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Anmeldenummer / Filing No / N^o de la demande : 82 100 838.0

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Bezeichnung der Erfindung: Method for displaying and editing spatially
Title of invention: related data in an interactive text processing
Titre de l'invention : system

Klassifikation / Classification / Classement :

ENTSCHEIDUNG / DECISION

vom / of / du 5 December 1989

Anmelder / Applicant / Demandeur : IBM Corp.

Patentinhaber / Proprietor of the patent /
Titulaire du brevet :

Einsprechender / Opponent / Opposant :

Stichwort / Headword / Référence : Text editing/IBM

EPÜ / EPC / CBE Art. 52(2), (3) EPC

Schlagwort / Keyword / Mot clé : "Exclusion from patentability"

Leitsatz / Headnote / Sommaire

Europäisches
Patentamt
Beschwerdekammern

European Patent
Office
Boards of Appeal

Office européen
des brevets
Chambres de recours



Case Number : T 186/86 - 3.5.1

D E C I S I O N
of the Technical Board of Appeal 3.5.1
of 5 December 1989

Appellant : International Business Machines Corporation
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New York 10504
USA

Representative : Bonneau, Gérard
Compagnie IBM France
Département de Propriété Intellectuelle
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Decision under appeal : Decision of Examining Division 065
of the European Patent Office dated
17 January 1986 refusing European
patent application No. 0 066 038
pursuant to Article 97(1) EPC

Composition of the Board :

Chairman : P.K.J. van den Berg
Members : J.A.H. van Voorthuizen
F. Benussi

Summary of Facts and Submissions

- I. European patent application No. 82 100 838.0 (publication No. 0 066 038) claiming a priority of 18 May 1981 (US) was refused by decision of Examining Division 2.2.01.065 dated 17 January 1986.
- II. That decision was based on Claims 1 to 7 filed on 6 July 1985. The reason given for the refusal was that the subject-matter of the application lacked inventive step having regard to "Communications of the ACM" June 1977, Vol. 20, No. 6, pages 385 to 396, "Proceedings of the International Conference on Very Large Data Bases, Boston, Mass." September 22, 1975, pages 1 to 24 and "Encyclopedia of Computer Science", 1976, pages 1410 to 1418.
- III. The Appellant (Applicant) lodged an appeal against this decision on 11 March 1986 and paid the appeal fee on the same date. A Statement of Grounds was filed on 6 May 1986.
- IV. In a communication dated 31 March 1989 the Board raised the question whether the claimed method for editing a text was patentable under Art. 52(2)(c) and (3) EPC and provisionally arrived at a negative answer in this respect.
- V. In the course of oral proceedings held on 5 December 1989 the Appellant essentially argued that the claimed text editing method had a technical nature while the conversion of spatially formatted data into sequentially formatted data, their display and the reconversion after the editing by a human operator were carried out automatically by a text processing system. These steps were independent of the nature of the data and the method was not concerned

with any specific linguistic problems. He drew attention to several European patents in the fields of spelling verification and footnote assembly management which had been granted by Examining Divisions.

- VI. The Appellant requested the grant of a European patent on the basis of Claim 1 filed in the oral proceedings and Claims 2-7 of 29.04.86, received 6.05.86.

"1. Method for displaying and editing spatially related data in an interactive text processing system including a keyboard (20), a microprocessor (11), a display screen (14) with a display refresh buffer (12) for controlling the generation of characters on said display screen; and a memory (23) comprising a text buffer (27) and a display format buffer (29) for temporarily storing conventional text data in form of the sequence of character data interspersed by the appropriate control data, and a display data area (28) for storing spatially related text type data in the form of row vectors and column vectors to permit data processing type operations to be performed by said system in either an interactive or non-interactive mode;

said method being characterized in that:

- the microprocessor automatically performs the steps of:
 - (a₁) converting, in response to operator placing said system into the editing mode, at least one portion of one of said spatially related text data into conventional text data,
 - (b₁) storing said converted data into said display format buffer (29),

- (c₁) transferring said converted data from said display format buffer to said display refresh buffer for displaying it on said display screen,
- the operator edits said displayed converted data by interactively entering a prescribed set of conventional text editing interactions character by character such as deleting, inserting or moving a character from said keyboard into said text buffer and then to said display refresh buffer for displaying it on said display screen, and
 - the microprocessor automatically performs the steps of:
 - (a₂) reconverting, in response to the operator ending said operation of editing, said edited displayed data from conventional text data to spatially related data, and
 - (b₂) replacing into said display data area said at least one portion of spatially related data."

Claims 2 to 7 are dependent on Claim 1.

Reasons for the Decision

1. The appeal is admissible.
2. The present Claim 1 is directed to a method for displaying and editing spatially related data in an interactive text processing system.

The claimed method enables the operator of a text processor to apply the usual editing procedures for a conventional sequential stream of text data also to

spatially related data (data in table form) which are internally stored in a vector format. This method aims more specifically at permitting easy manipulation of spatially related data, requiring the operator to learn only one set of editing instructions, thereby increasing processing efficiency. The appeal therefore, raises the preliminary question whether such a method can be regarded as patentable subject-matter under Art. 52 EPC.

3. The activity of editing a text is principally concerned with linguistic and lay-out features of a text but, when performed with the aid of a machine (text processor), will have to include further steps for inter alia presenting to the human operator the text to be edited in a form suitable for that purpose and steps for storing and/or reproducing the finalised text. The whole editing method, however, has for its purpose the creation of a text having a desired information content and lay-out, which means that the method as such aims at solving a problem which is essentially of a non-technical nature. The Board is therefore of the opinion that the activity of text editing as such must be considered as falling within the category of schemes, rules and methods for performing mental acts and is excluded from patentability under Art. 52(2)(c) and (3) EPC.
4. Insofar as the requirement that an invention must have a technical character is concerned, the Board refers for brevity's sake to paragraphs 3 and 4 of its previous decision in case T 22/85 (Document abstracting and retrieving/IBM; reported in OJ EPO 1990, No. 1-2).
5. For carrying out in practice an activity excluded as such under Art. 52(2)(c) EPC some means may be used which themselves could be qualified as technical e.g. a computer controlled by appropriate software. A claim directed to an

excluded activity but at the same time containing such technical features would not appear to be unallowable under all circumstances.

6. In the present case the method defined in Claim 1 is realised by a suitable computer program run on a conventional text processor as is apparent from the description. Claim 1 sets out a sequence of data processing steps which are required to effect, under the control of said program, the editing method according to the present application, including an interactive step in which a human operator enters the changes he wishes to make to the text. The operations performed do not go beyond the processing of data involving conventional techniques of entering, storing, displaying, converting and transferring data which do not represent a physical entity. Therefore, once the steps of the editing method in question have been defined, the implementation of the technical means to be used in these steps, at least at the level of generality specified in Claim 1, involves no more than the straightforward application of conventional techniques. The Board holds, in conformity with its decision in case T 22/85 already referred to in the present decision, that the mere setting out of the sequence of steps necessary to perform an activity, excluded as such from patentability under Art. 52(2) and (3) EPC, in terms of functions or functional means to be realised with the aid of conventional computer hardware elements does not import any technical considerations and cannot, therefore, lend a technical character to that activity and thereby overcome the exclusion from patentability.
7. It should be borne in mind in this context that it is conventional to store spatially related data in a vector format as this permits a convenient way of changing the spatial relationship between such data.

8. Furthermore it is to be noted that the display step is not concerned with the techniques of displaying an image but that merely the form is prescribed in which information kept in a memory in a certain format has to be displayed for a non-technical purpose viz to support a certain editing mode.
9. In the description it is stated as an advantage that considerable storage space can be saved with the present method in comparison to the case where individual items of vector formatted data are changed by means of a special program provided for that purpose in addition to a program for editing conventionally formatted data. This advantage, however, does not result from a fundamentally different way of internal working of the text processor in a technical sense but is determined solely by the size of the programs which are necessary for carrying out the particular editing method according to the present application. This advantage, therefore, makes no contribution outside the areas of text editing and programming.
10. The Appellant has argued that the claimed method would be patentable because the steps of the method (with the exception of the editing proper by a human operator) are performed "automatically" by the text processing system having the hardware components enumerated in Claim 1. It is true that, once the system has been appropriately programmed, it carries out such steps without further human intervention, i.e. automatically. The fact, however, that a method is carried out (at least partially) automatically by an appropriately programmed computer is in itself no evidence for any technical character of the invention on which the method is based. As set out before the present text editing method as such is to be considered as a mental act excluded from patentability.

The method steps to be carried out by a conventional text processor are formulated in Claim 1 in broad terms, such as converting, storing, displaying, reconvertng..., which are all common operations in the text processing art. Expressing the method steps in such terms does not require any activity of a technical nature and provides in the present case no contribution to the art outside the fields of text editing and computer programming. Claim 1 therefore does not comprise any patentable subject-matter. The same applies to the dependent Claims 2 to 7.

11. The Appellant furthermore referred to several European patents granted by Examining Divisions which seem to be directed to subject-matter related to that of the present application. However this may be, the Board's competence is strictly limited to deciding on the present appeal complying only with the provisions of the EPC (Art. 23(3)). Consequently it cannot be bound by any interpretation given to these provisions by a lower instance which might deviate from the interpretation which the Board considers to be the correct one and which is set out in this decision.

Order

For these reasons, it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

S. Fabiani

P.K.J. van den Berg