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**Datasheet for the decision
of 24 August 2015**

Case Number: T 1926/13 - 3.4.03

Application Number: 09701218.1

Publication Number: 2240924

IPC: G09G3/34, G09G3/36

Language of the proceedings: EN

Title of invention:

MITIGATION OF LCD FLARE

Applicant:

Dolby Laboratories Licensing Corporation

Headword:

Relevant legal provisions:

EPC Art. 84, 111(1), 123(2)

Keyword:

Amendments - added subject-matter (no) - main request
Claims - clarity (yes) - main request
Remittal to the department of first instance - (yes)

Decisions cited:

Catchword:



**Beschwerdekammern
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Chambres de recours**

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Case Number: T 1926/13 - 3.4.03

**D E C I S I O N
of Technical Board of Appeal 3.4.03
of 24 August 2015**

Appellant: Dolby Laboratories Licensing Corporation
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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted on 22 April 2013 refusing European patent application No. 09701218.1 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman G. Eliasson
Members: T. M. Häusser
T. Bokor

Summary of Facts and Submissions

- I. The appeal concerns the decision of the examining division refusing the European patent application No. 09701218 for added subject-matter (Article 123(2) EPC) and lack of clarity (Article 84 EPC) in relation to the main request and the first and second auxiliary requests which were pending at the time.
- II. The appellant requested to set aside the decision under appeal and to grant a patent on the basis of the sets of claims according to the main request, the 1st auxiliary request or the 2nd auxiliary request, all filed with the letter dated 8 May 2015. Furthermore, the appellant requested oral proceedings in case the board did not intend to remit the case to the examining division in a decision stating that the claims according to the main request satisfied the requirements of Articles 84 and 123(2) EPC.
- III. The wording of the independent claims of the main request is as follows (board's labelling "(1)", "(2)", "(3)"):
- "1. A method of driving a display comprising a modulated backlight and a front modulator illuminated by the modulated backlight, comprising the steps of:
- computing a first front modulator image and a first backlight image from image data representing an input image;
- (1) determining locations of at least one skirt where a first simulated display of the input image is brighter than the input image due to leakage of light from the backlight through the front modulator;
- (2) simulating a veiling glare that is associated with a perfect display of the input image;

calculating a backlight suppression image configured to reduce the backlight brightness in regions where the skirt exceeds the simulated veiling glare;

computing a second backlight image in light of the backlight suppression image;

(3) determining missing glare sources by subtracting a second simulated display of the input image from the input image, wherein the second simulated display of the input image is computed using the second backlight image;

calculating a desired glare for each missing glare source; and

constructing a second front modulator image on the basis of the second backlight image for a target image that is the sum of the input image and the calculated desired glares."

"14. A computer readable media and a set of instructions stored by the computer readable media that, when loaded into a computer, cause the computer to perform the steps recited in any of Claims 1-13."

"15. A display, comprising:

a front modulator;

a backlight configured to produce a modulated light illuminating the front modulator; and

a controller configured to produce a backlight control signal and a front modulator control signal from an image signal;

wherein the controller is configured for performing the steps recited in any of Claims 1-13."

IV. The appellant argued essentially as follows in relation to the main request:

a) Amendments

In relation to the replacement of the original wording "LED skirt" by "skirt" in claim 1 of the main request the original application documents clearly disclosed (e. g. page 5, lines 19-20 and page 7, line 22) that the backlight did not necessarily need to be an LED backlight.

In relation to the examining division's objection as to the deletion of the term "veiling" in the expression "veiling glare", the claims had been amended to use the original expression "veiling glare" again.

Concerning the objection raised in the decision under appeal regarding the feature of determining the missing glare sources, the description disclosed on page 12, lines 12-13 to "recompute the simulated backlight image as in [step] (1)".

b) Clarity

In response to the examining division's clarity objection in relation to the term "glare", that term had been replaced by "veiling glare", which was well-known in the field of computer imaging. Furthermore, regarding the objection in the decision under appeal that it was not clear what a "desired" display designated, that wording had been changed to the wording used on page 12, line 1, namely a "perfect" display of the input image.

Regarding the objection that the use of the term "simulation" was unclear it was not considered necessary that a patent claim contained a full teaching of how to practice an invention. It was therefore not necessary

to define the mathematical simulation model that was used for the simulation step.

In relation to the objection against the feature of simulating the glare using a convolution kernel as it was not clear which image should be convoluted it was submitted that on page 12, line 1 of the description it was clearly stated that the veiling glare associated with a perfect display of the input image was simulated.

Reasons for the Decision

1. Main request - amendments
 - 1.1 Independent claim 1 of the main request comprises essentially - apart from the feature mentioned below - the features of original claim 3 and certain features of the description, as will be indicated in detail below.
 - 1.2 In relation to claim 3 as originally filed, claim 1 of the main request has been amended in that the term "LED" has been omitted in the original feature of "determining locations of at least one LED 'skirt;'" (see feature (1) of claim 1 of the main request cited under point III. above).

In the decision under appeal the examining division held that the deletion of "LED" was not directly and unambiguously derivable from the application as filed since it was not evident from the original disclosure that this feature was not essential (points 9.1 and 10 of the decision under appeal).

However, in the description of the application it is mentioned in the context of the embodiment of original claim 3 that the backlight "may comprise, for example, an LED array" (see page 5, lines 18-20). In the last paragraph on page 7, which generally relates to the improvement of the invention, LEDs are also merely cited as an example for the backlight. Furthermore, in original independent claims 15 and 18, the display according to the invention is claimed to comprise generally "a backlight configured to produce a modulated light illuminating the front modulator" without any reference to LEDs. The board is therefore of the opinion that the use of LEDs is not presented as essential in the application as filed.

The use of LEDs is not considered to be indispensable for the functioning of the invention, either. Rather, it is evident for the skilled person that undesired skirts may be suppressed according to the invention no matter what concrete light sources are used as backlight. Moreover, "skirt" is considered to be a broad term that is not inextricably linked to LEDs. This understanding is also in line with the indication "skirt (flare, or leakage)" in the description of the application (page 9, line 25).

The omission of "LED" in claim 1 of the main request is therefore considered to be directly and unambiguously derivable from the application as filed.

- 1.3 In the appealed decision it was further held that it amounted to an intermediate generalization that it was not specified in claim 1 of the main request pending at the time that the second simulated display is obtained from both the first front modulator image LCD1 and the

second backlight image B2 (points 9.3 and 10 of the decision under appeal).

However, in the description of the application it is not even explicitly mentioned how the second simulated display is calculated (see page 12, point 7.). This is evidently done using the relevant front modulator and backlight images. Feature (3) of claim 1 of the main request (see point III. above) thus indicates merely how the second simulated display differs from the first simulated display. The examining division's objection is therefore not considered to be pertinent.

- 1.4 In the decision under appeal the examining division held that omitting to specify that the glare was a "veiling" glare in the feature "simulating a glare ..." of claim 1 of the main request pending at the time was not directly and unambiguously derivable from the application as filed (points 9.2 and 10 of the decision under appeal).

As the term "veiling" is re-introduced in claim 1 of the present main request (see feature (2) of claim 1 of the main request cited under point III. above), this objection of the examining division is no longer relevant.

- 1.5 Furthermore, the examining division objected to the omission in claim 1 of the main request pending at the time of the specification that the missing glare sources were obtained by subtracting the new display simulation from the original HDR input (point 9.3 of the decision under appeal).

As it is indicated in claim 1 of the present main request that the missing glare sources are determined

by subtracting a second simulated display of the input image from the input image (see feature (3) of claim 1 of the main request cited under point III. above), the above objection is not considered to be relevant any more, either.

- 1.6 In view of the above claim 1 of the main request is considered to be based on claim 3 as originally filed and on the description as originally filed (page 5, lines 18-20; page 7, lines 21-24; page 9, lines 25-27; page 11, lines 24-27; page 15, lines 16-21 and 34-35; page 16, lines 1-12; page 17, lines 13-18).
- 1.7 Dependent claims 2 to 13 of the main request are based on original claims 4, 11, and 12 and on the description as originally filed (page 10, lines 8-22; page 11, lines 22-27; page 12, lines 1-24; page 14, lines 9-15; page 15, lines 10-35; page 16, lines 1-12).
- 1.8 Independent claims 14 and 15 of the main request are based on original claim 13 and on original claims 15 and 18, respectively, in combination with the basis for claims 1 to 13 of the main request indicated above.
- 1.9 Accordingly, the board is satisfied that the amendments effected in relation to the set of claims according to the main request comply with the requirements of Article 123(2) EPC.
2. Main request - clarity
 - 2.1 In the decision under appeal the examining division held that the terms "simulating", "glare", and "desired display" in the feature "simulating a glare that appears in a desired display of the input image" of claim 1 of the main request pending at the time were

not clear (points 11.1 and 12 of the appealed decision).

In claim 1 of the present main request, "glare" and "desired display" have been replaced by "veiling glare" and "perfect display", respectively (see feature (2) of claim 1 of the main request cited under point III. above). These terms are considered to be clear to the person skilled in the art of displays. Furthermore, it is known to the skilled person that a simulation relates to a mathematical calculation using a model.

The objections as to alleged lack of clarity of claim 1 of the main request pending at the time, raised under point 14 of the decision under appeal as "remarks, which do not form part of the decision", are not considered to be detrimental for the clarity of claim 1 of the main request, either.

Claim 1 of the main request is therefore clear.

- 2.2 In the decision under appeal it was further held that the feature in dependent claim 7 of the main request pending at the time that "the step of simulating the glare uses a convolution kernel, thereby obtaining a convolution image" was unclear since the image to be convoluted with the convolution kernel was not defined.

The corresponding claim is dependent claim 7 of the present main request, in which it has merely been added in accordance with the wording of claim 1 of the main request that the glare was a "veiling glare". In claim 1 of the main request it is specified that the veiling glare is associated with a perfect display of the input image (see feature (2) of claim 1 of the main request cited under point III. above). It is therefore evident

for the skilled person that the convolution kernel is to be applied to the input image.

Claim 7 of the main request is therefore considered to be clear.

2.3 Accordingly, the board is satisfied that the claims of the main request are clear (Article 84 EPC).

3. Procedural matters

3.1 Remittal to the department of first instance

In the decision under appeal only the requirements of clarity under Article 84 EPC and the requirements of Article 123(2) EPC were dealt with in relation to the sets of claims pending at the time. The other requirements of the Convention were not discussed. In order to allow for the examination of these requirements in two instances, remittal of the case to the department of first instance under Article 111(1) EPC is deemed appropriate.

3.2 Oral proceedings

The appellant requested oral proceedings on the condition that the board did *not* intend to remit the case to the examining division in a decision stating that the claims according to the main request satisfied the requirements of Articles 84 and 123(2) EPC.

As the board came to the conclusion that the amendments effected in relation to the set of claims according to the main request comply with the requirements of Article 123(2) EPC and that the claims of the main

request were clear (Article 84 EPC), it is not necessary to hold oral proceedings.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance for further prosecution.

The Registrar:

The Chairman:



S. Sánchez Chiquero

G. Eliasson

Decision electronically authenticated