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**Datasheet for the decision
of 12 December 2013**

Case Number: T 0579/11 - 3.5.03

Application Number: 04750736.3

Publication Number: 1620998

IPC: H04M1/00

Language of the proceedings: EN

Title of invention:

Mobile telephone user interface

Applicant:

Nokia Corporation

Headword:

Mobile telephone user interface/NOKIA

Relevant legal provisions:

EPC Art. 56

RPBA Art. 13(1)

Keyword:

Inventive step (main request and first to third auxiliary requests) - noFourth auxiliary request - not admissible
Remittal - no

Decisions cited:

T 0641/00, T 0125/04, T 1567/05

Catchword:



**Beschwerdekammern
Boards of Appeal
Chambres de recours**

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Case Number: T 0579/11 - 3.5.03

D E C I S I O N
of Technical Board of Appeal 3.5.03
of 12 December 2013

Appellant: Nokia Corporation
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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted on 29 September 2010 refusing European patent application No. 04750736.3 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman: F. van der Voort
Members: T. Snell
M.-B. Tardo-Dino

Summary of Facts and Submissions

I. This appeal is against the decision of the examining division refusing European patent application No. 04750736.0, with international publication number WO 2004/100502 A. The grounds for the decision were that the main request was not admissible having regard to its late filing and lack of compliance of claim 1 of the request with Articles 123(2) and 84 EPC, and that claim 1 of the auxiliary request did not involve an inventive step (Article 56 EPC) having regard to the disclosure of the following two documents:

D1: DE 19638015 A*; and
D2: EP 0792056 A.

*cf. the Supplementary European Search Report. As pointed out by the appellant, in the impugned decision, reference is made erroneously to DE 19838015.

For convenience, this decision refers to a corresponding English language version of D1, namely:

D1-US: US 6067081 A,

which was cited in the International Search Report.

This decision also refers to two further documents cited in the International Search Report:

D3: US 5374924 A; and
D4: US 5950123 A.

II. In the notice of appeal the appellant requested that the decision be set aside and a patent granted. Together with the statement of grounds of appeal,

claims of a main request and first to fifth auxiliary requests were filed. The claims of the main request correspond to those of the auxiliary request refused by the examining division.

Oral proceedings were conditionally requested.

- III. In a communication accompanying a summons to oral proceedings, the board gave a preliminary opinion that, *inter alia*, the subject-matter of claim 1 did not involve an inventive step with respect to the disclosure of document D2 and common general knowledge.
- IV. Together with a reply to the summons, the appellant filed claims of a new main request and first and second auxiliary requests. The previous main request and the first to fifth auxiliary requests were re-submitted and renumbered as the third to eighth auxiliary requests respectively.
- V. Oral proceedings were held on 12 December 2013.

At the oral proceedings the appellant withdrew the fourth to eighth auxiliary requests and filed a new fourth auxiliary request.

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 one of the first to third auxiliary requests submitted with the letter dated 12 November 2013 or on the basis of the fourth auxiliary request filed during the oral proceedings.
- that that the case be remitted to the department of first instance (fifth auxiliary request).

After due deliberation, the chairman announced the board's decision.

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

"An apparatus (100) for increasing telephone-feature accessibility using non-visual (NV) cues configured to provide a plurality of user-actuatable features, at least some of the features being accessible through an organized menu system having a plurality of options for selectively accessing and activating the accessible features, comprising a user interface for navigating through the menu system to a particular option, said user interface comprising a non-visual (NV) cue generator operable to generate a plurality of distinguishable NV cues corresponding to a plurality of different menu options available for actuation via a scroll step within a first menu in the menu system, wherein selection of a plurality of consecutively-ordered menu options from the first menu generates a corresponding plurality of NV cues comprising a musical scale that progresses as the first menu is scrolled to indicate that the first menu is being scrolled through in a specific direction."

VII. Claim 1 of the **first auxiliary request** is the same as claim 1 of the main request except for the addition of the feature:

"wherein the first menu is scrollable to return the progression to the beginning of the scale to indicate that the first menu has started over".

VIII. Claim 1 of the **second auxiliary request** is the same as claim 1 of the first auxiliary request except that the

wording "said user interface comprising a non-visual (NV) cue generator" is replaced by "said user interface comprising a scroll key, and a non-visual (NV) cue generator", and the wording ", said scroll step being actuated by said scroll key" is added to the end of the first clause.

- IX. Claim 1 of the **third auxiliary request** is the same as claim 1 of the main request except that the final clause reads:

"wherein selection of a plurality of consecutively-ordered menu options from the first menu generates a corresponding plurality of NV cues that vary progressively to indicate that the first menu is being scrolled through in a specific direction".

- X. Claim 1 of the **fourth auxiliary request** reads as follows:

"An apparatus (100) for increasing telephone-feature accessibility using non visual (NV) cues having a plurality of user-actuatable features, at least some of the features being accessible through an organized menu system having a plurality of options for selectively accessing and activating the accessible features, comprising a user interface for navigating through the menu system to a particular option, said user interface comprising: a non-visual (NV) cue generator operable to generate at least one of a plurality of distinguishable NV cues when a selected option is available for actuation, and also operable to generate at least another one of the plurality of NV cues when a different selected option is available for actuation, wherein the organized menu system is organized into at least a level-one menu and at least one level-two

menu from which options may be selected, wherein the at least one level-two menu is accessed by selecting an option from the level-one menu, and wherein a first NV cue is generated when a level-one menu option is available for actuation and a second NV cue is generated when an option from the at least one level-two menu is available for actuation [sic]

wherein the at least one at least one [sic] level-two menu system comprises a plurality of options through which a user may scroll to view each option in sequence, returning at the end of the sequence to the first available level-two option, and wherein the second NV cue is generated when the first level-two option is available for actuation, and wherein each of the availability of each of the succeeding level-two menu options is associated with a progressively different NV cues [sic] such that the user may sense that the sequence is being scrolled though [sic] in a specific direction, wherein the progressively different NV cues are audible sounds, wherein each of the progressively different NV cues vary [sic] in pitch from the preceding NV cue."

Reasons for the Decision

1. Background and closest prior art

The present application is generally concerned with the problem of assisting a visually-impaired person to operate a menu-driven communications apparatus. It was common ground that the closest prior art is represented by document D2 which discloses a mobile telephone with a display offering various menu options in a hierarchical structure (cf. eg Figs. 6-9 and col. 6, lines 39-51). The operator can scroll down the list of options with a cursor using a jog dial key 6J (cf. col.

6, lines 13-19, and col. 7, lines 16-29). When scrolling beyond the final option, a new page of options appears (cf. col. 7, lines 34-42). Eventually, if scrolling is continued, the first page is displayed over again (cf. col. 9, lines 24-28). If the user selects one of the options by clicking the jog dial, the menu moves down to the next hierarchical level (cf. col. 8, lines 2-9).

2. *Common general knowledge*

2.1 At the priority date of the invention it was well-known either to convert text to a spoken form by means of a voice synthesiser or to play back a recorded message corresponding to a displayed message in order to provide assistance to blind users of electronic equipment.

2.2 In support of this, the board referred to three documents on file:

D1-US describes a menu-driven electronic information system with a display ("visual device") and a speech output unit. In col. 2, lines 46-50, it is stated that "The information system (10) is in this case connected to a visual device (display 11) for displaying the operating function and/or by means of a speech-output unit (12). Display (11) and speech output unit (12) are advantageously part of the information system" (see also claim 19: "said information system is connected to the visual device for displaying an operating function of the ... system via the speech-output unit").

D3, which is a document published more than eight years before the priority date of the present application, refers to various "prior art" solutions including

"software with built-in voice labels for icons" and using "synthetic or recorded speech solutions for making computer display screen contents available to blind persons" (cf. D3, col. 1, lines 49 to 59).

D4 describes a mobile telephone in which "To accommodate a visually impaired subscriber, ... these textual messages are instead converted to an audible format and delivered to be heard by the subscriber instead of seen" (cf. D4, the abstract).

2.3 The appellant disputed what the board held to be common general knowledge and argued that the case should be remitted to the examining division in order for further documentary evidence to be found. The board's assertion of what was common general knowledge was mere speculation, especially as the priority date was more than ten years ago. Moreover, the appellant argued that the skilled person would not even be aware of D1 as it came from a different field. The appellant also argued that D4 had been mentioned for the first time in the oral proceedings so that it was not possible for him to assess the document properly. If the board were to rely on D4, the case should also be remitted to the examining division.

2.4 The board considers however that the three documents on file in this case provide sufficient evidence. The three documents cover a range of applications which provides evidence that the use of voice synthesis or recorded messages for helping the visually impaired was in common usage. As regards D1-US, the board disagrees that the skilled person would not take this document into account since it is prima facie relevant to the problem of facilitating usage of electronic equipment for blind users (cf. D1-US, col. 1, lines 65-67: "The

possibility of a blind carrying out of functions is thus optimally supported, and a reliable orientation of the user on the input surface is made possible."). As regards D4, the board gave the appellant time (one hour) in the oral proceedings to assess its content. In the board's view, this was sufficient in the present case, since the relevant passages of D4 (the abstract alone even suffices) are short and in the board's view easily understood. Furthermore, D4, as mentioned above, was already cited in the International Search Report. The appellant's arguments for remitting the case are therefore not convincing.

3. *Main request - claim 1 - inventive step*

3.1 Using the wording of claim 1, document D2 discloses an apparatus for increasing telephone-feature accessibility using visual cues configured to provide a plurality of user-actuatable features, at least some of the features being accessible through an organized menu system having a plurality of options for selectively accessing and activating the accessible features, comprising a user interface for navigating through the menu system to a particular option (cf. the passages and figures referred to above in point 1).

3.2 The subject-matter of claim 1 differs from the disclosure of D2 in that it includes the following feature:

said user interface comprises a non-visual (NV) cue generator operable to generate a plurality of distinguishable NV cues corresponding to the plurality of different menu options available for actuation via the scroll step within the first menu in the menu system, wherein selection of the plurality of

consecutively-ordered menu options from the first menu generates a corresponding plurality of NV cues comprising a musical scale that progresses as the first menu is scrolled to indicate that the first menu is being scrolled through in a specific direction.

This analysis was not disputed by the appellant.

- 3.3 The board understands the above feature to mean that each menu option corresponds to a different audio signal having a frequency value which changes progressively as the menu options are scrolled through such that the set of audio signals comprises a musical scale.
- 3.4 The appellant argued that the problem to be solved starting out from document D2 was to assist a blind person in navigating the scrollable, hierarchical menu.
- 3.5 In accordance with the case law of the Boards of Appeal, the presence of an inventive step may only be supported by those features and aspects of the claimed invention which contribute to a technical solution of a technical problem. One field regarded as being non-technical is the presentation of information as such (cf. Article 52(2)(d) and 52(3) EPC). According to established case law, non-technical features which do not contribute to the solution of a technical problem are to be disregarded in the assessment of inventive step (cf. T 641/00, point 6 of the reasons, OJ EPO 2003, 352).
- 3.6 It has to be determined in the present case to what extent the distinguishing subject-matter with respect to document D2 relates to a technical solution of the above problem. In this respect, according to case law,

features aimed exclusively at improvements regarding the way information is perceived or processed by the human mind are regarded as non-technical (cf. eg T 1567/05, point 3.5 of the reasons, and T 0125/04, point 4.6 of the reasons, both not published).

3.7 In the present case the fact that the non-visual cues are (implicitly) audio signals which change progressively with scrolling clearly contributes to the technical character of the claimed subject-matter.

3.8 However, the board considers that in the light of common general knowledge (see above point 2.1), the (additional) use of audio signals which change with scrolling would at the priority date have been obvious to the person skilled in the art. In this respect, the board considers that an obvious method of helping blind users to operate the mobile telephone of document D2 that would have occurred to the skilled person would have been to use a voice synthesiser in addition to the visual display. In particular, it would have been obvious to the skilled person that menu items displayed in the apparatus of D2 could be spoken as well as displayed. The board notes that each menu item in D2 is numbered. It follows that it would have been obvious to include a sequence number in the spoken information to impart the information presented visually in an audio form. Such a spoken sequence number would be an indication to the user by using non-visual cues that the menu was being scrolled through progressively in the direction of scrolling.

3.9 The claimed solution however does not use spoken words but in essence a set of audio signals in the form of a musical scale.

3.10 However, the board considers that in the absence of any specific technical features, eg relating to the way in which the audio signals are generated, whether audio information is presented in the form of spoken words or as audible tones forming a musical scale is matter concerned only with the presentation of the information as such. The only difference is that the human brain has to interpret different sounds representing the scrolling down of the menu. In the board's view, presenting audio information in the form of a musical scale instead of a spoken language is no different to using an alternative language. This difference is therefore non-technical and hence can make no contribution to inventive step.

3.11 The appellant argued that the solution had technical effects, namely that the user can sense from the musical scale that the menu has started over at the beginning, detect the direction of scrolling, and assess how close he/she is to the first menu item.

However, the board notes, leaving aside the question as to whether or not these effects are technical, that these effects are equally achievable by presenting the menu in spoken form. Whether or not the form of presentation as a musical scale is more or less easy to understand is a matter concerned only with the perceptive abilities of the user (cf. T 1567/05, point 3.6 of the reasons).

3.12 The appellant also argued that the claimed solution was simpler in that it was language independent and avoided the phone having to be reconfigured for each linguistic market.

However, in the board's view these are subjective effects dependent on a user's ability to perceive and process a certain form of audio presentation. To illustrate this point, the board notes that it would be possible to perform an analogous non-technical step which would greatly reduce the need for reconfiguration by programming the menu in a widely understood language such as English (instead of, eg Dutch).

The board therefore finds the appellant's arguments unconvincing.

3.13 The board concludes that the subject-matter of claim 1 of the main request does not involve an inventive step (Articles 52(1) and 56 EPC).

4. *First auxiliary request - claim 1 - inventive step*

4.1 Claim 1 of the first auxiliary request is the same as claim 1 of the main request except for the addition of the feature:

"wherein the first menu is scrollable to return the progression to the beginning of the scale to indicate that the first menu has started over".

4.2 As mentioned above (point 1), D2 discloses a visual menu which is scrollable to return the progression to the first item to indicate that the first menu has started over (cf. D2, col. 9, lines 24-28 and Figs. 8H-8I). It follows that audio cues which correspond to the visual items would return to the start as well. This aspect therefore does not contribute to an inventive step.

4.3 The appellant argued that there was an additional technical effect which was that a large change in pitch occurred when moving from the last to the first item, thereby giving a clear indication to the user that the menu has returned to the start.

4.4 The board however considers that whether a change of pitch is an improvement over a spoken form of presentation of the menu information is a subjective matter of perception as has been discussed above. This difference is not per se technical in nature.

4.5 The board concludes that for the above reasons and the reasons set out in point 3, the subject-matter of claim 1 of the first auxiliary request does not involve an inventive step either (Articles 52(1) and 56 EPC).

5. *Second auxiliary request - claim 1 - inventive step*

5.1 Claim 1 of the second auxiliary request (see point VIII above) differs from claim 1 of the first auxiliary request in that the user interface comprises a scroll key for actuating the scroll step.

5.2 The board notes however that the user interface of the mobile phone of D2 also comprises a scroll key ("jog dial 6J", cf. col. 6, lines 13-19). This was not disputed by the appellant. This additional feature therefore does not contribute to inventive step.

5.3 The board concludes that for the above reasons and the reasons set out in points 3 and 4, the subject-matter of claim 1 of the second auxiliary request does not involve an inventive step either (Articles 52(1) and 56 EPC).

6. *Third auxiliary request - claim 1 - inventive step*

6.1 Claim 1 of the third auxiliary request (see point IX above) is essentially the same as claim 1 of the main request except that it lacks the feature that the plurality of NV cues comprises a musical scale.

6.2 Since this claim is more general than claim 1 of the main request, it follows that its subject-matter does not involve an inventive step either (Articles 52(1) and 56 EPC).

7. *Fourth auxiliary request - admissibility*

7.1 This request was filed during the oral proceedings. The appellant argued that it should be admitted as it was a reaction to the development of the proceedings.

7.2 Claim 1 of the fourth auxiliary request (see point X above) is based on the second auxiliary request filed with the statement of grounds (which was subsequently withdrawn), amended to add the following wording to the end of the claim:

"wherein the progressively different NV cues are audible sounds, wherein each of the progressively different NV cues vary in pitch from the preceding NV cue".

7.3 This added feature is more general than the wording "a plurality of NV cues comprising a musical scale that progresses" used in claim 1 of the main request. Hence the amended wording makes no difference in the assessment of inventive step as set out in point 3 above.

- 7.4 Claim 1 of the fourth auxiliary request further differs from claim 1 of the main request in that it defines a two-level hierarchical menu.
- 7.5 The appellant argued that claim 1 defines different NV cues, ie a "first NV cue" and a "second NV cue", at each level of the hierarchy which aids the user in navigating the menu.
- 7.6 The board however notes that claim 1 does not require different NV cues at each level, since the "first" and "second" NV cues could be the same. That notwithstanding, document D2 discloses a hierarchical menu with two levels ("groups"), whereby the items of each level could obviously be associated with different spoken instructions (eg cf. D2, Fig. 6, "group 1, item 1" and "group 2, item 1") to aid the user in navigating the menu. Whether the cues are spoken or given in the form of tones of varying pitch relates per se, as explained earlier, to a non-technical difference concerned with human perception.
- 7.7 For these reasons and those given in connection with the earlier requests, the board considered that there was no prospect that the new request would overcome the objection of lack of inventive step (Article 56 EPC). In consequence, it used its discretion not to admit the request (Article 13(1) RPBA).

8. *Remittal*

- 8.1 The appellant requested as a fifth auxiliary request that the case be remitted to the examining division. It argued that a search was required to provide evidence for what the board had alleged was common knowledge. It also argued that the board had referred to D4 during

the oral proceedings, which was the first time this document had been mentioned either in examination or appeal proceedings. The appellant therefore had not had time to study the document.

- 8.2 The board has however already considered these matters above. The appellant was deemed to have had sufficient time to reflect on the issue of common general knowledge and to comment on D4 (see point 2 above). Further, since neither the main request nor any of the first to fourth auxiliary requests is allowable, there is no request left which could serve as a basis for further prosecution following remittal. The auxiliary request for remittal is therefore refused.

9. *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