

Internal distribution code:

- (A) [-] Publication in OJ
- (B) [-] To Chairmen and Members
- (C) [-] To Chairmen
- (D) [X] No distribution

**Datasheet for the decision
of 19 January 2023**

Case Number: T 2468/19 - 3.4.03

Application Number: 11728686.4

Publication Number: 2580943

IPC: H05K13/00

Language of the proceedings: EN

Title of invention:

COMMISSIONING OF A BUILDING SERVICE SYSTEM

Patent Proprietor:

Signify Holding B.V.

Opponent:

Molnia, David

Headword:

Relevant legal provisions:

EPC Art. 123(2), 54, 56

Keyword:

Amendments - extension beyond the content of the application
as filed (no)

Novelty - (yes)

Inventive step - (yes)

Decisions cited:

Catchword:



Beschwerdekammern

Boards of Appeal

Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 2468/19 - 3.4.03

D E C I S I O N
of Technical Board of Appeal 3.4.03
of 19 January 2023

Appellant:

(Opponent)

Molnia, David
Theatinerstrasse 16
80333 Munich (DE)

Representative:

Molnia, David
Df-mp Dörries Frank-Molnia & Pohlman
Patentanwälte Rechtsanwälte PartG mbB
Theatinerstrasse 16
80333 München (DE)

Respondent:

(Patent Proprietor)

Signify Holding B.V.
High Tech Campus 48
5656 AE Eindhoven (NL)

Representative:

Eisenführ Speiser
Patentanwälte Rechtsanwälte PartGmbB
Johannes-Brahms-Platz 1
20355 Hamburg (DE)

Decision under appeal:

**Interlocutory decision of the Opposition
Division of the European Patent Office posted on
21 June 2019 concerning maintenance of the
European Patent No. 2580943 in amended form.**

Composition of the Board:

Chairman

T. Häusser

Members:

J. Thomas

D. Prietzel-Funk

Summary of Facts and Submissions

- I. The appeal of the opponent is against the opposition division's interlocutory decision that patent EP-B-2 580 943 and the invention to which it relates are found to meet the requirements of the EPC taking into account the amendments made by the patent proprietor during the opposition proceedings according to the then first auxiliary request.
- II. The opposition had been filed against the patent as a whole based on Article 100(a), (b) and (c) EPC.
- III. The following documents filed with the notice of opposition will be referred to in this decision:
- O1: CN 101 026 745 A
O1': computer translation of O1
O2: CN 101 009 821 A
O2': computer translation of O2
O3: N. Tezcan, W. Wang; "Self-orienting wireless multimedia sensor networks for occlusion-free viewpoints", Computer Networks, Elsevier, Amsterdam, NL, vol. 52, no. 13, pages 2558 to 2567, 17 September 2008, XP023903852
O4': WO 2005/091067 A2
O6: Y. E. Osais et al.: "Directional Sensor Placement with Optimal Sensing Range, Field of View and Orientation", Mobile Networks and Applications, vol. 15, pages 216 to 225, 28 May 2009, XP019793342
O8: US 6 222 191 B1
- IV. In the oral proceedings held before the board the final requests of the parties were as follows:

- The appellant / opponent (hereinafter referred to as the appellant) requested that the decision under appeal be set aside and that the European patent be revoked.
- The respondent / patent proprietor (hereinafter referred to as the respondent) requested that the appeal be dismissed.

V. Independent method claim 1 of the only request on file (the patent as maintained according to the opposition division's interlocutory decision in which claim 1 is identical to claim 1 of the patent as granted) reads as follows (labelling added by the board as used by the appellant under point III.1 in its statement setting out the grounds of appeal):

*"(F1.1) Method of adjusting at least one sensor (10) of installed building service sensors (10) of a building service system, the method comprising the step of:
(F1.2) automatically adjusting a sensor aperture or opening angle of said at least one sensor (10),
(F1.3) the adjusting of the sensor aperture or opening angle of each of said at least one sensor (10) being based on information on a position of the installed sensor (10) relative to at least one other sensor (10) of the installed building service sensors."*

VI. Independent apparatus claim 12 of the only request on file (the patent as maintained according to the opposition division's interlocutory decision in which claim 12 is identical to claim 12 of the patent as granted) reads as follows (labelling added by the board

as used by the appellant under point III.1 in the statement setting out the grounds of appeal):

*"(F12.1) Building service system, comprising a group of first building service sensors (10),
(F12.2) at least one sensor (10) of the group of first sensors comprising a sensor coverage adjusting unit (24) for adjusting a sensor aperture or opening angle of the sensor (10);
(F12.3) wherein each sensor coverage adjusting unit (24) is adapted for automatically adjusting, in a state of the system with the first sensors (10) being installed, the aperture or opening angle of the respective installed sensor (10) based on information on a position of the installed sensor (10) relative to at least one other installed sensor (10) of the group of first sensors."*

VII. The appellant's arguments insofar as they are relevant to the present decision may be summarised as follows:

Amendments

Claims 1 and 12 extended the subject-matter beyond the content as originally filed because due to the amendments the claims did not anymore define that the adjustment of the aperture or the opening angle was made in order to adjust the coverage area. This however was part of the only basis given on page 2, lines 9 to 10 of the originally filed description. In addition, on page 2, lines 9 to 10 of the originally filed description, the adjustment was presented only as an example. However, as the parameters defined in the two independent claims were only exemplary, there were other parameters that also allowed the coverage area to be adjusted, but these parameters were missing in the

wording of the claims. Furthermore, the use of the word "may" on page 2, lines 9 to 10 of the originally filed description indicated that changing the aperture or opening angle of the installed sensor did not necessarily change the coverage area. This was further illustrated in a figure on page 6 of the statement setting out the grounds of appeal. Hence, it was not directly and unambiguously derivable from the application as filed that the only adjustment to be carried out was the adjustment of the aperture or opening angle and that the aim of this adjustment was the adjustment of the coverage area, contrary to the requirements of Article 123(2) EPC.

Novelty

Documents O1 / O1' and O2 / O2' anticipated the claimed subject-matter since both documents individually disclosed the automatic adjustment of the coverage area due to a rotation of the sensor and thereby also changed the aperture and opening angle at least in its direction. This was sufficient for anticipating the claimed subject-matter.

Similar to documents O1 and O2, document O3 disclosed an adjustment of an aperture or opening angle by adjusting the orientation of the aperture or opening angle. This change in orientation modified the coverage area and encompassed also a change of the aperture or opening angle in this direction. It had not been specified in the impugned patent that the adjustment of only a change in value of the aperture or the opening angle was meant, so that this term should not be interpreted using a limited understanding excluding its change in orientation.

Document O4' anticipated novelty since an autofocusing camera was a directional optical sensor which was suitable to be used in a building system. This rather general view was particularly justified since the impugned patent mentioned that the sensor could be a camera and that the specific type of installation within the building was not specified in detail in the wording of the claims but remained vague and general.

Inventive step

Document O1 / O1' represented the closest prior art and was a suitable starting point for arguing inventive step.

The objective technical problem was seen in the provision of an alternative method of adjusting the coverage area of sensor(s) of a building service system.

The skilled person would know different ways of adjusting the sensor's coverage area. It would consider the alternative of changing the value of the aperture or opening angle rather than its orientation in order to eliminate overlap and blind areas in the coverage area. Therefore the defined subject-matter was obvious when starting from document O1 / O1' and combining it with the common general knowledge of the skilled person.

Also combining the teaching of O1 / O1' with document O6 would be obvious for the skilled person, since the title of document O6 guided the skilled person to the alternative of changing the aperture or opening angle instead of changing the orientation of the sensor. Already in the title and abstract of document O6, the

parameters "sensing range, field of view and orientation" were mentioned as relevant parameters in connection with the coverage area, so that the person skilled in the art, starting from document O1 / O1', would immediately understand that the coverage area could be changed by adjusting the aperture or opening angle. Finally, the building service system as defined in claim 12 did not refer to an installed sensor system, so that it was of no importance if the sensor was installed or not. This was further confirmed by Figures 1 and 2 of the impugned patent where the sensors were simply put on a table and were consequently movable and not installed, let alone fixedly installed. Hence the claimed subject-matter was not inventive in view of the combination of document O1 / O1' with document O6.

Next, also the combination of document O1 / O1' with document O8 was obvious for the skilled person when looking for an alternative solution. The skilled person would consider different sensor technologies like those disclosed in document O8 since it related to an occupancy controller installed in buildings. Document O8 (column 4, lines 9 and 10 and lines 21 to 36 and column 3, lines 26 to 29) taught that adjustments of the field of view could be made to the passive infrared sensor. Hence, the opening angle could be adjusted in order to adapt the spatial sensitivity of the sensor. Therefore, the skilled person, when integrating the teaching of O8 in the device known from O1 / O1' would directly arrive at the subject-matter defined in present claims 1 and 12.

VIII. The respondent's arguments insofar as they are relevant to the present decision may be summarised as follows:

Amendments

The disclosure in the originally filed description on page 2, lines 7 to 11, page 9, lines 11 to 32 and page 14, lines 1 to 4 as well as Figure 4 provided the necessary basis for the amendments. In particular, it could be directly and unambiguously derived that the aperture or opening angle of the sensor was a parameter which adjusted the coverage area. The definition of other possible parameters which allowed the adjustment of the coverage area was not necessary since at least the now defined parameter was disclosed in the originally filed documents.

Novelty

None of the documents O1 / O1', O2 / O2' or O3 disclosed an automatic adjustment of an aperture or opening angle, as they only disclosed the automatic adjustment of the orientation of the sensor, which was not to be confused with the aperture or opening angle.

Document O4' disclosed an autofocus camera and therefore did not disclose a sensor network, let alone the adjustment of the aperture or opening angle. Autofocusing related to the sharpening of the image, but not to an adjustment of the aperture or opening angle of the camera.

Inventive step

Starting from document O1 / O1' as closest prior art, neither the combination with the common general knowledge, nor with one of the documents O6 or O8 resulted in the subject-matter defined in claims 1 and 12.

Even if it was known to the skilled person that the aperture or opening angle had an influence on the coverage area, a sensor which allowed an automatic adjustment of its aperture or opening angle was at the relevant date of filing not known. Therefore, lack of inventive step could not convincingly be argued based on the combination of document O1 / O1' with the common general knowledge of the skilled person.

Document O6 was not combinable with document O1 / O1' since it related to the planning of a wireless sensor network and the placement of the sensors but not to the adjustment of already installed sensors. However, even if the skilled person considered document O6, the parameters mentioned therein, namely sensing range, field of view and orientation, were properties of the sensors which were not automatically adjustable once the sensors were installed.

Finally, the skilled person would not consider the combination of document O1 / O1' with O8, either, due to their different technologies. Document O8 concerned a passive infrared (PIR) sensor including a manual mounting of masks in contrast to document O1 / O1' which dealt with the automatic adjustment of the orientation of video cameras. The PIR sensor shown in document O8 comprising a PIR mask was operable to be manually rotated within and / or relative to the sensor housing or in which the aperture or opening angle could be manually changed by using another PIR mask. This required manual maintenance rather than automatic adjustment during operation or a robot. Hence, the combination of the documents O1 with O8, if considered by the skilled person, would not lead it to the subject-matter defined in claims 1 and 12.

The subject-matter defined in claims 1 and 12 consequently involved an inventive step.

Reasons for the Decision

1. Amendments

During the examination procedure, features F1.2 and F1.3 of claim 1 were amended as follows, with the crossed-out features deleted and the underlined features added:

Claim 1:

F1.2: automatically adjusting a sensor ~~coverage area~~ aperture or opening angle of said at least one sensor (10),

F1.3: the adjusting of the sensor ~~coverage area~~ aperture or opening angle of each of said at least one sensor (10) being based on information on a position of the installed sensor (10) relative to at least one other sensor (10) of the installed building service sensors.

Claim 12 was amended accordingly.

The basis for these amendments is comprised in the originally filed description, page 2, lines 7 to 10 which reads as follows:

"In the description and the appended claims, the term 'sensor coverage area' is to be understood as the area that is monitored by the sensor. In other words, it is the area that determines the sensor input. For example, the sensor coverage area may be

determined by an aperture angle or opening angle of the installed sensor, ..."

The appellant argued that according to the second sentence of this citation the adjustment of the coverage area by adjustment of the aperture or opening angle presented only an example ("*For example*") and did not concern a generally valid condition. Furthermore, the use of the term "*may*" indicated that changing the aperture or opening angle did not always and not necessarily change the sensor coverage area. This was further substantiated by a figure in the statement setting out the grounds of appeal, page 6. A change of the aperture or opening angle did not necessarily change the coverage area.

The board does not share this view of the appellant, but reads the passage cited above as follows. One example of changing the coverage area is presented. The coverage area can therefore be changed unconditionally when changing the aperture or the opening angle. The use of the term "*may*" refers to the example and does not mean that if the aperture or opening angle is changed the coverage area might remain unchanged. The skilled person also understands directly and unambiguously from the passage cited above that an adjustment of the aperture or the aperture angle has an immediate effect on the coverage area of the sensor as both parameters are directly linked to each other. Although they are not synonymous with each other, in the given context relating to an installed sensor (see below), changing the aperture or opening angle necessarily leads to a change in the coverage area. The aperture or opening angle is a sensor-inherent parameter, while the coverage area is a resultant parameter (not inherent to the sensor). The relation

between the aperture or opening angle and the coverage area is however such that changing the aperture or opening angle (without changing the position of the installed sensor, see below) changes directly and unconditionally also the coverage area.

As the board understands it, changing the position of an "*installed sensor*" is not contemplated in the given context. Claims 1 and 12 define that the adjustment of the sensor aperture or opening angle of each of the sensors is "*based on information on a position of the installed sensor ... relative to ... one other sensor ... of the installed building service sensors*". Although the application documents do not contain a precise definition of the terms "*installed sensor*" "*installed building service sensors*" or "*position of the installed sensor*", the skilled person would understand, considering the overall context of the invention as disclosed in the originally filed documents and in particular considering Figures 1 and 2 of the application, that once the sensors are installed, i.e. placed in their position of use, they would not change their position during use. Nothing else could be deduced from Figures 1 or 2 as originally filed and the original description. Moreover, the information based on the position of the different installed sensors, as defined in claims 1 and 12, is not discussed further, so the only reasonable understanding is a fixed position for each of the "*installed sensor*". Even if these sensors were installed on a table, as argued by the appellant, they would not be intended to change their position when being part of the "*installed building service sensors*". The invention as disclosed in the originally filed documents can only be understood such that the position of the installed building service sensors, i.e. the

sensors in use, are not changed, contrary to the appellant's allegation. The situation as illustrated by the appellant in the figure shown on page 6 of the statement setting out the grounds of appeal, where both the aperture angle and the position of the sensor change, cannot occur if the sensor is an "*installed sensor ... of the installed building service sensors*" as defined in claims 1 and 12.

Therefore, the board concludes that the wording of claims 1 and 12, namely that "*adjusting a sensor aperture or opening angle*" changes at the same time the "*coverage area*", can be directly and unambiguously derived from the originally filed documents. Hence, omitting the feature relating to the coverage area does not constitute added subject-matter as it is implied by the feature relating to the adjustment of the aperture or opening angle.

Finally, concerning the amendment "*automatically*", a direct and unambiguous disclosure is given in the original description on page 13, lines 25 to 27.

In view of the above, the board concludes that the subject-matter defined in claims 1 and 12 does not extend beyond the content of the application as filed (Article 123(2) EPC).

2. Documents O1 / O1' and O2 / O2'

The patentability is discussed in view of Chinese patent documents O1 and O2. Reference is also made to these documents with the associated machine-generated translations O1' and O2', which were not contested by any of the parties. Therefore, in the following,

references to documents O1' or O2' implicitly include the corresponding passages of documents O1 and O2.

3. Novelty

3.1 Document O1 / O1'

3.1.1 Document O1 discloses (the references in parentheses refer to document O1 if figures are concerned and document O1' if the description is concerned and the struck through features are not disclosed in document O1 / O1') a method of adjusting at least one sensor (O1': page 1, first paragraph) of installed building service sensors (O1': page 1, first paragraph; O1: Figures 2, 3 and 5) of a building service system (O1': page 2, first paragraph), the method comprising the step of:

~~automatically adjusting a sensor aperture or opening angle of~~ said at least one sensor (O1': page 2, last paragraph),

~~the adjusting of the sensor aperture or opening angle~~ of each of said at least one sensor being based on information on a position of the installed sensor (O1: Figures 2, 3 and 5) relative to at least one other sensor (O1: Figures 2, 3 and 5; O1': page 1, first paragraph) of the installed building service sensors. Document O1 discloses the adjustment of only the orientation of the respective sensors. There is no disclosure that the aperture or opening angle of the different sensors can be automatically adjusted.

Therefore, document O1 / O1' does not disclose "*automatically adjusting a sensor aperture or opening angle*" of a sensor based on positional information relative to another sensor of the installed building service sensors.

3.1.2 The appellant argued that a change in orientation of the aperture or opening angle, as disclosed in document O1 / O1', presented an adjustment of the aperture or opening angle thereby leading to a change in the coverage area. Therefore document O1 / O1' anticipated the subject-matter defined in claim 1 (and respectively claim 12).

3.1.3 The board does not agree since a change in orientation of an aperture or opening angle is not considered an adjustment of the aperture or opening angle. The aperture or opening angle is a scalar physical quantity which is independent of its direction. Document O1 / O1' shows opening angles of different sensors that all have the same values and for which only the orientation changes. In contrast, the explanations in relation to Figure 4 of the patent imply that in the patent the adjustment is to be understood as a change in the scalar value of the aperture or opening angle (see paragraph [0052]) in order to adjust the coverage area. Therefore, features F1.2 and F12.2 are not disclosed in document O1.

3.2 Document O2 / O2'

The relevant disclosure of document O2 / O2' is the essentially the same as that of document O1 / O1', so that all arguments made in relation to document O1 / O1' apply *mutatis mutandis* to document O2 / O2'.

Document O2 / O2' discloses a fixed aperture or opening angle of the sensors (O2: Figures 2, 5, 12(A) and 12(B) and O2': abstract) and an densification of the coverage area only by orienting the sensors.

3.3 Document O3

Document O3 discloses a sensor network with a plurality of sensors wherein the coverage area is optimised by an adjustment of the sensors' orientations and not by an adjustment of the sensors' aperture or opening angle. Therefore, the same argumentation as for documents O1 / O1' and O2 / O2' applies also with regard to document O3. The aperture or opening angle, referenced as angle Θ , is fixed (O3: page 2560, left column, last paragraph) and the self-orientation of the sensors is carried out by changing their orientation with respect to neighbouring sensors (O3: Figures 11 and 12). The aperture or opening angle of the different sensors is not adjusted automatically, but is fixed. Features F1.2 and F12.2 are consequently not disclosed in document O3.

3.4 Document O4'

3.4.1 Document O4' deals with an autofocus camera and provides no indication of the use of the autofocus camera as an "*installed sensor*", let alone of "*installed building service sensors*", nor does it disclose the adjustment of an aperture or opening angle of the camera. Autofocusing of a camera sharpens the image but has nothing to do with an adjustment of the aperture or opening angle. The board concludes that none of the features F1.1 to F1.3 of claim 1 and features F12.1 to F12.3 of claim 12 is disclosed in their entirety in document O4'.

3.4.2 The appellant argued that an autofocus camera was a directional optical sensor which was suitable to be used by installed building service sensors. This view was particularly justified because the patent in suit mentioned that the sensors could be a camera and the

specific type of installation within the building was not further specified in the wording of the claims.

- 3.4.3 The board is however of the opinion that
- autofocusing is different from "*automatically adjusting a sensor aperture or opening angle*" (see above) and
 - a single camera is different from "*installed building service sensors*" whereby this feature cannot be ignored even if its wording in the claim is rather general.

Therefore, the board concludes that none of the features F1.1 to F1.3 of claim 1 and features F12.1 to F12.3 of claim 12 is disclosed in their entirety in document O4'.

3.5 Summary in relation to novelty

In view of the above the subject-matter of claims 1 and 12 is new (Articles 52(1) and 54(1), (2) EPC).

4. Inventive step

4.1 Closest prior art

The appellant argued inventive step only with document O1 / O1' as closest prior art. This was not objected by the respondent. The board agrees that document O1 / O1' represents a suitable starting point for arguing inventive step.

4.2 Differentiating features

As shown under point 3.1 above, the subject-matter defined in claims 1 and 12 differs from what is known

from document O1 / O1' by "*automatically adjusting the aperture or opening angle of ... [the installed] sensor*" instead of the adjusting its orientation.

4.3 Objective technical problem / technical effect

The objective technical problem to be solved cannot be to scan the coverage area as densely as possible, as this problem is already solved in document O1 / O1'. The objective technical problem is therefore seen in providing an alternative to automatically adjusting the orientation of the installed sensors.

4.4 Obviousness in view of common general knowledge

The alternative of adjusting an aperture or opening angle compared to modifying the orientation of a sensor is, contrary to the appellant's assertion, not part of the common general knowledge. None of the cited documents shows this alternative and the argument used by the appellant is considered to be based on hindsight for the following reasons.

Sensors which allow an automatic adjustment of its aperture or opening angle were at the relevant filing date not part of the common general knowledge. Even if the influence of the aperture or opening angle on the coverage area was known to the skilled person, it was not known to automatically adjust the aperture or opening angle in a sensor. The technical realisation of an automatic adjustment of the aperture or opening angle demands for a particular mechanical and / or electronic adaptation of the sensor which was not part of the common general knowledge at the priority date of the patent. Therefore, the alternative of automatically adjusting the sensor's aperture or opening angle in

order to provide an alternative way of optimising the sensor's coverage area to adjusting the sensor's orientation is not obvious to the skilled person based on its common general knowledge.

4.5 Obviousness in view of document O6

4.5.1 The board already doubts whether the skilled person would combine document O1 / O1' with document O6. Document O6 deals with the planning of a wireless sensor network contrary to the teaching of document O1 / O1' which deals with a method and device for optimising the coverage area of "*installed building service sensors*" (similar to the impugned patent). Therefore, the optimisation of an installed sensor network is not dealt with in document O6.

4.5.2 However, even if the skilled person, when starting from document O1 / O1', were to consult document O6, it would not arrive at the claimed subject-matter in an obvious way. Document O6 and in particular the passages cited by the appellant (the abstract, page 218, point 3., and page 224, section "7 Conclusions and future works") do not disclose "*automatically adjusting a sensor aperture or opening angle*". Document O6 shows sensors with different opening angles and defines the "*field of view*" (equivalent to the aperture or opening angles) as "*the maximum angle of sensing which can be achieved by the sensor*" (O6: page 218, left column, point 3.). Document O6 further specifies that "*the FOV [field of view] of a directional sensor is defined as the angle whose sides define the range of vision of the sensor*" (page 218, left column, penultimate sentence) and that "*[w]ith each choice of direction, sensing range and FOV [field of view], a certain subset of control points will be covered by the directional*

sensor" (page 218, right column, second paragraph). Consequently, the field of view is a fixed, constructional parameter of the sensor which can be chosen differently for each sensor in the planning phase of the network. An automatic adjustment of the aperture or opening angle of the "*installed building service sensors*" is not disclosed in document O6. As indicated above, such automatic adjustment needs a particular mechanical and / or electronic equipment of the sensors themselves. It is not convincing to merely state in this respect that the automatic adjustment is already known from document O1 / O1', because the sensors themselves require specific technical equipment to enable the automatic adjustment of the aperture or opening angle. Therefore, the combination of the teaching of document O1 / O1' with that of document O6 does not lead to the subject-matter of claims 1 and 12, but at best to a sensor network with sensors having different, but fixed aperture angles and whereby the coverage area is optimised by rotation of the sensors. Therefore, also with respect to the combination of documents O1 / O1' and O6, the subject-matter defined in claims 1 and 12 involves an inventive step.

4.6 Obviousness in view of document O8

4.6.1 When starting from document O1 / O1', it is doubtful if the skilled person would consult document O8 due to the very different sensor technologies used in both documents (O1 / O1': video sensor technology; O8: infrared technology). Moreover, contrary to the appellant's assertion, it is not sufficient that the impugned patent cites both technologies as alternatives (see impugned patent, [0039]), because the starting point for arguing inventive step is not the impugned patent, but document O1 / O1'. Document O1 / O1'

discloses only the use of a video camera technology but does not show or hint to the infrared technology. Therefore, it is doubtful if the skilled person would combine the teaching of document O1 / O1' with that of document O8.

- 4.6.2 If, nevertheless, the skilled person were to combine the teaching of document O1 / O1' with document O8, it would not arrive at the claimed subject-matter. An automatic adjustment of the aperture or opening angle is again not taught in document O8, which admittedly discloses an infrared sensor usable with different apertures or opening angles. However, an automatic adjustment of these different aperture or opening angles is not possible, since only an installation of a specific aperture or opening angle adjusted manually by a user is shown. The different aperture or opening angles depend on the "*removably engaged*" retaining ring 201 (O8: column 3, lines 26 to 29). Therefore, the change of opening angle requires the mechanical manipulation of the sensor which is not disclosed to be done automatically. Therefore, an automatic adjustment would require a robot of which there is no disclosure in document O8 whatsoever. Therefore, the combination of the teaching of document O1 / O1' with that of document O8 would still not provide the feature "*automatically adjusting a sensor aperture or opening angle*". Consequently, the subject-matter defined in claims 1 and 12 involves an inventive step in view of O8.

4.7 Summary in relation to inventive step

Consequently, the subject-matter defined in claims 1 and 12 is not obvious for the skilled person when starting from the teaching of document O1 / O1', either

in combination with the common general knowledge or in combination with one of the documents O6 or O8. Hence the subject-matter defined in claims 1 and 12 involves an inventive step (Articles 52(1) and 56 EPC).

5. Conclusion

In view of the above, the board judges that the subject-matter defined in claims 1 and 12 of the sole request on file (claims 1 and 12 of the patent as granted) fulfils the requirements of the EPC, in particular it does not extend beyond the content of the application as filed, is new and involves an inventive step.

The same applies to claims 2 to 11, 13 and 14 because of their dependencies on claims 1 and 12.

Therefore, the appeal must fail.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



S. Sánchez Chiquero

T. Häusser

Decision electronically authenticated