

WIPO



IPC/CE/37/5

ORIGINAL: English

DATE: January 27, 2006

E

WORLD INTELLECTUAL PROPERTY ORGANIZATION
GENEVA

**SPECIAL UNION FOR THE INTERNATIONAL PATENT CLASSIFICATION
(IPC UNION)**

COMMITTEE OF EXPERTS

**Thirty-Seventh Session
Geneva, February 14 to 17, 2006**

GUIDELINES FOR REVISION OF THE IPC

Document prepared by the Secretariat

1. At its eleventh session, held in June 2004, the IPC Revision Working Group agreed that the documents “Philosophy of the IPC Revision Work” and “Specific Instructions for the Revision of the IPC” should be reconsidered in order to provide a sufficient basis for the future revision process of the reformed IPC. In that respect, Project WG 113 was created and Sweden was appointed as Rapporteur (see document IPC/WG/11/7, paragraphs 62 to 67).
2. At its twelfth session, held in December 2004, the Working Group agreed that the contents of the above-mentioned documents should be substantially revised and restructured, rather than simply updated, according to the new principles and rules introduced by the IPC reform and agreed that the contents should be combined in a single document, so as to provide the user with a comprehensive publication giving guidance with respect to the theory and practice of the revision work (see document IPC/WG/12/4, paragraphs 34 to 38).
3. After a thorough consideration at its thirteenth and fourteenth sessions, held in June 2005 and November 2005, respectively, the Working Group approved at its fourteenth session a document entitled “Guidelines for revision of the IPC”, which appears as Annex I to this document.

4. Annex II to this document contains comments, submitted by the International Bureau, with a view to modifying the examples contained in paragraphs 5(c) and 5(d) of Appendix IV to the said Annex I, relating to the numbering of new subgroups introduced between existing groups.

5. The Committee of Experts is invited to adopt the “Guidelines for Revision of the IPC” contained in Annex I to this document, in view of the comments contained in Annex II to this document.

[Annexes follow]

ANNEX I

GUIDELINES FOR REVISION OF THE IPC

INTRODUCTION

1. A basic description of the IPC and its classification rules is given in the “[Guide to the IPC](#)”. The purpose of the present document and its Appendices is to give complementary information for revising the IPC, particularly in regard of drafting classification schemes.
2. Details of the criteria for revision and of the working methods of different IPC bodies can be found in the following documents:
 - “[Revision Policy and Revision Procedure for the Reformed IPC](#)”;
 - “[Working Procedure of the Special Subcommittee for the Supervision of the Advanced Level](#)”;
 - “[Working Procedure of the IPC Revision Working Group](#)”.
3. Detailed rules for classification can also be found in the following documents:
 - “[Guidelines for Determining Subject Matter Appropriate for Obligatory and Nonobligatory Classification \(i.e., What to Classify Within Patent Document Disclosures Guidelines\)](#)”;
 - “[Guidelines for Determining Where to Classify Patent Documents Within the IPC](#)”.

SECTION I – GENERAL GOALS OF THE IPC

4. The primary purpose of the IPC is to serve as an effective search tool for the retrieval of patent documents by intellectual property offices or other users, in order to establish the novelty or evaluate the non-obviousness or inventive step of patent applications.
5. The IPC, furthermore, has the important purposes of serving as:
 - an instrument for the orderly arrangement of patent documents in order to facilitate access to their technological and legal information;
 - a basis for selective dissemination of information to all users of patent information;
 - a basis for investigating the state of the art in given fields of technology;

– a basis for the preparation of industrial property statistics which in turn permit the assessment of technological development in various areas.

6. The structure of the IPC must be such that its classification places enable searches to be conducted in the most efficient way possible.

7. In order to achieve this purpose, the IPC has to be devised in such a way that a given technical subject matter will be classified in a consistent way, and thus can be retrieved in a consistent way by using a corresponding search statement.

8. Accurate and consistent classification can only be achieved if there is no doubt over the scope of the classification places. Clear and correct wording of the texts of the classification is therefore of crucial importance.

9. Classification places should as far as possible be mutually exclusive, with no overlap therebetween.

10. The IPC should as far as possible enable classification of inventive things as a whole, and not by separate classification of their constituent parts.

11. In order that the IPC may remain a valid and viable classification system and an effective search tool, it has to be dynamic. The IPC must be constantly improved, for example in order to:

- provide for the development of new technology;
- alleviate errors, inconsistencies and conflicts between different places;
- further refine the existing classification, e.g., by subdivision of existing groups;
- conform to international classification practice that is reflected in the classification of the documents in the Master Classification Database (MCD).

SECTION II – FEATURES OF THE IPC

Terminology

12. The wording of a classification place must clearly indicate the scope of the place.

13. Multipart titles are used when it is considered desirable to cover distinct kinds of subject matter, which cannot conveniently be covered by a single phrase, in a single classification place. Each part of a multipart title should be interpreted as if it stood alone as a separate title. Multipart titles should be preferred over sentences with “or”.

14. Multipart titles should not be used where the different title parts are merely alternative expressions for the same subject matter.

15. When necessary, the scope of a place can be restricted by limiting references. However, titles that positively state the scope in a way that makes references unnecessary are preferable. For example, it is better to say “*1/00 Electric motors*” rather than “*1/00 Motors (non-electric motors 3/00)*”, even though both wordings define the same scope.

16. If there is any doubt over the scope of a place the situation should be explained by a note or by an explanation in the Definitions.

17. As far as possible the titles, notes and references of the schemes should give the information necessary for the correct interpretation of the scopes of their places. The Definitions are intended for giving a more detailed explanation of the scope, for example by giving illustrations or definitions of terms or by describing the relationship between related places. This additional information might increase the precision, particularly for novice users. Definitions should also be used for information that can be of use when searching places for related technical fields. Additional information about Definitions can be found in “[Guidelines for Drafting Definitions](#)”.

18. A limited number of terms or expressions are used in the IPC with standardized meanings that might be different from their common usage. These terms and their meanings are given in paragraphs 53 to 65 of the Guide and in the “Glossary” contained in Chapter XVI of the Guide. When the terms and expressions given in these parts of the Guide are used in classification schemes their standardized meaning should be assumed. Synonyms or alternative terminology with the same meaning as the standardized terminology should only be used if the standardized terminology is deemed unsuitable in a particular case.

19. If the Guide does not give any guidance on which terminology to use, the terms or expressions used and their spelling and punctuation should be checked for consistency with existing classification places for similar technology.

20. Titles should normally be in plural form, except when it might confuse users as to the scope of a place.

21. If different technical terms or expressions are used in a particular technical field for expressing one and the same thing, only one of them should be selected for use in the classification scheme in order to avoid confusion. The other can be mentioned in the Definitions. However, if alternative terms have been linked together in the title of a hierarchically higher place, the same terms should be used together in all dependent places.

22. When abbreviations are used, those standardized by the International Organization for Standardization (ISO) are recommended.

23. If abbreviations are used that might not be familiar to IPC users the corresponding full text that they replace should be given, within square brackets, together with the abbreviation at the hierarchically highest place where it appears in the scheme. Abbreviations that are used in the scheme should also be included, along with the full text that they replace, in the “Synonyms and Keywords” section of the Definitions.

24. When appropriate, the IUPAC (International Union of Pure and Applied Chemistry) nomenclature should be followed for the presentation of chemical terms.

25. The full names of chemical elements should be used whenever possible. When groupings of elements are given in the IPC, they should follow the definitions given at the beginning of section C of the IPC.
26. Except in chemical formulae, Greek letters should be spelt out, e.g. alpha instead of α , in order to facilitate text searching.
27. Classification symbols should always be given in their complete form, for example “A22C 21/00” and not “21/00”. When two or more classification places are listed together, their classification symbols should also be written in their complete form, for example “B21C, B21D” and not “B21C, D” or “A22C 21/00, A22C 23/00” and not “A22C 21/00, 23/00”.
28. Expressions within brackets should be avoided in schemes, except for references (which are placed within round brackets) and explanations, e.g. of abbreviations [which are placed within square brackets].
29. The use of trademarks should be avoided. However, well-known trademarks may be used in examples when useful in order to clearly illustrate the subject matter in question. In these situations, the trademark should be acknowledged with the symbol “®”. When the use of common trade names is indispensable, a check whether these trade names are registered trademarks should be carried out to the extent possible.
30. Other preferred terms and expressions:
- The term “processes” should be preferred over the term “methods”. Moreover, only one of the terms should be used within a given scheme.
 - The term “apparatus” should be used rather than “machines”, since it is more generic. Exceptions can be made when it is accepted practice in a particular art to use the term “machines”, for example in expressions such as “dynamo-electric machines” or “sewing machines”.
 - The term “functional” may be used only if its meaning is clear in the context given, for example as in “Computing devices characterised by the combination of hydraulic or pneumatic functional elements with at least one other type of functional element”. Otherwise, it should be replaced by a clearer wording.
 - The term “material” should normally be used only in its singular form, except when the plural form is required for accuracy.
 - The terms “invention(s)” and “inventive” should be avoided, with the exception of the expressions “invention information” and “inventive thing(s)” that are used with the meanings defined in the Guide.

References

31. References should be as specific as possible both as to the subject matter referred to and the place where it is covered.
32. References should as accurately as possible identify the subject matter that is actually referred out of the place where they stand. In some cases a mere repetition of the title of the place that the reference points to does not give a clear indication of what is referred out.
33. References must be carefully checked as regards the scope of the place referred to. In particular, it is not allowed to refer out subject matter that is not clearly covered by the place referred to, since the wording of a reference to a place should never appear to affect the scope of that place.
34. References must include the classification symbol(s) of at least one place where the subject matter that is referred out should be classified. Non-specific references, for example of the type “- - - specially adapted to a particular field of use, see the relevant places”, giving no examples of such places, are not allowed. Currently existing references of this type should be removed or clarified during revision or maintenance.
35. References should point to the most specific place (i.e. at the hierarchically lowest level) where the subject matter referred out is covered, rather than pointing to a non-specific subclass or main group.
36. A reference should be placed at the most relevant place in the scheme, for example in the single group where it applies rather than at subclass level.
37. Limiting references should always be presented both in the classification schemes and in the Definitions. A limiting reference is a reference associated with a classification place that excludes specified subject matter from the scope of this classification place, when this subject matter would otherwise be covered by that place. Precedence references are a type of limiting reference.
38. Precedence references should only be used between places in the same subclass. As far as possible, normal limiting references should be used instead of precedence references.
39. References from function-oriented to application-oriented places, and references out of residual places, should normally only be presented in the Definitions, under the heading “References relevant to classification”, and not in the schemes. However, in some cases where references of this type are limiting references, they are included in the scheme.
40. Informative references have no effect on the scope of the place where they stand. They should only be presented in the definitions, under the heading “Informative references”, and not in the schemes. Examples of such references are references from application-oriented places to general places and references between different application places for related subject matter.
41. References in an application-oriented place to a function-oriented place are always informative.

42. If a reference does not relate to all parts of a multipart title it should be placed after the last title part that it relates to. If it is not obvious to which title part(s) a reference relates (e.g. when it relates to only two of three title parts) the order of title parts should be chosen so that the applicability of references is clear. Otherwise the wording of a reference should make clear to which part of the title it refers. Alternatively a note could be introduced instead of a reference.
43. If a classification place has more than one reference, they should be listed in the alphanumerical order of the places referred to, with the following exceptions:
- Precedence references should always be placed first, in their alphanumeric order.
 - Other references pointing to groups within the same subclass as the place where they appear should be placed after the precedence references, in their alphanumeric order, but before references to other subclasses.
44. References that are presented at a higher hierarchical level should not be repeated at a lower hierarchical level. However, references at lower levels are acceptable, when they point to more specific places within a broader area that is indicated by a reference in a hierarchically higher place.
45. Different references in one place, or references in closely related places (e.g. in hierarchically dependent groups), should be worded consistently with one another.
46. References should normally be in plural form. In exceptional cases where the use of the plural form might lead to confusion, the singular form can be used.

Examples Used in Titles

47. Examples should if possible exemplify the subject matter as a whole covered by the place where they stand, rather than single words of titles.
48. The use of examples should be preferred over titles which have a main part that actually serves as an example. For example, “*Cutting tools, e.g. knives*” should be preferred over “*Knives or other cutting tools*” or “*Knives; Other cutting tools*”.
49. In places with multipart titles each example should be placed after the part to which the example applies.
50. Examples should preferably be given in the plural form, for example “*wheels*” rather than “*wheel*” or “*fungi*” rather than “*fungus*”.
51. In lists of two or more examples the last two should be separated by “or”, and the previous by commas.

Notes

52. The purpose of notes is to give information that is of particular relevance to a distinct part of the classification. Instructions, rules or explanations given in notes override similar general guidance or guidance given in hierarchically higher places.
53. Within classification schemes, only the term “Note”, or its plural form “Notes”, should be used where definitions, classification rules or similar information is given. Synonyms for “Note” are not allowed.
54. For each note, the area of the IPC where it is valid should be indicated. The subdivisions of the indicated places are implicitly included in this “scope”.
55. If the scope of a note is a single place the note will be displayed after the place. If the scope is a range of places the note will be displayed before the first place of the range. In the hierarchical mode, the note will be displayed before the highest place belonging to the range.
56. Notes that are presented at a higher hierarchical level should not be repeated in hierarchically dependent places. However, if deemed desirable, a reference to a note at a higher hierarchical level may be introduced, for example, in the form “*Attention is drawn to Note - - -*”.
57. Further instructions on the presentation of notes can be found in Appendix I.

Class and Subclass Indexes

58. Class and subclass indexes are not an obligatory feature of the IPC, but may be introduced in order to simplify the understanding of the structure of a scheme. The indexes only serve an informative purpose and cannot be used for modifying the scope of any classification places.
59. Only core level symbols should be used in the indexes.
60. Main headings should not indicate specific subgroup numbers.

Guidance Headings

61. In situations where the main groups of a subclass can be grouped in intervals that relate to common subject matter, and it is helpful for users to get an indication of this, guidance headings may be used. A guidance heading should consist of a short statement that broadly relates to the common subject matter. Guidance headings are not an obligatory feature of the IPC.
62. Guidance headings must not limit or modify the scopes of the groups to which they relate. The groups should still define their scope on their own, without reference to the guidance heading. References are not allowed in Guidance headings.

63. Where the scope of existing groups is modified by their guidance headings, this must be corrected by modifying the group titles and/or the guidance headings. Existing references in guidance headings should be deleted and either moved to the groups where they are needed or transformed into notes.

64. For each guidance heading, the interval of main groups where it is valid should be indicated. Guidance headings are displayed before the first main group of the interval. If there is no new guidance heading at the end of an interval, a horizontal line is presented after the last subgroup of the interval.

SECTION III – STRATEGIES AND SPECIFIC INSTRUCTIONS FOR REVISION

65. Revision of the IPC should be carried out in a manner fully consistent with the documents identified in paragraphs 1 and 2, above.

66. As the core level of the IPC should be stable, amendments to the advanced level should be compatible with the core level and should not imply modifications to the relevant parts of the core level without good reason.

67. Revision of the IPC should as far as possible make use of the experiences and solutions of other existing classification schemes, such as ECLA, FI and USPC.

General Strategies for Revision

68. The overall cost and benefits for the system as a whole must be considered when determining the desirability of a particular revision project. For example, when a particular technology can be effectively searched by means other than classification, such as chemical structure searching, it is normally not useful to revise the corresponding part of the IPC.

Subdivision or Reorganization?

69. Revision of the IPC follows the two basic strategies:

- further subdivision of an existing classification place by adding subgroups;
- reorganization of a technical field, for example by introducing new main groups or modifying the relationship between existing classification places by modifying their scope.

70. Many revision projects require a mixture of the basic strategies described above. Caution must be exercised when choosing strategies. Before proposing further subdivision of an area of the IPC, the suitability for search needs of the existing subdivision should be investigated in order to assess whether more extensive revision is required. If relevant documents can be easily found, but groups contain a high number of documents, mere subdivision may be acceptable. If it is difficult to locate relevant patent documents in the existing classification places, then the scopes of existing classification places may need to be modified.

71. In some situations it may not be efficient for search purposes to merely add subdivisions to an existing scheme. For example, if an existing subdivision is not efficient for searches, its further subdivision cannot improve search efficiency and makes future revision more difficult.

72. On the other hand, a major reorganization of an area of the IPC may not be cost-effective when considering the costs involved in reclassification, familiarization with new schemes and reassignment of technical fields to examiners.

73. Accordingly, revision work should be restricted to necessary changes and should pay due regard to the cost of the work involved.

74. Normally, for each group proposed to be subdivided in the advanced level, either the file should contain at least an average of 200 patent documents of the PCT minimum documentation (with one document per patent family) or the rate of growth of the PCT minimum documentation should be at least 50 patent documents for the most recent year for which statistics are considered.

75. When proposing new groups for the advanced level, it should be expected that as an average 50 to 100 patent documents (with one document per patent family) from the PCT minimum documentation should be covered by each such new group.

76. The quantitative criteria indicated in paragraphs 74 and 75, above, should be applied in a flexible manner. It is allowed to depart from them when it is justified by cost/benefit reasons.

Selection of General Classification Rules

77. When undertaking substantial revision of a subclass, the first place priority rule should normally be used. The exception is when the revision only concerns a minor part of a scheme that is organized according to another general rule and introduction of first place priority rule in only this part of the scheme would cause confusion.

78. However, other strategies, such as indexing or multi-aspect classification, may be used if it is considered particularly advantageous for search purposes.

Selecting Aspects to be Used for Subdivision, e.g. Function-Oriented or Application-Oriented Aspects

79. When revising the IPC both the function-oriented and the application-oriented principles of classification should be considered. It has been determined that the function-oriented principle, which subdivides technology according to functional features, embraces wider concepts than the application-oriented principle, which subdivides technology according to its specific uses and applications. Therefore, creating more function-oriented places is normally preferred over creating application-oriented places, since this increases the potential to cover future innovations in the technology. Revision of an area of the IPC according to the application-oriented principle should not, however, be excluded and all aspects should be thoroughly considered.

80. For example, it is often better for search purposes to subdivide a technical field by creating function-oriented groups that cover related technical features. The creation of application-oriented groups often leads to splitting of technically related art between several groups, based on less important application aspects. However, in some cases when it is difficult to find an efficient subdivision according to functional features, or the applications are of great importance, it might be more efficient for search to create groups for important application aspects.

81. The primary motivation for expanding the coverage of a classification place must be to improve search quality while containing classification cost. The scope of a classification place should be finally chosen only after an extensive review of the related arts and the patent documents within the revision project area by experts in the technology.

82. It should be noted that, just as with the terms combination and subcombination, the distinction between the terms function-oriented and application-oriented can only be determined in relation to other related classification places.

83. When selecting aspects to be used for subdivision, one should primarily be concerned with the relationships between existing places that are at the same hierarchical level and under the same higher-level hierarchical place.

84. Since the purpose of the classification is to enable search, the selection of aspects should be based on technical features and problems/solutions that are claimed and disclosed in patent documents.

85. In schemes using the common rule, a mixture of function-oriented and application-oriented groups at the same hierarchical level inherently leads to groups that are not mutually exclusive.

86. When revising an area according to the function-oriented principle, finer subdivision according to application should normally be avoided, unless application aspects are considered very important and no other places for them exist. An alternative strategy in particular cases might be to allow or prescribe parallel classification in areas for both function-oriented and application-oriented aspects.

Hybrid Systems

87. A hybrid system includes one or more classification groups and one or more indexing codes for specified aspects that are associated with these groups. Hybrid systems can only be created in the advanced level.

88. The reasoning behind hybrid systems is that it is often useful to be able to make “and”-type search statements combining two different aspects. A classification scheme should normally be based on as few aspects as possible, in order to reduce conflicts between classification places. The aspects chosen should be the ones that serve best for the purpose of subdividing the particular technical field. As stated above, the function-oriented aspect is most often the one that should be selected. Sometimes other aspects can be identified as particularly relevant for search in combination with the aspects selected as basis for the

classification scheme. In such cases these aspects may be considered for creation of indexing schemes, particularly when the aspects are difficult to text search or do not in itself reflect invention-type information.

89. When revising the IPC, all attempts should be based on applying conventional classification techniques. One reason for that is that indexing is not available in the core level, so that the results of the introduction of an indexing scheme will not be of use for core level users.

90. Indexing codes should identify elements of information about the technical subjects in addition to the information covered by their corresponding classification places. For example, a main group that is subdivided according to structural aspects could have an indexing scheme that identifies specific applications or specific problems to be solved that are useful for limiting a search.

91. Indexing schemes shall therefore not be created to cover aspects of subject matter that are already provided for by the classification schemes they are associated with. New entries that are based on the same principles as existing subdivisions of a classification scheme should only be created as classification groups. In particular, indexing schemes should never be created that merely specify:

- variations of a general concept covered by the classification scheme;
- details of the subject matter covered in existing classification groups.

92. For example, an indexing code for “steam engines” is not proper for a subclass with groups covering different functional types of engines, since the indexing code is a further example of an aspect that is already used for subdivision of the classification groups. If needed, a classification place covering “steam engines” should be created instead.

93. Indexing schemes should normally not be created when existing groups in other parts of the IPC already explicitly identify the same subject matter. In these situations, additional information classification in those groups could be recommended instead.

94. Indexing schemes should be tested for feasibility, cost benefits and clarity prior to their introduction into the IPC. This testing should also verify that the schemes contain no unbeneficial overlap.

95. Each indexing scheme must be associated with a particular identified part of the IPC.

96. Indexing schemes should have Definitions, similar to those of classification schemes.

Presentation of Indexing Schemes

97. Whenever possible, the layout of the indexing schemes should be hierarchical, in order to facilitate their presentation.

98. For indexing schemes alphanumerical symbols, similar to classification symbols, should be used. In the case of an indexing scheme that forms part of a classification subclass the indexing scheme should be placed at the end. Its main group numbers should be in a range separate from the classification main groups. For detailed instructions on numbering see Appendix IV.

99. An indexing scheme that forms part of a classification subclass should always be preceded by a guidance heading.

100. At each area with which an indexing scheme is associated, a note explaining the use of the indexing scheme should be presented.

Specific Instructions for Revision of the IPC

First Place Priority Rule, Last Place Priority Rule

101. In schemes where a general priority rule is applied the ordering of groups must be carefully considered. The main groups should be arranged in a sequence that ensures the desired placement of subject matter covered by each. When the first place priority rule is applied the main groups should generally be arranged in sequence from more complex to less complex subject matter and from specialized to non-specialized subject matter. When the last place priority rule is applied the order should normally be the opposite.

Common Rule

102. In every subclass in the IPC, the position of the main groups in the standardized sequence (see the Guide, paragraphs 21(c) and 52) should be indicated. This allows the electronic version of the IPC to display the content of a subclass by order of complexity of the subject matter, which can be used as guidance for classification.

103. When revising an area of the IPC where the common rule is applied, the order of the new and revised main groups in the standardized sequence should be specified.

104. When deleting main groups or modifying the scopes of existing main groups in an area of the IPC where the common rule is applied, the order of the main groups in the standardized sequence should be reviewed.

105. The guidelines that were used when arranging the main groups of subclasses of IPC 7 according to the standardized sequence can be found in Appendix II. These guidelines should be applied when those subclasses are revised.

106. Except when it would cause confusion in relation to existing groups, the guidelines of Appendix II should be used also when revising subgroups within a main group, even though it might be unpractical to introduce a general priority rule.

Residual Places

107. Classes or subclasses should normally not be of residual character.

108. Whenever existing subclasses are revised, or new subclasses are created, care must be taken to ensure that any necessary residual main groups are provided, so that the scheme is exhaustive for the subject matter concerned.

109. Main groups that are residual to an entire subclass should be placed at the end of the scheme and have the standard symbol 99/00 whenever possible. When this is not possible, for example when there are already classification main groups in the subclass with numbers higher than 99/00, the symbol 999/00 should be used. These residual main groups should not be subdivided.

110. Residual subgroups should be avoided, since they are not compatible with the split of the IPC into the core and advanced levels. It is preferable to make use of hierarchy instead. As an example, a subdivision of this type:

1/08 . Movable tools
1/10 . . Rotating tools
1/12 . . Reciprocating tools

is preferable to this type:

1/08 . Rotating tools
1/10 . Reciprocating tools
1/12 . Other movable tools

Check List

111. When subdivisions of subclasses are created, or when commenting on proposals for such elaborations, the check list appearing in Appendix III should be borne in mind.

Chemical Structural Formulae and Other Figures

112. When revising a chemical area of the IPC, consideration should be given to the desirability of presenting chemical structural formulae, either in the scheme itself or in the electronic layer. Such consideration should take into account the needs of the user and should not lead to the introduction of chemical formulae for very well-known chemical structures.

113. In the following cases formulae should be included in the schemes, because their inclusion is necessary in order to achieve consistent classification:

- when the numbering of ring atoms in cyclic compounds is inconsistent in practice, because, for example, two different systems of chemical nomenclature are applied;
- when a group covering cyclic compounds contains subordinated groups referring to the numbering system.

114. In most other cases the formulae should be presented in the electronic layer.
115. Illustrating chemical formulae should serve only as examples of subject matter classified in subgroups. General formulae for main groups should only be given in exceptional cases.
116. The number of examples should be limited. One example should normally be sufficient for each group.
117. For facilitating understanding of the examples, simple specific formulae should be used. Three-dimensional formulae may be used where necessary.
118. With respect to substituents, their structural presentation should be used as far as possible, and not their chemical names or trivial names.
119. When there is doubt over which part of the title of a group that a formula relates to, additional indications should be made.
120. In polymer areas of the IPC polymers should normally be used for illustrating purposes. When this is not sufficient for describing the contents of a group, monomers may be selected for illustration.
121. Other figures, for example mechanical drawings, may also be added to the schemes or the electronic layer, when necessary for correct classification or helpful for the user.

Transfers and Revision Concordance Data

122. After revision, each new entry or existing entry that has been changed (in wording or hierarchical position) in such a way that the scope of one or more groups is affected should be indicated. The indications should be “C” for a modification of scope of an existing place, “N” for a new place and “D” for a deleted place.
123. For the purpose of establishing the Revision Concordance List (RCL), the rapporteurs appointed for the revision projects concerned should, at the end of each revision project, submit a proposal indicating how subject matter will be transferred between places in the IPC as a result of the approved amendments. This data should include the following:
- for new places: an indication of the source of the subject matter covered;
 - for existing places whose scope has changed: indication of the source of subject matter added to the scope of the place or the destination of subject matter removed from the scope of the place;
 - for deleted places: an indication of the destination of the original subject matter.
124. Entries in the RCL referring to entire classes or subclasses should be avoided.

125. The inclusion of a group in the RCL indicates that documents classified in that group only, excluding its subgroups, should be reclassified. When subject matter of several consecutive groups is transferred to one and the same place, the first and the last groups transferred should always be indicated, even when the last group is a subgroup of the first.

126. As a result of the approval of the RCL relating to a revision project, an indication of modification of scope (“C”) should be added to those existing places which were included in the RCL, even though their title was not modified. On the other hand the “C” should be removed from those places that were approved with a “C” in the revision project but which were not included in the RCL.

Checking of References, Class Indexes and Subclass Indexes

127. At the end of each revision project, the rapporteur should check all references that point to a revised area and make sure that those affected by the amendments are updated. This check may be carried out with the aid of a reversed list of references, prepared by the International Bureau, listing for a given place in the IPC all places where reference is made to that place.

128. At the end of each revision project, class and subclass indexes should be checked, and those affected by amendments should be updated.

Changing the Symbols of Existing Classification Places

129. Renumbering of a group should take place if the scope of the group is substantially changed, except when the scope of the group is modified solely by the creation, deletion, or amendment of one or more of its subgroups.

130. Renumbering of a group should not take place if the scope of the group is not substantially changed, unless renumbering is necessitated by the change of position of a group in the scheme.

131. Changing the scope of a class or a subclass does not normally require changing the symbol of that class or subclass.

132. Classification symbols which have been used in earlier editions of the IPC should not be reused when creating or renumbering classification places. However, in exceptional cases and when no alternative exists, numbers which have been used in the Classification published by the Council of Europe in the years 1963 to 1967 may be used.

133. Detailed instructions for the selection of classification symbols can be found in Appendix IV.

[Appendices follow]

APPENDIX I

PRESENTATION AND LAYOUT OF NOTES IN THE IPC

1. The notes in the IPC should be categorized and presented in the following order:
 - (a) Notes relating to the subject matter covered by the place in question (see also paragraph 2, below)
 - (i) explaining subject matter which is covered;
 - (ii) explaining subject matter which is not covered;
 - (iii) other notes.
 - (b) Notes defining terms or expressions (see also paragraph 3, below)
 - (c) Notes drawing attention to other notes
 - (i) drawing attention to notes appearing in other sections, subsections, classes or subclasses;
 - (ii) drawing attention to other notes appearing in the section, subsection, class or subclass.
 - (d) Notes drawing attention to other places in the IPC
 - (e) Notes stating classification rules (see also paragraphs 4 to 6, below)
 - (i) precedence rules;
 - (ii) first place priority rule;
 - (iii) last place priority rule;
 - (iv) multiple, e.g. multi-aspect classification;
 - (v) other rules.
 - (f) Notes relating to recommendations
 - (g) Other notes

Appendix I, page 2

2. Notes relating to the subject matter covered by the place in question (referred to under 1(a), above) should be presented as follows:

(a) “This subclass covers:

“– apparatus which are not provided for in - - -;

“– the working of materials which - - -;

“– features specific to - - -”.

(b) “This subclass does not cover:

“– multi-step processes, which are covered by class - - -;

“– details or accessories which form part of - - -, e.g., - - -, which are covered by subclass - - -”.

3. Notes defining terms or expressions (referred to under 1(b), above) should be presented as follows:

“In this subclass, the following terms or expressions are used with the meaning indicated:

“– “working” covers also - - -;

“– “combined operation” means - - -”.

4. Notes stating general priority rules (referred to under 1(e)(ii) and 1(e)(iii), above) should be presented as follows:

(a) First place priority rule:

“In this subclass / main group(s) / group(s), at each hierarchical level, in the absence of an indication to the contrary, classification is made in the first appropriate place.”

(b) Last place priority rule:

“In this subclass / main group(s) / group(s), at each hierarchical level, in the absence of an indication to the contrary, classification is made in the last appropriate place.”

5. Notes prescribing multiple classification (referred to under 1(e)(iv), above) should be presented as follows:
 - (a) Obligatory multiple classification:

“- - -, when it is determined to be novel and non-obvious, must also be classified in - - -”.
 - (b) Nonobligatory multiple classification:

“- - -, which is considered to represent information of interest for search, may also be classified in - - -”.

6. Notes stating other classification rules (referred to under 1(e)(v), above) can, for example, be presented as follows:

“In this subclass:

 - “– groups - - - to - - - are limited to - - -;
 - “– after-treatment of materials is classified in groups - - -;
 - “– subject matter relating to both - - - is classified in groups - - -”.

7. The following model wordings of the different notes relating to indexing schemes should be observed:
 - (a) Note for a class containing a subclass which constitutes an indexing scheme:

“The codes of subclass - - - are only for use as indexing codes associated with subclass(es) - - -, so as to provide information concerning - - -”.
 - (b) Note for an area to which an indexing scheme is associated:

“In this - - -, it is desirable to add the indexing code(s) of - - -”.

[Appendix II follows]

APPENDIX II

GUIDELINES FOR THE REARRANGEMENT OF MAIN GROUPS (adopted by the IPC Revision Working Group, document IPC/WG/10/3, Annex G)

After a complete review of each subclass scheme and definitions, classifiers should successively use the following steps to arrange the main groups of schemes that do not follow a general priority rule (i.e., schemes using the common rule) into a top-down sequence:

1. Subclass Title is Multipart

Determine if the subclass title is of the multipart type (i.e., the title consists of two or more distinct parts that are separated by a semicolon) in which each part may be interpreted as if it “stood alone” (i.e., could be used as the title of its own subclass). [Utilization of this step is encouraged when appropriate, but optional.]

(a) If there is essential overlap between the subject matter covered by the distinct parts (i.e., the distinct parts of the title share an essential purpose or structure, as shown for example by a main group covering common subject matter for the multiple parts), then go to Step 2.

(b) If there is no essential overlap between the subject matter covered by the distinct parts of the subclass title, and each main group relates to only a specific part of the subclass title (except for those types of main groups covered by Steps 9 and 10), then the related main groups for each part are collected together within the top-down sequence (i.e., the sequence is divided into specific regions for each collection). Temporary explanatory “headings” may be used to show the division of the sequence into its distinct parts, but these headings are removed from the official rearrangement of main groups.

(c) The collections of main groups for each part of the subclass title are positioned separately in the scheme, with the most complex part’s collection at the top and the least complex part’s collection at the bottom. Complexity here may be based on purpose or structure.

(d) The main groups within each separate collection (i.e., the groups representing a part of the multipart title) are arranged according to the guidelines below (Steps 2 to 10).

2. Main Groups Cover Different Categories of subject matter (Device, Method of Making, etc.)

Determine if the main groups of the scheme cover the same or different categories of subject matter. The categories of subject matter are: Method of Use (of Product), Product (of Manufacture), Processes of Making a Product, Apparatus (to make the product or perform the method of making), and Material used to make the product. It should be noted that main groups sometimes also cover categories of subject matter that are not explicitly mentioned in their titles, as described in paragraphs 92 and 95 to 97 of the Guide to the IPC. [Utilization of this step is encouraged when appropriate, but optional.]

Appendix II, page 2

(a) If all of the main groups cover the same, or at least one common, category or categories of subject matter, then go to Step 3.

(b) If some of the main groups do not cover a common category of subject matter, divide these groups into distinct categories of subject matter collections (i.e., separate into collections that do not share a common category or categories of subject matter). Collect main groups together that cover at least one common category of subject matter within the top-down sequence or the appropriate segment of the sequence for their specific part of a multipart title (e.g., groups for products followed by groups for methods of making the products in the sequence).

(c) Position the categories of subject matter that are covered by a subclass in the top-down sequence, or their part's segment of the sequence, in descending order normally as listed above for categories of subject matter. For example, in E01D the methods and apparatus for building or repairing bridges are located below the various types of bridges in the top-down sequence of main groups for the scheme.

(d) If a single main group covers two or more categories of subject matter (e.g., slide fasteners, making slide fasteners), then the main group is positioned in the highest relevant portion of the top-down sequence providing for one of its categories (e.g., slide fasteners).

(e) Main groups covering the same category or categories of subject matter are arranged according to the Steps 3 to ten below.

3. Main Group Title is Multipart

Determine if one or more of the main group titles has multiple distinct parts of different complexity or level of specialization. [Utilization of subsection (b) is encouraged when appropriate, but optional.]

(a) Groups having multiple distinct parts are usually positioned in the relevant portion of the top-down sequence based upon the part of their title that covers the most complex or highly specialized subject matter.

(b) If it is beneficial to split, and locate in different portions of the sequence, the subject matter covered by a main group title having distinct parts of different complexity or level of specialization: the main group can be split in special situations. It is considered appropriate to split the subject matter of a main group when there is no essential overlap between the subject matter covered by the distinct parts of the main group title and one or more of the one-dot indentation level subgroups completely and separately covers the subject matter for a distinct part of its main group title. When this happens, the distinct part(s) of the main group title may be separately located in the sequence based on Steps 4 to 9 below. The classification symbol of the main group (e.g., 15/00) is used to locate the residue parts of the title and the appropriate one-dot indentation level subgroup symbol(s) (e.g., 15/14) is used to locate the separated out part of the title.

4. Main Group is for Highly Specialized Subject Matter (Subject Matter)

Determine if any main group contains subject matter that is “highly specialized” and place it at the top of the appropriate relevant portion of the sequence. Highly specialized subject matter accomplishes a function that is not inherent or common for the subject matter of the subclass. For example, main groups A61G 10/00 and 11/00 include highly specialized life supporting or sustaining accommodations that are not common within the “accommodations for patients” normally covered by the subclass title.

5. Main Group covers External Combination (Subject Matter Outside the Subclass)

Determine if any main groups provide for combinations of “basic subject matter” (i.e., those “things” that by themselves accomplish the primary purposes or functions stated in the subclass title and definition statement) with subject matter proper for another subclass (i.e., a larger or more extensive system than is commonly found in the subclass).

(a) If this type of combination main group exists, it is placed in its relevant portion of the sequence directly after any groups having highly specialized subject matter.

(b) If there are two or more of these main groups and there is no overlap or precedence reference between them, the main group covering the larger system is placed before the other(s).

(c) If there are two or more of these main groups and there is potential overlap between them, the most specialized main group is placed before the other(s) unless a precedence reference exists. When a precedence reference exists, the preferred order is altered to show the precedence (i.e., the group having precedence comes first in the sequence) and the precedence reference is shown with the group’s title. If this is impractical, then the precedence reference is merely shown with the group’s title.

6. Main Group Covers Internal Combination (Subject Matter Within the Subclass)

Determine if any main groups explicitly provide for combinations of the basic subject matter specified in other main groups within the subclass.

(a) If such a main group exists, it is placed in its relevant portion of the sequence directly after the groups already placed in the preceding steps.

(b) If there are two or more of these main groups and there is no possible overlap or precedence reference between them, the main group covering the larger system is placed before the other(s).

(c) If there are two or more of these main groups and there is potential overlap between them, the most specialized or largest system main group is placed before the other(s) unless a precedence reference exists. When a precedence reference exists, the preferred order is altered to show the precedence (i.e., the group having precedence comes first in the sequence) and the precedence reference is shown with the group’s title. If this is impractical, then the precedence reference is merely shown with the group’s title.

7. Main Group Covers Basic Subject Matter (Subject Matter)

Determine the main groups that provide for the basic inventive information of the subclass.

(a) If such main groups exist, the main groups covering the basic subject matter of the subclass are placed in the relevant portion of the sequence directly after the groups already placed in the preceding steps.

(b) If the main groups cover different functions, the main group covering the most specialized or complex function is placed before the others unless a precedence reference exists. When a precedence reference exists, the preferred order is altered to show the precedence (i.e., the group having precedence comes first in the sequence) and the precedence reference is shown with the group's title. If this is impractical, then the precedence reference is merely shown with the group's title.

(c) If main groups that cover the same function, they are collected together and arranged so that the main group having the most specialized structure or largest system is placed before the other(s) unless a precedence reference exists. When a precedence reference exists, the preferred order is altered to show the precedence (i.e., the group having precedence comes first in the sequence) and the precedence reference is shown with the group's title. If this is impractical, then the precedence reference is merely shown with the group's title.

8. Main Group Relates to Only One Part of the Subclass Multipart Title, and Covers That Section's Details, Components, Accessories, Ancillary Devices, or Residual Subject Matter

Determine if there are detail main groups, component main groups, accessories or ancillary device main groups, or "residual subject matter" main groups that are related to only one of the distinct sections of the subclass title.

(a) If such main groups exist, these main groups are placed directly after the main groups already placed in the preceding steps for which they collect specialized details, components, accessories, ancillary devices, or provide for residual subject matter. If there are main groups of two or more of the types specified, they are ordered as they are listed in the introduction of this step with detail main groups first and the most residual main group last.

(b) The main groups for the same purpose (e.g., they all cover components) are then arranged so that the main group having the most specialized structure or largest system is placed before the other(s) unless a precedence reference exists. When a precedence reference exists, the preferred order is altered to show the precedence (i.e., the group having precedence comes first in the sequence) and the precedence reference is shown with the group's title. If this is impractical, then the precedence reference is merely shown with the group's title.

9. Main Group Relates to All or Several Main Groups, and Covers the Details, Components, Accessories, Ancillary Devices, or Residual Subject Matter for all or Several Sections

Determine if there are detail main groups, component main groups, accessories or ancillary device main groups, or “residual subject matter” main groups that are related to all or several of the main groups already placed in the preceding steps.

(a) If such main groups exist, these main groups are placed in the sequence directly after the groups already placed in the preceding steps. They should be ordered as they are listed in the introduction of this step with the most residual main group always at the bottom of the top-down sequence.

(b) The main groups for the same purpose (e.g., they all cover components) are then arranged so that the main group having the most specialized structure or largest system is placed before the other(s) unless a precedence reference exists. When a precedence reference exists, the preferred order is altered to show the precedence (i.e., the group having precedence comes first in the sequence) and the precedence reference is shown with the group’s title. If this is impractical, then the precedence reference is merely shown with the group’s title.

10. New Residual Main Group is Suggested

If there is additional subject matter that is potentially within the coverage of the subclass title that is not covered by an existing main group, a new main group residual to the subclass should be created. It should be noted that main groups sometimes also cover categories of subject matter that are not explicitly mentioned in their titles, as described in paragraphs 92 and 95 to 97 of the Guide to the IPC.

[Appendix III follows]

APPENDIX III

CHECK LIST FOR USE WHEN REVISING THE IPC

1. This check list does not purport to be complete but is intended as a guide to various points which should be considered.
2. It should also be borne in mind that the various items listed in the check list cannot be dealt with independently but, on the contrary, are highly interrelated.

GENERAL ASPECTS

3. All wordings should be checked for clarity, possible ambiguity, uniform use of terms or expressions, and concordance between the English and French versions of the IPC. In addition, attention should be paid to Chapters VI and XVI of the Guide.
4. Every reference and note should be checked for accuracy and for uniformity with other references and notes used for similar purposes. The placement of all references in the schemes and in the Definitions should be checked.
5. A check should be made to determine whether the titles, references notes and Definitions correctly define the necessary borderlines with other classification places. Special care should be taken with the borderlines between entries determined by application and entries determined by function.
6. A check should be made to determine whether all relevant categories of invention, e.g. products, processes or apparatus are clearly provided for.
7. When general classification rules (e.g. first place priority) are introduced, test classification of actual documents should be made in order to verify that the rules produce the desired distribution of subject matter.

KINDS OF REVISION

Subclass Revision

8. Consideration should be given to the following questions:
 - (a) Whether the scope of the subclass is clearly defined; particular reference being given to:
 - the subclass title;
 - notes in different places in the subclass;

Appendix III, page 2

- references in different places in the subclass;
 - the subclass Definitions, including the glossary therein;
 - the class title with associated references and notes.
- (b) Whether the subdivision into main groups enables efficient searches.
- (c) Whether there is subject matter falling within the scope of the subclass which is not provided for or is not specifically referred out.
- (d) The existence or necessity of residual groups, application-oriented groups or “details” groups.
- (e) Whether each main group falls within the scope of the subclass.
- (f) The possible overlap between main groups.
- (g) The usefulness of subdividing the subclass scheme into distinct parts using guidance headings.
- (h) Whether any corrections are needed in the Catchword Index.

Group Revision

9. Consideration should be given to the following questions:

- (a) Whether the scope of the group is clearly defined; particular reference being given to:
- the group title;
 - notes in different places in the subclass;
 - references in different places in the subclass;
 - group definitions, if any;
 - class and subclass titles with references and notes.
- (b) Whether the subdivision into subgroups enables efficient searches.
- (c) Whether each subgroup falls within the scope of its hierarchically higher group.
- (d) The possible overlap between subgroups.

Appendix III, page 3

- (e) The accuracy of the hierarchy of the subdivisions.
- (f) Whether the number of documents and the activity is sufficient to justify the existence of every group.
- (g) Whether any corrections are needed in the Catchword Index.

[Appendix IV follows]

APPENDIX IV

CLASSIFICATION SYMBOLS FOR NEW CLASSIFICATION PLACES

SUBCLASS SYMBOLS

1. The last letter of a subclass symbol should be a consonant. However, in cases where special reasons so require, the use of vowels, with the exception of “T” and “O”, is acceptable.

NUMBERING OF MAIN GROUPS IN NEW SUBCLASSES

2. In new subclasses containing less than 20 main groups, the numbers of the main groups should be spaced between 1 and 98, leaving room for addition of future main groups both between groups and at the beginning and the end of the scheme. If a residual main group is needed it should be numbered 99/00. If an indexing scheme is introduced the first main group number should be 101/00.

– In new subclasses containing more than 20 main groups, numbers above 100/00 may be used, leaving room for addition of future main groups both between groups and at the beginning and the end of the scheme. If a residual main group is needed it should be numbered 999/00. If an indexing scheme is introduced the first main group number should be 1001/00.

NUMBERING OF INDEXING SCHEMES

3. If an indexing scheme is added to an existing subclass its numbering should be chosen on a case by case basis, but whenever possible the number of its first main group should be 101/00.

NUMBERING OF SUBGROUPS

4. Subgroup numbering should, as far as possible, be limited to four digits after the oblique stroke. The maximum number of digits after the oblique stroke is six.

– Group numbers with a final 0 are not allowed, except for groups having only two digits after the oblique stroke.

5. For the addition of further subdivisions the following use of numbers should be observed:

(a) in the case of an existing interrupted sequence of numbering, e.g., 1/02, 1/04, etc., use for additional subdivisions inserted between, for example, groups 1/02 and 1/04:

Appendix IV, page 2

one: 1/03
two: 1/027, 1/033
three: 1/025, 1/03, 1/035
four: 1/024, 1/028, 1/032, 1/036
five: 1/023, 1/027, 1/03, 1/033, 1/037
six: 1/022, 1/025, 1/028, 1/032, 1/035, 1/038
seven: 1/022, 1/025, 1/028, 1/03, 1/032, 1/035, 1/038
eight: 1/023, 1/025, 1/027, 1/029, 1/031, 1/033, 1/035, 1/037
nine: 1/022, 1/024, 1/026, 1/028, 1/03, 1/032, 1/034, 1/036, 1/038
etc.

(b) in the case of an existing uninterrupted sequence of numbering, e.g., 1/02, 1/03, etc., use as third digit:

for one	subdivision	5
“ two	subdivisions	3, 7
“ three	“	2, 5, 8
“ four	“	2, 4, 6, 8
“ five	“	1, 3, 5, 7, 9
“ six	“	1, 3, 4, 6, 7, 9
“ seven	“	1, 2, 3, 5, 7, 8, 9
“ eight	“	1, 2, 3, 4, 6, 7, 8, 9
“ nine	“	1 to 9

(c) in the case of 10 or more subdivisions to be added between subsequent entries, e.g., 1/01 and 1/02, a similar sequence should be used. For example, in case of 10 subdivisions, use the following sequence:

1/0113
1/0117
1/0133
1/0137
1/0153
1/0157
1/0173
1/0177
1/0193
1/0197

or, in case of 15 new subdivisions:

1/0112
1/0115
1/0117
1/0132
1/0135
1/0137

Appendix IV, page 3

1/0152
1/0155
1/0157
1/0172
1/0175
1/0177
1/0192
1/0195
1/0197

EXCEPTIONS

6. The departure from the numbering principles disclosed in paragraphs 2, 4 and 5, above, is allowed in order to take into account any foreseen future revision, for example by leaving empty intervals where it is likely that further groups will be added.

PROVISIONAL NUMBERING OF PROVISIONAL GROUPS DURING THE REVISION PROCESS

7. During technical discussions and commenting in revision projects, provisional group numbers should be used. These do not have to conform to the rules mentioned above. The provisional numbers should be replaced by finalized numbers at the end of each revision project before its final adoption. Provisional numbers that have once been used within a project should never be reused within the same project for other (e.g. new) proposed groups.

[Annex II follows]

ANNEX II/ANNEXE II

WORLD INTELLECTUAL PROPERTY ORGANIZATION	
IPC REVISION WORKING GROUP	
Project: WG113 , Updating the IPC revision material in the Handbook	Date: January 20, 2006
Comments	

Comments on the sequence of numbering of new groups

In appendix IV, of the Annex IV to document IPC/WG/14/3, rules and examples are given concerning the numbering of subgroups, when these subgroups are inserted in a sequence of existing groups.

In paragraph 5 of the said Annex, examples of numbering for various cases are given. These examples were taken by the Handbook without any change. Example (c) states “in the case of 10 or more subdivisions to be added between subsequent entries, e.g., 1/01 and 1/02, a *similar* sequence should be used. For example, in case of 10 subdivisions, use the following sequence”. The term *similar*, that we have highlighted, means, in our understanding, that the new symbols should be chosen in such a way that the “spaces” between them (i.e. number of future available symbols) are more or less equal. However this is not the case of the sequences in examples (c) and (d). For example there are only three symbols available for future revision, using four digits, between 1/0113 and 1/0117, while there are fifteen symbols available between 1/0117 and 1/0133.

We therefore propose to change the sequences (c) and (d) in the following way:

(c)

1/0109
1/0118
1/0127
1/0136
1/0145
1/0155
1/0164
1/0173
1/0182
1/0191

(d)

1/0107
1/0113
1/0119
1/0125
1/0131
1/0137

1/0143
1/015
1/0157
1/0163
1/0169
1/0175
1/0181
1/0186
1/0193.

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