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D E C I S I O N
of 17 October 1994

Case Number: T 0094/93 - 3.5.1

Application Number: 85111748.1

Publication Number: 0180021

IPC: G06F 15/72

Language of the proceedings: EN

Title of invention:
Hierarchical selection

Applicant:
International Business Machines Corporation

Opponent:
-

Headword:
-

Relevant legal norms:
EPC Art. 52(1), (2), (3); 56

Keyword:
"Inventive step - (yes)"

Decisions cited:
-

Catchword:
-



Case Number: T 0094/93 - 3.5.1

D E C I S I O N
of the Technical Board of Appeal 3.5.1
of 17 October 1994

Appellant: International Business Machines
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Representative: Schuffenecker, Thierry
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Decision under appeal: Decision of the Examining Division of the European
Patent Office dated 8 May 1992 refusing European
patent application No. 85 111 748.1 pursuant to
Article 97(1) EPC.

Composition of the Board:

Chairman: P. K. J. van den Berg
Members: R. Randes
G. Davies

Summary of Facts and Submissions

- I. European patent application No. 85 111 748.1 (publication No. 0 180 021) was refused by a decision of the Examining Division dated 8 May 1992. The decision was based on Claims 1 to 4 filed on 13 November 1991.
- II. The stated ground for the refusal was that the subject-matter of Claim 1 lacked the required inventive step in the light of document

D1: "PROC. 17th DESIGN AUTOMATION CONFERENCE, Minneapolis, June 1980, pages 430 to 439, ACM, P. CARMODY et al.: "An interactive graphics system for ustom design".

It was held that D1 disclosed a method of selecting one of a plurality of sub-objects ("shapes" - assigned to a level in LSI chip design or to the wiring plane level in card design) composing an object (design of one chip) displayed on a screen of a computer system, said system including a screen-pointing and selecting device (light pen). As the shapes of a design were assigned (ordered) to a level when they were created, there was apparently a relationship between the ordering and the order in which the shapes were created.

It was said that the subject-matter of Claim 1 differed from the method disclosed in D1 only in that it provided a step of causing, upon second activation of the selection button, a second sub-object, adjacent to the first selected sub-object in the relationship, to be displayed. The Examining Division concluded:

"But even at the time of filing of the present application, random selection or sequential

(next/previous) selection were so widely used in the art that no inventive step can be seen in using them either both or individually in a special case such as in the present case of selecting sub-objects of an image".

III. A notice of appeal was filed against this decision on 9 June 1992 and the appeal fee was paid on the same date. A Statement of Grounds of Appeal was submitted on 14 September 1992.

IV. The Appellant contended that it would not be obvious to a skilled man having regard to the teaching of D1 to arrive at the invention. The Appellant, in particular, pointed out:

"As particularly explained in the first part of the description, the Applicant was concerned with the problem of having an object displayed on a display screen which includes a plurality of closely-spaced portions having an ordered relationship. Often times, one of the portion [sic] may overlay a second one of the plurality of portions. In order to select one of the portions one must position a selector on the portions to be selected. However, an ambiguity exists, when the portions, having various sizes, are closely-spaced or one portion overlays another portion as to which portion is to be selected. This ambiguity results in one constantly moving the selector to precisely point to and select the desired one of the portions or to perform a time-consuming task of ungrouping of the portions in order to select the desired portion. The succession of the technical steps which are recited in the new claim provide a solution to this problem. On the contrary, the D1 document is concerned with the problem of the display of objects comprising masked and non-masked shapes".

- V. After a communication by the Board, wherein the clarity of the Claims was criticized, the Appellant on 19 August 1994 filed a new set of Claims 1 to 5. Claim 1 reads as follows:

A method of selecting one of a plurality of portions of an object displayed on a display screen, said portions having a stored ordered relationship which corresponds to an order in which said portions were generated, said method comprising the steps of:

- (a) displaying said object on a display screen;
- (b) displaying a screen-pointing device on said screen in response to an operator action on an input device;
- (c) monitoring the position of said screen-pointing device in response to the operator's first action on one selection button on said input device, to determine whether said screen-pointing device is close to one among said plurality of portions;
- (d) displaying said first selected portion among said plurality of portions in a more prominent manner relative to the remaining portions of said object;
- (e) monitoring a second action from the operator [on] said selection button in order to determine a request for the selection of a following portion said object having been generated;
- (f) determining, in response to the operator's second action on said selection button said following portion based on said ordered relationship;

(g) displaying said following portion on said screen in a more prominent manner relating to the remaining portions of said object.

Together with said claims the Appellant also filed pages 1 and 1a to replace original page 1 and pages 4 and 4a to replace original page 4 of the original pages 1 to 13 of the description.

VI. The Appellant requests that the decision under appeal be set aside and a patent granted on the basis of the claims submitted on 19 August 1994.

Reasons for the Decision

1. The appeal is admissible.
2. The new set of claims clearly meets the requirements of Article 123(2) EPC in that the claimed method and all the method steps of the claims are derived from the original application. Claim 1 and Claims 2 and 3 have been amended along the lines suggested by the Board in the above-mentioned communication. Moreover, a Claim 5 has been added, the subject-matter of which corresponds to the third paragraph on the original page 7 of the application.
3. The Board concurs with the opinion of the Appellant that the closest state of the art was already described in the introductory part of the original description of the present application. Therefore, the Board also agrees with the Appellant's identification of the problem to be solved (see under IV above). Thus, the problem is to improve the method of selection by a pointing device (such as a cursor or light-pen) a portion of a plurality

of portions of one object, which portions could be closely-spaced to each other, or even overlying each other (like the different portions on a drawing).

D1 discloses that different levels of an LSI chip or card design can be light-pen-selected from the names of the levels which are displayed on a level selection frame. Thus, according to said document no ambiguity exists when the different levels are selected. To the Board it appears that levels according to D1, therefore, cannot be compared to the said "portions" referred to in the present application.

Moreover, it appears that D1 can, indeed, be so understood that the same level could contain more than one shape as has been proposed by the Appellant. In such case according to D1 the different "shapes" (corresponding to "portions" according to the invention) on a level could not be separately displayed or highlighted at all.

It may be, as has been proposed by the Examining Division, that there exists according to D1 a relationship between the displaying of level names, the assignment of shapes to levels and the order of creation of said shapes. However, it is noted that according to D1 there is no hint, whatsoever, that such relationship between the order of creation of the shapes and the corresponding levels could be used for an "automatic" display selection of subsequent shapes (portions) as proposed by the invention.

When starting from the teaching of D1, there does not, therefore, appear to exist an obvious way to the skilled man to arrive at the claimed invention (Article 56 EPC).

To the Board it appears that the claimed method makes use of a new input means, consisting of a screen pointing device and a selection button, the function of which is apparently governed by data (input to a computer in the system) identifying a stored order of generated portions. Therefore, rapid selection is facilitated of the portions of a "drawing" on the screen in that a pointing device does not have to be moved around the screen and carefully positioned.

The dependent Claims 2 to 5 appended to the independent Claim 1 define embodiments of the invention.

4. The Board in this case finds it appropriate to point out that the subject-matter of Claim 1 is not excluded from patentability under Articles 52(2) and (3) EPC. Starting from the known method using a pointing device (cf. the introductory part of the present application) as input tool for selection of different portions, it is quite clear that the claimed method using the new input tool (pointing device in combination with a selection button according to Claim 1) is technically different from the old one. Moreover, said new input tool apparently provides a link between the display and the processing means, said processing means not being explicitly mentioned in Claim 1, but which apparently stores and uses the data identifying the said ordered relationship between said generated portions.

At first glance it may appear that the storage of said portions in said ordered relationship as identified by Claim 1 relies on a computer program and, therefore, should be excluded as such from patentable matter. However, when considered within the context of Claim 1 as a whole, then, in the end, just this provision provides that the new input means controls the displaying procedure in the way claimed (steps (e) to

(g) in Claim 1). Thus, although said storage could be seen as relying on a computer program, which as such would not be patentable, it appears that in this case such program must be considered to constitute a technical means necessary for carrying out the invention (cf. T 208/84, OJ EPO 1987, 14 and T 887/92, unpublished).

Apparently the new features added by the invention to the known method, taken separately or in combination with other features of the claim, must be considered to have technical character. Moreover, they also clearly contribute to the solution of the technical problem. The subject-matter of Claim 1, therefore, clearly makes a contribution to the art in a field outside the range of excluded matters.

5. The Board is therefore satisfied that the subject-matter of Claim 1 meets all the requirements of Article 52(1) EPC.
6. The Board notes that in the last paragraph of the description the expression "spirit of invention" has been used, which is not in accordance with the Guidelines of the EPO (CIII-4.3(a)).

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 further prosecution.

The Registrar:

The Chairman:

M. Kiehl

P. K. J. van den Berg