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**Datasheet for the decision
of 11 October 2012**

Case Number: T 1302/10 - 3.5.03

Application Number: 05777216.2

Publication Number: 1792520

IPC: H04S 1/00

Language of the proceedings: EN

Title of invention:
Audio Signal Enhancement

Applicant:
Koninklijke Philips Electronics N.V.

Headword:
Audio Signal Enhancement/PHILIPS

Relevant legal provisions:
EPC Art. 54

Relevant legal provisions (EPC 1973):
-

Keyword:
"Novelty (both requests) - no"

Decisions cited:
-

Catchword:
-



Case Number: T 1302/10 - 3.5.03

D E C I S I O N
of the Technical Board of Appeal 3.5.03
of 11 October 2012

Appellant:
(Applicant)

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Decision under appeal:

**Decision of the Examining Division of the
European Patent Office posted 28 December 2009
refusing European patent application
No. 05777216.2 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman: A. S. Clelland
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. 05777216.2, with publication number WO-A-2006/027717, on the ground that the subject-matter of the independent claims was not new having regard to the disclosure of document:

WO-A-2003/0219130,

hereinafter referred to as D1.

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, the appellant filed claims of a main request and an auxiliary request to replace the requests on file.

III. In a communication accompanying a summons to oral proceedings the board gave a preliminary opinion that the subject-matter of the independent claims of neither request met the requirement of novelty (Articles 52(1) and 54 EPC) with respect to the disclosure of D1.

IV. In a response to the summons, the appellant merely informed the board that it would not attend the oral proceedings.

V. Oral proceedings were held on 11 October 2012 in the absence of the appellant. The board understood from the appellant's written submissions that it requested that the decision be set aside and a patent granted on the basis of claims 1 to 22 of the main request, or

alternatively claims 1 to 22 of the auxiliary request, both filed with the statement of grounds. After deliberation, the board's decision was announced at the end of the oral proceedings.

VI. Claim 1 of the appellant's **main request** reads as follows:

"A device (10) for enhancing an audio signal comprising a first channel (L) and a second channel (R), the audio signal having inter-channel properties which may be represented by parameters (α , ILD, ICC), the device comprising:

- parameter adjustment means (13) for adjusting an original parameter (α , ILD, ICC) so as to produce an adjusted parameter (α' , ILD', ICC') representing an adjusted inter-channel property, and
- processing means (11) for processing the audio signal so as to produce an enhanced audio signal having the adjusted inter-channel property:

wherein the first channel (L) and the second channel (R) define a sound source position, and the device is characterized by being arranged for changing the sound source position by adjusting at least one of
a source angle (α); and
an inter-channel level difference (ILD)."

VII. Claim 1 of the **auxiliary request** is the same as the main request except for the addition of the wording "corresponding to a different sound source position than for the original parameter" following "representing an adjusted inter-channel property".

Reasons for the Decision

1. *Procedural matters*

This decision is essentially based on an objection raised in the board's communication accompanying the summons to oral proceedings. The appellant did not respond to the board's communication in substance and chose not to attend the oral proceedings. It therefore chose to rely on the written submissions in the statement of grounds. The board was therefore in a position to take a decision complying with Article 113(1) EPC.

2. *Technical Background*

The present application relates to enhancement of an audio signal having a left and right channel (stereo signal), in which the audio signal is coded using parameters such as the source angle (ie the apparent position of the sound source relative to the left and right channels), and the inter-channel level difference.

The idea underlying the present invention, as described in the description, is to directly modify these parameters in order to change the apparent position of the sound source.

3. *Claim interpretation (main request - claim 1)*

Claim 1 includes the wording "... by adjusting at least one of: a source angle (α); and an inter-channel level difference (ILD)". The board notes that this does not

require either the source angle or the inter-channel level difference to be directly adjusted by the parameter adjustment means defined previously in claim 1. Thus, claim 1 embraces indirect adjustment of these parameters, eg as a consequence of adjustment of a different parameter by the parameter adjustment means.

4. *Novelty with respect to document D1 (main request - claim 1)*

4.1 Using the language of the preamble of claim 1, document D1 discloses a device (Fig. 3) for enhancing an audio signal comprising a first channel (L) and a second channel (R), the audio signal having inter-channel properties which may be represented by parameters (w_L , w_R ; cf. paragraph [0045]), the device comprising:

- parameter adjustment means (314) for adjusting an original parameter (w_L , w_R) so as to produce an adjusted parameter (w_L' , w_R') representing an adjusted inter-channel property (see below), and
- processing means (314) for processing the audio signal so as to produce an enhanced audio signal having the adjusted inter-channel property:

wherein the first channel (L) and the second channel (R) define a sound source position (cf. paragraph [0045]).

4.2 In the board's view, the weighting factors w_L and w_R mentioned in paragraphs [0045] - [0049] are "original parameters" representing an inter-channel property within the meaning of claim 1, since they have the effect of "mov[ing] the corresponding auditory object

left or right in the synthesised auditory scene" (cf. paragraph [0045]). Further, the modified weights w_L' and w_R' mentioned in paragraph [0049] are "adjusted parameters" within the meaning of claim 1. In fact these modified weights apparently correspond to modified level differences resulting in an increase of the image width (cf. page 5, right-hand col., lines 11-14 and 42-44).

Hence the board concludes that document D1 discloses all the features of the preamble of claim 1.

4.3 In accordance with the characterising part of claim 1, the device is "arranged for changing the sound source position by adjusting at least one of: a source angle; and an inter-channel level difference".

4.4 The board considers that changing the sound source position by adjusting both the source angle and an inter-channel level difference is disclosed in document D1 for the following reasons (although in fact only one of these needs to be disclosed in order to deprive the claim of novelty):

As mentioned above, in D1 the width of the sound source is changed (cf. paragraphs [0047] - [0049]). In the board's view, this means that the position of the sound source is also changed since in order to fully define the "position" (ie location in space) of a sound source which is spread out (ie a sound source of the type disclosed in document D1) it is necessary to define not only a single point in space, eg that representing the centre, but also the spatial extent of the sound source. In D1, the spatial extent (in this case the

width) is changed by modifying the level weighting factors w_L and w_R for the left and right channels, ie by modifying an inter-channel level difference.

Furthermore, indirectly, the source angle (which in this case is an angle range) also changes (as mentioned above, the claim does not require that the source angle be changed directly by the parameter adjustment means; cf. point 2 above).

- 4.5 In the statement of grounds, the appellant argued mainly that document D1 disclosed a widening of the sound source, but not a change of position. However, as mentioned above, the board considers that the term "position" embraces both the location of the centre of the source and its spatial extent, eg its width. The board therefore finds the appellant's argument unconvincing. It is also noted that the appellant did not respond to the board's reasoning on this point, which had been put forward in the communication accompanying the summons.

Consequently, the board concludes that the subject-matter of claim 1 lacks novelty with respect to document D1 (Articles 52(1) and 54 EPC).

5. *Auxiliary request - claim 1*

Claim 1 of the auxiliary request is the same as claim 1 of the main request except for the addition of the wording "corresponding to a different sound source position than for the original parameter". The board however sees no difference in meaning or scope between the language used in claim 1 of the main request and that of claim 1 of the auxiliary request, since claim 1

of the main request already required that there be a change of position of the sound source. The appellant did not respond to this argument raised in the board's communication. Consequently, the board concludes that the subject-matter of claim 1 of the auxiliary request is not new either (Articles 52(1) and 54 EPC).

6. *Conclusion*

As there is no allowable request, 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