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**Datasheet for the decision
of 29 September 2025**

Case Number: T 1340/23 - 3.4.03

Application Number: 18188149.1

Publication Number: 3462440

IPC: G09G3/34

Language of the proceedings: EN

Title of invention:

METHOD FOR ADJUSTING AN ASPECT RATIO OF A DISPLAYED IMAGE AND
DISPLAY SYSTEM THEREOF

Applicant:

BenQ Corporation

Relevant legal provisions:

EPC Art. 84
RPBA 2020 Art. 13(2), 12(4), 12(6)

Keyword:

Amendment after summons - exceptional circumstances (no)
Late-filed main request - admitted (no)
Claims - clarity - former main request, first auxiliary
request (no)
Second auxiliary request - could have been filed in first
instance proceedings (yes)



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Case Number: T 1340/23 - 3.4.03

D E C I S I O N
of Technical Board of Appeal 3.4.03
of 29 September 2025

Appellant: BenQ Corporation
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 29 March 2023
refusing European patent application
No. 18188149.1 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman M. Papastefanou
Members: M. Ley
G. Decker

Summary of Facts and Submissions

- I. The appeal is against the decision of the examining division refusing European patent application No. 18 188 149 pursuant to Article 97(2) EPC.
- II. The examining division decided that the subject-matter of claim 1 according to a main request and to a first auxiliary request then on file did not involve an inventive step (Article 56 EPC) and that claim 1 of these requests was not clear (Article 84 EPC).
- III. The appellant requested that the impugned decision be set aside and a European patent be granted on the basis of the claims according to the main request filed with the letter dated 15 July 2025, or alternatively, according to one of the main request or the first or second auxiliary requests, all filed with the statement setting out the grounds of appeal.
- IV. Claim 1 according to the **main request** filed with the letter dated **15 July 2025** has the following wording.

A method for adjusting an aspect ratio of a displayed image, characterized by:

providing an OSD interface comprising a plurality of supported aspect ratios;

according to a selected aspect ratio of the plurality of supported aspect ratios, setting a first displayed image area (R1) having first co-ordinates (P1) and second co-ordinates (P2), wherein the first co-ordinates (P1) and the second co-ordinates (P2) are diagonally opposite corners of the first displayed

image area (R1); and

selectively adjusting the aspect ratio of the first displayed image area (R1) by;

defining a plurality of grid lines (L1, L2) in a backlight array (BLA) used for illuminating the displayed image, the BLA comprising a plurality of backlight components (BLCs) disposed in a grid pattern within the BLA, wherein the grid lines (L1, L2) are disposed equidistant between both vertically adjacent and horizontally adjacent BLCs of the BLA;

using the first co-ordinates (P1) and second co-ordinates (P2) to locate the first displayed image area (R1) on the plurality of grid lines, and

determining a minimum distance between at least a marginal line (B1, B2) of the first displayed image area (R1) and a grid line (L1, L2) closest to the marginal line (B1, B2);

when the minimum distance is smaller than a predetermined value, adjusting the marginal line (B1, B2) to substantially overlap the grid line (L1, L2) closest to the marginal line (B1, B2) to generate a second displayed image area (R2);

utilizing the grid line (L1, L2) closest to the marginal line (B1, B2) to generate first coordinates (P1') and second coordinates (P2') of the second displayed image area (R2), wherein the first coordinates (P1') and the second coordinates (P2') are two diagonally opposite corners of the second displayed image area (R2);

enabling a plurality of backlight components (BLC) within the second displayed image area (R2) and

disabling a plurality of BLCs outside the second displayed image area (R2);

driving a plurality of pixels (16) inside the second displayed image area (R2) of the display panel (15) for displaying an image by sequentially driving the plurality of pixels (16) inside the second displayed image area (R2) according to the first coordinates (P1') and the second coordinates (P2'); and

disabling a plurality of pixels outside the second displayed image area (R2) of the display panel (15).

- V. Claim 1 of the **main request** filed with the **statement setting out the grounds of appeal** has the following wording (board's feature labelling (a) to (f)).

A method for adjusting an aspect ratio of a displayed image, characterized by comprising:

(a) setting a first displayed image area [sic] (R1); and **(b)** selectively adjusting the aspect ratio of the first displayed image area (R1) by;

(b1) detecting a plurality of grid lines (L1, L2) corresponding to a plurality of backlight components (BLC) in a backlight array (BLA);

(b2) generating a minimum distance between a marginal line (B1, B2) of the first displayed image area (R1) and a grid line (L1, L2) closest to the marginal line (B1, B2);

(b3) adjusting the first displayed image area (R1) to the second displayed image area (R2) when the minimum distance is smaller than a predetermined value to substantially overlap a marginal line (B1, B2) of the

second displayed image area (R2) with the grid line (L1, L2);

(b4) generating first coordinates (P1') and second coordinates (P2') of the second displayed image area (R2), wherein the first coordinates (P1') and the second coordinates (P2') are two diagonally opposite corners of the second displayed image area (R2);

(c) merely enabling a plurality of backlight components (BLC) within the second displayed image area (R2);

(d) ~~and~~ generating a second displayed image area (R2) of a display panel (15) according to the first displayed image area (R1);

(e) driving a plurality of pixels (16) inside the second displayed image area (R2) of the display panel (15) for displaying an image;

(e1) wherein driving the plurality of pixels (16) inside the second displayed image area (R2) of the display panel (15) is driving the plurality of pixels (16) inside the second displayed image area (R2) of the display panel (15) according to the first coordinates (P1') and the second coordinates (P2'); and

(f) disabling a plurality of pixels outside the second displayed image area (R2) of the display panel (15).

VI. Claim 1 according to the **first auxiliary request** filed with the statement setting out the grounds of appeal includes features (a) to (f) and the following additional features (board's labelling):

(g) controlling the logical board (12) to drive the gate driving circuit (13) and the data driving circuit (14) by the chip processor (10) according to the first coordinates (P1') and second coordinates (P2'); and

(h) driving the plurality of pixels (16) sequentially from the first coordinates (P1') to the second coordinates (P2') of the second displayed image

area (R2).

VII. Claim 1 according to the **second auxiliary request** filed with the statement setting out the grounds of appeal has the following wording:

A method for adjusting an aspect ratio of a displayed image, characterized by comprising:

setting a first displayed image range {R1} of a display panel {15};

detecting a plurality of grid lines (L1, L2), each grid line (L1, L2) being a boundary line between two illumination ranges with respect to two adjacent backlight components (BLC) in a backlight array (BLA);
generating minimum distances between marginal lines (B1, B2) of the first displayed image range {R1} and grid lines (L1, L2) closest to the respective marginal lines (B1, B2);

substantially overlap the marginal lines (B1, B2) with the respective grid lines (L1, L2) when each of the minimum distances is smaller than a predetermined value to generate a second displayed image range (R2) of the display panel {15};

generating first coordinates (P1') and second coordinates (P2') of the second displayed image range (R2), wherein the first coordinates (P1') and the second coordinates (P2') are two diagonally opposite corners of the second displayed image range (R2);

merely enabling a plurality of backlight components (BLC) within the second displayed image range (R2);

driving a plurality of pixels {16} inside the second displayed image range (R2) of the display panel {15} according to the first coordinates (P1') and the second coordinates (P2') for displaying an image; and

disabling a plurality of pixels outside the second displayed image range (R2) of the display panel (15).

VIII. The appellant mainly argued that the main request filed after the board's communication pursuant to Article 15(1) RPBA should be admitted into the appeal proceedings and that the main request and the first auxiliary request underlying the impugned decision met the requirements of Article 84 EPC.

The appellant did not provide any arguments with respect to the admittance of the second auxiliary request filed with the statement setting out the grounds of appeal.

Reasons for the Decision

1. The invention concerns a method of operating a display system with display panel having a plurality of pixels and with a plurality of backlight components.

When an aspect ratio and an image size of a first displayed image area (Figure 5, R1) is selected (e.g. by a user), a second displayed image area (Figure 5, R2) is generated on the basis of a distance between a marginal line (Figure 5, B1) of the first displayed image and "grid lines corresponding" to the "plurality of backlight components" (Figure 5, L1). The size of the first displayed image area (R1) can be slightly enlarged (Figure 5) or reduced (Figure 6) for

generating the second displayed image area (R2). Pixels inside the second displayed image area are driven and pixels outside said area are disabled, i.e. the image (based on the image signal) is shown on the display within the second displayed image area.

As claimed, "merely" a plurality of backlight components within the second displayed image area are enabled (see feature **(c)**). Hence, a plurality of backlight components within the second displayed image area are enabled, while a plurality of backlight components outside the second displayed image area (R2) are disabled, see e.g. Figure 7 of the application.

2. Main request filed with the letter dated 15 July 2025 - admittance under Article 13(2) RPBA

2.1 The main request was filed after notification of the board's communication pursuant to Article 15(1) RPBA.

According to Article 13(2) RPBA, any amendment to a party's appeal case made after notification of a communication under Article 15, paragraph 1, shall, in principle, not be taken into account unless there are exceptional circumstances, which have been justified with cogent reasons by the party concerned.

2.2 In its letter dated 15 July 2025, the appellant merely indicated the amendments made to the claims without any indication of the basis for the amendments in the application as originally filed. The appellant also explained why, in its view, the amendments overcome the objections raised in the board's communication.

According to the appellant, the newly filed amendments directly addressed the clarity issues "raised in the

Office Action" without changing the legal and factual framework of the claims; hence, the submissions were not detrimental to procedural economy. The request did not raise new issues, could be dealt with within the current framework of proceedings and further posed no additional difficulties or surprises for either the appellant or the board.

2.3 The board is not convinced by the appellant's arguments that the main request should be taken into account in the appeal proceedings.

2.3.1 Some amendments in claim 1 of the main request filed with the letter dated 15 July 2025 were made in response to the objection under Article 84 EPC discussed in the board's communication pursuant to Article 15(1) RPBA, see chapter "III. Clarity (Article 84 EPC)" of said letter. According to the appellant, for example, the wording "defining a plurality of grid lines in a backlight array used for illuminating the displayed image, the BLA comprising a plurality of backlight components disposed in a grid pattern within the BLA, wherein the grid lines are disposed equidistant between both vertically adjacent and horizontally adjacent BLCs of the BLA" should address the clarity issue relating to feature (b1).

Other amendments were made in response to the board's preliminary view on inventive step, see chapter "IV. Inventive step (Article 56 EPC)" of said letter.

However, the amendments made to the claim of the amended main request do not address any objections raised for the first time by the board. On the contrary, the board's preliminary view in its communication pursuant to Article 15(1) RPBA only

repeated and confirmed objections already raised by the examining division, see the examining division's annex to the summons to attend oral proceedings and the minutes of the telephone conversation dated 14 March 2023. The same objections were also discussed (in the appellant's absence) during the oral proceedings on 21 March 2023.

Therefore, the board does not see any exceptional circumstances that would justify the filing to the amended main request only after the board's communication.

- 2.3.2 In addition, the board has doubts whether the amendments made e.g. to claim 1 have a basis in the application as originally filed. For example, as also admitted by the appellant, the wording defining the claimed arrangement of grid lines ("the BLA comprising a plurality of backlight components disposed in a grid pattern within the BLA, wherein the grid lines are disposed equidistant between both vertically adjacent and horizontally adjacent BLCs of the BLA") is not included as such in the application as originally filed. It is at least highly questionable whether this feature can be unambiguously derived from schematic Figure 4 in combination with page 9, lines 4 to 19, which are completely silent about the geometric distance between a grid line and a backlight component.

In other words, it is more than likely that admitting the amended main request would give rise to new issues and objections, which would also be detrimental to procedural efficiency.

- 2.3.3 In view of these considerations, the board decided not to take the amended main request into account in the

appeal proceedings under Article 13(2) RPBA.

3. Main request filed with the statement setting out the grounds of appeal - clarity (Article 84 EPC)

The main request filed with the statement setting out the grounds of appeal corresponds to the main request underlying the impugned decision.

- 3.1 The examining division held that a skilled person could not understand from the wording of claim 1 what might have been meant by "grid lines corresponding to a plurality of backlight components in a backlight array".

- 3.2 In the statement setting out the grounds of appeal, the appellant merely argued that an explanation was to be found on page 9, third paragraph of the application as originally filed, without amending the wording of claim 1.

During the oral proceedings before the board, the appellant argued that the skilled person would understand the term "grid lines" from the application as a whole and, in particular, from Figures 4 to 6. The last paragraphs of claim 1 would also clarify the meaning. The term "detecting" in feature (b1) was an "unlucky term". It should be understood in the context of the claimed method that there was a step of "receiving" or "inputting" the position of the grid lines.

- 3.3 Claim 1 of the main request underlying the impugned decision lacks clarity (Article 84 EPC), because the meaning of feature (b1) cannot be understood by a skilled person using the wording of claim 1 alone.

Insofar, the board shares the examining division's view.

- 3.3.1 It is established case law that the claims must be clear in themselves when read by the person skilled in the art, without any reference to the content of the description (see Case Law of the Boards of Appeal of the European Patent Office, 11th edition, 2025, II.A.3.1).
- 3.3.2 Features (e), (e1) and (f) and, in particular, the wording "inside the second displayed image area" and "outside the second displayed image area" do not allow the skilled person to understand where the "grid lines corresponding to a plurality of backlight components in a backlight array" are positioned.

This information is however crucial to determine the grid line closest to the marginal line, to generate the minimum distance, to compare the minimum distance with the predetermined value and to overlap a marginal line of the second displayed image area with said closest grid line. In other words, a proper definition of the positions of the grid lines is a prerequisite for the skilled person to implement the claimed method including features (e), (e1) and (f).

The wording of the claims alone does not provide such definition, contrary to the appellant's view.

- 3.3.3 Consequently, the appellant's argument that the term "grid line" should be given the meaning allegedly shown in Figures 4 to 6 of the application is without merit. An unclear term in the claim cannot be considered clear by referring to any possible explanations in the

description or any interpretations of figures.

3.3.4 In any case, the board takes the view that, even by consulting the description and the figures, the skilled person would not find any clarification of feature (b1), either.

(a) Specifying in claim 1 that a grid line is "a boundary line between two illumination ranges with respect to two adjacent backlight components", as set out in the passage of the description referred to by the appellant, would not overcome the objection under Article 84 EPC. It is plausible that two "illumination ranges" or areas illuminated by two adjacent backlight components (e.g. two LEDs) would not define a grid line in an unambiguous way, as also pointed out by the examining division. For example, the area illuminated by an backlight component BLC as shown in Figure 4 would not be the square area delimited by the vertical and horizontal grid lines L of said figure, but rather a circular region. The illuminated areas corresponding to adjacent backlight components would overlap and would not precisely define a (grid) line.

Hence, the description on page 9, lines 10 to 16 does not provide a clear definition of where the grid lines are positioned or how they are defined.

(b) As also pointed out by the examining division, the application does not disclose a direct link between the arrangement of the plurality of pixels of the display panel and the array of the backlight components. For example, it cannot be said that a row of pixels would be arranged along a horizontal

grid line. Generally, it can be assumed that the number of the pixels per cm^2 in the display panel is considerably higher than the number of backlight components per cm^2 . The application as such does not provide any details in this respect.

In other words, the position of the "grid lines" cannot be derived from a particular arrangement (e.g. with rows and columns) of pixels of the display panel.

- (c) With respect to Figures 4 to 6, it is acceptable that the black light components BLC (schematically shown e.g. in Figure 4) are arranged in an array structure (page 9, lines 4 to 13). It is noted that the claimed arrangement is not limited to the array shown in Figures 4 to 6, but that other backlight arrays are possible. As shown in Figure 4 of the application, the array structure then has horizontal and vertical intersecting "grid lines" (see page 9, lines 14 to 19) that "surround" the backlight components (see e.g. page 3, lines 11 and 12, page 7, lines 16 and 17, Figure 4). It seems that the "grid lines" in claim 1 are imaginary lines separating columns and rows of backlight components.

From the wording of claim 1, however, the skilled person would not understand that the grid lines of feature (b1) are necessarily such imaginary lines separating columns and rows of backlight components of the backlight array. In addition, as pointed out already before, the position of such imaginary lines is not clearly defined in the description on page 9, lines 10 to 16, because illumination ranges of two adjacent backlight component overlap and do not define a "line" in a clear way.

In other words, even when consulting Figures 4 to 6 and the description passages associated thereto, the skilled person would not be given a proper definition of the "grid lines" according to feature (b1).

- 3.3.5 Moreover, the skilled person understands from the wording of feature (b1) that the grid lines are "detected", which seems to imply that their positions are different depending e.g. on the mode of operation of the display system. On the other hand, the term "grid lines corresponding to a plurality of backlight components in a backlight array" suggests that their positions are merely defined by the backlight components and that they do not change.

Therefore, the term "detecting a plurality of grid lines" is at least misleading. The "grid lines" are present in the claimed device and not something that would/should be detected by any technical means of the claimed display system during operation.

4. First auxiliary request filed with the statement setting out the grounds of appeal - clarity (Article 84 EPC)

The first auxiliary request filed with the statement setting out the grounds of appeal corresponds to the first auxiliary request underlying the impugned decision. Claim 1 lacks clarity for the reasons given in point 3.3 above.

5. Second auxiliary request filed with the statement setting out the grounds of appeal - admittance (Article 12(4) and (6) RPBA)

5.1 According to Article 12(2) RPBA, in view of the primary object of the appeal proceedings to review the decision under appeal in a judicial manner, a party's appeal case shall be directed to the requests, facts, objections, arguments and evidence on which the decision under appeal was based.

Article 12(4) RPBA stipulates that any part of a party's appeal case which does not meet the requirements in paragraph 2 is to be regarded as an amendment, unless the party demonstrates that this part was admissibly raised and maintained in the proceedings leading to the decision under appeal. Any such amendment may be admitted only at the discretion of the board.

Moreover, according to Article 12(6), second sentence, RPBA, the board should not admit requests which should have been submitted in the proceedings leading to the decision under appeal, unless the circumstances of the appeal case justify their admittance.

5.2 In the present case, the appellant did not submit a set of claims according to the second auxiliary request during the examining proceedings. Clearly, the decision under appeal is not based on said second auxiliary request, which thus constitutes an amendment within the meaning of Article 12(4) RPBA.

5.3 While the appellant indicated the basis for the amendments in the application as originally filed (see section "II. Claims" on pages 2 to 7 of the statement

setting out the grounds of appeal), it did not provide any reasons for submitting it only in the appeal proceedings.

The appellant only briefly argued that the second auxiliary request overcame the objections raised against the main request underlying the impugned decision, see section V, second paragraph, and section VI.2 of the statement setting out the grounds of appeal.

- 5.4 The board is of the view that the objections under Article 84 EPC and under Article 56 EPC were raised (against the main request) by the examining division in its summons to attend oral proceedings and the telephone conversation dated 8 March 2023.

Hence, the appellant could and should have submitted the second auxiliary request at the latest during the oral proceedings before the examining division. Instead, it informed the examining division that nobody would attend the oral proceedings, choosing thus to forego the opportunity to do so.

- 5.5 In view of the above considerations, the board decided not to admit the second auxiliary request filed with the statement setting out the grounds of appeal into the appeal proceedings under Articles 12(4) and (6) RPBA.
6. As no allowable request is on file, the appeal must fail.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



S. Sánchez Chiquero

M. Papastefanou

Decision electronically authenticated