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COMPARATIVE ANALYSIS OF PRINTING METHODS AND COSTS

prepared by the International Bureau

BACKGROUND

1. At its seventh session (November 1 to 8, 1976), the PCT Interim Advisory Committee for Administrative Questions (hereinafter referred to as "the Interim Committee") considered the Draft Guidelines on Publication Under the Patent Cooperation Treaty (hereinafter referred to as "the Draft Guidelines on Publication") prepared by the International Bureau and reproduced in document PCT/AAQ/VII/4.

2. The Interim Committee, in its session referred to above, held only a general discussion on the subject covered in the Draft Guidelines on Publication and decided to establish the present Working Group ("PCT Working Group on Guidelines for Publication and for Drawing," hereinafter referred to as "this Working Group") "for the purpose of assisting in the establishing of the Guidelines for Publication and Guidelines for Drawings" (see document PCT/AAQ/VII/19, paragraph 138). The Interim Committee also decided, in respect of the composition of this Working Group, that it would be open to all those States members of the Interim Committee as well as all those observer organizations which, by December 1, 1976, expressed the wish to participate in the work of this Working Group. The following States expressed such a desire and are thus members of this Working Group: Austria, France, Germany (Federal Republic of), Japan, Netherlands, Soviet Union, Switzerland, United Kingdom and United States of America. The following two intergovernmental organizations, the Interim Committee of the European Patent Organisation (EPO) and the International Patent Institute (IIB), as well as the following five non-governmental organizations, the Council of European Industrial Federations (CEIF), the European Federation of Industrial Property Representatives of Industry (FEMIP), the International Federation of Patent Agents (FICPI), the Union of Industries of the European Community (UNICE), and the Committee of National Institutes of Patent Agents (CNIPA), which also expressed such a desire, are also participating in this Working Group. After consultation between the International Bureau and the International Patent Documentation Center (INPADOC) as foreshadowed at the said seventh session of the Interim Committee (see document PCT/AAQ/VII/19, paragraph 139), it has been agreed that INPADOC will also participate in this Working Group in relation to the question of the provision of a classified abstract service (see document PCT/AAQ/VII/4, paragraphs 140 to 146).

3. In the course of the general discussion which took place during the session referred to above on the subject matter dealt with in the Draft Guidelines on Publication, the Delegation of Switzerland indicated that the Swiss Patent Office was willing to supply the International Bureau with information connected with

the printing of its publications by commercial printers and to offer its assistance to the International Bureau in making contacts with commercial printers under contract with the Swiss Patent Office and in providing advice on this matter. The Interim Committee asked the International Bureau to prepare, for the present session of this Working Group and on the basis of the information to be obtained with the assistance of the Swiss Patent Office as well as information available to it from its own sources, a supplementary document containing a comparative analysis of printing techniques and corresponding costs according to the alternative methods of printing PCT publications within the International Bureau and through a commercial printer (see document PCT/AAQ/VII/19, paragraphs 141 to 150).

THE PRESENT DOCUMENT

4. The present document is the supplementary document referred to in paragraph 3 above. It contains, in response to the request of the Interim Committee, a comparative study of various printing techniques showing the respective costs of these techniques when implemented either by the International Bureau or by a commercial printer. It consists of the three following parts:

Part A: A general description of the printing techniques considered in the framework of the comparative analysis.

Part B: The printing of the pamphlet.

Part C: The printing of the Gazette.

5. Parts B and C are both subdivided into the following five sections:

Section I: A general (outline) specification used as a common basis for estimating the printing costs in relation to various printing techniques.

Section II: The preparation of the master images according to various printing techniques.

Section III: The offset reproduction itself.

Section IV: The binding.

Section V: Conclusions.

6. The present document also contains the following five annexes:

Annex A: A table setting forth the various possible techniques which could be used for the printing of the pamphlet and their respective costs when implemented either by the International Bureau or by a commercial printer.

Annex B: A table setting forth the various possible techniques which could be used for the printing of the Gazette and their respective costs when implemented either by the International Bureau or by a commercial printer.

Annex C: Four sheets containing a summary, in tabular form, of three possible variants which could be used for the printing of the pamphlet, indicating the corresponding total costs (Sheet I), and the calculations of the corresponding total costs (Sheets II, III and IV).

Annex D: Four Sheets containing a summary, in tabular form, of three possible variants which could be used for the printing of the Gazette, indicating the corresponding total costs (Sheet I), and the calculations of the corresponding total costs (Sheets II, III and IV).

Annex E: A cost estimate from a commercial printer under contract with the Swiss Patent Office, as transmitted to the International Bureau by the Swiss Patent Office, established on the basis of a questionnaire prepared by the International Bureau in collaboration with the Swiss Patent Office

7. The techniques that may be utilized for the printing of the two PCT publications (pamphlet and Gazette) as outlined in Parts B and C in relation to each of the elements of these publications are accompanied by the basic assumptions used for calculating the costs involved in the carrying out of the printing operations either by the International Bureau or by the commercial printer. The corresponding cost figures are set forth in Annex A for the pamphlet and in Annex E for the Gazette.

8. The conclusions formulated in relation to pamphlet and Gazette printing account for the possible execution of the printing work in three different ways:

- (i) Wholly by the International Bureau (Variant 1).
- (ii) Wholly by the commercial printer (Variant 2).
- (iii) Partly by the International Bureau and partly by the commercial printer (Variant 3).

9. It should be noted that cost estimates set forth in the present document and relating to operations carried out by the International Bureau are based on working conditions and salary scales in force in 1977 in the International Bureau in respect of General Services category staff, whereas cost estimates indicated with respect to operations carried out by the commercial printer are based on the information supplied to the International Bureau by a commercial printer in Switzerland through the Swiss Patent Office (see Annex E). The costs of offset printing indicated by the said commercial printer are consistent with the information available to the International Bureau from its own sources as to costs of offset printing by other commercial printers in Switzerland.

10. The attention of the Working Group is also drawn to the fact that the costs indicated in the present document, which have been calculated for the purpose of a comparison of printing costs, relate only to the operations pertaining to the printing itself. For example, operations which might be needed in the framework of preparations for printing, such as preparing the file for later publication of the pamphlet and translating, have not been taken into consideration for calculating the printing costs since such operations should in any case be carried out by the International Bureau and their corresponding costs, if included in the analysis, would not contribute to the significance of the comparison.

PART A--GENERAL DESCRIPTION OF THE PRINTING TECHNIQUES CONSIDERED IN THE FRAMEWORK OF THE COMPARATIVE ANALYSIS

11. For the sake of clarity, this general description of the various printing techniques which could be used for producing PCT publications (i.e., pamphlets and Gazette) has been subdivided into two parts dealing respectively with the preparation of the master images and with the reproduction in multiple copies of the master images.

Preparation of the master images

12. For the purposes of this comparative analysis, two basic methods of preparation of the master images have been considered, namely, the preparation, or the use, of typewritten masters, and the computerized photocomposition of the text matter, which are dealt with separately below.

Preparation, or use, of typewritten masters

13. According to this method, the master images to be later reproduced would be either prepared by typewriting (i.e., the front page of the pamphlet, and Sections 2 and 4 of the Gazette; as to the nature of Sections 2 and 4, see paragraph 37(i) below) or consist of the original documents either drawn up by the applicant (i.e., the description, the claims and the drawings) or transmitted by the International Searching Authority (i.e., the international search report). It has been assumed, for the purposes of the present study, that such a method, since it does not involve operations normally pertaining to printing as such, would be implemented by the International Bureau only, as far as the preparation

of the master image is concerned. This assumption, however, does not exclude the offset reproduction by the commercial printer of the original documents drawn up by the applicant or transmitted by the International Searching Authority (see, in this respect, the third variant suggested for printing the pamphlet in paragraph 36(iii)).

14. The direct use of the original document drawn up by the applicant or prepared by the International Searching Authority as the master image presents the following two advantages: low cost and no risk of errors of transcription. On the other hand, this method would certainly involve some variation in the quality and legibility of the printing.

Computerized photocomposition

15. The computerized photocomposition technique described below is, among the various photocomposition techniques presently available, the one which is used by the Swiss commercial printer which supplied the above-mentioned cost estimates (see Annex E). Having regard to the discussion in the Interim Committee referred to in paragraph 3 above and the limited time available before the present session, computerized photocomposition has been considered only, for the purpose of the present study, in the framework of printing operations carried out by the said commercial printer. If considered desirable, the International Bureau would either by itself or, if an offer of assistance similar to that of the Swiss Office is made by another Office, in conjunction with such Office, extend the present study to encompass other forms of computerized photocomposition in its ongoing work.

16. The photocomposition system used by the commercial printer consists of a photocomposer "monotype 600" which produces films on which are printed lines of text matter with fixed length and spacing. This photocomposer, which operates with 4 rotating discs comprising 100 different characters each, is actuated by a punched tape. This punched tape is prepared by keyboarding either with an electronic keyboard (justified tape) and is directly used by the photocomposer, or with a normal keyboard producing a paper tape which is processed by a small computer operating on the basis of a word division program. Corrections are entered directly by the electronic keyboard or, when the normal keyboard is used, entered on a second punched tape which is mixed by the computer with the first tape. When the expression "computerized photocomposition" is used in the present study, it relates to this particular photocomposition system.

17. It should be noted that the equipment used by the printer does not permit the computerized setting up of a page such as the front page. In fact, the photocomposed text matter is mounted manually, column by column, on a page to obtain the appropriate layout.

18. The existing equipment utilized by the printer allows photocomposition of text matter in languages using the Latin alphabet. Photocomposition in the Russian language could be effected with the existing equipment but would require a few adaptations of the system (i.e., new character discs with Cyrillic characters and a special word division program). On the contrary, photocomposition of text matter in Japanese would involve the use of a considerable number of different characters (about 3,000) and could not be implemented with the existing equipment of the printer.

19. The use of this computerized photocomposition system would present the two following advantages: excellent typographical quality and substantial reduction of the volume of the documents printed (a photocomposed text would represent, in volume, about 40% of the same text in typewritten form with 1½ spacing). On the other hand, the costs involved would be much higher than for the preparation of a master image in the manner described in paragraph 13.

Offset reproduction

20. The offset reproduction equipment used by the International Bureau and by the printer, although based on the same basic method (preparation of a master plate by a photographic process and reproduction thereof with an offset machine), are different from the viewpoint of size and capacity. For example, the equipment

used by the printer allows the offset reproduction of 4 to 8 A4 size pages at a time on a single sheet of paper. These differences account for the fact that the offset reproduction is more economical when made by the commercial printer.

21. Two variants of offset reproduction have been considered in connection with typewritten masters, namely reproduction in full size and with 50% reduction in size. The second variant, which would allow a substantial reduction of the volume of the printed document, would not, however, ensure an optimum level of legibility.

PART B--PRINTING OF THE PAMPHLET

Section I--General Specification Relating to the Pamphlet and Used as a Common Basis for Estimating the Printing Costs in Relation to Various Printing Techniques

22. In order to provide a common basis for comparison, the printing costs for the production of the pamphlet have been developed, in relation to the various printing techniques considered, on the basis of the following factors:

- (i) Length of an average published international application
 - (a) standardized front page according to the model front page appearing in Appendix E of document PCT/AAQ/VII/4;
 - (b) 12 pages (when in typewritten form) having an average of 250 words per page (9 pages of description, 2 pages of claims, 1 page of amended claims);
 - (c) 2 sheets of drawings (recto only);
 - (d) 3 pages of international search report;
 - (e) 1.7 pages of international search report in English translation;*
- (ii) Page size: A4 (recto-verso, with the exception of the drawings);
- (iii) Type of paper: reasonable quality (about 70 g/m²) to be established in accordance with cost (should be flexible, strong, white, smooth, non-shiny and durable);
- (iv) Binding: left open, depending on cost and binding facilities;
- (v) Number of copies of each pamphlet: 150;
- (vi) Chemical formulae, equations (inserted in text matter) either typed or mounted from original if the text matter is photocomposed;
- (vii) Languages: the pamphlet will be published in one of the following five languages: English, French, German, Japanese and Russian (but will include, if the pamphlet is published in a language other than English, the abstract and the international search report both in that language and in English);
- (viii) Publication: weekly;
- (ix) Number of pamphlets published: 50 per week.

Section II--Preparation of the Master Images

23. Since the problems involved, as well as the various printing techniques which could be used in preparing the master images of the various elements of

* The number of pages has been calculated on the assumption that 57% of the international applications would be published in a language other than English, so that 57% of the international search reports (each international search report comprising 3 pages) would be published in that language and in English (PCT Rule 48.3(c)).

the pamphlet, depend on the nature of the element concerned, the preparation of the master images of the pamphlet is considered separately below for each element of the pamphlet.

The front page

24. Two different techniques have been considered for the preparation of the master image of the front page, namely, the use of an A3 size sheet comprising preprinted entries which would be filled in by typing thereon the relevant bibliographic data and the abstract and by mounting the drawing (first variant), or the filling-in of the said sheet comprising preprinted entries with photocomposed text matter (bibliographic data and abstracts) and mounting the drawing, the method in respect of which costs have been provided through the Swiss Office (second variant).

25. The cost estimates relating to the first variant (filling-in pre-printed front pages by typewriting) have been calculated on the following assumptions:

- (i) Blank front pages of A3 size with preprinted entries would be prepared in the five languages considered and with different layouts designed to meet various situations (e.g., non-existing bibliographical data, variable length of certain bibliographic information). In total, five different types of front pages, in each of the five languages, would be prepared, that is, 25 different blank front pages with preprinted entries, which would be reproduced in 5,000 copies each. Taking into account the volume of printing work involved in producing in total 125,000 copies of blank front pages, it has been assumed that such an operation should be entrusted to the commercial printer. The corresponding cost, per blank front page (prepared by typesetting and offset reproduction), as indicated by the printer, would be, if rounded up, 0.04 Swiss francs (see column (3) of the table reproduced in Annex A).
- (ii) For calculating the cost involved in filling-in the blank front pages by typewriting (this operation being carried out within the International Bureau), it has been estimated that a typist could prepare, on average, for all the languages concerned, 15 front pages a day, including the time required for verifying the entries and making corrections. In this calculation the machine investment for this typing operation has also been reflected, taking into account the need to prepare the front pages in three languages using the Latin alphabet and in Japanese and Russian (4 typewriters 8,000 Swiss francs on a 5-year depreciation basis plus maintenance costs of 800 Swiss francs per year). The resulting cost, 18.60 Swiss francs per front page, is indicated in column (3) of the table reproduced in Annex A.
- (iii) The mounting of the drawing in the appropriate space of the front page would require an average of 10 minutes. The corresponding cost, to which was added the cost of preparing an electrostatic copy of the drawing, with reduction in size, would be 7.9 Swiss francs (see column (3) of the table reproduced in Annex A).

26. The cost estimates relating to the second variant (filling-in preprinted front pages with photocomposed text matter, which would be implemented by the commercial printer only) have been calculated on the basis of the cost estimates supplied by the commercial printer to the International Bureau through the Swiss Patent Office (see Annex E). The cost figures set forth in column (6) of the table in Annex A show separately the photocomposition cost and the cost involved in mounting the drawing (after reduction in size) on the front page. Photocomposition costs in the Russian language are much higher than the costs indicated for languages using a Latin alphabet, this difference resulting from the need to adapt the existing equipment of the printer for photocomposing text matter in Russian (see paragraph 16 above). It should also be noted that the cost figures indicated in column (6) of the table in Annex A cannot be applied to photocomposition in Japanese.

Description, claims, amended claims

27. Two different techniques have been considered for the preparation of the master images of the description, claims and amended claims, namely, the use of

the original documents drawn up by the applicant as master images (first variant), and computerized photocomposition (second variant).

28. Since, according to the first variant, the original documents drawn up by the applicant are used as master images, no work is involved in their preparation and, consequently, no corresponding cost has been indicated in column (3) of the table in Annex A. It should be mentioned, however, that the use of the original documents as master images might involve, in some cases, preparatory work connected with minor corrections or renumbering of pages and entering amendments. However, it has been considered that such work, if needed, should always be carried out by the International Bureau and that the corresponding cost would not be of particular significance. Consequently, the corresponding cost has not been included in Annex A.

29. The cost figures corresponding to the use of the second variant (which would be implemented by the commercial printer only) and indicated in column (6) of the table in Annex A are those indicated by the commercial printer in Annex E. The observation made with respect to photocomposition in the Russian language in paragraph 26 above also applies in this situation. It should be noted, furthermore, that the cost figures indicated do not cover photocomposition in Japanese.

Drawings

30. Since, in all situations, the drawings submitted by the applicant would be used as master images, no corresponding cost figures have been indicated in Annex A in connection with the preparation of the master image.

International search report

31. It has been assumed that the international search report transmitted by the International Searching Authority would be used as a master image. Consequently, no cost has been indicated in Annex A in relation to the preparation of the master image of the international search report. As far as the English translation of the international search report is concerned, it has been considered that the typing work involved in preparing it would always be performed by the International Bureau and that the corresponding costs can be disregarded for the purposes of this study.

Section III--Offset Reproduction

32. The offset reproduction costs have been indicated, when such offset reproduction is effected by the International Bureau or by the commercial printer, for 150 copies of each pamphlet. These costs, whenever indicated in relation to offset reproduction made by the International Bureau, take into account the machine investments, labor and consumables.

33. In the case of offset reproduction effected by the International Bureau, the corresponding costs are indicated in the situation when the master images have been prepared by typewriting (front page) or by using the original documents drawn up by the applicant (description claims, amended claims and drawings) and the international search report as transmitted by the International Searching Authority. The corresponding costs are indicated both for reproduction in full size and for reproduction with 50% reduction of the description, claims and amended claims (see table in Annex A, column (4)).

34. The costs for offset reproduction, if effected by the commercial printer, have been indicated in all the situations (non-composed master images, full-size and half-size reproduction, and photocomposed master images) (see the table in Annex A, column (7)).

Section IV--Binding

35. It has been assumed that the pages of the pamphlet would be assembled either by stapling (by the International Bureau only) or by using a glue binding method (by the commercial printer only).

Section V--Conclusions

36. On the basis of the foregoing analysis, the printing of the pamphlet could be effected according to the three following variants (also summarized in tabular form in Sheet I of Annex C):

- (i) First Variant: preparation of the master images (manual processing), offset reproduction and binding (stapling) made within the International Bureau (with the exception of the preparation of the blank front pages comprising preprinted entries, which would be carried out by the commercial printer). The cost corresponding to the printing of 150 copies of one pamphlet would be 474 Swiss francs (3.2 Swiss francs per copy) if the offset reproduction is made without reduction, and 342 Swiss francs (2.3 Swiss francs per copy) if the offset reproduction of the description, claims and amended claims is made with 50% reduction (for individual cost calculation, see Annex C, Sheet II).
- (ii) Second Variant: preparation of the master images (by photocomposition), offset reproduction and binding (glue binding) made by the commercial printer. The cost corresponding to the printing of 150 copies of one pamphlet would be 767 Swiss francs for a pamphlet published in a language using the Latin alphabet (5.1 Swiss francs per copy) and 1263 Swiss francs for a pamphlet published in the Russian language (8.4 Swiss francs) (for individual cost calculation, see Annex C, Sheet III). It is recalled that no cost figure is available for a pamphlet published in Japanese according to this second variant.
- (iii) Third Variant: preparation of the master images (manual processing) by the International Bureau, offset reproduction and binding (glue binding) by the commercial printer. The cost corresponding to the printing of 150 copies of a pamphlet would amount to 440 Swiss francs (2.9 Swiss francs per copy) if the offset reproduction is made without reduction, and to 310 Swiss francs (2.1 Swiss francs per copy) if the description, claims and amended claims are reproduced with a 50% reduction (for individual cost calculation, see Annex C, Sheet IV).

It appears from the cost figures set forth above, that the printing costs relating to the first and third variants (the third variant being, however, the least costly), are far below the costs involved in implementing the second variant, in particular, if the pages containing the description, the claims and the amended claims are reproduced with a 50% reduction. This factor is, naturally, only one element of determination of the most appropriate way of printing the pamphlet, and will doubtless be taken into account by this Working Group with other relevant factors such as the quality of printing and the volume of printed documents.

PART C--PRINTING OF THE GAZETTE

Section I--General Specification Relating to the Gazette and Used as a Common Basis for Estimating the Printing Costs in Relation to Various Printing Techniques

37. In order to obtain a common basis for comparison, the printing costs for the production of the Gazette have been estimated, in relation to the various printing techniques considered, on the basis of the following factors:

- (i) An average weekly Gazette would consist of:
 - a standardized cover page (hard paper, 180 g/m²) (4 pages)
 - a table of contents (1 page)
 - a first section containing comprehensive entries which would be obtained by reproduction of two standardized front pages per A4 page of the Gazette (i.e., A5 size entries) (25 pages containing 50 entries)
 - a second section containing notices and information relating to published international applications (1 page)
 - a third section containing weekly indexes (3 pages)
 - a fourth and last section containing notices of a general character (15 pages).

- (ii) Page size: A4 (recto-verso);
- (iii) Type of paper: reasonable quality (about 70 g/m²) to be finally established in accordance with cost (should be flexible, strong, white, smooth, non-shiny and durable);
- (iv) Binding: glue binding;
- (v) Number of copies: 2,000 copies per issue for the English edition and 500 copies per issue for the French edition;
- (vi) Languages: English and French (2 separate editions);
- (vii) Frequency of publication: weekly issues (in both languages), simultaneously with the pamphlets concerned.

Section II--Preparation of the Master Images

38. The problems involved and the various printing techniques which could be used in preparing the master images of the different parts of the Gazette depend upon the nature of the part considered. For this reason, the preparation of the master images of the Gazette is considered separately below for each part of the Gazette.

Standardized cover page

39. Since a standardized cover page has been provided for which, in fact, would consist of 4 pages constituting the first and last sheets of the Gazette, made of hard paper (180 g/m²), it is considered that the preparation of the said cover page should be entrusted to a commercial printer. Furthermore, this cover page would reproduce the same kind of information for all issues, such as: the identification of the International Bureau as the Authority which publishes the Gazette, the title of the Gazette, the date of publication of the weekly issue and the serial number of the weekly issue. Therefore, the preparation of the master image of the cover page would not involve a considerable amount of composing work and has not been taken into account in the present study.

The table of contents

40. Two alternative variants have been considered for the preparation of the master image of the table of contents, namely, mere typewriting on an A3 size page (first variant), this operation being carried out within the International Bureau, or computerized photocomposition by the commercial printer only (second variant).

41. The cost estimate relating to the first variant (typewriting) has been calculated on the assumption that the preparation of the table of contents would require, including the typing, verification and correction, 20 minutes (for the corresponding cost, see the table in Annex B, columns (3) and (4)).

42. The cost relating to the second variant (computerized photocomposition) has been calculated on the basis of the cost estimates supplied by the commercial printer; (for the corresponding cost, see the table in Annex B, columns (9) and (10)).

First Section (Main entries)

43. As already stated in paragraph 37 above, cost estimates have been made on the basis that the first section of the Gazette would comprise 25 pages containing 50 entries, each page comprising two entries of A5 size obtained by the reproduction of two pamphlet front pages. Consequently the preparation of the master images of the pages of the first section would involve the following tasks:

- (i) the preparation of new front pages in the language of the edition of the Gazette concerned (It has been assumed, for the purposes of this comparative analysis, that 85% of the international applications would be published in a language other than French, so that 45 (50 x 0.85)

new front pages would be prepared for each issue of the French edition of the Gazette. It has also been assumed that 57% of the international applications would be published in a language other than English, so that 23 (50 x 0.57) new front pages would be prepared for each issue of the English edition of the Gazette);

- (ii) the numbering of the pages of the first section, and the arrangement of the entries in IPC order and international publication number;
- (iii) the montage of two pamphlet front pages on a single A3 sheet for later reproduction.

44. The task mentioned in paragraph 43(ii) above has been considered as a preparatory task not strictly related to the printing itself and the corresponding cost has not been included in the estimate. On the other hand, the task mentioned in paragraph 43(iii), which is directly related to the printing itself, has been considered as a task pertaining to the offset reproduction operations. Consequently, the comparative costs connected with the preparation of the master images of section 1, indicated in the table in Annex B, reflect only the costs resulting from the preparation of new front pages in the language of the edition concerned. These costs refer to the two possible techniques for preparing the front pages already mentioned in paragraph 24 of the present document, that is, filling-in blank pamphlet front pages comprising preprinted entries by typing and by photocomposition, and are based on the costs indicated in relation to the preparation of the master image of the pamphlet front page.

45. The costs of preparing the master image, calculated on that basis, are shown in the table in Annex B, as follows:

- (i) with new pamphlet front pages prepared by manual processing, in columns (3) and (4);
- (ii) with new pamphlet front pages prepared by computerized photocomposition, in columns (9) and (10).

Second Section (notices and information relating to published international applications) and Fourth Section (notices of a general character)

46. Since the second and fourth sections of the Gazette would comprise only text matter, the preparation of their master images would involve the same costs in connection with the various techniques considered. Cost estimates have been made on the basis that these two sections would comprise a total of 16 pages, containing test matter either in typewritten form on A3 size pages or photocomposed on A4 size pages, for both the English and French editions of the Gazette. For this reason, the second and fourth sections of the Gazette have been considered together for the purpose of estimating the costs involved in preparing their master images.

47. Two different techniques for preparing the master images of the second and fourth sections of the Gazette have been considered, namely, typewriting on A3 size pages or computerized photocomposition.

48. The cost involved in preparing one A3 size page by typewriting has been calculated on the assumption that this task would be effected only by the International Bureau and that the time needed for typing, verifying and correcting one page would be 35 minutes, both for the English and French editions of the Gazette (for these costs, see the table in Annex B, columns (3) and (4)).

49. The cost involved in preparing the master images of the second and fourth sections by computerized photocomposition has been calculated on the basis of the cost estimates supplied by the commercial printer, for both the English and French editions of the Gazette (for these costs, see the table in Annex B, columns (9) and (10)).

Third Section (weekly indexes)

50. The cost involved in preparing the master images of the third Section of the Gazette has been estimated on the basis of the following assumptions:

- (i) this Section would contain the following indexes:
- international application numbers with corresponding international publication numbers,
 - international publication numbers according to designated States,
 - names of applicants and corresponding international application numbers of published international applications;
- (ii) the task of arranging the bibliographic data in the appropriate order (e.g., numerical or alphabetical order) is to be considered as a preparatory task not directly related to the printing itself (the corresponding cost has not been included in the estimate);
- (iii) the master images of the indexes would be prepared by filling in blank A3 size pages comprising preprinted entries, either by typewriting (within the International Bureau) or with photocomposed bibliographic information (by the commercial printer) and since such preprinted A3 size pages would be prepared in a considerable number of copies and the cost of one copy could be considered as negligible as compared with the cost involved in filling-in the page with the bibliographic information, this cost can be disregarded.

51. The cost involved in filling-in the blank pages by typewriting has been calculated on the assumption that such an operation, including the typing, the verification and the correction, would require 25 minutes per page, comprising 50 entries (for these costs, see the table in Annex B, columns (3) and (4)).

52. The cost involved in filling-in the blank pages with photocomposed bibliographic information has been calculated on the basis of the information supplied by the commercial printer, both for the English and French editions of the Gazette (see the table in Annex B, columns (9) and (10)).

Section III--Offset Reproduction

53. The offset reproduction costs of the Gazette have been indicated when such offset reproduction is effected by the International Bureau or by the commercial printer. These costs have been calculated for producing 2,000 copies of the English edition of the Gazette and 5,000 copies of the French edition. The costs relating to offset reproduction made by the International Bureau take into account the machine investments, labor and consumables.

54. In the situation where the offset reproduction is effected by the International Bureau, the corresponding costs are indicated only for the reproduction of typewritten master images. On the contrary, the costs resulting from the offset reproduction, when carried out by the commercial printer, are indicated in both situations (typewritten and photocomposed master images).

Binding

55. It has been assumed, for the purposes of the present study, that the pages of the Gazette would be assembled by using a glue binding method, either by the International Bureau or by the commercial printer. The cost of binding, when such an operation is carried out by the International Bureau, includes the machine investment (38,000 Swiss francs on a 5-year depreciation basis), staff costs and consumables. The cost of binding, in the situation where such an operation is carried out by the commercial printer, has been calculated on the information supplied by the said printer (see Annex E).

Conclusions

56. On the basis of the foregoing analysis, the printing of the Gazette could be effected according to the following variants:

- (i) First Variant: preparation of the master images (by typewriting), offset reproduction and binding made by the International Bureau. The cost corresponding to the printing of 2,000 copies of one issue of the English edition of the Gazette would amount to 5,774 Swiss francs (2.9 Swiss francs per copy), and the cost of producing 500 copies of one issue of the French edition would be 3,308 Swiss francs (6.6 Swiss francs per copy) (for individual cost calculation, see Annex D, Sheet II).
- (ii) Second Variant: preparation of the master images (by photocomposition), offset reproduction and binding by the commercial printer. The cost corresponding to the printing of 2,000 copies of one issue of the English edition of the Gazette would amount to 5,930 Swiss francs (3 Swiss francs per copy), and the cost of producing 500 copies of the French edition would be 5,798 Swiss francs (11.6 Swiss francs per copy) (for individual cost calculation, see Annex D, Sheet III).
- (iii) Third Variant: preparation of the master images (by typewriting) by the International Bureau, offset reproduction and binding by the commercial printer. The cost involved in the printing of 2,000 copies of one issue of the English edition of the Gazette would amount to 3,342 Swiss francs (1.7 Swiss francs per copy), and the cost of producing 500 copies of the French edition would be 2,547 Swiss francs (5.1 Swiss francs per copy) (for individual cost calculation, see Annex D, Sheet IV).

57. It appears from the cost figures set forth in paragraph 56 above that, whatever variant is considered, the cost per copy of the French edition of the Gazette would be far higher than the corresponding cost per copy of the English edition. This is due essentially to the fact that the number of new front pages required in the language of the edition considered would be much higher for the French edition than for the English edition, and to the fact that the estimated number of copies per issue of the French edition is 4 times less than the number of copies per issue of the English edition.

58. As far as the English edition of the Gazette is concerned, it appears that the third variant would be the most economical and that the costs involved in implementing the first and second variants are roughly comparable. It results from this that the most appropriate variant is to be selected from the second and third variants only. Consideration of other factors, such as the quality of printing, in selecting the preferred variant, will doubtless be given by this Working Group. It should also be mentioned that this decision depends on the printing method selected for the printing of the front pages of the pamphlet.

59. As far as the French edition of the Gazette is concerned, it appears that the third variant would be the most economical and, although the costs involved in implementing the first and second variants are different, once again the selection of the most appropriate variant would have to be made between the second and third variants, taking into account the other factors mentioned in connection with the English edition.

[Annexes follow]

ELEMENTS OF COSTS INVOLVED IN PRINTING THE PAMPHLET

| ELEMENT OF THE PAMPHLET | METHOD USED FOR PREPARING THE MASTER IMAGE | | PRINTING COSTS FOR 150 COPIES, in Swiss francs | | | | | |
|--|---|---------------------|--|---------------------------------------|---------------------------|--|---|----------------------------|
| | | | by the International Bureau | | | by the commercial printer | | |
| | | | Master Image | Offset Reproduction | Total | Master Image | Offset Reproduction | Total |
| (1) | (2) | | (3) | (4) | (5) | (6) | (7) | (8) |
| FRONT PAGE (1 page) | Preparation of a blank front page comprising pre-printed entries (A3 size) | | 0.04 | | | cost reflected in the photocomposition cost | | |
| | Filling-in the blank front page | by typewriting | 18.60 | | | 67 | | |
| | | by photocomposition | | | | 134 (Russian) | | |
| | Mounting the drawing (with reduction) | | 7.90 | | | 6.82 | | |
| Total master image | | 26.54 | 21.30 | 47.84 | 73.82 140.82 (Russian) | 19.37 | 93.19 160.19 (Russian) | |
| DESCRIPTION, CLAIMS, AMENDED CLAIMS (12 pages, in typewritten form) | Using the documents filed by the applicant | | 0 | full size : 264 50% reduction: 132 | 264 132 | 0 | full size : 232.44 50% reduction: 116.22 | 232.44 116.22 |
| | By computerized photocomposition (2 columns, 5 pages) | | | | | 428.80 857.60 (Russian) | 96.85 | 525.65 954.45 (Russian) |
| DRAWINGS (2 sheets) | Using the drawings submitted by the applicant | | 0 | 42.6 (full size) | 42.6 | 0 | 40 | 40 |
| INTERNATIONAL SEARCH REPORT (3+1.7 pages) | Using the international search report as transmitted by the International Searching Authority | | 0 | 109.3 (full size) | 109.3 | 0 | 91 | 91 |
| | Binding | Stapling | | | 10.5 | | | |
| | | Glue binding | | | | if photocomposed or 50% reduced : 17.32 full size : 30.70 | | |

ELEMENTS OF COSTS INVOLVED IN PRINTING THE GAZETTE

| ELEMENT OF THE GAZETTE | METHOD USED FOR PREPARING THE MASTER IMAGE | PRINTING COSTS, in Swiss francs, FOR { 2000 copies (English edition) (E) 500 copies (French edition) (F) | | | | | | | | | | | |
|---|--|---|------------|---------------------|-----|-------|------|---------------------------|------------|---------------------|--------|---------|--------|
| | | by the international Bureau | | | | | | by the commercial printer | | | | | |
| | | Master image | | Offset Reproduction | | Total | | Master image | | Offset Reproduction | | Total | |
| | | E | F | E | F | E | F | E | F | E | F | E | F |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) |
| COVER PAGE (4 pages) | Composition and offset on hard paper | | | | | | | negligible | negligible | 116 | 29 | 116 | 29 |
| TABLE OF CONTENTS (1 page) | Typing on an A3 master | 16 | 16 | 86 | 33 | 102 | 49 | | | | | | |
| | Photocomposition | | | | | | | 85.76 | 85.76 | 25.70 | 15.10 | 111.46 | 100.86 |
| FIRST SECTION (25 pages) | Using pamphlet front pages (including English or French versions prepared for the Gazette, when necessary). Two front pages reproduced on one A4 size page of the Gazette. | | | | | | | | | | | | |
| | If front pages prepared by typing on pre-printed pages | 770 | 1141 | 2150 | 825 | 2920 | 1966 | | | | | | |
| | If front pages prepared by photocomposition | | | | | | | 2141 | 3174 | 644 | 378 | 2785 | 3552 |
| SECOND AND FOURTH SECTIONS (1+15 pages) | Typewriting | 425 | 425 | 1376 | 528 | 1801 | 953 | | | | | | |
| | Photocomposition | | | | | | | 1372 | 1372 | 412.20 | 241.80 | 1784.20 | 1613 |
| THIRD SECTION (3 pages) | Preparing blank pages with pre-printed entries (A3 size), and filling-in the blank pages | negligible | negligible | | | | | negligible | negligible | | | | |
| | by typewriting | 57 | 57 | 258 | 99 | 315 | 156 | | | | | | |
| | by photocomposition | | | | | | | 257.28 | 257.28 | 86.49 | 47.63 | 343.77 | 304.91 |
| | GLUE BINDING | | | | | 620 | 155 | | | | | 789.50 | 197.40 |

TOTAL COSTS INVOLVED IN PRINTING THE PAMPHLET ACCORDING TO THREE VARIANTS
(in Swiss francs)

| Variant | Preparation of the Master Image by | Offset Reproduction by | Total Cost for 150 Copies | Cost per Copy |
|----------------|--|--------------------------|---|---------------|
| First Variant | the International Bureau | the International Bureau | without reduction: 474 with 50% reduction: 342 | 3.2 2.3 |
| Second Variant | the commercial printer (by photocomposition) | the commercial printer | latin alphabet: 767 Russian: 1263 | 5.1 8.4 |
| Third Variant | the International Bureau | the commercial printer | with reduction: 440 with 50% reduction: 310 | 2.9 2.1 |

INDIVIDUAL COST CALCULATION FOR PRINTING THE PAMPHLET (150 copies)
 ACCORDING TO THE FIRST VARIANT
 (in Swiss francs)

| Element of the Pamphlet | Preparation of the Master Image | Offset Reproduction | Binding | Total |
|--|---------------------------------|--|---------|---------------|
| Front Page (1 page) | 26.54 | 21.30 | | |
| Descriptions, Claims and Amended Claims (12 pages) | 0 | 264 | | |
| Drawings (2 sheets) | 0 | 42.60 | | |
| International Search Report (3 + 1.7 pages) | 0 | 109.30 | | |
| | 26.54 | 437.20 | 10.5 | 474.24 |
| | | With 50% reduction of the description, claims and amended claims, | less | 132.00 |
| | | | | <u>342.24</u> |

[Sheet III follows]

PCT/WG/GPD/I/2
 ANNEX C
 Sheet II

INDIVIDUAL COS CALCULATION FOR PRINTING THE PAMPHLET (150 copies)
 ACCORDING TO THE SECOND VARIANT
 (in Swiss francs)

| Element of the Pamphlet | Preparation of the Master Image | | Offset Reproduction | Binding | Total | |
|---|---------------------------------|---------|---------------------|---------|---------|------------------|
| | Latin alphabet | Russian | | | | |
| Front Page (1 page) | 73.82 | 140.82 | 19.37 | | | |
| Description, Claims and Amended Claims (12 pages) | 428.80 | 857.60 | 96.85 | | | |
| Drawings (2 sheets) | 0 | 0 | 40 | | | |
| International Search Report (3 + 1.7 pages) | 0 | 0 | 91 | | | |
| | 502.62 | | 247.22 | 17.32 | 767.16 | (Latin alphabet) |
| | | 998.42 | 247.22 | 17.32 | 1262.96 | (Russian) |

PCT/WG/GPD/I/2
 ANNEX C
 Sheet III

[Sheet IV follows]

INDIVIDUAL COST CALCULATION FOR PRINTING THE PAMPHLET (150 copies)
 ACCORDING TO THE THIRD VARIANT
 (in Swiss francs)

| Element of the Pamphlet | Preparation of the Master Image | Offset Reproduction | Binding | Total |
|---|---------------------------------|--|---------|--------|
| Front Page (1 page) | 26.54 | 19.37 | | |
| Description, Claims and Amended Claims (12 pages) | 0 | 232.44 | | |
| Drawings (2 sheets) | 0 | 40 | | |
| International Search Report (3 + 1.7 pages) | 0 | 91 | | |
| | 26.54 | 382.81 | 30.70 | 440.05 |
| | | With 50% reduction of the description, claims and amended claims, less: | | 129.60 |
| | | | | 310.45 |

PCT/WG/GPD/I/2
 ANNEX C
 Sheet IV

[Annex D follows]

TOTAL COSTS INVOLVED IN PRINTING THE GAZETTE ACCORDING TO THREE VARIANTS
(in Swiss francs)

| Variant | Preparation of the Master Image by | Offset Reproduction by | Total Cost for | | Cost per copy | |
|----------------|--|--------------------------|-------------------------------|-----------------------------|-----------------|----------------|
| | | | 2000 copies (English edition) | 500 copies (French edition) | English edition | French edition |
| First Variant | the International Bureau* | the International Bureau | 5774 | 3308 | 2.9 | 6.6 |
| Second Variant | the commercial printer (by photocomposition) | the commercial printer | 5930 | 5798 | 3.0 | 11.6 |
| Third Variant | the International Bureau* | the commercial printer | 3342 | 2547 | 1.7 | 5.1 |

* with the exception of the cover page

INDIVIDUAL COST CALCULATION FOR PRINTING THE GAZETTE
 ACCORDING TO THE FIRST VARIANT
 (in Swiss francs)

| Element of the Gazette | Preparation of the Master Images | | Offset Reproduction | | Binding | | Total | |
|--|----------------------------------|----------------|---------------------|----------------|-----------------|----------------|-----------------|----------------|
| | English Edition | French Edition | English Edition | French Edition | English Edition | French Edition | English Edition | French Edition |
| Cover Page (4 pages) | negligible | negligible | 116 | 29 | | | | |
| Table of Contents (1 page) | 16 | 16 | 86 | 33 | | | | |
| First section (25 pages) | 770 | 1141 | 2150 | 825 | | | | |
| Second and Fourth sections (1 + 15 pages) | 425 | 425 | 1376 | 528 | | | | |
| Third section (3 pages) | 57 | 57 | 258 | 99 | | | | |
| | 1168 | 1639 | 3986 | 1514 | 620 | 155 | 5774 | 3308 |

[Sheet III
 follows]

PCT/WG/GPD/I/2
 ANNEX D
 Sheet II

INDIVIDUAL COST CALCULATION FOR PRINTING THE GAZETTE
 ACCORDING TO THE SECOND VARIANT
 (in Swiss francs)

| Element of the Gazette | Preparation of the Master Images | | Offset Reproduction | | Binding | | Total | |
|--|----------------------------------|----------------|---------------------|----------------|-----------------|----------------|-----------------|----------------|
| | English Edition | French Edition | English Edition | French Edition | English Edition | French Edition | English Edition | French Edition |
| Cover Page (4 pages) | Negligible | Negligible | 116 | 29 | | | | |
| Table of Contents (1 page) | 85.76 | 85.76 | 25.70 | 15.10 | | | | |
| First Section (25 pages) | 2141 | 3174 | 644 | 378 | | | | |
| Second and Fourth Sections (1 + 15 pages) | 1372 | 1372 | 412.20 | 241.80 | | | | |
| Third Section (3 pages) | 257.28 | 257.28 | 86.49 | 47.63 | | | | |
| | 3856.04 | 4889.04 | 1284.39 | 711.53 | 789.50 | 197.40 | 5929.93 | 5797.97 |

PCT/WG/GPD/I/2
ANNEX D
Sheet III

[Sheet IV
Follows]

INDIVIDUAL COST CALCULATION FOR PRINTING THE GAZETTE
 ACCORDING TO THE THIRD VARIANT
 (in Swiss francs)

| Element of the Gazette | Preparation of the Master Images | | Offset Reproduction | | Binding | | Total | |
|--|----------------------------------|----------------|---------------------|----------------|-----------------|----------------|-----------------|----------------|
| | English Edition | French Edition | English Edition | French Edition | English Edition | French Edition | English Edition | French Edition |
| Cover Page (4 pages) | negligible | negligible | 116 | 29 | | | | |
| Table of Contents (1 page) | 16 | 16 | 25.70 | 15.10 | | | | |
| First Section (25 pages) | 770 | 1141 | 644 | 378 | | | | |
| Second and Fourth Sections (1 + 15 pages) | 425 | 425 | 412.20 | 241.80 | | | | |
| Third Section (3 pages) | 57 | 57 | 86.49 | 47.63 | | | | |
| | 1268 | 1639 | 1284.39 | 711.53 | 789.50 | 197.40 | 3341.89 | 2547.93 |

PCT/WG/GPD/I/2
ANNEX D
Sheet IV

[Annex E
follows]

TRANSLATION OF A LETTER
RECEIVED BY THE SWISS PATENT OFFICE
FROM IMPRIMERIES REUNIES LAUSANNE
AND TRANSMITTED TO THE INTERNATIONAL BUREAU BY THE SAID OFFICE

Re: PCT Publications

December 14, 1976

Dear Mr. Director,

Following our discussions in Lausanne on December 1, 1976, during which you outlined your request relating to printing costs of the international publications, we are pleased to submit our annexed calculation.

(a) for PCT pamphlets

(b) for the Gazette

Both of them being published on a weekly basis.

The calculations have been made on the basis of the present tariffs of our firm with respect to photocomposition and offset reproduction (verilith).

As far as languages are concerned, we shall not communicate to you the price relating to composition in Japanese, since we have no possibility of establishing it and therefore of calculating it.

The paper price has been calculated on the basic price relating to a minimum of 20 tons, since we obtain, for quantities above such a minimum, an extremely competitive price. For colored paper of the Gazette, the price has been calculated on the basis of a minimum use of 5 tons per color.

With respect to the binding, we did not consider stapling in the top left-hand corner; we propose instead the system presently used in Switzerland, that is, the side glue binding by 4 or 2 pages.

It should be well understood that, if you wish to obtain complementary information, you can ask for such information either directly by telephone or in a further meeting with the undersigned, Mr. P. Miskiewicz or Mr. S. Délez who made the calculations.

Looking forward to hearing from you, I remain,

Yours sincerely,

[signed Roger Rochat, Director]

IMPRIMERIES REUNIES S.A.

Bureau Fédéral de la
Propriété Intellectuelle
3000 Berne

Lausanne, December 14, 1976

PCT PAMPHLET - Weekly publication

PAMPHLETS

| | |
|----------------|--|
| Size (trimmed) | 21 x 29.7 cm (A4) |
| Composition | according to the detailed information given below |
| Printing | in black characters |
| Paper | surfaced, white, 70 gm ² |
| Shaping | sheet folded and glued on the back, single sheets glued (according to the present system used for Swiss patents) |

Front Page

Preprinting on A3 size blank sheets (framed), reproduction in 5000 copies x 5 languages x 5 types, that is, in total, 125,000 copies on offset white paper 90 gm²

for 1,000 copies S frs 38.75

Preparation of the front page by us in A4 size:

| | | <u>150 copies</u> | <u>± 10 copies</u> |
|---|-------|-------------------|--------------------|
| Composition | S frs | 67.-- | S frs -- |
| Printing per page | | 18.-- | 0.10 |
| Paper per sheet (2 pages) | | 1.37 | 0.92 |
| Composition in Russian | | 134.-- | -- |
| Extra charge for the reduction of one sheet of drawings | | 6.82 | -- |

| <u>Remaining Parts of the Pamphlet</u> | <u>150 copies</u> | ± | <u>10 copies</u> |
|--|---|---|------------------|
| Composition of one page of text matter on 2 columns, character size 9/10 times on 19 cicéros (6,650 characters per page) | S frs 85.76 | | S frs -- |
| Composition in Russian | 171.52 | | -- |
| Printing per page | 18.-- | | 0.10 |
| Printing per sheet of drawings, includ- ing small retouching (direct reproduction on Verilith-offset) | 20.-- | | 0.10 |
| Paper, price per sheet (2 pages) | 1.37 | | 0.92 |
| <u>Shaping</u> | | | |
| 1 sheet (1 or 2 pages) non glued | 1.49 | | 0.10 |
| 4 pages, folded once | 4.23 | | 0.28 |
| 8 pages (2 x 4 pages folded once and glued) | 12.57 | | 0.84 |
| 12 pages (3 x 4 pages folded once and glued) | 17.32 | | 1.15 |
| for 4 additional pages (folded and glued) | 4.75 | | 0.31 |
| for 2 additional pages (1 sheet glued) | 8.62 | | 0.57 |
| <u>GAZETTE</u> | | | |
| Size (trimmed) | 21 x 29.7 cm (A4) | | |
| Number of pages | 96 inside + cover (4 pages) | | |
| Composition | reproduction of existing or new pages | | |
| Printing | recto-verso in black | | |
| Paper | inside: surfaced, 70 gm ² white or coloured cover: hard paper, coloured, surfaced, 180 gm ² | | |
| Binding | thermoplastic, grooved cover, refolded and glued on the back | | |
| Price for | 2,000 copies in English 500 copies in French | | |
| | <hr/> 2,500 copies | ± | 100 copies |

| | | | |
|---|--------|--------------|-------------|
| Composition per new page of text matter | S frs | 85.76 | |
| Composition per pamphlet front page to be recomposed in English or French | | 67.-- | |
| Printing per sheet of 8 A4 size pages (2 separate languages) | S frs | 235.-- | S frs 2.-- |
| Paper per sheet of 8 pages in 2,500 copies | white | S frs 92.-- | S frs 37.-- |
| | colour | S frs 113.-- | S frs 45.-- |
| Paper of the cover in 2,500 copies | S frs | 145.-- | S frs 58.-- |
| <u>Thermoplastic binding</u> | | | |
| Thin cover, folded and glued | S frs | 333.-- | S frs 11.30 |
| For 8 pages, inside | S frs | 109.-- | S frs 4.-- |
| Supply of blank pages preprinted in A4 size on offset white paper, 90 gm ² for later mounting of photocomposed text matter, printed in 50,000 copies - Price for 1,000 copies | | | S frs 19.-- |

Time limits for printing : to be studied on a common basis, on the one hand in view of the number of pamphlets to be composed and on the other hand in view of the working capacity to be put at your disposal.

IMPRIMERIES REUNIES SA

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