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**Datasheet for the decision  
of 23 June 2021**

**Case Number:** T 1272/17 - 3.5.02

**Application Number:** 08736728.0

**Publication Number:** 2133157

**IPC:** B07C5/342

**Language of the proceedings:** EN

**Title of invention:**

System for the Automatic Selective Separation of Rotten Citrus  
Fruits

**Patent Proprietor:**

Roda Iberica, S.L.U.

**Opponent:**

De Greef's Wagen-, Carrosserie- en Machinebouw B.V.

**Relevant legal provisions:**

EPC Art. 100(a), 54, 56

RPBA Art. 12(4)

RPBA 2020 Art. 12(3), 13(2)

**Keyword:**

Ground for opposition (yes) - Lack of inventive step  
First auxiliary request - Lack of inventive step (yes) - no  
further distinguishing features  
Admissibility of objections pursuant to Article 123(2) EPC, 83  
EPC, 56 EPC (no) - no exceptional circumstances

**Decisions cited:**

G 0010/91



**Beschwerdekammern**

**Boards of Appeal**

**Chambres de recours**

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**Case Number: T 1272/17 - 3.5.02**

**D E C I S I O N**  
**of Technical Board of Appeal 3.5.02**  
**of 23 June 2021**

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**Decision under appeal:** **Interlocutory decision of the Opposition  
Division of the European Patent Office posted on  
7 April 2017 concerning maintenance of the  
European Patent No. 2133157 in amended form.**

**Composition of the Board:**

**Chairman** R. Lord  
**Members:** F. Giesen  
A. Bacchin

## **Summary of Facts and Submissions**

- I. The appeals by the patent proprietor and the opponent lie from the interlocutory decision of the Opposition Division posted on 7 April 2017 concerning maintenance of the European Patent No. 2 133 157 in amended form.

The reasons for the impugned decision were that the ground for opposition pursuant to Article 100(a) EPC prejudiced the maintenance of the opposed patent, since the subject-matter of claim 1 as granted lacked novelty in view of document

D10: JP-H8-184 563.

Reference was also made to document D10T, a human translation of D10, which is in Japanese, filed by the opponent with the notice of opposition on 22 August 2014.

The first auxiliary request was found to meet the requirements of the European Patent Convention.

- II. Despite the party status of both parties being that of an appellant, they will be referred to in the following as patent proprietor (or simply proprietor) and opponent for ease of comprehension.
- III. The Board summoned the parties to oral proceedings and informed them of its preliminary opinion on 17 July 2020.
- IV. Oral proceedings before the Board took place on 23 June 2021 in the form of a videoconference, to which both parties had given their consent.

The requests of the parties were as follows:

The patent proprietor requested

as main request, that the decision under appeal be set aside and the patent be maintained as granted,

and if that was not possible that the decision under appeal be set aside and the patent be maintained in amended form on the basis of the claims of one of the first to eleventh auxiliary requests filed with letter dated 28 December 2017, but with the order of the second and third auxiliary requests reversed.

The opponent requested that

the decision under appeal be set aside and the patent be revoked.

During the oral proceedings, the opponent raised objections under Articles 123(2) EPC, Article 83 EPC and Article 56 EPC against the second auxiliary request (filed as third auxiliary request).

V. Claim 1 according to the **main request** (i.e. as granted) reads as follows:

*"A system for the automatic selective separation of rotten citrus fruits, a system designed for identifying rotten pieces of fruit which being located on a conventional type of conveyor (1) are moved through a processing line with simultaneous rotation of the pieces of fruit at least in the portion of the path corresponding to the position of an observation and viewing member, the possible rot effect in the pieces*

*of fruit being determined with illumination sets emitting light comprised in UV-A band of the spectrum, with the system including a general control member (6), preferable a PC type computer equipped with specific application software connected to every one of the operating components of the system, characterized in that it comprises, successively along the path of the fruits:*

*a computer vision unit (3) for viewing the conveyed rotten pieces of fruit, with said unit (3) being included in a compartment closed to the outside and within which is extended the conveyor (1) on which the pieces of fruit are conveyed, and with said computer vision unit (3) comprising within the mentioned compartment closed to the outside, UV-A light emission sets (3a) projected on the fruits and a camera (7) for capturing the fluorescence effects emitted by the fruits as a result of the UV-A light projected on them, the mentioned camera (7) being equipped with an image acquisition card for sending the images captured by said camera (7) to the general control member (6);*

*an automatic expulsion unit (4) for expelling the pieces of fruit identified as rotten, with said automatic expulsion unit (4) comprising an electronic circuit (4a) controlled from the mentioned general control member (6); and*

*a device (5) for controlling the position of each of the pieces of fruit identified as rotten, embodied by an encoder controlled from the general control member (6) and capable for determining the exact position of each of the rotten pieces of fruit and activating corresponding expelling elements associated to the conveyor (1)."*

VI. Claim 1 of the **first auxiliary request** contains in addition to the features of claim 1 of the main request the following features at the end of the claim:

*"wherein said vision unit (3) for viewing the passing fruits driven by a conveyor (1) within a compartment closed to the outside in the longitudinal direction thereof comprises:*

*UV illumination lamps (3a), located in a centered position and projecting a considerable light power directed in a concentrated manner towards a forced passage area (C) of the fruits, and two viewing members (7'),*

*characterized in that one of the two viewing members (7') is located on the left side and the other of which is located on the right side of the passage area, with vision overlap towards a common passage area (C), both viewing members being aligned in opposite positions of a transverse passage line, such that they allow observing broad surface portions of the fruits conveyed through the vision unit (3)"*

Also at the end of the first paragraph of the claim "*characterized in that it*" has been replaced by "*wherein the system*".

VII. Claim 1 of the **second auxiliary request** (filed as third auxiliary request) contains in addition to the features of claim 1 of the first auxiliary request the following features at the end of the claim:

*"characterized in that both viewing members consist of MAF-type cameras with two monochromatic sensors, of which one of said sensors detects the fluorescence effects emitted by the rotten areas in response to the illumination of the UV lamps (3a), and the other sensor has been equipped with NIR (near infrared) filters to detect the IR component associated to the emission of UV light, and allows observing a slight loss in the image generated when it faces a rotten area."*

In view of the tenor of this decision, it is not necessary to reproduce the wording of the claims according to the third to eleventh auxiliary requests.

VIII. The arguments of the patent proprietor, in so far as they are relevant to this decision, can be summarised as follows.

*Main Request*

The subject-matter of claim 1 of the main request, i.e. as granted, was new. Document D10 did not disclose:

- (a) a compartment closed to the outside within which is extended the conveyor;
- (b) an encoder downstream of the compartment.

*Concerning feature (a)*

The figures of D10 consistently showed that the lightproof box was open at the bottom and the conveyor extending underneath said box, rather than within it. The figures of D10 were to some degree schematic as the lightproof boxes could not "hang in the air" without any support as they were depicted. Nevertheless, D10 only disclosed that the cameras and the lamps were



enclosed in the lightproof box 54, thus excluding that the conveyor extended within said lightproof box. Any support of the lightproof box did not have to be lightproof itself. The purpose of the lightproof box was merely to shield the cameras from ceiling light. Since the lightproof box was only shown schematically, it would amount to speculation to consider anything going beyond the figures in D10 to be disclosed. As opposed to this disclosure, paragraphs [0030] and [0031] of the opposed patent stated that the fruit passed through the inside of the compartment and that the compartment was completely closed. Figures 1 to 3 of the opposed patent also illustrated that the computer vision unit, through which the fruit passes, was a compartment completely closed to the outside. The expression "lightproof box" in the translation of D10 merely referred to the material of the box being intransparent to light but it could not be concluded from this expression, that the box was also shaped and arranged such that it was closed. A box is an element that can have an open face. The term "box" does not imply that the box had to be closed. The compartment in D10 was deliberately open because D10 provided for a dual manual and automatic system.

According to the opposed patent UV-A light with a wavelength in the range of 315 to 400 nm was used, which was close to the visible range of 400 to 700 nm. The fluorescence of the rotten areas was in the visible wavelength range. In order to shield the cameras from stray light in the visible range, the compartment according to claim 1 had to be closed to the outside. The fact that in the invention of the opposed patent the compartment was completely closed to the outside was essential to providing a correct reading of the fluorescence of the fruit. This was different in D10,

which stated that short wavelength UV light was used. Thus, the UV light of D10 had a wavelength far from the visible light so the noise generated in the visible band will not interfere with the image. Consequently an essential technical problem to be solved by the opposed patent, that of minimising the noise ratio of the camera, did not arise in D10. There was therefore no reason to interpret D10 such that the lightproof box was closed at the bottom.

The abstract of D10, as well as paragraphs [0010] and [0016], made it clear that an operator was always able to look directly at the fruits and manually sort them when he detects fluorescence on the fruit surface. The above cited passages all made statements to the effect that the system according to the invention allowed rot to be confirmed by the operator either visually or using an imaging camera. It followed that the lightproof box had to be open to allow the operator to confirm rot. In D10 there had to be a sufficient gap between the lightproof box 54 and the sorting conveyor 4 in order to allow an operator to visually inspect the fruit. In order to allow for visual inspection by an operator enough space between the light shield box and the conveyor (in which the fruits or vegetables are placed) was needed. As seen from the description and figures of D10, the lightproof box did not vary between the embodiments of D10 and thus it needed to allow the visual inspection in all cases. Figure 14 of D10 illustrated a method according to the invention according to paragraph [0043] and its short title. This method had to be compatible with every embodiment of a device according to the invention of D10. D10 never stated that this was not the case. This observation was corroborated by the claim structure of D10. The device of D10 had to be compatible with the claim structure.

Paragraph [0012] of D10, which made direct reference to claim 1 of D10, disclosed that the device according to claim 1 did not have an image camera but only allowed for visual inspection by a human operator. The further claims 2 to 7, by virtue of their claim dependency on claim 1, all allowed for a human operator being able to directly and visually determine water rot and decomposition in the fruit. The lightproof box therefore had to be open to the outside.

The opponent's argument directed to the alleged equivalence of the arrangement of the conveyor being the bottom of the box in figures 2 and 3 of the opposed patent and in D10 was incorrect since the opposed patent literally disclosed that the conveyor extended within the closed compartment, whereas the only disclosure in D10 was in its figures. The patent claimed literally that the compartment was closed to the outside. This was a structural difference with respect to D10 and no further structural differences needed to be explained in this context.

*Concerning feature (b)*

D10 disclosed in figure 2 that an address reader 38 was directly underneath the compartment containing the computer vision unit, rather than downstream of the computer vision unit as required by claim 1. The opponent's argument that the "most logical" position was at the end of the conveyor was irrelevant as it did not comply with the standard for novelty.

The subject-matter of claim 1 of the main request involved an inventive step. In D10 a working arrangement of the address reader under the lightproof box was disclosed. There was thus no incentive for a

skilled person to provide the encoder downstream of the lightproof box.

*First Auxiliary Request*

The subject-matter of claim 1 of the first auxiliary request was new and involved an inventive step. It contained the additional distinguishing features that the viewing members were arranged with vision overlap towards a common passage area (C), the viewing members being aligned in opposite positions of a transverse passage line.

D10 only disclosed cameras mounted in the direction of movement of the conveyor belt. This was in particular also true for the fourth embodiment depicted in figure 13 of D10, for the following reasons.

While the short title of figure 13 stated that it was a front view, this was clearly erroneous as it was a side view. The short title of figure 11 was manifestly erroneous and so was the short title of figure 13 in view of the description of the fourth embodiment in paragraph [0042]. D10 consistently used the expressions "front" and "back" to designate the transport direction of the conveyor belt throughout the description. According to the translation, the fruit were rotated by a "front-back inverter 7" inside the lightproof box. It followed that the cameras were arranged in front and to the back of the inspection position. To demonstrate that the expressions "front" and "back" always referred to the transport direction, reference was made to the following passages: When describing the cup swiveling mechanism in paragraphs [0023] and [0024] and figure 4, D10 uses the expressions front and rear of the cup which coincide with the transport direction of the

conveyor. Oranges did not have a "front" or "back", hence the mechanism also had to refer to the transport direction of the conveyor. This was consistent with the fact that oranges in the cups were rotated in the conveying direction, as also illustrated in figures 10 and 11. In these figures one arrow indicated the conveying direction and another arrow indicated the direction of rotation. Both arrows matched perfectly. In D10, all figures concerning the device according to the invention of D10 were side views. The only exceptions were figure 14, which illustrated a method of inspection rather than a device, and figure 15, which was a front view of a prior art device. As opposed to the consistent use of "front" and "back", according to paragraph [0026] the imaging cameras were located above and behind/in front of the inspection positions, facing the upper surfaces of each of the mounting cups 5. It followed that D10 did not use the expression "front" and "back" (or "behind") when referring to the vertical positions "above" or "upper" with respect to the conveyor. Therefore, figure 13 also had to be a side view. Furthermore, to corroborate this, the device according to D10 contained eight rows of cups on the conveyor. All figures depicting a single mandarin in a mounting cup were side views, as evidenced by the short title of figures 8 and 9 of D10. Thus, figure 13, showing only a single cup rather than a full row of cups, also had to be a side view. If figure 13 were a front view, the lightproof box would not cover all eight rows of cups on the conveyor. Additionally, there would simply not be enough room to place cameras to the side of the rows of fruit in the presence of eight rows of cups. Furthermore, the absence of an arrow indicating the conveyor direction in figure 13 was not indicative of figure 13 depicting a front view. For example, figures 8 and 9 were side

views but did not depict such an arrow. D10 stated in paragraphs [0040] and [0042] that the second and fourth embodiments (on which the opponent based its objection) were "similar" to the first embodiment depicted in figure 2. However, in the first embodiment the cameras were arranged in the transport direction of the conveyor. There was furthermore no disclosure in D10 that the viewing cones of the cameras overlapped in figure 13. Even if one assumed it was indeed a front view, the cameras, rather than being arranged in the same transverse plane with respect to the conveyor belt, could be arranged in different planes along the conveyor belt. Again, this would be consistent with the first embodiment, to which the fourth embodiment was similar according to paragraph [0042]. According to the first embodiment, there were two inspection positions along the conveyor direction between which the pieces of fruit were rotated by the front-back-inverter 7. This arrangement was also depicted in figure 13. The viewing cones therefore did not overlap in reality, since the fields of view of the cameras did not overlap to simultaneously inspect a given piece of fruit under inspection. Rather, the oranges were inspected consecutively. This also had to apply to the second and fourth embodiments. The disclosure of a wider scope of image in the fourth embodiment of D10 did not mean that the cameras were placed on a transverse line with vision overlap. A wider scope of image could be achieved even if the cameras were spaced along the conveyor direction without vision overlap.

*Second Auxiliary Request (Filed as Third Auxiliary Request)*

Concerning a remittal, the second auxiliary request (filed as third auxiliary request) should be discussed in appeal proceedings rather than being remitted. There was not much prior art on file. The opponent had had several opportunities to comment, but had decided not to do so. A remittal would allow them to steer the proceedings.

Concerning the new objections, they should not be admitted. The opponent had previously not raised any objections pursuant to Article 123(2) EPC, 83 EPC and 84 EPC at all, and raised no objection pursuant to Article 56 EPC against the second to eleventh auxiliary requests. Raising them only during the oral proceedings was not in line with the requirements of the Rules of Procedure. Clarity was not open to examination any more. The objections under Articles 83 EPC and 123(2) EPC even represented an entirely new ground for opposition. A party has to present their comments when requests are filed, not when a final decision to admit them is taken. It would be absurd to allow opponents to systematically refrain from presenting objections until oral proceedings when a decision on the admissibility is taken. The opponent could not rely on the assumption that any of the auxiliary request would not be admitted and hold back objections on that assumption. Rather, the fact that the opponent had raised objections in the notice of opposition but did not raise them in the appeal proceedings had to be interpreted as meaning that the respective objections were not maintained in appeal. Concerning the feature MAF-type camera, this merely referred to a brand name, and no technical meaning was associated to this name other than what was

explained in claim 1. The fact that an auxiliary request without dependent claims 2 and 3 had been filed by the patent proprietor was a precaution which could not be seen as equivalent to the opponent expressly raising a corresponding objection under Article 123(2) EPC. The objection of lack of sufficiency of disclosure had not been clearly raised by the reference in the opponent's letter dated 23 May 2021 to the notice of opposition, which itself did not contain any such objection.

- IX. The arguments of the opponent, in so far as they are relevant to this decision, can be summarised as follows.

*Main Request*

The subject-matter of claim 1 of the main request (i.e. as granted) lacked novelty in view of D10.

*Concerning Feature (a)*

D10 disclosed a lightproof box 54, the purpose of which was to shield its interior from external light which could disturb the detection of rot. In the opposed patent as well as in D10, the figures showed a compartment, the bottom part of which was formed by the conveyor. In both cases the conveyor was actually the bottom of the closed box. In both D10 and the opposed patent the figures were schematic and the proprietor had not made it clear in what structural way the compartment according to claim 1 was different from that of D10. If the embodiments depicted in the figures of the opposed patent fell under the wording of claim 1, this would also be true for the figures of D10. In particular, the actual compartment was shown to be



carried by a frame in figure 3 of the opposed patent. The conveyor was depicted to extend within the frame rather than the compartment itself. The conveyor closed the compartment at the bottom.

The patent proprietor's argument according to which D10 provided for a dual manual and automated system, wherein the operator was always able to look directly at the fruits and manually sort them, was incorrect. The abstract made it clear that visual and automatic inspection were alternatives. Four out of five embodiments concerned automatic fruit sorting. Only the fifth embodiment concerned manual sorting.

*Concerning Feature (b)*

D10 disclosed an address reader, the address data of which was associated with captured images to automatically expel rotten pieces of fruit. Encoders were generally known. Therefore, D10 disclosed an encoder. Looking at figure 2 of D10 there were only two possibilities to position an encoder, namely to the left and to the right. If a shaft encoder were used it had to be placed on a shaft of the conveyor rollers. There was more space on the right roller in figure 2. Hence D10 disclosed that the encoder was downstream of the computer vision unit.

Even if the Board considered the subject-matter of claim 1 of the main request to be new, it did not involve an inventive step for the above reasons.

*First Auxiliary Request*

The cameras in the fourth embodiment of D10 were arranged in a transverse plane with respect to the

conveyor. The expressions "front" and "back" did not refer to the transport direction of the conveyor belt. The first embodiment had eight rows of cups and the cameras 34, 35 were arranged directly above the cups. Nevertheless, paragraph [0028] of D10 disclosed that first the "fronts" of the oranges were photographed by cameras 34, then the oranges were rotated by the front-to-back inverter 7 and then their "backs" were photographed by cameras 35. Given the camera position in the first embodiment directly above the cups as shown in figure 2 of D10, "front" and "back" could not possibly relate to the transport direction of the conveyor but referred to the portions of the oranges facing the camera and then facing the camera after having been rotated. The same followed when considering figures 6 and 7, which showed different views of the first embodiment. Furthermore, there was no reason to assume, as the proprietor did, that the expressions "front" and "back" had to refer to the same direction in the description of the cups, which always pointed in the same direction, and in the description of the rotation of the oranges, which did not. The assertion by the proprietor that all figures depicting a single mandarin in a mounting cup were side views was wrong. Figure 13 itself demonstrated this.

Embodiments 2 and 3 were less relevant but entirely consistent with this view when taking into account that figure 11 was erroneously indicated in its brief explanation to be a front elevation view, whereas it was manifestly a side view. It was wrong to conclude, as the Opposition Division did, that this implied that also the brief explanation of figure 13 was erroneous. Rather, the error in the short title of figure 11 was an isolated obvious error. It also had to be noted that the figures consistently showed an arrow indicating the

transport direction of the conveyor when they were side views, and that any such arrow was absent, when they were front elevation views, such as in figure 13. It was also important to note that the fourth embodiment concerned a system with only a single row of cups on the conveyor, instead of eight rows as in the first embodiment. This was entirely consistent with figure 13 showing only a single orange and being a front elevation view. In the fourth embodiment, only the reference sign 34 was used for both cameras, whereas in the first embodiment the reference signs 34 and 35 were used. The reason for this was that in the first embodiment the oranges were rotated between the cameras 34 and 35, whereas in the fourth embodiment, similar to the embodiment shown in figure 11, they were rotated under the cameras 34. D10 disclosed in paragraph [0042] that the arrangement of the fourth embodiment with cameras on the side allowed for a wider image range or broader surface portions of the orange to be inspected. This implied that the cameras 34 were not only to the left and right of the conveyor, but that they were also on a transverse line. The viewing cones in figure 13 indicated that there was a vision overlap. The Opposition Division's observation that D10 did not specify that both cameras in the fourth embodiment took pictures at the same time was immaterial, as claim 1 according to the various requests only required visual overlap, not that pictures were taken at the same time. The remarkable similarity of figure 13 of D10 and figure 3 of the opposed patent corroborated that the cameras in D10 were arranged on a transverse line having visual overlap.

The second to eleventh auxiliary requests should not be admitted. In relation to the provisional opinion it was noted that the proprietor filed eleven auxiliary

requests which were neither included in the opposition proceedings, nor filed with the proprietor's statement of grounds of appeal. During the oral proceedings before the Board, the opponent withdrew their request that the case be remitted if these further requests were admitted into the proceedings. Although several of these requests appeared to be based, to some extent, on one or more of the dependent claims, these dependent claims were only briefly discussed in the notice of opposition.

*Second Auxiliary Request (Filed as Third Auxiliary Request)*

Claim 1 of the second auxiliary request was unclear, because the feature MAF-type camera was unclear. This was not a generally recognised terminology but appeared to refer to a proprietary camera format ("MAF Roda"). There was also no sufficient disclosure of a MAF-type camera. This was not a new objection as it had already been pointed out in the notice of opposition that the feature "MAF-type" camera was unclear. The opponent's letter dated 23 May 2021 contained a reference to the notice of opposition, and hence an objection of lack of sufficiency of disclosure had been raised in the appeal proceedings.

The second auxiliary request did not meet the requirements of Article 123(2) EPC. Originally claim 4, which was now combined with claim 1, had not been dependent on claims 2 and 3. Since claims 2 and 3 were not deleted and were dependent on amended claim 1, a new claim dependency, which was not originally disclosed, had been created. This was not a new objection. The proprietor had filed the third auxiliary request (filed as second auxiliary request) in which

the dependent claims 2 and 3 had been deleted. The proprietor had therefore been aware of the problem and the issue was not a new one.

The subject-matter of claim 1 of the second auxiliary request (filed as third auxiliary request) did not involve an inventive step. This objection was not a new objection. The opponent's letter dated 23 May 2021 contained a reference to the notice of opposition, in which clearly an objection against all dependent claims (and hence claim 1 of the present second auxiliary request) of lack of inventive step had been raised. The Board's summons also contained a reference to the notice of opposition. The proprietor had presented arguments in favour of inventive step, when filing the auxiliary requests. Therefore, the issue was not new but already in the proceedings. The opponent had clearly expected that inventive step of any auxiliary request would be discussed. The proprietor could not have been surprised by this objection.

Concerning all preceding objections against the second auxiliary request, they were not late-filed because a final decision on the admissibility of these requests had only been taken during the oral proceedings before the Board. The opponent therefore raised the objections without delay after they had become part of the proceedings. Given that the Opposition Division took the impugned decision on the basis of novelty and inventive step of higher ranking requests, there had been no occasion and no need to present the above objections earlier.

## **Reasons for the Decision**

### 1. *Admissibility of the Appeals*

Both appeals meet the formal and substantive requirements of Articles 106 and 108 as well as Rule 99 EPC. They are therefore admissible.

### 2. *Main request - Novelty in View of D10*

2.1 The subject-matter of claim 1 according to the main request (i.e. as granted) is new in view of document D10.

2.2 The main point of contention between the parties was whether D10 disclosed a compartment closed to the outside within which extended the conveyor.

2.3 The Board notes firstly that D10 and the opposed patent employ the same technique to detect rot in citrus fruit, namely by fluorescence of the substances in the rotten area in reaction to irradiation by UV light. The emitted fluorescent light lies in the visible range, in both D10 and the opposed patent, since the substances produced in rotten areas of a given citrus fruit are chemically identical in both cases.

2.4 Document D10 discloses a compartment closed to the outside within which the conveyor extends.

2.4.1 The Board considers the figures in D10 to be schematic as to the exact shape and details of the lightproof box 54. Figures 2, 6, 7, and 11 to 13 depict a section through a box which apparently hangs in the air above a

conveyor, which extends underneath it, without any apparent support. The proprietor accepted at the oral proceedings that this must be a schematic representation of the box, at least not showing all details.

Given that in D10 fluorescent light in the visible range is used to detect rot, a skilled person considering the disclosure of a lightproof box 54 in D10 will immediately find it apparent that the purpose of the lightproof box 54 is to shield the inspection arrangement from stray light in the visible range which would easily dwarf the weak intensity fluorescent light from the pieces of fruit under inspection, irrespective of whether such inspection is performed by a camera or by a human operator and irrespective of whether such light originates at the ceiling or is reflected from any other surfaces such as the floor. The skilled person would thus consider the expression "lightproof box" to refer to the function of the box to enclose the inspection arrangement in a lightproof manner and shield the vision unit from external stray light. A skilled person when reading D10 would understand that the "light-proofing" functionality of the lightproof box must be sufficient to detect the fluorescent light emitted by rotten areas of pieces of citrus fruit, and that the less visible stray light enters the lightproof box, the better the cameras signal to noise ratio. Nothing else would be understood from the wording of claim 1. If the lightproof box were shaped and arranged as depicted in the schematic figures of D10, it would clearly not serve the purpose of shielding visible stray light from the viewing arrangement.

Given this basic understanding of a skilled person, it is also clear that the conveyor has to extend "within

the lightproof box". The opponent is correct in pointing out that the opposed patent only shows a single embodiment according to which the conveyor actually forms the bottom of a compartment, which itself is a box open at the bottom face facing the conveyor. It is true that there are further light shields in figure 3 of the patent to the left and right of the conveyor and that the compartment rests on some sort of support which extends horizontally below the conveyor. Clearly, this single embodiment of the compartment is intended to be covered by the wording of claim 1 of the main request. A skilled reader of D10 would also find it immediately apparent that the lightproof box must sufficiently shield the cameras, UV lamps and the fruit at the inspection positions while at the same time allowing for the conveyor to move. D10 does not further disclose details of how this is achieved but clearly states the result to be achieved, i.e. light-proofing of the inspection area by means of a suitable box arranged such that the conveyor can transport pieces of fruit to the inspection position. There is therefore no difference to be seen in this respect between the disclosure of D10 and the subject-matter of claim 1 according to the main request.

2.4.2 The Board finds the proprietor's hypothesis that "lightproof" referred only to the material of the box rather than to its function not persuasive. There is technically absolutely no sense in providing a box of a lightproof material only to shape said box such that it allows stray light into its compartment.

2.4.3 The Board is not persuaded by the proprietor's argument that the figures consistently showed that the lightproof box was open at the bottom and that the conveyor extended underneath it. This represents an



attempt to extract information from a schematic figure about specific details which are clearly not accurately represented.

- 2.4.4 The Board does not find the proprietor's further argument persuasive, according to which D10 disclosed a dual inspection by camera and a human operator and that in order to allow access for the human inspector the box had to be open at the bottom as (accurately) depicted in the figures.

First of all, D10 does not disclose that human inspection and camera inspection had to be performed simultaneously. Rather, D10 discloses in the abstract that

*"water rot and initial decomposition occurring in the skin and/or flesh, which are difficult to detect, can be confirmed by the operator either visually or using an imaging camera."*

Paragraph [0016] merely repeats this wording. This is clearly a disclosure of an alternative, whereas the proprietor erroneously reads this rather clear sentence as if it said "visually and using an image camera".

Furthermore, the understanding of the proprietor is not supported by the claim structure, arguing that all possible combination of claims did not exclude a human inspector in addition to the inspection by cameras.

The proprietor's argument rests on the premise that claims 2 to 7 of D10 were dependent on claim 1, which is clearly not the case. Rather, claims 1 to 3 are three independent claims, the first of which claims visual inspection by an operator and the second of

which claims automatic inspection by a camera. The proprietor's protracted argument trying to show that any claim combination "did not exclude" human visual inspection, is logically flawed. Apart from the fact that the proprietor's premise that all claims depended on claim 1 is erroneous, the purpose of claims is to define in general terms the subject-matter for which protection is sought. The fact that such definitions do not exclude dual human and camera inspection can not be treated as a disclosure of such dual inspection.

The proprietor made further reference to figure 14 which shows a human inspector but no image camera. The proprietor argued that since figure 14 related to the method according to the invention, any device according to the invention of D10 had to be compatible with the method of figure 14 and hence that every lightproof box had to be open to provide space for a human inspector.

Again, the proprietor's premise is flawed. D10 discloses several separate embodiments, one of which, claimed in claim 1 and depicted in figure 14, allows for exclusively human inspection and the other of which allows for exclusively automatic inspection by image cameras. There is nothing in D10 to support the proprietor's assumption that both types of inspection had to occur simultaneously. Furthermore, the proprietor's argument is technically not persuasive. In the Board's opinion it is a highly unlikely proposition that there should be a human inspector in addition to the image cameras, whose very purpose it is to replace the human inspector. The Board would clearly expect imaging cameras to have a higher sensitivity to fluorescent light than the human eye. It is therefore very unlikely that a box designed to enable inspection

by a human would have to be less lightproof than one for an image camera.

- 2.4.5 In this context the proprietor also argued that, in contrast to the opposed patent, the lightproof box in D10 did not need to be completely closed to the outside, since the excitation UV light employed in the opposed patent was closer to the visible range, namely UV-A, whereas that in D10 had to be in the UV-C range. The Board notes that the proprietor never said this explicitly, but in fact their argument is not just an ancillary argument in support of the contention that D10 did not disclose a closed compartment, but rather amounts to saying that using light in the UV-A range was a distinguishing feature of claim 1 over D10 in its own right.

The Board is not persuaded by this argument. Paragraph [0026] of D10T discloses that the lamps 51 emit only short wavelength UV light at a frequency of between approximately  $8 \times 10^{14}$  and approximately  $4 \times 10^{16}$  c/s. According to the well established relation between frequency and wavelength of electromagnetic radiation in air  $\lambda = c/f$ , where  $c$  is the speed of light in air. Given that c/s means cycles per second, viz. Hertz, it follows that a frequency  $f = 8 \times 10^{14}$  Hz corresponds to a wavelength of 375 nm, which falls squarely in the UV-A range. The Board considers the end point of the range as directly and unambiguously disclosed.

Apart from this observation, the proprietor's argument appears to confuse the excitation light with the emitted fluorescent light. The lightproof box in D10, as well as the compartment according to claim 1, are necessary to shield visible light from superposing on the emitted fluorescent light, which is also in the

visible range. In contrast to this, the substances in rotten areas of citrus fruit manifestly will not be excited to fluoresce by visible light as is clear from everyday experience. Whether or not the UV excitation light is far away or close to the visible range is completely immaterial for a successful detection of rot in citrus fruit. It follows that UV-A excitation light is not a distinguishing feature and that the argument built on this incorrect premise is itself technically incorrect. It also follows that the lightproof box according to D10 has to be closed to the same extent as that according to claim 1 in order to allow for inspection of fluorescent emitted light from the oranges.

2.5 Document D10 does not disclose a computer vision unit and an encoder placed successively along the path of the fruit.

2.5.1 Document D10 discloses an address reader 38, which is depicted as being placed under the lightproof box 54 in figure 2 of D10. In contrast to this, claim 1 reads

"[a] system [...] characterized in that it comprises, successively along the path of the fruits:

a computer vision unit (3) [...]  
a device (5) for controlling the position of each of the pieces of fruit identified as rotten, embodied by an encoder [...]"

It follows from the wording of claim 1 that the encoder cannot be placed underneath the computer vision unit, but has to be placed such as to be successively along the path of the fruit, or in simpler words downstream

of the computer vision unit, which comprises the compartment.

2.5.2 The Board is not persuaded by the opponent's argument that D10 was silent on where the encoder was placed. Figure 2 indicates clearly that the address reader 38 is placed under the lightproof box. The Board is also not convinced by the opponent's argument that a skilled person would find the ends of the conveyor the most logical place for the encoder if a shaft encoder were used. The proprietor has chosen to limit the protection afforded by claim 1 to an arrangement in which the encoder is downstream of the computer vision unit. This is then the basis for the examination of novelty, whether this might appear obvious or not. The opponent's argument is not appropriate in the context of a novelty discussion, because it merely stipulates what would be possible or obvious for a skilled reader in view of, rather than what is *directly and unambiguously derivable* from, D10. In particular, D10 does not disclose a shaft encoder. Lastly, the Board observes that it is not convinced by the reasoning of the impugned decision, which is based on the premise that an encoder was an algorithm rather than a device and which could not have a place. An "encoder" is merely an alternative word for a position sensor. The conclusion that claim 1 defined an algorithm rather than a device is in direct contradiction to the fact that claim 1 specifies a physical arrangement of the encoder.

2.6 It follows from the foregoing, that the sole distinguishing feature of claim 1 of the main request with respect to D10 is that the encoder is downstream from the computer vision unit.

2.7 The subject-matter of claim 1 is therefore new over the system of D10.

3. *Main request - Inventive Step in view of D10*

3.1 The subject-matter of claim 1 of the main request does not involve an inventive step in the light of document D10 alone. The ground for opposition pursuant to Article 100(a) EPC in combination with Article 56 EPC therefore prejudices the maintenance of the opposed patent.

3.2 As concluded in the previous section on novelty, the sole distinguishing feature of claim 1 is that the encoder in D10 is not downstream of the computer vision unit but underneath it.

3.3 The opponent is correct in arguing that no particular technical effect is brought about by this distinguishing feature. Encoders are commercially available in a great variety and for different purposes. The purpose of the encoder is to be able to establish a connection between the images of a rotten piece of fruit and its position on the conveyor belt, so as to be able to sort the fruit correctly. To this end, it is clearly immaterial where along the conveyor the encoder is placed. The proprietor did not argue that the place of the encoder brought about any special technical effect. The technical problem solved by claim 1 of the main request is therefore merely to provide an alternative arrangement.

As far as the assessment of the solution is concerned, the proprietor argued that it was not obvious to place the encoder in D10 downstream of the computer vision

unit because they saw no incentive for a skilled person to modify the system of D10. The arrangement in D10 worked without problems as disclosed.

This argument is not persuasive. Placing the encoder downstream of the computer vision unit or using a rotary encoder and mounting it on the conveyor roller downstream of the computer vision unit amounts to merely providing alternative positions for a known sensor while otherwise providing the same information. Such an alternative is not non-obvious simply because D10 does not explicitly disclose to a skilled person that alternatives that achieve the same result could also be used. Finding functional alternatives is clearly within the normal skill of a skilled person and hence obvious in view of D10 without any particular hint.

4. *Inventive Step - First Auxiliary Request*

4.1 The subject-matter of claim 1 of the first auxiliary request does not involve an inventive step within the meaning of Article 56 EPC in view of document D10 alone.

4.2 The main contentious point of discussion between the parties concerning the first auxiliary request was whether according to the fourth embodiment of D10, illustrated in figure 13, the cameras were mounted to the left and the right of the conveyor on a transverse line such that they had vision overlap.

4.3 According to the brief explanation of the drawings in D10T, figure 13 is a front elevation view depicting the state of imaging and lighting by the image reading

device in the fourth embodiment. D10 as a whole uses the expression "side view" for views from a direction perpendicular to the conveyor direction and "front view" for a view along the conveyor direction. There is thus a clear and explicit disclosure that the cameras 34 are located to the left and the right of the conveyor in figure 13.

Furthermore, the beginning of paragraph [0042] of D10T, describing the fourth embodiment and figure 13, reads [0042]

*"[f]ig. 13 depicts an image reading device 6, which is the 4th embodiment, which photographs the front and rear sides of each mandarin orange A ... mounted on each of the mounting cups 5 ... in a single row and from an oblique angle using two imaging cameras 34, 34."*

There is thus a clear disclosure that, according to the fourth embodiment, the conveyor has a single row of cups, rather than eight rows as the first embodiment. The illustration in figure 13 is consistent with this information. In a front view - i.e. along the direction of the conveyor - only a single cup would be visible, whereas in a side view the whole row of cups would be expected to be visible.

The opening sentence of paragraph [0042] states that the front and rear sides of the oranges are photographed by the imaging cameras. The Board concedes that the use of the expressions "front" and "rear" sides of the oranges might at first sight appear inconsistent with figure 13 being a front elevation view. However, when looking at the remaining embodiments of D10, it becomes clear that in the



context of the oranges "front" refers to the portions facing the camera and "rear" to the side of the orange facing away from the camera, as the opponent correctly argues. According to paragraph [0040] of D10T

*"[f]ig. 11 depicts an image reading device 6, which is the 2nd embodiment, and captures images of both front and rear sides of each mandarin orange A ... mounted on each of the mounting cups 5 ... using only the imaging cameras 34."*

Looking at figure 11, the only visible camera 34 is mounted directly above the conveyor such that its line of sight is at a right angle with the conveyor. It is thus clear from this arrangement that taking a picture of the "front" of an orange cannot make reference to the portion facing the conveyor transport direction. The same is true when examining figures 6 and 7 and paragraphs [0034] and [0035]. Again the imaging cameras 34 and 35 are arranged such as to view any piece of fruit directly from above the conveyor, yet according to the description in paragraph [0034] of D10T

*"the fronts of mandarin oranges A ... mounted on mounting cups 5 ... are irradiated with shortwave UV light S projected from the lamps 51... , and an image thereof is captured by the 1st of the imaging cameras 34 ... , and the front side image data captured with each of the imaging cameras 34 is linked to the address data [...]"*.

This makes it again very clear that in this context front means the side facing the first camera. According to paragraph [0035] and figures 6 and 7, after the image of the "front" of the orange is taken by cameras 34, the oranges are rotated by front-to-back inverter

7, which is located between cameras 34 and 35 along the conveyor, and then

*"[o]nce rotated, the rear sides of mandarin oranges A ... mounted on mounting cups 5 ... are irradiated with shortwave UV light S projected from the lamps 51..., and an image thereof is captured by the second of the imaging cameras 35 ... , and the rear side image data captured with each of the imaging cameras 35 ... is linked to the address data[...]"*.

In this passage, the upper sides of the oranges facing the first set of cameras 34 is called "front sides", consistently with the embodiment of figure 11, and the side of the orange facing the second set of cameras 35 after having been rotated is called the rear side. Given the camera arrangement, it is again clear that in this context front and back has nothing to do with transport direction of the conveyor.

It is thus clear that figure 13 is a front view and that the cameras 34 are mounted to the left and the right of the conveyor.

4.4 Turning now to the question whether there is vision overlap, the Board notes firstly that according to paragraph [0042], the description of figure 13 and the fourth embodiment, "photographing from above gives a wider scope of image". A wider scope of image is only possible if the cameras are mounted on a transverse line and have visual overlap.

In this context, the Board notes that it follows from the singular "the front-to-back inverter 7" in paragraph [0042] that there is only one front-to-back inverter 7 in the fourth embodiment. The Board further

notes that in the first embodiment according to figures 2 and 7, there are two sets of cameras having reference signs 34 and 35 with the front-to-back inverter 7 mounted in between the cameras. The cameras 34 and 35 consecutively record an image of the oranges and the rotation takes place in between the images. In contrast to this, in the second embodiment shown in figure 11, only one set of cameras having the sole reference sign 34 is shown, with the front-to-back inverter 7 positioned directly underneath the camera. From the corresponding passages of the description it becomes apparent that the oranges are not transported between pictures but rather, that the (rows of) cameras 34 take two pictures with the rotation of the oranges taking place in between and with the transport interrupted while the (row of) oranges is inspected. In the fourth embodiment the absence of cameras with reference sign 35 and the presence of only one front-to-back inverter makes it clear that the transport is interrupted during the inspection and that the front-to-back inverter is positioned underneath the oblique cameras 34.

Returning to the question of a "wider scope of image" and a single camera mounted directly above an orange that is rotated about a horizontal axis (such as in figure 11 of D10) once by 180° and which takes two images, will not be able to cover a band about the orange's "equator", i.e. a small band about the plane in which the conveyor lies. If instead two cameras (34, 35) at symmetrical oblique angles, as shown in figure 13 of D10, which are not in the same transverse plane and do not have vision overlap are used and the orange were rotated in between the cameras by 180°, all that would change with respect to the initial situation is that the unimaged equator band rotates by the same angle as the camera 35. In addition, the rim of the cup

might shadow a portion of the oranges. If however, the cameras are arranged in the same transverse plane and the oranges are rotated at the inspection position, then only small portions at the cusp of the oranges pointing along the conveyor remain inaccessible to the cameras. It follows that the cameras have to be arranged on a transverse line and that there has to be vision overlap of the cameras in order to image a wider surface area as disclosed in paragraph [0042]. The viewing cones indicated in figure 13 corroborate that there is vision overlap, given that the cameras are disclosed to be on the same transverse line.

4.5 The Board is not persuaded by the proprietor's arguments, which were essentially that

- (a) according to the fourth embodiment of D10, the cameras were arranged in the transport direction of the conveyor, or
- (b) if this were not the case, D10 at least did not disclose vision overlap, because the cameras were arranged downstream of one another along the conveyor, and the pieces of fruit were rotated in between the images.

4.5.1 In support of argument (a), the proprietor argued that the brief explanation of figure 13 had to be erroneous because that of figure 11 was erroneous. The Opposition Division shared this opinion. The Board is not persuaded that the obvious error in the description of figure 11 is more than an isolated error. Clearly, it can not be concluded from such an isolated error alone that the brief description of figure 13 was also erroneous.

4.5.2 The proprietor provided a protracted argument attempting to demonstrate that in document D10 the expressions "front" and "back" referred exclusively to the transport direction of the conveyor belt, for which it followed that the cameras 34 in figure 13 could not be arranged in a plane transverse to the conveyor. According to the proprietor, these expressions were used consistently and also exclusively to describe the transport direction of the conveyor. Special reference was made in this context to the description of the swiveling mechanism of the mounting cup. The proprietor adduced in particular paragraph [0026] of D10T, according to which the imaging cameras were located above and behind/in front of the inspection positions, facing the upper surfaces of each of the mounting cups 5. It followed that D10 did not use the expression "front" and "back" (or "behind") when referring to the vertical positions "above" or "upper" with respect to the conveyor.

4.5.3 However, there is no reason to assume that in D10 the terms front and back are exclusively and consistently used with respect to the same frame of reference. The proprietor tacitly assumes that the authors of D10 constrained themselves to exclusively use a single frame of reference when describing the invention. Apart from the fact that this understanding is inconsistent with the first three embodiments of D10 (see above), the Board finds such an assumption highly unrealistic, since general experience shows that adapting the frame of reference to particular situations makes a description more comprehensible, such as in the case of the swivelling mechanism of the cups. One should bear in mind that, in contrast to the camera positions or the cups, the pieces of fruit change orientation during the inspection process and that the camera viewing

directions are the most natural frame of reference to describe this. It is immaterial if clearer terms could have been used. The original disclosure is in Japanese and the parties and the Board have to accept it.

- 4.5.4 The proprietor further argued that since oranges were spherical they could not have a front and a back side. The expressions therefore had to refer to the transport direction of the conveyor.

The proprietor's initial premise is correct but the proposed conclusion is not. The opponent, like the proprietor, argued that front and back, rather than to the oranges themselves, indeed referred to some extrinsic reference, however, the opponent correctly identified this external reference to be the cameras, rather than the conveyor.

- 4.5.5 The proprietor further argued that when the oranges were rotated their sides pointing in the transport direction - their "fronts" - and those pointing in the opposite direction - their "backs" - were inverted. Hence front-to-back had to refer to the transport direction. This was corroborated by figure 10 which showed an arrow indicating the rotation direction of the orange and a second arrow indicating the transport direction of the conveyor. Both arrows "matched perfectly" in the words of the proprietor.

This argument does not persuade the Board. The proprietor tries to describe the movement of the oranges as an inversion, while in reality it is a rotation. It is true that the portions of the oranges pointing along the conveyor are inverted, but so are their top and bottom portions facing the camera. The expression "front-to-back inverter" is clearly

consistent with the opponent's and the Board's reading. Furthermore, the statement that an arrow indicating a rotation of an orange and an arrow indicating a linear movement of a conveyor "perfectly matched" is technically meaningless. The Board has the impression that to the proprietor the arrow indicating rotation might have looked as though it pointed somehow in the same direction as the conveyor arrow, because the rotation arrow is positioned at the top of the orange. However, if the arrow, indicating the same sense of rotation, had been positioned at the bottom portion it would look as if it were antiparallel to the transport direction. This illustrates that the argument is technically meaningless.

- 4.5.6 The proprietor asserted that in D10, all figures concerning the device according to the invention of D10 were side views. The only exceptions were figure 14, which illustrated a method of inspection rather than a device, and figure 15, which was a front view of a prior art device. Therefore, figure 13 had to be a side view, not a front view. Furthermore, all figures depicting a single orange in a mounting cup were side views, as evidenced by the short title of figures 8 and 9 of D10. Figure 13 also showed a single orange and thus also had to be a side view. While in reality in a side view of the fourth embodiment a row of mounting cups should be visible, for illustration purposes, and in contrast with reality, only a single cup with an orange was shown.

The Board considers this to be a rather bizarre assertion, which is also manifestly incorrect. Firstly, figures 6 and 12 for instance deal with a device according to the invention and are at the same time clearly front views, not side views. Secondly, it is a

highly unlikely proposition that the authors of D10, or of any patent, would choose to constrain the manner of illustration in such a seemingly random fashion as to correlate the perspective of a drawing with the number of depicted pieces of fruit or with the question as to whether the device is one according to the invention. Thirdly, the proprietor assumes a drafting convention which would literally make it impossible to depict a front view of the fourth embodiment as the opponent understands it. Not surprisingly perhaps, the proprietor has to concede exceptions to his hypothesis from the beginning of his argument. The proprietor appears to confuse causation and correlation when looking at figures 8 and 9, which given paragraph [0036] are merely sketches analogous to figure 14 intended to illustrate the principle of rot detection by UV light using a camera. From this the proprietor erroneously infers a drawing convention, which simply does not exist, and tries to conclude that figure 13 can not be a front view applying the erroneously inferred drawing convention. In contrast to figures 8 and 9, figure 13 does not illustrate the detection principle, but instead an embodiment. There is no reason, why contrary to reality only a single orange should be shown for illustration purposes, when in the other figures a row of cups is shown.

- 4.5.7 The proprietor argued that the device according to D10 comprised eight rows of cups on the conveyor. There was simply not enough room to place cameras to the left and to the right of each row of cups.

Again, the proprietor's argument is manifestly incorrect. Paragraph [0042] of D10T clearly states that according to the fourth embodiment there is only a single row of mounting cups, not eight.



4.5.8 According to the proprietor, the absence of an arrow indicating the conveyor direction in figure 13 was not indicative of figure 13 depicting a front view. For example, figures 8 and 9 were side views but did not depict such an arrow.

The opponent did not base their conclusion on the premise of an absent arrow but merely pointed out that the absence of an arrow is entirely consistent with figure 13 being a front view, just as much as there is no arrow in figures 6 or 12, which are also front views.

4.5.9 The proprietor furthermore pointed out that according to paragraphs [0040] and [0042] of D10T, the second and fourth embodiments (on which the opponent based their objection) were "similar" to the first embodiment depicted in figure 2. However, in the first embodiment the cameras were arranged in the transporting direction of the conveyor. Therefore, this also had to be the case in the second and fourth embodiment.

The Board is not persuaded by this argument. It is typical of the drafting style of patents that embodiments are described "incrementally" with a focus on the differences between them and omitting, for reasons of conciseness, repetitions by reference to similarities to other embodiments. In this sense, D10T mentions in the context of the second and fourth embodiment that the detection principle - viz. fluorescence detection of rot - is similar to that of the first embodiment. However, this short statement clearly does not extend to the camera arrangement, which is essentially the sole difference between the embodiments.

4.5.10 Concerning the proprietor's argument (b) (see 4.5 above), they asserted that even if figure 13 were a front view, the viewing cones of the cameras did not overlap, since similarly to the first embodiment the cameras were arranged spaced along the conveyor belt and the oranges were rotated in between the inspection positions.

The proprietor asserted that a wider scope of image as disclosed in paragraph [0042] of D10T as the technical advantage of the camera position of the fourth embodiment, could be achieved if the cameras were not arranged in the same transverse plane and did not have visual overlap, when asked by the Board during the oral proceedings. The proprietor did not further explain this assertion, which does not persuade the Board due to simple geometrical considerations.

The proprietor's assertion does not allow for a wider scope of image, compared to the first embodiment. This can only be achieved if the cameras are arranged on a transverse line with vision overlap. The viewing cones in figure 13 further corroborate this view, as does the exclusive use of reference number 34 for both cameras, rather than 34 and 35.

4.6 It follows from the foregoing that claim 1 of the first auxiliary request does not have any additional distinguishing features over D10 compared with claim 1 of the main request. The reasoning concerning lack of inventive step of claim 1 of the main request therefore also applies to claim 1 of the first auxiliary request, so that the subject-matter of this claim does not involve an inventive step in view of D10.

5. *Admissibility - Further Auxiliary Requests*

5.1 The Board decided not to exclude any of the second to eleventh auxiliary requests pursuant to Article 12(4) RPBA 2007 from the proceedings.

5.2 The proprietor filed the second to eleventh auxiliary requests with their reply to the appeal of the opponent. The opponent requested that the second to eleventh auxiliary request not be admitted because these requests had not been included in the opposition proceedings and were not filed with the proprietor's grounds of appeal and argued further that claim 1 of the third auxiliary request introduced problems under Article 123(2) EPC.

The Board notes that by virtue of Article 12(1)(c) RPBA 2020, the appeal proceedings are based on any written reply timely filed to the grounds of appeal. Thus the only legal basis for excluding these auxiliary requests from the appeal proceedings would be Article 12(4) RPBA 2007, applicable by virtue of Article 25(2) RPBA 2020. The Board notes that the sole criterion according to Article 12(4) RPBA 2007 for the exercise of the Board's discretion to exclude requests is whether the requests could (and should) have been filed in the first instance proceedings. However, since the auxiliary requests filed with the proprietor's reply to the opponent's appeal grounds were simply a subset of the auxiliary requests which had been filed before the opposition division, they had already been filed in the first instance proceedings.

5.3 The opponent's argument overlooks the fact that the appeal proceedings are also based on the reply of the proprietor to the grounds of appeal (Article 12(1)(c) RPBA 2020, mentioned above) and that the auxiliary requests had indeed already been filed in the opposition proceedings. Furthermore, the Board does not consider potential issues with Article 123(2) EPC as a relevant criterion for the application of Article 12(4) RPBA 2007. Under the present circumstances, the Board finds therefore that it has no discretion to exclude these auxiliary requests from the appeal proceedings.

6. *Remittal - Second Auxiliary Request*

6.1 The Board decided not to remit the case for a discussion of the second auxiliary request (filed as third auxiliary request).

6.2 The patent proprietor requested that at least the second auxiliary request (filed as third auxiliary request) not be remitted. The opponent withdrew their request for remittal during the oral proceedings and indicated that they were willing to discuss this request.

6.3 Since none of the parties desired remittal, the Board was also willing to discuss the request.

7. *Taking into Account New Objections - Second Auxiliary Request*

7.1 The Board decided not to take into account the objections raised for the first time at the oral proceedings by the opponent against the second

auxiliary request (formerly third auxiliary request) since no special circumstances exist to justify their late filing.

The objections were:

- an objection under Article 83 EPC against the feature "MAF-type camera";
- an objection under Article 123(2) EPC on the ground that the amendments added new subject-matter due to the claim dependencies;
- an objection under Article 56 EPC.

The Board notes that these objections manifestly contain new allegations of fact and can neither be considered to be purely arguments, nor to be a refinement of timely submitted lines of argument, which the opponent also did not argue.

7.2 Pursuant to Article 12(1) RPBA 2020, the appeal is based on the parties' statement of grounds and the timely replies. Further, pursuant to Article 12(3) RPBA 2020, which substantially reflects the content of Article 12(2) RPBA 2007, the statement of grounds and the reply should contain a party's complete appeal case and they shall set out clearly and concisely the reasons why it is requested that the decision under appeal be reversed, amended or upheld, and should specify expressly all the requests, facts, objections, arguments and evidence relied on.

These procedural provisions make it very clear that if a party wishes to have objections considered in the appeal proceedings, they have to be raised expressly in the statement of grounds or the reply at the beginning of the appeal proceedings.

The opponent's statement of grounds of appeal (understandably) dealt only with novelty and inventive step of claim 1 of the request maintained by the Opposition Division. The opponent's reply to the proprietor's appeal only dealt with novelty and inventive step of claim 1 as granted and as maintained. The Board is aware that the opponent filed their reply before the proprietor filed the auxiliary requests. However, the opponent filed further letters on 19 April 2018 and 23 May 2021, by which time they clearly should have been aware that the auxiliary requests had been filed with the proprietor's reply of 28 December 2017, but in which they again did not raise any of the above objections expressly. Both of these letters contained a suggestion to remit the case at the end, the letter of 23 May 2021 stating

*"In case these further requests would be admitted into the proceedings, it is requested to remit the case to the Opposition Division. These requests are introduced by the Proprietor in the Appeal proceedings. Although several of these requests appear to be based, to some extent, on one or more of the dependent claims, it is noted that these dependent claims were only briefly discussed in the Grounds for Opposition."*

- 7.3 It follows from the foregoing that the opponent raised the objections for the first time at the oral proceedings, viz. after notification of the summons to oral proceedings before the Board. The objections go beyond the framework established by the opponent's appeal case with the statement of grounds and its reply to the proprietor's grounds and are therefore clearly an amendment to the opponent's appeal case made after notification of the summons, within the meaning of

Article 13(2) RPBA 2020 (applicable by virtue of Article 25(2) RPBA 2020). Accordingly, they are only to be taken into account if exceptional circumstances exist that the opponent has to justify by cogent reasons.

7.4 The Board came to the conclusion, that there were no exceptional circumstances justifying the amendment of the opponent's appeal case at the last possible stage, namely at the oral proceedings before the Board.

7.4.1 The opponent argued that a final decision on the admittance of the auxiliary requests had only been taken at the oral proceedings. They had not been part of the proceedings before, and therefore, the opponent raised the objections at the earliest possible time.

The opponent's assertion overlooks the clear procedural requirement enshrined in Article 12(1) and (3) RPBA 2020 mentioned above. Article 12(3) RPBA 2020 makes it clear that objections, including grounds for opposition, against requests that were on file have to be timely submitted, irrespective of when a final decision on their admittance is taken. If the opponent's contention were correct, opponents could always wait to raise objections until the oral proceedings, as the proprietor correctly pointed out. This contention is clearly not in line with the Rules of Procedure or the case law.

7.4.2 The opponent further argued that the objections under Articles 83 and 56 EPC were not raised for the first time at the oral proceedings, but with the letter of 23 May 2021 due to the reference at its end to the notice of opposition. Moreover, the Board's

communication pursuant to Article 15(1) RPBA also contained a reference to the notice of opposition.

The Board first notes that the notice of opposition (more precisely the statement according to Rule 76(2) (c) EPC) is itself not part of the appeal proceedings in view of the clear provisions of Article 12(1) RPBA 2020. The Board notes further, that the letter of 23 May 2021 was itself filed only after notification of the summons on 27 July 2020 (Rule 126(2) EPC). Even if, *arguendo*, the reference to the notice of opposition contained in that letter could be viewed as raising any objection, this would also be an amendment to the opponent's appeal case within the meaning of Article 13(2) RPBA 2020, for which the opponent has not indicated any exceptional circumstances, nor can the Board identify any, which could justify its admission.

- 7.4.3 Irrespective of the foregoing, the reference at the end of the letter merely states in essence, that the case should be remitted because the discussion of the dependent claims (and hence the auxiliary requests, which are essentially directed to combinations of dependent claims) up to that point of the proceedings only took place in the notice of opposition and there only superficially. This falls clearly short of the substantiation requirement of Article 12(3) RPBA 2020 that an objection needs to be raised expressly. From this statement, the Board doubts that any objection could be seen to be raised by it by an objective reader. Rather, this statement merely confirms the Board's view, that no objection had been expressly raised up to the oral proceedings in the appeal proceedings.



The Board's communication pursuant to Article 15(1) RPBA dated 17 July 2020 briefly discussed remittal of the case. In this context, the Board stated:

*"In this context the Board notes that the auxiliary requests on file appear to correspond to a subset of the auxiliary requests filed during the first instance proceedings before the oral proceedings. The Board further notes that the auxiliary requests appear only to concern combinations of granted claims. Despite this fact, the only comments made by the opponent appear to be those in the notice of opposition."*

It is rather clear from this passage that the Board merely took note of the fact that the opponent had not raised any objections against the second to eleventh auxiliary requests in the appeal proceedings. There is no room for interpreting the passage to mean that the Board considered any comment in the notice of opposition to be part of the appeal proceedings.

7.4.4 Furthermore, as far as the objection pursuant to Article 83 EPC is concerned, the notice of opposition stated with respect to granted dependent claim 5, which is combined with the independent claim in the second auxiliary request under discussion here, that

*"[i]t is first observed that claim 5 is to be considered to be not clear, as it refers to 'MAF-type' cameras. It is not evident what (additional) feature are or are not present in such cameras. This makes the scope of the claims unclear."*

Clearly, this cannot be considered to be an objection pursuant to Article 83 EPC but is merely an explanation as to why granted claim 5 is not clear.

The Board notes that in the present case, raising an objection pursuant to Article 83 EPC at the oral proceedings before the Board amounts to attempting to raising a new ground for opposition for the first time in appeal proceedings. This, as is generally accepted by case law, is only possible with the consent of the proprietor, who in the present case clearly did not give that consent (cf. G 10/91, OJ EPO 1993, 420, point 18 of the reasons).

- 7.4.5 Concerning the objection pursuant to Article 56 EPC, the opponent argued further that they had raised an objection against granted claim 5 in the notice of opposition but that there had afterwards simply not been a need to discuss this further, given the reasons for the impugned decision. They had always expected that inventive step would be discussed for all auxiliary requests. The proprietor themselves had filed arguments concerning inventive step of the second (formerly third) auxiliary request. Inventive step therefore had to be discussed.

This argument again overlooks the clear requirements of Article 12(3) RPBA 2020, which state that all objections have to be raised expressly at the latest in the reply. The Board notes that the opponent even reacted by letter after the auxiliary requests were filed on 28 December 2017. However, they still did not expressly raise any objection pursuant to Article 56 EPC against the second (formerly the third) auxiliary request, as they would have been expected to do at that point, instead of attempting to confront the proprietor

and the Board during the oral proceedings with an entirely new objection. The fact that the proprietor himself attempts to comply with the requirements of the Rules of Procedure by providing arguments in support of inventive step with their auxiliary request, can clearly not be to their disadvantage, by allowing an opponent to present new objections in response at a much later stage of the proceedings. This would be an unfair treatment and would go against the purpose of the Rules of Procedure, which *inter alia* aims at ensuring that all parties present their submissions as early as possible.

- 7.4.6 Concerning the objection pursuant to Article 123(2) EPC, a similar argument as in the case of the previous objections applies. If the opponent had wished that such an objection be considered, it would have been incumbent on them to file it as soon as possible after the second (formerly third) auxiliary request was presented.

The opponent also mentioned the third auxiliary request (filed as second auxiliary request) in support of arguing that the specific objection under Article 123(2) EPC was already in the proceedings.

The proprietor had indeed, probably as a precaution, filed the third auxiliary request which has the same independent claim 1 as the first auxiliary request, but in which the dependent claims are deleted. However, the fact that the proprietor takes precautions against potential objections does not mean that these potential objections have to be treated as though they had been expressly raised by the opponent. As in the foregoing, this would constitute an asymmetric and unfair treatment, punishing the party who complies with the

Rules of Procedure and favouring the other party who did not.

- 7.5 If follows from the foregoing, that the opponent has not been able to indicate exceptional circumstances which could justify the Board taking into account the above objections.

8. *Conclusions*

The ground for opposition under Article 100(a) EPC with Article 56 EPC prejudices the maintenance of the opposed patent and the patent with the claims of the first auxiliary request does not meet the requirements of the Convention. Therefore, the main and first auxiliary request of the patent proprietor are not allowable.

There are no admissible objections against the second auxiliary request (filed as third auxiliary request).

The description has to be adapted to the amended claims of that request, which would be too extensive for the appeal proceedings. The Board therefore allows the proprietor's second auxiliary request and remits the case with a description to be adapted and rejects the opponent's request.

## Order

### For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the Opposition Division with the order to maintain the patent in amended form with the following claims and a description to be adapted as appropriate:

- claims 1 to 4 of the second auxiliary request, filed as third auxiliary request, on 28 December 2017.

The Registrar:

The Chairman:



U. Bultmann

R. Lord

Decision electronically authenticated