

# WIPO



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MATTERS CONCERNING THE PCT UNION  
(ADDENDUM TO DOCUMENT PCT/A/XVI/1)

*Memorandum by the Director General*

## INTRODUCTION

1. The present document supplements paragraphs 27 to 31 of document PCT/A/XVI/1, which relate to the development of an optical disc system for the processing by the International Bureau of international applications under the PCT. It also refers to the results of a study undertaken concerning the printing of PCT pamphlets, as summarized in paragraphs 22 to 26 of document PCT/A/XVI/1.
2. A study on the development and use of an optical disc system for PCT purposes has been undertaken by the International Bureau. It was carried out with the help of an expert consultant. The purpose of the study was to investigate, in the light of existing technology, the possibility of further automating and rationalizing the various operations involved in the processing of international applications, in particular the operations relating to the publication of those applications. In carrying out the said study, due consideration was given to the recommendation made in conclusion to the study concerning the printing of pamphlets, namely that other printing technologies should be investigated before considering the

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possibility of a transfer of the printing and mailing of the PCT pamphlets to an outside printer (see paragraphs 25 and 26 of document PCT/A/XVI/1).

3. The results of the study, which were received after the writing of document PCT/A/XVI/1, demonstrate that the optical disc technology as well as associated technologies, in particular in the field of computer-assisted publication, have reached a state of development where several of the important requirements associated with the processing of international applications, which would have been difficult to meet some months ago, can now be met.

#### THE PCT OPTICAL DISC SYSTEM

4. The main features of the optical disc system, as identified by the study, are the following:

- (i) digitalization and storage on optical discs of all the pages making up application files (namely, the record copies, the priority documents, the international search reports, the notifications and communications received and sent, as well as any other pieces of correspondence, and, whenever applicable, the demands for international preliminary examination, the international preliminary examination reports, and all the notifications and communications associated with Chapter II of the PCT), resulting in "optical files." The optical file of any international application received by the International Bureau would, for three years, be kept in "active storage" (i.e. on an optical disc mounted on a juke box changer) which allows immediate accessibility-for on-line consultation and insertion of new pages, while any application older than three years would be removed from the juke box changer and kept separately; it could still be consulted, albeit with less speed;
- (ii) consultation of files page by page; direct access to individual pages;
- (iii) automatic printing of copies of the priority documents;
- (iv) on-line selection of the figure or figures of the drawings to be published with the abstract, the figure being selected on screen by means of an adjustable moving frame;
- (v) automatic composition of the Gazette entries and pamphlet front pages, consisting in particular of the transfer from the database and the processing of the bibliographic data, titles and abstracts, and the automatic reduction of the drawings in accordance with reduction ratios calculated by the computer. Such a reduction process would be totally carried out by software, without any optical process but still producing images of a good quality. The automatic composition of Gazette entries and pamphlet front pages would be carried out without any human intervention, the result of this process being printed on a laser printer in the form of proofs;

- (vi) on-line modification of text matter in drawings, when translation of such text into English or French is needed for publication in the Gazette entries and in pamphlet front pages;
- (vii) on-line preparation of the translations of the international search reports into English, whenever necessary;
- (viii) automatic composition of the pamphlet pages (description, claims, drawings) with superimposition~ on the top of each page, of the international application number and international publication number, while concealing information stamped by the receiving Office on the top of each page;
- (ix) on-line correction of Gazette entries and pamphlet pages, in particular pamphlet front pages;
- (x) automatic printing of pamphlets (front page, description, claims, drawings, international search report) on high-speed laser printers. This automatic printing would be carried out under the control of the PCT computer system and would reproduce, on the one hand, the front pages generated by the publication module, and, on the other hand, the pages of the relevant parts of the "optical files" of the corresponding international applications. It would be controlled in such a way that the copies produced are sorted according to needs (by designated Office and by international application number order for the purposes of communication under Article 20, by international publication number order for the dispatch of copies to national Offices and to International Authorities and by any other criterion);
- (xi) generation, in optical disc format, such as CD-ROM, of pamphlets for distribution to national Offices and to International Authorities, instead of hard copies, where any Office or Authority prefers such a format.

5. The said features allow a very high degree of integration between the three basic modules of the PCT processing system, namely the PCT computer system (already existing), the publication module and the optical storage module. In turn, this high degree of integration would open up the possibility of further rationalization of the processing of international applications.

6. The said possibilities exist thanks to very recent developments in the optical disc and computer-assisted publication technologies, both from the software and hardware points of view. In particular, automatic page setting and software image reduction (that is, without any human intervention) are new concepts which have been recently developed and implemented. Similarly, the high-speed and large volume printing on laser printers of documents such as pamphlets, which include digitalized pages extracted from "optical files" stored on optical discs and typeset pages generated by a computer-assisted publication system integrating images is a very recent development.

*Cost Estimate*

7. Such recent developments imply very powerful software and hardware, the costs of which, including their installation, have been estimated by the expert consultant as follows:

	Cost in Swiss Francs
<u>Archival and Printing System</u>	
Central processing unit and juke-box changer	575,000
Digitalization module (3 scanners)	225,000
Consultation module (20 workstations)	525,000
Printing module (2 high-speed laser printers)	900,000
Software	450,000
Installation, texting, documentation and training	350,000
<u>Computer-Assisted Publication System</u>	
Processing unit, 2 workstations	300,000
Software	175,000
Installation, testing, documentation and training	75,000
<u>Coordination of the two systems</u>	
(consultant)	125,000
Total:	3,700,000

8. The total cost estimate resulting from the study is 60% higher than the provision made under REG.01 of the draft program and budget for the 1990-91 biennium (2,300,000 francs). It should, however, be noted that, when the said provision was made, some of the very advanced features of the system resulting from the study could not be anticipated.

9. For example, the printing of pamphlets on high-speed laser printers, according to various predetermined sequences and selections, was not included in the corresponding estimation because the corresponding technology was not yet considered to be sufficiently ripe. It should also be noted that the high speed laser printers would replace the photocopying equipment presently used for producing the copies of the pamphlets and reduce the number of operators. The cumbersome manual sorting of the copies of pamphlets would no longer be needed. Similarly, the preparation of the originals for the printing of pamphlets, which is presently made by photocopy, would no longer be needed.

10. Another striking example of a very advanced feature is the possibility of selecting the figures of the drawings on screen and having them reduced automatically under the control of the computer, thus allowing a completely automatic setting-up of the pamphlet front pages and Gazette entries. The resulting rationalization of operations would reduce the number of staff needed to handle the same number of international applications and the time of operations.

11. It is important to note that part of the further significant costs, announced in paragraph 31 of document PCT/A/XVI/I, in later years for the expansion and development of the system are already included in the present cost estimate, due to the recommended use of up-to-date technology allowing a significant progress in further rationalization of the processing of international applications under the PCT.

## CONCLUSION

12. The higher degree of rationalization of the processing of international applications by the International Bureau, which would result from the use of the recommended optical disc system, would essentially be achieved in the following areas:

- circulation, storage and retrieval of files: paper files would no longer be used and application files (“optical disc files”) would be consulted in an on-line manner, and, possibly, by several users simultaneously;
- processing of drawings for the purposes of publication: the cumbersome manual reduction and mounting (cutting and pasting) of the drawings published with the abstracts in the Gazette and on pamphlet front pages would be replaced by automatic reduction and insertion of such drawings, after on-line selection thereof;
- printing of pamphlets: the automatic printing of pamphlets (that is, the direct passage from the “optical disc files” to the laser printers) would replace the present printing on photocopiers fed manually by operators; moreover, with the pages of the PCT pamphlets stored on the optical disc system, it would no longer be necessary to have extensive storage space for paper copies of the PCT pamphlets, and individual orders for PCT pamphlets would be filled by using the optical disc system to print the PCT pamphlets as they were ordered;
- distribution and mailing of pamphlets: such pamphlets would be sent in optical disc format to national Offices and International Authorities which so desire, thus saving space for national Offices, International Authorities and the International Bureau and the cost of mailing hard copies.

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