Case Number: G 0003/08

O P I N I O N
of the Enlarged Board of Appeal
of 12 May 2010

in relation to a point of law referred by the President of the European Patent Office pursuant to Article 112(1)(b) EPC

Composition of the Board:

Chairman: P. Messerli
Members: M. Vogel
D. Rees
M. Dorn
A. Klein
U. Scharen
J.-P. Seitz

Summary of the proceedings

I. In a referral under Article 112(1)(b) EPC dated 22 October 2008, the President of the EPO asked the Enlarged Board of Appeal to consider a set of questions concerning the patentability of programs for computers (computer-implemented inventions, CIIs) on which she deemed the Boards of Appeal to have given different decisions and which she held to be of fundamental importance within the meaning of Article 112(1) EPC. Her referral had been preceded by an informal letter from her predecessor, Alain Pompidou, dated 22 February 2007, in which Lord Justice Jacob's suggestion in the Aerotel/Macrossan judgment of 27 October 2006 ([2006] EWCA Civ 1371) of referring the issue of CII patentability to the Enlarged Board was dismissed as unnecessary.

II. Statements by third parties (amicus curiae briefs)

II.1 Under Article 10 of its Rules of Procedure, the Enlarged Board invited the public to file written statements on the President's referral (OJ EPO 2009, 32). This resulted in the filing of around a hundred *amicus curiae* briefs, which can be viewed in the Enlarged Board's area of the EPO website. These can be broken down roughly as follows:

- 30 originated from lawyers and patent attorneys or associations thereof; of these 15 were individual contributions;

- 54 came from companies, industry associations and other interest groups; of these 17 apparently had Free

and Open Source Software (FOSS) affiliations, and a further 9 identified themselves as individual developers (the responses of the latter were so similar to those of the FOSS-affiliated that they will be grouped together with the FOSS responses in what follows);

- 6 were from academia;

- 2 were from patent offices;

- 9 were from other sources; of these 6 were from individuals.

II.2 The question of the admissibility of the referral was raised in approximately a quarter of the submissions, mainly by lawyers or non-FOSS industry. Of these the great majority either expressed "doubts" about the admissibility or argued that the referral was definitely not admissible.

Three quarters of the submissions gave responses to some or all of the individual questions of the referral. However in many if not most cases these responses took the form of comments or observations, rather than answers classifiable as "yes" or "no". For this reason the Enlarged Board will not attempt to present a statistical analysis of the responses to the questions.

Around one third of all of the submissions made an analysis of the case law of the Boards of Appeal of the EPO. Most of the rest relied on either national (including US) case law, gave their views on how the

EPC ought to be interpreted, or made general statements based on policy considerations.

II.3 Many of the submissions took the opportunity to express their views on whether "software patents" were a good or bad thing. Around one third, including all the FOSS-affiliated companies and groups as well as the individual developers, considered that granting practice should be (generally very much) more restricted than it is now, around 30% appeared to be arguing for roughly the same conditions for grant as at present and about 10% argued for wider patentability. Approximately 30% of the submissions made comments explicitly or implicitly expressing approval of the present general case law of the Boards of Appeal with regard to computer-implemented inventions. Perhaps surprisingly there was very little correlation between this 30% and the submissions which argued that the referral was inadmissible.

II.4 One of the *amici curiae* argued that the Enlarged Board, and more specifically one of its members, was not impartial. The Board applied Article 4(1) of the Rules of Procedure of the Enlarged Board of Appeal and Article 24(4) EPC. In a composition not including the affected member the Enlarged Board deliberated and issued an interlocutory decision dated 16 October 2009 that the original composition was to remain unchanged.

Reasons for the Opinion

Admissibility of the referral

1. Under Article 112(1)(b) EPC, in order to ensure uniform application of the law, or if a point of law of fundamental importance arises, the President of the EPO may refer a point of law to the Enlarged Board of Appeal where two Boards of Appeal have given different decisions on that question.

2. The first issue the present case raises is whether the President's referral might be inadmissible on the grounds that her predecessor had declined to refer CII patentability issues to the Enlarged Board only the year before, in his letter of 22 February 2007 to Lord Justice Jacob. In other words, if no further decisions throwing new light on the issues had been taken in the interim, the question arises whether the presidential right of referral might have been forfeited.

However, in exercising his right of referral, a President is entitled to make full use of the discretion that he (or she) is granted by Article 112(1)(b) EPC. His appreciation of the need for a referral may change even after a relatively short time, for example because his assessment of the case law of the Boards of Appeal has changed and he therefore finds the implications of a perceived divergence more significant for Office practice than he initially thought. Or, as is the case here, a change in the presidency has taken place and the new President views matters differently from his

predecessor. Therefore, in the present case the right of referral cannot be held to have been lost.

3. Hence the Enlarged Board is required to consider whether the questions raised in the referral of 22 October 2008 were admissibly referred under Article 112(1)(b) EPC because

(i) they need to be answered in order to ensure uniform application of the law or they concern points of law of fundamental importance

and

(ii) two Boards of Appeal have given different decisions on the questions referred.

4. As regards the first admissibility criterion, which must be met for every referral whether from a Board of Appeal under Article 112(1)(a) EPC or from the President under Article 112(1)(b) EPC, the President maintains that the referral concerns the application of the exclusion of computer programs as such and is therefore of fundamental importance.

4.1 CII patentability has of course long been the subject of heated debate in administrative and judicial practice and literature in countries with advanced patent systems, in particular within EPC territory. In these countries, with their national rules on patentable subject-matter, although widely harmonised on an European basis, this problem has given rise not so much to different court verdicts but to sometimes different reasoning for them. Moreover, some years ago

the European Parliament and Council made an ultimately unsuccessful attempt to harmonise law on CII patentability within the EU by means of a directive (COM (2002) 92 final - 2002/0047 (COD)). A uniform understanding of where to draw the dividing line between applications relating to programs for computers as such, which are excluded from patentability under Articles 52(2)(c) and (3) EPC, and applications relating to patentable technical solutions, in the form of CIIs, still cannot be assumed despite considerable convergence in recent court rulings.

(See however the increasingly convergent decisions of EPO Technical Board of Appeal 3.5.01 of 15 November 2006 on T 154/04 - Duns Licensing; the Paris Tribunal de grande instance on case 2001/11641, PIBD No. 867 III p. 59 - Infomil (on the patent in that case see also Technical Board 3.5.01's decision of 22 October 2008 on T 116/06, which dismissed the proprietor's appeal against the opposition division's revocation of the patent); EWCA judgment of 8 October 2008, Civ 1066 - Symbian Limited; Order of the Tenth Civil Senate of Germany's Federal Court of Justice of 20 January 2009 in GRUR 2009, 479 - Steuerungseinrichtung für Untersuchungsmodalitäten; and in the USA, US Court of Appeal for the Federal Circuit of 10 October 2008, 2007 - 1130 in re Bilski)

4.2 Given the economic significance of such inventions in many technical fields, plus the consequent heated public debate on their patentability and the many cases before the EPO's Technical Boards and various national courts, the fundamental importance of the general subject addressed by the questions referred is not open to serious doubt.

5. Of course, the fact that there is such a worldwide debate does not mean that there have necessarily been different decisions taken by two Boards of Appeal within the meaning of Article 112(1)(b) EPC. It is clear from the wording of that article that decisions of other (national) courts are not relevant when examining the admissibility of a referral. Such courts are not part of the European Patent Organisation, and there is nothing in the EPC to make their decisions binding on the Office.

6. As to what is meant by different decisions of two EPO Boards of Appeal, this may depend on whether, as in the present case, the decisions cited as the basis for the referral were taken within the competence of a single Board of Appeal in differing compositions. It might be thought, not unreasonably, that this does not comply with the wording of Article 112(1)(b) EPC, which would make the admissibility of a presidential referral dependent on differences in the rulings of two Boards of Appeal.

On this question the Enlarged Board in G 4/98 (OJ EPO 2001, 131) offered the following comments on different decisions of the Legal Board of Appeal:

> As stated at the beginning of Article 112 EPC, one of the purposes of a referral to the Enlarged Board of Appeal is to ensure uniform application of the law. This is particularly true for the referral by the President of the EPO under Article 112(1)(b) EPC, which is dependent upon the existence of conflicting decisions. If his power of referral were to be defined by a restrictive reading of the term "two Boards of Appeal" based on organisational structure, then no referrals would be possible with respect to the Legal Board of Appeal, which is one organisational unit only. This would

> unduly restrict the effect of Article 112 EPC, since it is quite clear that conflicting decisions might also occur in cases within the competence of that board, which as an organisational unit comprises all legally qualified members of the Boards of Appeal (with the exception of the legally qualified chairmen of the Technical Boards of Appeal) and which therefore sits in a number of different compositions. In this context, it is noteworthy that the EPC does not define the Legal Board of Appeal as an organisational unit, but only by its composition, which lends additional strength to the argument that different decisions of that board may be the basis of a referral by the President of the EPO, at least if taken in different compositions. As this is the case here, there is no need to discuss whether a referral by the President of the EPO would also be admissible had the Legal Board of Appeal handed down different decisions in the same composition. Likewise, no opinion is to be expressed on the admissibility of a referral, had the present situation arisen not in the Legal Board of Appeal but in one of the Technical Boards of Appeal. Finally, no discussion is necessary on the limitation of the power of referral by the President of the EPO by the power of the Legal Board of Appeal to develop its case law by abandoning former case law (cf. Singer/Stauder, loc. cit.). In the present case, there is no evidence at all that this was intended by J 22/95. On the contrary, in point 7.2 of the Reasons, it is stated that there "are no conflicting decisions relevant to this case ..." (Reasons, point 1.2, second paragraph).

In this opinion the Enlarged Board did not need to express a view on the admissibility of a referral based on differing decisions by a single Technical Board, the relevant issue in the present case. However, the same reasons as are given in G 4/98 to justify the admissibility of a referral in the case of differing decisions by the Legal Board can also be used. This is in particular so since the object and purpose of a referral by the President is to ensure the uniform application of the law within the

Organisation in the interest of legal certainty. Lack of uniform application which warrants a referral may also happen within a single Board as an organisational unit, no matter whether legal or technical, and therefore no distinction should be made between the Legal Board of Appeal (case G 4/98) and a Technical Board of Appeal. It would be too limiting to declare a referral by the President inadmissible simply because the formal requirement that two Boards of Appeal must be involved has not been fulfilled. At least this holds true when, as is the case here, the Board of Appeal has delivered the allegedly different decisions in different compositions (see also *Joos* in: *Singer/Stauder*, The European Patent Convention, 5th edition, 2010, Article 112 marginal number 25). The question what the situation would be had the Board of Appeal delivered the allegedly different decisions in the same composition needs not to be answered here. Of course, to hold the referral admissible in respect of who delivered the allegedly different decisions does not mean that it has passed the admissibility test altogether. For this, it is necessary that the Board in question has indeed given "different decisions" within the meaning of Article 112(1)(b) EPC. This will be examined below.

7. The key to assessing the referral's admissibility is determining the meaning to be assigned to the undefined legal term "different decisions" / "abweichende Entscheidungen" / "décisions divergentes" in Article 112(1)(b) EPC. Do decisions differ if for example they come to the same verdict on different grounds? What about two decisions that are far apart in time? In such cases, does a Technical Board clearly

stand by earlier case law cited in support of a difference, or has it explicitly or implicitly abandoned it in the meantime? What if the claimed differences are the result of long-term legal developments affecting the patentability assessment of new subject-matter? How do different decisions relate to other case law of the Boards?

7.1 The meaning to be assigned to the key term "different decisions" as this expression is used in Article 112(1)(b) EPC must initially be determined on the basis of the provision's wording in all official versions of the EPC, these all having equal status (Article 177(1) EPC). Yet the wording does not seem to give a clear answer. The English, German and French terms used ("different", "abweichend" and "divergent" respectively) do not appear to have entirely the same connotations. *Cassell's* English-German Dictionary, 1978 edition, translates "different" with German words such as "anders, verschieden, andersartig, abweichend, ungleich, verschiedenartig", whereas according to *Harrap's* Shorter Dictionary French-English (1988 Reprint) the French term "divergent" equates to "divergent" in English, not "different", and in German is according to *Larousse* Grand Dictionnaire Allemand-Français, 1999 edition, equivalent to terms like "divergierend, auseinanderlaufend, abweichend". This results in variations in semantic content (abweichend/different/divergent) between the three language versions. "Different decisions" could apparently be ones that are far apart in time, regardless of whether they actually still have a claim to validity in view of intervening changes in case law. "Divergent decisions" by contrast would suggest ones

which do not take the same line, which in other words vary in their substantive content, while being close together in time. Thus a clear answer cannot be derived from the wording of the provision alone.

7.2 Ambiguous wording in international treaties, including industrial property conventions, has to be interpreted in the light of its object and purpose (Article 31 of the Vienna Convention on the Law of Treaties (VCLT) whose rules for the interpretation of treaties are to be applied to the EPC (see G 5/83, OJ EPO 1985, 064, Reasons, point 3 ff.; G 2/02 and 3/02, OJ EPO 2004, 483, Reasons, point 5.2 ff.; G 1/07 dated 15 February 2010, Reasons, point 3.1; G 2/08 dated 19 February 2010, Reasons, point 4)), and if we consider the object and purpose of Article 112(1)(b) EPC in the context of the EPC, there is much to suggest that it means divergent decisions in the second sense mentioned in paragraph (a) above (on the Enlarged Board's approach to interpretation see *Schachenmann*, Die Methoden der Rechtsfindung der Großen Beschwerdekammer, GRUR Int. 2008, 702/704 ff.; *Stauder* in: *Singer/Stauder*, Europäisches Patentübereinkommen, 5th edition, 2010, Art. 177 *passim* with further indications).

7.2.1 According to current constitutional thinking, the predictability and verifiability of all state action are indispensable elements of a democratic legal order based on the separation of powers, the rule of law and respect for human rights including fundamental procedural rights. These principles have been subscribed to in substance at national level by all the EPC contracting states, despite differing

constitutional traditions and despite several reservations made by different states. As a democracy is prohibited from signing an international treaty which would undermine its citizens' constitutional guarantees, the EPO must therefore support these fundamental principles either explicitly (e.g. Art. 113 EPC) or implicitly (e.g. liberty, equality) (see for example G 3/98, OJ EPO 2001, 62, Reasons, point 2.5.3; G 2/02 and G 3/02, Reasons, point 7.2; T 377/95, OJ EPO 1999, 11, Reasons, points 33-36; T 1193/02 dated 18 March 2005, Reasons, point 10; T 190/03, OJ EPO 2006, 502, Reasons, point 10).

The European Patent Organisation is an international, intergovernmental organisation, modelled on a modern state order and based on the separation of powers principle, which the sovereign contracting states have entrusted with the exercise of some of their national powers in the field of patents. Thus the EPC assigns executive power to the Office to grant patents and to its President to manage the Office in organisational respects (Articles 4(3) and 10 ff. EPC), while to the Administrative Council it assigns limited legislative powers restricted to lower-ranking rules (Article 33 EPC), along with financial and supervisory powers. Finally, the Boards of Appeal, which in their decisions are bound only by the EPC (Article 23(3) EPC), are assigned the role of an independent judiciary in this patent system (Articles 21 to 23 EPC; see also G 6/95, OJ EPO 1996, 649, Reasons, points 2 ff.), even if for the present, pursuant to Article 4(2) EPC and to EPC Part 1 Chapter III, they are not an independent organ of the Organisation but

structurally integrated departments of the Office under Article 15 EPC.

7.2.2 Like the judiciary of any democratic entity based on the separation of powers principle, the EPO's Boards of Appeal as an independent judiciary guarantee the due process of law within the Organisation. They are also assigned interpretative supremacy with regard to the EPC in terms of its scope of application (see also Article 23(3) EPC). Under Article 21(1) EPC they are responsible for reviewing decisions taken by the Office in grant and opposition proceedings. Their interpretation of the EPC is the basis for the practice established by the Office for the examination of patent applications and oppositions to granted patents. Otherwise there would be no need for the President's right of referral.

On the other hand, the interpretation of the EPC or equivalent national regulations by the courts of the Contracting States has no direct consequences for Office departments; but that does not mean that in interpreting the Convention the Boards of Appeal should not take account of relevant national decisions on harmonised European patent law, in keeping with normal practice. This is implied by the harmonisation philosophy behind the EPC.

7.2.3 Another essential element of a democratic legal order is the principle that a public authority is bound by law and justice. This is supplemented by the principle of uniform application of the law. Both principles are designed to ensure predictability of jurisdiction and hence legal certainty by preventing arbitrariness.

Those subject to the law, in the case of the EPC the parties to proceedings before the Office, but also the public, must be able to expect that the Office as patent granting authority and consequently the Boards of Appeal will settle cases of the same nature in the same way and will apply comprehensible arguments and methods to justify any substantive differences in such decisions. For the stated reasons, these principles also constitute essential precepts for administration and jurisdiction in the European patent system as codified in the EPC. Ensuring compliance with them is ultimately the task of the Boards of Appeal, including the Enlarged Board, the latter though only in the context of referrals by the Boards of Appeal and the President under Article 112(1) EPC and concerning petitions for review (Article 112a EPC).

7.2.4 In keeping with these principles, Article 112 EPC - like corresponding provisions in the legal orders of the Contracting States - defines the conditions in which legal uniformity within the European patent system may be established by means of a referral to the Enlarged Board of Appeal. It requires the Boards (Article 112(1)(a) EPC) or the President (Article 112(1)(b) EPC) to deem the referral necessary in order to ensure uniform application of the law or if points of law of fundamental importance arise, and a further admissibility criterion for a referral by the President is that two Boards of Appeal must have given different decisions on the question referred. Hence the Enlarged Board does not rule on abstract points of law, but only ever on real issues arising from the cited differing decisions, as well as on specific legal questions adduced in the referral (see

Moser in: Europäisches Patentübereinkommen, Münchner Gemeinschaftskommentar, 20th issue 1997, Article 112, marginal number 28; *van Empel*, The Granting of European Patents, 1975, marginal number 524). It is to be noticed that the President is not a party in a referral procedure because she or he can not be adversely affected by answers given by the Enlarged Board.

7.2.5 Thus it is clear that the interpretation of the EPC is primarily the responsibility of the Boards of Appeal. As a rule they have interpretative supremacy with regard to the EPC because their decisions are subject to review only under the narrowly defined conditions of Article 112(1) and 112a(2) EPC. It is only when these apply that the Enlarged Board has the last word. The fact that the Enlarged Board takes action only on a referral from the Boards of Appeal or the President (with the exception of petitions for review under Article 112a EPC, which however concern procedural matters and have a very narrow scope) and thus does not constitute a further instance ranking above the Boards of Appeal within the EPC judicial system is a clear indication of the extent of its significance for legal uniformity. The exhaustive list of admissibility criteria for a referral under Articles 112(1)(a) and (b) EPC implies that the Enlarged Board takes decisions on specific legal questions and that neither the Boards of Appeal nor the President are authorised to consult it whenever they so wish in order to clarify abstract points of law. For that purpose the President can call upon a separate Legal Department within the Office.

7.2.6 On the same restrictive grounds, Article 112(1)(b) EPC as an additional constraint for a referral by the President as opposed to one by a Board of Appeal requires there to be differences in the rulings of two Boards of Appeal (in the sense already discussed) on a point of law. The "different decisions" criterion would appear to show that the President is only intended to be allowed to refer a question to the Enlarged Board when there is a divergence or, better, conflict in the case law making it difficult if not impossible for the Office to bring its patent granting practice into line with the case law of the Boards of Appeal. It is of course immaterial whether the initiative behind the referral comes from a third party, as long as there is objective evidence of divergent applications of the law.

7.2.7 Given its object and purpose, the right of referral does not extend to allowing the President, for whatever reason, to use an Enlarged Board referral as a means of replacing Board of Appeal rulings on CII patentability with the decision of a putatively higher instance. For example, a presidential referral is not admissible merely because the European Parliament and Council have failed to adopt a directive on CII patenting or because consistent Board rulings are called into question by a vocal lobby (cf. the present referral, page 2, Section 1, paragraph 3). Even the essentially commendable desire for harmonisation expressed by Lord Justice Jacob in the Aerotel/Macrossan judgment can be taken up by the Enlarged Board only to the extent possible under the EPC, even if his suggestion might significantly advance the cause of legal uniformity in Europe. When

judiciary-driven legal development meets its limits, it is time for the legislator to take over.

7.3 The notion of legal development is an additional factor which must be carefully considered when interpreting the notion of "different decisions" in Article 112(1)(b) EPC, as has occasionally been pointed out in the literature (e.g. *Teschemacher,* Der Beitrag des Präsidenten des Europäischen Patentamts zur Rechtsprechung der Großen Beschwerdekammer - eine erste Bestandsaufnahme, GRUR 1993, 320/326 f.) and various *amicus curiae* briefs.

7.3.1 Development of the law is an essential aspect of its application, whatever method of interpretation the judge applies, and is therefore inherent in all judicial activity. In that light an element of legal development can even be seen whenever a specific case is subsumed under an abstract regulation. That is especially true of Anglo-Saxon law, where a decision on an individual case has far greater implications as a precedent than judgments in continental civil law. Consequently, legal development as such cannot on its own form the basis for a referral, only because case law in new legal territory does not always develop in linear fashion, and earlier approaches may be abandoned or modified.

Otherwise the "different decisions" feature of Article 112(1)(b) EPC would lose its meaning. While the development of the law may superficially appear to give rise to different decisions within the meaning of that provision, on its own it cannot justify a referral to the Enlarged Board. A referral is

justified only if at least two Board of Appeal decisions come into conflict with the principle of legal uniformity. The object and purpose of Article 112(1)(b) EPC is to have an Enlarged Board decision re-establish legal uniformity when it has clearly been disrupted, not to intervene in legal development. This is discussed in more detail in the following.

7.3.2 The EPC as it stands assigns interpretation of the EPC with its numerous undefined legal terms ultimately to the Boards of Appeal (see point 7.2.5 above). They are responsible for defining how the law is to be applied and where appropriate adapted to developments in patent law. To a greater or lesser extent the issue in every case is whether or not the situation is covered by an abstractly formulated regulation. Thus over time case law has given e.g. the notions of invention, novelty, inventive step and industrial applicability increasingly precise meanings with which the Office and other patent system stakeholders can align themselves in their daily practice. Hence in view of the direction that patent law has taken by means of the Boards' case law, appeals against decisions of the Examining and Opposition Divisions mostly operate within legally secure bounds.

7.3.3 Particularly in the field of new technologies, the Technical Boards often have to subject their established case law to critical review, applying accepted judicial procedure and general legal principles to decide whether the often broadly formulated undefined legal terms in the EPC are applicable to the specific nature of the new field,

i.e. in particular whether the existing widely accepted case law also yields acceptable solutions in the new field. It is entirely conceivable that the interpretation of undefined legal terms in the light of the EPC's purpose and principles will necessitate drawing further distinctions which, depending on what they include or exclude, may determine whether a patent is granted or refused in a specific case.

7.3.4 Where jurisprudence enters new legal territory, caution is required to avoid making statements that will prove untenable in the very next case to arise. Yet it cannot be ruled out that repeated amendments will be necessary in the course of time if legal solutions that the Boards initially deem correct prove to be mistaken in new situations and cease to be convincing jurisprudence. Such changes of direction in legal development are a normal part of judicial activity, and there is no need to speak of different decisions within the meaning of Article 112(1)(b) EPC simply because departures from earlier practice are deemed necessary when homing in on the right solution to a specific case (see however *Moufang* in: *Schulte*, Patentgesetz mit EPÜ, 8th edition 2008, Article 112 EPC (annex to paragraph 73) marginal number 42).

7.3.5 Thus even a radical shift in jurisprudence need not necessarily be construed as a different decision within the meaning of Article 112(1)(b) EPC vis-à-vis earlier case law, provided that the Board corrects itself and - mostly in explicit fashion - declares its earlier practice to be no longer relevant. The President does not acquire the right of referral simply because he prefers the earlier decision (*Joos*

in: *Singer/Stauder*, Europäisches Patentübereinkommen, 5th edition 2010, Article 112, marginal number 25; see however *Moufang* in: *Schulte*, Patentgesetz mit EPÜ, 8th edition 2008, Article 112 EPC (annex to paragraph 73) marginal number 42). Such corrections are a normal part of the application and development of the law and do not constitute a difference that could be corrected by means of a presidential referral to the Enlarged Board, overriding the interpretative power of the Boards. In fact, shifts of this kind when identified as such leave the Office as patent granting authority in no doubt how the EPC is to be interpreted according to the Boards' latest findings. This may entail altering the Examination Guidelines, but not having the case law reviewed by the Enlarged Board. It is another matter if the Boards themselves see a need to refer points of law to the Enlarged Board in the light of a change in their practice.

7.3.6 The same should apply where the Boards' case law has developed over an extended period and in the course of several decisions has gradually arrived at solutions which clearly and justifiably move away from the initial premise, even if the public and the patent granting authority have found earlier solutions acceptable. In that way, too, legal development has followed a course which, while not entirely linear, as long as it is transparent does not justify speaking of different decisions that could be grounds for a referral.

7.3.7 Legal rulings are characterised not by their verdicts, but by their grounds. That is the only way of assessing the courts' opinion, and the ability to

assess that is in turn the key to legal certainty. The Enlarged Board has already taken this line in its decision G 3/93 (OJ EPO 1995, 18, Reasons, point 2), where it took *obiter dicta* into account in examining a divergence (likewise *Moufang* in *Schulte*, Patentgesetz mit EPÜ, Article 112 EPC (annex to paragraph 73) marginal number 45).

7.3.8 The conclusion that must be drawn is that the Enlarged Board cannot develop the law in the same way as the Boards of Appeal, because it does not have to decide on facts of pending appeals, but only in specific instances and only in the aforementioned context of points of law referred to it under Article 112(1) EPC. This applies *a fortiori* to referrals by the President, which do not even arise from a specific appeal.

If, as required for a referral by the President, there are different decisions on points of law, the Enlarged Board may follow the legal approach of one of the decisions and reject the other as inappropriate, or it may find a third way appropriate. Thus the only way it can influence the assessment of individual issues is by breaking with previous practice and pointing in a new direction or by confirming the approach adopted by a Board.

In the process however the Enlarged Board must also consider whether the divergent decisions might not be part of a constant development, possibly still ongoing, in jurisprudence on recent patent law issues, in the course of which older decisions have lost their significance and so can no longer be considered in connection with newer decisions. Such putative

differences do not justify presidential referrals, legal development being one of the principal duties of the Boards of Appeal, in particular in new territory.

Hence the President has no right of referral under Article 112(1)(b) EPC simply in order to intervene, on whatever grounds, in mere legal development if on an interpretation of the notion of "different decisions" in the sense of conflicting decisions there is no need for correction to establish legal certainty.

The Questions of the Referral

8. In the light of these fundamental considerations on the interpretation of Article 112(1)(b) EPC, the questions that have been referred will now be considered.

9. Preliminary remarks

9.1 On the introduction to the referral

The referral (page 3) includes a definition of "computer program" ("a series of steps (instructions) which will be carried out by the computer when the program is executed"). "Computer program" is said to be synonymous with "program", "software" and "program for a computer". The term "computer" is defined to include "any programmable apparatus", including e.g. a mobile phone. It is further clarified that "the methods referred to in hypothetical examples are intended to be methods which can be implemented wholly by computer."

While these definitions may be helpful for the Enlarged Board in interpreting the referral, it should be made clear that the Board cannot be bound by them when it interprets the case law. The meaning of these terms in patents and appeal cases must rather be determined by an analysis of how the skilled addressee would have understood them in the context in which they were used.

It should be pointed out that if "computers" include mobile phones, and the hypothetical methods are meant to be those which can be implemented wholly by computer, they would include for example methods of generating radio carrier waves using particular analogue circuits. This was probably not intended to be included in the definition of a "computer implemented method" by the referral.

9.2 The term "technical"

We do not attempt to define the term "technical". Apart from using this term in citing the case law, in what follows the Enlarged Board only makes the assertions that "a computer-readable data storage medium" and a cup have technical character and that designing a bicycle involves technical considerations, in order to be able to explore the consequences of that case law. It is to be hoped that readers will accept these assertions without requiring a definition of exactly what falls within the boundaries of "technical". This question is discussed in some more detail for the particular case of programs for computers in the section relating to Question 4 (see point 13 below).

10. **Question 1**

"Can a computer program only be excluded as a computer program as such if it is explicitly claimed as a computer program?"

Admissibility

10.1 The first step is interpretation of the question. On the face of it all that is asked is whether one has to use the actual words "computer program". If the question is interpreted in this fashion it is easily answered; a claim utilising a synonym for "computer program", such as "a sequence of computer-executable instructions" or "an executable software module" perhaps, would clearly not avoid exclusion from patentability if the equivalent claim to a computer program did not. However the alleged divergence identified in the referral does not simply relate to the form of words chosen. Moreover the "Background" to Question 1 includes the following:

"In this field, claim formulations along the following lines are common:
- methods
- systems (i.e. computer systems)
- computer-implemented methods
- computer programs
- computer program products, storing a computer program.

However the substance of these claims, i.e. the underlying method to be performed by a computer, is often identical," (referral, page 4).

The discussion also refers to "the function of the computer program (does the claimed program have technical character) rather than the manner in which it is claimed (e.g. as a computer program, a computer program product or a computer-implemented method)," (referral, page 5).

Thus it would seem that the first reference to a "computer program" in the question is in fact intended to encompass claims to various matters which involve a computer program without necessarily literally being one, and that the question to which the referral is seeking an answer is something along the lines of:

If a particular claim to a computer program ("1. A program for a computer comprising instructions to carry out steps x, y, z,") is excluded from patentability by Article 52(2) EPC, are any of the following (or anything else) automatically excluded under the same article?

"2. A computer system loaded with the program of claim 1."
"3. A method of operating a computer comprising executing the program of claim 1."
"4. A computer program product storing the program of claim 1."

10.2 The only "divergence" in the case law identified by the referral with respect to this question is between

the decisions in cases T 1173/97, IBM (OJ EPO 1999, 609) and T 424/03, Microsoft, dated 23 February 2006. It is argued in the referral (see pages 5 and 6) that according to T 424/03 only a claim of the form "computer program for method x" could possibly be excluded from patentability as a computer program as such, whereas claims of the form "computer implemented method x" or "computer program product storing executable code for method x" would not be excluded (irrespective of the nature of the method x). T 1173/97 is said however to place the emphasis on the function of the computer program rather than on the manner in which it is claimed, for example as a computer program product or a computer-implemented method.

T 1173/97 concerned an application where the examining division had come to the conclusion that there was an invention and was prepared to grant a patent including claims of the types which had been accepted at least since T 208/84, VICOM (OJ EPO 1987, 14), namely for a method of operating a computer and for a computer adapted to carry out the method (i.e. a computer loaded with an appropriate program). However the applicant had included claims directed not to the system as a whole or a method of operating the system as a whole, but to a program, in two forms, as follows (T 1173/97 Facts and Submissions, point II):

"A computer program product directly loadable into the internal memory of a digital computer, comprising software code portions for performing the steps of [independent method] claim 1 when said product is run on a computer,"

and

"A computer program product stored on a computer usable medium, comprising: computer readable program means for causing a computer to [carry out the various steps of method claim 1]."

10.2.1 The Board considered the question whether a computer program might be claimed and if so under what circumstances such a claim could be allowable. Its conclusion, at Reasons, point 13, was:

"In the view of the Board, a computer program claimed by itself is not excluded from patentability if the program, when running on a computer or loaded into a computer, brings about, or is capable of bringing about, a technical effect which goes beyond the 'normal' physical interactions between the program (software) and the computer (hardware) on which it is run.

'Running on a computer' means that the system comprising the computer program plus the computer carries out a method (or process) which may be of the kind according to claim 1.

'Loaded into a computer' means that the computer programmed in this way is capable of or adapted to carrying out a method which may be of the kind according to claim 1 and thus constitutes a system (or device or apparatus) which may be of the kind according to claim 14."

10.2.2 The Board made a point of not deciding on a particular form of words; the Order includes, "The case is remitted to the first instance ... for examination of whether the wording of the present claims avoids exclusion from patentability under Article 52(2) and (3) EPC, ...". However it did comment on the question whether claiming the program on a medium could overcome exclusion (also at Reasons, point 13):

"Furthermore, the Board is of the opinion that with regard to the exclusions under Article 52(2) and (3) EPC, it does not make any difference whether a computer program is claimed by itself or as a record on a carrier ... ."

10.2.3 Since the Board had come to the conclusion that some programs, claimed alone, are excluded from patentability, it must follow from this statement that such a program claimed "as a record on a carrier", i.e. on a computer-readable medium, would also be excluded. The reasoning supporting this conclusion can be seen in the following quotations.

T 1173/97, Reasons, point 5.3: "This means that programs for computers must be considered as patentable inventions when they have a technical character." Reasons, point 6.2: "[P]hysical modifications of the hardware (causing, for instance, electrical currents) deriving from the execution of the instructions given by programs for computers cannot *per se* constitute the technical character required for avoiding the exclusion of those programs." Reasons, point 6.3: "Although such modifications may be considered to be technical, they

... cannot be used to distinguish programs for computers with a technical character from programs for computers as such." The same evidently applies to the physical modifications of a medium (e.g. the pits created in a CD-ROM) caused by storing a program, and this would appear to be what the Board meant by Reasons, point 9.3: "[T]he hardware is not part of the invention. ... Furthermore, it is clear that if, for instance, the computer program product comprises a computer-readable medium on which the program is stored, this medium only constitutes the physical support on which the program is saved, and thus constitutes hardware."

10.2.4 Considering that according to Article 52(1) EPC (in both 1973 and 2000 versions), "European patents shall be granted for any inventions" provided they are new, inventive and industrially applicable, the reasoning in 9.3 that, (i) when a computer program product comprises a computer-readable medium, the medium constitutes hardware, and (ii) hardware is not part of the invention, makes it clear that the Board considered that a claim to a computer program product could not escape the exclusions of Article 52(2) EPC merely by comprising a computer-readable medium. Reasons, points 6.2 and 6.3 cited above at least suggest that the Board also considered that claiming a computer loaded with a program or the execution of a program on a computer would not be sufficient to escape the exclusion.

10.3 The decision also referred to the "technical effect which goes beyond the 'normal' physical interactions between the program (software) and the computer

(hardware) on which it is run" as a "further technical effect" (see Reasons, point 9.4), and this is the expression which is generally used. As may be seen from the quotations above, the general condition for a claimed invention not to be excluded from patentability by Articles 52(2) and (3) EPC was considered to be that the claimed subject-matter has a "technical character". Thus in the particular case of a claim to a computer program it has a "technical character" if and only if the program causes a "further technical effect" when run. (This topic will be revisited in the discussion of Question 4.)

10.4 It is notable that the definition of further technical effect in Reasons, point 13 makes no reference to the state of the art. Thus according to this decision it may be determined whether a claim to a computer program is excluded from patentability by Articles 52(2) and (3) EPC independent of the prior art. That is, the identified further technical effect need not be new. By taking this position the Board consciously abandoned the so-called "contribution approach" which had been applied, somewhat inconsistently, in the earlier case law. This was clearly a deliberate development of the case law (the inconsistency of the previous case law having previously been identified in an article, "Patentability of computer-software-related inventions", by the then chairman, *P. van den Berg*, in "The law and practice of the Enlarged Board of Appeal of the European Patent Office during its first ten years", issued by the members of the Enlarged Board of Appeal, 1996, pages 29 to 47). To our knowledge no decision of the Boards of Appeal has since challenged

this choice by the Board in T 1173/97. It therefore stands as the established case law, and cannot be overturned by this Opinion, for the reasons given above (see point 7).

10.5 T 1173/97 also drew the consequence from its abandonment of the "contribution approach" that, "Determining the technical contribution an invention achieves with respect to the prior art is therefore more appropriate for the purpose of examining novelty and inventive step than for deciding on possible exclusion under Article 52(2) and (3)," (Reasons, point 8, second paragraph).

10.6 For readers unfamiliar with the jargon, an analogy may help to understand the distinction between the "contribution approach" and the approach adopted by the Board in T 1173/97. Note, however, that what follows is intended to be merely illustrative, not definitive.

Suppose a patent application claims a cup carrying a certain picture (e.g. a company logo). We assume that no effect beyond information, "brand awareness" or aesthetic pleasure is ascribed to the picture. According to the "contribution approach", cups are known, so that the "contribution to the art" is only in a field excluded from patentability by Article 52(2) EPC and the application may be refused under this provision, i.e. the European patent application is considered to relate to (cf. Article 52(3) EPC) an aesthetic creation, a presentation of information or possibly even a method for doing business "as such".

According to the approach laid down by T 1173/97, for the purposes of Article 52(2) EPC the claimed subject-matter has to be considered without regard to the prior art. According to this view a claim to a cup is clearly not excluded from patentability by Article 52(2) EPC. Whether or not the claim also includes the feature that the cup has a certain picture on it is irrelevant. This approach, at least as formulated in e.g. T 258/03, Hitachi (OJ EPO 2004, 575) and T 424/03, has been characterised in some of the *amicus curiae* briefs as the "any hardware" or "any technical means" approach.

10.7 Over a series of decisions the Boards of Appeal (and in particular Board 3.5.01) explored this consequence of abandoning the contribution approach. Firstly in T 931/95, Pension Benefit Systems (OJ EPO 2001, 441), it decided that an apparatus for carrying out an activity excluded as such from patentability by Articles 52(2) and (3) EPC was not itself excluded from patentability (Headnote 3). In particular, a claim directed to a computer loaded with a program was not excluded from patentability by Article 52(2) EPC even if the program itself would be, i.e. if the program caused no "further technical effect" when run. That decision did not however extend the logic to methods employing technical means (Headnote 2). With regard to methods, this decision was explicitly overturned by T 258/03, Hitachi (Headnote 1); T 258/03 came to the conclusion that any claim involving technical means was not excluded from patentability by Article 52(2) EPC (see Reasons 3 and 4), and since a claim directed to a method of operating a computer

involved a computer it could not be excluded from patentability by Article 52(2) EPC. However neither of these decisions dealt with the question whether a claim to a program on a computer-readable medium avoided exclusion. T 424/03, Microsoft, finally extended the reasoning applied in T 258/03 to come to the conclusion that a claim to a program ("computer executable instructions" in the claim in question) on a computer-readable medium also necessarily avoids exclusion from patentability under Article 52(2) EPC (see Catchword 2 and Reasons, point 5.3, "The subject-matter of claim 5 has technical character since it relates to a computer-readable medium, i.e. a technical product involving a carrier (see decision T 258/03 - *Auction method/Hitachi* ...)"). This statement is quite unequivocal and stands alone as a reason for the claim not to be excluded under Article 52(2) EPC.

10.7.1 The decision in T 424/03 did go on to note (also in Reasons, point 5.3) that the particular program involved had the potential of achieving a further technical effect when run and thus also contributed to the technical character of the claimed subject-matter. This fact however was not necessary to the conclusion that the claimed subject-matter avoided exclusion, since according to the reasoning of T 258/03 any technical means claimed was sufficient to overcome the exclusion of Article 52(2) EPC. The question whether the program itself caused a "further technical effect" when run, and would therefore also qualify as technical means, only assumed importance for the question of inventive step - in parallel to these decisions the Board had been developing an approach to

the appraisal of inventive step taking into account the fact that some of the features of a claim might, considered alone, fall under the exclusions of Article 52(2) EPC (see T 154/04, Duns, OJ EPO 2008, 46, for an exposition of the approach). For this approach it is important which features contribute to the technical character of the claimed subject-matter, since only such features are taken into account for the assessment of inventive step. In the particular case of T 424/03, both the computer-readable medium and the program itself were features which gave the subject-matter of the particular claim as a whole a technical character, and were both therefore to be taken into account for the assessment of its inventive step.

10.7.2 Thus finally the Board had arrived at a conclusion which clearly contradicted the position (or rather one of the positions) taken in T 1173/97. T 1173/97 declared, "Furthermore, the Board is of the opinion that with regard to the exclusions under Article 52(2) and (3) EPC, it does not make any difference whether a computer program is claimed by itself or as a record on a carrier ... ," (Reasons, point 13), whereas T 424/03 stated, "The subject-matter of claim 5 has technical character since it relates to a computer-readable medium, i.e. a technical product involving a carrier (see decision T 258/03 - *Auction method/Hitachi* ...)", (Reasons, point 5.3).

10.8 Thus there was a difference between the positions taken in T 1173/97 and T 424/03 on this point. It is still however necessary to decide whether this difference constitutes a divergence allowing a

question to be referred by the President on the point. The considerations to be taken into account have been discussed in points 5 to 7 above.

10.8.1 Although both these cases were decided by Board 3.5.01 as an organisational unit, the compositions of the Board were completely different, so that a referral on the basis of these two decisions is not excluded (see point 6 above). However there are factors which suggest that the difference should be treated as a development of the case law as discussed in point 7.3 above.

Firstly and most importantly the referral does not identify, and we are not aware of, any decision whatsoever of one of the Boards of Appeal of the EPO which follows T 1173/97 on this point (although T 1173/97 is evidently considered seminal in its definition of "further technical effect" and abandonment of the contribution approach to exclusion).

10.8.2 Secondly, the conclusion arrived at in T 424/03 has not been challenged in any later decisions; nor was it isolated but rather came as the last of a series of decisions, the logic of which is consistent and, at least to our knowledge, has also not been challenged in any later decision of a Board of Appeal of the EPO (national court decisions are another matter, but cannot be taken into account for admissibility as discussed above at point 5). For the reader's convenience we rehearse this logic, as we understand it, in what follows.

10.8.3 As discussed above the Board in T 1173/97 consciously abandoned the "contribution approach" and also expressed the opinion (at Reasons, point 13) that "with regard to the exclusions under Article 52(2) and (3) EPC, it does not make any difference whether a computer program is claimed by itself or as a record on a carrier ... ." These two positions are, however, contradictory when considered in the context of the case law of the Boards of Appeal as a whole.

10.8.4 T 1173/97 declares that a claim to a computer program is not excluded from patentability if the program, when run, shows a "further technical effect", i.e. a technical effect going beyond those effects which occur inevitably when any program is run. It further states that this "further technical effect" need not be new and there should be no comparison with the prior art when making the judgement whether there is such a "further technical effect". It cannot have been intended that there be no comparison with the prior art for computer programs, but that there should be for other claimed subject-matters. So it may be concluded that the judgement whether some subject-matter is excluded under Articles 52(2) and (3) EPC from patentability is, according to T 1173/97, always to be decided without regard to the prior art.

10.8.5 Following this principle, a claim to a particular kind of computer-readable medium memory with certain special properties, e.g. a Blu-Ray disk, is evidently not excluded from patentability by Articles 52(2) and (3) EPC, whether or not it is new at the relevant date. But applying the principle consistently, the claim does not have to be a special kind of memory - "A

computer-readable data storage medium," specifying no further details, has the "technical effects" of being computer-readable and of being capable of storing data. And since there is no entry in the list of Article 52(2) EPC relating to computer-readable media as such there is no requirement for a "further" effect going beyond the basic properties of such a computer-readable storage medium. In short, according to the logic of T 1173/97 the following claim is not excluded from patentability by Articles 52(2) and (3) EPC: "A computer-readable storage medium."

10.8.6 In the case law of the Boards of Appeal there has never been any suggestion that narrowing a claim can bring it under the exclusions of Articles 52(2) and (3) EPC, which would require weighting of features or a decision as to which features define the "essence" of the invention (cf. T 26/86, Koch & Sterzel, OJ EPO 1988, 19, Reasons, point 3.4, and T 769/92, Sohei, OJ EPO 1995, 525, Headnote 1), in contrast to e.g. the Bundespatentgericht, where such a weighing up of features has at some times been used (known by the expression "Kerntheorie", see e.g. *Ganahl*, Ist die Kerntheorie wieder Aktuell?, Mitteilungen der deutschen Patentanwälte 2003, 537). Thus according to Boards of Appeal case law, since the claim, "A computer-readable storage medium," is not excluded from patentability by Articles 52(2) and (3) EPC, neither is a claim, "A computer-readable storage medium storing computer program X," (cf. "A cup decorated with picture X").

10.8.7 It might be argued that whereas "A Blu-Ray disk with program X written on it," would escape the exclusion

of Article 52(2) EPC, "A computer-readable storage medium with program X written on it," should not. The only basis for such an argument which the Enlarged Board can envisage would be that the feature "computer-readable storage medium" loses its technical nature because it is too generic or "functionally defined". There is however no case law known to the Enlarged Board that would support this view.

10.8.8 Thus the position taken in T 424/03 that a claim to a program on a computer-readable storage medium is necessarily not excluded from patentability by the provisions of Articles 52(2) and (3) EPC is in fact a consequence of the principles laid out in T 1173/97; the contrary position taken in that decision is inconsistent with its own premises. It would appear that the Board in that case did adopt an implicit "essence of the invention" position ("[T]he hardware is not part of the invention. ... Furthermore, it is clear that if, for instance, the computer program product comprises a computer-readable medium on which the program is stored, this medium only constitutes the physical support on which the program is saved, and thus constitutes hardware.") But as explained above there is no support for such an approach in the general case law of the Boards of Appeal.

The arguments above apply with equal force to claims which "mention" a computer (as the referral puts it in Question 2).

10.9 Returning to the direct question of admissibility of the referred question it is further noted that there was a period of approximately seven years between the

issuance of the two decisions, a period which, although not very long in legal terms, is nonetheless compatible with the notion of development of the case law.

10.10 It is perhaps regrettable that the Board in T 424/03 did not mention the fact that it was deviating from an earlier decision, as foreseen in the Rules of Procedure of the Boards of Appeal, Article 20(1) (previously Article 15(1)). However in the judgement of the Enlarged Board this fact alone is not sufficient to disqualify the process as a legitimate development of the case law.

10.11 While the final outcome of the cases is not the decisive factor in determining the admissibility of a referral (see point 7.3.7 above), the Enlarged Board also notes that there is no suggestion in the referral that the change of approach from Article 52(2) EPC to Article 56 EPC had any effect on the final result of T 424/03.

10.12 Thus in the judgement of the Enlarged Board, although T 424/03 does deviate from a view expressed in T 1173/97 this is a legitimate development of the case law and since T 1173/97 has not been followed by any Board on this particular point there is no divergence which would make the referral of this point to the Enlarged Board of Appeal by the President admissible. Question 1 is therefore not admissible.

10.13 The present position of the case law is thus that (phrasing the conclusion to match Question 2 of the referral) a claim in the area of computer programs can

avoid exclusion under Articles 52(2)(c) and (3) EPC merely by explicitly mentioning the use of a computer or a computer-readable storage medium. But no exposition of this position would be complete without the remark that it is also quite clear from the case law of the Boards of Appeal since T 1173/97 that if a claim to program X falls under the exclusion of Articles 52(2) and (3) EPC, a claim which specifies no more than "Program X on a computer-readable storage medium," or "A method of operating a computer according to program X," will always still fail to be patentable for lack of an inventive step under Articles 52(1) and 56 EPC. Merely the EPC article applied is different. While the Enlarged Board is aware that this rejection for lack of an inventive step rather than exclusion under Article 52(2) EPC is in some way distasteful to many people, it is the approach which has been consistently developed since T 1173/97 and since no divergences from that development have been identified in the referral we consider it not to be the function of the Enlarged Board in this Opinion to overturn it, for the reasons given above (see point 7.3.8).

10.13.1 In the section 3.1.IV, "Consequences"(page 6), of the referral it is stated that, "if one were to follow the reasoning of T 424/03, overcoming the exclusion of programs for computers would become a formality, merely requiring formulation of the claim as a computer implemented method or as a computer program product." Indeed if the Boards continue to follow the precepts of T 1173/97 it follows that a claim to a computer implemented method or a computer program on a computer-readable storage medium will never fall

within the exclusion of claimed subject-matter under Articles 52(2) and (3) EPC, just as a claim to a picture on a cup will also never fall under this exclusion. However, this does not mean that the list of subject-matters in Article 52(2) EPC (including in particular "programs for computers") has no effect on such claims. An elaborate system for taking that effect into account in the assessment of whether there is an inventive step has been developed, as laid out in T 154/04, Duns. While it is not the task of the Enlarged Board in this Opinion to judge whether this system is correct, since none of the questions put relate directly to its use, it is evident from its frequent use in decisions of the Boards of Appeal that the list of "non-inventions" in Article 52(2) EPC can play a very important role in determining whether claimed subject-matter is inventive.

10.13.2 We note, in passing, that it is somewhat surprising that the referral does not address any of its questions to the validity of this way of judging an inventive step, an issue which is surely of general interest (and one which Lord Justice Jacob proposed should be put to the Enlarged Board - "How should those elements of a claim that relate to excluded subject matter be treated when assessing whether an invention is novel and inventive under Articles 54 and 56?", Aerotel/Macrossan at 76, question (2)). The Board can only speculate that the President could not identify any divergence in the case law on this issue, despite the fact that (at present) approximately seventy decisions issued by a total of fifteen different Boards (in the sense of organisational units) cite T 641/00, COMVIK (OJ EPO 2003, 352), and over

forty decisions by eight Boards cite T 258/03, Hitachi, the decisions which essentially defined the approach. Nor is the Enlarged Board aware of any divergence in this case law, suggesting that the Boards are in general quite comfortable with it. It would appear that the case law, as summarised in T 154/04, has created a practicable system for delimiting the innovations for which a patent may be granted.

11. **Question 2**

"(a) Can a claim in the area of computer programs avoid exclusion under Art. 52(2)(c) and (3) merely by explicitly mentioning the use of a computer or a computer-readable storage medium?

(b) If Question 2(a) is answered in the negative, is a further technical effect necessary to avoid exclusion, said effect going beyond those effects inherent in the use of a computer or data storage medium to respectively execute or store a computer program?"

Admissibility

11.1 Firstly the question has to be interpreted again, although its intention is in this case fairly clear. While the question says "merely by explicitly mentioning", it may be presumed that the referral does intend there to be a functional relationship, such as, "Method of operating a computer according to program X".

11.2 The referral argues that "claims for a computer program and a computer implemented method can be seen

as having an identical scope," and also that "the scope of a method claim would encompass a computer program for carrying out that method," (both referral, page 8), which would not appear to be quite the same thing, since the latter suggests that the scope of the method claim could be greater than that of a claim to a computer program. Reference is then made to the assertion in T 258/03 that any method involving technical means is not excluded from patentability (see Headnote 1). Given the equivalence of method and program claims, this is said to be inconsistent with the requirement in T 1173/97 that programs for computers must show a "further technical effect" in order to escape exclusion from patentability under Article 52(2) EPC.

11.2.1 The argument that computer program claims and computer implemented method claims have identical scope is as follows:

"Method claims are, in essence, a series of instructions or steps which are to be carried out by any capable entity (this could be a person, a machine, a combination thereof or indeed a computer). A computer implemented method corresponds to the specific case of the entity for carrying out the steps being a computer. In the same way a computer program is a series of instructions or steps, constituting a method, whereby the instructions or steps are carried out by a computer. Thus claims for a computer program and a computer implemented method can be seen as having an identical scope," (referral, page 8).

It is to be noted that this argumentation is based on the features claimed actually being the same, rather than any considerations of the protection conferred, in the sense of e.g. Article 123(3) EPC.

11.2.2 There seem to be two logical weaknesses in the argumentation. The first is the assertion that a method can be divorced from the device that it is (to be) carried out on, which is made as a general statement, not limited to computer implemented methods. This is palpably not the case; "A method of operating a shoe polishing machine comprising placing a shoe in a position touching a surface rotatable in a direction ..." clearly requires the presence and involvement of the shoe polishing machine.

11.2.3 The second logical weakness seems to be a confusion between a set of instructions for carrying out steps and the steps themselves. This is already present in the "Definitions" section of the referral ("A computer program is a series of steps (instructions) ..."). There is a general distinction in logic to be made between an object and a name or description of the object. Consider the following argument:

Tigers eat meat. Meat is a word. Therefore tigers eat words.

Clearly there must be an error in this argument. It occurs because "meat" is being used differently in the two premises. In the second premise what is being discussed is not the substance meat, but the name of the substance. These are two different things, and the usual way of distinguishing them is to put the name in

quotation marks. For a famous but more complicated example of this kind of wordplay see *Lewis Carroll's* "Through the Looking Glass (and What Alice Found There)", search expression, "The name of the song is called". In such a complicated situation it is easy to confuse names or descriptions and the things they refer to.

11.2.4 In the present case there is a logical distinction between a method carried out by a computer and the sequential list of instructions which specify that method. This distinction is real; consider for example a program which contains an instruction to increment the value of a variable. There may be only one such instruction in the program, but if it occurs inside a loop (e.g. a "while" statement) the corresponding method carried out by a computer may involve the increment step being carried out many times. It is moreover possible to talk of a computer loaded with a set of instructions or of a computer-readable medium storing a set of instructions. The concepts of a computer (or any other machine) "loaded" with a method, or a computer-readable medium "storing" a method, appear to be meaningless. The only way a meaning can be assigned to these concepts is to assume that they are elisions of, respectively, a computer loaded with and a computer-readable medium storing instructions to carry out a method.

11.2.5 Since formulations like "a program loaded on a computer" and "a disk storing a computer program" are commonplace in the art, the Enlarged Board considers that the skilled person understands the word "program" to refer to the sequence of instructions specifying a

method rather than the method itself. (It may be noted that although very few of the *amicus curiae* briefs addressed this point, those that did agreed with this position, sometimes in rather forceful terms.)

11.2.6 The referral's confusion on this point seems to arise from its equating a method claim, which is a description (or at least delimitation) of a method, with the method it delimits: "Method claims are, in essence, a series of instructions or steps ... In the same way a computer program is a series of instructions or steps, constituting a method, whereby the instructions or steps are carried out by a computer. Thus claims for a computer program and a computer implemented method can be seen as having an identical scope."

11.2.7 While on a correct interpretation there is a distinction between a computer program and the corresponding computer-implemented method, it is conceivable that there is nonetheless a divergence in the case law of the Boards of Appeal, resulting from a false usage by Boards of the word "program". The referral asserts that two decisions take the same view as it does that a claim to a computer program has the same scope as a claim to a computer implemented method (or that the method encompasses the program), namely T 1173/97 at Reasons, point 9.6, second paragraph, lines 1 to 3, and T 38/86, IBM (OJ EPO 1990, 384), Reasons, point 14 (referral, page 8). Even though the argument made in the referral that a program is the same as a method is not convincing, it is nonetheless necessary to consider whether Boards have in fact used

the expression "computer program" to mean a method in the cases where such use is asserted in the referral.

11.2.8 The first citation (i.e. T 1173/97 at Reasons, point 9.6, second paragraph, lines 1 to 3) is, "It is self-evident that a claim to such a computer program product must comprise all the features which assure the patentability of the method it is intended to carry out when being run on a computer." There is however no problem in interpreting this as being a reference to the instructions which make up the program. It does not imply that the Board in T 1173/97 necessarily saw the features of a claim to a computer program product as being method steps. Indeed the sentence which immediately follows the cited one gives the opposite impression: "When this computer program product is loaded into a computer, the programmed computer constitutes an apparatus which in turn is able to carry out the said method." This would appear to indicate that the Board in that case saw computer programs in the same way as the Enlarged Board does.

11.2.9 The second citation (i.e. T 38/86, IBM, Reasons, point 14) is, "Although a computer program is not expressly recited in Claim 1, it is clear to a reader skilled in the art that the claim covers the case in which a computer program is used and, indeed, in the only embodiment disclosed in the application the text processing system is controlled by a set of programs and data stored in memory." Claim 1 was a method claim. However this does not mean that a computer program is a method, merely that, as it says, the claim could be satisfied by the use of a computer program. The shoe polishing method mentioned above may be satisfied by a

particular use of the shoe polishing machine, but this does not mean that claims to the machine and to the method have the same scope or that the scope of the method encompasses the scope of the machine. If anything the scope of (in the sense of protection conferred by) a claim to the machine encompasses the scope of a claim to a method of using the machine - see G 2/88 (OJ EPO 1990, 93, Headnotes 1 and 2).

11.3 Thus no divergence in the case law supporting this question has been identified by the referral and the question is therefore not admissible.

12. **Question 3**

"(a) Must a claimed feature cause a technical effect on a physical entity in the real world in order to contribute to the technical character of the claim?

(b) If Question 3(a) is answered in the positive, is it sufficient that the physical entity be an unspecified computer?

(c) If Question 3(a) is answered in the negative, can features contribute to the technical character of the claim if the only effects to which they contribute are independent of any particular hardware that may be used?"

Admissibility

12.1 The referral argues that a divergence arises as follows: "According to decisions T 163/85 [BBC, OJ EPO 1990, 379] and T 190/94 [Mitsubishi, dated 26 October

1995], a technical effect on a physical entity in the real world was required. This was however not the case in T 125/01 [Henze, dated 11 December 2002] and T 424/03. In these decisions the technical effects were essentially confined to the respective computer programs," (referral, page 10).

12.2 There are two evident problems with this assertion. The first is that the referred question relates to individual features, rather than the claimed subject-matter as a whole. The referral does not specify, and the Enlarged Board cannot identify, any passage in the cited decisions relating to the individual features. Indeed the referral does not even mention the fact that the question relates to individual features in its discussion of the alleged divergence.

12.2.1 This is an important point. The case law of the Boards of Appeal as a whole is consistent in considering all the features that are claimed. As mentioned above the Boards have always avoided approaches which involve weighting of features or a decision which features define the "essence" of the invention. It is true that the COMVIK/Hitachi approach to deciding whether there is an inventive step may involve ignoring some features, but the method starts with a consideration of all the features together to determine whether the claimed subject-matter has a technical character. Only once this determination has been made can the Board turn to the question of which claimed features contribute to that technical character and therefore should be taken into account for the assessment of whether there is an inventive step.

12.2.2 It is in fact a well-established principle that features which would, taken in isolation, belong to the matters excluded from patentability by Article 52(2) EPC may nonetheless contribute to the technical character of a claimed invention, and therefore cannot be discarded in the consideration of the inventive step. This principle was already laid down, albeit in the context of the so-called "contribution approach", in one of the earliest decisions of the Boards of Appeal to deal with Article 52(2) EPC, namely T 208/84, VICOM (Reasons, point 4 ff.).

12.3 The second problem with the alleged divergence is that the decisions T 163/85 and T 190/94, said in the referral to require a technical effect on a physical entity in the real world, simply did not do so. They merely accepted this as something sufficient for avoiding exclusion from patentability; they did not state that it was necessary. The referral does not identify any passages requiring such an effect and the Enlarged Board cannot find any.

12.4 Thus there is no divergence. The other two decisions cited considered that there were technical effects; whether the Boards concerned considered that these technical effects were on a physical entity in the real world is irrelevant.

12.5 This question is therefore also inadmissible.

13. **Question 4**

"(a) Does the activity of programming a computer necessarily involve technical considerations?

(b) If Question 4(a) is answered in the positive, do all features resulting from programming thus contribute to the technical character of a claim?

(c) If Question 4(a) is answered in the negative, can features resulting from programming contribute to the technical character of a claim only when they contribute to a further technical effect when the program is executed?"

Admissibility

13.1 Again the question needs some interpretation. The Enlarged Board supposes that "the activity of programming a computer" is intended to relate to the intellectual activity of working out what are the steps to be included in a computer program rather than the simple physical activity of entering a program into some computer.

13.2 The referral asserts (on pages 11 and 12), correctly in our view, that T 1177/97, SYSTRAN, dated 9 July 2002, considers that programming always involves technical considerations, at least implicitly, and that T 172/03, Ricoh, dated 27 November 2003, assumes the same in that it considers the skilled person, who, it is emphasised, is a technical expert, to be a software project team, consisting of programmers. On the other hand, T 833/91, IBM, dated 16 April 1993,

T 204/93, AT&T, dated 29 October 1993, and T 769/92, Sohei, OJ EPO 1995, 525, are said to consider the programmer's activity, programming, to be a mental act, falling within the exclusions of Article 52(2) EPC.

13.3 However, there is no contradiction between these positions, as may be seen by considering the same case in a non-controversial field, for example bicycle design. Designing a bicycle clearly involves technical considerations (it may also involve non-technical, e.g. aesthetic, considerations) but it is a process which at least initially can take place in the designer's mind, i.e. it can be a mental act and to the extent that it is a mental act would be excluded from patentability, just as in the cited cases T 833/91, T 204/93 and T 769/92 (cf. also T 914/02, General Electric, dated 12 July 2005, Reasons, point 2.3 and T 471/05, Philips, dated 06 February 2007, Reasons, points 2.1 and 2.2).

13.4 Hence the question does not satisfy the requirement for a divergence in the case law and is therefore inadmissible.

13.5 While the referral has not actually identified a divergence in the case law, there is at least the potential for confusion, arising from the assumption that any technical considerations are sufficient to confer technical character on claimed subject-matter, a position which was apparently adopted in some cases (e.g. T 769/92, Sohei, Headnote 1). However T 1173/97, IBM sets the barrier higher in the case of computer programs. It argues that all computer programs have technical effects, since for example when different

programs are executed they cause different electrical currents to circulate in the computer they run on. However such technical effects are not sufficient to confer "technical character" on the programs; they must cause further technical effects. In the same way, it seems to this Board, although it may be said that all computer programming involves technical considerations since it is concerned with defining a method which can be carried out by a machine, that in itself is not enough to demonstrate that the program which results from the programming has technical character; the programmer must have had technical considerations beyond "merely" finding a computer algorithm to carry out some procedure.

13.5.1 Defining a computer algorithm can be seen in two different lights. On the one hand it may be seen as a pure mathematical-logical exercise; on the other it may be seen as defining a procedure to make a machine carry out a certain task. Thus for example *Knuth*, in "The Art of Computer Programming", Volume 1 / Fundamental Algorithms, second edition, 1973, gives a purely abstract mathematical definition of an algorithm, and then immediately goes on to state that, "There are many other essentially equivalent ways to formulate the concept of an effective computational method (for example, using Turing machines)," (sentence bridging pages 8 and 9). *Turing*, in "On Computable Numbers, with an Application to the Entscheidungsproblem", proved a purely mathematical result but did so by defining a hypothetical, but plausible, machine to carry out algorithms ("The Essential Turing", ed. *B.J. Copeland*, Clarendon Press, Oxford, 2004, pages 58-90). Depending on which of

these views is favoured the question whether computer programming always involves "technical considerations" may be answered negatively or positively. Either view may apparently be genuinely held, as may be seen from the lack of consensus in the *amicus curiae* submissions; which one is held depends on one's intuitive notion of the term "technical". It was apparently the intention of the writers of the EPC to take the negative view, i.e. to consider the abstract formulation of algorithms as not belonging to a technical field (see e.g. the reference to the *travaux préparatoires* in the referral on page 12). In T 1173/97 the Board concentrated on the effect of carrying out an algorithm on a computer, noting that there were always technical effects, which led the Board, since it recognised the position held by the framers of the Convention, to formulate its requirement for a "further" technical effect. Only if a computer program, when run, produced further technical effects, was the program to be considered to have a technical character. In the same way, it would appear that the fact that fundamentally the formulation of every computer program requires technical considerations in the sense that the programmer has to construct a procedure that a machine can carry out, is not enough to guarantee that the program has a technical character (or that it constitutes "technical means" as that expression is used in e.g. T 258/03, Hitachi). By analogy one would say that this is only guaranteed if writing the program requires "further technical considerations".

Conclusion

For these reasons it is decided that:

The referral of 22 October 2008 of points of law to the Enlarged Board of Appeal by the President of the EPO is inadmissible under Article 112(1)(b) EPC.

The Registrar The Chairman

W. Roepstorff P. Messerli