Datasheet for the decision
of 19 April 2012

Case Number: T 0993/08 -3.5.04
Application Number: 03253738.3
Publication Number: 1377050
IPC: H04N5/445
Language of the proceedings: EN

Title of invention:
Video apparatus having an OSD function

Patentee:
Samsung Electronics Co., Ltd.

Opponent:
Interessengemeinschaft für Rundfunkschutzrechte e.V. (IGR e.V.)

Headword:

Relevant legal provisions:
EPC 1973 Art. 56, 84

Keyword:
inventive step (main request, first and second auxiliary requests) - no
clarity (third to fifth auxiliary requests) - no

Decisions cited:

Catchword:
Case Number: T0993/08 – 3.5.04

DE C I S I O N
of the Technical Board of Appeal 3.5.04
of 19 April 2012

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Decision under appeal: Decision of the Opposition Division of the European Patent Office posted 17 March 2008 revoking European patent No. 1377050 pursuant to Article 101(3)(b) EPC.

Composition of the Board:
Chairman: F. Edlinger
Members: R. Gerdes
T. Karamanli
Summary of Facts and Submissions

I. The present appeal arises from the decision of the opposition division revoking European patent No. 1 377 050.

II. Opposition had been filed against the patent as a whole, based on the grounds of lack of novelty and inventive step (Article 100(a) together with Articles 54 and 56 EPC 1973).

III. In its decision dated 17 March 2008 the opposition division found that the subject-matter of independent claims 1 and 5 according to all of the patent proprietor's requests did not involve an inventive step (Article 56 EPC 1973) in view of the prior art document D1: US 6 169 543 B1.

IV. The patent proprietor filed an appeal against this decision. In the statement of grounds of appeal the appellant requested that the impugned decision be set aside and that the patent be maintained on the basis of the attached claims of a main request, a first or a second auxiliary request.

V. The respondent (opponent) replied by letters dated 5 June 2008 and 11 November 2008 and requested that the appeal be dismissed.

VI. In a communication annexed to the summons to oral proceedings, the board _inter alia_ expressed doubts that the subject-matter of the independent claims of all requests met the requirements of Article 84 EPC 1973. The board also indicated that, according to its provisional opinion, it was inclined to follow the view
taken by the opposition division regarding inventive step of the subject-matter of claim 1 of the main request (Article 56 EPC 1973).

VII. By letter of 20 February 2012 the respondent announced that it would not attend the oral proceedings, but maintained its request that the appeal be dismissed.

VIII. By letters of 19 March 2012 and 4 April 2012 the appellant submitted several sets of new claims and requests.

IX. Oral proceedings were held on 19 April 2012. As announced beforehand, the respondent was not represented at the oral proceedings. The appellant finally requested that the decision under appeal be set aside and the patent maintained in amended form on the basis of the claims of the main request, or of auxiliary requests 1 or 2, all submitted in the oral proceedings, or on the basis of the claims of one of auxiliary requests 3, 4 or 5, filed as "1st Auxiliary Request", "2nd Auxiliary Request", "3rd Auxiliary Request", respectively, with letter of 19 March 2012.

X. Independent claim 1 according to the appellant's main request reads as follows:

"A video reproduction device comprising:

a reproduction component (202), adapted to read out video data stored in a recording medium;
an on-screen display (OSD) menu component (205a, ..., 205n) separate from the recording medium, adapted to store and output graphic data in order to set an OSD menu display, the OSD menu display comprising a plurality of predetermined OSD display images corresponding to different menus selectable in
response to user input; and
a controller (220, 240), adapted to select and display
the video data and/or the graphic data, and a decoder
(206) for decoding video data from the reproduction
component (202), the graphic data being in a form that
can be decoded by the decoder (206);
wherein the OSD menu component consists of a plurality
of OSD menu units (205a, ..., 205n), each storing
graphic data corresponding to one of the plurality of
OSD display images; and
the controller (220, 240) comprises:
a selection component (220), adapted to output
selectively the graphic data from one of the plurality
of OSD menu units (205a, ..., 205n) and/or video data
from the reproduction component (202) to the decoder
(206); and
a selection control component (240), adapted to control
the selection component (220)."

XI. Claim 1 according to the **first auxiliary request** is identical to claim 1 of the main request, except for the feature "each storing graphic data corresponding to one of the plurality of OSD display images", which is replaced by the following feature:

"wherein graphic data for each one of the plurality of OSD display images is stored in a respective OSD menu unit in a compressed format".

XII. Claim 1 of the **second auxiliary request** differs from claim 1 of the first auxiliary request by the deletion of the expression "in a compressed format".

XIII. Claim 1 of the **third auxiliary request** is worded as follows:
"A video reproduction device comprising:
a reproduction component (202), adapted to read out
video data stored in a recording medium;
an on-screen display (OSD) menu component (205a, ..., 205n) separate from the recording medium, adapted to
store and output graphic data in order to set an
OSD menu display, the OSD menu display comprising a
plurality of predetermined OSD display images
corresponding to different menus selectable in response
to user input, wherein each of the predetermined OSD
display images comprises a screen image, each screen
image being arranged to provide one OSD menu for
display; and
a controller (220, 240), adapted to select and display
the video data and/or the graphic data, and a decoder
(206) for decoding video data from the reproduction
component (202), the graphic data being in a form that
can be decoded by the decoder (206);
wherein the OSD menu component comprises a plurality of
OSD menu units, each storing graphic data corresponding
to one of the plurality of OSD display images; and
the controller (220, 240) comprises:
a selection component (220), adapted to output
selectively the graphic data from one of the plurality
of OSD menu units (205a, ..., 205n) and/or video data
from the reproduction component (202) to the decoder
(206); and
a selection control component (240), adapted to control
the selection component (220)."

XIV. The wording of claim 1 of the fourth auxiliary request
is the same as that of claim 1 of the third auxiliary
request with the following feature appended to the latter:
"wherein each screen image comprises a plurality of sub-images, each sub-image corresponding to a menu item, one of the plurality of sub-images being user selectable in each screen image."

XV. Claim 1 of the **fifth auxiliary request** has the same wording as claim 1 of the third auxiliary request with the following feature being appended to the latter:

"wherein each screen image comprises a plurality of sub-images, each sub-image corresponding to a menu item, one of the plurality of sub-images being highlighted in each screen image, the device being operative such that, when a cursor is positioned over a given menu item of a screen image being displayed, the selection component (220) is arranged to select for subsequent display the screen image in which the sub-image corresponding to the given menu item is highlighted."

XVI. In the decision under appeal the opposition division expressed the opinion that providing an OSD menu component separate from the recording medium where the video data were stored merely represented a choice of a suitable storage medium. Moreover, it was common practice to compress data before they were transmitted or stored in order to save transmission bandwidth and memory capacity. D1 was silent as to how the OSD images were stored and whether or not they were synthesised from graphics and text components. It was obvious to store whole images if the system had sufficient memory capacity because the skilled person always had to consider a trade-off between memory capacity and processing power.

XVII. Essentially the appellant argued as follows:
Re: "main request"

D1 fails to disclose storage of OSD graphic data separate from the recording medium.

In addition, the video reproduction device of the invention is distinguished from D1 by the fact that each screen display of an OSD menu display is stored as a whole image in one of the OSD menu units. It follows from the above that the OSD images need not be synthesised for display from different elements. In D1, graphic data of one OSD display image are received from various sources. Based on these data, program guide information is customised and menus are generated as needed (see D1, column 7, line 45 to column 8, line 3). D1 points away from the invention by combining a number of different components from different sources.

The invention provides a simple and efficient mechanism by which OSD menus can be provided as high-quality displays in a video reproduction device.

Re: "first and second auxiliary requests"

Claim 1 of these requests was amended to illustrate more clearly the difference with respect to D1 that all graphic data of one OSD display image are stored in one OSD menu unit. Claim 1 according to the first auxiliary request additionally specifies that the graphic data are stored in compressed format, which results in a reduction of storage space.
With respect to clarity of claim 1 of the third auxiliary request it was argued that an "OSD display image" is to be understood as one of the OSD screens shown in figures 4 to 6. The expression "screen image" in claim 1 designates the same OSD screen of figures 4 to 6 as the OSD display images. This argument also applied to claims 1 of the fourth and fifth auxiliary requests.

XVIII. The arguments of the respondent which are of relevance with respect to the appellant's final requests may be summarised as follows:

D1 does not explicitly refer to the place of storage of graphic data for the OSD menus. D1 refers to media such as DVDs and video tapes as a source of audio and video data. It was evident that storage of OSD menus did not make sense on these removable media. Therefore, they would have to be stored separately from the recording medium.

The content of the EPG screens in D1 was not predetermined and therefore had to be generated by the video reproduction device itself. However, OSD menus for general user guidance were well-known at the effective filing date of the patent. It was common practice for the skilled person to balance the requirements with respect to memory capacity and processing power.
Reasons for the Decision

1. The appeal is admissible.

2. For the sake of consistency with references made by the appellant, in the following, references to the description apply to the application as originally filed, which underlies the patent in suit if not otherwise mentioned.

3. Main request

3.1 It is not disputed that D1 may be considered as reflecting the closest prior art with respect to the subject-matter of claim 1.

3.2 D1 discloses a video reproduction device for reproducing video and audio data received via broadcast or stored on recording media such as digital video disks, compact disks and video tapes. D1 is concerned with the task of customising an electronic program guide such that information from different sources is integrated into a single program guide and such that - in addition - calendaring or scheduling functions are provided (see D1, column 1, line 61 to column 2, line 49, column 6, lines 21 to 65, column 10, lines 47 to 59).

D1 shows several examples of OSD menus in grid guide format and in addition predetermined OSD menus for entering calendaring or scheduling information (see figures 4 to 8). According to D1, OSD menus are generated from "stored program guide information, stored graphics information, and/or program guide and graphics information received via the input signal".
The OSD menu information may be received from the input transport stream, i.e. via broadcast, or retrieved from storage (see column 7, line 41 to column 8, line 14).

D1 (see figure 2) discloses a recording medium (105) and a reproduction component (90, 95) adapted to read out video data stored in the recording medium. It also discloses a controller (115, 37, 65, 70) including a selection control component (115) and a selection component (37, 65, 70) to select and display the video and/or the graphic data. A decoder (55, 80, 85) is provided to decode video data and graphic data from the reproduction component and to transmit the decoded data to an OSD menu display (see column 6, lines 23 to 43 and lines 53 to 64, column 8, lines 4 to 15, column 10, lines 1 to 15, column 11, lines 32 to 36).

D1 does not explicitly disclose where graphic data for the OSD menu display are stored. However, it may be deduced from the passage in column 6, lines 53 to 64, that they would be stored together with video data in storage medium 105 and not as specified in claim 1 in an on-screen display menu component "separate from the recording medium" for the video data.

In addition, D1 (see e.g. column 7, line 56 to column 8, line 3) seems to generate OSD menus from stored EPG data and graphics when the OSD menus are needed. D1 does not disclose the specific arrangement for storing graphic data, as specified in claim 1, in the OSD menu component which "consists of a plurality of OSD menu units (205a, ..., 205n), each storing graphic data corresponding to one of the plurality of OSD display images".
3.4 The first difference provides an alternative to the storage of video data and graphic data on a common recording medium. The storage of video data on a removable storage medium such as a video tape or a DVD is also envisaged in D1, see column 6, lines 30 to 34. In this case, it would be evident for the skilled person that graphic data for an OSD menu should not be stored on the same (removable) storage medium. Otherwise, they would not be available whenever OSD menus were needed and the medium was removed from the video reproduction device. The storage of graphic data on a separate medium therefore follows as a necessity from the choice of a removable storage medium for the video data. As a result this difference cannot justify an inventive step.

3.5 A technical effect resulting from the second difference relating to the storage of graphic data corresponding to one OSD display image in a corresponding OSD menu unit is not explicitly disclosed in the application. However, the board accepts that it is implicit for the skilled person that such an arrangement of data may result in a reduction of computational power necessary to generate the corresponding OSD display image, in particular, if each OSD display image is stored as a complete image in one of the OSD menu units. Such a reduction of computational power potentially goes along with an increase in memory capacity required to store the graphic data because graphic data usually require more memory, in particular when copies of the same graphic data have to be stored in different OSD menu units.

3.6 The associated technical problem may therefore be seen as being how to reduce the computational load for the controller in a video reproduction device.
The opposition division stated in the decision under appeal (see Reasons, point 3.3) that "[i]t is always a trade-off between memory capacity and processing power, and therefore it would be obvious to the skilled person to store whole images if the system has sufficient memory capacity". It was not contested by the appellant that the skilled person was well aware of this trade-off. The board is also convinced that - when designing a video reproduction device - the skilled person will consider which factors contribute to processor load and that he will try to find a suitable balance with other design requirements such as limitations of available memory space. Hence, depending on the requirements for the presentation of the OSD menus and the availability of sufficient memory or processing power in the video reproduction device of D1, a skilled person would have considered adopting the storage concept of claim 1.

The arguments of the appellant did not convince the board. It is correct that in general D1 refers to OSD display images which are combined from a number of different components from different sources. However, this is not the case for all of the OSD display images (see figures 5 and 5A) and it does not imply that these components are not available in good time before they are requested for display. The board also notes that according to D1 "[p]referably, this EPG menu is generated in response to the EPG display being activated (e.g., a user activating a particular key on remote control 125)", see column 11, lines 29 to 33. The skilled person would understand this sentence to mean that even though generating EPG menus in response to a user request is the preferred method, there are also other options, i.e. generating them beforehand. Depending on the availability of computational power
and memory, the skilled person would have chosen the one or the other option.

3.9 The board concludes that the subject-matter of claim 1 was obvious to a person skilled in the art having regard to the state of the art in D1 and thus lacks an inventive step (Article 56 EPC 1973).

4. First auxiliary request

4.1 As conceded by the appellant, the amendments over claim 1 of the main request (see point XVII above) are intended to improve clarity and essentially only add to the subject-matter of claim 1 that the graphic data are stored in compressed format.

4.2 The fact that graphic data are generally stored in compressed format (JPEG, GIF, PNG, etc.) and not as a bitmap is well-known. In addition, D1 discloses that data are stored in compressed format on the recording medium 90 (see column 6, lines 58 and 59). Hence, the added feature cannot justify an inventive step.

4.3 It follows from the above that the subject-matter of claim 1 lacks an inventive step (Article 56 EPC 1973).

5. Second auxiliary request

Claim 1 of the second auxiliary request is identical to claim 1 of the first auxiliary request except for the deletion of the words "in a compressed format". Claim 1 thus defines the same subject-matter as claim 1 of the main request in a slightly amended wording to improve clarity over this claim. This was not contested by the appellant. In view of the above, the subject-matter of
claim 1 also lacks an inventive step (Article 56 EPC 1973).

6. Third auxiliary request

6.1 Claim 1 of the third auxiliary request comprises different features referring to OSD display images:

(a) "the OSD menu display comprising a plurality of predetermined OSD display images corresponding to different menus selectable in response to user input",
(b) "wherein each of the predetermined OSD display images comprises a screen image, each screen image being arranged to provide one OSD menu for display", and
(c) "... OSD menu units, each storing graphic data corresponding to one of the plurality of OSD display images".

Feature (b) was added to claim 1 of the third auxiliary request.

6.2 The expression "OSD display image" in feature (a) is neither expressly used in the opposed patent nor in the application as originally filed. The board accepts the appellant's view that this expression may be seen as an alternative designation for the "OSD screens" shown in figures 4 to 6 and referred to on page 10, lines 17 to 20 of the description. This interpretation is consistent with that of feature (c) according to which graphic data of a (whole) OSD screen are stored in one OSD menu unit.

6.3 Feature (b) introduces the expression "screen image", which is likewise neither expressly used in the opposed
patent nor in the application as originally filed. The
first part of feature (b) implies that a screen image
is not necessarily the same as an OSD display image
because each OSD display image "comprises a screen
image" (emphasis added). However, the second part of
feature (b) implies that the screen image refers to the
same OSD screen as the OSD display image. The usage of
different terms for the same entities creates obscurity
concerning the true meaning of the terms for the
definition of the claimed subject-matter. On the other
hand, if these terms were intended to define different
(although similar) entities, such as parts of a
complete OSD screen, the board considers that even a
purposive construction of the terms in the context of
claim 1 does not allow unambiguously delimiting them
from one another. This problem is exacerbated by the
fact that there is no clear correspondence for these
terms in the description and thus a lack of support.

6.4 It follows from the above that claim 1 does not meet
the requirements of Article 84 EPC 1973.

7. Fourth and fifth auxiliary requests

7.1 Claim 1 of the fourth auxiliary request and claim 1 of
the fifth auxiliary request also contain features (a)
to (c) (see point 6.1 above). The additional features
of these claims are not suitable to overcome the lack
of clarity resulting from feature (b). On the contrary,
these claims specify that "each screen image comprises
a plurality of sub-images", the term "sub-image" being
a further expression which is neither expressly used in
the opposed patent nor in the application as originally
filed.
7.2 Hence, neither claim 1 of the fourth auxiliary request nor claim 1 of the fifth auxiliary request meet the requirements of Article 84 EPC 1973.

8. Conclusion

Since none of the appellant's requests are allowable, the appeal must be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

K. Boelicke F. Edlinger

Decision electronically authenticated