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Datasheet for the decision of 19 January 2012

Case Number: T 1238/09 - 3.5.03

Application Number: 05024174.4

Publication Number: 1657894

IPC: H04M 1/60

Language of the proceedings: EN

Title of invention:
Multi-spot call system, sound volume adjustment device, portable terminal device, and sound volume adjustment method used therefor and program thereof

Applicant:
NEC Corporation

Headword:
Portable terminal device/NEC

Relevant legal provisions:
EPC Art. 56
RPBA Art. 13

Relevant legal provisions (EPC 1973):
-

Keyword:
"Inventive step (main request) - no"
"Admissibility (auxiliary request) - no"

Decisions cited:
-

Catchword:
-

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Case Number: T 1238/09 **-** 3.5.03

D E C I S I O N
of the Technical Board of Appeal 3.5.03
of 19 January 2012

Appellant: NEC Corporation
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Decision under appeal: **Decision of the examining division of the European Patent Office posted 6 February 2009 refusing European patent application No. 05024174.4 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman: A. S. Clelland
Members: F. van der Voort
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. 05024174.4 (publication number EP 1 657 894 A).

The reason given for the refusal was that claim 1 of a main request and claim 1 of an auxiliary request lacked clarity, Article 84 EPC. By way of additional remarks the examining division also gave reasons as to why the independent claims of each request lacked an inventive step.

II. The following documents, which were cited in the search report and were referred to in the course of the examination proceedings, are referred to in the present decision:

D1: EP 0 659 006 A; and

D2: "Push-to-talk over Cellular (PoC); Architecture; PoC Release 1.0, Architecture V1.1.0, pages 1 to 23, August 2003.

III. In the statement of grounds of appeal the appellant made the following requests: "We request to maintain the European Patent Application No. 05 024 174.4 on the basis of claim 1 as filed during Oral Proceedings on 12.11.2008 as well as on the basis of claims 3 to 15 as filed with letter of October 10, 2008 and on the basis of the description as originally filed" and, by way of an auxiliary request, "We request to maintain the above application on the basis of a new claim 1 as filed with this notice of appeal as well as on the basis of claims

3 to 15 as filed with letter of October 10, 2008 and on the basis of the description as originally filed". Arguments in support of clarity and inventive step were submitted and oral proceedings were conditionally requested.

IV. The appellant was summoned to oral proceedings. In a communication accompanying the summons the board raised, without prejudice to its final decision, objections under Article 84 EPC (lack of clarity), Article 123(2) EPC (added subject-matter), and under Article 52(1) in combination with Article 56 EPC (lack of inventive step) having regard to the disclosures of D1 and D2.

V. In response to the board's communication, the appellant filed with a letter dated 21 November 2011 new claims 1 of auxiliary requests II and III and presented arguments in support of these requests.

VI. Oral proceedings were held on 16 December 2011 in the course of which the appellant withdrew the requests as referred to in the statement of grounds of appeal and instead requested that the decision under appeal be set aside and that a patent be granted on the basis of claim 1 of a main request or, in the alternative, on the basis of claim 1 of an auxiliary request, both as filed with the letter dated 21 November 2011 as auxiliary requests II and III, respectively. After confirming these final requests the chairman declared the debate closed and informed the appellant that a decision would be issued in writing.

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

"A portable terminal device for a Push-to-Talk over Cellular (PoC) call system which includes sound volume adjustment device *[sic]* for adjusting the sound volume corresponding to a voice packet received by a *[sic]* portable terminal device (2) when said PoC call system executes voice transmission between a plurality of portable terminal devices, said PoC system comprising a portable terminal device (2) which when having a speaker's right is able to talk through a PoC server to another portable terminal device, comprising:

- an identification unit (11) for identifying the identification of the portable terminal device which has the floor based on a speaker identification ID extracted from the received packet, and
- a storage management unit which stores and manages the sound volume control information set for said plurality of portable terminal devices (2), comprising a sound volume coefficient table (13) with sound volume coefficients (0.nn, 0.xn, 0.zy) corresponding to each of said portable terminal devices, and

wherein

- a sound volume control unit (12) which searches siad *[sic]* storage management unit (13) for said sound volume coefficients corresponding to said portable terminal device (2) which is identified by said identification unit (11) and dynamically adjusts the sound volume for obtaining a constant sound volume, wherein said adjustment is based on said sound volume coefficients set and on the contents of a sound volume adjustment information, which is received from an adjustment unit of the own terminal,

wherein

- said sound volume adjustment device includes a manual adjustment unit (39) for manually adjusting the

stored sound volume coefficient of the identified portable terminal device and that said sound volume adjustment device is for adjusting the sound volume based on the currently stored sound volume coefficient."

Claim 1 of the auxiliary request reads as follows:

"A portable terminal device which outputs voice of a voice packet received in a multi-spot call system using a PoC (Push-to-Talk over Cellular) which executes voice transmission from a portable terminal device having a speaker’s right to other portable terminal devices, said portable terminal device characterized by a sound volume adjustment device comprising:

- an identification unit 11 which identifies a portable terminal device having said speaker's right by extracting each speaker's identification information which identifies said portable terminal device from said floor control information, and
- a storage management unit with an each speaker's sound volume coefficient table 13 which stores said each speaker's identification information and a user-adjustable sound volume coefficient relevant to the each speaker's identification information so as to correspond to each other, and
- a sound volume control unit 12 which, for the respective portable terminal device having said speaker's right, obtains the speaker identification from the identification unit 11 and obtains the sound volume coefficient corresponding to the speaker identification from the each speaker's sound volume coefficient table 13, for dynamically adjusting the sound volume from its own terminal based on sound volume coefficient."

Reasons for the Decision

1. *Main request - inventive step*

1.1 The board interprets claim 1 of the main request such that the four items listed in the claim, i.e. the identification unit, the storage management unit, the sound volume control unit, and the manual adjustment unit are all part of the sound volume adjustment device. This interpretation is in accordance with the block diagram of a sound volume adjustment device as shown in Fig. 1 of the application in suit and was concurred with by the appellant at the oral proceedings.

1.2 Document D2 is a technical specification produced by Ericsson, Siemens, Motorola and Nokia, i.e. not by the present applicant, and relates, like the subject-matter of claim 1 of the main request, to user equipment for a Push-to-Talk over Cellular (PoC) call system.

D2 was cited in the application in suit and in the search report and was referred to in a first communication of the examining division in connection with an inventive step objection, in which D2 was referred to as illustrating the common general knowledge.

The board notes that D2 includes at the bottom of the front page the wording "The present document has is *[sic]* considered confidential" and in the header and footer of each page the wording "Confidential information" and "Confidential and proprietary", respectively. Nevertheless, in the reply to the board's communication, the appellant explicitly considered D2 to represent the closest prior

art. Further, neither before the examining division nor before the board did the appellant at any point contest that the technical content of D2 was part of the state of the art.

In view of the above, the board considers that the technical content of D2 may be used as a starting point for the assessment of inventive step.

1.3 More specifically, D2 discloses a PoC call system, in which a user of a portable terminal device ("user equipment", e.g., a cellular phone, points 3.1, 7.2.2, and 7.6) is able to receive voice packets when the PoC call system executes voice transmission between a plurality of terminal devices and is able, by pressing a button and after having been granted a speaker's right ("floor grant"), to talk through a PoC server to one or more other portable terminal devices (points 4, 5.4, 7.5, and 8.6). The user may communicate with a group of other users in order to establish a group talk, i.e. a conference call (points 1, 5.3, and 8.6).

1.4 The subject-matter of claim 1 of the main request differs from the portable terminal device disclosed in D2 in that according to claim 1 the portable terminal device includes a sound volume adjustment device which includes an identification unit, a storage management unit, a sound volume control unit, and a manual adjustment unit, all as further defined in the claim.

The sound volume adjustment device enables the user of the portable terminal device to dynamically and individually adjust the sound volume of each of the other participants in a conference call.

1.5 Starting out from D2, the technical problem underlying the present invention may therefore be seen in improving the sound playback at the portable terminal device such that an equalisation of sound volumes of different participants in a conference call may be achieved.

1.6 The formulation of this problem does not contribute to an inventive step, since in practice, i.e. when making a PoC conference call, unsatisfactory differences in sound volume of different participants would normally have been encountered and, hence, would have motivated the person skilled in the art to find a solution, in which he or she would realise that simply adjusting the overall playback volume of the portable terminal device would not solve the problem in the case of a conference call involving a plurality of participants.

1.7 D2 does not provide any details of the sound playback at the portable terminal device. The board notes that the above-mentioned technical problem does not specifically relate to PoC call systems, i.e. a system in which only one participant can speak at the same time, but may also be encountered in conference call systems in which the participants may speak simultaneously. Hence, when faced with the above-mentioned technical problem, the skilled person would consider document D1, since it is explicitly concerned with the problem of sound volume adjustments in conference calls in an audio conferencing system and provides a solution for this problem (see the abstract and col. 3, line 55, to col. 4, line 20).

1.8 More specifically, D1 discloses an audio conferencing system in which, using the language of the present

application, a terminal device ("computer workstation") includes a sound volume adjustment device (D1, Figs 2, 3 and 7) including a digital signal processor (DSP) 46 (Fig. 3) and volume control bars 722 (Fig. 7), for adjusting the sound volume corresponding to a voice packet received by the terminal device when the call system executes voice transmission between a plurality of terminal devices (col. 11, lines 11 to 21). The sound volume adjustment device further includes a LAN adapter card and a program executed on a microprocessor 22 (Fig. 2), which constitute an identification unit for identifying the terminal device corresponding to a received voice packet (col. 8, lines 17 to 23 and 35 to 38), and a management unit, which includes DSP 46, an audio adapter card, and an application 810 (col. 11, lines 50 and 51, and Fig. 8), for managing sound volume control information including a set of sound volume coefficients, i.e. volume control factors or weighting parameters, each corresponding to a respective one of the audio streams of the called terminal devices (col. 4, lines 12 to 18, and col. 9, lines 6 to 20). D1 implicitly discloses that the management unit stores a current set of sound volume coefficients, i.e. the current weighting parameters, since after disabling a muting of an audio output the sound volume coefficient is restored to its previous value which may be a value which differs from the default value and, hence, has to be remembered (col. 11, lines 22 to 28, and col. 12, lines 23 to 35). Further, the board notes that the set of stored sound volume coefficients reads onto "a sound volume coefficient table (13) with sound volume coefficients" as referred to in claim 1, since, in the absence in the claim of any constructional features of the table, a "table" in this context is understood

merely as being a collection of data stored in a memory in the form of a series of records, here sound volume coefficients set for the respective audio streams of the called terminal devices. The sound volume control device of D1 further includes an adjustment unit in the form of the volume adjustment bars 722 (Fig. 7) as discussed above, for manually adjusting the volume coefficients (col. 11, lines 11 to 21). In operation, after the currently stored sound volume coefficient ("weighting parameter") corresponding to a specific terminal device has been read out, the sound volume is adjusted on the basis of the volume coefficient, in which any further manual adjustments made by operating the adjustment unit for manually adjusting the volume coefficient are taken into account (col. 11, lines 11 to 21, and col. 12, lines 23 to 29). Thereby a dynamic adjustment is obtained which is suitable for obtaining a constant sound volume (col. 9, lines 11 to 20 ("The weighting parameters are used to control the relative loudness of the audio signals from different sources")).

1.9 When faced with the above technical problem, the skilled person would therefore apply the teaching of D1 to the portable terminal device of D2. Since in a PoC system only one participant is allowed to speak, in the context of a PoC system, the identification unit would correspondingly identify the speaker who has the floor, based on the received voice packet. The skilled person would thus, without exercising inventive skill, arrive at a portable terminal device which includes all the features of claim 1 of the main request.

1.10 The appellant argued that the skilled person would not consider D1, since it did not relate to a PoC system but

to an audio conferencing system in which the individual audio streams were summed together and subsequently supplied to a loudspeaker and in which the participants could speak simultaneously. The teachings of D2 and D1 were also incompatible in that in the PoC call system of D2 each user would normally have his own cellular phone, whereas in the audio conferencing system of D1 several participants could share one workstation, whilst using a commonly available handsfree function. Further, in D1 a look-up table was used, which was a static or quasi-static data structure, and, hence, did not permit dynamic adjustment of the weighting parameters. The appellant further argued that the manual adjustment of D1 was a separate adjustment of the volume, i.e. not of the weighting parameter.

However, in the board's view, whether or not the audio streams are summed together or whether or not the participants may speak simultaneously is not relevant to the technical problem which the skilled person faces when starting out from D2, see points 1.5 to 1.7 above. In any case, D1 does not disclose a conference call in which several participants use one workstation. On the contrary, D1, Figs 5 and 7 ("B", "C", "D"; "name B", "name C", "name D"), illustrates that each one of the audio streams from the different terminal devices is associated with a single participant (col. 8, lines 31 to 35, and col. 10, lines 45 to 55). As to the manual adjustment described in D1, it is noted that D1 explicitly discloses that the manual adjustment correspondingly increases or decreases the weighting parameter used in the digital mixing (col. 9, lines 6 to 20, and col. 11, lines 16 to 21). Further, D1 merely discloses that a look-up table is used for converting the individual samples to a linear scale. This

conversion is a step which is separate from the step of multiplying each sample by a respective, dynamically adjustable and stored weighting parameter (col. 9, lines 8 to 13, col. 11, lines 11 to 21, col. 12, lines 31 to 35, and Fig. 6 (steps 604 and 606)).

The appellant's arguments are therefore not convincing.

1.11 In view of the above, 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. Consequently, the main request is not allowable.

2. *Auxiliary request*

2.1 In accordance with Article 13(1) RPBA any amendment to a party's case after it has filed its grounds of appeal may be admitted and considered at the board's discretion. This discretion shall be exercised in view of, *inter alia*, the complexity of the new subject-matter submitted, the current state of the proceedings and the need for procedural economy. In the board's view, and in line with the established case law of the boards of appeal, one of the criteria for admitting further amendments to the claims at a late stage of the appeal proceedings is whether or not the claims are clearly allowable. In the board's judgement, claim 1 of the auxiliary request is not clearly allowable for the following reasons:

2.2 The subject-matter for which protection is sought with claim 1 of the auxiliary request does not appear to essentially differ from claim 1 of the main request. The amendments appear to have been made mainly in order to overcome various clarity objections raised in the board's

communication. Indeed, the arguments as set out in the accompanying letter in support of inventive step in respect of the subject-matter of claim 1 of this request (i.e. auxiliary request III at the time) are essentially a mere repetition of the arguments submitted in respect of claim 1 of the main request (i.e. auxiliary request II at the time). Hence, the amendments do not *prima facie* overcome the inventive step objections which led the board to reject the main request (Articles 52(1) and 56 EPC).

2.3 The board further notes that the amendments result in the omission of various features which were present in claim 1 of the main request. For example, the manual adjustment unit, the reference to a PoC server, the extraction of the speaker identification from a received voice packet, and the feature that the storage management unit is for managing the sound volume control information are omitted. On the other hand, the term "said floor control information" is introduced in the claim without an antecedent and the meaning of the added wording "so as to correspond to each other" in "a storage management unit with an each speaker's sound volume coefficient table 13 which stores said each speaker's identification information and a user-adjustable sound volume coefficient relevant to the each speaker's identification information so as to correspond to each other" does not appear to be clear. Hence, the amendments *prima facie* give rise to objections under Articles 84 and 123(2) EPC.

2.4 Claim 1 of the auxiliary request is therefore not clearly allowable. Exercising its discretion under Article 13(1) RPBA, the board therefore decided not to admit the auxiliary request to the appeal proceedings.

3. There being 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 A. S. Clelland