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Practice Note - June 2010

Patentability of computer programs in Europe

The European Patent Office Enlarged Board of Appeal has provided its long-awaited opinion in case G3/08 relating to software patentability. Set out below is a summary of the opinion and current EPO practice.

Executive Summary

The European Patent Office Enlarged Board of Appeal has approved current EPO practice on the assessment of patentability of software-implemented inventions. This confirms that software-implemented solutions to technical problems will continue to be patentable, if they are novel and inventive. However, software-implemented solutions that do not achieve a technical effect will remain unpatentable – for example innovative business schemes that are implemented by computer programs and conventional computer hardware.

The EPO will therefore continue granting patents for many software-implemented inventions, but applicants should consider whether their software-implemented solutions solve a technical problem. If not, and if the hardware architecture is merely conventional, applicants should consider seeking advice before incurring the costs of European filing.

Background

The question of whether software should be patentable has been hotly debated within Europe for many years, with different views expressed about the intended scope of the European Patent Convention's exclusion of "computer programs as such" from being patentable inventions. The European Parliament and Council discussed a possible directive on Computer-Implemented Inventions, but instead left national courts and the EPO Boards of Appeal to interpret the exclusion. In October 2008, the European Patent Office President asked the EPO's Enlarged Board of Appeal to consider a set of questions on the patentability of software-implemented inventions. The President suggested that conflicting Board of Appeal case law required the Enlarged Board to give its opinion on various points of law, but many applicants and patent practitioners viewed the President's referral of questions as unhelpful and unnecessary.

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Opinion of the Enlarged Board of Appeal

The EPO Enlarged Board of Appeal (EBA) published its opinion G3/08 on 12 May 2010, commenting on and approving recent EPO practice. Comments from the EBA's opinion and some practical points are set out below.

Comments on the referral

Under Article 112(1) EPC, an EPO President may refer any question to the EBA if a point of law of fundamental importance arises or a decision is required to ensure uniform application of the law and where the EPO Boards of Appeal have given divergent or conflicting decisions on that question. The Boards of Appeal are also able to refer questions to the EBA. However, the EBA highlighted various flaws in the particular questions referred by the President. The EBA commented that the "right of referral" does not allow the EPO President to use an EBA referral as a mechanism to replace existing Board of Appeal rulings. There are narrowly defined limits on when either the Boards of Appeal or the President can refer questions to the EBA. The EBA emphasized the independent judicial role of the Boards of Appeal and their "interpretative supremacy" with regard to the EPC.

The EBA stated that they could not accept the referral, despite the background of pressure from lobbyists and despite the desire for harmonisation within Europe. The EBA stated that, although there have been developments in EPO case law over the years, there is currently no significant divergence or "conflict" to be resolved. The referral was therefore held to be inadmissible.

The EBA was unimpressed

"...logical weaknesses in the argumentation..."

"...an error in this argument..."

"The referral's confusion..."

"..not convincing.."

Comments on evolving law

The EBA commented that ongoing development of the law is essential and a normal part of judicial activity. It is within this context that the EBA declined to offer a specific definition of "technical", as specific definitions could quickly become outdated, and noted that not every difference between decisions implies the divergence or conflict between decisions that is needed to justify a referral to the EBA.

The EBA opinion discussed relevant EPO Board of Appeal cases, referring with approval to various earlier EBA opinions and Technical Board of Appeal decisions. Selected cases are summarized briefly on the next page. The EBA commented that the principles applied by the EPO Technical Boards of Appeal when assessing the patentability of software-implemented inventions have not changed much since 1998 when Decision T1173/97 concluded that program claims are not excluded if the program is capable of bringing about a "further technical effect" beyond the inevitable physical interactions between hardware and software. This further technical effect can be achieved by the internal functioning of a computer under the influence of a program.

An invention's technical contribution to the art is now assessed when determining novelty and inventive step (under Articles 54 and 56 EPC), and not under Art.52(2) and (3) EPC. Decision T424/03 concluded in 2006 that a computer-readable medium is a technical product, such that some claim formulations that would previously have been rejected as "excluded" under Art.52(2) now bypass that Article. The requirements for a further technical effect remains a fundamental requirement for patentability of software-implemented inventions, but it is now often assessed together with novelty and inventive step instead of separately as in the past. See comments below.

Selected cases cited by EBA

The following decisions were cited by the EBA with explanatory comments:

EPO Case	Reason cited	Comments
T154/04 Duns Licensing	Cited with reference to increasing convergence between EPO and UK, French and German courts	Methods of business research are excluded from patentability under Art. 52(2). An invention must have a technical character. Only claimed technical features which contribute to technical character are taken into account when assessing inventive step. Non-technical features that do not interact with technical features to solve a technical problem do not provide a technical contribution to the art, and are ignored when assessing inventive step.
T1173/97 IBM	Cited in comparison with T424/03 and noting that the "further technical effect" need not be new to avoid the exclusion of Art.52(2) EPC.	**Program claims are not excluded if the program is capable of bringing about a "further technical effect"** beyond the inevitable physical interactions between software and hardware. This **further technical effect can be achieved by the internal functioning of a computer under the influence of the program**. An invention's technical contribution should be assessed when determining novelty and inventive step, not under Art.52(2) and (3).
T258/03 Hitachi T931/95 P.B.S.	Compared with T1173/97 and T424/03	A claim to an apparatus or method implemented in a computer system avoids exclusion under Art. 52(2) EPC, but steps of modifying a business scheme could not contribute to technical character. Inventive step assessment only took account of features that contribute to technical character.
T424/03 Microsoft	Compared with T1173/97, and extending T258/03, concluding that the law has developed since T1173/97 but is now settled rather than "divergent" (and that T424/03 is more consistent with the principles of T1173/97 than the Board's conclusions in that case!).	**Enhancing the internal operation of a computer system is technical.** EPO no longer follows one of the suggestions in T1173/97, which was that it makes no difference whether a program is claimed by itself or as a record on a carrier. A claim to a program on a computer-readable recording medium now does avoid the exclusion of Art.52(2) EPC. **However, avoidance of the exclusion merely by claiming the program carrier only defers the assessment of the "further technical effect" until assessing inventive step.** This assessment focused on the technical problem and its solution.
T641/00 Comvik	Cited by EBA as consistent with T258/03	Inventive step assessment only took account of features that contribute to technical character.
T38/86 IBM	Cited by the EPO President when suggesting that T258/03 is inconsistent with T38/86 and T1173/97	EBA confirmed that claims to a computer program and claims to the software-implemented method do not have identical scope. The suggestion in the referral that there is a divergence in the case law is based on a misreading of the cases.
T163/85 BBC T190/94 Mitsubishi T125/01 Henze	Cited by President to suggest inconsistency (is technical effect on physical entity required or not? And can features contribute to technical character if their effects are independent of hardware?)	EBA said there is no divergence, as T163/85 and T190/94 do not require a technical effect on a physical entity (they merely note that this is sufficient to avoid the exclusion). With reference to the latter question, the EBA noted that **the invention must be considered as a whole (not features in isolation) and features which would, in isolation, belong to excluded matters may contribute to technical character.**
T1177/97 Systran T172/03 Ricoh T833/91 IBM T204/93 AT&T T769/92 Sohei	Cited by President to suggest inconsistency (asking whether programming necessarily involves technical considerations; does all programming contribute to technical character, or only if there are "further technical effects"?)	EBA noted that T1173/97 correctly set a higher threshold than T769/92 in the case of computer programs: technical considerations are not enough – **a further technical effect is required**. EBA held that there is no conflict between the cited cases despite T1177/97 and T172/03 considering that programming always involves technical considerations and T833/91 and T204/93 identifying programming as a mental act. The cases do not show divergence, so question is inadmissible.
T208/84	Only cited with reference to long history of EPO accepting certain types of claim	Confirmed that a technical process carried out under program control and a computer set up to operate in accordance with a program controlling a technical process is not excluded

Conclusions

The Enlarged Board of Appeal's approval of current EPO practice means that existing "case law" provides a suitable framework to assess the likelihood of patentability objections and final outcomes with reasonable confidence. In particular:

- Software-implemented inventions remain patentable if they achieve a technical effect and are new and inventive.
- A computer program that has no technical effect will not be granted a patent regardless of whether it is claimed as a "computer program" or with reference to a conventional storage medium or computer, but the different objections of lack of inventive step (under Article 56 EPC) or exclusion from patentability (under Article 52 EPC) will be raised depending on the chosen claim wording. See 'Issues Remaining' below.
- Since the EBA has approved current EPO practice, the EPO will continue granting a significant number of patents for software-implemented solutions - subject to any future legislation and the EBA's comment that continuing development of the law is a normal part of the judicial process. Anyone hoping for a major reduction in the granting of software-related patents by the EPO will be disappointed by the EBA's opinion.

Issues Remaining

Different claim formulations:
The EBA confirmed that it will not impose a change to the EPO's practice of different treatment of different claim formulations (program, program on physical carrier, computer controlled by program, or method). Under the current practice, a claim to a "computer program" that has no technical effect is excluded from patentability under Art.52(2) EPC. Claims which avoid the exclusion from patentability for such programs by reciting a "computer-readable storage medium" or a computer, will also fail (if there is no technical effect and if the medium or computer is merely conventional), but under a different article of the EPC.

The EBA recognized that treating these different claim formulations differently is "distasteful" to many people (i.e. perceived to be illogical), but they conclude that the end result will be the same whether applying Art. 52(2) or Art.56. The EBA stated that it is not their function to impose changes on the Boards of Appeal of the EPO if the law is being applied consistently.

Harmonization:
Despite the EBA's brief reference to increasingly convergent decisions as between the EPO Boards of Appeal and national courts of EPC states, the EBA recognizes that we do not yet have harmonization between how the EPO and UK courts assess patentability. This applies to both the application of Art.52 and Art.56 EPC. Given the EBA's comments that their own power is quite limited in view of Art.112 EPC, and given that the UK courts are bound by existing UK case law, this difference will continue until an EBA decision or UK appeal court offers an attractive compromise. There will be some inventions for which the choice between applying to the EPO or UKIPO will make a difference to the chances of success. The German Federal Court has also not always applied the law consistently with the EPO, although an April 2010 decision of the Bundesgerichtshof (Supreme Court) is consistent with EPO practice.

Most relevant Articles of European Patent Convention

Art. 52(2) and (3)
Art. 54, Art. 56
Art. 112(1)

Referenced EPO Decisions

EBA decisions:
G4/98, G5/83, G2/02, G3/02, G1/07, G2/08
G3/98, G6/95, G3/93
G2/88

Most relevant Board of Appeal Decisions
T154/04, T1173/97
T424/03, T258/03
T641/00, T38/86
T163/85, T190/94
T125/01, T208/84

(List not exhaustive)

National case law

German BGH Decision Xa ZB 20/08 of 22 April 2010 (Siemens AG's application)

UK Court of Appeal judgement EWCA Civ.1066 of 8 Oct 2008 (Symbian Ltd)

Treatment of excluded subject matter:

As noted by the EBA, the EPO's way of assessing inventive step is an issue that the EPO President might have chosen to ask questions about, but did not. The EBA concluded that a consistent approach was followed in T154/04, T258/03, T641/00 and T424/03. These decisions agreed that features that are excluded from patentability are not taken into account when assessing inventive step.

However, the EBA has given applicants an opportunity to argue that inventive step should instead be assessed with reference to the claimed subject matter as a whole, by stating that "*features which would, taken in isolation, belong to the matters excluded from patentability… cannot be discarded in the consideration of the inventive step*". It is difficult to find explicit support for this assertion in the cited recent case law, except that T154/04 flags the possibility of non-technical features interacting with technical features to solve a technical problem. Nevertheless, this provides some encouragement to applicants who wish to refer to the interaction between technical and non-technical claimed features when arguing inventive step.

Drafting and prosecution practice:

There are many software-implemented solutions which require a careful review of their technical effects and the technical problems they address while the original application (or the European or international patent application) is being prepared. A clear identification within the patent specification of how all of the claimed features interact to solve a technical problem, and an identification of the technical advantages and applications of the invention, is usually very helpful during European prosecution. It is also likely that there will continue to be borderline cases for which careful claim drafting from the outset will increase the chances of successful patent grant: claims that recite "technical means" (such as the computer that is controlled by software, or a recording medium) will encourage the EPO Examining Division to move on from consideration of the exclusions of Art.52(2) and (3) EPC to a consideration of inventive step, and claims that recite the interaction between technical and non-technical features will help applicants to argue inventive step.

Mike Jennings - June 2010

The Enlarged Board's opinion is available from the EPO's Website: http://www.epo.org/patents/appeals/eba-decisions/date.html

Further Information

If you would like any additional information regarding software patents, or a review of specific inventions, please contact:

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