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Datasheet for the decision of 9 October 2023

Case Number: T 1795/21 - 3.5.05

Application Number: 18195225.0

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Language of the proceedings: EN

Title of invention:
A DISPLAY APPARATUS

Applicant:
Nokia Technologies Oy

Headword:
Touch display having audio transducers for generating acoustic and tactile waves / Nokia

Relevant legal provisions:
RPBA 2020 Art. 12(4), 12(6)
EPC Art. 84, 123(2)

Keyword:

Amendment to case - amendment overcomes objection (yes) - amendment admitted (yes)
Claims - clarity (no)
Amendments - added subject-matter (yes)

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Boards of Appeal

Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 1795/21 - 3.5.05

D E C I S I O N
of Technical Board of Appeal 3.5.05
of 9 October 2023

Appellant: (Applicant)	Nokia Technologies Oy Karaportti 3 Espoo (FI)
Representative:	Page White Farrer Bedford House 21a John Street London WC1N 2BF (GB)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 20 May 2021 refusing European patent application No. 18195225.0 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chair	A. Ritzka
Members:	P. Tabery
	E. Mille

Summary of Facts and Submissions

I. The appeal is directed against the examining division's decision to refuse the European patent application.

II. The examining division decided that the claimed subject-matter contained matter which was not originally disclosed and did not involve an inventive step (main request and auxiliary request 1). The remaining auxiliary requests were considered either to contain added subject-matter or to lack clarity.

III. In its statement of grounds of appeal, the appellant requested that the decision of the examining division be set aside and that a patent be granted on the basis of the claims of a main request or one of auxiliary requests 1 to 3, copies of all requests submitted with the statement setting out the grounds of appeal. If no request was found allowable, oral proceedings were requested.

IV. The board issued a summons to oral proceedings. It also set out its preliminary opinion on the case (Article 15(1) RPBA 2020).

The board noted that a discrepancy existed between the annexed claims and those cited in the statement setting out the grounds of appeal. It considered that the **main request** and **auxiliary request 1** as addressed in the statement setting out the grounds of appeal did not meet the requirements of Articles 84, 123(2) and 56 EPC. As for **auxiliary requests 2 and 3** as addressed in the statement setting out the grounds of appeal, the board noted that the objections pursuant to Articles 84 and 123(2) EPC also applied.

V. In a reply dated 7 September 2023, the appellant submitted claims of a main request and auxiliary

requests 1 to 3 corresponding to what was indicated in the statement setting out the grounds of appeal and provided further arguments.

VI. By short communication dated 12 September 2023, the board informed the appellant that the arguments against the objections pursuant to Articles 84 and 123(2) EPC were not convincing.

VII. Oral proceedings were held on 9 October 2023. The appellant requested that the decision under appeal be set aside and that a patent be granted based on the set of claims of a main request or alternatively of any of auxiliary requests 1 to 3 filed with the appellant's letter dated 6 September 2023.

VIII. **Claim 1** of the **main request** reads as follows:

"An apparatus comprising:

a touch display (12) for generating acoustic waves and tactile waves based on an audio transducer coupled to the touch display (12); and

means configured to:

determine an audio signal and a tactile signal from a combined signal, wherein the combined signal comprises the tactile signal and the audio signal, wherein, when the apparatus is in a first operating mode, a drive signal generated by an audio driver configured to process the combined signal is received by the touch display (12) and using the touch display (12) generate audio acoustic waves and tactile waves based on the combined signal;

determine a second operating mode of the apparatus, wherein the second operating mode is one of a plurality of operating modes of the apparatus and the second operating mode is different from the first operating mode; and

separate the combined signal into the audio signal and the tactile signal according to the second operating mode, wherein, when the apparatus is in the second operating mode, the audio signal and the tactile signal are independently processed such that for the second operating mode the tactile waves are output based on the tactile signal from the touch display while the audio signal is not output."

Independent **claim 14** is directed to a corresponding method.

IX. Independent **claims 1 and 13** of **auxiliary request 1** are identical to claims 1 and 14 of the main request, respectively.

X. **Claim 1** of **auxiliary request 2** reads as follows:

"An apparatus comprising:

more than one tactile feedback transducer, the tactile feedback transducer being an audio transducer;

a touch display (12) for generating acoustic waves and tactile waves based on the audio transducer coupled to the touch display (12); and

means configured to:

receive more than one feedback signal, wherein the more than one feedback signal comprises a tactile signal and an audio signal and are associated with an address identifier configured to route the more than one feedback signal to a transducer addressed location;

determine the audio signal and the tactile signal from the more than one feedback signal, wherein, when the apparatus is in a first operating mode, a drive signal generated by an audio driver configured to process the more than one feedback signal is received by the touch display (12) and using the touch display (12) to

generate audio acoustic waves and tactile waves based on the more than one feedback signal;

determine a second operating mode of the apparatus, wherein the second operating mode is one of a plurality of operating modes of the apparatus and the second operating mode is different from the first operating mode; and

separate the more than one feedback signal into the audio signal and the tactile signal according to the second operating mode; and

independently process the audio signal and the tactile signal, wherein, when the apparatus is in the second operating mode, the audio signal and the tactile signal are independently processed such that for the second operating mode the tactile signal is routed to the audio transducer coupled to the touch display (12) identified by the address identifier and the tactile waves are output based on the tactile signal from the touch display while the audio signal is not output."

XI. **Claim 1** of **auxiliary request 3** reads as follows:

"An apparatus comprising:

more than one tactile feedback transducer, the tactile feedback transducer being an audio transducer;

a touch display (12) for generating acoustic waves and tactile waves based on the audio transducer coupled to the touch display (12); and

means configured to:

receive more than one feedback signal, wherein the at least one feedback signal comprises a tactile signal and an audio signal and is associated with an address identifier configured to route the more than one feedback signal to a transducer addressed location;

determine the audio signal and the tactile signal from the more than one feedback signal, wherein, when the apparatus is in a first operating mode, a drive signal generated by an audio driver configured to process the more than one feedback signal, the drive signal is routed to the audio transducer coupled to the touch display (12) identified by the address identifier and using the touch display (12) to generate audio acoustic waves and tactile waves based on the more than one feedback signal;

determine a second operating mode of the apparatus, wherein the second operating mode is one of a plurality of operating modes of the apparatus and the second operating mode is different from the first operating mode; and

separate the more than one feedback signal into the audio signal and the tactile signal according to the second operating mode; and

independently process the audio signal and the tactile signal, wherein, when the apparatus is in the second operating mode, the audio signal and the tactile signal are independently processed such that for the second operating mode the drive signal based on the tactile signal is routed to the audio transducer coupled to the touch display (12) identified by the address identifier and the tactile waves are output based on the tactile signal from the touch display while the audio signal is not output."

Reasons for the Decision

1. The application concerns an apparatus with a touch display having audio transducers for generating acoustic waves and tactile waves in which the audio

signal may not be output, depending on the mode of operation.

2. Main request

The claims of the main request are based on those of the main request considered in the decision under appeal.

2.1 Admissibility (Article 12(4) RPBA)

The board notes that the examining division, in its summons to oral proceedings, introduced document **D4** into the examination proceedings and based its argument of lack of novelty on this new document. The appellant reacted by filing new claims, which were found to contain added subject-matter. Since the appellant was confronted with the latter finding for the first time during those oral proceedings, the board admits the amended main request into these proceedings (Article 12(6) RPBA).

2.2 Added subject-matter (Article 123(2) EPC)

2.2.1 In the decision under appeal, the examining division held that claim 1 contained added subject-matter. This claim specified that the combined signal was received by the touch display, whereas the description disclosed in paragraph [0166] (A1 publication) that "*the touch display as described herein [is] configured to receive the combined audio signal drive signal ...*" (emphasis added by the examining division).

2.2.2 The appellant brought forward that the amendment in claim 1 was based on page 28, lines 16 to 20 of the application as originally filed (which the board understands as being equivalent to paragraph [0165] of

the A1 publication). As such, the amended claims explicitly recited the manner in which signals were presented to the touch display as disclosed in the application as filed. Furthermore, the appellant argued that the application disclosed (in paragraph [0127] and Figure 6) that the combined signal could be either received or retrieved. Since paragraph [0136] cited by the board referred to this feature, the embodiment of this paragraph was not limited to the case that the combined signal was received.

2.2.3 The board concurs with the appellant that the amendment presented upon appeal renders moot the respective objection in the decision under appeal.

However, the board notes that claim 1 comprises the case that, also in the second operating mode, the combined signal may be *generated* by the claimed apparatus. However, according to the original disclosure, this may only happen in the first operating mode (see e.g. paragraph [0004] of the description, A1 publication). For the case of the combined signal being separated, as in the second operating mode, the description discloses that the apparatus *receives* the combined signal (see paragraph [0134] to [0136] and Figure 6) but not that it *generates* the combined signal.

2.2.4 Thus, the subject-matter of claim 1 does not fulfil the requirements of Article 123(2) EPC.

2.3 Clarity (Article 84 EPC)

2.3.1 The board holds that claim 1 comprises a contradiction. The feature "*determine an audio signal and a tactile signal from a combined signal*" implies that the audio and tactile signals are separated, whereas the feature "*[generating] audio acoustic waves and tactile waves*

based on the combined signal" implies that a determination/separation is neither necessary nor actually performed. This raises doubts as to how the apparatus of claim 1 is supposed to be limited by the "*determine*" step.

2.3.2 The appellant argued that "*to determine*" meant "*to settle or decide by choice of alternatives or possibilities*" and that the claim described how the determining was to be implemented in the two cases. Finally, the skilled person reading the claim as a whole would understand that the feature "*determine an audio signal and a tactile signal from a combined signal*" merely emphasised the fact that the combined signal comprised the tactile signal and the audio signal.

2.3.3 The board is not convinced by the appellant's arguments. First, the term "*determine*" means also "*to discover the facts about something; to calculate something exactly*" (see Oxford dictionary), which implies separating the audio and tactile signals, i.e. the opposite of what the first operating mode requires. Also, the "*determine*" step is mentioned as a separate method step, rather than a step which is then specified in more detail, as alleged by the appellant. Finally, given that it is specified later on in the claim that the combined signal comprises the tactile signal and the audio signal, the skilled person would not consider that the "*determine an audio signal and a tactile signal from a combined signal*" step could be regarded as a redundant specification of the very same matter.

2.3.4 Therefore, claim 1 does not comply with Article 84 EPC.

2.4 In view of the above, the **main request** is not allowable.

3. Auxiliary requests 1 to 3

3.1 The board holds that the objections pursuant to Articles 84 and 123(2) EPC raised against the main request also apply to the claims of auxiliary requests 1 to 3. In each of these requests, claim 1 contains the same added subject-matter and the same contradicting features. Thus, the conclusion on the main request also applies to auxiliary requests 1 to 3.

3.2 Hence, none of auxiliary requests 1 to 3 is allowable.

4. Consequently, the appeal is not allowable.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chair:

K. Götz-Wein A. Ritzka

Decision electronically authenticated