A SENSIBLE APPROACH TO DETERMINE PATENTABILITY OF COMPUTER IMPLEMENTED INVENTIONS

Introduction

Software development is a field that witnesses various types of innovation. Some of the innovations may be regarded as technical innovations, while others may be non-technical in nature. However, often technical innovations and non-technical innovations are intertwined, whereas patent protection is accorded to inventions that are technical in nature. Therefore, patent office of various jurisdictions have faced challenges while examining software inventions, or what is generally known as Computer Implemented Inventions (CII).

Among many jurisdictions, India and the European Patent Convention (EPC) have statutes for preventing non-technical inventions from being patented. One may be tempted to even say that India leans towards the EPC approach of dealing with CII, both in terms of statute and patent office guidelines. However, in India the guideline for dealing with CII has been evolving over the years.

EPC's provisions concerning patentability of Computer-implemented inventions (CII)

The EPC excludes computer programs "in itself" from being patented. In effect, inventions which do not consist purely of computer programs and codes, but instead implement the programs in a device (hardware) may constitute potentially patentable subject matter. A CII is one which:

- involves the use of a computer, computer network or other programmable apparatus
- has one or more features realized wholly or partly by means of a computer program

While "programs for computers" are listed under excluded subject matter, the same may not be excluded from patentability if it is capable of bringing about, when running on or loaded into a computer or any hardware, substantial technical effect that goes beyond the "normal" physical interactions between the program (software) and the computer (hardware) on which it is run. A further technical effect which lends technical character to a computer program may exist

- in the control of an industrial process; or
- in the internal functioning of the computer itself or its interfaces under the influence of the program and could, for example, affect the efficiency.

However, a note should be made that the normal specifications of a computer or any hardware, for example, electrical currents, among others, do not contribute technical character to a computer program, and a further technical effect is needed. The further technical effect may or may not be known in the prior art. In other words, or in a layman's language, if any programs running in the computer is capable of bringing about certain remarkable result in the functioning or operation of the computer itself or any other hardware onto which such programs are loaded, then the subject matter, although includes computer programs, may be included under patentable subject matter.

A simple test to determine whether technical character exists in a claim covering CII would be to consider whether each feature or their combination lends any technical contribution to the claim.

To determine existence of technical contribution, one may check whether the claimed technical effect results in the computer being made to operate in a new way that is more efficient and effective. Further, if the resultant technical effect overcomes the objective technical problem, then the claim in question has "further technical effect".

If claimed subject-matter relating to a computer program does not have a technical character, the claim may be rejected. If the subject-matter passes the test for technicality, the examiner proceeds to the questions of novelty and inventive step.

Let's take a look at what happened in Apple Inc. and HTC Corporation concerning Apple's patent European Patent No. 2 098 948 (the '948 patent"). The '948 patent relates to computer devices with touch sensitive screens which are capable of responding to more than one touch at a time. The judge found claims 1 and 2 were invalid because they related to computer programs as such. The court of Appeal, however found the judge's decision erroneous and traversed the judge's decision. The specification addresses the problem associated with multi-touch interface. The Court of Appeal affirmed that the problem which the patent addresses, namely how to deal with multiple simultaneous touches on one of the new multi-touch devices, is essentially technical. The Court of Appeal further explains that the solution to this problem lies in a method of dividing up the screen of such a device into views and configuring each view as a multi-touch view or a single-touch view using flags with a specific functionality in the manner, and that the method concerns the basic internal operation of the device and applies irrespective of the particular application for which the device is being used and the application software which it is running for that purpose. Further, the Court stated that it causes the device to operate in a new

and improved way and it presents an improved interface to application software writers. Hence, the Court of Appeal asserted that invention does make a technical contribution to the art and its contribution does not lie in excluded matter.

Application of Problem-Solution Approach (PSA) for assessment of inventive step of claims that consists of both technical as well as non technical features

A common case with CII is that claims of such inventions may have a mix of technical and non-technical features. When assessing the inventive step of such a claim, those features which contribute to the technical character of the invention are taken into account. These may also include the features which, when considered individually, are non-technical, but in the context of the invention, contribute to producing a technical effect serving a technical purpose, thereby contributing to the technical character of the invention. However, if a feature contributes only to the solution of a non-technical problem, such a claim cannot support the presence of an inventive step.

The problem-solution approach is applied to mixed-type inventions so as to ensure that inventive step is acknowledged by taking into consideration all those features which contribute to technical character of the claim and not on the basis of features not contributing to the technical character of the invention.

Steps for applying problem-solution approach to mixed-type inventions:

- The features which contribute to the technical character of the invention are determined.
- Closest prior art is selected based on the features contributing to the technical character of the invention identified in the previous step.
- The differences from the closest prior art are identified.

The claim(s) as a whole is/are determined in order to identify and differentiate the features which make a technical contribution from those which do not.

If no differences (even non-technical difference) are found, an objection under Art 54 is raised. If the differences do not make any technical contribution, an objection under Art 56 is raised. If the differences include features that make technical contribution, then, the objective technical problem is formulated on the basis of the technical effect(s) achieved by these features. Further, if the claimed technical solution to the objective technical problem appears obvious to the person skilled in the art, an objection under Art 56 is raised.

A *prima facie* determination of the features contributing to the technical character of the invention is performed for all the features. The technical effects achieved by the differences over the selected closest prior art are determined and the extent to which the differences contribute to the technical character of the invention is analysed based on these technical effects. A detailed analysis may reveal that some features considered *prima facie* as not contributing to the technical character of the invention do, on closer inspection, appear to make such a contribution. The reverse situation is also possible. In such cases, the selection of the closest prior art might need to be revised.

While applying PSA to determine technical and non technical character of a claim, care should be taken to avoid missing any features that might contribute to the technical character of the claimed subject-matter.

Conclusion

In conclusion, claimed subject-matter is always considered as a whole when evaluating whether individual features contribute to its technical character. However, only that part of the subject-matter which is determined to contribute to its technical character is taken into account when assessing inventive step. As long as there is at least one technical feature, the whole claim has technical character, and is therefore not excluded from patentability.

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