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

**PATENT COOPERATION TREATY (PCT)**  
**WORKING GROUP**

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**FILING AND PROCESSING OF SEQUENCE LISTINGS UNDER THE PCT**

*Document prepared by the International Bureau*

## SUMMARY

1. The Working Group is invited to comment on proposals to modify certain provisions of the Administrative Instructions under the PCT concerning the filing and processing of sequence listings (those proposals will also be the subject of consultation under Rule 89.2(a) by way of a PCT Circular to be sent in due course).

2. The proposals seek, in particular:

(i) to encourage applicants to file ST.25 sequence listings in the machine readable text format which is required for international search and preliminary examination, and

(ii) in the event that the applicant does not file the sequence listing in such a text format as part of his international application, to make the sequence listing in that text format furnished for the purposes of international search available to the public so that the disclosure, which formed the basis for the international search, is usable by designated Offices and third parties.

## BACKGROUND

3. Proposals for modifications of the Administrative Instructions under the PCT have been under discussion for some time to clarify the status of sequence listings provided for different purposes under the PCT and questions of their electronic submission. Following two separate rounds of consultation by way of Circulars C. PCT 1014/C. SCIT 2609, Annexes II to VI (dated February 7, 2005), and C. PCT 1074/C. SCIT 2624 (dated April 24, 2006), it appears that agreement has now been reached on the main aspects of the proposals, and it is envisaged that modifications to the Administrative Instructions will be promulgated with effect from January 1, 2009.

4. During the most recent round of consultation, the International Bureau has been requested to review certain other matters relating to the processing of sequence listings, also dealt with in the same parts of the Administrative Instructions. Consequently, the International Bureau will enter into a further round of consultations on those new proposals for modifications of the Administrative Instructions. If agreement on those further modifications is reached quickly, it is envisaged that these should be promulgated together with the other modifications already agreed upon and also come into force on January 1, 2009. The substance of those further proposed modifications of the Administrative Instructions is outlined in the following paragraphs.

## MIXED MODE FILINGS

5. Since January 11, 2001, applicants have been permitted to file “mixed mode” applications, where the body of the description is in paper format and a sequence listing is provided either both on paper and in electronic form on a physical medium, or else only in electronic form on a physical medium. This was envisaged to be a temporary solution to the problem of very large sequence listings being filed on paper, which were both difficult to process and, from the applicant’s perspective, extremely expensive, due to the number of page fees payable.

6. By now, fully electronic filing systems are available to all applicants, either through a national receiving Office or through the receiving Office of the International Bureau. While some online filing systems may not permit very large listings to be filed, applications of any size can be filed at the receiving Office of the International Bureau in electronic form on physical media. Furthermore, it is very unlikely that any applicant filing an international application for an invention relating to a sequence listing would be technically incapable of using this filing route. Consequently, it is proposed to delete the option of mixed mode sequence listing applications. This would be done by deleting Part 8 of the Administrative Instructions entirely (rather than moving its substance into Part 7 of the Administrative Instructions, as had been agreed following the two rounds consultations referred to in paragraph 3, above).

## FILE FORMATS USED AND MADE AVAILABLE

7. At present, applicants are permitted to file sequence listings forming part of the international application in any of the following formats:

(i) on paper;

(ii) as a plain text file (henceforth referred to as “ST.25 text file”) complying with the requirements as to the electronic document format required for international search and international preliminary examination as specified in Annex C of the Administrative Instructions (which is identical to WIPO Standard ST.25), either as part of a fully electronic filing or else accompanying an otherwise paper filing in the case of a “mixed-mode” application;

(iii) where permitted by the receiving Office, as a PDF or image file (“ST.25 image file”), which shows a layout of text which complies with all requirements of ST.25 except for the requirements as to the electronic document format required for international search and international preliminary examination, and thus does not permit the sequence listing to be machine-processed directly.

8. Only the second option is of real use to Offices or third parties in the case of any but the smallest of sequence listings, since most listings can only be analyzed and searched if they can be read directly into a computer. However, a large majority of sequence listings are filed on paper or as ST.25 image files in PDF or TIFF format. These are usually either accompanied by an ST.25 text file for the purposes of international search (which will not form part of the application and thus is not published), or else the International Searching Authority will request the applicant to furnish such a text file under Rule 13*ter*. Failure to furnish such a searchable text file will usually result in no international search report being established.

9. There should not be any difficulty for an applicant in providing an ST.25 text file as part of the international application, rather than providing an ST.25 image file as part of the application and an ST.25 text file for the purpose of international search only, given that:

(i) it is necessary for the applicant to create an ST.25 text file first in order to then print it or create a PDF or image file;

(ii) the sequence listing is to be presented as a separate part of the description (see Rule 5.2(a)) and thus can easily be presented as a text file even where the remainder of the application is filed in image format; and

(iii) it is, in any case, necessary to furnish an ST.25 text file for the purposes of international search if such a text file has not been submitted as part of the international application itself.

10. Consequently, a number of measures are proposed to:

(i) provide a greater incentive for the applicant to provide an ST.25 text file from the outset, as part of the international application, thereby reducing the processing required by receiving Offices, the International Bureau and International Authorities alike in handling multiple versions of sequence listings; and

(ii) ensure that third parties and designated Offices have access to an ST.25 text file version of the sequence listing where such text file has not been submitted as part of the international application but is furnished for the purposes of the international search only.

*Incentive For Applicants to File Sequence Listings, as Part of the Application, in the ST.25 Text Format*

11. It is proposed to modify Section 707(a-bis) of the Administrative Instructions so as to provide that, instead of a maximum of 400 page fees payable, no page fees would be payable for a sequence listing filed in ST.25 text format but full page fees would be payable for all pages of a sequence listing filed in an ST.25 image format (as well as for sequence listings filed on paper, as at present).

12. This would give applicants a greater incentive to file the sequence listing in the ST.25 text format in the first place, rather than filing it in the ST.25 image format and (simultaneously or subsequently) furnishing a file in ST.25 text format for the purposes of international search only. The financial implications of reduced fee income for the International Bureau would be negligible in comparison to the potential improvements in information for third parties and designated Offices, as well as for efficiency of processing in receiving Offices, International Searching Authorities and the International Bureau, noting that only around 3,500 applications are filed each year containing sequence listings, that a large majority of such listings are less than 5 pages in length, and that, already today, the page fees for the extremely long ones are capped at the equivalent of 400 pages.

13. A further benefit would be that this proposal would significantly simplify the fee calculation: fees relating to a sequence listing presented in the ST.25 image format are easily calculated since the images are actual representations of sheets and are directly included into the normal page count; the estimate of the equivalent number of sheets of a sequence listing in the ST.25 text format would no longer be required and such files can simply be ignored for the purpose of the calculation of the page fees.

14. Following consultations with International Authorities during the 15<sup>th</sup> session of the Meeting of International Authorities, held in Vienna from April 7 to 9, 2008 (see paragraph 85 of document PCT/MIA/15/13, available on the WIPO website<sup>1</sup>), it is further proposed to no longer provide any special fee reduction where tables related to sequence listings are furnished in electronic form, as is the case at present (see Section 707(a-bis)) and had been proposed to be maintained during the two rounds of consultation referred to in paragraph 3, above. Such pages containing tables related to sequence listings are not machine-readable in the way that the sequence listings are but rather require consideration by the examiner or a third party reader. Consequently, there is no processing advantage or policy objective to be gained by offering a fee incentive related to format. Furthermore, in view of

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<sup>1</sup> See [http://www.wipo.int/meetings/en/details.jsp?meeting\\_code=pct/mia/15](http://www.wipo.int/meetings/en/details.jsp?meeting_code=pct/mia/15)

the absence of a definition of what constitutes “tables related to sequence listings”, if no page fees were to be charged for pages containing such tables, applicants could be tempted to include in such tables all kind of subject matter not related to sequence listings in order to avoid the payment of page fees, which would result in great difficulties for the receiving Offices in determining whether or not to include such pages in the page count, noting the lack of expertise in sequence listing related matters in those Offices.

15. Consequential on the proposal not to include in the page count any pages containing tables related to sequence listings, it is further proposed to no longer require that tables related to sequence listings be presented as a separate part of the description and be submitted in a particular document format (ASCII) (as had been proposed during the two rounds of consultation referred to in paragraph 3, above)..

16. In the context of setting an incentive for applicants to file sequence listings as part of the application in the ST.25 text format, it is noted that one measure considered but not included in this proposal was to make ST.25 text format a formal requirement, equivalent to those in Rule 11 (though not directly included in Rule 11 since it would apply only to applications in electronic format and not to sequence listings on paper). In this case, an ST.25 image file could be provided but would be considered a formal defect requiring correction under Article 14. However, this approach does not seem practical in view of the difficulty for both applicants and receiving Offices in making corrections to electronically filed applications and the fact that the receiving Office would not usually be in a good position to confirm whether the corrected file was actually appropriate.

*Making Available Copies of Sequence Listings in the ST.25 Text Format Submitted for the Purposes of International Search*

17. It is also proposed that the International Bureau should make available, through PATENTSCOPE®, sequence listings provided for the purposes of international search. It is suggested that this should be sent to the International Bureau by International Searching Authorities at the same time that the international search report is transmitted (see proposed modification of Section 513(e)). It does not appear to be practical for the transmission to be made by the receiving Office with the record copy, since a listing specifically for the purpose of search will not always be sent to the receiving Office.

18. The fact that the ST.25 text file is made available whether it is sent as part of the international application or specifically for the purpose of international search will eliminate one possible reason that the applicant might want to file the sequence listing in a less useful format. Consequently, it is believed that, once applicants become aware of the changes, International Searching Authorities will only actually need to handle copies furnished for the purpose of search in the case of international applications which are filed in paper form.

19. Consideration was given to also making available copies of sequence listings provided for the purpose of international preliminary examination. However, in view of the restrictions in Article 38 on access to the file of the International Preliminary Examining Authority, it would seem that this could only be done on a reliable basis by amendment of Rule 70 to make a listing provided for that purpose an annex of the international preliminary examination report. If the listing forming part of the international application is not in ST.25 text file format, a copy will almost always have been provided to the International Searching Authority and the one provided to the International Preliminary Examining Authority (where

the two are not the same Office) should be identical. Consequently, it does not appear to be necessary to set up a further (and more complicated) process to make this version of the listing available.

### *Other Changes*

20. Finally, a clarification is proposed to the provisions of Annex F relating to the electronic document format in which sequence listings filed as part of the application may be submitted. It is proposed to clarify that the “document created using the Standard for the Presentation of Nucleotide and Amino Acid Sequence Listings in International Patent Applications (see Annex C of the Administrative Instructions (WIPO Standard ST.25))” defined in paragraph 3.1.1.2 of Annex F and referred to elsewhere means an ST.25 text file and not TIFF or PDF format ST.25 image files (which, if accepted, would be handled in accordance with paragraphs 3.1.2 and 3.1.3 accordingly).

21. This change would make clear that, in accordance with the basic common standard, a receiving Office accepting applications in electronic format must accept a sequence listing in the ST.25 text file format but is not required to accept electronically filed applications where a sequence listing is included in TIFF or PDF if it does not accept the filing of international applications in such electronic document format.

22. It is to be noted that this is a clarification only and not a change to the present legal situation and practice and, in any case, for the reasons noted above, should not cause any difficulty to applicants, provided that the electronic filing system warns the applicant immediately (either from the client or server side) that the ST.25 text file must be provided where the receiving Office does not accept the filing of international applications (and sequence listings contained therein) in an image format such as PDF.

23. *The Working Group is invited to comment on the proposals for:*

*(i) the elimination of mixed-mode sequence listing filings,*

*(ii) the change of calculation of number of page fees payable to encourage the filings of sequence listings in ST.25 text file format, and the taking into account in the page count of pages containing tables related to sequence listings;*

*(iii) the making available of copies of sequence listings submitted for the purposes of international search; and*

*(iv) the clarification concerning acceptable electronic document formats for the filing of sequence listings under the basic common standard.*

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