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**Datasheet for the decision
of 11 April 2018**

Case Number: T 2073/12 - 3.5.04

Application Number: 08847653.6

Publication Number: 2213090

IPC: H04N5/44

Language of the proceedings: EN

Title of invention:

Image display apparatus and method of controlling the same

Applicant:

Samsung Electronics Co., Ltd.

Headword:

Relevant legal provisions:

EPC Art. 56, 123(2)

Keyword:

Amendments - added subject-matter - main and first auxiliary
request (yes)

Inventive step - second auxiliary request (no)

Decisions cited:

T 1143/06, T 1214/09, T 1547/13

Catchword:



Beschwerdekammern
Boards of Appeal
Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 2073/12 - 3.5.04

D E C I S I O N
of Technical Board of Appeal 3.5.04
of 11 April 2018

Appellant: Samsung Electronics Co., Ltd.
(Applicant) 129, Samsung-ro
Yeongtong-gu
Suwon-si, Gyeonggi-do, 443-742 (KR)

Representative: Grootscholten, Johannes A.M.
Arnold & Siedsma
Bezuidenhoutseweg 57
2594 AC The Hague (NL)

Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 30 May 2012
refusing European patent application
No. 08847653.6 pursuant to Article 97(2) EPC**

Composition of the Board:

Chairman C. Kunzelmann
Members: R. Gerdes
G. Decker

Summary of Facts and Submissions

I. The appeal is directed against the decision to refuse European patent application No. 08 847 653.6, published as international application WO 2009/061102 A1.

II. The patent application was refused on the grounds that the subject-matter of the independent claims of the then main request did not involve an inventive step in view of

D2: JP 2007 142785 A.

The examining division determined the disclosure of D2 by means of its US family document, US 2008/0016089 A1, which it considered to be a faithful translation of D2. The applicant did not dispute that US 2008/0016089 A1 was a translation of D2. In the following, references to D2 are to be understood as referring to JP 2007 142785 A, with the proviso that the paragraph numbering is that used in US 2008/0016089 A1.

Claim 1 of the then first auxiliary request was found not to be clear, contrary to Article 84 EPC, and to extend beyond the content of the application as filed (Article 123(2) EPC).

III. The applicant appealed against this decision and with its statement of grounds of appeal submitted claims of new main and first auxiliary requests.

IV. The board issued a summons to oral proceedings together with a communication in which it raised doubts *inter alia* as to the clarity and original disclosure of the independent claims of the main request and the first auxiliary request.

V. The appellant replied with a letter dated 9 March 2018 and submitted amended claims and description pages according to main, first and second auxiliary requests.

VI. Oral proceedings were held before the board on 11 April 2018.

During the oral proceedings the appellant submitted amended claims 1 to 15 of a new main request and amended claims 1 to 14 of a new second auxiliary request.

At the end of the oral proceedings the appellant confirmed its final requests as follows:

The appellant requested that the decision under appeal be set aside and that a European patent be granted on the basis of the claims of the new main request filed during the oral proceedings on 11 April 2018, or of the first auxiliary request filed with the letter dated 9 March 2018, or of the new second auxiliary request filed during the oral proceedings on 11 April 2018.

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

"An image display apparatus comprising:

a selecting unit (10) which receives instructions concerning a progress bar (1, 41, 42, 43);

a storage unit (30) which stores information concerning the progress bar (1, 41, 42, 43), and stores information concerning a plurality of marks (41a, 42a, 43a) for searching for a plurality of predetermined scenes of content; and

a control unit (50) which extracts a scene corresponding to a mark (41a, 42a, 43a) of the progress bar (1, 41, 42, 43) from the storage unit, and displays the scene,

CHARACTERIZED IN THAT

the selecting unit (10) is adapted for selecting one progress bar (1; 41; 42; 43) from a plurality of progress bars (1, 41, 42, 43) of various kinds, and

the storage unit (30) stores information concerning each of the progress bars of various kinds, and stores information concerning the plurality of marks, each mark concerning one of the plurality of progress bars of various kinds, per progress bar individually, for searching for a plurality of predetermined scenes of content corresponding with said marks using a corresponding one of the plurality of progress bars of various kinds."

VIII. Claim 1 of the first auxiliary request differs from claim 1 of the main request only in the characterising portion of the claim, which reads as follows (added features are marked by underlining, deleted features by strike-through):

"...

CHARACTERIZED IN THAT

the selecting unit (10) is adapted for selecting one progress bar (1; 41; 42; 43) from a plurality of progress bars (1, 41, 42, 43) of various kinds provided in the image display apparatus for simultaneous display, and

the storage unit (30) stores information concerning each of the progress bars of various kinds, and stores information concerning the plurality of marks, each mark concerning one of the plurality of progress bars of various kinds, ~~per progress bar individually,~~ for searching for a plurality of predetermined scenes of content corresponding with said marks using a corresponding one of the plurality of progress bars of various kinds."

- IX. Similarly, claim 1 of the second auxiliary request differs from claim 1 of the main request only in its characterising portion, which reads as follows:

"...

CHARACTERIZED IN THAT

the selecting unit (10) is adapted for selecting one progress bar (1; 41; 42; 43) from a plurality of progress bars (1, 41, 42, 43) of various kinds, and

the storage unit (30) stores information concerning each of the progress bars of various kinds, ~~and stores information concerning the plurality of marks,~~ including the plurality of marks, each mark concerning one of the plurality of progress bars of various kinds, ~~per progress bar individually,~~ for searching for a plurality of predetermined scenes of content corresponding with said marks using a corresponding one of the plurality of progress bars of various kinds,

wherein, if a cursor is positioned at the mark on the selected progress bar, the control unit (50) displays a scene corresponding to the mark (41a, 42a, 43a) as a

thumbnail image, and thereafter displays the scene only if a play button is pressed."

- X. The examining division held in the decision under appeal that claim 1 of the then main request differed from D2 in that "information concerning each of the progress bars" was stored separately (when interpreted according to the description), whereas D2 stored all the information for all progress bars together in one data structure. The storing in a single data structure disclosed in D2 involved a high amount of processing because the whole data structure had to be searched to find the relevant attribute marks. It would have been obvious for a skilled person to re-arrange the information stored in the data structure of figure 4 of D2 into separate data structures for each progress bar or "attribute".

The feature of the then claim 1 of the first auxiliary request relating to the "selecting unit ... adapted for selecting more than one progress bar ... from a plurality of progress bars ... for simultaneous display" was not disclosed in the application as originally filed. In particular, figure 3 and paragraphs [24], [28] and [38] could not serve as a basis for the feature.

- XI. The appellant's arguments, as far as they are relevant for the present decision, may be summarised as follows:

The feature of claim 1 of the main request relating to the storage unit storing "information concerning each of the progress bars ... and ... the plurality of marks, ..., per progress bar individually" should be interpreted such that information for each progress bar was stored together with the corresponding marks in a

separate storage device or data structure. In other words, the information pertaining to each progress bar including its marks was grouped. The skilled person would derive the feature from paragraphs [8], [23] and [24] of the application as filed. In addition, figure 3 together with corresponding passages of the application in paragraphs [29] to [31] disclosed that each progress bar was assigned a separate controller. It was implicit for the skilled person that the separate controllers corresponded to separate storage areas in which the information for each progress bar was stored together.

The additional feature of claim 1 of the first auxiliary request ("provided ... for simultaneous display") was based on figure 3 together with paragraphs [14], [20], [24], [27], [28], [38], [41] and [42]. There were two types of selection, i.e. selection for display (see figure 9 showing eligible progress bars and figure 3 showing progress bars that have actually been selected for display) and selection for navigation, for which the selecting unit 10 was employed. The bars of figure 3 were selected for display and were consequently also shown in figure 3. The displayed progress bars were encompassed by a dashed box 40 designating the display unit (see paragraph [19]). Figure 3 showed the plurality of the progress bars displayed on the display at a single point in time (see statement of grounds, pages 4 and 5, and letter dated 9 March 2018, pages 3 and 4).

In claim 1 of the second auxiliary request the contested features of the previous requests were deleted and the claim was clarified in view of paragraph [8]. D2 did not disclose the features of the characterising portion of the claim. The features

relating to the selecting unit and the storage unit implied that several progress bars were displayed and that the information concerning the progress bars included the marks that were associated with the respective progress bar. The latter feature, i.e. the grouping of information relating to one progress bar and separate storage of each group, allowed the simultaneous display of progress bars with overlapping marks, which was not the case for D2. D2 only allowed the assignment of one mark (CM or highlight) to each chapter, which was thereby blocked for the assignment of further marks (see figures 4 and 18). In contrast, with the present invention, marks could be assigned to the same point in time and be overlapping. In addition, the display of a thumbnail associated with a mark allowed improved navigation in the movie. In D1 the timeline was divided only into equally spaced segments. The segment indicators 12 of figure 4 could therefore not be regarded as marks. A purposeful selection of scenes was not possible on the basis of D1. On the basis of these distinguishing features the technical problem should accordingly be formulated as how to enable a user to easily and conveniently search desired scenes of multimedia content (see paragraph [6] and [7] of the application).

Reasons for the Decision

1. The appeal is admissible.

The invention

2. The invention relates to improvements in user interfaces for digital televisions.

In order to rapidly search the content of desired scenes of a TV program, various progress bars may be provided for display on the screen. One progress bar (a default progress bar) notifies the user of the progress time and the positional information in the content currently being reproduced. Other progress bars include marks for searching for predetermined scenes using a cursor. The marks may, for example, indicate highlights, rapid scene changes and bookmarks. In addition, when the cursor is positioned at a mark, the corresponding scene is displayed as a thumbnail on the progress bar. It is only when a play button is pushed that the display switches to the corresponding scene (see paragraphs [1], [5], [7], [23], [39], [40] and [42] of the application as published).

Main request

3. The claims of the new main request are based on the claims of the main request submitted with the letter dated 9 March 2018, which was discussed during the oral proceedings and subsequently replaced by the present main request. The amendments were intended to overcome an objection of lack of clarity discussed during the oral proceedings. The board therefore admitted the new main request (Article 13(1) RPBA).

4. Claim 1 of the main request comprises the following features (underlining added by the board, indicating the amendment made during the oral proceedings):

" ... the storage unit (30) stores information concerning each of the progress bars of various kinds, and stores information concerning the plurality of marks, each mark concerning one of the plurality of progress bars of various kinds, per progress bar

individually, for searching for a plurality of predetermined scenes of content corresponding with said marks using a corresponding one of the plurality of progress bars of various kinds."

- 4.1 The appellant declared in the oral proceedings that the underlined feature referred back to all of the preceding information stored in the storage unit, meaning that information concerning each of the progress bars and the plurality of marks was stored "per progress bar individually". This was to be understood such that the information for each progress bar was grouped in the storage and that it was independent of the information concerning other progress bars.
- 4.2 In the appellant's favour, the board accepts that interpretation of claim 1.
- 4.3 Nevertheless, the board holds that the underlined feature cannot be derived directly and unambiguously from the application as filed, as required by the established "gold standard" for assessing compliance with Article 123(2) EPC (see Case Law of the Boards of Appeal, 8th edition 2016, II.E.1).

First, there are inconsistencies in the application as to which elements constitute a progress bar. According to paragraph [24] and claim 3 as originally filed, the different progress bars include corresponding marks. According to paragraphs [25], [38] and [41], the marks are displayed or arranged on the selected progress bar, which implies that the marks are distinct from the progress bar. The application also refers to a default progress bar, which "indicates the progress time and the positional information of content being currently

reproduced" (see paragraphs [23] and [24]). It is, therefore, not clearly specified in the application as filed which information is comprised in the "information concerning each of the progress bars", i.e. whether it comprises the marks concerning the progress bar and a pointer to the default progress bar, or a copy of the default progress bar together with the marks or just the marks.

Second, the application as filed does not contain explicit details of how the information concerning the progress bars is stored, i.e. whether it is stored per progress bar individually as specified in amended claim 1 or, for example, in a single timeline for all progress bars together, with attributes indicating the type of mark.

In view of the uncertainties regarding the information concerning a progress bar and the marks, different storage structures are conceivable on the basis of the disclosure of the application as filed. Apart from the option of storing the information "per progress bar individually", it is also conceivable that only one default progress bar is stored and is commonly used to be displayed with a set of marks. All marks may also be arranged in one list/table together with each one timestamp and an attribute designating the type of mark (the latter option corresponds to D2, figure 4).

- 4.4 The appellant referred to figure 3 and paragraphs [8], [23], [24] and [29] to [31] as a basis for the added feature "per progress bar individually".

Figure 3 shows several "controllers", each controlling "the operation of" one progress bar (see paragraph [31]). The appellant argued that the symbols

in figure 3 for illustrating the controllers were symbols of storages and that the skilled person would understand from the provision of one controller for one progress bar that the information for each progress bar was stored in a separate storage unit. The board cannot agree with that argument. Architectures with several controllers/processors and a shared memory or several memories and a single controller/processor are common, so the number of storage units need not correspond to the number of controllers/processors. Paragraphs [29] and [30], which explain details illustrated in figure 3, only refer to "the storage unit 30" for extracting scenes corresponding to marks. Hence, these paragraphs and figure 3 do not provide information on the organisation of the information concerning each of the progress bars and the associated marks.

Paragraph [8] refers to "a storage unit storing information on the progress bars including marks for helping a user to search predetermined scenes of content". This phrase specifies only the overall content of the storage unit. It does not specify either how the information is organised in the storage or how the progress bars are represented in the storage. In particular, the passage does not specify whether the information concerning each progress bar and associated marks is stored "individually" or in one common list with attributes indicating the type of mark. The further paragraphs cited in support of the amended feature likewise refer only to the appearance of the progress bars and associated marks on the screen and not to the organisation of the data in the storage.

It is noted that the examining division concurred with the appellant's interpretation that "the information concerning each of the progress bars" was stored

separately. However, it did not provide reasons for that assessment (see point X above).

- 4.5 Hence, the added feature of claim 1 is not directly and unambiguously derivable from the application as filed, contrary to Article 123(2) EPC. The same finding applies to claim 10, which defines the corresponding method of controlling an image display apparatus.

First auxiliary request

5. Claim 1 of the first auxiliary request (underlining added by the board) specifies that:

"... the selecting unit (10) is adapted for selecting one progress bar (1; 41; 42; 43) from a plurality of progress bars (1, 41, 42, 43) of various kinds provided in the image display apparatus for simultaneous display, ...".

- 5.1 The appellant essentially argued that the underlined amendment was based on figure 3, which shows several progress bars 41, 42 and 43 enclosed by a dashed and a continuous box, and the corresponding description. A reference number 40 designating the "display unit" is assigned to the dashed or the continuous box (see paragraph [19]). According to paragraph [28], "[i]t is preferable that the display unit 40 display the selected progress bars below the screen on which the content is reproduced."

The appellant interpreted figure 3 and paragraph [28] as disclosing a simultaneous display of progress bars. It argued that figure 3 illustrated the displaying at a single point in time. The display, as appearing at this single point in time, was indicated by the boxes drawn

around the progress bars and designated as display unit 40 (see point XI above and letter of reply dated 9 March 2018, page 4, second paragraph).

- 5.2 It is true that selected progress bars are shown below the screen on which the content is reproduced in figures 4 to 8. However, the board cannot agree that a plurality of progress bars can be displayed simultaneously. Unlike figures 4 to 9, figure 3 does not show an illustration of a displayed scene, i.e. a screenshot. Instead, it relates to the structure of the display apparatus and the "various progress bars provided in the image display apparatus" (see paragraphs [14], [18] and [28]). The fact that figure 3 concerns the structure of the display apparatus is also illustrated by the hardware components shown in the upper part of the figure and the data flow indicator (arrow) shown between the hardware components and the progress bars. Hence, the progress bars 41, 42 and 43 shown in figure 3 are some of those which are available for display, but one at a time.
- 5.3 Nor would a person skilled in the art derive this feature directly and unambiguously from the other passages cited in support of the underlined feature in point 5 above, because they are consistent with the analysis given in points 5.1 and 5.2 above.
- 5.4 As a result, the board agrees with the finding in the decision under appeal (see point X above) that the simultaneous display of progress bars is not disclosed in the application as filed, contrary to Article 123(2) EPC. The same objection applies to independent claim 10, which defines the corresponding method of controlling an image display apparatus.

Second auxiliary request

6. The claims of the present second auxiliary request are based on the claims of the second auxiliary request submitted with the letter dated 9 March 2018. The amended claims were submitted during the oral proceedings on 11 April 2018 and were intended to overcome an objection of lack of clarity which had been raised against identical passages of claim 1 of the main request filed with the letter dated 9 March 2018. The board therefore admitted the second auxiliary request (Article 13(1) RPBA).

7. It is common ground that D2 may be regarded as the closest prior art with respect to the subject-matter of claim 1.
 - 7.1 D2 discloses an image display apparatus for recording or reproducing a motion picture. As in the present application, the apparatus of D2 serves to improve user friendliness and manoeuvrability in the movie, which is achieved by displaying a progress bar below a motion picture display field and making marks on this progress bar selectable so as to change the current reproduction position in the movie. It was not contested that D2 therefore implicitly contains a selection unit receiving instructions concerning a progress bar, a storage unit storing information concerning the progress bar and concerning a plurality of marks for searching for predetermined scenes of content, and a control unit which extracts a scene corresponding to a (selected) position of the progress bar (see paragraphs [0002], [0008], [0013], [0017], [0023] and [0024] of D2).

7.2 D2 also discloses that one of several progress bars of various kinds (highlight, CM) may be selectable and displayed. Necessarily, information concerning each of the progress bars including the plurality of marks is stored. Navigation along the marks of the progress bars is possible in order to search for specific scenes (see figures 6 and 7 together with paragraphs [0102] to [0104], [0108] to [0110] and [0118]). Hence, the second set of features of claim 1 relating to the selecting unit and the storage unit are disclosed in D2.

The appellant contested that D2 disclosed the latter features relating to the selecting and storage unit. According to the present application one or several progress bars could be displayed, in contrast to the single progress bar of D2. The information relating to each progress bar was grouped and separately stored for each group, which allowed the simultaneous display of progress bars with overlapping marks. This difference distinguished the apparatus of claim 1 from that of D2, which only allowed the assignment of one mark (CM or highlight) to each chapter and which was thereby blocked for the assignment of further marks (see figures 4 and 18). In contrast, with the present invention, marks could be assigned to the same point in time and be overlapping.

The board is not convinced by these arguments. The simultaneous display of several progress bars and the grouping of information concerning each progress bar are neither reflected in features of claim 1 nor derivable from the application as filed (see sections 4 and 5 above). The progress bars of figures 6 and 7 of D2 are different progress bars, because they include different marks.

7.3 It follows that the subject-matter of claim 1 is distinguished from D2 only by the following features:

(a) wherein, if a cursor is positioned at the mark on the selected progress bar, the control unit (50) displays a scene corresponding to the mark (41a, 42a, 43a) as a thumbnail image,

(b) and thereafter displays the scene only if a play button is pressed.

7.4 The appellant argued that the technical effect of the distinguishing features was to enable the user to easily and conveniently search for desired scenes (see paragraphs [6] and [7] of the application).

7.5 The board considers this effect to be based on an improvement in the cognitive evaluation of the displayed image, which does not qualify as a technical effect (cf. decision T 1547/13, Reasons 8.1 to 8.3, and T 1214/09, Reasons 4.8.3 to 4.8.8).

Feature (b) serves to initiate locating and displaying of the desired scene. This effect depends on the outcome of the mental act on the part of the user and is therefore only an indirect effect. Hence, a technical problem could only be related to the implementation details of the steps carried out by the apparatus of claim 1. However, in claim 1 the implementation is only implicit, which means that it is carried out using standard methods which are well known to the skilled person (cf. decision T 1143/06, Reasons 3.8).

7.6 Even if the board agreed with the appellant regarding the technical effect, the claimed subject-matter would not involve an inventive step.

D1 also concerns an image display apparatus enabling the user to find "a desired scene jump destination" (see paragraphs [0098], [0104] and [0107]). Hence, D1 is in the same technical field as the present application.

In order to provide an indication of the content of the movie at different time instances, a progress bar (termed a time bar 15) containing a replay position icon 14 and a pointer icon 13 (see figure 4) is displayed at the bottom of the TV screen 20. A thumbnail 16 displays the video data at the position of the pointer icon "to permit the user to confirm the contents" (see paragraphs [0058], [0063], [0098], [0104] and [0107]).

The board therefore holds that the skilled person would combine D2 with D1 when trying to provide a more convenient apparatus for searching for desired scenes. He would have been motivated to display a scene corresponding to the mark at the location of the cursor as a thumbnail image. The board is also convinced that the skilled person would be prompted by the phrase "to permit the user to confirm the contents" to implement a button that serves to locate and play back the indicated scene if the user activates that button, a play button being a well-known means of confirming contents for playback.

7.7 The appellant argued that in D1 the timeline was divided only into equally spaced segments. The dividing lines could therefore not be regarded as marks. A

purposeful selection of scenes was not possible on the basis of D1.

The board is not convinced by these arguments. It is true that the marks of D1 divide the timeline/progress bar into evenly spaced segments. Nevertheless, in claim 1 there is no restriction to marks defining scene changes, highlights or bookmarks. In addition, this difference is specified only in terms of the cognitive content associated with a mark. The distinction therefore does not provide a technical effect.

The board also does not accept that a purposeful selection is not possible with the marks of D1. Predetermined scenes clearly can be searched and located with the timeline and marks of D1.

- 7.8 As a result, the board finds that the subject-matter of claim 1 according to the second auxiliary request lacks an inventive step (Article 56 EPC).

Conclusion

8. It follows from the above that none of the appellant's requests is allowable, and so the appeal is to be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



M. Cañueto Carbajo

C. Kunzelmann

Decision electronically authenticated