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**Datasheet for the decision
of 12 October 2021**

Case Number: T 0878/16 - 3.5.04

Application Number: 07793176.4

Publication Number: 2036331

IPC: H04N5/202

Language of the proceedings: EN

Title of invention:

IMAGE COMPENSATION APPARATUS AND METHOD

Applicant:

Samsung Electronics Co., Ltd.

Headword:

Relevant legal provisions:

RPBA Art. 12(4)

Keyword:

Late-filed request - request could have been filed in first instance proceedings (yes)

Decisions cited:

G 0010/93, T 1178/08, T 1212/08, T 1108/10, T 0892/11

Catchword:



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Case Number: T 0878/16 - 3.5.04

D E C I S I O N
of Technical Board of Appeal 3.5.04
of 12 October 2021

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

Representative: Grootsholten, Johannes A.M.
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 10 November
2015 refusing European patent application
No. 07793176.4 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairwoman B. Willems
Members: M. Paci
T. Karamanli

Summary of Facts and Submissions

I. The appeal is against the examining division's decision refusing European patent application No. 07793176.4, published as international patent application WO 2008/004799 A1.

II. The prior-art documents cited in the decision under appeal included the following:

D1: WO 2006/060666 A2
D3: US 2002/0036716 A1

III. The decision under appeal was based on the following grounds:

- Independent claims 1 and 9 of the then single request did not meet the requirements of clarity of Article 84 EPC for a number of different reasons.
- The subject-matter of claims 1 and 9 of the then single request did not involve an inventive step in view of document D3.

In a "Further Remarks" section of the decision, the examining division explained *obiter* that the claimed subject-matter also lacked inventive step in view of document D1 alone or in combination with document D3.

IV. The applicant (hereinafter: appellant) filed notice of appeal. With the statement of grounds of appeal it filed sets of amended claims according to a main request and first and second auxiliary requests, replacing the sets of claims of the single request underlying the decision under appeal.

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 or, alternatively, of one of the auxiliary requests.

In the statement of grounds of appeal the appellant further submitted that the application as filed comprised the wrong Figure 5 and that the correct figure should have been Figure 4 of the earlier application from which priority was claimed.

On that basis, the appellant further requested that the board

" **(1)** - *allows figure 4 of the priority application to be inserted as figure 5 of the present application by way of correction; OR*

(2) - *requests the applicant for the evidently missing drawing under Rule 56(1), to enable the applicant to insert the missing drawing under Rule 56(3), thus maintaining the filing date; OR*

(3) - *allows the above adaptation of figure 8, based on the description of figure 5, which are both clearly defined as embodiments of the invention for a higher TH and longer L in the case of figure 5, and a lower TH and shorter L for the case of figure 8."*

(numbering (1), (2), (3) added by the board)

V. The board issued a summons to oral proceedings and a communication under Rule 15(1) RPBA 2020. In this communication, the board gave, *inter alia*, the following preliminary opinion:

The board was leaning towards exercising its discretionary power under Article 12(4) RPBA 2007 to hold the main request and the first and second auxiliary requests inadmissible.

If any of the requests was held admissible, it might be necessary to discuss the appellant's requests relating to the allegedly incorrect Figure 5 in the application as filed. The board was of the preliminary view that none of these requests relating to the allegedly incorrect Figure 5 could be granted.

VI. By letter dated 4 October 2021, the appellant confirmed that it would be attending the oral proceedings to be held by videoconferencing technology. It did not comment on the issues raised in the board's communication.

VII. The board held oral proceedings on 12 October 2021 by videoconferencing technology.

The appellant's final requests were that the decision under appeal be set aside and that a patent be granted on the basis of the claims of the main request filed with the statement of grounds of appeal or, alternatively, of one of the first and second auxiliary requests filed with the statement of grounds of appeal.

The appellant further requested: "*Correction under Rule 139 or replacement under Rule 56 of figure 5 of the application as filed with figure 4 of the priority application, or amendment by adaptation of figure 8 to the description of figure 5.*"

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

VIII. Claim 1 according to the appellant's **main request** reads as follows:

"An image compensation apparatus (200, 300) in use being connected to a light emitting unit (210), the image compensation apparatus (200, 300) comprising:

 a control parameter generation module (320) configured to receive an original image;

 an image compensation module (230, 330) connected to the control parameter generation module (320), which, in case of a decrease in supply or consumption of power of the light emitting unit (210), when the light emitting unit is driven at less than maximum power thereof, is configured to convert the received image information in case of the decrease in supply or consumption of power of the light emitting unit (210); and

 an output (340) connected to the image compensation module (230, 330) to output image information obtained from the image compensation module (230, 330) to the light emitting unit (210),

 CHARACTERIZED IN THAT

 the control parameter generation module (320) is configured to determine a threshold (TH) at a luminance value above zero, in correspondence with the decrease in supply or consumption of power of the light emitting unit (210);

 the image compensation module (230, 330) is configured to convert the received image information per pixel in correspondence with the decrease in supply or consumption of power of the light emitting unit (210) and with a comparison of a luminance value per pixel of the received image information with the threshold (TH) by performing no compensation on luminance values of pixels in received image signals below the threshold (TH) for a low gray-scale area in the original image to enhance contrast and at a maximum luminance value, and by increasing luminance values relative to received image information per pixel above

the threshold (TH) and below the maximum luminance level for medium- and high-grayscale areas in the original image to enhance brightness."

- IX. Claim 1 according to the appellant's **first auxiliary request** reads as follows (additions to claim 1 of the **main request** are underlined, long identical text portions are replaced by "[...]"):

"An image compensation apparatus (200, 300) in use being connected to a light emitting unit (210), the image compensation apparatus (200, 300) comprising:

[...]

the image compensation module (230, 330) is configured to convert the received image information per pixel in correspondence with the decrease in supply or consumption of power of the light emitting unit (210) and with a comparison of a luminance value per pixel of the received image information with the threshold (TH) by performing no compensation on luminance values of pixels in received image signals below the threshold (TH) for a low gray-scale area in the original image to enhance contrast and at a maximum luminance value, and by increasing luminance values relative to received image information per pixel above the threshold (TH) and below the maximum luminance level for medium- and high-grayscale areas in the original image to enhance brightness, and to increase a difference of luminance values between the received image and the converted image increases in a first portion of the medium- and high-grayscale areas from the threshold (TH), and to decrease the same in a second portion of the medium- and high-grayscale areas approaching the maximum luminance level, as the luminance value of the received image increases."

- X. Claim 1 according to the appellant's **second auxiliary request** reads as follows (additions to claim 1 of the **main request** are underlined, long identical text portions are replaced by "[...]"):

"An image compensation apparatus (200, 300) in use being connected to a light emitting unit (210), the image compensation apparatus (200, 300) comprising:

[...]

the image compensation module (230, 330) is configured to convert the received image information per pixel in correspondence with the decrease in supply or consumption of power of the light emitting unit (210) and with a comparison of a luminance value per pixel of the received image information with the threshold (TH) by performing no compensation on luminance values of pixels in received image signals below the threshold (TH) for a low gray-scale area in the original image to enhance contrast and at a maximum luminance value, and by increasing luminance values relative to received image information per pixel above the threshold (TH) and below the maximum luminance level for medium- and high-grayscale areas in the original image to enhance brightness, in accordance with a first equation: if $x > TH$, $y_1 = F(x) * g$, else, $y_2 = x$, where y_1 indicates pixel information of a compensated image and $F(x)$ indicates a function that compensates the input pixel information x , g indicates the compensation amount, and y_2 indicates the non-compensated pixel information, wherein the function $F(x)$ can be represented as a polynomial, in accordance with a second equation: $F(x) = ax^5 + bx^4 + cx^3 + dx^2 + ex + f$, where a , b , c , d , e , and f are coefficients that are determined experimentally or determined according to the pixel information of the original image."

Reasons for the Decision

1. The appeal is admissible.

Main request - discretionary power under Article 12(4) RPBA 2007

2. In the present case, the statement of grounds of appeal was filed before the date on which the revised version of the Rules of Procedure of the Boards of Appeal (RPBA 2020) entered into force, i.e. 1 January 2020 (see OJ EPO 2019, A63). Thus, in accordance with Article 25(2) RPBA 2020, Article 12(4) to (6) RPBA 2020 does not apply. Instead, Article 12(4) of the Rules of Procedure of the Boards of Appeal in the version of 2007 (RPBA 2007 - see OJ EPO 2007, 536) continues to apply.

According to Article 12(4) RPBA 2007, the board has the discretionary power to hold inadmissible facts, evidence or requests which could have been presented or were not admitted in the first-instance proceedings. Since, in fact, almost every claim request could have been presented before the department of first instance, the question within that context is whether the situation was such that the filing of this request should already have taken place at that stage (see Case Law of the Boards of Appeal of the EPO, 9th edition, July 2019, hereinafter "Case Law", V.A.4.11.1). The board exercises its discretion under Article 12(4) RPBA 2007 having regard to the particular circumstances of the individual case (see e.g. decision T 1178/08, point 2.3). However, as was held in G 10/93 (OJ EPO 1995, 17, point 4 of the Reasons), "[p]roceedings before the boards of appeal in ex-parte cases are

primarily concerned with examining the contested decision". Appeal proceedings are not a continuation of examination at first instance or a second, parallel procedure for the substantive examination otherwise to be carried out by the examining division which applicants could freely opt to launch depending on the circumstances (see Case Law, V.A.4.11.4b), in particular the cited decisions T 1108/10 and T 1212/08).

3. The amended claims according to the present main request were filed for the first time with the statement of grounds of appeal. The appellant justified the filing of the new main request as follows (see statement of grounds, page 5, fourth and fifth paragraphs):

"During prosecution of the present application, the Examining Division allowed only the bare minimum of procedural space, comprising the EESR, a single examination report and summons to Oral Proceedings.

The decision to refuse the present application is based on several alleged deficiencies. In view of the quite considerable changes in the claims of September 15, 2015 that were discussed at the Oral Proceedings, relative to the version of October 16, 2012. However, that previous version of October 16, 2012, is now used as a basis for the present appeal. To address objections in the Preliminary Opinion with the summons to appear before the Examining Division and in the decision to refuse the application, further amendments are introduced therein."

4. The board exercised its discretionary power under Article 12(4) RPBA 2007 and decided to hold the present

main request inadmissible for the reasons set out below.

- 4.1 In its submissions the appellant referred to the two sets of amended claims filed with letters of 16 October 2012 and 15 September 2015, respectively.

The claims according to the single request filed with the letter of 16 October 2012 were examined in the examining division's communication annexed to the summons to oral proceedings. Objections under Articles 56, 83, 84 and 123(2) EPC were raised.

In reply to that communication, by letter dated 15 September 2015, the appellant filed amended claims according to a new single request replacing the previously filed request and underlying the decision under appeal. The claims of this new request, as acknowledged by the appellant, contained "*quite considerable changes*" compared to the previous claims of the request filed by letter dated 16 October 2012. In its letter of 15 September 2015, the appellant also indicated that it would not be attending the scheduled oral proceedings.

Oral proceedings before the examining division were held on 15 October 2015 in the absence of the appellant.

- 4.2 In the board's view, the amended claims according to the present main request, which are now based on the claims of the request filed by letter dated 16 October 2012, could, and should, have been filed in the proceedings before the examining division.

4.3 The first opportunity to file amended claims on the basis of the request filed by letter dated 16 October 2012 and to address the examining division's objections raised in its preliminary opinion would have been in reaction to the communication annexed to the summons to oral proceedings before the examining division. Instead, the appellant chose not to continue to use these claims as a basis for further amendments that took into account the objections of the examining division. However, in the board's view, such claims should have been prosecuted in the examination proceedings at least as an auxiliary request, so that they would have been subject to an appealable decision. The appellant has thus effectively prevented the department of first instance from giving a reasoned decision on amendments inserted into the claims of the request filed by letter dated 16 October 2012 in response to the department's previously raised objections. The appellant has thereby compelled the board of appeal either to give a first ruling on those amendments or to remit the case to the department of first instance.

4.4 Instead of filing amended claims as set out above in point 4.3, in response to the communication annexed to the summons to oral proceedings before the examining division, the appellant filed extensively amended claims according to a new single request and made the deliberate choice not to attend the oral proceedings.

By filing extensively amended claims one month before the date of oral proceedings and not attending the oral proceedings, the appellant should have expected that, during the oral proceedings, the examining division might maintain previous objections and/or raise new

ones, and that the application could be refused on that basis.

- 4.5 The appellant argued that the examining division allowed too little "*procedural space*" for it to file the amended claims. This argument is not persuasive in view of the course of the proceedings before the examining division and the fact that the appellant chose not to attend the oral proceedings.
- 4.6 The board notes that the claims of the present main request have been extensively rewritten, not only compared to the claims of the single request underlying the decision under appeal but also, to a lesser extent, compared to the claims of the single request filed with the letter of 16 October 2012, on which the claims of the present main request are allegedly based. As a consequence, the subject-matter of the claims of the present main request was never examined by the examining division.
- 4.7 If the board admitted the new main request into the appeal proceedings, it would thus have to examine and decide for the first time on appeal on these extensively rewritten claims, or remit the case to the department of first instance for further prosecution. Neither procedural option is appropriate. These two inappropriate options would never have arisen if the amended claims in question had been presented in the proceedings before the examining division. The appellant should have allowed the examining division to exhaustively assess and then decide on all subject-matter for which it intended to seek protection, even if only on a subsidiary basis, if it wished the board to rule on it. This approach is also in line with established case law (see Case Law, V.A.4.11.4b)).

5. During the oral proceedings, the appellant submitted the following arguments as to why it could not have filed the claims of the present main request during the proceedings before the examining division.

(a) In response to the objections raised in the examining division's communication annexed to the summons to oral proceedings, the appellant filed amended claims (the claims underlying the decision under appeal) - going in **a first direction** no longer referring to "the decrease in supply or consumption of power of the light emitting unit (210)". It believed that these amended claims would both overcome the objections raised and provide the best scope of protection. The appellant understood from the clarity objections raised by the examining division that these objections could only be overcome by amending the claims filed with its letter dated 16 October 2012 on the basis of the specific embodiment in which the threshold was set as a function of a change in the screen brightness. Such an amendment - going in **a second different direction** including features relating to "the decrease in supply or consumption of power of the light emitting unit (210)" - would have resulted in a scope of protection that would have been too limited. In the decision under appeal, the examining division indicated for the first time which features it considered to be essential. Claim 1 of the main request filed with the statement of grounds of appeal includes these essential features. It specifies a general embodiment in which the luminance values are only compensated if the received image signals are above a threshold. Therefore, the appellant had no reason to file amended claims according to the present main

request during the proceedings before the examining division.

(b) Since the appellant did not attend the oral proceedings, it could not have filed, during the oral proceedings, amended claims according to the present main request in response to objections raised for the first time during the oral proceedings. The appellant had no obligation to attend the oral proceedings. The negative mindset of the examining division and the high costs that would have been incurred by attending oral proceedings at the premises of the EPO in Munich dissuaded the appellant from attending.

6. The board did not find the above arguments persuasive for the following reasons:

Re argument (a)

In response to the objections raised in the examining division's communication annexed to the summons to oral proceedings, the appellant filed amended claims (the claims underlying the decision under appeal), which were extensively reworded and in which features had been both added and deleted (see "first direction", referred to in point 5(a) above). In the board's view, at that stage the appellant should have considered filing amended claims according to the present main request (based on the claims of the request filed with the appellant's letter dated 12 October 2012 and including features relating to the "decrease in supply or consumption of power of the light emitting unit") as an auxiliary request in order to have a fallback position, on which the examining division could give a reasoned decision, which could then be appealed in the event of the examining division not allowing the

extensively reworded claims. Such a course of action would have made all the more sense because the claims of the present main request differed less from the claims considered in the examining division's communication annexed to the summons than the claims underlying the decision under appeal.

In other words, in response to the objections raised in the examining division's communication annexed to the summons to oral proceedings, the appellant should have amended its claims also according to the second direction that it pursued on appeal in case an adverse decision was reached by the examining division during the oral proceedings, which the appellant chose not to attend. In the board's view, the claims according to the present main request should thus have been filed, at least as an auxiliary request, at that stage.

Re argument (b)

The question arises as to whether an appellant who chooses not to attend oral proceedings should be in a better position for filing amended claims with the statement of grounds than an appellant who does attend. Still, in the present case, this question can be left unanswered because, for the reasons given above regarding argument (a), the appellant could, and should, have filed amended claims according to the present main request already in response to the objections raised in the examining division's communication annexed to the summons to oral proceedings.

First auxiliary request - discretionary power under Article 12(4) RPBA 2007

7. Claim 1 of the first auxiliary request has the same wording as claim 1 of the main request, but with the following text added at the end of the claim:

" , and to increase a difference of luminance values between the received image and the converted image increases in a first portion of the medium- and high-grayscale areas from the threshold (TH), and to decrease the same in a second portion of the medium- and high-grayscale areas approaching the maximum luminance level, as the luminance value of the received image increases".

The appellant relied on its arguments relating to the admittance of the main request and did not submit specific arguments for admittance of the first auxiliary request.

The reasons given *supra* for not admitting the main request also apply to the admittance of the first auxiliary request. Again, if the appellant intended to seek protection for the subject-matter of claim 1 of the first auxiliary request, it should have presented that request in the proceedings before the examining division, for instance as a further auxiliary request. The appellant had several opportunities to do so. The board therefore exercised its discretionary power under Article 12(4) RPBA 2007 and decided to hold the first auxiliary request inadmissible.

8. In addition, the board notes that the text added at the end of claim 1 and the features defined by that text had no equivalent in the original claims. They were not

included in any set of claims submitted before the examining division. According to the appellant, they are based on paragraphs [55] and [57] and on Figure 8 of the application as filed.

The board sees no reason to assume that these features have been the subject of a search. If the board were to admit the first auxiliary request into the proceedings, it would be forced either (1) to examine and decide on subject-matter which has probably not been searched, or (2) to remit the case to the examining division in order to enable a search to be performed. The board concurs with the view taken in similar situations by other boards of appeal, in decisions T 1212/08 (see section 4 of the Reasons), T 1108/10 (see section 3.2 of the Reasons) and T 892/11 (see section 2 of the Reasons), that neither of these procedural options is appropriate and acceptable (see also Case Law, V.A.4.11.4b)).

Second auxiliary request - discretionary power under Article 12(4) RPBA 2007

9. Claim 1 of the second auxiliary request has the same wording as claim 1 of the main request, but with the following text added at the end of the claim:

*", in accordance with a first equation: if $x > TH$, $y_1 = F(x) * g$, else, $y_2 = x$, where y_1 indicates pixel information of a compensated image and $F(x)$ indicates a function that compensates the input pixel information x , g indicates the compensation amount, and y_2 indicates the non-compensated pixel information, wherein the function $F(x)$ can be represented as a polynomial, in accordance with a second equation: $F(x) = ax^5 + bx^4 + cx^3 + dx^2 + ex + f$, where a , b , c , d , e , and f are*

coefficients that are determined experimentally or determined according to the pixel information of the original image".

10. The appellant relied on its arguments relating to the admittance of the main request and did not submit specific arguments for admittance of the second auxiliary request.

The reasons given *supra* for not admitting the main request also apply to the question of admittance of the second auxiliary request. Again, if the appellant intended to seek protection for the subject-matter of claim 1 of the second auxiliary request, it should have presented this request in the proceedings before the examining division, for instance as a further auxiliary request. The appellant had several opportunities to do so. The board therefore exercised its discretionary power under Article 12(4) RPBA 2007 and decided to hold the second auxiliary request inadmissible.

11. In addition, the board notes that the text added at the end of claim 1 and the features defined by that text had no equivalent in the original claims. They were not included in any set of claims submitted in the proceedings before the examining division. According to the appellant, they are based on paragraphs [62] to [74] of the application as filed. For the sake of completeness, the board notes that the original dependent claim 52 mentioned the polynomial function $ax^5+bx^4+cx^3+dx^2+ex^1+f$, but only in a different context (i.e. in an equation to determine a threshold).

Requests relating to Figure 5 of the application

12. Since none of the appellant's main request and first and second auxiliary requests was admitted into the appeal proceedings, the board did not have to decide on whether the claims according to any of these requests met the requirements of the EPC. Therefore, the appellant's request that Figure 5 of the application should be corrected under Rule 139 EPC or replaced under Rule 56 EPC serves no purpose in the case at hand and does not need to be considered by the board.

Conclusion

13. Since none of the appellant's requests is allowed, the appeal must be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairwoman:



K. Boelicke

B. Willems

Decision electronically authenticated