ARTICLE

A sun-tanned or 3D smurf[1]? Patentability of computer programs in Europe

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Background

The European Patent Convention (EPC),[3] the law which governs the granting of patents throughout much of Europe, stipulates that computer programs are not patentable 'as such'. The relevant part of the EPC, Article 52, reads as follows:

(1) European patents shall be granted for any inventions, in all fields of technology, provided that they are new, involve an inventive step and are susceptible of industrial application.

(2) The following in particular shall not be regarded as inventions within the meaning of paragraph 1:

    (a) discoveries, scientific theories and mathematical methods;

    (b) aesthetic creations;

    (c) schemes, rules and methods for performing mental acts, playing games or doing business, and programs for computers;

    (d) presentations of information.

(3) Paragraph 2 shall exclude the patentability of the subject-matter or activities referred to therein only to the extent to which a European patent application or European patent relates to such subject-matter or activities as such.[4]

The deletion of the exclusion from patentability of computer programs was considered and rejected when the EPC was most recently revised in 2000.[5] Thus computer programs (as such) remain unpatentable under the EPC—except that they are *not* apparently unpatentable in the view of the European Patent Office's Technical Board of Appeal (TBoA) 3.5.01. For example, the following is a claim in a European patent which was granted following a successful appeal[6] by the patent applicant, IBM, to TBoA 3.5.01:

A computer program comprising program code means for performing all the steps of any one of the claims 1 to 13 [these are claims to a method of resource recovery in a computer system] when said program is run on a computer.[7]

This is a claim to a computer program as such, if the words 'as such' are given their normal and common sense meaning. However, the examiners of patent applications in the EPO should apply the EPC as inter-

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Key issues

- The Enlarged Board of Appeal (EBoA) of the European Patent Office in May 2010 handed down its opinion[2] on a referral by the former President of the EPO, Alison Brimelow, on the patentability of computer-related inventions, more particularly computer programs.

- The EBoA refused to accept the referral and in so doing, in our opinion, overrode the correct interpretation of the 'as such' provision of Article 52(3) of the European Patent Convention (EPC), requiring that interpretation to be supplemented by an interpretation which has no basis in the legislative history of the EPC, and even extended that unsupported interpretation in such a way as to reduce further the effects of the exclusions from patentability found in Article 52(2) EPC.

- As we argue in this article, this leaves the position even more unclear as to the proper basis

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1 Depending on your point of view, a lovable or irritating blue-skinned humanoid in Belgian cartoons <http://www.smurf.com/smurf.php/www/home/en> accessed 2 June 2010.

2 G-3/08 Programs for computers. Not yet published, <http://documents.epo.org/projects/babylon/eponet.nsf/0/DC6171F182D8B65AC125772100426656/$File/G3_08_Opinion_12_05_2010_en.pdf> accessed 2 June 2010.

3 European Patent Office, *Convention on the grant of European patents (European Patent Convention)* (13th edn European Patent Office, Munich 2007).

4 European Patent Office, above, n 5 at 80.

5 The EPC before revision is referred to as EPC 1973, and after revision as EPC 2000. European Patent Office, above, n 3, sets out the text of EPC 2000.

6 T-1173/97 Computer program product/IBM [1999] OJ EPO 609.

7 EP-B-457112, claim 20.

preted by the Boards of Appeal, even when such interpretation appears illogical, and problematic results may therefore occur.

A computer program is a set of instructions which, when followed by a computer, causes an effect. For example, an image processing computer program may cause the computer to transform a raw image data set (pixel coordinates plus pixel intensity plus pixel colour: x, y, i, c) into an enhanced image. We illustrate this with reference to the smurfs of this paper's title. One program might serve to detect the blue skin in an image of a smurf and change the pixel colour to mauve to yield an image of a mauve-skinned (i.e. sun-tanned) smurf. This, we suggest, is an example of a program performing a technical function to produce only an aesthetic effect. By contrast, another program operating on the same data set might yield a dual data set which, when the image is viewed through appropriate glasses, appears to present the blue-skinned smurf in 3D: this exemplifies a program again performing a technical function but to produce a technical effect.[8]

However, the examiners of patent applications in the EPO should apply the EPC as interpreted by the Boards of Appeal, even when such interpretation appears illogical, and problematic results may therefore occur

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When traded, a computer program is always associated with, loaded onto, a carrier, eg a CD-ROM. Thus potential patent claims to a computer program might read as follows:

1. A computer program comprising program code which when run on a computer and applied to the data set for a smurf image causes the data set for a corresponding sun-tanned smurf image to be generated.

2. A CD-ROM having recorded thereon a computer program comprising program code which when run on a computer and applied to the data set for a

smurf image causes the data set for a corresponding sun-tanned smurf image to be generated.

3. A computer program comprising program code which when run on a computer and applied to the data set for a smurf image causes the data set for a corresponding 3D smurf image to be generated.

4. A CD-ROM having recorded thereon a computer program comprising program code which when run on a computer and applied to the data set for a smurf image causes the data set for a corresponding 3D smurf image to be generated.

Before commenting on the interpretations of Article 52(2) and (3) EPC in the decisions which prompted the referral to the EBoA, we should make it clear that we consider the exclusion from patentability of computer programs inappropriate; TBoA 3.5.01 has 'simply' been trying to find ways to limit the effect of this inappropriate exclusion. Computer programs can be highly technical and innovative products which, when run, achieve highly desirable technical effects. There is no apparent reason why this area of technology should be discriminated against on the ground that inventions made within it simply are not patentable inventions. Moreover, since it has been settled law for decades[9] that Article 52(2) EPC has nor excluded from patentability methods involving the use of computer programs and computers under operational control by computer programs, this field of technology is not regarded as a whole as outside the ambit of patents.

The topic of this article is not the appropriateness of the exclusion but rather, given its retention in EPC 2000, the manner in which it should be interpreted and given effect. To this end, the following statements should be borne in mind:

> [C]omputer programs as such, independent of [a practical application] …, are not patentable [under the EPC] irrespective of their content, i.e. even if that content happened to be such as to make it useful.[10]

This statement of TBoA 3.5.01 supports the appropriateness of a normal common sense approach to interpreting the words 'as such' in Article 52(3) EPC.

> Since the only conceivable use for a computer program is the running of a computer, the exclusion from patentability of programs for computers [under the EPC] would be

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2   G-3/08 Programs for computers. Not yet published, <http://documents. epo.org/projects/babylon/eponet.nsf/0/ DC6171F182D8B65AC125772100426656/$File/G3_08_Opinion_12_05_ 2010_en.pdf> accessed 2 June 2010.

8   While some readers may consider both programs to produce only aesthetic effects or both to produce technical effects, we ask them to accept our interpretation in order for visualize concrete examples of programs with and without technical character. *Some* programs must, for

EPC purposes, be void of technical character or the exclusion of Art 52(2) EPC would be without effect, which cannot be the case.

9   See, for example, T-208/84 Computer-related invention/VICOM [1987] OJ EPO 14.

10 T-204/93 System for generating software source code components/AT&T, at para 3.13, <http://legal.european-patent-office.org/dg3/biblio/ t930204eu1.htm> accessed 2 June 2010.

effectively undermined if it could be circumvented by including in the claim a reference to conventional hardware features, such as a . . . memory . . . , which, in practice are indispensable if the program is to be used at all.[11]

In this later statement, TBoA 3.5.01 suggested that the exclusions from patentability should not be avoidable simply by the skill of the patent attorney in drafting the claims, in other words that the exclusions must be construed to have some 'teeth'.

> To restrict the application of [a provision of the EPC excluding certain matters from patentability] . . . to what the applicant chooses explicitly to put in his claim would have the undesirable consequence of making avoidance of the patenting prohibition merely a matter of clever and skilful drafting of such claim.[12]

Those words, articulated recently by the EBoA, the EPO's highest instance, appear to confirm TBoA 3.5.01's previous intuitive understanding that exclusions should not simply be emasculated.

> [EPO] boards of appeal cannot assume the role of legislator. They have to apply the law as it stands and cannot strive to meet wishes which are incompatible with the provisions of the European Patent Convention.[13]

This is a comment by Paul van den Berg, former chairman of TBoA 3.5.01 and a long-standing member of the EBoA. The comment predates the decisions from TBoA 3.5.01 which are at the centre of the G-3/08 referral but seems to identify correctly the constraints under which the EPO Boards of Appeal should operate.

> [I]t by no means follows that because of pressure from applicants, the grant of patents for excluded categories should be allowed or that excluded categories (particularly . . . computer programs) should be construed narrowly. Just as with arms, merely because people want them is not sufficient reason for giving them.[14]

Paul van den Berg's previous words are thus fully supported here by Lord Justice Jacob of the England and Wales Court of Appeal.

> The decisions of the EPO Boards of Appeal are mutually contradictory. To say that is not to criticise anyone. On the

contrary the Boards of Appeal have each done what they think is right in law - as befits tribunals exercising a judicial function. But the time has come for matters to be clarified by an Enlarged Board of Appeal.[15]

This comment also from Jacob LJ supports the argument that the G-3/08 referral was timely and that a thorough review and clarification was desirable as to the legal basis for accepting or rejecting claims directed explicitly or indirectly to excluded subject matter.

T-1173/97 Computer program products/IBM[16] and T-424/03 Clipboard formats I/MICROSOFT[17]

We have discussed elsewhere[18] the development by the EPO's TBoAs of the case law relating to the patentability of computer-related inventions; that development is not the subject of this article. However, the TBoAs have developed two current approaches to the manner in which Article 52(2) EPC may exclude computer programs from patentability: the 'technical character' approach and the 'any hardware' approach.

These approaches replaced the earlier 'contribution' approach, which in our opinion was incorrect.[19] That approach is best illustrated by what we term a 'mixed media' claim, in which the invention is defined as the combination of two components, one of which is excluded from patentability by Article 52(2) EPC and the other of which is not excluded, for example 'A CD-ROM [not excluded] having recorded thereon a computer program [excluded]'. Under the 'contribution' approach, the novelty and inventiveness of the claimed subject-matter overall could not derive from the excluded component. Thus, CD-ROMs being known, the claim would be rejected.

T-1173/97 IBM may be regarded as the *magnum opus* of TBoA 3.5.01, the EPO's first clear computer program-specific exposition of its currently dominant approach to the exclusions from patentability of Article 52(2) and (3) EPC, the 'technical character' approach. Under this reasoning, Article 52(2) EPC serves only to exclude subject-matter which has no 'technical character', by virtue of the meaning accorded to the words 'as

11 T-38/86 Text processing/IBM [1990] OJ EPO 384, at para 25.

12 G-2/06 Use of embryos/WARF [2009] OJ EPO 306, at 326.

13 Paul van den Berg, 'Patentability of Computer-software Related Inventions' in Members of the Enlarged Board of Appeal of the EPO, *The law and practice of the Enlarged Board of Appeal of the European Patent Office during its first ten years* (Carl Heymanns, Cologne 1996) 45.

14 Lord Justice Jacob, in *Aerotel Ltd v Telco Holdings & Ors* [2006] EWCA Civ 1371, at para 19.

15 Lord Justice Jacob, above, n 14, at para 25.

16 T-1173/97 Computer program products/IBM, above, n 6. [Hereinafter T-1173/97 IBM.]

17 T-424/03 Clipboard formats I/MICROSOFT. [Hereinafter T-424/03 MICROSOFT.] <http://legal.european-patent-office.org/dg3/biblio/t030424eu1.htm> accessed 2 June 2010.

18 Sigrid Sterckx and Julian Cockbain, 'The Patentability of Computer Programs in Europe: An Improved Interpretation of Articles 52(2) and (3) of the European Patent Convention' (2010) 13 JWIP 366–402.

19 The 'contribution' approach would have the undesirable effect of rendering many beneficial technological advances unpatentable. See Sterckx and Cockbain, above, n 18, at 375–6.

such' in Article 52(3) EPC.[20] Thus, in the 'technical character' approach, if a computer program has no technical character (eg the smurf sun-tanning program), it is a computer program as such and so is excluded by Article 52(2) EPC. By contrast, if a computer program has 'technical character' (eg the smurf 3D-ing program), it is not a computer program 'as such' and so is not excluded by Article 52(2) EPC. However, if this is the meaning of 'as such' in Article 52(3) EPC, it must equally apply to all the other subject-matter and activities listed in Article 52(2) EPC, for example discoveries and presentations of information. Moreover, the requirement for an invention to have 'technical character' is not present in the EPC and Pila[21] has argued convincingly that it was clearly not intended by the legislators responsible for the wording of EPC 1973.

TBoA 3.5.01, in T-1173/97 IBM, stated that 'computer programs are not excluded from patentability [by Art. 52(2) EPC] under all circumstances'.[22] The patent application considered by TBoA 3.5.01 in T-1173/97 IBM was duly granted as EP-B-457112 with the claim to the computer program which we described above. This ruling made it plain that, where a computer program did not have technical character, not only would claims to it as a program be excluded by Article 52(2) EPC, but so too would be claims to it on a carrier, eg a CD-ROM: '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'.[23]

TBoA 3.5.01, with a different set of appeal board members, created, or rather confirmed, the second, 'any hardware', approach to the exclusions of Article 52(2) EPC in T-424/03 MICROSOFT, handed down more than seven years later.[24] Under this approach, which we consider correct, the prohibition of Article 52(2) EPC is avoided where the subject matter of the claim does not, in itself, fall within one of the categories excluded 'as such'. Thus a claim to a CD-ROM carrying a computer program is a claim to a CD-ROM, not a claim to a computer program as such, so cannot be excluded by Article 52(2) EPC. Under this approach, mixed media claims as mentioned above are not excluded by Article 52(2) EPC.

Let us return to the smurf claims listed above:

1. A computer program comprising program code which when run on a computer and applied to the data set for a smurf image causes the data set for a corresponding sun-tanned smurf image to be generated.
2. A CD-ROM having recorded thereon a computer program comprising program code which when run on a computer and applied to the data set for a smurf image causes the data set for a corresponding sun-tanned smurf image to be generated.
3. A computer program comprising program code which when run on a computer and applied to the data set for a smurf image causes the data set for a corresponding 3D smurf image to be generated.
4. A CD-ROM having recorded thereon a computer program comprising program code which when run on a computer and applied to the data set for a smurf image causes the data set for a corresponding 3D smurf image to be generated.

Under the 'technical character' test of T-1173/97 IBM, claims 1 and 2 would be excluded by Article 52(2) EPC since the program of these claims has an aesthetic rather than technical effect, while claims 3 and 4 would not be excluded since the program there has a technical effect. Under the 'any hardware' test of T-424/03 MICROSOFT, claims 2 and 4 would not be excluded by Article 52(2) EPC since they are directed to a CD-ROM, which is something that is simply not excluded by Article 52(2) EPC. Here one should appreciate that, to be patentable, such claims would still have to pass the tests for novelty, inventive step, and industrial applicability.

An important question is therefore whether these 'technical character' and 'any hardware' tests are alternative or accumulative? If the former, there is clearly a divergence in the case law since claim 2 would pass one test but fail the other. If the latter, two different meanings are given to the words 'as such' in Article 52(3) EPC, something for which there is no basis, and again there is clearly a divergence in the case law.

20 'Technical character' cannot be something that a computer program inherently possesses as otherwise the exclusion of Art 52(2) EPC would be without effect. Technical character, in the context of computer programs must therefore mean achieving in operation a technical effect which must be other than the effects implicit to the operation of all computer programs.

21 Justine Pila, 'Dispute over the meaning of "invention" in Article 52(2) EPC - the patentability of computer-implemented inventions in Europe', 36 IIC 173–91 (2005).

22 T-1173/97 Computer program products/IBM, above, n 6, at para 9.4.

23 T-1173/97 Computer program products/IBM, above, n 6, at para 13.

24 TBoA 3.5.1 almost reached this point in its earlier decision T-931/95 Pension Benefit Systems where it concluded in consideration of a claim to a computer that 'An apparatus constituting a physical entity or concrete product suitable for performing or supporting an economic activity, is an invention within the meaning of Article 52(1) EPC.'

The EPO President's referral

While the President referred four questions to the EBoA, we are here concerned only with questions 1 and 2(a) as these most clearly highlight the interpretation of 'as such' in Article 52(3) EPC:

1. Can a computer program only be excluded as a computer program as such if it is explicitly claimed as a computer program?[25]

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?[26]

Sticking rigidly to the wording of these questions, under the 'technical character' doctrine as expressed in T-1173/97 IBM, the answers to both questions are 'no'. Under the 'any hardware' doctrine of T-424/03 MICROSOFT, the answers to both questions are 'yes'. Clearly there is a divergence.

The President's referral was made under Article 112(1)(b) EPC which reads as follows:

> In order to ensure uniform application of the law, or if a point of law of fundamental importance arises: ... the President of the European Patent Office may refer a point of law to the Enlarged Board of Appeal where two Boards of Appeal have given different decisions on that question.[27]

The EPO President's referral[28] in relation to the first question drew attention to T-1173/97 IBM and T-424/03 MICROSOFT. Since there was a divergence in the approaches to the interpretation of 'as such' in these decisions and the answers that would have been resulted from the questions, the referral should clearly have been admitted and answered. Unfortunately, and in our opinion incorrectly, the conclusion reached by the EBoA was that the referral was inadmissible.

Further shortcomings of the EBoA's Opinion

Whether or not the EBoA was correct in law in rejecting the President's referral on grounds other than the existence or otherwise of a divergence in EPO case law is not the subject of this article but has been commented on extensively by Pila[29] who argues that, other than on those grounds, the referral was also incorrectly deemed inadmissible.

The EPO is tasked with applying the EPC in examining patent applications and granting or refusing to grant European patents and in examining oppositions to granted European patents and maintaining or revoking the opposed patents. The decisions made may be appealed to a Board of Appeal, of which there are many, each focusing on a particular subject matter area. The Boards of Appeal are essentially courts and, in interpreting the EPC, they inevitably develop the law. Since the Boards of Appeal are not bound by each other's decisions, each may disagree with the others. To achieve clarity, a Board may refer a point of law to the EBoA, which may include members of the Boards of Appeal and may additionally include members who are judges in national courts of EPC member states.

If the EPO's President becomes aware of Board of Appeal decisions which appear to involve conflicting interpretations of the EPC, (s)he too may refer the relevant point of law to the EBoA for clarification. The ability of the President to do this, however, might seem to threaten the independence of the Boards of Appeal and the EBoA may refuse such referrals if it considers that there is no divergence in the supposedly conflicting decisions. It has done that before in G-3/95 Inadmissible referral.[30]

In the present case, over the years, TBoA 3.5.01 had developed a comfortable legal fiction allowing it to sidestep the exclusion from patentability of computer programs (an exclusion which, while we consider it inappropriate, was nonetheless retained when the EPC was revised in 2000). To that legal fiction, the 'technical character' approach, TBoA 3.5.01 later added a different test, the 'any hardware' approach. For the EBoA to reject the President's referral, it would have to argue either (1) that T-1173/97 IBM and T-424/03 MICROSOFT were not decisions of 'two Boards of Appeal' but of only one, even though their members were different, or (2) that the 'technical character' and 'any hardware' approaches were not divergent *and* no point of law of fundamental importance had arisen. The first option would have been difficult to adopt since in at least one earlier decision the EBoA had accepted a referral relating to decisions from the same TBoA but with different members.[31]

An arguable point of law of fundamental importance was the manner in which computer-related inventions, and in particular computer programs, might be patent-

25 G-3/08 Programs for computers, above, n 2, at para 10.

26 G-3/08 Programs for computers, above, n 2, at para 11.

27 European Patent Office, above, n 3, at 138.

28 Alison Brimelow, letter of 22 October 2008 to Peter Messerli, chairman of the EBoA <http://documents.epo.org/projects/babylon/eponet.nsf/0/DC6171F182D8B65AC125772100426656/$File/G3_08_en.pdf> accessed 2 June 2010.

29 Justine Pila, 'Software patents, separation of powers, and failed syllogisms: a cornucopia from the Enlarged Board of Appeal of the European Patent Office', University of Oxford Legal Research Paper Series No. 48/2010, <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1612518> accessed 2 June 2010.

30 G-3/95 Inadmissible referral [1996] OJ EPO 169.

31 G-1/04 Diagnostic methods [2006] OJ EPO 334.

able in view of the wording of Article 52(2) and (3) EPC. While computer programs are protected by copyright, its protection is weaker than patent protection. In the early decades of the development of today's large scale computer industry, computer programs were widely believed to be unpatentable, which may have been a contributing factor to the explosive nature of that development. To quote from Bill Gates of Microsoft: 'If people had understood how patents would be granted when most of today's ideas were invented and had taken out patents, the industry would be at a complete standstill today'.[32]

To understand the manner in which the EBoA has apparently resolved the divergence between the two decisions, it is helpful to consider the example which the Board gives in paragraph 10.6, namely 'A cup carrying a picture', ie a mixed media claim to the combination of cup (known but not excluded) and picture (new but excluded, eg as an aesthetic creation). In the final section of this paragraph, the EBoA states:

> According to the approach laid down by T 1173/97 [IBM], 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 . . . T 424/03 [MICROSOFT], has been characterised . . . as the 'any hardware' . . . approach'

If we substitute CD-ROM for cup and computer program for picture, we get to the conclusion that no claim to 'a CD-ROM having recorded thereon a computer program' can be rejected under Article 52(2) EPC. This is indeed the 'any hardware' approach of T-424/03 MICROSOFT. However, it is the CD-ROM and not the program that saves the claim from Article 52(2) EPC just as it is the cup rather than the picture in the EBoA's example. In this approach, the computer program need not have any technical effect for the claim to avoid exclusion under Article 52(2) EPC.

However, this is *not* the approach in T-1173/97 IBM, which considered some computer programs (and claims to such programs on a carrier) to be excluded from patentability by Article 52(2) and (3) EPC. In paragraph 10.2.3, the EBoA acknowledged this to be the case:

> Since the [T-1173/97 IBM] 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 misrepresentation by the EBoA of T-1173/97 IBM in paragraph 10.6 of its decision lies in considering the effect of T-1173/97 IBM to reside in the replacement of the 'contribution' approach by a 'technical character' approach in which the words 'as such' in Article 52(3) EPC are interpreted to mean that no claim having a feature which in use has technical effect can be rejected under Article 52(2) EPC, ie by a 'technical character' approach that extends beyond that approach as expressed in T-1173/97 IBM.

> *To understand the manner in which the EBoA has apparently resolved the divergence between the two decisions, it is helpful to consider the example which the Board gives*

The EBoA acknowledged that it did find a divergence between T-1173/97 IBM and T-424/03 MICROSOFT. This is identified in paragraph 10.7.2:

> Thus finally the [T-424/03 MICROSOFT] Board had arrived at a conclusion which clearly contradicted the position (or rather one of the positions) taken in T 1173/97[IBM]. T 1173/97 [IBM] 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. . .' . . . whereas T 424/03[MICROSOFT] 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. . .'.

In attempting to reconcile this notable difference, the EBoA found that the T-1173/97 IBM TBoA had not fully appreciated the effect of its new 'technical character' approach. The EBoA considered that the T-1173/97 IBM Board had failed to realize that a carrier would have had technical character and thus that the mixed media claim could not be rejected. That realization, still according to the EBoA, came with T-424/03 MICROSOFT. Thus according to the EBoA, the 'any hardware' approach of T-424/03 MICROSOFT is not to ask whether the claim is to something not listed in Article 52(2) EPC (ie carrier rather than program) but to ask whether any feature of the claimed subject-matter has technical character.

32 Quoted in F Washofsky, '*The Patent Wars: The Battle to Own the World's Technology*' (Wiley, New York 1994) 170.

TBoA 3.5.01, in T-424/03 MICROSOFT, expressed what we see to be the correct form of the 'any hardware' approach in relation to a method claim:

> Even though a method, in particular a method of operating a computer, may be put into practice with the help of a computer program, a claim relating to such a method does not claim a computer program in the category of a computer program. Hence, present [method] claim 1 cannot relate to a computer program as such.[33]

Here we consider that the TBoA, giving the words 'as such' their normal and common sense meaning, correctly interpreted Article 52(3) EPC in accordance with Article 31 of the Vienna Convention on the Law of Treaties,[34] a treaty the EBoA has long considered itself obliged to follow.

That 'technical character' is a *separate* matter from the test for whether subject-matter is excluded 'as such' by Article 52(2) EPC, is made clear by TBoA 3.5.01 in T-424/03 MICROSOFT when it continues from the passage quoted immediately above to comment that it

> *also* considers the claimed method steps to contribute to the technical character of the invention.[35]

The EBoA's extension of T-1173/97 IBM's 'technical character' approach arises from its consideration of whether the additional presence of excluded subject matter in addition to a feature with technical character could render a claim rejectable under Article 52(2) EPC. In this regard, the EBoA found that, if a claim to the technical feature alone (eg cup or CD-ROM) was acceptable, its limitation by recitation of a further feature could not make the claim rejectable: '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'.[36] However, this is at odds with the EPO case law on claims to plants and animals—a claim to 'a plant with blue flowers' is non-excluded but one to 'a rose plant with blue flowers and of variety X' is excluded.[37]

The distinction between the T-1173/97 IBM 'technical character' test, the T-424/03 MICROSOFT 'any hardware' test, and the EBoA's extended version of the 'technical character' test may best be illustrated by considering a piece of paper carrying spots of dry ink arranged to provide a set of smurf names. This might be claimed as 'dry ink' or 'spots of dry ink arranged to provide a set of smurf names', ie this latter claim being drawn to a presentation of information which as such is excluded under Article 52(2) EPC.

Under the IBM 'technical character' test, the first of these claims is not rejectable under Article 52(2) EPC (as ink has technical character), but the second is rejected under Article 52(2) EPC since the subject matter of the claim as a whole (information) has no technical character. Under the MICROSOFT 'any hardware' test, since the first claim is not to a presentation of information as such it is not rejected under Article 52(2) EPC. The second claim should, however, be rejected under Article 52(2) EPC since it is not to the combination of excluded (no technical character) and non-excluded (data carrier) but is as a whole to a presentation of information (which incidentally has no technical character). Under the EBoA's extended interpretation of the 'technical character' test, since the first claim to the ink cannot be rejected under Article 52(2) EPC, then neither too can the more limited claim to the ink in an information-presenting arrangement.

The EBoA's approach overrides the (in our view correct) 'any hardware' approach by causing technical character to be required. Moreover, it upholds the unsupported 'technical character' doctrine, which it effectively extends to deny all effect to the Article 52(2) EPC exclusions of presentations of information and of computer programs at least.

By 'at least' we would include, for example, the exclusion of discoveries. Consider the case of a blue fluorescent sand newly found in Bavaria, but usable in its natural state as an alternative to a child's night light. In use it has technical effect and thus could be claimed as 'blue fluorescent sand' (ie a claim covering a product of nature in the form in which it exists in nature). Even US patent law would reject such blue sand (as well as arrangement-of-ink) claims as non-statutory subject-matter.[38]

33 T-424/03 Clipboard formats I/MICROSOFT, above, n 17, at para 5.1.

34 Vienna Convention on the Law of Treaties, 1969, in United Nations Treaty Series, vol. 1155, 331, <http://untreaty.un.org/ilc/texts/instruments/english/conventions/1_1_1969.pdf> accessed 6 June 2010.

35 T-424/03 Clipboard formats I/MICROSOFT, above, n 17, at para 5.2 (emphasis added).

36 G-3/08 Programs for computers, above, n 2, at para 10.8.6.

37 See T-19/90 Onco-mouse/HARVARD [1990] OJ EPO 476; T-315/03 Transgenic animals/HARVARD [2006] OJ EPO 15; G-1/98 Transgenic plants/NOVARTIS II [2000] OJ EPO 111. In this context, to determine whether a second claim is a limited version of the first, it is necessary only to determine whether everything encompassed by the second must also be encompassed by the first. Thus all rose plants are plants, and all rose plants with blue flowers are plants with blue flowers, and so on.

38 See, for example, the discussion of the non-statutory nature of 'printed matter' in Debra Greenfield, 'Intangible or embodied information: The non-statutory nature of human genetic material', 25 *Santa Clara Computer & High Tech L J* 467 (2009), at 512–8, and Sweet DJ's discussion of the non-patentability of products of nature in *Association for Molecular Pathology et al v United States Patent and Trademark Office et al.,* 702 F. Supp. 2d 181 (SDNY 2010).

'Technical character' and 'field of technology'

Shortly before TBoA 3.5.01 gave its decision in T-1173/97 IBM, the WTO-TRIPS Agreement had come into effect bringing the requirement, in Article 27(1), that patents be available for inventions 'in all fields of technology'. This requirement, which was not present in EPC 1973, only came into force for the EPO when EPC 2000 came into effect in December 2007 since the words 'in all fields of technology' had been inserted into Article 52(1) EPC to achieve TRIPS compliance. In T-1173/97 IBM, the TBoA commented that: 'although TRIPS may not be applied directly to the EPC, the Board thinks it appropriate to take it into consideration'.[39]

We suggest that the IBM 'technical character' approach is an attempt to import the requirement of TRIPS Article 27(1) into EPO case law, without full appreciation of unintended side-effects, and that, just as the EBoA[40] has recently declared Swiss-type use claims[41] to be redundant and no longer permissible following the amendment of the EPC to allow purpose-limited product claims for second indications, so too should the 'technical character' test have been discarded as redundant following the entry into force of the amended version of Article 52(1) EPC in December 2007.

Perverse and unintended

By focusing on the divergence between the conclusions of T-1173/97 IBM and T-424/03 MICROSOFT on the ability of Article 52(2) EPC to exclude claims to a 'carrier carrying a computer program', rather than on the conclusion of T-1173/97 IBM that a claim to a computer program as such could escape Article 52(2) EPC by an interpretation (to our minds a perverse interpretation) of the words 'as such' in Article 52(3) EPC, the EBoA failed to notice the true divergence between T-1173/97 IBM and T-424/03 MICROSOFT, namely that one uses the perverse interpretation of 'as such' and the other uses the normal common sense interpretation.

In attempting to show that the two decisions did not differ dramatically, the EBoA has ended up not only (to our minds) misrepresenting the T-1173/97 IBM decision, but also extending the perverse interpretation of 'as such', with the perhaps unintended consequence of emasculating much of the effect that Article 52(2) EPC was clearly intended to have. As the former chairman of TBoA 3.5.01 and member of the EBoA, Paul van den Berg, stated in 1996:

> [EPO] boards of appeal cannot assume the role of legislator. They have to apply the law as it stands and cannot strive to meet wishes which are incompatible with the provisions of the European Patent Convention.[42]

Equally, as Pila concluded in a 2010 paper:

> The only hope is for the European or national Legislatures to recognize that 'judiciary-driven legal development' within the EPO has met its limits, with the result - as the [EBoA] itself suggested - that 'it is time for the legislator to take over'.[43]

While the authors approach the interpretation of Article 52(2) and (3) EPC from the position of the life sciences rather than that of computer science, the 'as such' provision is applicable to all the subject matters listed in Article 52(2) EPC and must take the same meaning for all. Computing is not an exceptional case for the interpretation of patent law.

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39 T-1173/97 Computer program product/IBM, above, n 6, at para 2.3.

40 G-2/08 Dosage regime/ABBOTT RESPIRATORY. Not yet published, <http://documents.epo.org/projects/babylon/eponet.nsf/0/1c9976e4866080a2c12576cf00417e3e/$FILE/G2_08_en.pdf> accessed 6 June 2010.

41 Claims of the format 'use of drug X for the manufacture of a medicament for use in method of medical treatment Y'. Such claims were permitted for so-called second medical indications, where a known drug was found to be useful in a new medical treatment—claims to a new method of medical treatment itself not being acceptable under the EPC.

42 Paul van den Berg, above, n 13.

43 Justine Pila, above, n 29 at 17 (footnotes omitted).