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**Datasheet for the decision
of 26 July 2018**

Case Number: T 2391/13 - 3.5.03

Application Number: 10151117.8

Publication Number: 2180667

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Language of the proceedings: EN

Title of invention:

Mobile communication device and related construction method

Applicant:

Nokia Technologies Oy

Headword:

Mobile communication device/NOKIA

Relevant legal provisions:

EPC Art. 123(2)

Keyword:

Non-compliance with Article 123(2) EPC - all requests

Decisions cited:

T 0461/05

Catchword:



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Case Number: T 2391/13 - 3.5.03

D E C I S I O N
of Technical Board of Appeal 3.5.03
of 26 July 2018

Appellant: Nokia Technologies Oy
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 4 July 2013
refusing European patent application No.
10151117.8 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman F. van der Voort
Members: T. Snell
P. Guntz

Summary of Facts and Submissions

- I. This appeal is against the decision of the examining division refusing European patent application No. 10151117.8, publication number EP 2 180 667 A1. The refusal was based on the ground that claim 1 of the main request and all five auxiliary requests respectively did not comply with Article 123(2) EPC.
- II. The appellant filed an appeal against the above decision. In the statement of grounds of appeal, the appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of a main request or, in the alternative, on the basis of one of first to third auxiliary requests (to be referred to as auxiliary requests 1 to 3), all requests as filed with the statement of grounds of appeal. The appellant also conditionally requested oral proceedings (cf. Article 116 EPC).
- III. In a communication accompanying a summons to oral proceedings, the board gave a preliminary view inter alia that claim 1 of respectively the main request and each of the auxiliary requests did not comply with Article 123(2) EPC.
- IV. With a letter dated 22 June 2018, the appellant filed a new auxiliary request 3 to replace auxiliary request 3 on file. It also submitted a document said to clarify the meaning of the expressions "duct" and "acoustic cavity".
- V. Oral proceedings were held on 26 July 2018. The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the main request or, in the alternative, on the basis

of either auxiliary request 1 or 2, all three requests as filed with the statement of grounds of appeal, or on the basis of auxiliary request 3 as filed with the letter dated 22 June 2018.

At the end of the oral proceedings, after due deliberation, the chairman announced the board's decision.

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

"A mobile communication device of the type having a radio frequency transmitter, a radio frequency receiver, a radio frequency antenna and a speaker component, said mobile communication device comprising:

a housing for carrying subassemblies defining an operational communication device, said housing comprising a contoured case having an exterior surface and an interior surface, wherein said interior surface forms and defines an interior cavity within said housing for holding said subassemblies; characterised in that:

said interior cavity comprises two acoustical cavities constituting an acoustic volume for the speaker component, at least one of said acoustical cavities constituting a chamber for the radio frequency antenna."

VII. Claim 1 of auxiliary request 1 is the same as claim 1 of the main request except that in the last clause, the wording "said interior cavity comprises two acoustical cavities" reads instead: "said interior cavity is an acoustic resonator comprising two acoustical cavities".

VIII. Claim 1 of auxiliary request 2 is the same as claim 1 of the main request except that the characterising part reads:

"said interior cavity comprises two acoustical cavities arranged such that the total volume of the two acoustical cavities provides a total chamber volume for the speaker component to achieve desired acoustic characteristics, at least one of said acoustical cavities constituting a chamber for the radio frequency antenna."

IX. Claim 1 of auxiliary request 3 is the same as claim 1 of the main request except that the characterising part reads:

"said interior cavity comprises two back acoustical cavities (90, 92; 222, 246) constituting a back acoustic volume for the speaker component (80; 232), at least one (92; 222) of said back acoustical cavities (90, 92; 222, 246) constituting a chamber for the radio frequency antenna (70; 242)."

Reference signs have also been added to the preamble.

Reasons for the Decision

1. *Main request - claim 1 - Article 123(2) EPC*

1.1 In accordance with established case law, the test for compliance with Article 123(2) EPC is whether an amendment is directly and unambiguously derivable from the application as filed.

1.2 The characterising part of claim 1 has been amended to include a reference to two acoustic cavities. The

appellant argued that both the embodiment of Figs. 2 to 4 and respectively that of Fig. 5 comprised two acoustic cavities and thus provided support for the characterising part of claim 1.

1.3 The board however considers that the embodiment of Figs. 2 to 4 does not provide a direct and unambiguous basis for the characterising feature of claim 1 because, as rightly pointed out by the examining division, in the description the combined speaker-antenna chamber/cavity is consistently presented as a single chamber/cavity (cf. e.g. paragraphs [0036] and [0039]). This is also consistent with the description of the prior art arrangement shown in Fig. 1, which as regards the speaker, shows the same configuration as Fig. 2. In this respect, the description states that "although the speaker chamber 50 [in Fig. 1] is indicated as a single cavity ..." (cf. col. 6, lines 11-12, underlining by the board). This sentence goes on to state: "multiple cavities around the speaker can be provided ...". However, the description does not disclose this latter possibility in connection with the later-described combined speaker/antenna chamber solution of Figs. 2 to 4, and in any case this reference does not provide direct and unambiguous support for specifically two acoustic cavities as claimed, all the more so considering that claim 1 does not include the limitation in that passage "around the speaker".

1.4 In the letter dated 22 June 2018 and at the oral proceedings the appellant argued that Fig. 2 did indeed disclose two acoustic cavities to the right of the speaker 80. In this respect, an imaginary demarcation line could be drawn between the space under the antenna and the remaining space, with the result that cavity 90

could be seen as two acoustic cavities (which the appellant considered to mean two Helmholtz resonators) in series. Various analogies were drawn between a capacitor, which could be equivalently represented by two capacitors in series, a kitchen/dining room which could be demarcated by a change of floor tiling, or a plastic bottle (a form of acoustic resonator) which could be lengthened by an extra piece of a different colour such that there were recognisably two acoustic cavities in series.

1.5 The board found this line of argumentation to be unconvincing. The skilled person looking at Figs. 2 to 4 would not recognise any demarcation between two portions of the cavity as there is no physical feature, e.g. a change of shape, which could be regarded as a meaningful demarcation line with regard to acoustic resonance. Furthermore, there is nothing in the description which would support such an interpretation. The board notes that if the appellant's argument were accepted, this would equally mean that the cavity 90 in Fig. 2 could be arbitrarily regarded as embracing any number of acoustic cavities in series, an interpretation which the board finds as implausible as two acoustic cavities in series.

1.6 Consequently, the only relevant embodiment for determining compliance with Article 123(2) EPC is that of Fig. 5. However, this detailed embodiment is relatively complex and provides a complete solution to the problem of providing both speaker and antenna resonant cavities without mutual interference. In the board's view, the special structural design of Fig. 5 with regard to the mounting of these components in order to avoid mutual interference is intrinsically bound up with the location and shape of the two

acoustic chambers. The isolation of the particular claimed general aspect from this embodiment therefore constitutes in the board's view an unallowable intermediate generalisation. It is further noted that claim 1 embraces any solution involving two or more acoustical cavities constituting an acoustic volume for the speaker where at least one of these cavities constitutes a chamber for the antenna. The special embodiment of Fig. 5 does not provide direct and unambiguous support for such a broad claim.

1.7 The appellant argued that the skilled person would recognise a number of elements of Fig. 5 as being non-essential or not necessary (referring to T 461/05). The board however finds this argument unconvincing for the reasons given above. In the case of such an integrated solution as that of Fig. 5, the skilled person is not in a position to recognise, directly and unambiguously, which features can be deemed non-essential, all the more so as there is no wording in the description of this embodiment directly corresponding to the features of the characterising part of claim 1.

1.8 Consequently, the board concludes that claim 1 of the main request does not comply with Article 123(2) EPC.

2. *Auxiliary requests - claim 1*

2.1 None of the amendments with respect to claim 1 of the main request have any effect on the issue of compliance with Article 123(2) EPC. This was not contested by the appellant.

2.2 Consequently, claim 1 of each of auxiliary requests 1 to 3 does not comply with Article 123(2) EPC.

3. *Conclusion*

As there is no allowable request, it follows that the appeal must be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



G. Rauh

F. van der Voort

Decision electronically authenticated