E

WIPO

PCT/A/33/3
ORIGINAL: English
DATE: August 20, 2004

WORLD INTELLECTUAL PROPERTY ORGANIZATION
GENEVA

**INTERNATIONAL PATENT COOPERATION UNION
(PCT UNION)**

ASSEMBLY

Thirty-Third (19th Extraordinary) Session
Geneva, September 27 to October 5, 2004

STATUS REPORT ON PCT INFORMATION SYSTEMS

Document prepared by the International Bureau

INTRODUCTION

1. At the thirty-second Session of the Assembly of the PCT Union, held in Geneva from September 22 to October 5, 2003, status reports were provided on the IMPACT (Information Management for the PATent Cooperation Treaty) project (document PCT/A/32/3), as well as on the PCT-SAFE (Secure Applications Filed Electronically) project (document PCT/A/32/7). The present document reports on developments that have occurred in both areas since the issuance of these status reports and covers the following topics:

I. Developments affecting the electronic communication by the International Bureau of PCT documents to Offices of PCT Contracting States ("PCT Offices");

II. Developments affecting electronic filing (including PCT-SAFE) at the International Bureau and at the Receiving Office of the International Bureau (RO/IB);

III. Developments affecting the electronic processing of international applications by the International Bureau; and

IV. Anticipated future developments affecting PCT Information Systems.

I. ELECTRONIC COMMUNICATION OF PCT DOCUMENTS

2. One of the IMPACT project deliverables was an electronic system for communication of PCT documents to Offices (now referred to as PCT COR for "Communication on Request"). The status report provided to the previous Session of this Assembly (PCT/A/32/3), explained that this system already at that time was "in daily use internally by the International Bureau" and that "preparations were underway for [its] Internet-based document ordering functions to be delivered to a PCT Office for pilot testing by that Office." The subsequent paragraphs of this report will describe:

(a) The benefits which this system has generated to date for Offices and the International Bureau;

(b) Current developments with respect to the deployment to Offices of the system's Internet-based document ordering functions; and

(c) Further automation of the PCT document communication process: PCT Electronic Data Interchange.

Benefits of the System for Offices and the International Bureau

3. It is recalled that, since the entry into production of the system, the International Bureau's manual and paper-based methods for communicating PCT documents to Offices have been replaced by an automated system of document scanning and reproduction. As a result, the International Bureau is now able to communicate PCT documents to Offices not only on paper, but also on CD and DVD. Furthermore, the International Bureau is now also able to support the requirements of Offices which require high volumes of documents on request.

4. The document communication system has been used internally at the International Bureau since February 2003 and its entry into production was announced officially to Offices through Circular C.PCT 907 of May 9, 2003.[1]

5. More than one year of practical experience shows that the system has fundamentally changed the PCT document communication process, rendering it much more efficient and user-friendly. Some of the more important benefits which the system has generated for Offices and the International Bureau are highlighted below. While these benefits affect only a part of the International Bureau's operations, they are encouraging in terms of what might be achievable in other areas of the International Bureau's work through increased automation.

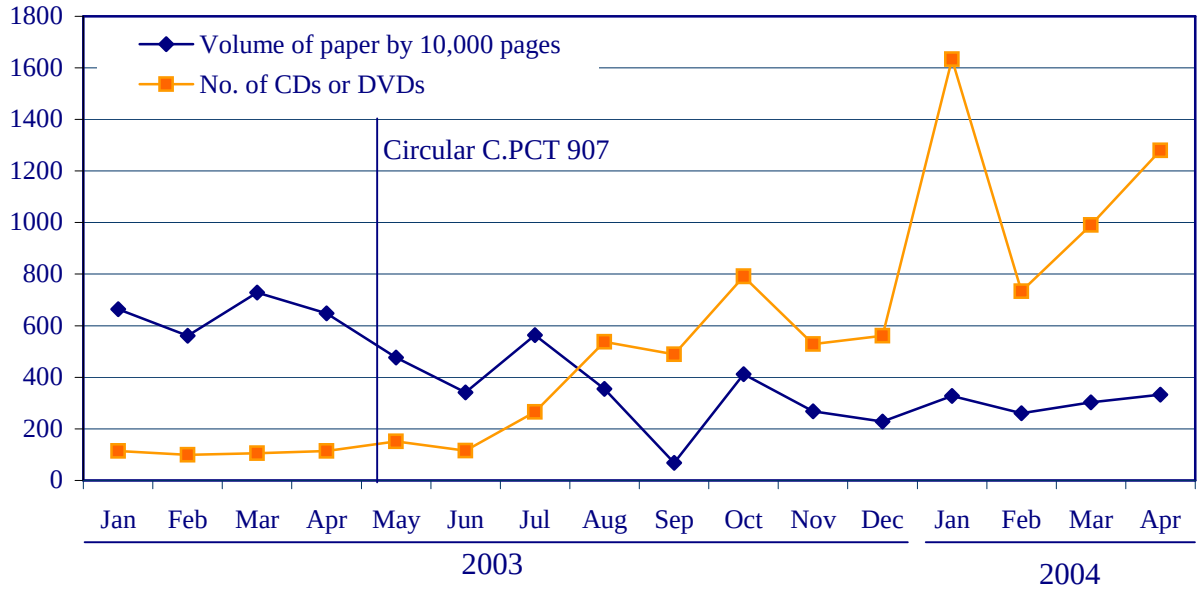
(i) Evolution Paper/CD + DVD

6. Many Offices have taken advantage of the possibility offered by the system of receiving PCT documents on CD/DVD rather than paper. To date, approximately 72% of Offices have elected CD/DVDs as the preferred means of communication. It is clear that this is a positive development, as it alleviates the considerable logistical burden of having to deal with large volumes of paper, both for the Offices involved, as well as for the International Bureau.

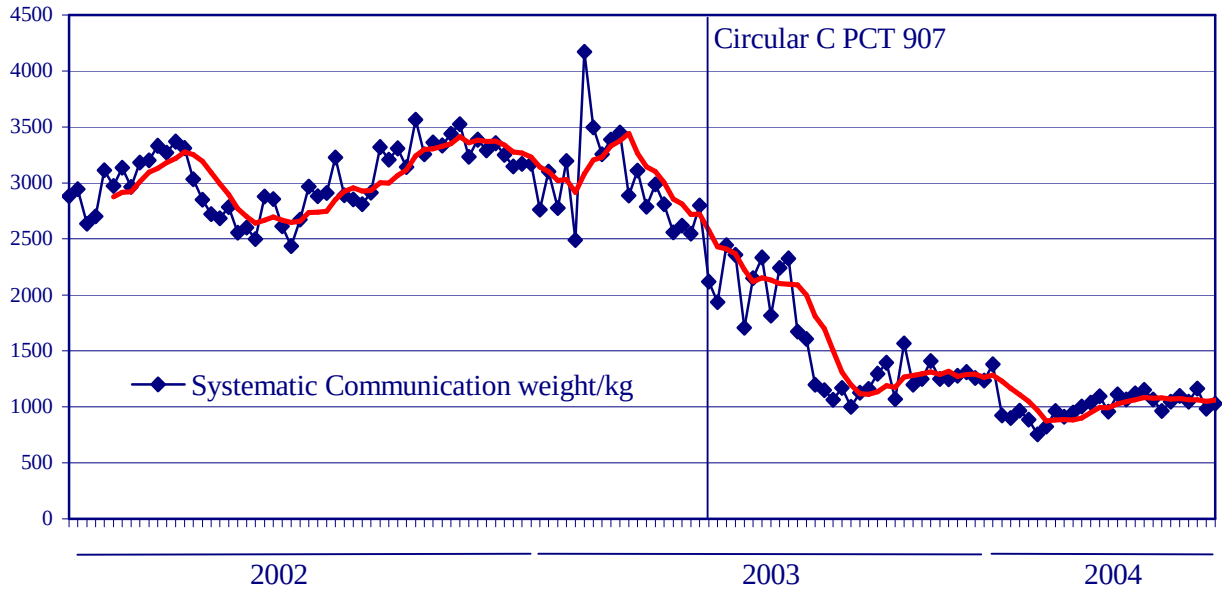
---

[1] An interim report on the use of the system was contained in Circular C.PCT 962 of December 15, 2003.

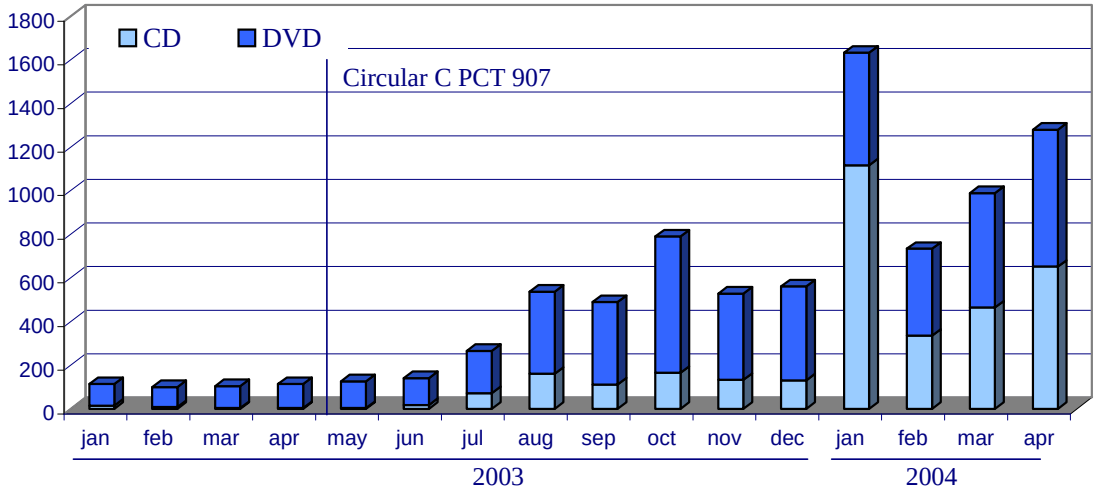
7. The chart below illustrates the evolution of the relative importance of paper compared to CD/DVD as a means of communicating PCT documents. Clearly, since the issuance of Circular C.PCT 907 announcing the entry into production of the system, reliance on CD/DVDs has increased, whereas the importance of paper has diminished.



8. As a further illustration of the same trend, the chart below compares the evolution of the volume of paper shipped for purposes of the systematic communication of PCT documents to Offices in 2002, 2003 and the summer of 2004. The volume of paper shipped has decreased significantly since 2002 and appears to have stabilized at around 1,000 kgs per week. Considering that, previously, the International Bureau transmitted more than 3,000 kgs of paper per week, the system has led to a reduction of more than 100 tons of paper shipped per year. It should be noted that the shipment of the remaining volume reflects the desire of certain Offices to continue receiving paper.



9. Corresponding to the decrease in paper shipped, there has been a large increase in the number of CD/DVDs produced by the International Bureau for the purpose of document communication, as reflected in the chart below.



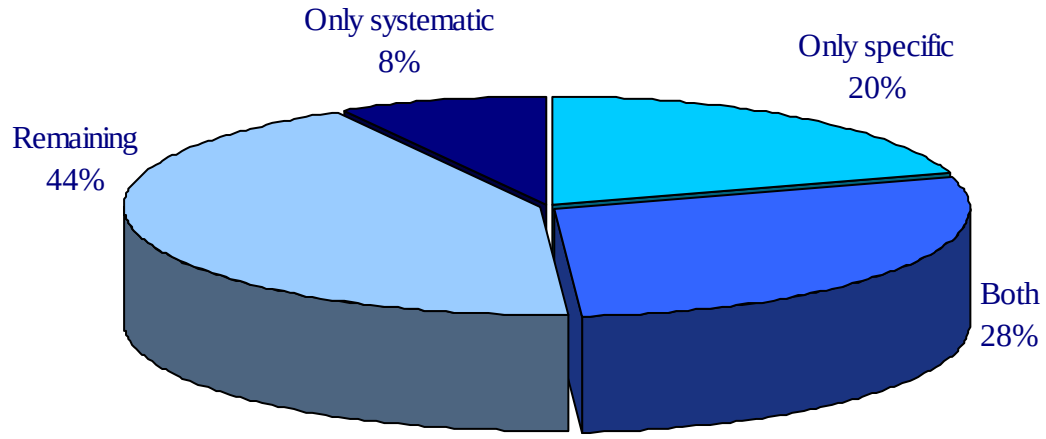
(ii) Document Communication Process Management

10. Prior to the system, there existed no database of PCT documents capable of providing systematic management information to the International Bureau on its document communication process. During this period, the process consisted essentially of staff retrieving files from the International Bureau's storage areas, making photocopies of documents requested by Offices from those files, and transmitting those photocopies to the Offices concerned. While certain stand-alone software applications had been developed to manage certain aspects of the process, this was not an integrated database-driven system. With the advent of the new system, the management of the document communication process has become more sophisticated, permitting higher quality and quicker feedback to the

International Bureau and Offices regarding the completeness of the International Bureau's document collection and the status of related document orders.

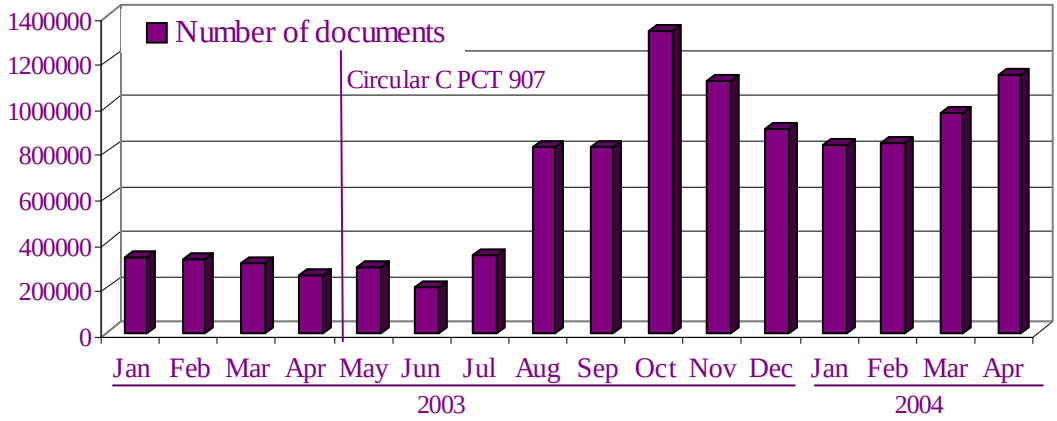
(iii) Communication on Request and Systematic Communication

11. Contrary to what was possible in the past, the system now allows all Offices to choose whether they wish to receive documents systematically or only upon request. The chart below reflects Office choice in this respect. Eight percent of the Offices wish to receive all PCT documents systematically, 20% wish to receive PCT documents only on request and 28% wish to receive some documents systematically and some others on request only.



(iv) Total PCT Documents Communicated

12. The availability of the system also has led to an increase in the total number of PCT documents requested from the International Bureau by Offices, as illustrated in the chart below. Because the document communication process now is largely automated and the documents can be communicated on CD/DVD, the International Bureau is able to absorb this increased workload without undue difficulty.



(v) International Bureau Response Time

13. Another measure of the International Bureau's performance in the area of document communication is the amount of time that lapses between the receipt by the International Bureau of a request by an Office for documents and the transmission of those documents by the International Bureau to the Office concerned.

14. In the case of a specific request by an Office for documents, the International Bureau typically required 10 working days to process this request prior to the availability of the system. Because many aspects of the document communication process are now automated, the International Bureau has been able to halve its response time, and now, typically, document requests can be honoured within 3 to 5 working days. Increased use by Offices of certain advanced features of the system, some of which have become recently available (see paragraph 21 for more details), should further reduce the time required between an order for and the receipt of documents by Offices.

15. In the context of Systematic Communication, the system has had little impact on the prompt transmission of documents by the International Bureau, as, prior to the availability of the system, the documents concerned were already prepared for transmission at such time to ensure that they could be shipped immediately upon publication.

16. While undoubtedly there is still a small minority of instances where the International Bureau is unable to communicate a document to an Office as promptly as it should (mostly because it has not yet received the document from the originating Office), the system clearly has had a positive impact on the International Bureau's performance in this area.

The System's Internet-based Document Ordering Functions

17. The International Bureau's electronic system for the communication of PCT documents also includes a number of Internet-based document ordering functions permitting Offices to directly place orders for PCT documents through the Internet. Orders for documents can be entered manually by Offices into the system through a Web browser interface, or they can be uploaded into the system via an Extensible Markup Language (XML) file referencing the documents to be ordered (such file to be created by the Offices off-line).

18. At the time of the status report provided to the previous Session of this Assembly (PCT/A/32/3), preparations were underway for these Internet-based functions to be delivered to certain Offices for pilot testing. This pilot phase, involving four Offices, started in August 2003 and was concluded successfully in April 2004, after which the official entry into production of the functions in question were announced by way of Circular C.PCT 988 of May 14, 2004.

19. Since then, a process has been initiated at the International Bureau to deploy these Internet-based functions to all interested Offices. To date, the following Offices use these functions for ordering PCT documents from the International Bureau directly through the Internet:

- Australia
- Brazil
- Bulgaria
- Canada
- Eurasian Patent Office
- Hungary
- Israel
- New Zealand
- Portugal
- Republic of Korea
- Singapore
- Spain
- Sweden
- United Kingdom

20. The International Bureau's goal is to deploy the Internet-based functions of the system to remaining interested Offices by the end of 2004.

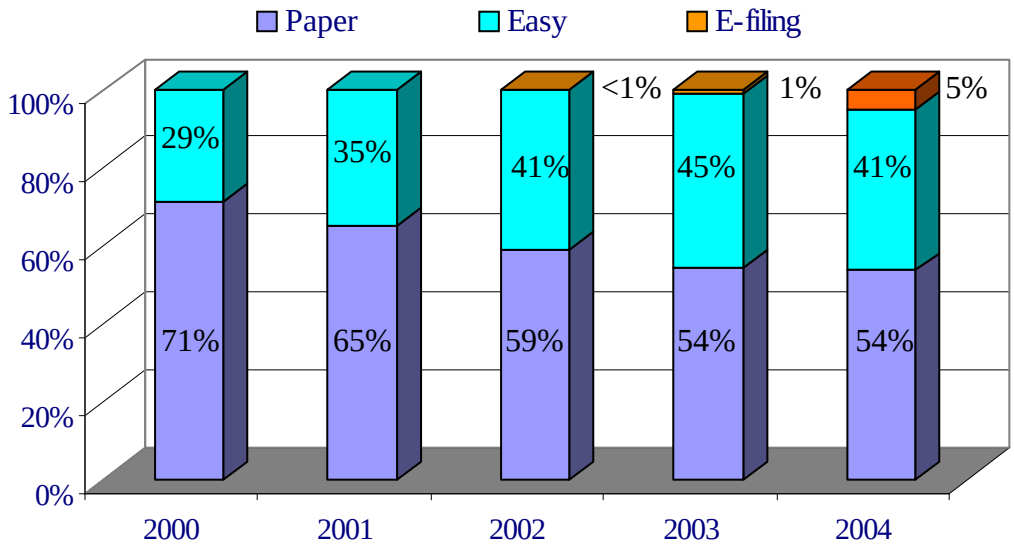
Further Automation of PCT Document Communication: PCT Electronic Data Interchange

21. Whilst the International Bureau was concentrating on the IMPACT Project there were such considerable developments in information technology, so that by the time the PCT COR systems were operational and delivering CD/DVD's to Offices, Offices were quite rightly expecting a more modern communication mechanism. The International Bureau has reacted to these expectations through the establishment of a secure and modern Internet-based document ordering and document delivery infrastructure and associated procedures, that will enable Offices to order and receive PCT documents without any human intervention. The International Bureau calls the new mechanism PCT Electronic Data Interchange (PCT EDI). PCT EDI may also be used for the transmission of PCT documents to the International Bureau by Offices. At the date of this report, the Australian, Canadian and Spanish Offices had successfully concluded tests of PCT EDI and the Korean Intellectual Property Office had used the PCT EDI infrastructure to transmit an initial number of priority documents to the International Bureau.

II. ELECTRONIC FILING AND PCT-SAFE

Electronic filing

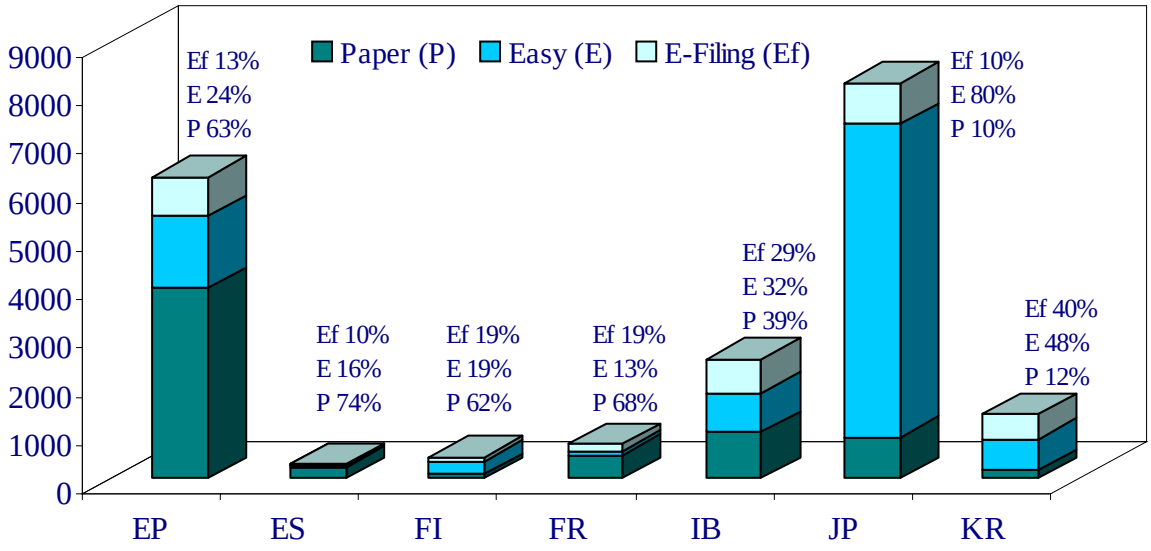
22. The chart below illustrates the evolution, since 2000, of the use of paper, PCT-EASY and E-filing as a means of submitting PCT applications. A steady reduction of paper-based filings is to be noted, in favor of increased reliance on PCT-EASY and E-filing. The first PCT receiving Office started accepting E-filings in November 2002 (European Patent Office) and this format now represents five percent of all applications. The format is expected to grow in importance, especially in light of the start of electronic filing at the Japanese Patent Office on April 28, 2004.



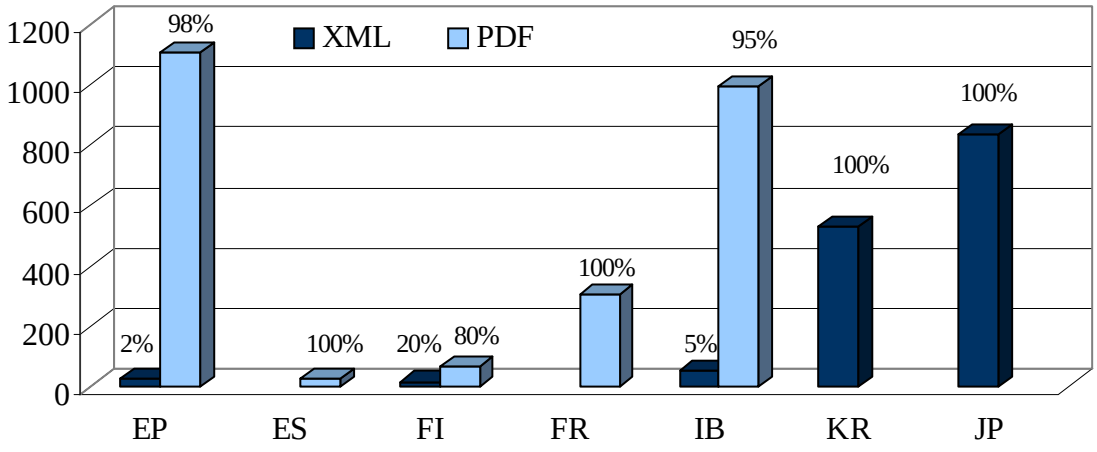
23. Electronic filing is now operational at the following seven PCT receiving Offices:

- European Patent Office (EP)
- Finland (FI)
- France (FR)
- International Bureau (IB)
- Japan Patent Office (JP)
- Korean Intellectual Property Office (KR)
- Spain (ES)

24. The chart below indicates the relative importance of paper, PCT-EASY and E-filing in each of the Offices in question, as reflected in the number of record copies received by the International Bureau up to June 2004.



25. The breakdown of E-filings received by the International Bureau in 2004 according to whether the applications were filed in Portable Document Format (PDF) or in XML character coded format is reflected in the chart below. A marked preference for the first format is to be noted, although it is expected that the proportion of international applications filed in full XML will increase, in particular since the Japanese Patent Office accepts electronic filings only in character coded format, as does the Korean Intellectual Property Office. For the time being, however, PDF-based filings represent 68% compared to 32% character encoded.



PCT-SAFE

26. Since the status report provided to the previous session of this Assembly (PCT/A/32/7), the PCT-SAFE Project has been completed and has become an operational system as of February 2004. Consequently, the PCT-SAFE system was deployed at the RO/IB, making available electronic filing under the PCT to all applicants from all PCT member States, at the reduced fee as prescribed by the Regulations. As at June 2004, 882 electronic filings had been received at the RO/IB, representing 24% of all filings.

27. The PCT-SAFE client software that was deployed at the end of 2003 contained the modified PCT request form and reflected other PCT Rule changes that took effect on January 1, 2004. Furthermore, and in order to more easily accommodate those Rule changes

and any subsequent changes, the PCT-EASY software was integrated into the PCT-SAFE software, thus making PCT-EASY and fully electronic filing via PCT-SAFE available within the one software.

28. The number of WIPO web-site downloads of PCT-SAFE software indicates that PCT-SAFE is now in regular use by thousands of PCT filers. For example, there is an average of 8,563 downloads made for each new build of the PCT-SAFE client, which is used for both fully electronic filing and PCT-EASY filing. Likewise, the PCT-SAFE Editor, which is used exclusively for fully electronic filing, has seen 5,124 downloads since it was released at the end of 2003. In total, there have been 37,800 downloads of the various PCT-SAFE software downloads since the end of 2003.

29. The International Bureau also established in February 2004, the WIPO customer Certification Authority, which provides low level Public Key Infrastructure (PKI) certification authority services under PCT-SAFE.

30. Annex F of the Administrative Instructions under the PCT (containing the technical standard for electronic filing and processing of international applications) has been modified taking into account five proposals for change. Work continues on the revision of Part 7 of the Administrative Instructions with a view to standardizing the procedures for the exchange and processing of scanned image copies of documents that were originally presented in paper form.

III. ELECTRONIC PROCESSING OF INTERNATIONAL APPLICATIONS

Background

31. Next to PCT COR, the other main IMPACT project deliverables were IMPACT International Bureau, an electronic system for the processing of international applications, and IMPACT Receiving Office of the International Bureau, an electronic system for the handling of international applications filed with the RO/IB. With respect to these project components, the status report provided to the previous Session of this Assembly stated the following (PCT/A/32/3, paragraphs 5 and 6):

> "*IMPACT IB.* Previously announced deadlines for the finalization of the IMPACT IB component have not been met. It has become clear to the International Bureau that, if the current development approach were to be retained, considerably more time and resources than indicated in previous progress reports would be required to finalize this component of the project. This has led the International Bureau to make certain changes in the management of the IMPACT project, and to adopt a different approach to the work that remains to be done. At the time of writing this document, changes to the management of the IMPACT project were underway, and the process of developing and validating a new approach for the completion of the IMPACT IB component had commenced.
>
> "*IMPACT RO/IB.* In line with the need to develop a new approach to the IMPACT IB component, the RO/IB component is also being revised."

32. In terms of changes to the management of the project, the same status report explained that a new Division had been created, entitled the PCT Information Systems Division, under which responsibility for all IT systems specifically dedicated to the Office of the PCT was housed, including the work that would normally have been done as part of the IMPACT project. This new Division was created as part of the Office of the PCT and Patents, Arbitration and Mediation Center, and Global Intellectual Property Issues. It is recalled that, prior to this decision, primary responsibility for the IMPACT project lay with the IT Projects Division, an organizational unit of the International Bureau that was separate and independent from the Office of the PCT (PCT/A/32/3, paragraphs 15 to 17).

33. With respect to the new approach to the work remaining from the IMPACT Project, the status report outlined a number of options, but emphasized that "further detailed business validation" of any alternatives was still required (PCT/A/32/3, paragraphs 18 to 19).

New approach

34. Since the issuance of the above status report, the International Bureau's new approach to the remaining work has crystallized around the following fundamental elements:

(a) The overarching goal remains to enable the International Bureau to receive and process international applications, as well as all related documents, in electronic form with a view to enhancing efficiency and improving services.

(b) Making the Office of the PCT and Patents, Arbitration and Mediation Center, and Global Intellectual Property Issues directly responsible for all PCT informations systems has greatly contributed to achieving progress towards this goal. There is now a much larger degree of confidence that system functions are designed, developed and maintained in accordance with real business requirements and in a manner that is most consistent with the needs of the PCT system, including those of Offices and applicants.

(c) After a full technical assessment of the approach to the former IMPACT Project, it was found that the IMPACT software architecture was too sophisticated, and as a result was too complicated. There were also severe reservations that such an architecture could be deployed to the entire Office of the PCT and deliver adequate performance. A new and radically simple technical architecture has since been adopted, and all new software development will be based upon this new architecture.

(d) Under the previous IMPACT project, the intention was to deliver and deploy, at a given moment in time, a single system (IMPACT IB) capable of handling all of the International Bureau's processes. This course of action was proven to be unsustainable, and has since been replaced by a much more nimble approach, consisting of the development of a series of system modules handling different aspects of the International Bureau's work, which are to be deployed progressively in accordance with business priorities. These modules are designed within an overall integrated automation framework in order to avoid inconsistencies and duplication, and, depending on the module in question, may be loosely integrated with operational legacy system functions (i.e., functions carried out on older, pre-IMPACT computer systems) and the re-usable IMPACT functions that have proven to be reliable. The International Bureau's experience to date suggests that this new approach is less costly, less risky and much more capable of flexibly meeting evolving business requirements, thus significantly enhancing chances of success.

(e) A study is currently being conducted by the International Bureau to determine how information technology could streamline the working procedures at the RO/IB.

Achievements in the past year

35. As explained in more detail below, the principal achievements in the past year with respect to the electronic processing of international applications concern the creation of the E-viewer and E-pdoc applications, and activities relating to the 2004 Rule Changes.

(i) E-viewer application

36. The E-viewer is an application permitting the visualization of PCT documents residing in the International Bureau's document database. As such, the E-viewer is the foundation on which further functionalities will be built, with the aim to establish a fully electronic dossier which can be used for end-to-end electronic processing of international applications and thus allow the International Bureau to progressively phase out its paper-based operations.

37. The E-viewer was developed in parallel with the ramping-up of electronic filing and, in particular, in preparation for the start of electronic filing at the Korean Intellectual Property Office and the Japanese Patent Office. The E-viewer was first deployed to staff in the PCT Operations Division that handle the high volume of electronic filings from those Offices, so that they can visualize the electronic record copy of those E-filed applications on screen, rather than having to print them out and process them on paper. The ongoing deployment of the E-viewer within the PCT Operations Division will enable staff also to handle electronic filings from other Receiving Offices, such as the European Patent Office, France, Finland and Spain, as well as the RO/IB, in a similar way.

(ii) E-pdoc application

38. One further functionality also already developed by the International Bureau is the E-pdoc application permitting the full electronic processing of priority documents received in electronic form at the International Bureau. User testing of this application is currently underway and involved the Korean Intellectual Property Office (see also paragraph 21 above). Once in production, it is expected that use of the E-pdoc application will be extended for the electronic processing of priority documents received at the International Bureau in paper form, but that are scanned upon receipt.

(iii) Activities relating to the 2004 Rule Changes

39. Taking into consideration not only the significant extent of development and testing work required in order to prepare the PCT information systems for the entry into effect, as of January 1, 2004, of extensive PCT Rule changes, but also bearing in mind that the PCT timeline allows for a certain manoeuvrability with respect to the timeframe within which particular functionality is needed to be available, it was decided to implement the IT-related modifications in three steps, as outlined below:

Step 1 - Modifications required to be implemented and in production by January 1, 2004, namely, new IA number format and date format.

Step 2 - Modifications required to be implemented and in production by April 1, 2004, namely, modifications to a large number of PCT forms and functionality for scanning and storage of the Written Opinion of the International Search Authority and managing

the time limit for issuance of the International Preliminary Report on Patentability (Chapter 1).

Step 3 - Modifications required to be implemented and in production by January 1, 2005, namely, functionality for translation and automated assembly and issuance of the International Preliminary Report on Patentability (Chapter 1).

Steps 1 and 2 have been successfully completed and are in production. The work on step 3 is currently in progress.

IV. ANTICIPATED FUTURE DEVELOPMENTS

40. For the remainder of the current biennium, efforts will concentrate on further consolidating the achievements of the past fifteen months. It is expected that during the course of 2005, PCT Operations will make further progress in the transition towards the paper-less processing of international applications. An important milestone in this connection will be reached in November 2004 when a large volume of Japanese e-filed applications will need to be published. At the same time during this period, and starting with priority documents, a progressively increasing range of documents which are received on paper by the International Bureau is expected to be scanned upon receipt as the initial step in their processing by the International Bureau. In harmony with that initiative, the Office of the PCT will intensify its efforts to solicit Offices to deliver PCT documents to the International Bureau in electronic form and to accept their communication by the International Bureau in the same form. The Office of the PCT also will continue to leverage the Internet as its principal means of communication with Offices, applicants and the general public, and will further exploit the Internet for the purposes of disseminating patent information and other patent-related services to those actors.

41. The Assembly of the PCT Union is invited to take note of the status report on the PCT Information Systems contained in this document.

[End of document]