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**Datasheet for the decision
of 1 March 2023**

Case Number: T 1890/20 - 3.5.05

Application Number: 11826676.6

Publication Number: 2620850

IPC: G06F3/048, G06F3/14, G06F3/041

Language of the proceedings: EN

Title of invention:
DISPLAY DEVICE

Applicant:
NEC Corporation

Headword:
DISPLAY DEVICE / NEC

Relevant legal provisions:
EPC Art. 56
RPBA 2020 Art. 12(6)

Keyword:
Inventive step - effect not made credible within the whole
scope of claim
Amendment to case - reasons for submitting amendment in appeal
proceedings (no)



Beschwerdekammern

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Case Number: T 1890/20 - 3.5.05

D E C I S I O N
of Technical Board of Appeal 3.5.05
of 1 March 2023

Appellant: NEC Corporation
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 22 June 2020
refusing European patent application No.
11826676.6 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chair E. Konak
Members: N. H. Uhlmann
E. Mille

Summary of Facts and Submissions

- I. The applicant appealed against the examining division's decision to refuse the European patent application in suit.
- II. The examining division had decided that the sole request on file did not meet the requirements of Article 56 EPC.
- III. The examining division had made reference, *inter alia*, to the following document:

D1 US 2002/018028
- IV. With the statement setting out the grounds of appeal the appellant submitted a main request and an auxiliary request 1.
- V. The board summoned the appellant to oral proceedings.

In a communication under Article 15(1) RPBA, the board set out its provisional opinion on the case.
- VI. At the oral proceedings the appellant submitted further arguments.
- VII. The appellant's final requests were that the decision under appeal be set aside and that a patent be granted on the basis of the set of claims of the main request or alternatively of auxiliary request 1, both as filed with the statement setting out the grounds of appeal.
- VIII. Claim 1 of the main request is worded as follows:

"A display device comprising:

a plurality of display units that are equipped with a touch panel function and that display an image that is information;

a coordinate conversion unit that judges whether an application that is currently operating is displaying said image straddling said plurality of display units, wherein the coordinate conversion unit, when the application is displaying said image straddling said plurality of display units, uses a predetermined operation to convert physical coordinates that indicate the position at which said display unit senses contact to virtual coordinates; and

a coordinate notification unit that, when the application is displaying said image on one display unit among said plurality of display units, reports the physical coordinates at which said display unit senses contact to the application and, when the application is displaying said image straddling said plurality of display units, reports said virtual coordinates to the application."

- IX. Claim 1 of auxiliary request 1 differs from claim 1 of the main request in that the following further clause has been inserted:

"wherein the coordinate conversion unit converts to said virtual coordinates the physical coordinates on, from among said plurality of display units, a display unit other than a primary display unit that includes the coordinates of the origin that said application recognizes;"

Reasons for the Decision

1. The present application pertains to a display device comprising a plurality of display units with a touch function. When an application is displaying an image straddling the plurality of display units, the physical coordinates of a touch contact are converted to virtual

coordinates and reported to the application. When the application displays the image on one display unit the physical coordinates are reported.

2. Document D1 discloses a display system comprising a plurality of display devices. The coordinates of a touch contact on one display device are converted while the coordinates of a touch contact on another display device are not.

Main request

3. Inventive step

The board confirms the outcome of the inventive-step analysis in the impugned decision.

- 3.1 Claim interpretation

- 3.1.1 "Physical coordinates" are coordinates of a position on which a contact is sensed by a display unit. The physical coordinates are relative to this specific display unit.

- 3.1.2 "Virtual coordinates" correspond to the entire plurality of display units.

- 3.1.3 "Displaying said image straddling said plurality of display units" is taken to mean that the image is displayed over **the plurality** of display units, i.e. that each of the display units displays a part of the image. This understanding corresponds to the teaching in the description: paragraphs 17, 29, 41 and 44 refer to two display units and the image is displayed over both.

- 3.2 Document D1 forms a suitable starting point for inventive-step assessment.

- 3.3 D1 (Figure 2, paragraphs 33 to 35) teaches that coordinate values are converted only when they

correspond to an input on the digitizer of the display device B. No conversion takes place when the coordinate values correspond to an input on the digitizer of the display device A. Thus D1 discloses that under certain conditions no conversion takes place.

- 3.4 According to claim 1, conversion of physical coordinates to virtual coordinates takes place when an application is displaying an image straddling the plurality of display units. Under the same condition the virtual coordinates are reported to the application. Under the condition "when an application is displaying an image on one display unit" the physical coordinates are reported.
- 3.5 The difference between the claimed subject-matter and the disclosure of D1 lies in the conditions under which the conversion takes place and the physical coordinates are reported.
- The appellant concurs with this finding (statement setting out the grounds of appeal, paragraph bridging pages 3 and 4).
- 3.6 The appellant argued that the distinguishing features solved the problem of avoiding waste of resources due to unnecessary processing, this unnecessary processing being the conversion from physical to virtual coordinates.
- 3.7 The board concurs with the decision under appeal that this problem is not solved over the whole scope of claim 1.
- 3.8 The conversion from physical to virtual coordinates takes place when the application displays the image straddling said plurality of display units. When this is not the case, implicitly, no such conversion is performed. For instance, if the display image comprises

three display units and the image is displayed on two of them, no conversion would take place. However, in this situation it is not sufficient to report only the physical coordinates to the application because the contact position could be on any of the three display units. Thus additional information, e.g. an identification of the display unit concerned, will have to be reported, too.

In the case of the application "displaying said image on one display unit" the reporting of the physical coordinates to the application is similarly not sufficient. The contact position could be on any of the plurality of display units. Furthermore, in general an application window will be bigger than the image displayed by this application inside the application window. In such a case, similar additional information will have to be reported to the application.

- 3.9 Summarily, the avoidance of a conversion step does not lead to avoidance of waste processing because when no conversion takes place and physical coordinates are reported additional information will also have to be reported to the application. The provision of additional information implies additional processing, and it is not credible that the overall processing is reduced.
- 3.10 For these reasons, the distinguishing features do not credibly solve the problem posed and do not credibly lead to an effect.
- 3.11 As consistently held by the boards of appeal, when, as in the present case, the distinguishing features do not lead to an effect credibly achieved over the whole scope claimed they cannot contribute to an inventive step (Case Law of the Boards of Appeal of the EPO, 10th edition, July 2022, chapters I.D.9.6 and I.D.9.2.8).

That such distinguishing features are not disclosed in the prior art is of no relevance.

- 3.12 The appellant submitted that the statement in the penultimate paragraph of item 1.2 of the impugned decision seemed to be based more on a guess than on a justified argument.

The board does not agree. The preceding paragraph in the decision under appeal sets out pertinent arguments.

- 3.13 At the oral proceedings the appellant submitted that when an effect was not achieved over the whole scope claimed the problem to be solved would need to be reformulated in less-ambitious terms. It suggested that the problem should be formulated along the lines of "how to reduce the computational load under certain conditions" and stated that it was not intending to add such conditions to the wording of claim 1.

The board is not convinced. In the absence of further limitations, the distinguishing features of claim 1 as it stands would not contribute towards solving this problem over the whole scope claimed. The board notes that a granted claim provides protection over the whole scope claimed. Hence the problem underlying a positive inventive-step assessment must be equally solved over the whole scope claimed.

- 3.14 For these reasons, the board confirms the finding in the decision under appeal that the subject-matter of claim 1 does not involve an inventive step.

Auxiliary request 1

4. Admission

- 4.1 The decision under appeal was not based on this request. Hence it does not meet the requirements of

Article 12(2) RPBA and is to be regarded as an amendment of the appeal case (Article 12(4) RPBA).

- 4.2 In the statement setting out the grounds of appeal the appellant did not provide reasons for submitting the request in the appeal proceedings.
- 4.3 The features of the previous dependent claims 2 and 7 have been added to the independent claims.
- 4.4 The appellant on 11 March 2019 submitted an amended request. In a communication attached to the summons dated 11 July 2019, the examining division informed the appellant that this request seemed not to be allowable under Article 56 EPC, and gave detailed reasons for this. At the oral proceedings the objection under Article 56 EPC was discussed. The application was refused at the oral proceedings, for essentially the reasons given in the communication attached to the summons.

In this particular situation, the board holds that the appellant should have submitted in the course of the first-instance proceedings, and not only on appeal, a request, at least on an auxiliary basis, including an independent claim corresponding to the present claim 1 and addressing the arguments set out in this communication and during the oral proceedings, if it wanted to have such subject-matter examined by the examining division and this decision reviewed in a judicial manner.

The board is not aware of any circumstances of the appeal case which might justify the admittance of auxiliary request 1.

- 4.5 The board points out that the appeal proceedings do not form a continuation of the first-instance proceedings. The primary object of the appeal proceedings is to

review the decision under appeal in a judicial manner (Article 12(2) RPBA).

4.6 The board notes further with regard to Article 12(6), second sentence, RPBA that it expresses and codifies the principle that each party should submit all arguments and requests that appear relevant as early as possible so as to ensure a fair, speedy and efficient procedure. An appellant is not at liberty to bring about the shifting of its case to the appeal proceedings as it pleases, and so compel the board either to give a first ruling on the critical issues or to remit the case to the examining division. Conceding such freedom to an appellant would run counter to orderly and efficient appeal proceedings. In effect, it would allow a kind of "forum shopping" which would jeopardise the proper distribution of functions between the departments of first instance and the boards of appeal and would be unacceptable for procedural economy generally.

4.7 At the oral proceedings the appellant argued twofold:

- The request was suitable for overcoming the objections raised in the decision under appeal
- The appellant had not perceived the full complexity of the arguments until the written decision was issued

4.8 The board is not convinced.

The features added to claim 1 do not lead to any effect because claim 1 requires the virtual coordinates to be reported to the application when the image is straddling a plurality of display units, but does not require the reporting of the virtual coordinates under the condition "not a primary display unit". Hence the

amendment is not suitable for overcoming the inventive-step objection set out in the impugned decision.

As explained in point 4.4 above, the objections of the examining division had been raised in the communication attached to the summons dated 11 July 2019, discussed at the oral proceedings and essentially maintained in the written decision under appeal.

4.9 For these reasons, the board does not admit auxiliary request 1 under Article 12(6), second sentence, RPBA.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chair:



K. Götz-Wein

E. Konak

Decision electronically authenticated