



IPC/R 8/99

ORIGINAL: English/français

DATE: May 18, 1999/

18 mai 1999

**WORLD INTELLECTUAL PROPERTY ORGANIZATION**  
**ORGANISATION MONDIALE DE LA PROPRIÉTÉ INTELLECTUELLE**  
GENEVA/GENÈVE

**COMMITTEE OF EXPERTS OF THE IPC UNION**  
**COMITÉ D'EXPERTS DE L'UNION DE L'IPC**

**IPC REFORM PROJECT FILE/DOSSIER DE PROJET DE RÉFORME DE LA CIB**

<b>SUBJECT:</b>	STUDY OF THE POSSIBILITY OF COOPERATION BETWEEN OFFICES IN THE RECLASSIFICATION OF BACKLOG PATENT FILES, INCLUDING ITS OUTSOURCING TO EXTERNAL CONTRACTORS
<b>SUJET :</b>	ÉTUDE DES POSSIBILITÉS DE COLLABORATION ENTRE OFFICES DANS LE DOMAINE DU RECLASSEMENT DES DOSSIERS DE BREVETS, Y COMPRIS LE RECOURS À DES SOUS-TRAITANTS EXTÉRIEURS

<b>ANNEX/ ANNEXE</b>	<b>CONTENT/CONTENU</b>		<b>SEE/VOIR R 8/99</b>	<b>ORIGIN/ ORIGINE</b>	<b>DATE</b>
1	Comments	Commentaires		US	14.04.99
2	Comments	Commentaires		IB	16.04.99
3	Comments	Commentaires		DE	04.05.99
4	Rapporteur report	Rapport du rapporteur		EP	03.05.99

ANNEX 1/ANNEXE 1



**UNITED STATES DEPARTMENT OF COMMERCE**  
**Patent and Trademark Office**  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

April 14, 1999

Mr. Mikhail Makarov  
Head, IPC Section,  
Classification and Patent  
Information Division,  
World Intellectual Property Organization  
34, chemin des Colombettes  
1211 Geneva 20  
SWITZERLAND

Re: IPC Reform Task #8 – Study the possibility of cooperation between offices in the reclassification of backlog patent files, including its outsourcing to external contractors.

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Dear Mr. Makarov:

Enclosed is the initial US response to Task #8 as set forth in Annex V of the Final Report of the Twenty-Eighth Session Committee of Experts (IPC/CE/28/5) for your consideration. Copies of this document have also been circulated via e-mail to the IPC Reform Working Group Members.

Sincerely,

Robert W. Saifer, Director  
International Liaison Staff

Enclosure  
cc Reform WG Members

## **REFORM WORKING GROUP**

### **US Paper on Task 8**

#### **Study the possibility of cooperation between offices in the reclassification of backlog patent files, including its outsourcing to external contractors**

#### **Introduction**

If the IPC is to remain viable it must become a complete, self-contained search and retrieval system for all patent documents. The IPC currently exists as nothing much more than an “official” skeleton structure without any “official” substance, that is, without any “official” enumeration of all the patent documents that should be associated with the various parts of the structure. Many Intellectual Property Offices (IPOs) maintain inventories that identify patent documents and their associated IPC placements. Some of these are quite extensive in their coverage, in terms both of years and publishing offices. But none are complete.

All of these inventories, to some significant extent, reflect the very serious limitation on IPC usefulness that multiple IPC editions create. Some offices, in particular the EPO and the JPO, have sought to mitigate this limitation by reclassifying older documents into an IPC based system (e.g., ECLA, F-Term/FI). But complete reclassification of all documents in any one system has not been achieved.

#### **Goals**

The members of the IPC Union, as represented by the Committee of Experts, have agreed that revitalization of the IPC is imperative. To be effective, this reform effort should set in motion steps to make substantial progress towards achieving, among others, two results:

- Creation and maintenance of an official electronic IPC Master Classification File (IPC-MCF) intended ultimately to identify all the patent documents published by the members of the IPC Union and the valid (according to the current IPC) classifications ascribed to each document.
- Provision of appropriate currently valid IPC classification(s) to all documents not presently having such classifications (i.e., backlog patent file reclassification)

#### **Discussion**

*IPC-MCF*: Very comprehensive patent bibliographic databases that contain IPC data already exist. The INPADOC database is a prime example and could serve as a core upon which to build an IPC-MCF. But the INPADOC database does not reflect any of the IPC reclassification effort that has taken place, nor does the IPC data it contains reflect the intellectual effort some offices (e.g., the EPO) have invested in correcting and improving their IPC based classifications.

It seems clear that before any major reclassification activity is begun a “base line” needs to be established. The results of already completed reclassification and IPC classification improvement efforts should be assembled and merged to establish a single database representing the most comprehensive, complete, accurate and current patent document/IPC classification data available – from whatever source. This database could then be adopted as the “official” IPC-MCF and serve as the baseline against which all further IPC improvement activity (e.g., reclassification) would be conducted.

Establishing an IPC-MCF, as described, will be challenging, both technically and from an inter-office cooperation standpoint. Because so much of the existing additional “value added” IPC data have been generated by the EPO and JPO, their initial contribution, as compared to other offices, would be high. Consequently, inter-office discussions aimed at establishing an IPC-MCF should also explore and, hopefully, reach agreement on cooperation (e.g., resource sharing) as regards follow on activities.

*Reclassification of the Backlog Patent Files:* Once a baseline has been established, revisions to the IPC must include reclassification of all effected patent documents. Cooperation in the reclassification effort itself can take several forms – each office reclassifying its own documents, one or a few offices reclassifying all documents, offices contributing funds to have a contractor reclassify all or some documents, etc. – the possible permutations are many.

However, in selecting an approach, preference should be given, if at all possible, to an approach that is likely to yield a high level of document placement consistency. A significant (if artificial) contribution to consistency (and substantial cost savings, as well) can be achieved by reclassifying only one document in each patent family, and automatically ascribing the same classifications to other family members. Beyond that, high levels of consistency can be achieved only by very close consultation between offices conducting a cooperative reclassification project, or by limiting to one or a very few the number of entities (offices/contractors) conducting the project.

*Reclassification Resources:* Resources, of course, are the key. No matter how IPC reclassification is accomplished, substantial resources will be required. On an absolute basis, with few exceptions, most IPOs are not able to invest significantly in classification activities. The exceptions are the EPO, JPO and USPTO. If there is to be progress in IPC reclassification, then, it seems realistic to assume that these three offices must be major contributors.

To this may be added an important contributing role for WIPO. In addition to its current activities and the care and maintenance of the new IPC-MCF mentioned above, WIPO needs to dramatically increase its role with respect to reclassification support activities and funding. In any case, at least initially, the lion share of resources will likely come from redirection of existing allocations of classification funding/personnel. This reality should be reflected by placing heavy emphasis on obtaining a high benefit-to-cost ratio in the cooperative IPC revision projects first selected, due to the new requirements to reclassify documents effected.

*Use of Contractors:* It seems reasonable to assume that contractors, appropriately selected and with adequate training and oversight, could do an acceptable job in IPC document reclassification. Further, they might provide the benefits of high consistency levels and minimal use of scarce IPO staffing. The major deterrent is an anticipated high cost. However, the approach should be explored, at least tentatively, by:

- Conducting informal discussions with private sector firms competent in patent literature, e.g., Derwent, CAS, etc., to determine levels of interest and “ball park” estimates of anticipated cost; and
- Inviting IPOs to express interest in performing, on a contract basis, defined IPC document reclassification based on revision projects.

The information gathered in these exploratory initiatives could then be use to assess further the appropriateness and practicality of taking a more formal contract approach to IPC document reclassification.

*Use of Automation:* Experiments in automated patent document classification have been conducted and additional pilot projects are planned. These techniques have much potential to reduce both the time and professional resources required to conduct IPC reclassification, even if they prove useful only as assistance tools, perhaps providing classifiers with suggested choices. Therefore, the use of automation in IPC reclassification efforts should be aggressively explored.

## **How to Proceed**

The IPC Reform Working Group may want to endorse cooperative reclassification of backlog patent files including the establishment of an IPC-MCF. They should establish a Task Force that, in cooperation with the IB, would:

- Work to identify and obtain the data needed for the IPC-MCF and arrange with cooperating office(s) or with the IB for its physical creation and subsequent maintenance
- Establish and seek implementation of procedures to maintain the IPC-MCF
- Establish and apply criteria and procedures to select a few high payoff reclassification projects for pilot testing of cooperative approaches
- Select and launch at least one pilot cooperative reclassification project as a proof of concept
- Explore informally with the private sector and interested IPOs the possibilities for using a contract approach for IPC reclassification
- Collaborate with the IB in pilot testing the use of automated classification tools to assist in IPC reclassification

[Annex 2 follows/  
L'annexe 2 suit]

ANNEX 2/ANNEXE 2

COMMENTS ON TASK 8 ON THE PROGRAM OF THE  
AD HOC IPC REFORM WORKING GROUP

*submitted by the International Bureau*

Under Task 8 the cooperation between offices in the reclassification of backlog patent files, including its outsourcing to external contractors, should be considered.

According to a survey conducted by the International Bureau, the German, Norwegian and Russian patent offices have reclassified their entire national collections according to IPC<sup>6</sup>, while the Canadian patent office has reclassified its national patent collection in selected fields (see the *WIPO Handbook on Industrial Property Information and Documentation*, pages 5.1.7.1, 2). Furthermore, these offices agree to supply the reclassification data in electronic form to other offices free.

On the other hand, the European Patent Office reclassifies the PCT minimum documentation according to the European Classification on a permanent basis and, similarly, the Japanese patent office reclassifies its national collection according to the internal classification scheme. Since these two classifications are based on the IPC, it could be argued that there should be a possibility to obtain reclassification data according to the IPC from these two offices without imposing a heavy extra workload.

In order to simplify the use of the IPC and to base the searches only on the last edition, these reclassification data should be provided not only to the interested offices, but also to the public through the patent digital libraries or the commercial databases. Furthermore, the use of the reclassification data would be further enhanced if they replace the original IPC data on the patent documents. A study should be conducted in order to define a common format for the reclassification data and the way they could replace the original ones on the electronic documents.

[Annex 3 follows/  
L'annexe 3 suit]

## ANNEX 3/ANNEXE 3

<b>DEUTSCHES PATENT- UND MARKENAMT</b> German Patent and Trademark Office	<b>IPC/REF/WG      Task 8</b>
	Date : 4.05.1999
<p align="center"><i>Study the possibility of cooperation between offices in the reclassification of backlog patent files, including its outsourcing to external contractors</i></p>	

Re: **Comments on document IPC/CE/28/5, Annex V**

An appropriate way for reclassifying the patent documents might be that each Office or Organization will reclassify its own documents, i.e. documents which originate from this Office. Afterwards the reclassification data should be exchanged between the offices.

When reclassifying documents the new symbol should not replace the previous symbol but should be added to the data. When storing both symbols, the one from the previous edition and the other from the current edition the information could be used for generating a path through the different editions of the IPC.

As to the PCT documents, they could be reclassified by the Office where they were originally filed.

[Annex 4 follows/  
L'annexe 4 suit]

## **COMMITTEE OF EXPERTS**

### **ad hoc IPC REFORM Working Group**

#### **EUROPEAN PATENT OFFICE**

#### **Rapporteur Report on Cooperation between Offices in reclassification of backlog files ( task 8 )**

#### **INTRODUCTION**

During the twenty-eighth session of the Committee of Experts the EPO volunteered to be rapporteur for the task " Study the possibility of cooperation between offices in the reclassification of backlog patent files, including its outsourcing to external contractors".

Although it is noted that the International Bureau intended to conduct a pilot project on the use of automated tools for the reclassification and indexing of patent files in the course of the 2000-01 biennium, the rapporteur report does not take into account any positive result of this study.

The comments made by the International Bureau and the USPTO in their documents on task 8 have been taken into account for this rapporteur document.

#### **IPC REFORM**

The outcome of the IPC reform is still unknown but during the twenty-eighth session of the committee of experts tendencies were already coming up and especially the layered IPC structure, which seems to satisfy the user needs of smaller Offices as well as of Searching Authorities, was mentioned as a possibility.

For this study the layered IPC is seen as a two layer IPC in which the first layer or core layer contains all the groups, which are declared to belong to this core or basic level of the IPC. It is to be understood that the core or basic layer could contain less groups than the current IPC edition.

The second layer can contain deeper or finer subdivisions of the core layer as well as a further system of codes for indexing.

It is also supposed that smaller Offices are using the core layer and Searching Authorities are using the second layer of the IPC.

For the core layer the revision of the IPC should only result in limited changes which are due to emergent technology changes or obvious shortcomings.

However many changes are expected to be requested and implemented in the second layer.

The local classification schemes based on the IPC respectively in the German Patent Office, Japanese Patent Office ( FI ) and the European Patent Office ( ECLA ) can be adapted to be in line with the layered structure. Local indexing systems like F terms and ICO codes can be part of a coding system in layer 2.

## **RECLASSIFICATION OF THE BACKLOG PATENT FILES**

The future revisions have a limited impact on the core layer of the IPC and could have a more substantial impact on the second layer. As some Offices are only expected to use the core layer, the minimum requirement is the reclassification of the backlog according to the core layer and for all patent collections which are bearing the IPC.

All Offices which allot the IPC to their patent documents have in principle the expert knowledge to adapt the IPC symbols to the new situation. However the capacity in manpower could prevent Offices to carry out the backlog reclassification of their own documents.

For the collections belonging to the PCT minimum documentation it can be expected that the searching authorities reclassify their search files to the latest version including the second layer of the IPC. From the second layer, at least for the deeper subdivisions of the core layer, a computer based regeneration of the core layer can be carried out, e.g. from ECLA it is possible to come back to IPC level by suppressing the internal finer subdivisions.

In this way the PCT minimum documentation patent collections would become available according to the core layer as well as according to the second layer. Patent Offices are free to organise their own access to the data on the level as defined by these Offices.

For the non-PCT minimum documentation patent collections two possibilities are existing, namely with or without an abstract in English. Can a reclassification of a document be carried out on basis of an abstract? Without any doubt it can not be done for all cases and most experts tend to say " do not use abstracts for it ". Therefore this option is not developed in this document.

## **EXTERNAL CONTRACTORS**

External contractors, which are in the best position for this kind of work are abstracting services which already provide English language abstracts for documents published in other languages. They have shown to be able to work with the documents in the original language. Derwent is an example of such external contractor, willing to take on board additional activities, as far as they are compatible with their main activities.

Patent Offices can also be considered as far as the language is no major problem and therefore cooperation on regional level can be sorted out.

## **MAGNITUDE OF THE RECLASSIFICATION WORK**

From 1970 onwards patent family systems are available which allow to limit the reclassification work to one member per family. Apart from EP, WO, AP, OAPI, CH, DE, FR, GB, US which are fully covered by the normal work of the searching authorities also AT, AU and CA can be considered to be fully covered via the patent families. Indeed the first filings of AT, AU and CA are belonging to the PCT minimum search documentation and the rest of the filings in these countries are covered by corresponding filings in other countries. As BE, NL and LU are belonging to the EPO search documentation, these collections can be expected to be covered by the reclassification carried out by this searching authority.

The statistics made available by WIPO have been consulted for the countries not yet mentioned above and to create a worst case scenario the filings arriving directly in the office (marked with N in these statistics ) have been counted ( detailed figures are in annex ) and a grand total of about 240000 filings during 1996 is found. However already more than 120000 are counted for three Offices namely CN, KR and RU.

To remove the corresponding documents or family members the same calculation can be done by limiting the direct filings in the office to the residents. The figures now are 140000 as grand total from which 98000 are belonging to CN, KR and RU.

A further subdivision could be made on basis of basis of language bundles:

Nordic languages ( DK, FI, NO, SE) or 8900 filings

Spanish and Portuguese ( ES, PT, and Latin-America ) or 5600 filings

English ( IE, NZ, ZW) for 2100 filings

Italian ( IT ) for 6700 filings

More than 50% of the rest are filings in east European countries and the CIS countries.

## **IPC CLASSIFICATION MASTER FILE**

Do we need special measures to set up an IPC classification master file? The answer lies in the status and completeness of the existing bibliographic patent databases. EPO's bibliographic patent databases are already covering 65 offices or countries and all bibliographic patent data as far as delivered to the EPO is stored.

In these bibliographic patent databases there are fields for the IC (International Classification) and the EC ( European Classification or ECLA ). It is clear that the IC field could be reserved for the core layer of the IPC. Manipulating the data in this IC field is a new activity but also in the interest of larger offices as the EPO, knowing that access to the major part of the non minimum PCT patent documents is only possible via the IPC.

The second layer could be stored in the EC field or in a new field depending on the outcome on the second layer.

In EPO's bibliographic databases is also built a patent family system which allows to classify or reclassify only once per family. These propagation rules are now only working for the EC field but could be extended to other fields.

The access to the IPC Classification Master File is not a problem as Offices in general follow the policy to make their databases public. Especially the bibliographic patent databases of the EPO are available to the public via esp@cenet and the same databases are also available in some patent offices and via commercial hosts.

## **CONCLUSION**

Taking into account the layered structure of the IPC, it can be concluded that for the core layer no major obstacle is found for the systematic reclassification of all patent documents bearing an IPC. However a lot of agreements are to be made to cover all patent document collections and these agreements could differ per country or language group.

The second layer is of particular interest for the searching authorities which are almost automatically reclassifying the PCT minimum documentation to the latest version. A full reclassification of all patent document collections to the latest second layer version is difficult to imagine in the current situation. However this is not a vital necessity for a two layer system. With all patent documents (re)classified according to the core layer and a big part additionally (re)classified according to the second layer, such a system would constitute a big improvement in accessibility of patent documents for searching.

## ANNEX

### Extract from WIPO Statistics

#### Patent applications filed during 1996

Country	Residents	Non-residents	Total filings
Algeria	48	150	198
Armenia	162	4	166
Azerbaijan	165	17	182
Belarus	698	102	800
Brazil	2641	3378	6019
Bulgaria	316	407	723
Burundi	1	4	5
Chile	176	1771	1947
China	11628	10806	22434
Colombia	87	1172	1259
Croatia	259	356	615
Cuba	83	40	123
Finland	2179	483	2662
Georgia	288	14	302
Greece	404	44	448
Guatemala	2	102	104
Haiti	3	6	9
Honduras	10	126	136
Hongkong	41	2059	2100
Hungary	803	850	1653
Iceland	16	30	46
India	1660	6632	8292
Indonesia	40	3957	3997
Iraq	68	18	86
Ireland	793	134	927
Israel	1218	2101	3319

Country	Residents	Non-residents	Total flings
Italy	6997	1678	8675
Kazakstan	1022	72	1094
Kenya	15	12	27
Kyrgyzstan	126	16	142
Latvia	197	135	332
Lesotho	1		1
Libya	12	23	35
Lithuania	100	11	111
Madagascar	7		7
Malawi	2	3	5
Malta	6	18	24
Mauritius	3	19	22
Mexico	384	3809	4193
Monaco	16	23	39
Mongolia	114	12	126
Morocco	90	237	327
Netherlands	2348	593	2941
New Zealand	1275	3579	4854
Norway	1291	1621	2912
Pakistan	16	782	798
Panama	31	142	173
Peru	52	565	617
Philippines	163	2634	2797
Poland	2411	1297	3708
Portugal	86	57	143
Republic of Korea	68405	14282	82687
Moldova	289	7	296
Romania	1831	169	2000
Russian Federat.	18014	5197	23211
Saint Lucia		5	5

Country	Residents	Non-residents	Total flings
Saint Vincent &		8	8
Samoa		3	3
Seychelles		6	6
Singapore	200	14800	15000
Slovakia	195	420	615
Slovenia	286	87	373
Spain	2274	486	2760
Sri Lanka	50	114	164
Sweden	4111	744	4855
Tajikistan	32	3	35
Thailand	203	4355	4558
Macedonia	52	13	65
Trinidad & Tobago	9	79	88
Tunisia	46	128	174
Turkey	365	721	1086
Turkmenistan	66	23	89
Ukraine	3636	349	3985
Uruguay	25	182	207
Uzbekistan	914	53	967
Venezuela	182	1822	2004
Viet Nam	37	410	447
Yugoslavia	479	234	713
Zaire	2	27	29
Zambia	6	36	42

[End of Annex 8 and of document/  
Fin de l'annexe 8 et du document]