPO digital certificate can be found on that page. EP, KR and some JP certificates (only those issued by SECOM) can be used instead of a WIPO certificate if desired. Separate accounts will be required for testing applicant and Office services since accounts which have been authorized for Office use are not able to access applicant functions.

45. The Meeting is invited to comment on the issues set out in this document.

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