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Enlarged Board of Appeal
European Patent Office
Erhardtstrasse 27
80331 MÜNCHEN
Germany

Gießen, April 20, 2009

Regarding case G 03/08

Dear Sirs,

I present my amicus curiae brief as a professional in the field of software development. I am concerned that certain interpretations of applicable law have the potential to alter competition in the software industry to a point where it fails to make quality of products a driving competitive advantage.

My views are generally being reflected in the amicus curiae briefs published so far. To avoid duplication, I will concentrate on a single issue.

As you are probably aware, computer programs "as such" (from now on referred to as program or programs) have an equivalent algorithm, which is a purely mathematical method. Computer programs are an automatically executable formulation of an algorithm. In short, programs are practically equivalent to algorithms. This may be part of the reasoning behind Art. 52(2)(c).

I will continue by showing that access to a data storage medium does neither distinguish a program from an algorithm, nor does it contribute to such a distinction. This is an important consideration when assessing the following question:

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 DATA STORAGE MEDIUM?

No. As Alan Turing has established in the 30's, the presence of storage is crucial to the notion of computability. His so-called "Turing Machine" has access to two storages: A permanent (unmodifiable) store, containing the program, and a second, modifyable store.

The turing machine is a theoretical machine, a mathematical method. As such, it is not patentable. For every algorithm or program, there exists a corresponding turing machine which can execute it. In other words, there is an equivalence between a turing machine, an algorithm and a program. They just use different notation.

The turing machine is at the heart of how we define computability. It has been shown that the turing machine can compute everything which can be computed at all. Conversely, a program without access to any form of storage is simply not able to compute.

We observe that the concept of a store is not alien to mathematical methods. This leads to my first conclusion: *Access to a store does not, by itself, distinguish a computer program from its corresponding algorithm.*

The turing machine has an infinite store (infinite in size and duration). No real data storage medium, or combination thereof, could be as powerful. *It follows that, no matter what type of storage medium is accessed by a computer program, the range of solveable problems does not extend beyond that of a turing machine. In other words, the program is still equivalent to a corresponding algorithm.*

This is equally true for a computer and program, however specified, without extraordinary storage. *It follows that computer use, including storage access, cannot break the equivalence between a computer program and an algorithm. Therefore, neither computer use nor storage access can contribute to the technical character of a claim.*

Please note that full formal proofs have been done for about every non-trivial assertion I used to make my points so far. I was merely combining long-established knowledge to draw my conclusions in a way that relates to the question at hand.

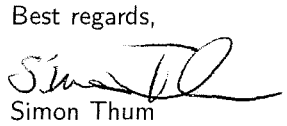
A real-world computer-readable storage medium, conceptually, is a modifyable persistent storage. In this respect, it extends beyond the modifyable transient storage required to compute anything at all. Access to a modifyable persistent storage enables computer programs to solve large problems (where one cannot afford to loose intermediate results) and ongoing problems (for similar reasons).

We observe that the type of storage involved depends on problem characteristics. The actual storage technology, in turn, depends on solution characteristics. *It follows that specifying a generic "data storage medium" (or similar) actually relates to the problem, not to its solution. Therefore it cannot contribute to the technical character of a claim, or to any other question regarding patentability.* This is likewise true if a non-generic storage is spefified which could trivially be exchanged with a generic one.

Theoretical machines do not execute real programs. Real programs do extend beyond algorithms or theoretical machines in several ways, most notably when they perform input or output (commonly referred to as "IO"). This does not, however, cause programs in general to be different from algorithms. It is questionable in general whether the differences between real and theoretical machines may relate to an inventive step or the technical character of a claim. Without a clear indication, this should not be assumed.

IO may, however, cause physical effects unrelated to the operation of the computer or computer program itself, instead being neccessary for the non-computer parts of the invention to work. I view this as the minimum requirement a computer and program should satisfy to contribute to the technical character of a claim.

Best regards,



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