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**Datasheet for the decision
of 24 October 2017**

Case Number: T 1527/12 - 3.5.04

Application Number: 08170517.0

Publication Number: 2071833

IPC: H04N5/45

Language of the proceedings: EN

Title of invention:

Image processing apparatus and control method thereof

Applicant:

Samsung Electronics Co., Ltd.

Headword:

Relevant legal provisions:

EPC Art. 84

Keyword:

Claims - clarity - main and auxiliary requests (no)

Decisions cited:

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 1527/12 - 3.5.04

D E C I S I O N
of Technical Board of Appeal 3.5.04
of 24 October 2017

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

Representative: Walaski, Jan Filip
Venner Shipley LLP
200 Aldersgate
London EC1A 4HD (GB)

Decision under appeal: Decision of the Examining Division of the
European Patent Office posted on 14 December
2011 refusing European patent application
No. 08170517.0 pursuant to Article 97(2) EPC.

Composition of the Board:

Chairman C. Kunzelmann
Members: B. Willems
G. Decker

Summary of Facts and Submissions

- I. The appeal is against the decision of the examining division dated 14 December 2011 refusing European patent application No. 08 170 517.0, published as EP 2 071 833 A1.
- II. The documents cited in the decision under appeal included the following:

D1: US 2007/229706 A1

D5: US 2002/013941 A1.
- III. The application was refused on the grounds that the subject-matter of claim 1 of the then sole request lacked inventive step (Article 56 EPC) over the disclosure of document D1 combined with the common general knowledge of the person skilled in the art as exemplified by document D5.
- IV. The applicant filed an appeal against this decision. With the statement of grounds of appeal, it filed claims according to a main and an auxiliary request. It requested that the impugned decision be set aside and that a patent be granted on the basis of the claims according to the main request or the auxiliary request. It also provided arguments as to why it considered the subject-matter of the claims of both requests to be new and to involve an inventive step.
- V. The board issued summons to oral proceedings. In a communication under Article 15(1) RPBA (Rules of Procedure of the Boards of Appeal, OJ EPO 2007, 536), annexed to the summons to oral proceedings, the board gave its provisional opinion that claim 1 of the main

request and claim 1 of the auxiliary request did not meet the requirements of Article 84 EPC. Furthermore, it introduced document D7 (KR 1020040067139 A) into the appeal proceedings and indicated that the appellant should be prepared to discuss inventive step in view of the combination of the disclosures of D1 and D5 or D1 and D7 and the common general knowledge of the person skilled in the art (Article 56 EPC).

- VI. With a letter dated 13 September 2017 the appellant filed amended claims according to a main request and first and second auxiliary requests, all requests replacing all the previous requests on file. It also submitted reasons as to why it considered the amended claims to meet the requirements of Articles 56 and 84 EPC.
- VII. The board held oral proceedings on 24 October 2017. The appellant was represented. During the oral proceedings, the appellant filed the claims of a third auxiliary request.

The appellant requested that the decision under appeal be set aside and that a European patent be granted on the basis of the claims according to the main request or the first or second auxiliary requests filed with the letter dated 13 September 2017, or the third auxiliary request, filed at the oral proceedings of 24 October 2017.

At the end of the oral proceedings, the chairman announced the board's decision.

VIII. Claim 1 of the main request and claim 1 of the first auxiliary request read as follows (additions to the former in the latter claim are in *italics*, deletions are ~~struck-out~~):

"An image processing apparatus (100) comprising:
a processor (20) for processing an image corresponding to a first channel to be displayed;
a display (30) for displaying the image of the first channel on a first screen;
a pointer control (60) for controlling a pointer to select a portion of the image of the first channel displayed on the first screen; and
a controller (70) for setting a selection area comprising the selected portion of the image of the first channel based on signals received from the pointer control (60), and for controlling the processor to display the selection area on a second screen in a predetermined region of the first screen displaying the image of the first channel,
the image processing apparatus further comprising:
a receiver which is configured to receive different video signals corresponding to different channels; ~~and~~
a channel selector which is configured to change the first channel to a second channel~~;~~; *and*
a user interface (UI) generator,
wherein the processor comprises a picture-in-picture (PIP) processor which is arranged to process the different video signals to be displayed on the first screen and the second screen, and
wherein, when the first channel is changed to the second channel by the channel selector, the controller is arranged to control the PIP processor to display an image corresponding to the changed channel on the first screen, and to maintain display of the image of the selection area displayed on the second screen, *and*

wherein the controller is arranged to control the UI generator to generate a display adjustment menu for adjusting the selection area displayed as the second screen".

IX. Claim 1 of the second auxiliary request reads as follows:

"An image processing apparatus (100) comprising:
a processor (20) for processing an image corresponding to a first channel to be displayed;
a display (30) for displaying the image of the first channel on a first screen;
a pointer control (60) for controlling a pointer to select at least two points on the image of the first channel displayed on the first screen;
a user interface (UI) generator; and
a controller (70) for setting a selection area by selecting a partial image displayed within a boundary including the at least two points from the image of the first channel based on signals received from the pointer control (60), for controlling the UI generator to generate a display setup menu for setting whether to display the selection area on a region of the first screen and to display the display setup menu on the first screen and for controlling the processor to display the selection area as a second screen on the region of the first screen displaying the image of the first channel if the display setup menu is selected to display the selection area,
the image processing apparatus further comprising:
a receiver which is configured to receive different video signals corresponding to different channels; and
a channel selector which is configured to change the first channel to a second channel,

wherein the processor comprises a picture-in-picture (PIP) processor which is arranged to process the different video signals to be displayed on the first screen and the second screen;
wherein, when the first channel is changed to the second channel by the channel selector, the controller is arranged to control the PIP processor to display an image corresponding to the changed channel on the first screen, and to maintain display of the image of the selection area displayed on the second screen, and
wherein the controller is arranged to control the UI generator to generate a display adjustment menu for adjusting the selection area displayed as the second screen if the pointer is positioned on the second screen".

X. Claim 1 of the third auxiliary request reads as follows:

"An image processing apparatus (100) comprising:
a processor (20) for processing an image corresponding to a first channel to be displayed;
a display (30) for displaying the image of the first channel on a first screen;
a pointer control (60) for controlling a pointer to select at least two points on the image of the first channel displayed on the first screen;
a user interface (UI) generator; and
a controller (70) for:
selecting an area of the image of the first channel displayed within a boundary including the at least two points, based on signals received from the pointer control (60),
controlling the UI generator to generate and display on the first screen a display setup menu for confirming the selected area, and

controlling the processor to display a partial image of the image of the first channel displayed within the selected area as a second screen on a region of the first screen displaying the image of the first channel, if the display setup menu is selected to confirm the selected area,

the image processing apparatus further comprising:
a receiver which is configured to receive different video signals corresponding to different channels; and
a channel selector which is configured to change the first channel to a second channel,

wherein the processor comprises a picture-in-picture (PIP) processor which is arranged to process the different video signals to be displayed on the first screen and the second screen;

wherein, when the first channel is changed to the second channel by the channel selector, the controller is arranged to control the PIP processor to display an image corresponding to the second channel on the first screen, and to maintain display of the partial image on the second screen".

XI. The examining division's reasons for the decision under appeal are no longer relevant for the present decision.

XII. The appellant's arguments which are relevant to the present decision may be summarised as follows:

(a) The "*selection area*" was an abstract representation of a geometrical shape defined by the user and the selected portion the part of the image of the first channel that lay within the selection area (see also letter dated 13 September 2017, page 2, first paragraph). Similarly, the partial image was the part of the image lying within the selection area. The use of the term "*selection area*" prevented the

claim from being interpreted as referring to a scene grab producing a static image. The "*second screen*" should be equated with the "*selection area*" and had been introduced to avoid confusion about which channel had been selected when changing the channel. To "*display the selection area as a second screen*" did not actually display the selection area but labelled the displayed area as a second screen.

- (b) The step of "*setting the selection area*" translated user actions into controller instructions, i.e. the controller looked at the area drawn by the user to define in abstract terms a mask for selecting part of the image of the first channel.
- (c) The phrase "*predetermined region*" could refer to a region at a fixed position such as the right-hand bottom corner of the screen or a region at a position which had been defined when selecting the area. In the example set out in the description, the predetermined region corresponded to the selection area.
- (d) Setting whether to display the selection area on a first screen encompassed confirming the correctness of the selection and determining whether the selection could be used in subsequent processing steps.

Reasons for the Decision

1. The appeal is admissible.
2. *Main and first auxiliary requests - clarity (Article 84 EPC)*
 - 2.1 According to Article 84 EPC, the claims shall define the matter for which protection is sought. They shall be clear and concise and be supported by the description.
 - 2.2 Claims 1 of the main and first auxiliary requests specify:

"a controller (70) for setting a selection area comprising the selected portion of the image of the first channel based on signals received from the pointer control (60), and for controlling the processor to display the selection area on a second screen in a predetermined region of the first screen displaying the image of the first channel [...] and to maintain display of the image of the selection area displayed on the second screen".
 - 2.3 The claims do not clearly define the relationship between the selection area, the selected portion and the second screen.
 - 2.3.1 The board has not been convinced by the appellant's argument that it is clear that the selection area is a shape defined by the user and the selected portion the part of the image within this shape (see points XII(a) and (b) above).

- 2.3.2 If the claims were interpreted as suggested by the appellant, then displaying the selection area would entail, for instance, presenting the user with monochrome pixels arranged in the shape of the selection area. This arrangement of monochrome pixels would continue to be displayed after a channel change. Thus, the selected part of the image of the first channel would be continuously concealed. This would not be compatible with the feature that the PIP processor is "*arranged to process the different video signals to be displayed on the first screen and the second screen*" (emphasis added) or the appellant's argument that the selection area defines in abstract terms part of the image of the first channel to be extracted for display.
- 2.3.3 If "*selection area*" were to refer to video content, then the questions of how "*a selection area comprising the selected portion*" should be set and how displaying the selection area differed from displaying the image of the selection area would arise.
- 2.4 The board is not persuaded that the "*predetermined region*" is a region determined in the preceding step of setting the selection area (see point XII(c) above). If the predetermined region corresponded to the selection area, the claims would be meaningless, because they would specify selecting a displayed part of the image of the first channel and displaying the selected (displayed) part at the same position. If the predetermined region were fixed and independent of the selection area, it would not be clear whether the selected part of the image was extracted and moved to the predetermined region or whether the selected part was duplicated in the predetermined region.

2.5 It follows from the above that claim 1 of the main request and claim 1 of the first auxiliary request do not meet the requirements of Article 84 EPC. Hence, the main and first auxiliary requests are not allowable.

3. *Second auxiliary request - clarity (Article 84 EPC)*

3.1 Claim 1 of the second auxiliary request specifies:

"a controller (70) for setting a selection area by selecting a partial image displayed within a boundary including the at least two points [...], for controlling the UI generator to generate a display setup menu for setting whether to display the selection area on a region of the first screen [...] and for controlling the processor to display the selection area as a second screen on the region of the first screen displaying the image of the first channel if the display setup menu is selected to display the selection area".

3.2 The claim does not clearly specify the relationship between the partial image, the selection area and the boundary. In particular, it does not define a one-to-one correspondence between the area and the image as suggested by the appellant (see point XII(a) above). Moreover, the partial image could be any image within the boundaries.

3.3 In addition, "*setting whether to display the selection area*" implies a choice between displaying the selection area or not. If the "*selection area*" were video content (see point 2.3.3 above), the viewer would be given the choice not to display displayed content. If the selection area were a mask, then the viewer would be given the choice to display an image of this mask, even

after a channel change. The "setting" would thus be pointless whatever interpretation of "selection area" is adopted.

3.4 The board has not been persuaded by the appellant's argument that "*setting whether to display the selection area*" entails confirming whether the viewer's designation of the selection area is correct (see point XII(d)). The user would have to confirm that the area is appropriate for subsequent processing steps without any visual indication of the area. Displaying the two points selected by the user would not unambiguously identify the selection area, since "*setting a selection area by selecting a partial image displayed within a boundary including the at least two points*" does not define a one-to-one correspondence between the two points and the selection area.

3.5 It follows from the above that claim 1 of the second auxiliary request does not meet the requirements of Article 84 EPC. Hence, the second auxiliary request is not allowable.

4. *Third auxiliary request - clarity (Article 84 EPC)*

4.1 Claim 1 specifies "*controlling the processor to display a partial image of the image of the first channel displayed within the selected area as a second screen on a region of the first screen displaying the image of the first channel, if the display setup menu is selected to confirm the selected area*".

4.2 If the second screen were equated with the selection area and the partial image were the part of the image displayed in said area (see point XII(a)), the partial image would only be displayed if the selected area were

confirmed, i.e. a part of the image of the first channel would not be displayed if the selection area was not confirmed. The board is not convinced by the appellant's argument that "*to display the partial image ... as a second screen*" denotes labelling the image as a second screen, i.e. creating a window within the first screen. Claim 1 uses both the prepositions "*display a partial image [...] as a second screen*" and "*maintain display of the partial image **on** the second screen*" (emphasis added). The word "*maintain*" implies that a previous situation continues, i.e. the partial image was previously displayed **on** the second screen. Thus, the appellant's interpretation that to display the partial image would be to label said image as a second screen is not consistent with the remaining wording of the claim.

- 4.3 Furthermore, the wording "*a partial image of the image of the first channel displayed within the selected area*" does not unambiguously define the partial image. The board is not persuaded by the appellant's argument that the cited wording defines the partial image as being the part of the image of the first channel which occupies the whole of the area defined by the boundaries set by the user.
- 4.4 It follows from the above that claim 1 of the third auxiliary request does not meet the requirements of Article 84 EPC. Hence, the third auxiliary request is not allowable.
5. Since none of the appellant's requests is allowable, the appeal is to be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



K. Boelicke

C. Kunzelmann

Decision electronically authenticated