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**Datasheet for the decision
of 3 December 2013**

Case Number: T 0510/12 - 3.5.05

Application Number: 08021846.4

Publication Number: 2120135

IPC: G06F3/041

Language of the proceedings: EN

Title of invention:

Method for filtering signals of touch sensitive device

Applicant:

HTC Corporation

Headword:

Method for filtering signals/HTC

Relevant legal provisions:

EPC Art. 84, 111(1), 123(2)

EPC R. 43(2)(c)

Keyword:

Claims - clarity and support (yes - after amendment) -
conciseness (yes)

Extension of subject-matter (no - after amendment)

Remittal to the department of first instance (yes)

Decisions cited:

Catchword:



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Chambres de recours**

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Case Number: T 0510/12 - 3.5.05

D E C I S I O N
of Technical Board of Appeal 3.5.05
of 3 December 2013

Appellant: HTC Corporation
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 24 October 2011
refusing European patent application No.
08021846.4 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chair: A. Ritzka
Members: P. Corcoran
F. Blumer

Summary of Facts and Submissions

- I. The present appeal is against the decision of the examining division to refuse the European patent application no. 08 021 846, publication no. EP 2 120 135. The decision was announced during oral proceedings on 27 September 2011 and the written reasons were dispatched on 24 October 2011.
- II. According to the decision under appeal, the examining division exercised its discretion decision under Rule 137(3) EPC not to consent to amendments to the claims which resulted in a finding that the application lacked a valid set of claims and thus failed to meet the requirements of Article 78(1)(c) EPC.
- III. In an *obiter dictum* to the decision, the examining division referred to a parallel European patent application no. 08 017 241 which had been granted as European patent no. EP 2 120 137 and noted that there appeared to be an overlap of subject-matter with the present application.
- IV. Notice of appeal was received at the EPO on 20 December 2011 with the appropriate fee being paid on the same date. A written statement setting out the grounds of appeal was received at the EPO on 20 February 2012. With the statement setting out the grounds of appeal, the appellant filed a main request comprising 10 claims and an auxiliary request comprising 8 claims.
- V. In a communication accompanying a summons to oral proceedings to be held on 3 December 2013, the board gave its preliminary opinion that the appellant's requests were not allowable and, *inter alia*, made the following observations:

- (i) With respect to both the main request and the auxiliary request, the board expressed reservations as to whether the claims of said requests, in particular the independent claims thereof, complied with the requirements of Articles 84 and 123(2) EPC.
- (ii) The board indicated that the subject-matter of the independent claims of the requests on file appeared to overlap with the subject-matter of the claims of the granted European patent no. EP 2 120 137 B1 based on the related European application no. 08 017 241 and noted that this matter might require further discussion during oral proceedings.
- (iii) Concerning the question of the compliance with the requirements of Article 52(1) EPC, in particular the inventive step requirement thereof, the board noted that this matter did not appear to have been discussed exhaustively during first instance proceedings and, moreover, it was not the subject of a final decision during said proceedings. The board indicated that it was minded to remit the case to the department of first instance for further prosecution should the discussion progress to a point where it became appropriate to give consideration to this matter.

VI. With a letter of reply dated 30 October 2013, the appellant filed an amended main and auxiliary request to replace the requests on file.

VII. Oral proceedings were held as scheduled on 3 December 2013. During the oral proceedings the appellant

submitted a further auxiliary request (Auxiliary Request II) comprising claims 1 to 7.

VIII. The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the Main Request as filed with letter dated 30 October 2013, or, subsidiarily, on the basis of Auxiliary Request I, filed as Auxiliary Request with letter dated 30 October 2013, or on the basis of Auxiliary Request II as filed during the oral proceedings before the board.

IX. Claim 1 of the main request reads as follows:

"A method for distinguishing between a user's input signal and a noise signal in received touch signals, suitable for a touch sensitive device, wherein the touch sensitive device comprises a plurality of sensing areas (101, 102, 103, 104, 105, 106, 107, 108, 109) each being adapted to output a user's input signal upon being touched, output a noise signal produced by noise, or output no signal, wherein the touch sensitive device comprises a capacitive touch sensitive device and each of the sensing areas comprises a capacitive touch sensitive component;
the method comprising:
obtaining (S110) a touch signal composed of the user's input signal if said user's input signal has been produced or the noise signal if said noise signal has been produced from the sensing areas (101 - 109) of the touch sensitive device;
selecting (S120) three contiguous sensing areas which correspond to the touch signal and comprising a first sensing area, a second sensing area and a third sensing area, wherein the second sensing area is located between the first sensing area and the third sensing

area, wherein the second sensing area separates the first sensing area and the third sensing area from each other; and
discarding (S140) the touch signal if the touch signal is just produced by the first sensing area and the third sensing area, and the second sensing area produces no signal,
wherein the touch signal not being discarded represents a touch by a finger or a conductor."

X. Claim 1 of the first auxiliary request (Auxiliary Request I) reads as follows:

"A method for distinguishing between a user's input signal and a noise signal in received touch signals, suitable for a touch sensitive device, wherein the touch sensitive device comprises a plurality of sensing areas (101, 102, 103, 104, 105, 106, 107, 108, 109) each being adapted to output a user's input signal upon being touched, output a noise signal produced by noise, or output no signal, wherein the touch sensitive device comprises a capacitive touch sensitive device and each of the sensing areas comprises a capacitive touch sensitive component, wherein upon a touch by a finger or a conductor a touch signal is produced, which corresponds to contiguous sensing areas;
the method comprising:
obtaining (S110) a touch signal composed of the user's input signal if said user's input signal has been produced or the noise signal if said noise signal has been produced from a 3x3 block of the sensing areas (101 - 109) of the touch sensitive device;
selecting (S120) three contiguous sensing areas of the 3x3 block of the sensing areas which correspond to the touch signal, wherein the three contiguous sensing areas are a first sensing area, a second sensing area

and a third sensing area, wherein the second sensing area is located between the first sensing area and the third sensing area, wherein the second sensing area separates the first sensing area and the third sensing area from each other; and discarding (S140) the touch signal if the touch signal is just produced by the first sensing area and the third sensing area, and the second sensing area produces no signal, wherein the touch signal not being discarded represents a touch by a finger or a conductor."

XI. Claim 1 of the second auxiliary request (Auxiliary Request II) reads as follows:

"A method for distinguishing between a user's input signal and a noise signal in received touch signals, suitable for a touch sensitive device, wherein the touch sensitive device comprises a plurality of sensing areas (101, 102, 103, 104, 105, 106, 107, 108, 109), wherein the touch sensitive device is a capacitive touch sensitive device and each of the sensing areas comprises a capacitive touch sensitive component; the method comprising: obtaining (S110) a touch signal corresponding to at least one of the sensing areas; selecting (S120) three contiguous sensing areas comprising a first sensing area, a second sensing area and a third sensing area, wherein at least one of the three contiguous sensing areas corresponds to the touch signal and wherein the second sensing area is located between the first sensing area and the third sensing area, wherein the second sensing area separates the first sensing area and the third sensing area from each other; and

discarding (S140) the touch signal as said noise signal if the touch signal is produced by the first sensing area and the third sensing area, and the second sensing area produces no signal, wherein the touch signal not being discarded represents said user's input signal."

Claim 6 of the request is a further independent method claim which reads as follows:

"A method for distinguishing between a user's input signal and a noise signal in received touch signals, suitable for a touch sensitive device, wherein the touch sensitive device comprises a plurality of sensing areas (101, 102, 103, 104, 105, 106, 107, 108, 109), wherein the touch sensitive device is a capacitive touch sensitive device and each of the sensing areas comprises a capacitive touch sensitive component; the method comprising:
obtaining (S110) a touch signal corresponding to at least one of the sensing areas;
selecting (S120) four contiguous sensing areas comprising a first sensing area, a second sensing area, a third sensing area and a fourth sensing area, wherein at least one of the four contiguous sensing areas corresponds to the touch signal and wherein the first sensing area, the third sensing area, the second sensing area and the fourth sensing area are arranged in a 2x2 block and the first and third sensing areas as well as the second and fourth sensing areas are located in opposite corners of said 2x2 block,
discarding (S140) the touch signal as said noise signal if the touch signal is produced by the first sensing area and the third sensing area, and the second sensing area and the fourth sensing area produce no signal,

wherein the touch signal not being discarded represents said user's input signal."

XII. Insofar as they are relevant to the present decision, the written and oral submissions made on behalf of the appellant during the present appeal proceedings, may be summarised as follows:

- (i) With respect to the main request, the appellant referred in particular to paragraphs [0028], [0029], [0032] and [0033] of the originally filed disclosure as providing support for the amendments to claim 1 of said request.
- (ii) With respect to the first auxiliary request, the appellant made a submission to the effect that the amendments to the claims of said request substantially corresponded to the amendments to the claims of the main request and also referred to a number of further minor amendments and corrections.
- (iii) With respect to the second auxiliary request, the appellant submitted that claim 1 had been amended in response to the board's objection concerning the specification of the plurality of sensing areas, viz. "each being adapted to output a user's input signal upon being touched, output a noise signal produced by noise, or output no signal". The claim had been further amended to clarify how the underlying aim of the claimed method was realised, i.e. how to distinguish between a user's input signal and a noise signal. Claim 6 which sought protection for a further embodiment of the invention had been amended in a manner substantially identical to claim 1.

XIII. At the end of the oral proceedings the chair announced the board's decision.

Reasons for the Decision

1. The appeal is admissible. The board judges that the appeal is allowable for the reasons which follow.

Main request

2. *Article 84 EPC*

2.1 Claim 1 of the main request is directed toward a method for distinguishing between a user's input signal and a noise signal in received touch signals. The claim specifies that the method is "suitable for a touch sensitive device" and that the touch sensitive device comprises a plurality of sensing areas.

2.2 With respect to the plurality of sensing areas, the board judges that the specification "each being adapted to output a user's input signal upon being touched, output a noise signal produced by noise, or output no signal" lacks support by the description and is also unclear. There is no identifiable disclosure to the effect that each sensing area has been specifically "adapted" in the manner recited in the claim nor is it readily apparent what such an adaptation would entail in technical terms.

2.3 According to the preamble of claim 1, the claim seeks protection for "a method for distinguishing between a user's input signal and a noise signal". However, the

wording used in the latter part of the claim fails to provide a clear and unambiguous expression of how the concluding features contribute to the aim specified in the preamble, viz. to distinguish between a user's input signal and a noise signal. The wording used in the latter part of the claim indicates that the touch signal may be discarded in situations where the signal produced by the sensing areas is discontinuous but it omits any specification to the effect that the act of discarding said signal is the consequence of its categorisation as a "noise signal". Likewise, the specification "wherein the touch signal not being discarded represents a touch by a finger or a conductor" omits any specification to the effect that the act of not discarding the signal is the consequence of its categorisation as a "user's input signal".

2.4 The board therefore concludes that the amendments to claim 1 of the main request fail to define the matter for which protection is sought in a manner which complies with the clarity and support requirements of Article 84 EPC.

3. *Article 123(2) EPC*

3.1 It is additionally noted that the claim wording objected to under 2.2 above, lacks any identifiable basis in the originally filed application documents. In the board's judgement, the passages of the original disclosure referred to by the appellant do not provide support for this amendment (cf. Facts and Submissions, item XII(i) above).

3.2 The board therefore concludes that the amendment to claim 1 in this respect introduces subject-matter which extends beyond the content of the originally filed

application documents and consequently infringes Article 123(2) EPC.

4. Having regard to the findings set forth under 2. and 3., above the main request is not allowable.

First auxiliary request

5. *Articles 84 and 123(2) EPC*

- 5.1 The objections noted under 2. and 3. above also apply to claim 1 of the first auxiliary request.

6. The first auxiliary request is therefore not allowable for the same reasons given in respect of the main request.

Second auxiliary request

7. *Claim 1*

- 7.1 Claim 1 of the second auxiliary request has been amended such that the claim wording objected to under 2.2 above has been deleted.

- 7.2 Said claim 1 has been further amended to clarify that that the act of discarding the touch signal is the consequence of its categorisation as a "noise signal" and that the act of not discarding the signal is the consequence of its categorisation as a "user's input signal". The amendments to the claim in this respect thus clarify how the corresponding claim features contribute to the aim specified in the preamble, *viz.* to distinguish between a user's input signal and a noise signal.

8. *Articles 84 and 123(2) EPC*

8.1 The board is satisfied that the amendments to claim 1 of the second auxiliary request noted under 7.1 and 7.2 above overcome the objections raised under Article 84 EPC against the corresponding independent claims of the main and first auxiliary requests.

8.2 It is further noted that the subject-matter of claim 1 of the second auxiliary request is based on the embodiments of the invention illustrated in Figs. 1 and 2A and disclosed in the associated passages of the originally filed disclosure. The board is satisfied that the amending wording of the claim is supported by the originally filed application documents and does not infringe Article 123(2) EPC.

9. *Claim 6*

9.1 The second auxiliary request includes a further independent method claim which is evidently based on the embodiments of the invention illustrated in Figs. 3 and 4 and 2B and the associated passages of the originally filed disclosure.

9.2 Amendments substantially identical to those noted under 7. above in respect of claim 1 of the request have also been made to the wording of claim 6. As in the case of claim 1, the board is satisfied that these amendments are in conformity with the clarity and support requirements of Article 84 EPC and that they do not infringe 123(2) EPC.

9.3 For the sake of completeness the board notes that in the present case the inclusion of two independent claims in the same category does not, in its judgement,

conflict with the conciseness requirement of Article 84 EPC. According to the provisions of Rule 43(2) EPC, a European patent application may contain more than one independent claim in the same category if such claims relate to alternative solutions to a particular problem where it is inappropriate to cover these alternatives by a single claim (Rule 43(2)(c) EPC). Claims 1 and 6 evidently relate to different, albeit closely related, embodiments of the invention both of which address the same underlying problem, viz. how to distinguish between a user's input signal and a noise signal, and provide solutions based on the common principle of examining the distribution of the output signal components over a selected group of contiguous sensing areas. The board takes the view that, in the present case, there is no compelling reason to require the appellant to cover these alternative embodiments by a single independent method claim.

10. *Remittal*

10.1 As may be inferred from the foregoing, the board is satisfied that the claims of the second auxiliary request comply with the requirements of Article 84 and 123(2) EPC.

10.2 Given that the question of compliance with the further requirements of the EPC, in particular the inventive step requirement thereof, has not been the subject of a final decision during first instance proceedings (cf. Facts and Submissions, item V(iii) above), the board judges that the most appropriate course of action under the given circumstances is to remit the case to the department of first instance for further prosecution in order not to deprive the appellant of the opportunity

to have these outstanding matters decided by two instances (Article 111(1) EPC).

- 10.3 In conclusion the board notes that, in its judgement, it would not be appropriate to give further consideration to the question of alleged overlap with the subject-matter of the claims of the granted European patent no. EP 2 120 137 B1 (cf. Facts and Submissions, items III and V(ii) above) in the context of the present appeal proceedings. In view of the decision to remit the case, this becomes a matter to be decided by the examining division during the further prosecution of the application subject to all other outstanding issues concerning patentability being resolved in the appellant's favour.

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 on the basis of claims 1-7, filed as Auxiliary Request II during the oral proceedings before the board.

The Registrar:

The Chair:



K. Götz

A. Ritzka

Decision electronically authenticated