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Aktenzeichen / Case Number / N° du recours : T 115/85 - 3.5.1

Anmeldenummer / Filing No / N° de la demande : 81 108 567.9

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Bezeichnung der Erfindung: Method of decoding phrases and obtaining a read  
Title of invention: out of events in a text processing system  
Titre de l'invention :

Klassifikation / Classification / Classement : G 06F 15/20

### ENTSCHEIDUNG / DECISION

vom / of / du 5 September 1988

Anmelder / Applicant / Demandeur : IBM

Patentinhaber / Proprietor of the patent /  
Titulaire du brevet :

Einsprechender / Opponent / Opposant :

Stichwort / Headword / Référence : Computer-related invention-IBM

EPÜ / EPC / CBE Art. 52(2), (3) EPC

Schlagwort / Keyword / Mot clé : Patentable subject-matter (yes)  
Computer program

#### Leitsatz / Headnote / Sommaire

I. Giving visual indications automatically about conditions prevailing in an apparatus or system is basically a technical problem.

II. Even if the basic idea underlying an invention may be considered to reside in a computer program a claim directed to its use in the solution of a technical problem cannot be regarded as seeking protection for the program as such within the meaning of Art. 52(2)(c) and (3) EPC.

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Boards of Appeal

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des brevets

Chambres de recours

Case Number : T 115/85 - 3.5.1



**D E C I S I O N**  
of the Technical Board of Appeal 3.5.1  
of 5 September 1988

**Appellant :** International Business Machines  
Corporation  
Armonk  
New York 10504  
U.S.A.

**Representative :** Bonneau, Gérard  
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**Decision under appeal :** Decision of Examining Division 065 of the  
European Patent Office dated 23 November 1984  
refusing European patent application  
No. 81 108 567.9 pursuant to Article 97(1)  
EPC

**Composition of the Board :**

**Chairman :** P.K.J. van den Berg  
**Members :** J.A.H. van Voorthuizen  
E. Persson

## Summary of Facts and Submissions

- I. European patent application No. 81 108 567.9 filed on 20.10.81 (Publication No. 52757), claiming priority of 20.11.80 (US) was refused by a decision of the Examining Division 065 of the EPO dated 23.11.84. That decision was based on Claims 1-8 filed on 24.12.83.
- II. These claims relate to a method of decoding stored phrases and obtaining a read-out of events in a text processing system, this method using a message build program.
- III. The reason given for the refusal was that the sole contribution to the art in the subject-matter of Claim 1, as interpreted in the light of the application documents as a whole, resides in a program for a computer as such within the meaning of Article 52(2)(c) and (3) EPC, and consequently that Claim 1 does not relate to a patentable invention within the meaning of Article 52(1) EPC.

In arriving at this conclusion the Examining Division considered that it was clear from the description and drawings that the only hardware required for implementing the subject-matter of Claim 1 is that of a classical text processing system. There is no disclosure of an embodiment comprising specifically designed hardware and no suggestion that such an embodiment is envisaged. It seemed, moreover, that the program routines, which are stored in random access memory are used in a conventional manner for controlling the functioning of the hardware. In view of the above it followed that Claim 1 defines a collocation of known hardware and new software, as there is no support for any other interpretation. No changes to, or new uses of the hardware were implied by the implementation of the claimed method.

IV. The Appellant lodged an appeal against this decision on 01.02.85. The appeal fee was paid on the same date. The statement of Grounds was filed on 29.03.85.

V. In the Statement of Grounds the Appellant argued essentially as follows:

None of Claim 1 and the dependent claims relate to a computer program in the sense of a set of instructions but rather to a new method of operating a text processing system.

Moreover, hardware elements included in the preamble of Claim 1 are required for the implementation of the new method which forms the characterizing part of Claim 1. Even if this method were assimilated to a program, the claims could not be refused since Article 52(2)(c) EPC excludes programs from patentability only to the extent to which the invention relates to a program as such (Article 52(3) EPC).

The claimed method defines an unconventional way of operating the hardware elements. Such a way based upon an original memory organisation results in a new functional relationship or combination of the hardware elements.

It is clear that the skilled man will be able to implement the invention as a special device in logic circuits. The same man, who has nowadays the knowledge in programming, will also be able to implement the invention as a program by using the teachings of the description. Besides, even though the current trend is in favour of software implementation instead of logic circuitry, the skilled person may well decide to carry out the invention by mixing logic circuits and software.

- VI. In a communication dated 15.09.87 the Rapporteur informed the Appellant that in the provisional opinion of the Board the valid claim essentially sought protection for a method for performing a mental act (i.e. decoding stored phrases) expressed in the form of a computer program. Its subject-matter, therefore, was excluded from patentability under Art. 52(2)(c) and (3) EPC and could not become patentable merely because some technical means were mentioned in the claim. It was observed, however, that the application in effect concerned a method for displaying one of a set of predetermined messages, each such message indicating a specific event which may occur in the input/output device of a text processing system and that such a method was basically concerned with a technical problem.
- VII. In his reply of 31.10.87 the Appellant did not dispute the Board's provisional opinion. He submitted a set of amended Claims 1-8, and requested the grant of a European patent on the basis of these claims. Claim 1 reads as follows:
1. Method for displaying one of a set of predetermined messages comprising a phrase made up of a number of words, each such message indicating a specific event which may occur in the input/output device (1), in a text processing system comprising furthermore a processor (2), a keyboard (6), a display (8) and a memory (4); said method comprising the following steps :
    - upon receiving a message of event from said input/output device (1), said processor (2) calls into operation, a message build program (52) stored in the memory (4)
    - said message build program outputs a message number to a message frame index table (56) stored in the memory (4) to obtain therefrom an appropriate pointer into a phrase table (57) stored in the memory (4),

- upon receiving the message from said message index table, the phrase table pointer is advanced to the next pointer and the first pointer position is subtracted from the second pointer position to obtain the number of bits included in the phrase,
- the bits making up said phrase are compared with a decode table (58) stored in the memory (4) comprising words coded and ordered on a byte value/frequency of use basis, until a match is found thereby providing a word pointer,
- the word pointer is provided to a word table (59) stored in the memory (4) containing words encoded on a user basis to define the beginning of a word to be displayed which is transferred to an output buffer, and
- the contents of said output buffer are displayed when a test determines that the end of the phrase has been reached.

#### Reasons for the Decision

1. The appeal complies with Art. 106 - 108 and Rule 64 EPC and is, therefore, admissible.
2. The present application in effect concerns a method for displaying one of a set of predetermined messages comprising a phrase made up of a number of words, each such message indicating a specific event which may occur in the input/output device of a text processing system which comprises furthermore a processor, a keyboard, a display and a memory.
3. For carrying out this method in practice there must be present a means for detecting these events and a means for

visually presenting an indication (message) relating to the specific event detected. In between means are required for transforming the information that a specific event has occurred into information having a suitable form to be displayed.

4. In the present application the information is displayed in the form of one of a number of predetermined phrases which are stored in coded form in a memory (phrase table). The particular phrase to be displayed is then built up under program control from a fixed collection of words stored in a word table.
5. The Examining Division has held in its decision that the claims before it related to a computer program as such, as this was the sole new contribution to the art.
6. The issue to be decided in the present appeal is therefore whether the subject-matter to which the claims in their present amended form relate is excluded from patentability under Art. 52(2)(c) and (3) EPC.
7. Generally the Board takes the view that giving visual indications automatically about conditions prevailing in an apparatus or system is basically a technical problem.
8. The application proposes a solution to a specific problem of this kind namely providing a visual indication about events occurring in the input/output device of a text processor. The solution includes the use of a computer program and certain tables stored in a memory to build up the phrases to be displayed.
9. Even if the basic idea underlying the present invention might be considered to reside in that computer program and the way the tables are structured, a claim directed to its use in the solution of a technical problem cannot be

regarded in the Board's opinion as seeking protection for the program as such within the meaning of Article 52(2)(c) and (3) EPC.

10. As stated by this Board already in its decision in case T 208/84 (OJ EPO 1/1987, 14-23) an invention which would be patentable in accordance with conventional patentability criteria should not be excluded from protection by the mere fact that for its implementation modern technical means in the form of a computer program are used.

However, in this context it appears useful to the present Board to observe that it does not follow from this statement that conversely a computer program can under all circumstances be considered as constituting a technical means.

11. The claims presently on file are phrased in functional terms. These must be understood as referring to the technical means necessary for carrying out the functions (including an appropriate program). No objections can be made against such claims in this respect so long as the person skilled in the art can understand from the description and/or from his general knowledge in the field which means are required (cf. also decisions in cases T 68/85 (OJ EPO 6/87, 228-236) and T 208/84 (OJ EPO 1/87, 14-23)).
12. For the foregoing reasons the Board has come to the conclusion that the subject-matter of the present Claim 1 is not barred from protection by Art. 52(2)(c) and (3) EPC.
13. The Examining Division has limited its examination of the application to the allowability of the claims under Art. 52(2)(c) and (3) EPC. Accordingly, the Board has only



decided on this question and deems it appropriate to remit the case to the Examining Division for examination of all further requirements of the EPC to be fulfilled.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside
2. The case is remitted to the Examining Division for continuation of the examination.

The Registrar:



S. Fabiani

The Chairman:



P.K.J. van den Berg