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RECENT DEVELOPMENTS AND CHALLENGES IN THE PROTECTION OF INTELLECTUAL PROPERTY RIGHTS

SOFTWARE INVENTIONS AND BUSINESS METHODS

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INTRODUCTION

Over the last years we have experienced a very rapid increase of the number of patent applications in general and in some specific technical fields in particular. These fields, sometimes referred to as “high tech” are characterized by a very fast technical development, including areas such as telecom, bio-technology and of course the computer area in its broadest sense (in this context a more appropriate term would be computer implemented inventions). The ever-increasing importance of patents in software and commercial fields have made necessary a review of the procedures for examining patent applications. The purpose of this paper is to present the current procedure adopted in the EPO and also to try to give a short perspective of future developments.

BACKGROUND IN EUROPEAN PATENT CONVENTION (EPC)

Let me start with a brief summary of the legal background as set out in the European Patent Convention. The basis can be found in Article 52(1) specifying that:

> "*European patents shall be granted for any inventions which are susceptible of industrial application, which are new and which involve an inventive step.*"

The term “invention” is not defined in the EPC, but Article 52(2) includes a list of things which are not considered to be inventions:

> “*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.*”

To qualify this exclusion principle, Article 52(3) goes on to state:

> “*The provisions of paragraph 2 shall exclude patentability of the subject-matter or activities referred to in that provision only to the extent to which a European patent application or European patent relates to such subject-matter or activities as such.*”

An additional problem is that the EPC does not further define what is to be understood as an invention. The EPC, however, does include various references, indicating that an invention is required to have technical aspects:

Rule 27(1): “The description shall:

(a) *specify the technical field to which the invention relates*;
...
(c) *disclose the invention, as claimed, in such terms that the technical problem (even if not expressly stated as such) and its solution can be understood, ...*”

Rule 29(1): “The claims shall define the matter for which protection is sought in terms of the technical features of the invention … .”

Rule 30(1): "*Where a group of inventions is claimed in one and the same European patent application, the requirement of unity of invention referred to in Article 82 shall be fulfilled only when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical features. The expression 'special technical features' shall mean those features which define a contribution which each of the claimed inventions considered as a whole makes over the prior art.*"

Again, the EPC does not define what is meant by the word "technical."

Clearly, these Articles and Rules require interpretation. Guidance for that interpretation is given in the decisions of the EPO Boards of Appeal (BoA), and formulated into an examination policy by the Directorate General responsible for examination, DG2. This policy forms the basis for the relevant sections of the "Guidelines for Examination in the EPO."

3. TECHNICAL

With respect to technical two different concepts are of importance for the understanding of the procedures, namely, "technical effect" and "technical contribution."

3.1. Technical effect

As regards the term "technical effect" it should be noted that this is the term mainly used by the Boards of Appeal, although "technical character" also occurs in decisions and is perhaps clearer. According to the recent jurisprudence of the BoA, in order not to be excluded from patentability by Articles 52(2) and (3) EPC, claimed subject-matter must exhibit a "technical effect." This test is a priori, i.e. it is not to be determined by comparison with the prior art, so that the technical effect of an invention need not be new. In the special case of computer-implemented inventions, the Boards of Appeal have specified that there must be a "further technical effect," i.e. one going beyond the normal physical effects seen when programs are run. This requirement for a <u>further</u> technical effect is derived by the BoA from the fact that programs for computers, as such, are excluded from patentability by Articles 52(2)(c) and (3) EPC. Without the requirement for a further technical effect (as opposed to simply a technical effect, which every program has) this exclusion would be meaningless.

3.2. Technical contribution

The second concept, the "technical contribution" relates to what is claimed when it is compared with the state of the art. In older BoA cases the lack of a technical contribution to the art was often given as the reason for denying the patentability of claimed matter under Articles 52(2) and (3). However, on the other hand, in about half the cases where exclusion under these Articles had been considered, an a priori "technical character" approach had been taken (see "*The Law and Practice of the Enlarged Board of Appeal of the European Patent Office during its first ten years*", Carl Heymanns Verlag, 1996, 29-47; Paul van den Berg: "*Patentability of computer-software-related inventions*"). This unsatisfactory situation was commented on in T1173/97 (Official Journal 1999, 609), Reasons, 8, where it was considered that "determining the technical contribution an invention achieves with respect to the prior art is ... more appropriate for the purpose of examining novelty and inventive step than for deciding on possible exclusion under Article 52(2) and (3)." This is the position now proposed to be taken in examination.

4. PRACTICAL APPROACH IN THE EXAMINATION PROCEDURE

4.1. Software related inventions

The expression “computer-implemented inventions” is intended to cover claims which specify computers, computer networks or other conventional programmable apparatus whereby prima facie the novel features of the claimed subject-matter are realised by means of a new program or programs.

According to the present approach, in order to decide whether a computer-implemented invention satisfies the requirements of Article 52(1) EPC, the examiner proceeds directly to the examination of novelty and inventive step. This is done as specified in the Guidelines for Examination in the European Patent Office C-IV, 9.5. In particular, in the examination for inventive step the objective technical problem solved by the matter claimed considered as a whole when compared with the closest prior art is to be determined. In the current context, the point to be emphasised is that the problem, and thus the solution too, must be technical. If no such technical problem can be established, but only for example an aesthetic or a commercial problem, then no inventive step, as opposed to for example an artistically or commercially innovative step, can be acknowledged. Moreover the technical problem and its claimed solution must not be obvious.

There is no need to consider whether the invention provides a “further technical effect” since if this examination scheme is followed no patent will be granted which should have been refused for lack of further technical effect. This is because the existence of an objective technical problem overcome is itself sufficient proof of the requisite further technical effect. A new solution of a technical problem implies a new “technical effect,” and in the case of computer-implemented inventions a new “further technical effect” (since by definition, the “normal physical effects” of running a program must be conventional). Hence, if an invention provides a new solution to a technical problem, it must satisfy the requirement for “technical character.”

Further, this scheme of examination will not lead to refusals where previously a patent would have been granted, since the requirement for an objective technical problem when examining for inventive step is well established. It is of course true that under this scheme claimed subject-matter may be refused for lack of an inventive step when it could also be refused for lack of a further technical effect, under Articles 52(2) and (3) EPC. However, it is clearly only necessary for a claim to fail to meet one of the requirements of the EPC for the application to be refused - arguments to the effect that it also fails to meet another requirement are redundant.

To emphasise this last point, suppose that it is found in a particular case that there is no inventive step, because there is no technical contribution to the art. There are two possibilities: (1) the claimed subject-matter does not show an inventive step AND does not have technical character; or (2) it does not show an inventive step BUT does have technical character. It is not necessary in examination to decide between these two possibilities - either way the claimed subject-matter does not satisfy the requirements of the EPC and is to be refused.

4.2. Business methods

Methods of doing business are, according to Article 52(2) EPC, not to be considered to be inventions. Although not explicitly stated, this exclusion is also considered to apply to a

wide range of subject-matters which, while not literally methods of doing business, share the same quality of being concerned more with interpersonal, societal and financial relationships, than with the stuff of engineering and applied science - thus for example, valuation of assets, advertising, teaching, choosing among candidates for a job, etc. The term “business methods” has become a generally used shorthand for all of these areas.

It is further remarked that it is clearly undesirable to create “special” schemes for certain fields, not applicable to others. It is therefore intended that the scheme laid out in what follows should be equally applicable to the other items on the list of Article 52(2) EPC, insofar as they have similar properties.

Claims for business methods can be divided into three groups:

(1) claims for a method of doing business in abstract, i.e. not specifying any apparatus used in carrying out the method;

(2) claims which specify computers, computer networks or other conventional programmable digital apparatus for carrying out at least some of the steps of the business method (“computer-implemented business methods”);

(3) claims which specify other apparatus (perhaps in addition to computers) e.g. mobile telephones. In the great majority of applications what is described would fall in the second of these groups. Thus while initial claims may sometimes fall in the first category, the applicant nearly always has the possibility to amend them to specify computer means for carrying out at least part of the method. Claims which fall in the third group are rare but by no means unheard of.

The following approaches to examination are to be applied in each of these cases:

(1) claims to abstract business methods are to be rejected on the grounds that they are excluded by Articles 52(2) and (3) EPC, since they are methods of doing business “as such”;

(2) Claims for computer-implemented business methods and claims for other technical implementations of business methods (i.e. category (3)) are to be treated in exactly the same way as computer-implemented inventions (see above).

4.3. The whole claim approach

The EPC makes various references to “technical features” and it would be easy to conclude that when analysing a claim the examiner should decide which features are technical and which are non-technical and discard the latter. However, such a procedure, at least performed a priori (without consideration of the objective problem), is not correct. The jurisprudence of the BoA makes it quite clear that the claimed subject-matter is to be considered as a whole and that claims may comprise a mixture of technical and non-technical features (e.g. T26/86, OJ 1988,19, “Koch & Sterzel”). The reason is immediately apparent when one considers the field of computer-implemented inventions - the only new features in a claim may be steps of a new computer program. However, whether the claimed subject-matter satisfies the requirements of the EPC depends on the circumstances, and in particular on whether this new program leads to a “further technical effect,” and further whether it leads to an unobvious technical contribution to the art. Thus, these features may or may not be “technical features,” a categorisation which can only be arrived at once an analysis of

technical character and technical contribution has been carried out. At that point, it may be remarked, there would seem to be little point in such categorisation.

Confronted with real "business method" claims, it is immediately clear that the same arguments apply. Features which are "non-technical" may be essential for the clear definition of the invention and its technical contribution to the art, and therefore these features must be taken into account and included in the claimed subject-matter.

5. FUTURE DEVELOPMENT

In the Diplomatic Conference last November the first steps were taken for a revision of the EPC. In the preparations for the Conference it was at length discussed to modify the listing of exclusions in Article 52(2) and, in particular, to delete the reference to computer programs. While finally no proposal was made along these lines it is nevertheless clear as set out above that the approach discussed is not directly influenced by a deletion or not of "computer program" in the listing in Article 52(2)(c) and (3). The important development and any further change or modification as regards the practical approach when examining computer implemented inventions, including business methods, can rather be expected to come from the interpretation of the word "technical."

All of this discussion has used the term "technical" as if it were clearly defined and well understood. In reality, this is not the case. As mentioned before, the EPC does not define this concept, and the main recurring problem for the BoA in cases relating to exclusion from patentability over the last twenty years has been to wrestle with the question of what isand what is not technical. Furthermore, it is quite clear that the concept of "technicality" has evolved over that time. Thus also no precise definition can be given here. This statement may seem unsatisfactory. However, it can be argued that the lack of a definition of "technical" in the EPC and therefore the existence of scope for the BoA to adapt it to unanticipated future technologies is a major strength of the EPC. The price paid must be a lack of certainty in borderline cases as to what will and will not be accepted.

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