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**Datasheet for the decision  
of 7 December 2021**

**Case Number:** T 1050/20 - 3.4.02

**Application Number:** 14803599.1

**Publication Number:** 3004978

**IPC:** G02F1/13357, G02B26/08,  
G02B27/22, H04N13/02, H04N13/04

**Language of the proceedings:** EN

**Title of invention:**

RAYS TRIDIMENSIONAL CAPTURE CAMCORDER AND TELEVISION TO  
PRODUCE A REAL IMAGE FORMED IN THE FRONT AND IN THE BACK  
SURFACE OF SAID TELEVISION; PARALLEL RAYS FILTER DEVICES;  
LEVELED LIQUID CRYSTALS OR OPTICAL CELLS MOVEMENT OR PARALLEL  
RAYS FILTER WITH A SET OF MOVING LENSES INCLUDING MULTI FOCAL  
FLEXIBLE LENSES; METHODS FOR OBTAINING THESES SAID DEVICES

**Applicant:**

Massaru Amemiya, Roberto

**Headword:**

**Relevant legal provisions:**

EPC Art. 83  
RPBA Art. 12(4)

**Keyword:**

Sufficiency of disclosure - main request (no)

Admissibility of first and second auxiliary request (no)

**Decisions cited:**

**Catchword:**



**Beschwerdekammern**  
**Boards of Appeal**  
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Case Number: T 1050/20 - 3.4.02

**D E C I S I O N**  
**of Technical Board of Appeal 3.4.02**  
**of 7 December 2021**

**Appellant:** Massaru Amemiya, Roberto  
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**Representative:** Elzaburu S.L.P.  
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**Decision under appeal:** **Decision of the Examining Division of the  
European Patent Office posted on 12 December  
2019 refusing European patent application No.  
14803599.1 pursuant to Article 97(2) EPC.**

**Composition of the Board:**

**Chairman** R. Bekkering  
**Members:** A. Hornung  
G. Decker

## Summary of Facts and Submissions

I. The applicant appealed against the decision of the examining division refusing European patent application No. 14803599.1 on the basis of Article 83 EPC.

II. According to the statement setting out the grounds of appeal, the applicant requested that the decision under appeal be set aside and that a patent be granted on the basis of the claims according to the main request or one of the first or second auxiliary requests, all requests filed with the statement setting out the grounds of appeal.

As a precaution, the applicant requested oral proceedings.

III. In a communication annexed to a summons to oral proceedings, the board informed the applicant about its provisional and non-binding opinion according to which, *inter alia*, the invention as defined in claim 1 of the main request was not sufficiently disclosed within the meaning of Article 83 EPC. Moreover, it informed the applicant about its intention to exercise its discretion under Article 12(4) RPBA 2020 in not admitting the sets of claims according to the first and the second auxiliary request into the proceedings.

IV. The board's opinion concerning lack of sufficiency of disclosure of the invention was worded as follows (see point 6.2 of the communication annexed to the summons):

"6.2. Sufficiency of disclosure

The board, in its preliminary view, tends to share the opinion of the examining division that the subject-matter of claim 1 lacks sufficiency of disclosure (Article 83 EPC).

**6.2.1** Objections raised:

(a) As explained by the examining division, the camera of claim 1 appears to comprise merely a "parallel ray filter" and a regular CCD, whose size is negligible compared to the size of most of the natural objects (such as a person). No other means for capturing the real image are mentioned in the patent application. See the exemplary embodiment shown in figure 1 of the patent application. In particular, no optical lens system arranged in front of the CCD or any other means for enlarging the size of the captured portion of the object is disclosed. Therefore, "for the claimed camera, the claimed technical effect [i.e. capturing and reproducing real images] would not be achieved, because such a camera would only observe an object from a single viewpoint" (appealed decision, page 2, last paragraph). Due to capturing exclusively parallel rays from the object, in the absence of any optical lens system or other means, and due to the negligible size of a conventional CCD with respect to a natural object, each object point seems to be captured only once in a single image. A 3D-effect can thus not be achieved.

(b) As explained by the examining division in the appealed decision, page 3, second paragraph, insufficient details appear to be disclosed in the patent application about how to synchronise (i) the captured image on the CCD with the orientation of the corresponding parallel ray filter, (ii) the reproduced

image on the television screen with the orientation of the corresponding parallel ray filter and (iii) the captured image with the reproduced image. The patent application merely mentions general image processing.

- (c) As explained by the examining division in the appealed decision, page 3, third paragraph, "the required timings for angular sampling of a field of view of a camera (...) results in extremely short exposure times", namely 1/7200 seconds in the exemplary case described in the appealed decision, a duration which seems to be "unrealistic".

**6.2.2.** The applicant presented the following counter-arguments:

- (a) The applicant submits that "physical principles and some qualifications such as dimensions and quantities are not described [in the patent application]. After the deposit of the requested patent, clarification is made with respect to physics and some qualifications" (...) We currently have a CCD with a diameter of 64 cm" (statement of grounds of appeal, page 2, penultimate and last paragraphs; see also the photo on page 3 showing the extra large CCD). Moreover, "[t]he small real-image camcorder relative to the object can capture a beam of parallel rays from the entire object" (statement of ground of appeal, page 3 last paragraph).

The board is currently not convinced by these arguments:

- While certain technical details of a system are not necessary to be disclosed in the application as originally filed, basic characteristics of the

system (size and resolution of the CCD and of the pair of liquid crystals; operation with or without lenses; relative positioning of the pair of liquid crystals and the CCD; ...) and basic operating principles (physical principle underlying the 3D perception of an image captured by the claimed device; which kind of image is captured by the CCD at which frequency with which spatial and/or angular resolution; how is the whole object scanned; timing of the image scanning; scanning data processing and data transmission to the television screen; ...), which are essential for understanding the invention and enabling the skilled person to carry out the invention, however, are required to be disclosed in the patent application as originally filed and may not be clarified after having filed the patent application.

- The CCD of 64 cm seems to belong to the Vera C. Rubin Observatory and is the world's largest digital camera and, according to the observatory's internet site, having the size of a small car and weighing 3 tons and requiring 1500 HD screens to view a single image captured by the 3 Gigapixel camera. In other words, it is doubtful whether this giant camera adapted to be used in the field of astronomy is suitable to be used as a 3D-camera as claimed. Moreover, the application as originally filed does not disclose such large CCDs and claim 1 is not limited to large CCDs.
  
- In a standard configuration falling under the scope of claim 1, such as a typical CCD of 1 cm<sup>2</sup> capturing an image of a person, it would appear that the CCD cannot capture a beam of parallel rays from the entire object, contrary to the applicant's

submission, but only a very small portion of 1 cm<sup>2</sup> of the object.

- (b) The applicant explains that "[r]eal-image television emits parallel rays in different directions (forward, right, left, up and down) always (...) There is no device that directs the rays parallel to the eyes (...) This synchronization that the technical examination refers to with parallel rays with the eyes needs no description" (statement of grounds of appeal, page 5). Moreover, the applicant alleges that "the real image processor was described" and that "[t]he parallel ray filters of the real image camcorder and the real image television must be synchronized and is described in the patent application" (statement of grounds of appeal, page 6, first paragraph).

The board cannot follow these arguments for the following reasons:

- The corresponding objection raised in the appealed decision did not relate to the synchronisation between rays emitted by the television and the eyes but to the synchronization between the two parallel ray filters, the camera and the television.
- The application as originally filed merely recites general image processing without any technical details about how the synchronisation is actually carried out.

- (c) The applicant submits that "[i]mage receivers have up to 480 Hertz image refresh rate" (statement of grounds of appeal, page 8, last paragraph) and "[t]he deficiencies pointed out by the technical examination are due to the use of physical properties not used in



the patent application and by characteristics not belonging to the devices" (statement of grounds of appeal, page 9, last paragraph).

The board is currently not convinced by this argument because the applicant did not explain why the example described in the appealed decision, page 3, third paragraph, corresponding to an exposure time of 1/7200 seconds, was erroneous. The exemplary configuration described in the appealed decision appears to be a typical configuration of a 3D device and appears to fall within the large scope of claim 1. The applicant did not explain in a comprehensible manner why the physical properties underlying the examining division's objection were not used in the patent application, nor what the actual physical properties were in the invention as claimed."

- V. The board's opinion concerning the admission of the first and the second auxiliary request was worded as follows (see point 7. of the communication annexed to the summons):

**"7. First and second auxiliary requests**

Claims 1 of the first and the second auxiliary requests have been substantially amended with respect to claim 1 underlying the appealed decision, contrary to the requirement of Article 12(2) RPBA 2020. The amendments seem to be intended to overcome objections raised in the appealed decision under Articles 83 and 84 EPC. It would appear that these amendments of claim 1 could and should have been filed during the first-instance proceedings since the objections of lack of clarity and lack of sufficiency of disclosure have been raised by the examining division in writing before and orally during the oral proceedings before the examining division.

In view of the complexity of the amendments (e.g. unclear basis in the application as filed) and in view of the fact that they do not seem to be suitable to overcome the existing objections under Articles 83, 84 and 54(1) EPC, the board intends to exercise its discretion under Article 12(4) RPBA 2020 in not admitting the first and the second auxiliary request into the proceedings. In this context, the board also notes that the applicant did not clearly identify each amendment and did not provide reasons for submitting it in the appeal proceedings, contrary to the requirement under Article 12(4), third sentence, RPBA 2020. Nor did the applicant indicate the basis for the amendments to claim 1 of auxiliary request 1 in the application as filed and provided reasons why the amendments to both auxiliary requests overcame the objections raised, contrary to the requirement under Article 12(4), fourth sentence, RPBA 2020."

VI. In response to the summons to oral proceedings, the applicant informed the board with its letter dated 26 November 2021 that it will not be attending the oral proceedings. The applicant did not file any comments concerning the board's preliminary opinion as annexed to the summons.

VII. Following the applicant's letter of 26 November 2021, the oral proceedings were cancelled.

VIII. Independent claim 1 according to the main request reads as follows:

"An optical system for capturing and reproducing real images comprising a camera and a television; in which:

the camera comprises a first parallel ray filter (1) for capturing rays originated from a real object in all its irradiation angles within the view range of said camera; a CCD (2) having photo-electric properties for generating electrical impulses; a computer (3) for processing the electrical impulses coming from the CCD (2) and directing the data resulting from said electrical impulses to the television;

the television comprising a second parallel ray filter (5), a image receptor (4) for forming a real image, the parallel ray filter (5) being similar to and synchronized with the ray filter (1),

said optical system being characterized in that:

the first parallel ray filter (1) is comprised by a pair of liquid crystals (6, 7) having two leveled liquid crystals surfaces, each having a opening of a window with a same colour filter in every liquid crystal surface provides the selection of a filter color ray; and

the second parallel ray filter (5) is comprised by a pair of liquid crystals (6, 7) having two leveled liquid crystals surfaces, each having an opening of a window with a same colour filter in every liquid crystal surface provides the selection of a filter colour ray".

Independent claim 1 according to the first auxiliary request reads as follows:

"An optical system for capturing and reproducing real images comprising a camera and a television; wherein

the camera comprises a first parallel ray filter (1) for capturing rays originated from a real object (A, B) in all

its irradiation angles within the view range of the camera; a coupled charge device CCD (2) having photo-electric properties for generating electrical impulses; a computer (3) for processing the electrical impulses coming from the a (sic) coupled charge device CCD (2) and directing the data resulting from the electrical impulses to an image receptor (4) having photo-electric properties for generating electrical impulses;

the television comprising a second parallel ray filter (5), the image receptor (4) for forming the real image (A, B), the second parallel ray filter (5) being similar to and synchronized with the first parallel filter (1),

the optical system being characterized in that:

the first parallel ray filter (1) is comprised by a pair of liquid crystals (6, 7) having two leveled liquid crystals surfaces, each having an opening of a window with a same colour filter in every liquid crystal surface provides the selection of a filter colour ray, wherein the window is movable to allow the parallel rays issued from the surface of the real objects (A, B) from several angles;

the computer (3) is configured to revers (sic) captured parallel rays issued from several angles and

the second parallel ray filter (5) is comprised by a pair of liquid crystals (6, 7) having two leveled liquid crystals surfaces, each having an opening of a window with a same color filter in every liquid crystal surface provides the selection of a filter colour ray, wherein the window is movable to allow the reversed parallel rays will be displayed on the television".

Independent claim 1 according to the second auxiliary request reads as follows:

"An optical system for capturing and reproducing real images comprising a camera and television; wherein:

a. a first filter (1) configured for generating first parallel rays at a first angle from fields of vision of a real object (A, b) in a moment  $T_i$ ,

b. a coupled charge device CCD (2) for capturing the first parallel rays from the first filter (1) and forming a first image of the real object in the first angle,

c. a processor (3) for processing the first images captured by the coupled charge device CCD (2) and reversing an order of the first angle of the first parallel rays,

d. an image receptor (4) for capturing the first parallel rays reversed.

e. a second filter (5) configured for generating second parallel rays from the reversed parallel rays at the first angle; wherein the second parallel rays form an image of the real object (A,B) at the first angle, and wherein the processor reconfigures the first and second filters (1, 5) to move to a second angle of the fields of vision in a moment  $T_{i+1}$ , to capture images of the real object (A, B) from a different angle, and display the images on a display, and wherein the processor (3) repeatedly reconfigures the first and second filters (1, 5) to move to different angles of the field of vision to cause as impression of moving real images of the real objects (A, B) on the display".

## **Reasons for the Decision**

1. In its letter dated 26 November 2021 the applicant stated "*Please be advised that we will not be attending the oral proceedings, as we have not been instructed by our client to that effect*". This statement is considered equivalent to a withdrawal of the request for oral proceedings (see Case Law of the Boards of Appeal, 9th edition 2019, section III.C.4.3.2 and the references cited there). Consequently, the oral proceedings were cancelled and an immediate decision on the file as it stood was taken.
  
2. In the communication annexed to the summons to oral proceedings (see point IV. above), the board expressed its preliminary opinion, along with the underlying reasons, that the patent application did not disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art and that the applicant's arguments in favour of sufficiency of disclosure, filed with the grounds of appeal, were not convincing.

Moreover, it informed the applicant about its intention to exercise its discretion under Article 12(4) RPBA 2020 in not admitting the sets of claims according to the first and the second auxiliary request into the proceedings (see point V. above).

The applicant neither rebutted the board's preliminary opinion, nor submitted any new requests aiming at overcoming the objections. The board sees no reason to deviate from its preliminary opinion, which therefore becomes final.

3. It follows that the invention according to the main request is not disclosed in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art (Article 83 EPC). Moreover, the first and second auxiliary requests are not admitted into the proceedings under Article 12(4) RPBA 2020.

## Order

### For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



L. Gabor

R. Bekkering

Decision electronically authenticated