

REPORT OF THE TEGERNSEE EXPERTS GROUP
TREATMENT OF CONFLICTING APPLICATIONS
STUDY MANDATED BY THE TEGERNSEE HEADS

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I. INTRODUCTION

A. THE PROBLEM

1. In determining the prior art applicable to the determination of the patentability of an invention by a patent office during the granting procedure, the state of the art is defined as anything made available to the public in any way, anywhere in the world, prior to the critical date of the priority or filing date (although some exceptions may apply, e.g. due to a grace period). This rule appears to be a general principle of patent law.
2. A further issue which must be dealt with in all patent systems is how to deal with applications containing relevant subject-matter which were filed prior to the filing or priority date of the application being examined, although published later. It is a particularly difficult issue, in which a balance must be struck between the first applicant, subsequent applicants and the general public. This is an area where rules to entitlement in a first-to-file system develop their full impact, when innovation occurs rapidly and patent rights for competing inventors must be allotted, taking various factors into account in striking a balance, e.g. chronology, fairness, legal certainty and predictability, and systemic effects.
3. The treatment of conflicting applications is dealt with differently in Japan, the US and the EPO. When the Industry Trilateral sent a letter in July 2009 to the Heads of the Trilateral Offices, requesting that harmonization efforts be taken up again, the treatment of conflicting applications was one of the 5 main issues which were considered to be of utmost importance, but significantly, there was no indication as to which solution was considered by users to be the most appropriate - there was no consensus on this point. Users simply requested "*an agreed definition of how and when published patent applications, including PCT applications, are to be used as prior art, including any necessary solution for double patenting*".
4. The main purpose of the provisions governing the effect of co-pending prior applications which are later published is to prevent double patenting. However, how these provisions are formulated plays a role in determining the manner in which incremental innovative developments may be appropriated, and by whom. Because by definition, at the time of their filing, the subject-matter contained in these applications is not publicly available, arguably, the policy considerations relevant in determining the effect of these applications differs somewhat from that of the definition of the state of the art.

B. OBJECTIVES

5. The treatment of conflicting applications is a difficult and complex issue, the ramifications of which for innovation in general are perhaps not entirely understood. Accordingly, the objectives of this study are manifold. First, the state of the law in the jurisdictions of the Tegernsee Offices is described. In addition, it is attempted to evaluate the impact of these rules in practice, through statistical data. Policy arguments will be ventilated to discern what considerations underlie the practices in each jurisdiction, and a brief discussion of the advantages and disadvantages

inherent in each system will be attempted. Finally, some issues relevant in work-sharing perspective will be considered, and possible further investigations suggested.

II. SUBSTANTIVE LAW

A. EPC

1. STATE OF THE LAW: CONFLICTING APPLICATIONS UNDER THE EPC

(a) European applications

6. Under the EPC, the content of European applications which are filed prior to the filing or priority date of the application at hand, and which are published by virtue of Art. 93 EPC on or after that date, are included pursuant to Art. 54(3) EPC in the state of the art for the purpose of examining novelty.
7. In order to be a conflicting application under Art. 54(3) EPC, the application must still be pending at its publication date. If the application was withdrawn or deemed to be withdrawn prior to the date of publication but was published because the preparations for publication had been completed, this application enters the state of the art under Art. 54(2) EPC as of the date it actually became available to the public, and does not constitute a conflicting application entering the state of the art through the legal fiction of Art. 54(3) EPC as of its original priority or filing date. (See *Guidelines for Examination in the EPO*, C-IV -7.1.1; J 5/81)
8. However, as provided by Art. 56 EPC, second sentence, such applications are not considered to form part of the state of the art for the purpose of determining whether there has been inventive step. These provisions apply to European applications pending at the EPO.
9. Given that EPO practice aims to provide an absolute standard for novelty easily distinguishable from the relative standard of inventive step, the notion of novelty which the EPO applies is narrow and although it includes also the implicit disclosure of the document, as interpreted by the skilled person reading the document, it excludes equivalents. This is examined in greater detail below.
10. The first step in deciding whether an invention is new is to define the prior art, the relevant part of that art, and the content of that relevant art. The next step is to compare the claimed invention with the prior art thus defined, and to assess whether the invention differs from such prior art. If it does, the invention is novel.
11. The case law of the Boards of appeal provides that for an invention to lack novelty, its subject matter must be clearly and directly derivable from the prior art (T 465/92, OJ 1996, 32; T 511/92) and all its features – not just the essential ones – must be known from the prior art.
12. The content of a prior art document is not to be considered to be limited to what it explicitly discloses, but it includes also the implicit disclosure of the document, as interpreted by the skilled person reading the document (see decisions T 677/91, T 465/92 and T 511/92). Such implicit disclosure comprises subject matter which is

“derivable directly and unambiguously” from the prior art document. This can be in the form of features which the skilled person would recognize as necessarily part of what is disclosed in the document, even if they are not explicitly mentioned. For example, in case T 6/80 the board found that where a further functional attribute of an element of a device disclosed in a document was immediately apparent to a person skilled in the art reading the document, such attribute formed part of the state of the art with regard to that device.

13. Further, in decision T 71/93, it was held that a feature not explicitly mentioned in a prior art document, even though generally known to help overcome a drawback usual in the same technical field, could not be considered implicitly disclosed if it were not directly derivable from the prior art document that the drawback was considered unacceptable and/or if other solutions were proposed for overcoming the drawback. Alternatively, in particular in the case of properties or parameters, there can be features which can be seen to be present automatically if the teaching of the prior art is put into practice. This interpretation also has the consequence that a specific disclosure can take away the novelty of a generic claim embracing that specific disclosure (e.g. a disclosed value takes away the novelty of a range including that value), but that the converse is not the case (see decisions T 651/91 and T 508/91).
14. Moreover, well-known equivalents of features which are explicitly or implicitly disclosed in the prior art document are not considered to be “derivable directly and unambiguously” from the prior art document, and are therefore to be taken into account only for the assessment of inventive step (see decision T 517/90). As mentioned above, this narrow concept of novelty, which excludes equivalents, is of particular importance for the application of Article 54(3) EPC. In case T 167/84, the board commented that conflicting applications within the meaning of Article 54(3) EPC were included in the state of the art solely from the point of view of novelty, but were considered in the light of their “whole contents”. In order to mitigate the harsh effects of the “whole contents approach”, its application was confined to novelty (see Article 56 EPC, second sentence). Further, in order to reduce the risk of “self-collision”, it had always been considered justified to adopt a strict approach to novelty. Accordingly, the board held that the “whole contents” of an earlier document did not also comprise features which were equivalents of features in the later document (see also T 928/93).
15. In case T 447/92, this general approach under Art. 54(3) EPC was reiterated, and it was observed that the Boards of appeal have consistently applied a very restrictive interpretation of disclosure in regard to prior rights in order to reduce the risk of self-collision, as to do otherwise would undesirably undermine the exclusion from consideration of these documents under Art. 56 EPC.

(b) PCT applications

16. Pursuant to Art. 153(5) EPC, prior filed and later published Euro-PCT applications pending at the EPO are considered as comprised in the state of the art under Art. 54(3) EPC provided the conditions laid down in Art. 154(3) and (4) EPC and in Rule 165 EPC are fulfilled, *ie* upon entry into the European phase. Thus, (1) the international application has been published in an official language of the EPO, or, in the alternative, a translation of the application into one of the EPO official languages

has been filed, and such translation has been published by the EPO; and (2) the filing fee pursuant to Rule 159 (1)(c) must have been paid.

17. [*Contribution from the UK:*] In the UK, in addition to PCT applications which have validly entered the European regional phase, PCT applications which have been published by WIPO under Art. 21 PCT and which have entered the UK national phase (that is, the national fee has been paid and, if the application is in a foreign language, an English translation has been filed at the Office) also form part of the state of the art for the purposes of assessing novelty in relation to UK applications.

(c) Prior rights in EPC Contracting States

18. For the sake of completeness, Art. 139(2) EPC should be mentioned: national applications pending in an EPC Contracting State have a prior right effect against a European patent application filed later for that Contracting State, as though the European patent application had been a national application. These applications do not form a bar to the grant of a European patent, but constitute a ground of revocation in the Contracting State concerned (See *Guidelines for Examination in the EPO*, B-VI-4.2). However, Rule 138 EPC provides that in such cases, the applicant may file a different set of claims and if appropriate, a different description and drawings for that Contracting State.
19. Conversely, prior European rights have the same effect in the EPC Contracting States as prior national rights. According to Art. 139(3) EPC, in such cases, it is up to the Contracting States to determine the fate of the invention and whether it may be protected simultaneously by two patents. (For a complete overview of the situation in each Contracting State in this regard, see the EPO Brochure *National Law relating to the EPC, Part X*.) The effect of the prior European right on the pending national application is determined by national law. Thus, Switzerland and Liechtenstein apply the prior claiming approach rather than the whole contents approach adopted by the EPO and most other EPC Contracting States.
20. [*Contribution from the UK:*] It may be worth adding that since all European patent applications filed on or after 13 December 2007 designate all Contracting States (including the UK) automatically at the date of filing, every European patent application becomes a European patent (UK) application. Removal of the UK designation before publication of the European patent (UK) application does not prevent the matter contained in the European patent (UK) application becoming part of the state of the art in the UK by virtue of section 2(3) of the Patents Act 1977, as set out in section 78(5A). Every European patent application which was filed after 13 December 2007 will therefore enter the state of the art by virtue of section 2(3) once it is published. For European patent applications filed prior to 13 December 2007, removal of the UK designation before publication would have prevented the matter contained in those applications from forming part of the state of the art by virtue of section 2(3).

(d) Whole contents approach

21. Although the concept of novelty applied by the EPO is restrictive, which is to the benefit of later applicants, on the other hand, the EPO applies the "whole contents

approach", more rigorous for later applicants than the "prior claiming approach" embraced in many jurisdictions. Thus, the entire contents of the earlier filed application are treated as part of the state of the art with regard to the determination of the novelty of the invention contained in the application filed later.

(e) Same date applications / double patenting

22. The EPC does not contain any rules applying in the event that two European applications for the same invention are filed on the same effective date (*ie* having the same date relevant to determine novelty, whether a priority or a filing date).
23. However, it is an accepted principle in most patent systems that two patents cannot be granted to the same applicant for one invention. Where the applications have been filed by the same applicant, the *Guidelines for Examination in the EPO* (C-IV-7.4) indicate that it is permissible to allow an applicant to proceed with two applications having the same description where the claims are distinct in scope and directed to different inventions. However, in the rare case in which one applicant files two or more European applications definitively designating the same States and the claims of those applications have the same filing or priority date and relate to the same invention, the applicant is then required to either amend his applications so that they no longer claim the same invention, or choose which one of the applications should proceed to grant.
24. In the unlikely event that two applications on the same invention and having the same effective date are filed by different applicants, each must be allowed to proceed as though the other did not exist (*Guidelines*, C-IV-7.4, last sentence). Thus, theoretically, two patents could be granted by the EPO on the same invention to two different applicants.

2. POLICY CONSIDERATIONS

(a) Purpose

25. Quite clearly, the purpose of Art. 54(3) EPC is twofold: (1) it ensures that patents are granted to the first applicant to file; and (2) it is intended to prevent "double patenting". In practice, it also allows incremental improvements to inventions, which form a cornerstone of the innovation process, to be protected without resorting to the mechanism of anti-self collision.

(b) Scope

26. It should be noted that originally, Art. 54(4) EPC was articulated so as to have the minimum effect necessary to avoid collision of rights. Thus, this provision only applied insofar as a Contracting State designated in the later application was also designated in the earlier application. When the EPC was revised in 2000, Art. 54(4) EPC was deleted, so that a prior European application which is published on or after the filing date of a subsequent application now constitutes prior art in all EPC Contracting States, regardless of the details of designation. This makes the provision easier to apply from an operational perspective. It is arguably less applicant-friendly, but it contributes to reduce market fragmentation within Europe.

(c) Whole contents v. prior claim approach

27. *[Contribution from the UK]* The Patents Act 1977 moved the UK to a “whole contents” approach, from the “prior claim” approach which existed under the previous legislation (the 1949 Act). The main policy reason was that it was felt to be against the public interest for a later applicant to monopolise subject matter which, although he was not aware of it at the time of the application, would inevitably have come into the public domain. Once a disclosure has been made by way of a patent application, other applicants should be precluded from subsequently monopolising any part of that disclosure. The “whole contents” approach means that the filing and publication of a patent application prevents the subsequent patenting of anything described in the earlier application, even if no patent is ever granted for it – i.e. first-to-file, as against simply preventing double patenting – it was felt that the law should not confine itself merely to the prevention of double patenting. In addition, the whole contents approach was considered simpler and more certain in application than the prior claim approach, and enables the conflict to be resolved during examination.
28. The *UK* has a similar practice to the EPO in relation to applications which were withdrawn prior to the date of publication but were published because the withdrawal took place after the preparations for publication were complete (following the Patents Court decision in *Woolard's Application* [2002] RPC 39). It is not clear how this fits with the first-to-file policy considerations set out above, as according to UK law an application must be withdrawn prior to the date that preparations for its publication are complete in order to avoid publication. However it is noted that this is likely to only affect a very small number of applications *[End of UK contribution]*.

B. FRANCE

1. Substantive Law

29. Article L611-11 of the Intellectual property code (IPC) states: An invention shall be considered to be new if it does not form part of the state of the art. The state of the art shall be held to comprise everything made available to the public by means of a written or oral description, by use or in any other way, before the date of filing of the patent application. Additionally, the content of French patent applications and of European or international patent applications which designate France as filed, of which the dates of filing are prior to the date referred to in the second paragraph of this Article and which were published on or after that date, shall be considered as comprised in the state of the art.
30. The provisions of the foregoing paragraphs shall not exclude the patentability of any substance or composition, comprised in the state of the art, for use in a method referred to in Article L611-16, provided that its use for any method referred to in that Article is not comprised in the state of the art.
31. These provisions concerns national applications, European applications and international applications which designate France which are filed before prior to the filing or priority date of the application and published at this date or after that date. Such applications are only opposable for the purpose of examining novelty and not

considered to form part of the state of the art for the purpose of determining whether there has been inventive step. The opposability of the first application is subject to its publication after the second application. A foreign patent or a foreign application, as it does not designate France, is not considered to form part of the state of the art.

2. Whole contents approach

32. The 1978 law moved to a “whole contents” approach from the “prior claim” approach which existed previously.

3. Same date application/ double patenting

33. The IPC does not contain any rules applying in the event that two national applications for the same invention are filed on the same effective date.
34. In the case where a European application is filed on the same effective date as a national application, article L614-13 IPC provides that “Where a French patent covers an invention for which a European patent has been granted to the same inventor or to his successor in title with the same filing date or the same priority, the French patent shall cease to have effect at either the date on which the period during which opposition may be filed against the European patent expires without opposition having been filed or the date on which the opposition proceedings are closed and the European patent maintained.”
35. However, where a French patent has been granted at a date later than either of the dates, as appropriate, laid down in the foregoing paragraph, such patent shall not take effect. The subsequent lapse or annulment of the European patent shall have no effect on the provisions of this Article.
36. We can imagine that if two applications filed on the same date have two different applicants, theoretically, two patents could be granted.

C. JAPAN

1. STATE OF THE LAW

(a) Application filed in the JPO

37. A patent shall not be granted for any invention, which is claimed in a patent application in question, that is identical to an invention indicated in the specification or in the scope of claims for any patent or drawings originally attached to the application of another application filed for a patent which has been filed prior to the filing date of the said patent application and published after the filing date (or identical to an device indicated in the specification, or in the scope of claims for a utility model registration, or in drawings originally attached to the application of an earlier application filed for a utility model which has been published after the later utility model application). This provision exists as the Article 29-2 of the Japanese Patent Law.

38. It should be noted that when discussing Article 29-2 of the Japanese Patent Law, the prior filed and later published applications (hereinafter referred to simply as “prior applications” or “prior filed application”) include not only applications for a patent but also those for registration of a utility model. In order to make explanation simple and short, the applications for registration of a utility model are not referred below. However, it should be noted that, under the Article 29-2, the applications for registration of a utility model are dealt with as prior applications in the same manner to deal with applications for a patent as prior applications.

(1) Prior Applications

39. Other patent application which can be a “prior application” under the Article 29-2 should be an earlier patent application which has been filed prior to the filing date of the patent application in question (or in the case where the patent application in question claims priority, prior to the priority date) and should be an application which is published or for which a patent gazette is issued after the filing of the said patent application in question. If such other application is a divisional application, converted application, or patent application based on utility model registrations, it will be an “prior application” only when its actual filing date is prior to the filing date of the said patent application in question.
40. Moreover, Article 29-2 of the Patent Law shall not be applied when inventor(s) of inventions claimed in the prior application and those of inventions claimed in the later application in question are identical or when applicant(s) of the prior application and those of the later application are identical at the time of filing of the later application. That is, the principle of anti-self-collision is adopted. In addition to this, Article 29-2 shall not be applied if the filing date of the prior application and that of the later application are identical. However, in this case, in accordance with Article 39 of the Patent Law, double patenting will be prevented. (See section (5) below)
41. Just for information, the prior application can reject the later application under Article 29-2, even if such prior application has been waived, withdrawn or dismissed after the publication of the said application or issuing the gazette containing the patent for the said application.

(2) Definition of “Identity” of inventions

42. A case in which an invention of the later application is identical to an invention indicated in specification, etc. originally attached to the prior application is a case in which the matters used to specify the claimed invention in the later application are not different from those used to specify an invention indicated in the originally attached specification, etc. of the earlier application; or a case where there is a difference between them, but such difference in matters used to specify inventions is a minor one in embodying the means for solving the problem (this is a case which is described as “substantially the same”).

- What is “Substantially the Same”-

Decision by the Tokyo High Court, September 29, 1986 [Showa 61 (Gyo ke) 29]
“...when comparing two or more inventions, it is almost impossible for the structures thereof and the effects produced thereby to correspond formally between them. The point is that even if two or more inventions are formally different, the inventions may be determined to be identical as a creation of a technical idea if such difference is one merely in expression or a minor one in designing, or if the effects produced thereby are not remarkably different. In this case, both inventions are considered to be substantially the same...”

43. In Japan, in such a case, the inventions are considered to be “substantially the same” and under the Article 29-2 of the Patent Law, if an invention indicated in a prior application and an invention claimed in a later application are “substantially the same” in terms of the above mentioned meaning, the later application cannot be patented.

(3) Whole contents approach

44. The whole contents approach is adopted when applying the Article 29-2 of the Patent Law. That is, when determining whether inventions are identical or not by comparing an invention claimed in the later application in question with inventions indicated in other prior filed application, the subjects of the comparison are inventions described in the specification, scope of claims or drawings originally attached to the prior application, not limiting inventions described in the scope of claims of the prior applications. There are several reasons for that.
45. First, in regards to the prior application, the contents of documents other than the scope of the claims, namely descriptions of the specification or drawings attached to the prior application, are generally disclosed in publication of the application. If the later application is filed for an invention, which is identical to descriptions of the specification or drawings of the prior application, and if such inventions claimed in the later application are disclosed in publication of the later application, such invention claimed in the later applications will not make any new art open to the public. Therefore, it is not appropriate to grant a patent for such inventions claimed in the later applications from the perspective of the basic principle of the patent system in that protection should be granted to inventions in return for publication of new inventions.
46. Second, in the examination process for the later application, the scope of claims of the prior application is not always fixed. Until the examination process of the prior application is completed, the scope of claims of the prior applications can be changed by making amendments. Consequently, if the range of a subject of the prior applications to be compared with from the view point of Article 29-2 is limited only to inventions described in the scope of claims, the examination for the later applications cannot be conducted until the examination process of the prior application is completed. Therefore, if the whole contents of the prior application including the specification and drawings attached to it, namely a maximum range of the scope of claims of the prior application for which amendments can be made, are taken into

account, the later application can be examined without waiting for completion of the examination of the prior application.

47. Thirdly, it is providing convenience for applicants. Even in a case where an applicant consider it enough to obtain rights for a major art, if the applicants does not take any actions to prevent other persons to obtain patents for relevant arts to the major art (in other words, art indicated in the specification or drawings but not in the scope of claims), problems may arise when the applicant use his/her own major art by themselves. If the whole contents of the prior application including the specification and drawings are considered when examining the later application, the applicant of the prior application can prevent such relevant arts from being patented by other persons' later applications, without seeking for patent protection on such relevant arts by filing other patent applications. .

(4) Anti-self-collision

48. The Article 29-2 of the Patent Law prescribes that inventions claimed in a later filed application shall not be rejected by an invention which the same inventor has made or by an application which the same applicant has filed. Generally, an applicant does not seek a patent protection for inventions indicated in the specification but not indicated in the scope of claims. In other words, the applicant seems to have the intention to make open such inventions not indicated in the scope of claims for the third parties' uses. However, all of applicants do not necessarily have the same intention. There is a situation where an applicant may file another application aiming to obtain a patent right for his/her own specific art at a later stage, when such specific art has been indicated in the description attached to his/her own prior filed application as necessary elements for explanation of the inventions claimed the prior filed application. In this situation, it will be inconvenient for the applicant of the prior application if he/she is not able to obtain a patent for such specific art indicated in the specification of the prior application. The Article 29-2 of the Patent Law provides the applicant of the prior application with a way to avoid this kind of problem.

(5) Other provisions related to double patenting

49. Article 29-2 of the Patent Act shall not be applied if inventors or applicants are the same persons between the prior application and the later application. In this case, in accordance with Article 39 of the Patent Act, double patenting will be prevented. If we focus on these articles' functions to reject the later filed applications, Article 29-2 and Article 39 can be applied at the same time for the same cases redundantly. However, the examination guidelines of the JPO prescribes that in case applicants and inventors are different between the prior application and the later application, provisions of Article 29-2 shall be applied to refuse the later application, and that in other cases, Article 39 shall be applied.

-Differences in range to refuse the Later Applications-

50. Under Article 29-2, the claimed invention in the later application which is identical to those indicated in the specifications, scope of claims or drawings originally attached to the prior filed application will be refused. In contrast, under Article 39, the claimed invention in the later application which is identical to those indicated in the scope of claims of the prior filed application will be refused only.
51. Moreover, Article 29-2 of the Patent Law shall not be applied if the filing date of the prior application and the filing date of the later application are the same. In this case, in accordance with Article 39 of the Patent Law, double patenting may be prevented.
52. Under Article 39 (2) of the Patent Act, if two or more patent applications claiming an identical invention have been filed on the same filing date, only one applicant, who is selected based on a consultation between the applicants filing these applications, shall be entitled to obtain a patent for the invention. Where no agreement is reached through the consultation or when the consultation is unable to be held, none of the applicants shall be entitled to obtain a patent for the invention.

(b) PCT applications

53. Under Article 184-13 of the Patent Law, an international patent applications, which specifies Japan as a designated state and is published as an international publication, is treated as a prior application defined by Article 29-2 and entitle to reject the later applications filed after the filing date of its international application. In case such international application is the prior application, a range to reject the later application covers inventions indicated in the specifications, scope of claims, or drawings on the international filing date of the international application.
54. Moreover, with regard to the international application filed in a foreign language other than Japanese, such international application will be treated as the prior application defined by Article 29-2 only when translations of the specification and the scope of claims are submitted. This is because, as a procedural matter, such international patent application filed in the foreign language will be given effects as a regular national application in Japan at the time when the prescribed procedures such as submission of translation and payment of fees are carried out. An international application without such translations shall not be entitled as the prior application defined by the Article 29-2.
55. In addition, pursuant to Article 184 (6), with regards to such international patent application in a foreign language, translations of the specification and the scope of claim on the international filing date shall be deemed to be the specification and the scope of claim which are submitted being attached to an application in accordance with the Article 36 (2) of Patent Law.

2. POLICY CONSIDERATIONS

56. In Japan, provisions under Article 29-2 of the Patent Law have been introduced in the revision of the Patent Law in 1970. Until then, there had been no provision except Article 39 of the Patent Law to prevent double patenting. That is, for inventions

indicated in scope of claims of a later patent applications filed before the publication of examined application for an earlier applications, in comparing with inventions indicated in the scope of claims of the earlier applications, if these inventions claimed in the later application were not identical to the inventions claimed in the earlier application, the later application have not been rejected on the grounds that they were filed later. Consequently, in regards to inventions which were identical to those indicated only in specifications and drawings attached to the prior application, if an applicant of a later filed application indicated such inventions in the scope of claims, he/she could be obtain patents on such inventions indicated only in specifications and drawings attached to the prior application, as long as there were no other reasons for refusal.

57. And, in the revision of the Patent Act in 1970, the 18 month publication system and the examination request system were introduced, and at the same time, the current Article 29-2 of the Patent Law, namely provisions not to grant any patent to later filed applications in accordance to the principle of “whole contents approach” was introduced.
58. In regards to inventions indicated in the specification of the prior filed application, even if they are described only in other part of application documents than the scope of claims, their contents will be generally disclosed by publication of the application. Consequently, even if a later application is filed before the publication of the earlier application, contents of inventions claimed in the later application, which are identical to those of inventions indicated in the earlier application, the publication of the later application will not disclose any new art to the public. It is not appropriate to grant a patent for such inventions claimed in the later application from the perspective of the basic principle of a patent system in that protection should be provided to new inventions in return for publication of such inventions. Article 29-2 prescribes provisions to reject later filed applications in such a case.
59. In addition, there are other reasons to adopt whole contents approach. As already mentioned in the section 1.(3) above, one of such reason is that the scope of the claims of the prior application can be changed to the extend which are described in the specification or drawings of the earlier applications until the examination process of earlier filed applications is completed. Furthermore, another reason is that this approach enables an applicant to prevent relevant arts indicated in the specification of the earlier applications from being obtained a patent by the third party without filing other applications, and that is providing convenience for applicants.

D. U.S.

1. STATE OF CURRENT (pre-AIA) LAW

(a) Statutory Basis

60. 35 U.S.C. § 102 sets forth a number of conditions for entitlement to a patent, including novelty, and has been used as a basis by the U.S. courts to determine what qualifies as “prior art.” Pursuant to 35 U.S.C. §§ 102(e)(1) and (2), an application filed in the United States and subsequently published or granted may qualify as novelty-defeating “prior art” against another U.S. application if its earliest effective

U.S. filing date was prior to the date of “invention” of the other application, and it names a different inventive entity. The reference to the date of invention rather than the filing date of the other application reflects the U.S. “first-to-invent” system, in which dates of invention, rather than filing dates, are used to determine entitlement to an invention. During *ex parte* examination at the USPTO, however, the earliest effective filing date of the application under examination (including any claims of foreign priority) is considered the date of constructive reduction to practice, and hence is used, absent evidence of earlier “inventive” activities (e.g., conception), as the date against which Sections 102(e)(1) and (2) are applied.

61. 35 U.S.C. § 103(a) further provides that even though an earlier-filed published application or granted patent was not novelty-defeating as to a later application, a patent still may not be obtained on the later application if the differences between the subject matter sought to be patented and the “prior art” are such that the subject matter as a whole would have been obvious to a person of ordinary skill in the art. In *Hazeltine Research, Inc. v. Brenner* (1965), the U.S. Supreme Court sanctioned the use of a conflicting application to establish that the invention claimed in a later application would have been obvious, notwithstanding that it did not constitute “prior art” in the sense that it had not been publicly known prior to the filing date of the later application (see “Policy Considerations” discussion, *infra*). As such, conflicting applications may be considered by themselves or in combination with other items of “prior art,” including other conflicting applications, for purposes of determining whether an invention in a later-filed application would have been obvious.

(b) PCT Applications

62. Pursuant to 35 U.S.C. § 102(e)(2), a PCT application may also qualify as novelty-defeating prior art provided that the international application designated the United States, was published in English, and had an international filing date on or after November 29, 2000. The American Inventors Protection Act (1999) (AIPA) added the English requirement to ensure that third parties would have actual notice (in English) of the most recent technological developments. This requirement provides an opportunity to U.S. researchers and investors to design around claimed inventions, thus avoiding duplicative research and wasted developmental expenditures.

(c) Hilmer Doctrine

63. In the case *In re Hilmer*, the U.S. Court of Customs and Patent Appeals addressed the question: Where a conflicting application has an earlier foreign priority date, but later U.S. filing date, than the U.S. application in question, which filing date for the conflicting application is to be used for purposes of 35 U.S.C. § 102(e)? The court considered the relationship between 35 U.S.C. § 102(e), 35 U.S.C. § 119 (the U.S. statute that provides for foreign priority), and the Paris Convention and concluded that the filing date of a conflicting U.S. application for § 102(e) purposes is limited to its earliest U.S. filing date—earlier foreign priority dates are not considered. The court explained that 35 U.S.C. § 119 acts as a defensive priority preserving mechanism, not an offensive patent-defeating provision, the latter being the function of § 102(e), and as such, foreign priority claims have different applications in the different circumstances.

(d) Double Patenting (Anti-Self Collision) Practice

64. Current U.S. law can give rise to situations where pending U.S. applications filed by or patents granted to the same inventive entity identified in a co-pending U.S. application do not qualify as “prior art” *per se* under any section of 35 U.S.C. § 102, i.e., the applications and/or patents do not “collide” with each other as prior art. Because of the lack of applicable prior art, a single inventive entity could theoretically obtain patents with claims of identical or patentably indistinct scope. In U.S. patent law parlance, this is known as “double patenting.” There are two legal mechanisms under U.S. law to address double patenting. The first is a statutory prohibition on the same inventive entity obtaining more than one patent containing claims of identical scope. 35 U.S.C. § 101 provides that an applicant is entitled to “a” patent, which the courts have interpreted to mean “a single patent” per claimed invention.
65. The second is the judicially created doctrine of non-statutory double patenting. Under one aspect of this doctrine, claims in a later-filed pending application that are patentably indistinct from (i.e., are anticipated by or obvious in view of) the claims in a co-pending application by or patent granted to the same inventive entity will be refused. It should be noted that the determination of obviousness in such situations can include combining the claims in the co-pending application or granted patent with other items of prior art. The applicant can overcome this ground of double-patenting by filing a “terminal disclaimer.” The disclaimer has two main features. The first is the “terminal” provision, which disclaims the portion of the patent term of the pending application that would extend beyond the expiration date of the patent term of the conflicting application or patent. This assures that the applicant does not obtain an unjust timewise extension of patent rights based on claims of patentably indistinct scope emanating from different applications subject to different patent terms. The second feature of the disclaimer is the requirement that all of the applications/patents involved must be commonly owned or transferred in order to be enforceable. The purpose of this common ownership provision is to prevent infringers from being subjected to multiple lawsuits from different parties holding patents of overlapping scope.

(e) Changes to Current Law under the AIA

66. The Leahy-Smith America Invents Act (AIA), signed into law in September 2011, makes a number of changes to U.S. law regarding treatment of conflicting applications. Perhaps the most significant is the abolishment of the *Hilmer* doctrine. The AIA amends 35 U.S.C. § 102 to treat conflicting U.S. applications as available “prior art” as of their earliest effective filing date, regardless of whether the earliest effective filing date is based upon an application filed in the U.S. or in another country. AIA 35 U.S.C. § 102 takes effect on March 16, 2013 and applies to any U.S. patent application that contains or contained at any time: (1) a claimed invention that has an effective filing date that is on or after March 16, 2013; or (2) a designation as a continuation, divisional, or continuation-in-part of an application that contains or contained at any time a claimed invention that has an effective filing date that is on or after March 16, 2013. The AIA also eliminates the requirement that a published PCT application designating the United States be published in English. As such, a

published PCT application is effective as a conflicting application in the United States if it designates the United States, regardless of the language in which the publication was effected.

2. POLICY CONSIDERATIONS

67. The seminal case in U.S. law on the treatment of conflicting applications is the U.S. Supreme Court's 1926 decision *Alexander Milburn Co. v Davis Bournonville Co.* In that case, one inventor had filed an application disclosing the same subject matter disclosed and claimed in a later-filed application by another inventor. The first-filed application published as a granted patent after the filing of the second application, and there was no evidence presented that the second applicant was entitled to an earlier date of invention than the filing date of his application. At that time, as well as currently, U.S. law entitled an applicant to a patent unless he/she was not the first inventor of the subject matter. The Court noted that while the earlier filing of a complete description of the invention by another person, on its face, indicated that the second applicant was not the first inventor, it was also the case that evidence of earlier inventorship generally had to be in the form of information publicly available in the United States. Although the disclosure of the earlier application was not publicly available prior to the second inventor's filing, the Court pointed out that had it been, it would have constituted evidence of earlier inventorship in the same way as if a disclosure of the invention had been contained in a periodical or other printed publication. The Court reasoned that because the first inventor/filer had taken the steps necessary to bring the subject matter to the public's attention as soon as possible, and that but for delays in processing at the Patent Office, that application would have been granted prior to the second inventor's filing and thus barred issuance of a patent to the second inventor, there was no reason in law or policy to allow the second applicant to benefit from the delay and hold himself out as the first inventor, and therefore entitled to the patent, when he was not so in fact. This holding was codified in the 1952 Patent Act, 35 U.S.C. § 102(e).
68. In the 1965 case, *Hazeltine Research Inc. v. Brenner*, the Supreme Court addressed the question of whether conflicting applications could be considered part of the "prior art" under 35 U.S.C. § 103 in determining whether an invention in a co-pending application by another inventor was obvious. The question in the case turned on the fact that the term "prior art" is not defined in the statute; § 102 merely lays out conditions that may defeat an applicant's entitlement to a patent, but without identifying or defining any particular activities that constitute "prior art." The Petitioner cited legislative history of the 1952 Act suggesting that "prior art" was intended to mean "known" information, i.e., information available to the public, and argued that a conflicting application, being subject to confidentiality restrictions imposed on the Patent Office, could not be considered "known" for prior art purposes. The Petitioner further argued that application of the *Milburn* rule (§ 102(e)) was limited to situations where the invention had been identically described in the prior-filed application. The Court rejected both arguments and held that the reasoning in *Milburn* applied with equal force in this situation. The Court further commented that:

To adopt the result contended for by petitioners would create an area where patents are awarded for unpatentable advances in the art. We see no reason to read into § 103 a restricted definition of "prior art" which would lower standards of patentability to such an extent that there might exist two patents where the Congress has plainly directed that there should be only one.

69. The policy noted in *Milburn* was cited in a 1992 U.S. Department of Commerce Advisory Committee on Patent Reform report, which concluded that the United States approach of evaluating conflicting prior art for both novelty and non-obviousness will effectively eliminate issuance of patents which are only obvious variants of each other.

III. STATISTICAL DATA

A. EPO (+ data from AT and FI)

70. The EPO has gathered statistical data for the years 2005-2011 regarding the number of European and PCT applications in which search reports are drawn up containing references to conflicting applications forming relevant prior art under Art. 54(3) EPC, in absolute numbers as well as expressed in the form of percentages.
71. In the table below, the number of intermediate documents ("P") is given, meaning both non-patent literature having a publication date after the priority date but prior to the filing date of the application, (so that they might become relevant should the priority not have been validly claimed); as well as relevant co-pending applications, which have a priority or filing date prior to the filing date of the application. The latter become "conflicting applications" reflected in the column under "E" documents, when they indeed have been published and priority issues have been sorted out, so that their priority or filing date is definitely established as being prior to the date at which the novelty of the invention contained in the application being examined will be determined.
72. In addition, information is provided regarding the distribution of these conflicting applications across three broad technological areas: Chemistry, Electricity/Physics and Mechanics.
73. The percentage of search reports in which at least one conflicting application has been cited has been very stable over the time period considered. The area of Chemistry displays a percentage that is double that of the Electricity/Physics and Mechanical areas.
74. Within the Chemistry area, it can be noted that Biotechnology and Pure and Applied Organic Chemistry are the fields with the highest percentage of search reports citing at least one conflicting application (>6 %), whereas in the Electricity/Physics field, the area of technology with the lowest occurrence of conflicting applications is that of Computers (<1%).

75. The distribution for intermediate documents is the same as for conflicting applications, but there is a steady downward trend in numbers of search reports citing so-called "intermediate" documents.

Year	Technical Area	Number of SR (EP & PCT only)	N of intermediate document (P)	N of conflicting Applications (E)	% intermediate document (P)	% Conflicting Application (E)
2005	Overall	134312	16544	4623	12%	3%
2005	Chemistry	38447	8222	2352	21%	6%
2005	Electricity-Physics	49092	4335	1164	9%	2%
2005	Mechanics	46773	3987	1107	9%	2%
2006	Overall	135489	16293	4800	12%	4%
2006	Chemistry	38762	8266	2416	21%	6%
2006	Electricity-Physics	50059	4129	1255	8%	3%
2006	Mechanics	46668	3898	1129	8%	2%
2007	Overall	137933	16352	5238	12%	4%
2007	Chemistry	39914	8238	2629	21%	7%
2007	Electricity-Physics	49984	4066	1281	8%	3%
2007	Mechanics	48035	4048	1328	8%	3%
2008	Overall	148886	16749	5587	11%	4%
2008	Chemistry	43595	8380	2706	19%	6%
2008	Electricity-Physics	53114	4136	1405	8%	3%
2008	Mechanics	52177	4233	1476	8%	3%
2009	Overall	159315	17410	5846	11%	4%
2009	Chemistry	47698	8903	2961	19%	6%
2009	Electricity-Physics	56857	4209	1384	7%	2%
2009	Mechanics	54760	4298	1501	8%	3%
2010	Overall	154055	15538	5047	10%	3%
2010	Chemistry	46383	7901	2531	17%	5%
2010	Electricity-Physics	55138	3921	1281	7%	2%
2010	Mechanics	52534	3716	1235	7%	2%
2011	Overall	160497	14992	4930	9%	3%
2011	Chemistry	47727	7711	2487	16%	5%
2011	Electricity-Physics	56836	3808	1247	7%	2%
2011	Mechanics	55934	3473	1196	6%	2%

76. The EPO invited those Contracting States which were not participating in the Tegernsee effort to provide statistical or other input on their experience with conflicting applications. Several replied that their automated systems did not allow for easy retrieval of statistical information on this point.
77. This was the case in Austria, but an informal survey was carried out amongst examiners, and it was estimated that conflicting applications were relevant in fewer than 2% of cases, with the exception of the Chemical/Pharmaceutical areas, where the rate of relevance appeared to be significantly higher, a situation which was roughly consistent with the findings at the EPO.

78. The Finnish Patent Office provided us with the following statistics, which show the same order of magnitude of relevant conflicting applications as that found at the EPO, with slight variations, in the table below.

Category of initial search report	year of search report								2005-2011							
	2005 % (**)	2006 % (***)	2007 % (****)	2008 %	2009 %	2010 %	2011 %									
National search report (FI)		1446	1683	1832	1614	1734	1547		9856							
with intermediate documents (P, X or P,Y)	0,0 %	10	0,7 %	7	0,4 %	3	0,2 %	0	0,0 %	1	0,1 %	0	0,0 %	21	0,2 %	
with conflicting documents (E)	0,0 %	22	1,5 %	50	3,0 %	40	2,2 %	25	1,5 %	24	1,4 %	23	1,5 %	184	1,9 %	
Chemistry (IPC section C)		151		129		151		154		176		168		929		
with intermediate documents (P, X or P,Y)	0,0 %	0	0,0 %	0	0,0 %	0	0,0 %	0	0,0 %	0	0,0 %	0	0,0 %	0	0,0 %	
with conflicting documents (E)	0,0 %	1	0,7 %	8	6,2 %	4	2,6 %	4	2,6 %	4	2,3 %	8	4,8 %	29	3,1 %	
Electricity-Physics (IPC sections G and H)		369		511		513		401		458		376		2628		
with intermediate documents (P, X or P,Y)	0,0 %	5	1,4 %	5	1,0 %	2	0,4 %	0	0,0 %	0	0,0 %	0	0,0 %	12	0,5 %	
with conflicting documents (E)	0,0 %	10	2,7 %	21	4,1 %	19	3,7 %	6	1,5 %	5	1,1 %	2	0,5 %	63	2,4 %	
Mechanics (IPC sections A, B, D, E, and F)		926		1042		1168		1059		1100		1003		6298		
with intermediate documents (P, X or P,Y)	0,0 %	5	0,5 %	2	0,2 %	1	0,1 %	0	0,0 %	1	0,1 %	0	0,0 %	9	0,1 %	
with conflicting documents (E)	0,0 %	11	1,2 %	21	2,0 %	17	1,5 %	15	1,4 %	15	1,4 %	13	1,3 %	92	1,5 %	
ISA/210 (PCT/FI)	243	617	687	638	819	774	964		4742							
with intermediate documents (P, X or P,Y)	25	10,3 %	63	10,2 %	59	8,6 %	49	7,7 %	56	6,8 %	51	6,6 %	60	6,2 %	363	7,7 %
with conflicting documents (E)	4	1,6 %	18	2,9 %	19	2,8 %	13	2,0 %	17	2,1 %	17	2,2 %	23	2,4 %	111	2,3 %
Chemistry (IPC section C)	18		44		74		69		63		68		75		411	
with intermediate documents (P, X or P,Y)	4	22,2 %	15	34,1 %	17	23,0 %	12	17,4 %	7	11,1 %	6	8,8 %	9	12,0 %	70	17,0 %
with conflicting documents (E)	0	0,0 %	1	2,3 %	4	5,4 %	4	5,8 %	1	1,6 %	1	1,5 %	3	4,0 %	14	3,4 %
Electricity-Physics (IPC sections G and H)	128		332		305		274		420		427		534		2420	
with intermediate documents (P, X or P,Y)	13	10,2 %	34	10,2 %	23	7,5 %	22	8,0 %	39	9,3 %	38	8,9 %	42	7,9 %	211	8,7 %
with conflicting documents (E)	4	3,1 %	13	3,9 %	8	2,6 %	8	2,9 %	8	1,9 %	10	2,3 %	18	3,4 %	69	2,9 %
Mechanics (IPC sections A, B, D, E, and F)	95		241		308		295		336		279		355		1909	
with intermediate documents (P, X or P,Y)	8	8,4 %	14	5,8 %	19	6,2 %	15	5,1 %	10	3,0 %	7	2,5 %	9	2,5 %	82	4,3 %
with conflicting documents (E)	0	0,0 %	4	1,7 %	7	2,3 %	1	0,3 %	8	2,4 %	6	2,2 %	2	0,6 %	28	1,5 %

Classifications are not exclusive (a single application may belong to several IPC sections).

* Incomplete ISA/210 data, two reports without IPC classification

** No National search report data available

*** Incomplete data

**** Incomplete National data, one report without IPC classification

B. DENMARK

79. Denmark is not in position to extract such data from its systems at this time. However, the percentages outlined in by the EPO above seem to reflect the experience by the Danish Patent and Trademark Office.

C. FRANCE

80. France is not in a position to extract such data from its systems at this time.

D. GERMANY

81. The German Patent and Trademark Office DPMA has carefully examined the statistical data that could be retrieved in the short period of time available. Regarding the German Patent Procedure with its possibility for the applicant to ask for a search report without examination at an early stage and also having in mind that a great number of applications at the DPMA are first filings, i.e. not claiming a national or foreign priority, we find the figures elaborated by the EPO generally confirmed. Having evaluated a subset of 777.635 cited documents we found 1.223 P-documents and 5.253 E-documents among them.

82. Since an assignment to individual search reports is technically not feasible in the time given, it was assumed on the basis of founded practical experience that an average DPMA search report cites five prior art documents with usually only one P- or E-document per search report. This leads to an estimated occurrence of about 0.8% P-documents and 3.4% E-documents in DPMA search reports.
83. This percentage for E-documents is in good agreement with the EPO's numbers. In order to produce comparable data, it can be noted however that the "real" number of existing E-documents is presumably about one third higher, since German search reports are mostly drawn up within 12 months after the filing date of an application and do not take into account later published E-documents.
84. As for the significantly lower ratio of P-documents it has to be kept in mind that the subset of cited documents examined relates to applications with a particularly high percentage of first filings, which do not claim a priority from an earlier application (estimated more than 90%), which in turn is a likely explanation for the low number of cited P-documents.

E. UNITED KINGDOM

85. It is not possible for the UK IPO to provide any data in relation to the numbers of search reports which list documents in category P and E or the numbers of citations which are cited in category P and E. This is due to the fact that none of the UK IPO systems store data on the category assigned to each citation.
86. Nonetheless, it is considered that the statistical data provided by the EPO provides useful evidence in relation to the proportions of documents which fall into these categories.

F. JAPAN

87. The JPO has obtained statistical data for the applications to which notifications of reasons for refusal had been sent based on the Article 29-2 or Article 39, by analyzing statistical data on patent applications for which the First Action (FA) had conducted at the JPO during the period from 2005 to 2011. As shown in the table below, the JPO also gathered such statistical data for each technological area (mechanics, chemistry, electricity-communications, and others). These statistical data consists of the number of applications for which have been conducted FA, the percentage of application for which notifications of reason for refusal have been sent based on the Article 29-2 and Article 39 respectively.
88. The percentage of notifications of the reason for refusal based on the Article 29-2 has been on a slightly decreasing during the period of gathering the statistical data. Also, from the perspective of technological areas, it can be seen that the percentage of such notifications in the area of chemistry was doubled that of other technical areas.
89. The similar trend as the Article 29-2 can be seen with regard to the Article 39, but the percentage is much smaller. It is because that the examination guideline of the JPO

stipulates that in case applicants and inventors are different between the later application in question and the prior application are different, provisions of Article 29-2, not provisions of Article 39, shall be applied.

Year	Technical Area	Number of FA	%Article 29bis	%Article 39
2005	Overall	240604	5.2%	1.0%
	Chemistry	55772	8.0%	2.7%
	Electricity-communications	49653	4.6%	0.6%
	Mechanics	74527	3.3%	0.3%
	Others	60652	5.4%	0.7%
2006	Overall	293245	5.0%	1.1%
	Chemistry	66749	7.9%	2.8%
	Electricity-communications	63168	4.0%	0.6%
	Mechanics	91985	3.3%	0.4%
	Others	71343	5.2%	0.8%
2007	Overall	307554	4.6%	1.1%
	Chemistry	71622	7.5%	2.7%
	Electricity-communications	63652	3.8%	0.7%
	Mechanics	97878	3.0%	0.3%
	Others	74402	4.8%	0.8%
2008	Overall	343510	4.3%	1.0%
	Chemistry	84828	6.7%	2.6%
	Electricity-communications	70399	3.4%	0.6%
	Mechanics	105578	2.7%	0.3%
	Others	82705	4.7%	0.8%
2009	Overall	360583	4.1%	0.9%
	Chemistry	89839	6.5%	2.3%
	Electricity-communications	73476	3.1%	0.6%
	Mechanics	107550	2.5%	0.3%
	Others	89718	4.2%	0.6%
2010	Overall	377187	3.7%	1.0%
	Chemistry	96630	5.7%	2.2%
	Electricity-communications	75222	2.7%	0.7%
	Mechanics	107794	2.1%	0.2%
	Others	97541	4.1%	1.0%
2011	Overall	363878	3.2%	0.9%
	Chemistry	90064	5.1%	2.2%
	Electricity-communications	73135	2.4%	0.6%
	Mechanics	105098	1.9%	0.3%
	Others	95581	3.5%	0.8%

G. US

90. In 2005, as part of ongoing discussions among the Trilateral Offices and in the newly-formed “Group B+” forum regarding substantive patent law harmonization, the USPTO undertook an internal study to gauge the frequency with which conflicting applications under 35 U.S.C. § 102(e) (the U.S. law equivalent of “secret prior art”) were cited in rejections based on 35 U.S.C. § 103 (the U.S. law equivalent of “inventive step”). The intent of the study was to provide a factual basis for further discussion and analysis as to the differences in practice among the various jurisdictions regarding the prior art effect of conflicting applications.

(a) Methodology

91. A representative “art unit” (the smallest working unit within the USPTO patent examining corps; it contains about 10-20 examiners under the direction of a Supervisory Patent Examiner) was selected from each of the three major technological disciplines (Mechanical, Electrical and Chemical) to provide the data for the study. The study was limited to data gathered during a 4-week period in 2004 from each participating art unit. All applications examined in the participating art units during this time frame were reviewed, and those that contained an office action (non-final rejection, final rejection, or an “Examiner’s Answer” to an applicant’s Appeal Brief) rejecting one or more claims under Section 103 based in whole or in part on a conflicting application under Section 102(e) were counted and separated for further analysis.
92. The further analysis involved a review of the rejection made to determine whether an equivalent document could have been cited under another provision of Section 102. This could happen, for instance, where the examiner cites a document under Section 102(e), but a family member of that application published in another country, and the date of publication qualified it as prior art under, e.g., Section 102(a) (earlier invention by another). Where further review identified such situations, these rejections were subtracted to form a “corrected percentage.”
93. In addition to this correction procedure, an effort was made to account for the impact of 18-month publication on the reported results. Because the 18-month publication regime in the United States resulted from a change of law in 1999, some of the data included in the study reflected the pre-1999 situation where applications were not published, and therefore did not qualify as a conflicting application under Section 102(e), until grant of the patent. This meant that a conflicting application cited in a rejection in the study may have qualified under another provision of Section 102 if it had actually published at 18 months, i.e., before the filing date of the application under examination, instead of at grant. The study projected the effect of 18-month publication on the rejections that formed the corrected percentage and reported these results as a projected impact percentage.
94. It should be noted that despite the foregoing explanation, the study was not completed as intended. Notably, the analysis of cases in the Mechanical area was not completed. In addition, while the results reported below are taken directly from the final report of the study and are thus accurate, some data has since been lost, in particular, the raw number of applications forming the denominator of the reported results. Therefore, the exact parameters of the study cannot be fully reported.

(b) Results

Technology	Percent of Applications Containing a Section 103 Rejection Based in Whole or in Part on a Section 102(e) Citation	Corrected Percentage	Projected Impact of 18-Month Publication on the Corrected Percentage
Electrical	About 50%	About 30%	About 20%
Chemical	About 10%	About 5%	No Change

IV. PREVIOUS STUDIES AND ATTEMPTS TO COMPROMISE

A. WIPO STUDY ON AN "ENLARGED CONCEPT OF NOVELTY" (2004)

95. In view of the difficulty of the issue of the treatment of conflicting applications and of the fact that there existed at least three major approaches in dealing with this matter, a proposal was made by US and European users to create a so-called "Enlarged Novelty Approach", intended as a compromise between the relevance of conflicting applications for novelty purposes only and for both novelty and inventive step. (See Article by Helfgott, Bardehle and Hornickel, "A Harmonized Approach to Applying Secret Prior Art" (2004) WIPR 1, appended to the WIPO draft "'Enlarged' Concept of Novelty: Initial Study Concerning Novelty and the Prior Art Effect of Certain Applications Under Draft Article 8(2) of the SPLT", issued on 2.12.2004, available in the SCP Forum, on the WIPO website.)
96. In essence, the proposal was to apply the whole contents approach for "enlarged novelty" purposes, which would cover all that a person skilled in the art understands from a document, and be broader than the novelty approach adopted by the EPO and most of the EPC Contracting States, similar to the Japanese approach and closer to the American concept of "inherency" found in a single prior art reference.
97. The aim was to give full benefit of the invention to the applicant who is the first to file. It should have extended to equivalents and well-known substitutes, but the resulting scope of the patent should not have precluded the obtaining of patents by third parties having combined the same invention with other independent ideas. Thus, combining the secret prior art of the earlier application with other references against the later application would have been prohibited. The concept included both anti-self-collision and terminal disclaimer features.

98. In Europe, at least, the proposal met with little approval, mainly because at the time, users felt there would be too much legal uncertainty and little predictability in applying this new approach. In any event, the proposal was not pursued further at that time.

B. "NO MOSAIC" SOLUTION

99. During the course of the SPLT negotiations, the idea was put forward (*inter alia* by the CA delegation) to allow conflicting applications to form part of the secret prior art for the purposes of evaluating inventive step, but without including them in a "mosaic" of documents. Lack of inventive step derived from a conflicting application would have to be on the basis of the disclosure contained in that single document. One issue which was unclear was whether the impact of such a rule would be such as to warrant the inclusion of an anti-self-collision clause.

C. ANTI-SELF-COLLISION FOR INVENTIVE STEP ONLY

100. This section is included for the sake of historical completeness and should not be interpreted as a current proposal. In 2006, bearing in mind its users' clearly expressed dislike for the principle of anti-self-collision, which in their view, led to patent thickets, albeit concentrated in one hand, the EPO cautiously put forward a preliminary idea for a possible compromise solution, which was discussed within the framework of the Standing Advisory Committee before the EPO (SACEPO). The concept was the following:
101. (1) Where two conflicting applications were filed by different applicants, the earlier application would be taken into account for the purpose of determining both novelty and inventive step, which was the US approach. It would prohibit the patenting of an obvious variant by a third party, ensuring greater distance between patents granted to different right holders. It would also ensure that an earlier applicant would not be "restricted" by a later application filed by a third party for a non-inventive improvement over his invention.
102. (2) Where conflicting applications were filed by the same applicant, the earlier application would be taken into account in order to determine novelty alone. Thus, where the applicant was the same, the current European system would continue to apply. Thus, protection for incremental inventions which were new but not inventive over a prior applications by the same applicant would remain possible, and an anti-self-collision provision would not be necessary, which reduced the granting of multiple patents on the same subject-matter to a single right holder.
103. Since the criterion of "same applicant" was already defined for the purpose of claiming priority, it could be applied *mutatis mutandis* to determining the treatment of conflicting applications.
104. At the time, it was argued that the advantage it would have over "Enlarged Novelty" is that it would not introduce any new legal concepts, thereby arguably reducing the impact on legal certainty. It was also surmised that this approach might reduce the incidence of "patent thickets" and "trivial patents", given that it would increase the

distance between patents held by different parties compared to the European approach today, whilst simultaneously decreasing the number of patents subject to a terminal disclaimer held by a single owner.

105. At the time, European users also rejected this idea, on grounds of lack of legal certainty due to a new concept, as well as differences in the treatment of applicants.

V. RECENT USER FEEDBACK

A. EPO / European users

106. In the past, when consulted at the time of the work on the SPLT within the WIPO SCP, European users were against modifying the EPC regime governing conflicting applications. In particular, they were adamantly against any rule importing anti-self collision.
107. One of the reasons European users preferred the approach under the EPC was that all files were treated the same: co-pending applications constituted prior art for all subsequent applications for the purpose of testing novelty, even those emanating from the first-filer. They pointed out that in the US system, the threshold for patentability for subsequent incremental innovations was higher than in Europe for third-party second filers, but quasi non-existent for the first applicant to file, due to the availability of the mechanism of anti-self-collision, which allowed the first past the post the possibility of obtaining a patent on patentably indistinct claims.
108. Also, there was the perception that in a first-to-file system, applying the whole contents approach, having a first-filer-takes-all approach gave excessive advantages to the first filer, and was overly harsh towards "second" filers who had filed at a time where the subject-matter of the invention had not been disclosed.
109. In May 2011, in view of the ongoing developments regarding US Patent Reform, the EPO called a User Consultation on the Bills which were to become the AIA and their potential impact on the harmonization process. Many of these positions were echoed there, with European users unanimously rejecting the US approach of co-pending applications forming prior art both for novelty and inventive step, coupled with anti-self-collision. There appeared to be no flexibilities, and some users emphasised that this issue could be left unharmonized.
110. There seems to have been a little movement since then. At a Patent Law Committee held in May 2012, European delegations reported consulting with their users on a national basis, and it was indicated that some users had expressed a willingness to explore possible ways to harmonize rules governing conflicting applications. This should be done, according to some users, *inter alia* in order to reduce patent thickets, which were perceived to exist in all systems, including the US, where several overlapping patents could be granted to the same owner.
111. Finally, at the end of June 2012, another European user consultation took place which entailed also detailed written submissions. Generally, although some users stated in substance that there would be merit in keeping the conflicting application

issue in the harmonization basket, many were of the opinion that there was no urgent need to harmonize this point.

112. One participant expressed the view that the simplest and clearest system would be to apply secret prior art for both novelty and inventive step, but *erga omnes*, ie without anti-self-collision. However, since no one was willing to accept this system, this user felt that the US and Japanese systems - which also had patent thickets - presented the advantage that overlapping patent rights were concentrated in the same hands, making licensing somewhat easier.
113. However, the vast majority of users viewed the EPC approach to conflicting applications as optimal. It was characterised as: "fair, clear, simple, easy to operate, predictable and reliable".
114. A number of reasons were given for such preference. The EPC provides a narrow provision for the narrow aim of preventing patents issuing for identical matter in different applications. As in all systems, the approach to secret prior art was a compromise, but the EPC's tight fit was exactly what was required.
115. It was argued that it was unfair to consider secret prior art in relation to inventive step for co-pending applications, since the invention was not known at the critical date. It was a stretch to extend the fiction to the assessment of inventive step since the person skilled in the art did not have that information available to him at the filing date of the subsequent application.
116. A majority of users rejected the system of anti-self collision, which it viewed as "discriminatory" and "unfair" since it unduly advantaged the first filer. "The patent system is there to encourage innovation, rather than reward the incumbent". It was also criticised as injecting "extreme complexity" into the system (particularly if there was "mis-joinder or non-joinder of inventors at a late stage of the examining process").
117. With regard to PCT applications, and the issue of whether they should enter the state of the art prior to entry into the regional phase - which had been raised by a user in the February 2012 consultation of European users - European users were evenly divided. Half supported having PCT applications enter the state of the art as of the date of publication of the application at 18 months, rather than on the date of entry into the regional phase, arguing that not doing so discriminated unduly against PCT applications. The other half opposed modifying the rule in this manner. Given the high volume of PCT applications which never enter into the regional phase, this was considered dangerous for European industry, which would be precluded from obtaining patents in instances where there would be no double patenting.

B. UNITED KINGDOM

118. At a stakeholder consultation meeting on 11 June 2012, UK users were asked about their experiences in relation to conflicting applications. Those users present at the meeting thought that the EPO's approach to dealing with conflicting applications was very simple and clear, and stressed the importance of the UK not moving back to a "prior claiming" approach.

119. In addition, users pointed out that anti-self-collision provisions give a huge advantage to the first person. Those present felt that this is inherently unfair as the relevance of other applications depends on who filed them. It was felt that the patent system should be encouraging disruptive technologies rather than giving an advantage to the first mover.
120. Users also pointed out that figures of numbers of patent applications which have citations listed in categories 'P' or 'E' on the search report could provide useful evidence of how many conflicting applications there are. However, it was pointed out that examiners quite correctly cite broadly at the search stage and so a proportion of the documents listed on search reports may turn out not to amount to a final citation.

C. JAPAN

121. The JPO conducted hearings with Japanese user associations.
122. According to these results, first of all, in answer to whether either the principle of anti-self collision or self collision should be adopted, many users supported the principle of anti-self collision. At the same time, according to results of the questionnaire, which was independently conducted by one of the user associations, it was found that approximately 80% of users preferred the principle of anti-self collision.
123. One reason for the support of the principle of anti-self collision was that the principle of anti-self collision would be preferable to provide protection for their own improved inventions. Also, there was an opinion that, taking into account the fact that there were some companies in which each business unit of the company was in charge of filing of patent application respectively, there was a possibility that a later filed patent application made by one unit in one company would be rejected based on a prior filed patent application made by another unit in the same company if the principle of self collision had been adopted. Moreover, there was another opinion that, from the perspective of companies filing a lot of applications, it might be very difficult for them to file patent applications paying attention carefully to all their prior filed applications in every details in order to avoid situations of conflicting applications, and that they would prefer the principle of anti-self collision.
124. Furthermore, in terms of effect of prior filed applications as prior arts, the JPO received feedback stating that such prior art effect should be admitted within the scope of novelty or substantial identity.
125. As for giving prior art effect to prior filed application when considering inventive step, there were some negative opinions. One of such opinions was that standards for the inventive step have not been unified in each country of the world, and another one was that it might be very severe for later applicants to have their applications evaluated not only for novelty but also for inventive step based on prior filed applications which they could never find no matter how they had tried to do so.

D. UNITED STATES

126. The USPTO has not had occasion to revisit the specific issue of prior art effect of conflicting applications with stakeholders since 2006-2007. During those consultations, stakeholders generally expressed the view that the U.S. approach—novelty plus non-obviousness/inventive step—was not only preferred, but should be the international norm.
127. There does not appear to be any commentary from stakeholders regarding this issue in the legislative materials relevant to the AIA, suggesting that existing U.S. practice was not the object or source of any particular concern.

VI. DISCUSSION OF RESULTS AND CONCLUSIONS

A. COMMENTS FROM THE EPO

1. State of harmonization

128. As pointed out by the USPTO, the repeal of the Hilmer doctrine has had an important harmonizing effect bringing the three blocs closer together in regard to the effect of the priority right on co-pending applications. The effect of the priority right in terms of the definition of secret prior art is now harmonized. In all three systems, where a prior application claims a priority right from a first application filed in any country which is a member of the Paris Convention or the WTO/TRIPs Agreement, that priority right will ensure (1) that the novelty of the invention contained in the subsequent application will be tested at the priority date; and (2) that the application will form a conflicting application which will be included in the state of the secret prior art applicable to any subsequent application filed after the priority date. This has been welcomed by European users.
129. The definition of conflicting applications, as being applications which are filed before the critical (priority or filing) date of a subsequent application, which have been published after the critical date, is also harmonized between the three jurisdictions.
130. In terms of methodology: the whole contents approach (as opposed to the prior claiming approach) to the inclusion of subject-matter from prior applications into the secret prior art, which is applied by in three big jurisdictions, is undoubtedly the gold standard in this regard and is harmonized.
131. However, it must be concluded that there is no harmonization as concerns the effect of the secret prior art, and how these co-pending applications are treated as a result of the rules governing conflicting applications.

2. Discussion of results

132. Where widely differing practices exist - all of which evidently work in practice - where harmonization is wished, it is necessary at the outset to define the policy objectives which should be pursued. If the purpose of the conflicting applications rule is merely to avoid double patenting in the narrow sense, *ie* granting two patents for the

identical invention, then a narrow definition for the relevant provisions should be pursued.

133. It is suggested that the ambit of these provisions extends beyond this mere policy goal, and that they also play a fundamental role in the protection of incremental improvements to the invention. In a first-to-file system such as the EPC, where strict rules exist against the adding of subject-matter, either to an earlier filed application, or to a divisional application, the rules must be conceived so as to allow meaningful incremental improvements to be appropriated. Applicants filing early, thereby giving the public accelerated access to new technology, should not be penalized by rules making it impossible for them to obtain protection on improvements which are only discovered after the filing has been made and/or the priority period has elapsed.
134. However, with the massive growth in IP rights which has occurred in the past few decades, new policy objectives may be identified. Where large clusters of patent rights are granted on "technologically close" subject-matter, "patent thickets" may be created making entry into the market for new players difficult, and making it also difficult for the existing playing field to continue to function in a manner which is propitious for further technological development. Also, a first filer may see his range of action in terms of the further development of his invention limited by rights granted to a subsequent applicant.
135. One difficulty with the present study is that there are no recent numbers from the USPTO which could be directly compared with the statistics which have been presented by the EPO and JPO. For this reason, any conclusions drawn on the basis of the figures contained in this study regarding the relative importance of conflicting applications in each jurisdiction should be approached with caution. However, even if it could be assumed that the numbers cited here are indicative, we cannot completely subscribe to the conclusions of the USPTO on these points.

(a) Importance of harmonization in regard to work sharing

136. We agree with the USPTO below when it argues that an increase in patent family members in the IP5 patent offices will in turn increase the work-sharing potential of a harmonized rule on conflicting applications by increasing the pool of similar/identical co-pending applications in each office.

(b) "Crowding" or "Thickets"

137. However, we must distinguish this argument from that made below by the USPTO, which appears to imply that applying the US approach to the effect of conflicting applications would necessarily stem the increased crowding which would result.
138. First, "patent thickets", should they exist, cannot be solely ascribed to the rules governing conflicting applications. They are a product of various facets of the patent system, including quality levels, rules governing unity of invention, the breadth of scope of the claims which are allowed, as well as the speed of innovation in a given field and many other factors, including costs and applicant strategies. It should be recalled that rules on conflicting applications only apply as a general matter for a very short time span of 18 months maximum, where there is no relevant public prior art

prior to the critical date of the second application, as an exception to the definition of the state of the art as encompassing subject-matter which has been made available to the public.

139. Likewise, in our view, even if there is a higher rate of conflicting applications at the USPTO compared with the JPO and EPO, we are not sure that the relevance of conflicting applications to the examination of inventive step solely explains the difference in numbers. Other factors may also be at work here, such as, for instance, differing practices with regard to the concept of unity of invention.
140. Moreover, given the existence of the principle of anti-self-collision, mere numbers of occurrences do not necessarily lead to a conclusion that the office with the higher numbers of files for which conflicting applications have been identified, grants fewer patents on that basis. Indeed, it would be interesting to be able to distinguish between conflicting applications between two parties, and conflicting applications which result in the application of the principle of anti-self-collision, in order to be able to assess how many conflicting applications in the US have resulted not in lack of patentability in the case of the second application, but rather in issuance of an additional patent right to the same right holder. In how many of these cases would the second application have been refused at the EPO on the grounds that the applicant collided with his own earlier application on novelty grounds ? At the EPO, an identified conflicting application which indeed collides with the previous application according to EPC practice will inevitably result in either refusal of the application or a limitation of scope. Thus, it is suggested that absent more detailed information on the practice and numbers at the USPTO, merely looking at rates of identified conflicting applications does not inform us as to the impact of the respective practices on "crowding" or thickets, which are widely believed to exist in all jurisdictions, regardless of their substantive approach to the effect of conflicting applications.
141. As for the percentages of rejections involving conflicting applications quoted above by the USPTO, absent *ceteris paribus* numbers from other offices, it is difficult to comment upon them. Moreover, these numbers may also reflect elements of examination practice other than the US approach to the effect of conflicting applications.
142. Critics of the European system also point out that the EPC allows that patent rights be granted to "patentably indistinct" subject-matter, *ie* second-filed applications will be allowed to proceed to grant even though the invention claimed therein is not inventive vis-à-vis the previous filing. The EPC strict approach to the novelty criterion applied in this context, (*eg* not extending to equivalents), is seen as compounding the problem, allowing the co-existence of rights on technology which is quite close. Since these two resulting patents may be in different hands, it is argued that this may cause difficulties for third parties trying to obtain licenses to use the technology covered.
143. Whilst the argument that the EPC rules sometimes result in patent rights on close technology held by different parties may have some merit, it is often responded in Europe that a system involving anti-self-collision results in serial application behaviour leading to a proliferation of rights concentrated in a single hand - which also falls within the purview of the phenomenon referred to as "crowding" or "patent thickets". When warning letters are issued referring to dozens of patents, even if

concentrated in one hand, this too may have a stifling effect on follow-on innovation, block market-entry for newcomers and make licensing difficult and expensive.

(c) Other systemic considerations

144. On the other hand, the EPC provides a rule which applies equally to all applicants, without regard to their identity, and which provides for a measure of leniency where the technology in question is still secret. The novelty requirement is an objective requirement, it rests on a factual inquiry: was the invention new or not. Where a prior application has been made, the knowledge that the invention was not new at the filing date within the jurisdiction is available to the granting authority, and the rules on conflicting applications will apply for the policy reasons exposed above.
145. The same cannot be said about the requirement of inventive step, which ensures that the distance between patented inventions is great enough that patents will be granted on "inventions", and not for modest adjustments or obvious variations. There is an element of relativity in this requirement, since an assessment must be made by the examiner whether the claimed invention shows actual "inventive step" over the prior art - which by definition is what has been made available to the public. Applying the requirement of inventive step here requires the fiction that the person skilled in the art at the critical date of the second application had access to the secret previous invention which has not yet been disclosed and would have found the subsequent invention obvious as a result. The state of the art here forms the base line from which the invention must leap to meet the patentability requirement. Adding the subject-matter of co-pending applications which have remained secret to this base line is perceived in Europe to be unfair.
146. In policy terms, it can be argued that where two *bone fide* inventors produce the same invention within the same time frame, the fact that the resulting rights may be technologically close and thus their scope may be mutually restricted as a result, this may actually be the fairest outcome, particularly in a first-to-file system. Perhaps the inventions were "ripe" for discovery, and thus the inventive step involved may not have been huge. It can also be argued that the EPC rule attenuates the harshness of the chronological rule for entitlement, in that it does not give all the rights to the first-past-the-post, where society would have been given germane technology within a short time span anyway.
147. Finally, proponents of the EPC approach feel that the strict approach for novelty results in a system which is simple and predictable for applicants as well as third parties. Expanding novelty to include other elements subject to assessment or interpretation, such as equivalents, appears intuitively reasonable and attractive. However, in discussions on this issue, European users have rejected the adoption of an expanded notion of novelty, because of the inherent legal uncertainty and higher complexity which would be involved.
148. To conclude, it is observed that what is striking about the systems governing conflicting applications in a harmonization perspective, is that the European, US and Japanese systems are all locked in a singular balance: it is precisely what makes them attractive to their own users which users from other blocs find off-putting, in a remarkable symmetry.

B. COMMENTS FROM THE JPO

1. Whole content approach

149. The whole contents approach has been adopted in Japan, the United State, and Europe. Scopes of claims in prior filed applications are not always determined when conducting examinations for later filed applications. To ensure that examinations on later applications are conducted without problems smoothly, the whole contents approach may be more effective. Also, users in the United Kingdom stressed not moving back to a “prior claiming” approach.

2. Anti-Self Collision

150. Japan has been adopting the principle of anti-self collision to provide convenience for applicants. In general, an applicant does not call for patent protection on inventions which has not been written in a scope of claim. In other words, this can be considered as his/her intention to make such inventions open to third parties for use. However, this is not always true with some cases. There can be a case where an applicant had described some specific art only in a specification of prior file application due to the necessity of explanation of claimed inventions and, at later stage, thinks about obtaining patent on the specific art in the specification by filing another patent application. It is inconvenient for the applicant if he/she cannot file another application and obtain patents on such art which was described in the specification of prior filed application in such case. This is one of the reasons why the principle of anti-self collision has been adopted in Japan.

151. Under the first-to-file system, applicants must file applications as early as possible, so there are limitations for applicants to prepare a scope of claim perfectly at the time of filing their applications. Also, as Japanese users have pointed out, business entities that tend to file a lot of applications will need to make a lot of efforts in carefully checking all of their prior filed applications when filing later application in order to perfectly avoid a collision, and this will be a heavy workload for them.

152. Of course, even under the principle of self-collision, applicants may later obtain patent rights also for matters described only in specifications of their prior applications that they did not intend to do so when filing their prior applications. In order for this, making amendments to prior filed applications or filing divisional applications based on prior filed applications can be an option. When taking the former option, it will be required to obtain patents on plural inventions with a single patent application and to satisfy requirement of unity of invention. When taking the later option, the application must fulfill prescribed requirements for divisional application. Thus, it will be troublesome to obtain patents on matters described only in specifications of their prior applications under the principle of self-collision.

153. Moreover, there may be an opinion that, through allowing applicants to file later applications as to inventions described in specifications of their own prior applications and to obtain patents on such invention, it would become enabled for the applicants to protect their inventions strategically and that this would lead to appropriately

protect the applicants' rights under a first-to-file system, as well as contribute to industrial development.

154. While the advantages as mentioned above can be suggested for adopting the principle of anti-self collision, it is also necessary to consider the balance against the interests of third parties as well as the effects of prior filed applications as prior arts. There is a suggestion that the principle of anti-self collision would lead to an imbalanced situation. That is, applicants of prior filed applications may easily obtain patents for improved inventions of inventions claimed in specifications of the prior filed applications, while third parties may have difficulties in obtaining patents for such improved inventions.

3. Effect of Prior filed Application as Prior Art

155. One of the reasons why the Japan has been adopting the principle of the whole contents approach is that it is not appropriate to grant patent for later application claiming inventions which has been described only in specifications of prior applications from the perspective of the basic principle of the patent system in that protection should be granted to inventions in return for publication of new inventions. More precisely, even if the later file applications claim inventions which had been described in the specifications of prior filed applications, such inventions would also be disclosed through publications of the prior filed application and thus the later applications claiming such inventions would not disclose any new arts in comparison to the prior filed applications through publication of the later applications and would not make contributions to the public.
156. According to this reason mentioned above, it is appropriate not to grant a patent for inventions that are identical to (or substantially the same with) inventions described in specifications of earlier filed applications. However, if in case where claimed inventions in later file applications are not identical to inventions described in specifications of earlier, this case means that the new art would be disclosed through publications of later filed applications and it would seem to be an excessive idea to deny patentability of claimed inventions in late filed application which were not identical to inventions described in specifications of prior filed applications.
157. Also, as previously mentioned in the user feedbacks, it can be said that it might be very severe for later applicants to have their applications evaluated not only for novelty but also for inventive step based on secret prior art (prior filed but not published applications) which they could never find no matter how they had tried to do so at the time of filing.
158. On the other hand, as mentioned above, even if there is a difference between the matter used to define a claimed invention and the matter defining a cited invention, they are found to be identical if the difference is a minor one in the means for solving the problem (addition, removal, conversion, etc. of well-known art and commonly used art, which does not produce any new effect).

C. COMMENTS FROM THE USPTO

1. Issues Arising from Lack of Harmonization

159. As noted by the EPO, the laws of the three major jurisdictions represented in this Group—the United States, Japan and Europe—are aligned in many respects as regards the treatment of conflicting applications. However, the laws remain unaligned in perhaps their most critical aspect—the prior art effect of conflicting applications as against later-filed applications by the same inventive entity or a third party.
160. This lack of alignment can lead to a number of problems in the international patent system. First is the issue of crowding, or “thickets.” A novelty-only approach to conflicting applications may prevent “double patenting” in the strict sense, but the result is still “double patenting” in terms of two or more patents being granted where as a general matter of patent law, there should be only one. This approach therefore tends to increase the number of patents on patentably indistinct inventions held by different parties, which may make it difficult for competitors to find innovation “white spaces,” significantly increase the complexity and cost of obtaining licenses, and increase litigation. This phenomenon may be exacerbated in certain technology areas where other sources of “prior art” besides earlier filed applications are not readily available or not the most relevant. All of this could have a dampening effect on innovation and growth in various technology sectors.
161. Apart from third party concerns, crowding also affects the first-to-file and raises questions about the appropriate balance of interests between first and subsequent applicants. A novelty-only approach may have the effect of treating all subsequent applicants the same, but it also arguably places the first-to-file at a relative disadvantage because late-comers are able to cluster around a pioneering invention with competing claims of patentably indistinct scope. Such competing claims, in addition to creating significant transaction costs for potential licensees, also tend to dilute the value of the pioneering invention.
162. Second, if the focus of patent law harmonization as a general matter is to better align national/regional laws to enable innovators to obtain cross-border patent protection more easily, at lower cost, and with greater predictability and certainty so as to promote global growth and expansion of business and trade, and if it is also a goal to align laws so as to enable patent offices to more effectively engage in work sharing, then it stands to reason that one result of harmonization would be more commonly filed applications producing greater work sharing potential. That being the case, it would seem to frustrate both objectives if the prior art effect of conflicting applications was an area of continued disalignment among jurisdictions.
163. In view of the foregoing, applicants, offices and governments all seem to have a stake in working together to forge a common solution to the treatment of conflicting applications, particularly as regards prior art effect.

2. Implications of the Empirical Studies

164. The data provided by several offices for this Report underscore the above-mentioned issues.¹

(a) Crowding, or “Thickets”

165. The EPO and the DPMA report generally equivalent percentages of citations of conflicting applications. These percentages fluctuate across technical disciplines and over time from 2%-7%. In absolute terms, the EPO reports between 1100 and 3000 conflicting application citations in a given discipline in a given year, while the total number of citations increased steadily from 2005 to 2009, when it peaked at about 5800. The DPMA found about 5200 total citations out of about 155,500 search reports after having evaluated a total of about 775,500 citations.

166. The JPO provided data showing similar percentages as the EPO, fluctuating over time and across disciplines between about 2% and 8%. In absolute terms, the JPO study suggests that the total number of conflicting applications in a given discipline in a given year ranged from about 1800 to about 5800, and, like the EPO, the total number of citations generally increased (though not as steeply as EPO) from 2005 to 2009, when it peaked at 14,783. Moreover, while the JPO notes that the percentage of conflicting application citations expressed as a percentage of office actions (notification of reasons of refusal) queried has been declining over time, it is also true that the number of search reports steadily and significantly increased in the years between 2005 and 2010, with a slight decline in 2011. Although it is not possible to discern directly from the data presented in these reports, the pattern of steady increase and near simultaneous decline in citations reported by EPO and JPO seems to track data these offices and other sources (like WIPO) have reported over the last several years showing the effects of the economic downturn on patent filings and related matters, thus suggesting the economy may be playing a role in the changing numbers, numbers that may reverse course as the economy rebounds.

167. It is important to bear in mind that each of these offices applies a novelty-only standard to conflicting applications. The question that is immediately raised is how many additional conflicting applications—or, put a different way, how many additional patents containing claims of overlapping scope held by different parties—would be implicated if these offices applied a novelty plus inventive step standard?

168. The study undertaken by the USPTO, while limited in scope and duration relative to the studies reported by the EPO and JPO, provides some clues. The USPTO reported that conflicting applications were cited in obviousness rejections in about 5% of cases in the chemical discipline and in about 20% of cases in the electrical discipline. While based on somewhat incomplete and limited data, these numbers nonetheless provide some validation of the USPTO’s working thesis going into the study, which was that the impact of U.S. practice would be significant in fast-moving technology areas—areas most susceptible to crowding or “thickets”—where the most relevant source of prior art tends to be earlier-filed patent applications.

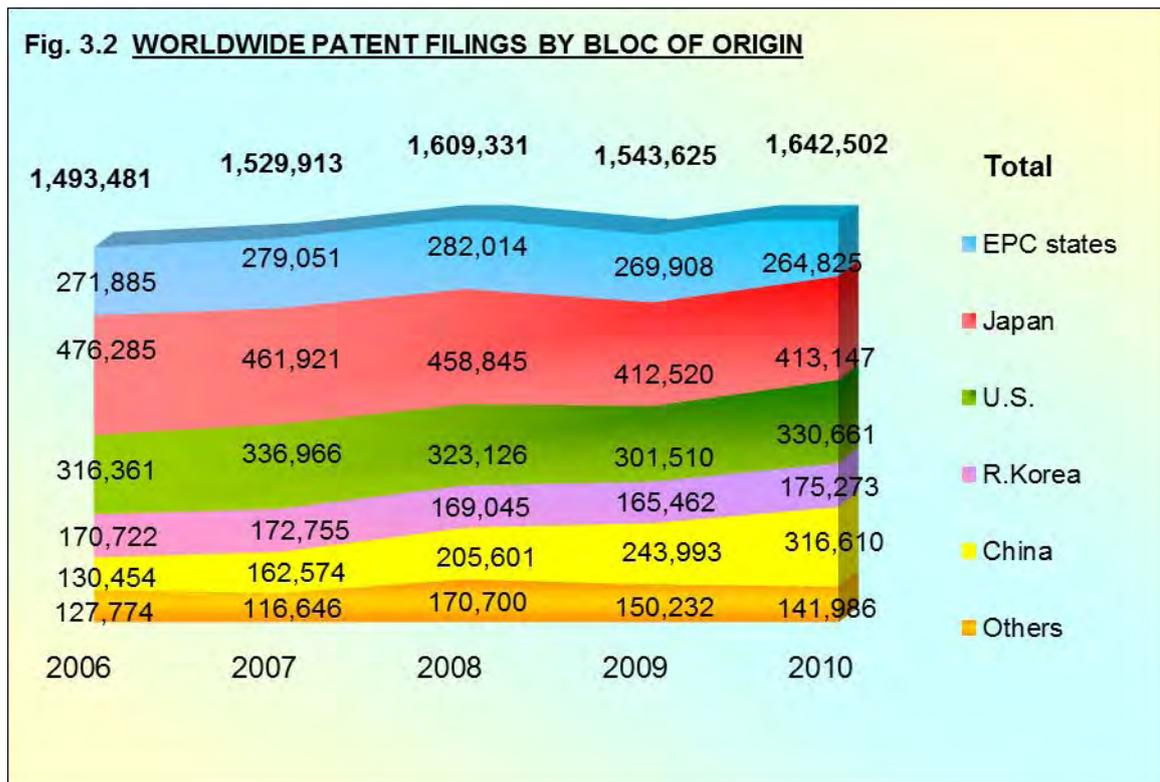
¹ The late inclusion of Finnish data and Austrian estimations prevents a fuller discussion of those data in this section, though it is noted that the cited percentages are somewhat comparable to data cited by the EPO and DPMA.

169. What the numbers also suggest is that the frequency of citation of conflicting applications in Europe and Japan could perhaps increase another 5%-20% in the chemical and electrical disciplines, respectively, if the U.S. approach were applied. Stated another way, the total number of patents with overlapping claim scope issued to different parties could be reduced on the order of another several hundred to several thousand per discipline per year. Moreover, consistent with the USPTO thesis, the particular effects of this practice change could be magnified in technologies where such patent applications are concentrated.

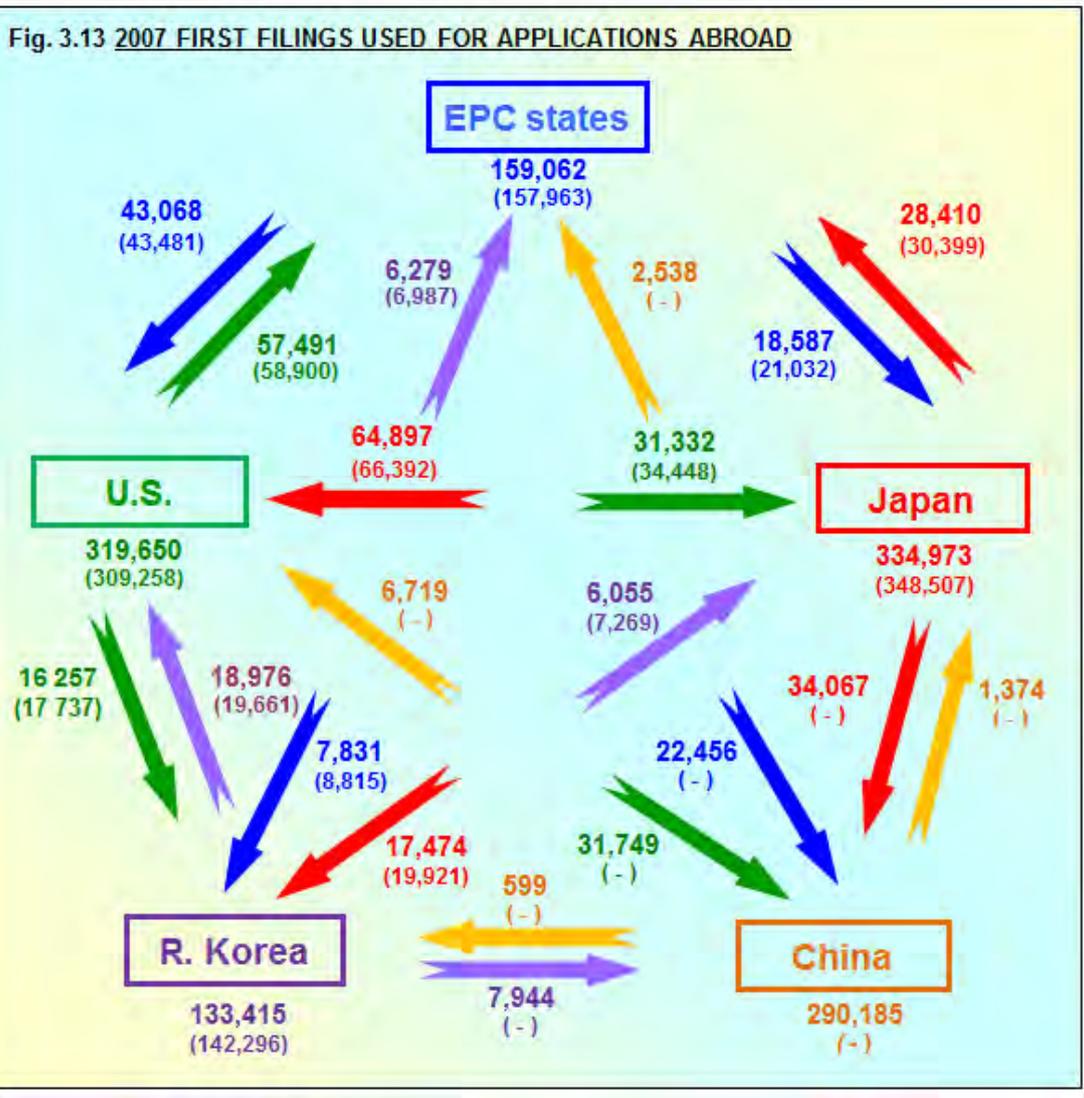
(b) Impact on Innovators and on Work Sharing

170. Furthermore, if the economic recovery leads to a return of annual increases in filings observed before the crisis, and also assuming continued global expansion of business and trade and perhaps an agreement on substantive patent law harmonization, one would expect the number of potentially conflicting applications to increase, perhaps proportionately with above-reported percentages, though those percentages may also increase as a result. In short, the magnitude of crowding that currently exists could increase substantially in the future with increased filings and more patent family members. This could have significant consequences for innovators and for offices in terms of work sharing.

171. Data from a number of sources show that the number of global filings is increasing, and that the number of patent families, particularly family members in two or more of the major jurisdictions, is considerable. The draft 2011 IP5 Statistics Report (pg. 39) notes that global filings rebounded from the economic recession and grew approximately 6% in 2010, from about 1.54 million in 2009 to about 1.64 million. This growth rate is consistent with pre-recession filing increases year-on-year. The chart below, taken from the above-mentioned report, shows the breakdown of filings by bloc:



172. The report further notes (pg. 40) that the IP5 offices represent, on average, about 90% of global filings from 2006-2010.
173. The WIPO 2011 Report on Intellectual Property Indicators (Fig. A.1.1.1) suggests a similar growth rate in 2010 (about 7%) and total number of applications filed in the IP5 offices (about 1.55 million; Fig. A.2.3.1)
174. In terms of patent family members, the IP5 report is limited to data from 2006-2007, but it shows (patent family member tables, pg. 55) that in each year, there were about 1.3 million first (priority) filings in one of the IP5 offices that resulted in roughly 220,000 second filings (patent family members) in at least one other IP5 office, or about 17% of the total number of first filings. About 2% of the total each year resulted in patent family members in all five offices, or roughly 25,000 IP5 patent families each year.
175. The WIPO Report (Fig. A.4.1.1) notes a fairly constant growth in patent families globally from about 1990 to 2008 (the last year of data reported), with an average growth rate of just over 1% from 2006-2008. Fig. A.4.2.1 of the Report further shows that the number of patent families with members in at least two other offices increased at a fairly steady rate from about the mid-1990s until 2007, declining slightly in 2008, perhaps as a result of the economic crisis.
176. The following chart, taken from pg. 54 of the report, illustrates graphically the flow of patent family members among the offices in 2007 (2006 numbers in parentheses for comparison):



177. If, as the foregoing data suggest, application filing growth may be returning to pre-crisis levels, and growth in patent families continues a decade-and-a-half long upward trend, there is a considerable potential for substantial increase in the number of conflicting applications in each office, which could be further fuelled by harmonization. This could exacerbate the crowding phenomenon that appears to already exist to some extent in certain technologies, making it difficult for innovators to identify and capture new markets.

178. The data also suggest that if the prior art effect of conflicting applications remains disaligned, work sharing potential will be diminished for an increasing number of applications. The above graphic clearly illustrates the magnitude of both the problem and the potential solution that harmonization in this area may provide.

VII. RECOMMENDATIONS FOR FURTHER INVESTIGATION

A. THE PARTICULAR ISSUE OF PCT APPLICATIONS

179. As mentioned, currently, in Europe, PCT applications only enter the state of the art once they have entered the European phase, *ie* once the filing fee has been paid, and a translation into one of the EPO official languages has been filed. The rationale behind the original adoption of this rule was two-fold: if the rule was intended to prevent double patenting, then allowing PCT applications to knock out subsequent applications was overkill if they never entered the European phase and thus would never result in the grant of a European patent. The second matter was that of languages. If any PCT application became prior art during the international phase, this meant a pool of potential prior art which was not translated and thus incomprehensible to examiners. One of the drawbacks of this approach is that there is a considerable lapse of time between the filing or priority date of a PCT application and the point in time when its status as a conflicting application becomes ascertainable.
180. Within the work sharing context, and quite independently of the issue of the substantive treatment of conflicting applications in the different jurisdictions (*ie* whether they are considered to be relevant for novelty only or for both novelty and inventive step), the issue should be considered of whether it might not be desirable to create a pool of international secret prior art under the PCT, by determining that published PCT applications shall constitute conflicting applications (or in Europe: "prior rights") as of their filing or priority date. Thus, any potentially relevant PCT application pending in a jurisdiction which would be cited in a search report would be relevant for any subsequent office in a PCT member state designated in that application and relying on said search report.
181. The translation issue remains relevant: machine translation in its present state might provide assistance, but is not available for all languages. Moreover, the policy issue of whether such a rule would be desirable in terms of the overall function of the patent system would need to be addressed.

B. PROPOSAL FOR AN EMPIRICAL STUDY

182. The EPO is investigating whether it will be possible to identify a small number of PCT applications which have proceeded to grant at the JPO, USPTO and EPO, against which another conflicting PCT application has been cited, which was also pending in all three offices, in order to compare the actual outcome of the impact of the different rules in all three legal systems, in terms of patents granted and to whom, scope of claims, etc.
183. It should be emphasised that the study would not purport to give a representative idea of the mechanisms and their impact, but would endeavour to give tangible illustrations of the magnitude of the differences between the application of the rules in practice.
184. If the EPO automated systems are capable of identifying an appropriate set of co-pending conflicting applications in all three jurisdictions, the application numbers will

be forwarded to all three offices, and the work of analysing differences should be shared amongst offices. The results of the study, including the analysis and any observations or conclusions, would be consigned in a report appended to this study, which would have to be agreed by all 3 offices.

185. At the outset, it must be noted that it may not be possible to complete the empirical study by the time of the report of the Experts Group to the Tegernsee Heads. In this case, such a report will be forwarded to the Heads at a later date.

VIII. CONCLUSIONS

A. STATE OF HARMONIZATION

- There is alignment between the Tegernsee offices with regard to the effect of the priority right.
- All Tegernsee offices apply the whole contents approach.
- However, there is no harmonization with regard to the effect of conflicting applications, or the mechanism of anti-self-collision.

B. MOVING FORWARD

- Users in each jurisdiction appear to be generally happy with the rules applying within their own system and show little flexibility in their acceptance of other rules, despite the fact that objectively, all three systems have their drawbacks.
- What we do not know, however, is how these differences in the state of the law play out where the different rules are applied to the same set of co-pending applications, which would give an indication of the true impact of the different rules and of the potential gains which could be achieved if these rules were harmonized.
- For this reason, the Tegernsee Heads should consider whether to mandate the Tegernsee Experts Group to carry out an empirical study as proposed above.
- Furthermore, this is an area where, in work sharing terms, efficiency gains due to harmonization would be mitigated by the fact that the result of the application of these rules to a particular application is dependent on the pool of applications pending in that office, which may differ from the pool in other offices, leading thus to different outcomes in different offices due to different secret prior art.
- Against this backdrop, the Tegernsee heads should consider whether to mandate a closer examination of the feasibility of creating a common pool of international secret prior art under the PCT, by determining that a published PCT application will become prior art as of its priority or filing date, as well as the policy issues which such a change would raise.