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**Datasheet for the decision
of 2 September 2014**

Case Number: T 0956/13 - 3.5.04

Application Number: 10157949.8

Publication Number: 2280535

IPC: H04N5/00, H04N5/60

Language of the proceedings: EN

Title of invention:

Method for auto-setting configuration of television according to installation type and television using the same

Applicant:

Samsung Electronics Co., Ltd.

Headword:

Relevant legal provisions:

EPC Art. 54(2), 56, 123(2)

Keyword:

Novelty - main request (no)
Extended subject-matter - first auxiliary request (yes)
Inventive step - second auxiliary request (no)

Decisions cited:

Catchword:



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Chambres de recours**

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Case Number: T 0956/13 - 3.5.04

D E C I S I O N
of Technical Board of Appeal 3.5.04
of 2 September 2014

Appellant: Samsung Electronics Co., Ltd.
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 11 January 2013
refusing European patent application
No. 10157949.8 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman F. Edlinger
Members: R. Gerdes
B. Müller

Summary of Facts and Submissions

- I. The appeal is directed against the decision to refuse European patent application No. 10 157 949.8, published as EP 2 280 535 A1.

- II. The patent application was refused by the examining division on the grounds that the subject-matter of claim 1 of the sole request lacked novelty in view of the following document:

D5: EP 2 037 678 A1.

- III. The applicant appealed against this decision and, with the statement of grounds of appeal, submitted new claims 1 to 13 of a first auxiliary request. The appellant requested that the decision under appeal be set aside and that a patent be granted according to the claims of the request underlying the decision under appeal (main request) or, alternatively, according to the claims of the first auxiliary request.

- IV. The board indicated in a communication annexed to a summons to oral proceedings that it tended to share the opinion set out in the decision under appeal. The board also questioned the allowability under Article 123(2) EPC of the amendments made in claim 1 according to the first auxiliary request.

- V. With a letter of reply of 29 July 2014 the appellant presented comments on the board's communication.

- VI. Oral proceedings were held before the board on 2 September 2014. The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the claims of the main request

underlying the decision under appeal, alternatively the claims of the first auxiliary request filed with the statement of grounds of appeal, or the claims of the second auxiliary request submitted in the oral proceedings before the board.

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

"A method of controlling a display apparatus having an audio processing unit (125), the method characterised by:

providing a Graphical User Interface GUI to receive a user input to select a stand installation or a wall-mount installation as a TV installation type;

setting the TV configuration based on the TV installation type input via the GUI;

if the stand installation is selected through the GUI, controlling the audio processing unit (125) to process audio signals according to an audio configuration for stand installation; and

if the wall-mount installation is selected through the GUI, controlling the audio processing unit (125) to process audio signals according to an audio configuration for wall-mount installation;

wherein at least one audio output configuration setting value is designated for the TV installation type, and wherein the step of setting the TV configuration comprises setting the audio output configuration according to the audio output configuration setting value designated for the TV installation type input via the GUI."

VIII. Claim 1 of the first auxiliary request differs from claim 1 of the main request in that the penultimate feature of the claim has been modified to read (amendments highlighted in bold) "wherein at least one

audio output configuration setting value is designated for **each of** the TV installation types". In addition, the following feature has been appended to the claim:

", and wherein an audio output by a speaker when the audio processing unit (125) is controlled according to the audio configuration for the stand installation type is different from an audio output by the speaker when the audio processing unit (125) is controlled according to the audio configuration for the wall-mount installation type".

- IX. Claim 1 of the second auxiliary request corresponds to claim 1 of the main request, with the features relating to the stand installation, the wall-mount installation and the audio output configuration setting value having been modified to read (amendments highlighted in bold, deletions in strike-through):

"... if the stand installation is selected through the GUI, controlling the audio processing unit (125) to process audio signals according to an audio configuration for stand installation **comprising a PEQ setting value (PEQ-S) designated for the stand installation type;** and
if the wall-mount installation is selected through the GUI, controlling the audio processing unit (125) to process audio signals according to an audio configuration for wall-mount installation **comprising a PEQ setting value (PEQ-W) designated for the wall-mount installation type;**
wherein at least one audio output configuration setting value is designated for ~~the~~ **each said** TV installation type, and ...".

X. In the decision under appeal the examining division held that the subject-matter of claim 1 of the then sole request, now the main request, lacked novelty with respect to D5. The distance measured in the wall-mounted TV installation type did not coincide "with the pre-stored distance used in the stand TV installation type", unless the TV was "placed in such a way, that said two distances coincide". Hence, the audio signals were processed differently according to installation type. The method of the present application simplified the method of D5 by skipping the distance measurement and "going directly to acquire a set of audio parameters." The difference between the two methods was not reflected by the wording of claim 1 (see decision under appeal, Reasons 11.1b).

XI. The appellant's arguments may be summarised as follows:

D5 taught that the television control unit 150 equalised the TV audio signals based on the distance value of the TV to the floor. As accepted by the examining division, according to D5 the audio equalisation of a stand TV installation would be the same as the audio equalisation of a wall-mounted installation if the distance had the same value. In contrast, claim 1 expressly provided audio configurations based on the installation type, which meant that there was one configuration for stand installation of the TV and another for wall-mount installation. The essential feature reflecting this difference was "wherein at least one audio output configuration setting value is designated for the TV installation type". Hence, the subject-matter of claim 1 of the main request was novel.

Claim 1 of the second auxiliary request had been amended with respect to claim 1 of the main request to emphasise the essential difference as compared to D5, i.e. that different audio configuration setting values were designated to each installation type. This difference allowed additional parameters, apart from distance to the main reflecting surface, to be taken into account for equalisation (see present application, paragraph [0070]). Hence, the technical problem was how to improve the audio output for the TV. The invention was not obvious since D5 only taught audio equalisation based on the distance value of the TV from the floor.

With respect to the question of extended subject-matter in claim 1 of the first auxiliary request, the appellant indicated that a basis for the amendments could be found in claim 12 as well as in paragraphs [0053] to [0056] of the application as originally filed. The passages disclosed that the audio configuration "is applied differently as a stand type PEQ-S or a wall-type PEQ-W, respectively".

Reasons for the Decision

1. The appeal is admissible.

The invention

2. The present application relates to a method of setting an audio configuration for a display apparatus such as a flat panel television. Preferably after the installation of the television, a graphical user interface is provided allowing the user to select either a wall-mount or a stand-type installation of the television. Depending on the selected installation

type, the audio output of the television is equalised by applying an audio output configuration setting value designated for the input installation type. According to an exemplary embodiment, parametric equalisation (PEQ) values may be chosen as audio output setting values. A plurality of these values may be appropriate for a specific installation type. For example, PEQ-W1, PEQ-W2 and PEQ-W3 may all be setting values for the wall-mount installation type. One of these setting values may be selected based on further parameters such as user preference, listening environment, type of content to be displayed, or other environmental factors (see present application, paragraphs [0002] to [0014] and [0069] to [0071]).

Main Request

3. D5 discloses a method for equalising audio equipment of a television, in particular, by removing attenuation from a reflective surface such as the floor or a table if the speakers have been moved from the front of the TV to the bottom to provide a more aesthetical design (see paragraphs [0001] and [0005]). To this effect the display apparatus (TV) controlled by the method in D5 has an audio processing unit (see paragraph [0044] and figure 3).
- 3.1 According to D5 the TV may be equipped with an ultrasonic wave sensor to sense the distance of the speakers to the reflective surface. Alternatively, if the TV is not equipped with such a sensor and preferably when the TV is initially installed "an on-screen display (OSD) is displayed so that the user can input whether the TV is installed on the wall or is standing alone". Thus, a GUI is provided to receive this input which is decisive for setting the TV (audio)

configuration, as in the present application (see figure 2: S210, S215, S225). If the TV is mounted on the wall, a further OSD is displayed in order for the user to input the distance. In the alternative case of a stand-type installation, a pre-stored distance is read out from memory, since TVs of the same model have the same stand length. In both cases the distance value is transmitted to the TV's control unit and subsequently used to read out the "set values corresponding to the detected distance" (or the input distance in the sensorless case). As a final step the control unit equalises the audio signal based on the set values by applying a parametric equalisation (see paragraphs [0053], [0062] to [0073] and figure 9: S335 to S338). The audio output configuration is thus set according to the designated setting value for the input stand installation type or wall-mount installation type, as the case may be.

Hence, D5 discloses a method of controlling a display apparatus according to claim 1.

- 3.2 It follows that the subject-matter of claim 1 lacks novelty (Article 54(1) and (2) EPC).
- 3.3 The appellant argued that claim 1 expressly provided audio configurations based on the installation type ("wherein at least one audio output configuration setting value is designated for the TV installation type"). This meant that there was one configuration for stand installation and another (different) one for wall-mount installation of the TV. Therefore, according to the invention the decisive criterion was the installation type, not the distance as in D5. This implied that for the same distance the setting values would be distinguishable according to the installation

type. This argument is apparently based on an understanding of claim 1 according to which a configuration consists of setting values assigned in advance in a given relationship to one of the TV installation types. However, claim 1 does not exclude that these setting values are determined as part of a multi-step procedure after the selection of an installation type. Nor does claim 1 exclude the determination of a distance value in an intermediate method step and the subsequent use of this value to extract the appropriate configuration setting value (see figure 5 of the application). Both the method of the claimed invention and that of D5 would normally use different audio configurations dependent on the user input of the installation type. Of course, setting values depending on distance may be stored separately for each installation type (see paragraphs [45] and [74] of the present application) or as a function of the distance only. However, claim 1 does not specify, and the application as filed does not disclose, that the setting values would be different for given distances depending on the installation type.

3.4 As a consequence, the main request cannot be allowed.

First Auxiliary Request

4. According to Article 123(2) EPC the European patent may not be amended in such a way that it contains subject-matter which extends beyond the content of the application as filed. An amendment is to be regarded as introducing subject-matter which extends beyond the content of the application as filed if the overall change in the content of the application results in the skilled person being presented with information which

is not directly and unambiguously derivable from the application as originally filed.

4.1 Independent claim 1 according to the appellant's first auxiliary request was amended *inter alia* to contain the additional feature "and wherein an audio output by a speaker when the audio processing unit (125) is controlled according to the audio configuration for the stand installation type **is different** from an audio output by the speaker when the audio processing unit (125) is controlled according to the audio configuration for the wall-mount installation type" (emphasis added by the board).

4.2 The appellant indicated that claim 12 and paragraphs [0053] to [0056] of the application as originally filed served as a basis for the amendment. These passages refer to a PEQ-S setting value "appropriate for a stand type" and a PEQ-W setting value "appropriate for a wall-mount type". The audio output is equalised or "output according to" the PEQ-S and PEQ-W setting values. The PEQ setting values are further specified in paragraph [0045]: "The PEQ setting values may be stored separately for each DTV installation type." According to paragraph [0070] there may also be more than one PEQ setting value for wall-mount installation. For instance, one of the PEQ-W1, PEQ-W2, and PEQ-W3 setting values may be selected "based on, for example, user preference, a listening environment, a type of content to display, or other environmental factors."

Hence, the above cited passages disclose that there are several PEQ setting values which are distinguished by name and storage location. In addition, it can be inferred from these passages that the audio output is

controlled according to a PEQ setting value and may depend on several parameters such as the television's distance to the floor, user preference, etc. However, there is no disclosure that these setting values necessarily take different numerical values for different installation types with the same distance.

4.3 According to claim 1 it is the "audio output by a speaker", which "is different" for the wall-mount installation and the stand-type installation. The audio output is controlled according to the audio configuration for the stand installation or the wall-mount installation, respectively, and thus according to the numerical value stored in one of the PEQ-S or PEQ-W setting values. As set out above, there is no disclosure that these numerical values are different. Hence, the claim amendment does not comply with Article 123(2) EPC.

4.4 It follows that the first auxiliary request cannot be allowed.

Second auxiliary request

5. The board accepts that the subject-matter of claim 1 of this request differs from D5 in that the wall-mount and stand-type audio configurations each comprise particular PEQ setting values designated for one of the TV installation types (and stored separately; see paragraph [45] of the application).

5.1 According to the appellant - as a result of the assignment of PEQ setting values to audio configurations for wall-mount and stand-type installations - further parameters other than vertical distance of the TV to a reflective surface could be

taken into account for the optimisation of the audio output. As set out in the description of the present application, for instance, the audio output setting values could be adapted to incorporate influences from the distance to a wall or the setting values could be adjusted "based on, for example, user preference, a listening environment, a type of content to display, or other environmental factors" (see paragraphs [0070] and [0075]). The audio output could therefore be optimised taking into account further parameters in addition to vertical distance.

5.2 The board is not convinced that this advantage applies without qualification to the whole breadth of the claim. The board does not see any other objective technical effects. It is only for the sake of argument that the board accepts the appellant's consequential formulation of the technical problem as being how to improve the audio output for the TV. The considerations in the following paragraph are based on this hypothetical assumption.

5.3 It was well known that equalisation of an audio signal depends on multiple parameters, the distance to the main reflecting surface being only one of the most important contributors to distortions. It is noted in this respect that D5 explicitly mentions taking additional parameters into account, such as the material of the floor (see paragraph [0078]). In order to improve the audio output, the skilled person would have had to adapt the determination of equalisation parameters accordingly. Starting from D5 it would have been obvious to take into account such additional parameters which are typical of the different installation types and can be selected in use either by using different sensors or by querying the user for the

respective values. Hence, starting from D5, the skilled person would have arrived at the claimed subject-matter without exercising an inventive step.

5.4 It follows that the second auxiliary request is not allowable because its subject-matter lacks an inventive step in view of D5 (Article 56 EPC).

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



K. Boelicke

F. Edlinger

Decision electronically authenticated