

WIPO



SCP/WGM/2/1

ORIGINAL: English

DATE: October 16, 2002

WORLD INTELLECTUAL PROPERTY ORGANIZATION
GENEVA

STANDING COMMITTEE ON THE LAW OF PATENTS

WORKING GROUP ON MULTIPLE INVENTION DISCLOSURES AND COMPLEX APPLICATIONS

Second Session
Geneva, November 26, 2002

SUMMARY OF THE RESPONSES AND POINTS FOR DISCUSSION

Document prepared by the International Bureau

I. INTRODUCTION

1. In accordance with the decision made by the Working Group on Multiple Invention Disclosures and Complex Applications (Working Group) under the Standing Committee on the Law of Patents (SCP) at its first session, which was held on May 7 and 8, 2002, in Geneva, the International Bureau sent a circular to the members and observers of the SCP requesting information on the practices of patent Offices on the issues under consideration by the Working Group, as well as concrete proposals on whether and how to address these issues (see document SCP/7/8 Prov.2, paragraph 210). Comments were received from 30 Member States, two intergovernmental organizations and two non-governmental organizations. All the comments were posted on the SCP Electronic Forum (<http://www.wipo.int/scp>).

2. This document provides a summary of the comments received and suggests certain points for discussion by the Working Group at its second session, which will be held on November 26, 2002. This document is also posted on the SCP electronic forum in order to allow members and observers of the Working Group to share information and exchange views among them prior to the second session of the Working Group.

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II. UNITY OF INVENTION

Current national/regional practices and difficulties

3. A vast majority of Offices adopts the unity of invention standard, which corresponds to Rule 13 of the Regulations under the Patent Cooperation Treaty (PCT), consisting of the following elements:

(i) The claims in an application can define a group of inventions so linked as to form a single general inventive concept;

(ii) A group of inventions forms a single general inventive concept only when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical features;

(iii) The expression “special technical features” means those technical features that define a contribution which each of the claimed invention, considered as a whole, makes over the prior art.

Where one or more of the same or corresponding special technical features are found, the claims may contain certain types of subject matter, including claims concerning combinations and sub-combinations, intermediate and final product claims and Markush claims.

4. Some Offices who adopt the above-mentioned unity standard (hereinafter referred to as “PCT-type unity of invention”) also provide, in their Guidelines, rules concerning types of combinations of claims which are in different categories and are in compliance with the unity of invention requirement. The types of acceptable combinations of claims include:

(a) a product and a process especially adapted for making the product;

(b) a product and a use of that product;

(c) a product, a process specially adapted to make the product and a use of that product;

(d) a process and an apparatus or means especially adapted to carry out the process;

(e) a product, a process especially adapted to make the product and an apparatus or means especially adapted to carry out the process;

(f) a product, a process especially adapted to make the product, an apparatus or means especially adapted to carry out the process and a use of the product.

5. Some other Offices also adopt the standard of “single general inventive concept”, but interpret it without any reference to prior art. For example, in one country, if a single independent claim contains more than one invention in the alternative, this is not permitted where: (i) the alternative features do not lead to the same technical result; (ii) the alternative relates to a group of features each of which includes several functionally independent features; or (iii) the choice of the alternative depends on the choice made for the other feature(s). Where a group of inventions is characterized in more than one independent claim, the requirement of unity of invention is considered to be met where the inventions comply with one of the combinations under items (a) to (f) in the previous paragraph, or where the

inventions relate to an objective of one kind, or an identical purpose, for obtaining the same technical result.

6. In another Office, the requirement of unity of invention for a group of inventions shall be fulfilled if an invention is devoted to produce or to realize another invention or is devoted to use an invention for another invention, or if the inventions have the same function providing the same result in an adequate way. According to the practice of one other Office, the requirement of unity of invention is fulfilled where at least one of the following conditions are met: (i) the group of inventions contribute to solve the same problem; (ii) the group of inventions lead to the same effects; (iii) there is an interdependence between the inventions; (iv) at least one invention of the group cannot be carried out or used without the other; or (v) lack of at least one invention of the group makes any other invention inapplicable.

7. In one Office which does not provide substantive examination, the requirement concerning unity of invention shall be met if a group of inventions form a “sole general inventive concept (*seul concept inventif général*)”, which takes into account the aspect of technical relationship among the inventions, rather than considering a contribution by the inventions over the prior art. The Guidelines established by that Office provide a detailed list of combinations of claims that comply with the requirement of the “sole general inventive concept”.

8. One Office stated that a restriction to one invention was required if two or more independent and distinct inventions were claimed in a single application, and if there was a serious burden on the examiner. The term “independent” means that there is no disclosed relationship between the two or more subjects disclosed, i.e., they are unconnected in design, operation, or effect. The term “distinct” means that two or more subjects as disclosed are related, for example, as combination and part (sub-combination) thereof, process and apparatus for its practice, process and product made etc.

9. The examining Offices tend to view the requirement of unity of invention as a tool to ensure the efficiency of the substantive examination and recovery of costs necessary for the examination. Indeed, one of the examining Offices stated that the question of unity of invention was an issue confronting only examining Offices. Non-examining Offices, however, view the unity of invention from the perspective of third parties’ access to the information contained in the patent application and with a view to achieving a reasonable scope of protection by a single patent.

10. Some Offices indicated that they encountered difficulties in applying their practices where there were a large number of claims. In those cases, the application of either the “single general inventive concepts” test or the “independent and distinct” test was not straightforward. More than one Office pointed out that the requirement of unity of invention related to the questions of pure plurality of inventions and of inappropriate drafting of claimed inventions. As regards the *a posteriori* determination which may be required under the PCT-type unity of invention standard, one Office noted that *a posteriori* objection was generally not raised because of the complexity and delay it added to the process. Another Office supported an “*a priori*” test at the international level in order to take account of procedures under non-examining Offices.

11. Several Offices introduced the methodology they used to assess unity of invention. One examining Office, however, noted that examiners of that Office were not bound by further

methodology, since the principle of unity could be examined only on an individual basis and according to the general principles.

Suggestions by the SCP members and observers on whether and how the issue may be addressed

12. Many Offices felt that the harmonization of the requirement relating to “unity of invention” at the international level was desirable. Although one Office stated that it was premature to discuss specific proposals for harmonizing the standard of “unity of invention”, some Offices noted that current Article 6 of the draft Substantive Patent Law Treaty (SPLT) (see document SCP/8/2) and Rule 6 of the draft Regulations under the SPLT (see document SCP/8/3) could be a basis for further discussion. Because of differences between examining Offices and non-examining Offices, one Office proposed that detailed methodology be not specified in the SPLT. Some Offices indicated that the same standard should be adopted under the PCT and the SPLT.

Points for discussion at the Working Group

13. One of the difficulties relating to the harmonization of the unity of invention requirement is that restriction of claims may not be required to the same extent in examining Offices and in non-examining Offices, since such requirement may not serve the same objective in both cases. In practice, not only non-examining Offices, but also many examining Offices develop subjective criteria useful for the assessment of unity of invention, and provide, in their Guidelines, a list of allowable combinations of the claims that meet the requirement of unity of invention. While many Offices follow the practice applied under the PCT, some Offices provide a more liberal approach in interpreting the “single general inventive concept” for national applications. Such subjective criteria would allow examiners to determine the compatibility with the requirement of unity of invention *a priori*, the need of which may be discussed by the Working Group.

14. From the viewpoint of applicants who wish to draft a single application acceptable in all Contracting Parties of the SPLT, an absolute standard would certainly be welcome. However, it could be against their interest if the international standard was more restrictive than what is allowed in some Offices today, particularly where these Offices do not encounter any problems with their liberal standards. On the other hand, those Offices that consider the current unity standard necessary to recover the examination costs would not agree on a more liberal standard than what is applied today. One examining Office, however, noted that the application of the unity standard actually consumed considerable examination resources, and that the unity requirement was a poor tool for achieving cost recovery, since the requirement for a single invention did not equate to any predictable level of examination effort. If other Offices supported this view, problems underlying some of the situations addressed under the current unity practice might be most effectively solved in relation to other requirements. Indeed, one Office stated that there were many issues that had an impact on “unity”, including claim presentation requirements and different standards relating to the clarity and conciseness of claims.

15. In connection with the unity requirement under the PCT, reference is made to Annex B of the Administrative Instructions Under the PCT, entitled “Unity of Invention”. Part 1 of this Annex provides instructions concerning unity of invention, including the method for determining unity of invention for particular situations such as combinations of different categories of claims, the so-called “Markush practice” and intermediate and final products. In

Part 2, examples of claims that meet/do not meet the unity of invention are described. In accordance with Article 5(2) of the draft SPLT, this Annex would be incorporated by reference into the draft SPLT, unless otherwise provided in the SPLT.

16. In sum, in order to recommend draft provisions as regards unity of invention under the SPLT to the SCP, the Working Group may wish to further discuss this issue on the basis of Article 6 of the draft SPLT and related Rule taking into account various national/regional practices applied under national/regional systems, as described above. The contents of the Administrative Instructions Under the PCT concerning unity of invention may possibly be taken into consideration.

III. LINKING OF CLAIMS

Current national/regional practices and difficulties

17. A vast majority of Offices defined the term “dependent claim” as a claim which included all the features of one or more other claims, while few Offices considered the same term as a claim which referred back to one or more other claims, i.e., not all the features of other claims needed to be included in the dependent claim. However, some of the Offices that took the former view expressly indicated that they allowed independent claims that referred to claims in a different category, combination/sub-combination claims or claims that referred to other claims but replace one or more elements or steps of the claims referred to. Therefore, in practice, it may be concluded that the current office practices provide the possibility of drafting claims in various forms.

18. As regards the restrictions on how to link independent and/or dependent claims, a majority of Offices stated that there was no restriction in this regard as far as those claims met the requirement of unity of invention and the requirement of clarity and conciseness of the claims. Five Offices replied that multiple dependent claims could refer to the claims on which they depended in the alternative only. The same number of Offices provided that a multiple dependent claim should not serve as a basis for any other multiple dependent claims. One of the reasons put forward was that, without such restrictions, multiple dependent claims could lead to enormous numbers of inventions being recited in a small number of claims, which would impose a heavy burden on examiners. Another reason was based on the consideration that the objective of claims, which was to notify third parties as to what was claimed, would not be sufficiently achieved.

19. Three Offices indicated that, in their practice, more than one independent claim in the same category could be contained in a single application only if the subject matter of the application involved: (i) a plurality of inter-related products; (ii) different uses of a product or apparatus; or (iii) alternative solutions to a particular problem, where it is not appropriate to cover these alternatives by a single claim. Two other Offices were supportive of such kind of restriction, while one Office opposed such a limitation practice. One other Office indicated that a reference in a dependent claim was permitted only to one independent claim and other claims dependent on the independent claim.

20. Some Offices, which do not provide any restrictions on how to link independent claims and/or dependent claims, found that a large number of multiple dependencies and, more in general, the structure and/or size of the “claim tree”, posed difficulties for examiners. One Office noted that, even if examiners could restrict the subject of the search based on lack of

clarity and/or conciseness of claims, a substantial analysis of the claims by the examiners was still needed in order to reach that conclusion.

Suggestions by the SCP members and observers on whether and how the issue may be addressed

21. One Office expressed its general support for current Rule 5(5) of the draft Regulations under the SPLT. One other Office, however, felt that that provision was too detailed, unless it provided a maximum requirement. Two other Offices were also of the view that only basic rules should be prescribed in the Regulations under the SPLT. The views were split on the questions as to whether the multiple dependency of multiple dependent claims should be allowed and whether multiple dependent claims could refer in the cumulative to the claims on which they depend. The necessity of harmonization between the PCT and the SPLT was also raised.

22. Other issues raised by more than one Office are the inclusion of definitions of “dependent claim” and “independent claim” and of the rules concerning the linking of independent claims. One Office however, noted that the law of its country did not limit the method of claiming as long as the claims, whether dependent claims or independent claims, defined the invention in a manner clear, succinct and fairly based, and hence a definition of the terms “independent” or “dependent” would be superfluous.

Points for discussion at the Working Group

23. In order to recommend draft provisions as regards dependent and multiple dependent claims under the SPLT to the SCP, the Working Group may wish to further discuss this issue on the basis of Rule 5(5) of the draft Regulations under the SPLT taking into account various national/regional practices applied under national/regional systems, as described above.

IV. NUMBER OF CLAIMS/CLEAR AND CONCISE CLAIMS

Current national/regional practices and difficulties

24. A number of Offices stated that a large number of claims might render it difficult to determine the scope of subject matter claimed, and might lead to redundant and nonsensical claims. Consequently, the claims might be rejected on the grounds of clarity and conciseness of claims. However, some Offices clarified that the simple fact that an application contained a large number of claims could not be a ground to invoke the clarity and conciseness requirement. Some Offices noted that the number of claims should be reasonable in consideration of the nature of the invention claimed. One Office stated that there were two requirements for multiple claims: claims may not be duplicative and may not be unduly multiplied.

25. In response to the question as to whether an Office could limit the number of claims or distinct embodiments, a majority of Offices indicated that, as long as the requirements concerning unity of invention, clarity and conciseness of claims and support by the description were met and independent claims and dependent claims were linked in accordance with the applicable law, no restriction on the number of claims could be imposed. Some Offices, however, provide that, as indicated above, more than one independent claim in the same category were allowed in a single application only if these claims met certain conditions

(see paragraph 19, above). One other Office noted that the examiners of that Office tried to limit the excessive number of dependent claims only to those which develop features contained in the independent claims.

26. As regards broad Markush claims, one Office stated that an objection could be made on the ground of lack of inventive step to the extent that the claim encompassed possibilities that did not provide a solution to the problem underlying the invention. Another Office introduced its practice according to which an applicant could be required to elect one species from the Markush grouping for examination where there was serious extra burden on the examiner's side. One other Office also suggested that, as regards Markush-type claims, an applicant be required to specify a principal claim in accordance with examples contained in the description in order to comply with the clarity requirement.

27. Difficulties as to how to handle an application with an excessive number of claims and Markush-type claims were pointed out by a number of Offices in view of, in particular, their workload. One Office noted a difficulty with the procedures for examining Markush-type claims. According to its practice, a Markush-type claim will be examined fully with respect to the species elected by the applicant. If the elected species is determined to be patentable over the prior art, the Markush-type claim will be further examined to the extent necessary to determine patentability of the remainder of the Markush-type expression. This practice thus requires an examiner to continue the search from species to species until a reference is found to render the species unpatentable.

Suggestions by the SCP members and observers on whether and how the issue may be addressed

28. Many Offices indicated that a sliding fee structure depending on the number of claims would be an effective measure to prevent unnecessarily large number of claims. A few Offices said that a norm should be provided to limit the number of claims in a single application. However, some Offices, because of its effectiveness and lack of flexibility for applicants, questioned the establishment of such a norm. One Office noted that, according to its Guidelines, where objections regarding lack of support or sufficiency of disclosure was raised during the search stage, a partial search report would be issued.

Points for discussion at the Working Group

29. In order to make a recommendation to the SCP, the Working Group may wish to further discuss the issue on the basis of experiences of the national/regional Offices indicated in the responses, and decide on, in particular, the following:

- whether any Rule or Guidelines should be included in the draft SPLT;
- if yes, what kind of provision(s) could be envisaged;
- in addition to a further exchange of information and sharing of experiences among the

Offices, what could constitute further activities and actions to be undertaken by the Working Group.

30. In connection with the number of claims, PCT Rule 6.1(a) provides that the number of claims shall be reasonable in consideration of the nature of the invention claimed. It should be noted that, in accordance with Article 5(2) of the draft SPLT, this provision would be incorporated by reference into the SPLT, unless otherwise provided in the SPLT.

V. SPECIAL PROCEDURES TO TREAT COMPLEX APPLICATIONS, SUCH AS MEGA-APPLICATIONS OR LARGE SEQUENCE LISTINGS

Current national/regional practices and difficulties

31. Although some Offices responded that they had not received complex applications yet, many Offices expressed various difficulties related to the processing, searching and examining of such applications. Those difficulties derived from two distinct characteristics of complex applications. The first concerns the huge volume of applications, which causes difficulties in handling and processing the applications. The second concerns the complexity of the claims, which renders it difficult to search and examine such applications.

32. As regards the first aspect, many Offices noted that information technology was a useful tool to cope with voluminous applications and huge sequence listings. For example, Offices may require nucleotide and/or amino acid sequence listings to be filed in a machine-readable format. Another example indicated by more than one Office was the publication of applications (or, at least voluminous applications) in electronic form, and not on paper. One Office said that only a reference regarding extended lists or other long documentation (such as computer program listings) was made in the publication, and that the public would have access to those documentation on demand. A sliding fee structure was also suggested by more than one Office.

33. Concerning the second aspect, many Offices stated that because of the complexity and the large number of claims, complex applications required more workload and time when determining the scope of the claims and unity of invention, searching and examining the applications. Several Offices introduced their practices according to which the examiner might limit the subject of the search and issue a partial search report if it was impossible to carry out a meaningful search because of non-compliance with requirements such as sufficiency of disclosure, support or clarity and conciseness of claims. For example, one Office explained that, if certain claims did not define a clear scope of protection, only the claims that clearly defined the scope would be searched, and the applicant would be informed accordingly. If all claims were not clear, but an invention could be regarded to be defined in the description, an evaluation of the inventive idea would be made on the basis of the description, and an examiner would base his search on such an inventive idea. If the claims were so undermined that a meaningful search could not be performed, the applicant would be requested to amend the claims. Another Office noted that examiners had long had search strategies for dealing with problematic claims, given that there was a requirement to search what was ascertained to be the first invention present in the claims. During the examination phase, one Office stated that the strict application of the requirements on sufficiency of disclosure, support and clarity and conciseness of claims was in force. The same Office, however, noted that lack of the support requirement tended to lead to long discussions with the applicants about its applicability. In particular, it said that it was difficult to judge compliance with the “support requirement” for Markush-type claims, where many preferred embodiments were contained in dependent claims with no exemplification in the description. More than one Office indicated that consultations with the applicant and providing opportunities to amend the claims, both before and during search or examination, were effective measures to deal with complex applications.

34. As regards the search and examination of a large number of nucleotide and/or amino acid sequence listings, one Office introduced its practice according to which, rather than making an arguable *prima facie* plurality objection, examiners contacted the applicant

suggesting that only the first sequence would be searched unless the applicant identified a clear unity concept. Another Office stated that, since DNA sequences encoding different proteins were structurally distinct chemical compounds, and thus independent and distinct inventions, in general, applicants were required to limit those sequences to a single sequence. The same Office, however, indicated that such limitation was not always possible due to the nature of the invention.

35. Some countries said that, since complex applications were mostly international applications under the PCT or applications filed internationally, international search reports and international preliminary examination reports under the PCT as well as search and/or examination results of corresponding foreign applications issued by relevant foreign Offices were fully utilized to examine those applications. Further, in view of the complexity and the technical scope of those applications, a few Offices noted that a group of examiners or experienced examiners were assigned to cope with mega-applications and complex applications.

Suggestions by the SCP members and observers on whether and how the issue may be addressed

36. Several Offices indicated that the provisions concerning applications under the SPLT should be general and flexible so that the Offices were allowed to take appropriate measures to cope with complex applications and mega-applications, for example, consultations with applicants or a cost recovery mechanism such as a sliding fee structure according to the number of claims. One Office noted that the Guidelines under the SPLT might provide how general provisions under the SPLT and its Regulations could be applied to Markush-type claims or large sequence listings. One office stated that a mechanism that would allow an Office to require the division of mega-applications should be defined, while satisfying the requirement of unity of invention. Noting that this issue is related to redefining the “unity” standard, another Office said that the SCP should strive for a general claim-limiting scheme. To the extent that this was not feasible, that Office suggested looking at particular characteristics of specific fields of inventions, such as biotechnology. One other Office said that a definition of “complex applications” should be established. More than one Office indicated that the issue should be further discussed in the Working Group.

37. As regards the procedural aspects of handling complex applications, a number of offices suggested the full utilization of information technology, for example, an electronic publication of applications or requiring nucleotide and/or amino acid sequence listings in electronic form.

Points for discussion at the Working Group

38. In order to make a recommendation to the SCP, the Working Group may wish to further discuss the issue on the basis of experiences of the national/regional Offices indicated in the responses, and decide on, in particular, the following:

- whether any Rule or Guidelines should be included in the draft SPLT;
- if yes, what kind of provision(s) could be envisaged;
- in addition to a further exchange of information and sharing of experiences among the Offices, what could constitute further activities and actions to be undertaken by the Working Group.

39. As regards the electronic publication of mega-applications and the processing of nucleotide and/or amino acid sequence listings in electronic form, Rule 8(1)(d) of the Regulations under the Patent Law Treaty (PLT) provides that, where the receiving or processing of an application or other communications on paper is deemed not practicable due to its character or its size, a Contracting Party may require the filing of such an application and other communications in another form or by other means of transmittal. The Working Group may wish to decide on whether any further actions are necessary in this regard.

40. The Working Group is invited to take note of the contents of this document.

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