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Aktenzeichen / Case Number / N^o du recours : T 95/86 - 3.5.1

Anmeldenummer / Filing No / N^o de la demande : 82 101 866.0

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Bezeichnung der Erfindung: Method for assisting an operator of an interactive
Title of invention: text processing system in entering instructional
Titre de l'invention : data which define a desired rearrangement of fields
in a stored file of spatially related data

Klassifikation / Classification / Classement : G06F 15/20

ENTSCHEIDUNG / DECISION

vom / of / du 23 October 1990

Anmelder / Applicant / Demandeur : IBM Corporation

Patentinhaber / Proprietor of the patent /
Titulaire du brevet :

Einsprechender / Opponent / Opposant :

Stichwort / Headword / Référence : Text editing/IBM

EPO / EPC / CBE Article 52(2), (3)

Schlagwort / Keyword / Mot clé : Exclusion from patentability

Leitsatz / Headnote / Sommaire



Case Number : T 95/86 - 3.5.1

D E C I S I O N
of the Technical Board of Appeal
of 23 October 1990

Appellant : IBM Corporation
Old Orchard Road
Amouk, New York 01504
US

Representative : Bonin, Jean-Jacques
Compagnie IBM France
Département de Propriété Industrielle
F-06610 La Gaude

Decision under appeal : Decision of Examining Division 065 of the European Patent Office dated 25 October 1985 refusing European patent application No. 82 101 866.0 pursuant to Article 97(1) EPC

Composition of the Board :

Chairman : P. Van den Berg
Members : J. Van Voorthuizen
J. Stephens-Ofner

Summary of Facts and Submissions

- I. European patent application No. 82 101 866.0 (publication No. 0 066 047) claiming a priority of 18 May 1981 (US) was refused by decision of Examining Division 2.2.01.065 dated 25 October 1985.
- II. That decision was based on Claim 1 filed on 13 August 1985 and Claims 2 to 7 filed on 6 November 1984. The reason given for the refusal was that the subject-matter of the application lacked inventive step having regard to "Electronics", 16 August 1979, pages 40-41; "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 19 November 1985 and paid the appeal fee on the same date. A Statement of Grounds was filed on 3 March 1986.
- IV. In a communication dated 17 May 1989 the Board raised the question whether the claimed method for assisting an operator of an interactive text processing system was patentable under Article 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 23 October 1990 the Appellant essentially argued as follows:

The invention makes it possible for the operator of a relational data base to select by means of the cursor and

dedicated keys from the total number of columns (indicated by the term "fields" in Claim 1) in a table which is stored in rector format in a memory such columns and in such positions as are required for the operation to be carried out, e.g. consulting or printing part of the stored data. In this way the rearrangement of the columns is made in a manner as if this data was conventional text data (cf. page 6, lines 1-4 of the description). Only the selected columns are displayed, while the non-used data remain stored in the memory.

This way of handling the data stored in table form cannot be regarded as text processing in the conventional sense as no charge is made in the individual data and the rearranging of the columns is independent of the nature of the data. In effect, the operator can at will create new files comprising only part of all the available stored data simply by moving the cursor and activating appropriate keys of the keyboard. All necessary subsequent internal operations of the text processing system are carried out automatically under control of a suitable program.

This capability of the claimed method, therefore, forms a technical feature of the invention. The claimed method is comparable to a technical process controlled by a program.

VI. The Appellant requested the grant of a European patent on the basis of Claims 1-6 filed on 3 March 1986. The independent Claims 1 and 4 read as follows:

1. An improved method for assisting an operator of an interactive text processing system in interactively entering from a keyboard into said system instructional data which defines to said system desired changes to be made to the arrangement of fields for each spatially related vector formatted data record stored in an

existing file which includes a header record having a plurality of named fields, the location of which in said header record establishes the spatial relationship of data in each said record, comprising the steps of:

- (a) displaying to said operator said header record as a horizontal row of said named fields, each of which is disposed at a location in said row determined in accordance with said vector format;
- (b) displaying to said operator a cursor disposed at a predetermined position in said horizontal row of named fields;
- (c) moving said cursor to a position in said horizontal row of name fields which corresponds to a field location involved in one of said changes;
- (d) initiating an edit operation corresponding to said one of said changes after the cursor is moved to said position in said horizontal row which corresponds to said one of said changes, said edit operation being performed through the activation of a dedicated key of said keyboard;
- (e) storing in said system the instructional data comprised of both the data defined in the activation of said dedicated key and the data defined by said position in said header of said cursor when said edit operation was initiated, to permit said system to subsequently edit said data records in said existing file in accordance with said stored instructional data, and
- (f) repeating steps (c), (d) and (e) for each desired said change.

4. In an interactive text processing system including a display device, a keyboard and a microprocessor which processes both conventional text data and spatially related data in which the spatially related data is stored in said system as a plurality of vector formatted data records along with a header record having a plurality of named fields, said records being converted from said vector format to conventional text stream data for displaying on said device, an improved method for changing each spatially related vector formatted data record stored in an existing file comprising the steps of:
- (a) displaying on said device to the operator said header record of said existing file as a horizontal row of named fields;
 - (b) displaying a cursor disposed at a predetermined position in said horizontal row;
 - (c) changing the order of fields in said horizontal row by performing a conventional text edit move operation involving interactive operator directed cursor movements which specify the movement of one of said fields from its current position to a new position; and
 - (d) storing in said system at locations available to said microprocessor the instructional data reflecting each said move operation including the location in said header involved therewith to permit said microprocessor to modify the vector information of each said data record in said existing file in accordance with the stored instructional data.

Claims 2 and 3 are dependent on Claim 1 and Claims 5 and 6 are dependent on Claim 4.

Reasons for the Decision

1. The appeal is admissible.
2. The present Claim 1 is directed to a method for assisting an operator of 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 the columns in a table which consists of several rows and columns of data. The appeal, therefore, raises the preliminary question whether such a method can be regarded as patentable subject-matter under Article 52 EPC.

3. In connection with the Appellant's argument that the method according to the present application is not a text processing (or editing) method in the conventional sense, it has to be noted that the concepts of text processing and text editing have no sharply defined boundaries. It is, furthermore, to be noted that the column repositioning feature is consistently referred to as an edit operation in the application (cf. e.g. feature (d) of Claim 1).

The method permits an operator to rearrange the columns of a table in the same way in which blocks of text in a document can be rearranged (e.g. deleted or moved to a different position in the document).

The Board is of the opinion that the term text-editing in its normal meaning would not be restricted to making changes in the substantive content of the text in contrast to making changes in the presentation or order of the parts making up the text. The claimed method must, therefore, be regarded as a form of text editing.

4. As the Board already held in an earlier decision (T 186/86 of 5 December 1989, not published) it now finds that the activity of editing a text is principally concerned with linguistic and lay-out features of a text. Nonetheless, when performed with the aid of a machine (text processor), it needs 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 other steps for storing and/or reproducing the finalised text. The whole editing method, however, is designed for the creation of a text having a particular 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, therefore, finds 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 Article 52(2)(c) and 3 EPC.
5. 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).
6. For carrying out in practice an activity excluded as such under Article 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.

7. 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 arrangement of the columns. The operations which are set out in Claim 1 do not go beyond the processing of data involving conventional techniques of displaying text and a cursor, moving the cursor, initiating an (edit) operation by activating a key and storing instructional data. Therefore, the technical implementation of the method 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 above mentioned decision in case T 22/85 that the mere setting out of the sequence of steps necessary to perform an activity, excluded as such from patentability under Article 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 fundamental exclusion from patentability.

8. 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.

9. 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.
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. 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, which all refer to 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 Claim 4 and the dependent claims.

Order

For these reasons, it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

M. Kiehl

P.K.J. van den Berg