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IPC REVISION – THE FUTURE

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1 Strategy

The IPC is a sophisticated technical classification system covering all areas of technology. It has evolved through over 30 years of international negotiation and discussion. It is used in varying degrees by all major patent offices and is a vital tool for developing patent systems in third world countries.

The IPC is the only world-wide patent classification system. It is "applied" by all signatories to the Strasbourg Agreement (those signatories are known as the IPC Union). Unfortunately some of those countries apply IPC using a concordance, some only apply to main group level, and some only apply old editions. The ideal is of course for all countries of the world to apply all relevant IPC Classification and Indexing using the very latest editions to all patent documents. Until this happens, the true value of the IPC cannot be assessed, but it is clear that no nation on earth can expect any longer to rely totally on a local patent classification system to allow retrieval of all relevant information, especially as the advent of the internet will inevitably blur national boundaries as regards information.

The revision system has continued unchanged for many years, almost since the inception of the IPC itself. It is clear that we must collectively question the whole procedure as regards the results achieved and the cost of those results in time and money. It is particularly essential that the major patent offices put aside long-held prejudices and partisan attitudes, in order to enable a rigorous examination of the revision process.

2 Goal and Objective

It is important to use a single classification system. Use by patent offices demands intimate familiarisation with a classification scheme both for its consistent internal use and for external advice and regulation. The many disparate classification schemes in use today mean that searching the world-wide patent collection is cumbersome, inefficient and unreliable.

The IPC should be easy to use for both patent offices and the public. More help should be given to the user in tools such as IPC CD-ROM to allow more reliable classification and indexing. Steps should be taken to allow speedy revision of problem areas of the IPC or of areas for accommodation of new technology.

3 Today's Situation

IPC is applied universally and therefore is the only globally uniting patent classification. ECLA comes close in that it is applied to a large part of the world's patent documentation but it is essentially still an internal system with little regulation of its content. It has many subdivisions of IPC but some areas of IPC are not used in ECLA so that there is not 100% correspondence between IPC and ECLA.

The IPC is not currently applied reliably for various reasons. The concordance approach used by some countries is obviously unreliable. In some patent offices insufficient training in applying IPC is a problem. Other patent offices only apply old versions of IPC such that the latest technologies are not accommodated. The only saving grace to this confusion is that in large families the correct IPC is usually applied sooner or later by one of the patent offices classifying the patent!

IPC indexing is not universally applied as some patent offices disagree with the concept of hybrid classification/indexing on principle and others lack the resources to apply it. Although the Strasbourg Convention does not require supplementary classification/indexing to be mandatorily applied, many patent offices feel that they have an obligation to users to provide as complete classification/indexing information as practically possible.

4 How Did We Get Here?

The IPC has been gradually honed over 30 years as a usable and comprehensive classification system. This is not to say that it does not need improvement – far from it. On the other hand it should be remembered that wholesale changes to the classification itself would cause severe problems to some patent offices, small and large, which rely on its use.

The age of readily available computer searching of patents is now upon us and the IPC must keep pace with that. This implies that classification/indexing may in the future be at least partially automated and also that retrieval using ever more complex algorithms will be possible. In the face of this technological explosion, the sacred cows of the paper age should be re-examined – particularly the envisaging of each classification code as a paper document which needs to be put away and that will take up space. Although paper files will be used for some years yet it is clear that their days are numbered.

Patent professionals have used key-word searching for over 20 years. They realise that key-word searching is an imprecise tool even when only one regional variation of one language is involved (e.g. American English vs European English). In many technical areas key-word searches are not feasible at all. When one considers all regional variations of all languages in the world then key-word searching cannot provide the degree of confidence needed in patent searches, nor is it foreseeable that it can ever do so unless a common language were to be used. In view of the political will to preserve cultural diversity, this is unlikely to happen in the foreseeable future. A reliably applied classification system removes the need to consider the vagaries of language until the search has reached a much finer level and is cost-effective on a world-wide level. A new common classification scheme could be evolved but what is the point of that when a tried and tested system familiar to major patent offices - the IPC - sits there waiting to be used? We therefore think that it is essential to maintain the IPC or a closely analogous tool. We think that classification under the IPC could indeed be extended to technical disclosures other than patents, particularly on the internet.

5 Available Options

The IPC could simply be abandoned and ECLA, which is after all largely based on IPC, take over. This would have the advantages that ECLA is mostly backlogged to the necessary degree and also that ECLA has many more subdivisions than IPC, so improving search efficiency. Disadvantages are that ECLA is essentially an internal system managed by EPO alone, and it would have to open up to more rigorous scrutiny as regards its revision and regulation. This would inevitably slow down its ability to react to technology and may use friction within its examining staff on which its operation depends.

Re-engineering the IPC revision process would enhance its ability to react to technological advance. There would still remain the problem of backlogging. A co-operation of patent offices to backlog its own patents under IPC would be possible but many patent offices lack the resources to do so. A way out may be to adapt ECLA data where possible.

Production of an all-new classification scheme would be a daunting task and seems very wasteful in view of the well-defined national and international classification schemes available already. Then there would be the problem of backlogging…

Recommendation 1

Reduce revision period to 3 years – this appears to be at least what must be done to improve IPC's ability to react to technological change and to address existing shortcomings.

This would have many knock-on effects, such as the need to continually re-prioritise the revision program, reassessing the criteria required for acceptance of a revision project into the program – particularly as regards file size and growth (should both be necessary? Will growth necessarily mean that sufficient file size will follow?).

Recommendation 2

The meeting facilities and system are outdated and should be thoroughly re-engineered to improve the efficiency of the meeting process. The recent introduction of world-wide e-mail communication into the revision system already means that IPC can already react faster so that the five year period for revision appears to be out of date. Major patent offices revise their internal classifications yearly, or even more often, depending largely on whether the classification is for public use as well. With enhanced use of IT, and assuming the revision process follows the present form, i.e. meetings of a search information group supervised by a Committee of Experts, followed by the issue of a new printed IPC at the end of the revision period, a revision period of three years appears perfectly feasible but this also depends upon the efficiency of the meeting process. Interspersed within the three year period there could be an intermediate issue, in the case of rapidly advancing technology. This would not appear in a full printed version but could be issued in electronic form.

WIPO's conference facilities are somewhat outdated although they work adequately in the context of the present meetings. Real-time alterations of text with viewing of the results at a local workstation is now feasible and this would enhance meeting efficiency greatly. We therefore think that WIPO desperately needs to overhaul at least some of the conference facilities to allow delegates to have individual screen and keyboard access to a local area network within the meeting room, perhaps with repetition on a large projected screen or screens. We also suggest power facilities and/or docking stations for delegates' laptop computers to allow uploading/downloading. Voice communications could also presumably be handled by the network to avoid the inefficiencies experienced by the current system's reliance on human control.

It is obviously neither practical nor desirable to have a sub-group for every project but we think that the principle of localised subject-matter oriented meetings would provide increased efficiency. This could work by having 3 to 5 day meetings devoted only to either electrical, chemical or mechanical subject matter in various Patent Offices in turn. This would enable use of that Office's IT facilities to allow real-time alteration of schemes, doing away with the tedious report stage of a meeting. French translation would be difficult or impossible at such meetings but this could be dealt with by Committee of Experts when the project is otherwise complete.

Meetings could, of course, be held by video-conferencing but we think that this would be inefficient as the discussions in SI often involve ad hoc changes of a varied and complex nature. Video-conferencing may also disadvantage third world countries.

Recommendation 3

The current procedure of translating a project into French each time a revision is made appears basically inefficient. We fully appreciate the need for a French version but it would be more efficient to translate when the project is otherwise completed.

Flexibility of the revision process is also hampered by the need for interpretation which probably could not readily be provided for shorter meeting in patent offices. We therefore suggest that interpretation for technical meetings discussing projects is unnecessary but would be needed for the Committee of Experts stage where projects would be finally approved.

Recommendation 4

With modern data retrieval techniques there appears no need to attempt “pigeonhole” a document or an invention in one place. For efficient information retrieval we therefore believe that the concepts of multiple classification and hybrid classification/indexing should be further legitimised and encouraged. Of course, these techniques are not universally desirable or necessary and any problems in this respect with existing schemes should be examined.

The "hybrid" system of allocating a restricted number of classification codes with additional information provided by indexing has worked well in our Office and we have much experience of this approach. Indexing also lends itself to possible future automatic indexing of patent documents from full-text analysis whereas classification of an inventive advance will almost always need an intellectual assessment of the scope and context of an invention. Offices that have chosen to use indexing have seen its advantages and we think this approach should be a standard and fully obligatory tool, as without obligatory application, it cannot totally be relied on.

An indexing scheme, however, needs to react quickly to prevent the indexing of features which have become commonplace. This problem may be alleviated by shortening the revision period to allow a faster reaction.

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