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Anmeldenummer / Filing No / N^o de la demande : 81 108 123.1
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Bezeichnung der Erfindung: Eye controlled user-machine communication
Title of invention:
Titre de l'invention :

Klassifikation / Classification / Classement : G 06 F 3/00

ENTSCHEIDUNG / DECISION
vom / of / du 6 August 1986

Anmelder / Applicant / Demandeur : IBM Corporation

Patentinhaber / Proprietor of the patent /
Titulaire du brevet :

Einsprechender / Opponent / Opposant :

Stichwort / Headword / Référence :

EPÜ / EPC / CBE Art. 56
"Inventive step"

Leitsatz / Headnote / Sommaire

Europäisches
Patentamt

Beschwerdekammern

European Patent
Office

Boards of Appeal

Office européen
des brevets

Chambres de recours



Case Number : T 19 /85

D E C I S I O N
of the Technical Board of Appeal 3.5.1
of 6 August 1986

Appellant : IBM Corporation
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U.S.A.

Representative : Appleton, J.E.
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Decision under appeal : Decision of Examining Division 065 of the European Patent Office dated 08.08.84 refusing European patent application No 81 108 123.1 pursuant to Article 97(1) EPC

Composition of the Board :

Chairman : G. Korsakoff

Member : W. Oettinger

Member : F. Benussi

Summary of Facts and Submissions

I. European patent application No. 81 108 123.1 filed on 9 October 1981 claiming a priority of 31 December 1980 and published under No. 55 338 was refused by a decision of Examining Division 065 dated 8 August 1984.

II. The reason given for the refusal was that the subject-matter of Claim 1 filed on 19 August 1983 lacked an inventive step having regard to the prior art known from document US-A-4 109 145.

III. Claim 1 reads:

"Eye controlled user-machine communication apparatus comprising a display area (2), means positioning the display area into a plurality of regions, identifying means (30 to 33) to identify which one of said regions the user selects by his direction of gaze according to predetermined gaze-fixation criteria, said identifying means being able to identify direction of gaze many times during usual eye movements, and one gaze-fixation criterion involving the identification of the same region selected by the direction of gaze a particular number (N1) of times, feedback means (90) operatively associated with one said region, which feedback means provides a visual signal back to the user indicating that the identifying means has identified preliminary user gaze selection of said one region, verification means (92) including a predetermined location in the display area, the verification means, in response to the identifying means identifying user gaze selection of said predetermined location providing an action signal (93) representing user verification of the preliminary selection of said one region as signalled by the feedback means, and cancellation means (94, 95) including a uniquely dedicated cancel region forming one of said regions, the cancellation

means, when the identifying means identifies that the user has selected said cancel region by his direction of gaze, cancelling an image displayed in the display area, characterised in that said predetermined location is a uniquely dedicated verify region forming one of said regions, said verify region, said cancel region, said verification means and said cancellation means being common to a plurality of preliminarily selectable ones of said regions, whereby user gaze selection of any of said preliminarily selectable regions is fed back by a respective said visual signal and must be verified by subsequent user gaze selection of the common verify region as a prerequisite to the verification means generating said action signal, and whereby for non-verification, user gaze selection of any of said preliminarily selectable regions and said respective visual signal can be cancelled by subsequent user gaze selection of the common cancel region."

This claim is accompanied by dependent Claims 2 to 6 concerning particular embodiments of the apparatus claimed in Claim 1.

As to their wording and the description and drawings reference is made to the file.

IV. The Applicant lodged an appeal against that decision on 16 October 1984 and paid the appeal fee.

A statement setting out the grounds of appeal was filed on 13 December 1984.

V. In that statement the Appellant argued that the Examining Division had drawn far more from the prior document than was justified and that the differences in technical features of the claimed invention and the differences of operation were not suggested by that document.

This submission was further specified by a number of individual arguments which may essentially be summarized as follows:

- a) The verify function is suggested only for the landing gear instruction as a dangerous operation if accidentally performed and not for other selections, such as "FUEL"; the verify region is not common to a plurality of selections.
- b) A solution for the problem of cancelling an accidental preliminary selection, such as the landing gear instruction, or a cancel function for a plurality of such selections is not proposed; the "OFF" region (165) is only dedicated to the cancelling of parameter displays such as "FUEL".
- c) While the prior document seeks to avoid erroneous identifications the invention proposes recovery from them.

For further details reference is made to the file.

VI. The Appellant requested that the decision under appeal be set aside and the application allowed to go to grant with Claim 1 in its present form and with minor amendments to Claims 4 and 5.

Subsidiary requests were directed to (in this order):

- an unspecified amendment to a form acceptable to the Board;
- consideration of a possible combination of Claim 1 with Claim 6 and/or Claim 2;

- consideration of a possible combination with Claim 5 and/or Claim 4;
- consideration of any other possible combination, unspecified, which the Board considered to be important;
- the establishment of oral proceedings.

VII. In a communication pursuant to Article 11(2) of the Rules of Procedure of the Boards of Appeal dated 14 May 1986, the Rapporteur informed the Appellant of the Board's provisional opinion that the subject-matter of Claim 1 lacked an inventive step and the Appellant's arguments for non-obviousness had been found unconvincing.

The same opinion was expressed on the possible claim combinations subsidiarily requested to be considered, as far as these requests were regarded to be clear.

With regard to Claim 2, another two prior documents were cited in addition, viz. FR-A-2 382 056 and IEEE Transactions, BME-21, No. 4, July 1974, pages 309 to 317.

VIII Oral proceedings were scheduled to take place on 5 August 1986, but cancelled after a telephone call received by the Rapporteur from the Appellant's Authorized Representative, Mr Appleton, saying that nobody would appear on behalf of the Appellant.

IX. In that telephone conversation, the Representative also stated that the Appellant had no arguments against the Board's provisional opinion expressed in the communication dated 14 May 1986.

Reasons for the Decision

1. The appeal complies with Articles 106 to 108 and Rule 64 EPC and is, therefore, admissible.

2. No observation is to be made under Article 123(2) EPC.
3. The invention as presented in the application is, however, not patentable under Article 52(1) EPC.
4. The subject-matter of Claim 1 on file - while it is novel (Art. 54) - does not involve an inventive step (Art. 56) and is, therefore unallowable.

4.1 In the apparatus known from US-A-4 109 145, a solution for the problem (implicit in the document, col. 8, lines 8-30) of cancelling an accidental preliminary selection not to be verified, is, although not proposed, obvious to the skilled person; apparently one possibility would be to use the additional "OFF" region in the upper left-hand corner of Fig. 2, not described in the text.

4.2 A plurality of selectable operations which "could be dangerous if accidentally performed" (col. 8, lines 13-14) and of which "lower landing gear" is but an "assumed" (line 19) "example" (lines 9-10), is easily envisageable, in particular with the control of an aircraft, or its use, for instance if military (cf. Fig. 2: "WEAPON", "ARM 1", "ARM 2").

Although not mentioned, it is obvious that in such a case a single cancel region, possibly the above-mentioned additional "OFF" region in the upper left-hand corner, may be common to that plurality of selectable operations, in the same way as the "OFF" region 165 in the upper right-hand corner would seem to be usable as a common cancel region for a plurality of parameter displays of which "FUEL" is but an "assumed" example (cf. col. 7 line 25 to col. 8 line 7 and Fig. 2: "AIR SPEED", "ALT", i.e. altitude, etc.).

4.3 A similar consideration would apply to a single, common, verify region for the plurality of selectable operations envisaged above, a plurality of individual verify regions appearing less practicable.

4.4 The submitted distinction between the prior art avoiding erroneous identifications and the invention proposing recovery from them, is considered to be artificial.

Any cancelling (implicit in the document) of a preselection after the preliminary but before the final selection allows recovery from a wrong preliminary selection, thus avoiding a wrong final selection.

4.5 The above view was expressed in the communication dated 14 May 1986 and has not been disputed in any response to that communication.

4.6 Summarizing this view, the characterizing portion of Claim 1 relates only to features of the verification and cancellation means of the apparatus defined in the precharacterising portion, and such features, to the skilled person reading the prior document with his knowledge and capabilities, are obvious to include in said apparatus.

5. The same conclusion is reached on the possible claim combinations - not filed - which have subsidiarily been considered in the communication dated 14 May 1986.

ORDER

For these reasons it is decided that:

The appeal is dismissed.

The Registrar

The Chairman

B A Norman

G Korsakoff