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Bezeichnung der Erfindung: Data communication system with capabilities to
Title of invention: analyse an error or problem condition
Titre de l'invention :

Klassifikation / Classification / Classement : G06F 3/14

ENTSCHEIDUNG / DECISION

vom / of / du 11 October 1990

Anmelder / Applicant / Demandeur : International Business Machines Corporation

Patentinhaber / Proprietor of the patent /
Titulaire du brevet :

Einsprechender / Opponent / Opposant :

Stichwort / Headword / Référence :

EPÜ / EPC / CBE Art. 52(2)(c), 56

Schlagwort / Keyword / Mot clé : "Patentable invention - yes, after amendment"
"Inventive step - yes"

Leitsatz / Headnote / Sommaire

Europäisches
Patentamt

Beschwerdekammern

European Patent
Office

Boards of Appeal

Office européen
des brevets

Chambres de recours



Case Number : T 216/89 - 3.5.1

D E C I S I O N
of the Technical Board of Appeal 3.5.1
of 11 October 1990

Appellant : International Business Machines Corporation
Old Orchard Road
Armonk
N.Y. 10504 (US)

Representative : Bonin, Jean-Jacques
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Département de Propriété Intellectuelle
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Decision under appeal : Decision of Examining Division 065
of the European Patent Office dated
4 October 1988 refusing European
patent application No. 82 103 335.4
pursuant to Article 97(1) EPC

Composition of the Board :

Chairman : P.K.J. van den Berg
Members : W.J.L. Wheeler
E. Persson

Summary of Facts and Submissions

I. Appellant's European patent application No. 82 103 335.4, filed on 21 April 1982, claiming priority from a previous application in the United States of America dated 16 June 1981, was refused by a decision of the Examining Division dated 4 October 1988.

II. In the course of the proceedings before the Examining Division, the following prior art documents were cited in support of an objection of lack of inventive step:

D1: US-A-3 906 445

D2: US-A-4 030 072.

The reason given for the refusal was that the method claimed in Claim 1 filed with a letter dated 5 June 1987 involved mental acts on the part of an operator and was consequently excluded from patentability by Article 52(2)(c) EPC.

III. On 8 November 1988 the Appellant filed a notice of appeal against that decision. The appeal fee was paid on the same day. The statement of grounds was filed on 8 February 1989, accompanied by a new set of apparatus claims. The Appellant did not defend, or seek to maintain, the method claim refused by the Examining Division.

IV. In response to a communication of the Board pursuant to Article 110(2) EPC, raising objections under Articles 83 and 123(2) EPC, the Appellant filed on 7 May 1990 replacement Claims 1 to 4 and replacement pages of description.

- V. The Appellant requests that the decision under appeal be set aside and a patent granted on the basis of the following documents:

Claims: 1 to 4, filed on 7 May 1990;

Description: pages 1, 1a, 2, 2a, 3, 3a and 15, filed on 7 May 1990; and pages 4 to 14 as originally filed on 21 April 1982, pages 8 and 12 being amended as requested in the letter dated 5 June 1987;

Drawings: sheets 1/9 to 9/9 as originally filed on 21 April 1982.

- VI. Claims 1 and 3 are now worded as follows:

"1. Data communication system comprising

- at least one data transmitting word processing display terminal (10) having means (13) for transmitting a stream of data in coded form representative of alphanumeric text data, and means for displaying said alphanumeric text data,
- at least one data receiving word processing display terminal (11) having means (14) for receiving a stream of data in coded form representative of alphanumeric text data sent by said transmitting terminal, and means (17) for displaying corresponding alphanumeric text data,
- a communication link (12) between said transmitting and receiving terminals

characterized in that

- at least one of said data transmitting terminal and data receiving terminal includes means for displaying said

stream of data in coded form representative of alphanumeric text data transmitted to or received from the other terminal, and means for selectively changing to and from a first display mode for displaying said stream of data in coded form and a second display mode for displaying the alphanumeric data, whereby if there is a transmission problem between said transmitting and receiving terminals, the coded data itself can be analysed at said one transmitting or receiving terminal, thus allowing a competent operator sitting at that terminal to diagnose the problem.

3. Data communication system comprising

- at least one data transmitting word processing display terminal (10) having means (13) for transmitting a stream of data in coded form representative of alphanumeric text data and means for displaying said alphanumeric text data,
- at least one data receiving word processing display terminal (11) having means (14) for receiving a stream of data in coded form representative of alphanumeric text data sent by said transmitting terminal, and means (17) for displaying corresponding alphanumeric text data.
- at least one remote receiving display terminal, at a location where competent engineering support is available, adapted to receive and display alphanumeric text data,
- a communication link (12) between said transmitting terminal, said receiving terminal and said remote terminal,

characterized in that

- said remote terminal comprises additional means for displaying a stream of data in coded form sent by said system, and means for selectively changing to and from a first display mode for displaying a stream of data in coded form and a second display mode for displaying alphanumeric text data,

whereby, if there is a transmission problem between said transmitting (10) and receiving (11) terminals, said transmitting terminal may transmit to said remote terminal the same stream of data that was previously sent by said transmitting terminal to said receiving terminal, and said remote terminal may display the corresponding stream of data in coded form, thus allowing a competent operator sitting at that remote terminal to analyse said stream of data in coded form and to diagnose the problem."

Claims 2 and 4 are dependent on Claims 1 and 3 respectively.

Reasons for the Decision

1. The appeal is admissible.
2. The technical features recited in the present Claim 1 are all to be found in the originally filed Claims 1, 2, 4, 5 and 7. The explanatory "whereby" clause at the end of the claim is based on page 12, lines 7 to 12. The additional features recited in present Claims 2 to 4 are to be found in the originally filed Claims 3 and 6 and on pages 14 and 15 of the description. In the opinion of the Board, the current version of the claims complies with Article 123(2) EPC.

3. As appears from paragraph 8 of the decision under appeal, the Examining Division's reason for refusing the present application was that the method claimed in Claim 1 filed with the letter dated 5 June 1987 involved mental acts on the part of an operator and was consequently excluded from patentability by Article 52(2)(c) EPC.
- 3.1 However, the claims have since been amended so that they now relate to a data communication system, i.e. to an apparatus, in which, inter alia, at least one terminal includes means for displaying a stream of data in coded form representative of alphanumeric text data transmitted to or received from another terminal, and means for selectively changing to and from a first display mode (called the trace mode in the description) for displaying said stream of data in coded form and a second display mode for displaying the alphanumeric data.
- 3.2 The Board notes that the "whereby" clauses at the end of Claims 1 and 3, and the phrase in Claim 3 concerning the availability of competent engineering support at the location of the remote terminal, do not define features of the system itself, but merely explain the intended use of the system. The claimed system does not automatically detect the existence of a transmission problem: an operator has to notice that something has gone wrong. Nor does the claimed system automatically diagnose the problem: a competent operator has to do that, with the help of the information displayed in the trace mode.
- 3.3 In the opinion of the Board, although the operator(s) would have to perform mental acts to recognise the existence of a transmission problem and diagnose it, the system itself (as now claimed) does not involve a mental act, so the reason given by the Examining Division for refusing the application no longer applies.

4. The Board has considered the question of whether or not the present claims relate to a computer program as such (in a cleverly disguised form).
- 4.1 It appears that, in the course of being prepared for display or for transmission to another terminal, the signals representative of the alphanumeric text data undergo various technical transformations in which the represented text per se remains unchanged. When the system presently claimed is in the first display mode (trace mode), the display does not display the formatted alphanumeric data but rather displays the coded data stream being transmitted to or received from another terminal. In other words, the display receives its input from a different point in the sequence of technical transformations of the signals representative of one and the same alphanumeric text. In the opinion of the Board, this is basically technical subject-matter, irrespective of whether analog or digital signals are involved. Even if a computer program may be involved, the present claims cannot be regarded as seeking protection for the program as such within the meaning of Article 52(2)(c) and (3) EPC.
5. Turning now to the question of inventive step, the Board notes that in their communication dated 12 February 1986, the Examining Division raised the objection that the subject-matter of Claims 1 to 7 then on file did not involve an inventive step having regard to the prior art known from US-A-3 906 445 (D1).
- 5.1 D1 discloses a data communication system with alphanumeric terminals providing composite digital messages including various portions such as the address of the receiver, a status indication, a text portion and parity bits. The terminals include circuits automatically performing a

number of validity and error checks. If an error is detected in the text portion of a message, a visual indication is displayed to the operator. However, D1 does not disclose any means for displaying a stream of data in coded form representative of alphanumeric text data transmitted to or received from another terminal.

- 5.2 In their communication dated 19 December 1986, the Examining Division raised the objection that the subject-matter of Claims 1 and 2 then on file did not involve an inventive step having regard to the prior art known from US-A-4 030 072 (D2). In particular, reference was made to column 14, lines 56 to 59, and column 15, lines 16 to 21, of D2 to show that it was known to analyse hexadecimal coded data for diagnostic purposes.
- 5.3 D2 discloses a computer system including a control processor for supervising the various devices of the system and running maintenance and diagnostic tests automatically. D2 does not disclose any means for displaying a stream of data in coded form representative of alphanumeric text data transmitted between terminals. The hexadecimal code referred to in certain parts of the description (see D2, column 15, lines 14 to 24, column 37, lines 42 to 61, and column 45, line 15 to column 46, line 11) appears to be the code used in the machines to process the data. The only error tracking operation which involves that hexadecimal code is in the P-mode, in which tests are made to see whether an input character is a hexadecimal digit or not. The reference in column 46, lines 3 and 4, to a hexadecimal output display mode does not appear to imply that the displayed code is representative of alphanumeric text data transmitted between terminals.

- 5.4 In the opinion of the Board, since neither of the cited documents D1 and D2 mentions, or even remotely suggests, means for displaying a stream of data in coded form representative of alphanumeric text data transmitted between terminals, the application of their teaching to assist in diagnosing a transmission problem occurring in a communications system of the type specified in the prior art portion of Claim 1 or 3 of the present application would not lead to the presently claimed subject-matter.
- 5.5 Nevertheless, the Board has considered whether the presently claimed subject-matter might be inherently obvious to a person skilled in the art, so that he would not need help from a prior art document.
- 5.6 According to the review of the prior art on page 1 of the present application, communication problems resulting in erroneous or no alphanumeric data being received, or protocol incompatibilities, have been diagnosed by means of complex diagnostic apparatus (such as that disclosed in D2) operated in association with the terminals. By contrast, the present invention provides a simple means, based on the idea displaying the stream of data in the coded form in which it is transmitted between terminals.
- 5.7 As far as the Board can tell from the file, it was not previously known to display a stream of data in the coded form in which it is transmitted between terminals. Nor does the relevance of that particular stream of coded data for diagnostic purposes appear to have been previously recognised. A new insight or initiative was therefore needed to arrive at the idea of the trace mode for displaying the stream of data in the coded form in which it is transmitted between terminals.

- 5.8 In the result, the Board takes the view that the data communication systems now claimed in the present application involve an inventive step over the cited prior art.
6. The amendments made to the description are only for the purposes of acknowledging D2, correcting clerical errors and removing inconsistencies. In the opinion of the Board, the current version of the application complies with Article 123(2) EPC and meets the requirements for the grant of a European patent.
7. The Board has noticed a clerical error in Claim 3 filed on 7 May 1990, namely the full stop at the end of the twelfth line should obviously be replaced by a comma.

Order

For these reasons, it is decided that:

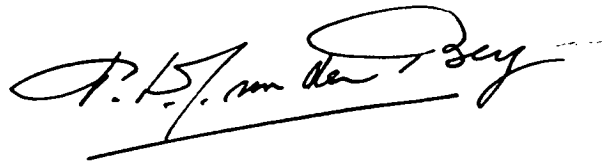
1. The decision under appeal is set aside.
2. The case is remitted to the first instance with the order to grant a patent on the basis of the Appellant's request (paragraph V above), with correction of the clerical error noted in paragraph 7 above.

The Registrar



M. Kiehl

The Chairman



P.K.J. van den Berg