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**Datasheet for the decision
of 19 January 2016**

Case Number: T 0108/13 - 3.2.01

Application Number: 99942501.0

Publication Number: 1112199

IPC: B60Q1/14

Language of the proceedings: EN

Title of invention:
CONTINUOUSLY VARIABLE HEADLAMP CONTROL

Patent Proprietor:
Gentex Corporation

Opponent:
Hella KGaA Hueck & Co.

Headword:

Relevant legal provisions:

RPBA Art. 12(4)
EPC Art. 54, 56

Keyword:

Admission of new submissions to appeal proceedings (no)
Novelty (yes)
Inventive step (yes)

Decisions cited:

Catchword:



**Beschwerdekammern
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Case Number: T 0108/13 - 3.2.01

**D E C I S I O N
of Technical Board of Appeal 3.2.01
of 19 January 2016**

Appellant: Gentex Corporation
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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
14 November 2012 concerning maintenance of the
European Patent No. 1112199 in amended form.**

Composition of the Board:

Chairman G. Pricolo
Members: C. Narcisi
P. Guntz

Summary of Facts and Submissions

I. European patent No. 1 112 199 was upheld in amended form by the decision of the Opposition Division posted on 14 November 2012. An appeal was lodged by Opponent 1 and by the Patentee on 11 January 2013 and on 24 January 2014 respectively and the appeal fees were paid. The statement of grounds of appeal was filed by Opponent 1 and by the Patentee on 22 March 2013 and on 14 March 2013 respectively.

II. Oral proceedings were held on 19 January 2016. Appellant I (Opponent 1) requested that the appealed decision be set aside and that the European patent be revoked. Appellant II (Patentee) withdrew its appeal (Appellant II is hereinafter designated as Respondent) and requested that the appeal of Opponent 1 be dismissed (sole request).

According to the appealed decision the patent was amended such as to include only one independent claim (i.e. claim 1 as granted), since granted independent claim 18 was found not to conform with the requirements of the EPC, in particular of Article 123(2) EPC.

III. Claim 1 as granted reads as follows:

"A method for automatically controlling vehicle headlamps (22) comprising:
receiving a signal representing an ambient light level;
enabling automatic control of headlamp operation if the ambient light level is below a first threshold level;
detecting an image in front of the vehicle headlamps;
and controlling the vehicle headlamps to produce a light level responsive to the detected image when

automatic control of headlamp operation is enabled by performing the following substeps:

- (a) acquiring an image from an imaging system, the image covering the glare area including points at which the driver in a vehicle (26, 28) in front of the headlamps would perceive the headlamps as causing excessive glare if the headlamps are operating above a low beam illumination level;
- (b) processing the image to determine if at least one vehicle in front of the controlled vehicle is within the glare area by detecting headlamps from oncoming vehicles (26) and tail lamps from leading vehicles (28); and
- (c) if at least one vehicle in front of the controlled vehicle is within the glare area, automatically controlling the vehicle headlamps."

IV. The Appellant's submissions may be summarized as follows:

The arguments against claim 1 of the main request based on the ground of opposition according to Article 100(c) EPC were submitted with the statement of grounds of appeal. Thus, these arguments were submitted timely at the beginning of the appeal proceedings and constitute part of the Appellant's case according to Articles 12(1) and 12(2) RPBA (Rules of Procedure of the Boards of Appeal). The ground of opposition based on Article 100(c) EPC had already been discussed during opposition proceedings in relation to granted independent claim 18 and according to the impugned decision the objections related to Article 100(c) EPC prejudiced maintenance of the patent as granted. Thus, on the one hand, the additional arguments submitted in relation to claim 1 of the main request being based on the same ground of opposition would not open an

entirely new or different discussion. On the other hand, these arguments could not have been presented earlier since the Opponent did not have enough time to react when the Patentee suddenly switched during oral proceedings (in opposition proceedings) to the auxiliary request, including as an independent claim only independent claim 1. Therefore these arguments have not been submitted belatedly and moreover there would also be no reason for the Board to exercise its discretion under Article 12(4) RPBR such as not to admit these arguments to the appeal proceedings.

The subject-matter of claim 1 of the main request is not new over D1 (WO-A-97/35743). In particular, the appealed decision (see page 5) asserted that the features designated I (i.e. "enabling automatic control of headlamp operation if the ambient light level is below a first threshold level"), II (i.e. "processing the image to determine if at least one vehicle in front of the controlled vehicle is within the glare area") and III (i.e. "if at least one vehicle in front of the controlled vehicle is within the controlled glare area, automatically controlling the vehicle headlamps") were not known from D1. However, above feature I is disclosed in D1 (see claims 13 and 21), claim 21 of D1 specifically reading "the vehicle headlamp control in claim 13 including an ambient light detector which enables said control circuit during low ambient light conditions". As to feature II it may be inferred from D1 as for instance from page 6, lines 11 to 16 and page 12, lines 20 to 26, these passages of D1 implying that all light signals emitted from sources located in different visible areas in front of the vehicle and impinging on individual pixels of the image sensor are analysed by the detection circuit 78 for having or not an intensity above a particular threshold. Thus the

visible area in front of the vehicle and the corresponding area on the image sensor is screened for producing a light intensity above a given threshold. In this way a glare area is determined out of a visible area in front of the vehicle. Finally, feature III may be inferred for instance from page 2, lines 9 to 12 of D1 (see also page 2, lines 16-19).

Anyway, the subject-matter of claim 1 is not inventive over D1 in view of the skilled person's common general knowledge or in view of D2 (US-A-5 707 129). Starting from D1 the skilled person would aim at improving the known system by further reducing the likelihood of an oncoming or leading driver being disturbed by the control vehicle's headlamps. Therefore, the skilled person would obviously try to determine an area in front of the control vehicle where oncoming (or leading) drivers would be disturbed by excessive glare. Specifically, the spatial differentiation (i.e. image processing techniques to be employed to discriminate between close-up off-axis light sources of interest and distant off-axis light sources, which are not of interest) disclosed in D1 (pages 11, 12; figures 11a, 11b, 11c) already suggests to the skilled person to introduce such an area (defined as "glare area") to identify headlights of oncoming vehicles and whose drivers are disturbed by excessive intensity of the headlamps. Thus the skilled person would arrive in an obvious manner, based on its common general knowledge, to the claimed subject-matter. Alternatively, the skilled person would consult the prior art and would retain document D2 disclosing a glare sensor, "which detects the presence of a preceding vehicle or a vehicle traveling in the opposite direction in front of the vehicle carrying the headlamp" (D2, column 5, lines 30-34). Thus by the obvious use of a glare sensor in

the method of D1 a refinement and improvement of the method would be obtained, allowing to better screen for oncoming cars and drivers experiencing excessive glare. Thus the claimed subject-matter would be arrived at in an obvious manner.

V. The Respondent's arguments may be summarized as follows:

The objections based on Article 100(c) EPC raised against claim 1 of the main request were filed late. The Appellant had ample opportunity to submit these arguments during the opposition proceedings, particularly after the summons to attend oral proceedings, the annex to these summons introducing into the proceedings the ground of opposition based on Article 100(c) in relation to claim 18. Further, objections based on Article 123(2) EPC against both amended claims 1 and 18 of an auxiliary request (filed by the Patentee in reply to the notice of opposition) were also raised in this annex and thus the Appellant actually had an incentive to likewise consider the subject-matter of granted claim 1 in view of Article 100(c). Missing this opportunity cannot be remedied by submitting such arguments with the statement of grounds of appeal since this is too late in view of the state of the proceedings and additionally amounts to opening a completely new discussion about features never considered in relation to this ground of opposition during opposition proceedings. Therefore, these submissions should not be admitted into the appeal proceedings.

The subject-matter of granted claim 1 is new over D1 since the above mentioned features I to III are not known therefrom. In effect, according to D1 automatic

control is enabled not only if "the ambient light level is below a first threshold level" (see feature I, point IV), but also at "high ambient level" to inhibit headlight actuation (see D1, page 6, lines 24-25). Thus, feature I is not known from D1. Additionally, features II and III (see point IV) are likewise not disclosed in D1, for the concept of a "glare area" is not derivable therefrom. "Glare area" is a technical term which is used in vehicle lighting regulations and hence has a well defined meaning. According to claim 1 points in this area include points in front of the vehicle at which an oncoming driver perceives excessive glare if the headlamps are operating above low beam operation level. This can be detected by measuring corresponding levels of light intensity. By contrast hereto, D1 aims at identifying "relatively small light sources ... at great distances in order to dim the headlights well before they become a nuisance to the driver ahead of the control vehicle" (D1, page 13, lines 12-15). Thus, features II and III are likewise not disclosed in D1.

Reasons for the Decision

1. The appeal is admissible.
2. In the Board's view the Appellant's arguments based on Article 100(c) EPC and related to independent claim 1 were late filed and should have been submitted already during opposition proceedings. The Opposition Division introduced the ground of opposition based on Article 100(c) EPC into the proceedings with the annex to the summons of the parties to the oral proceedings. There, not only the aforesaid ground of opposition was introduced into the proceedings in relation to granted claim 18, but in addition the amended set of claims

(filed on 24 March 2009), particularly claims 1 and 18, was stated not to comply with Article 123(2) EPC. This should have prompted the Opponent (Appellant) to consider whether the same ground of opposition according to Article 100(c) EPC applied to granted claim 1 and this even more so, given that claim 1 is nothing else but the method claim corresponding to product claim 18. In this respect it is immaterial that the feature objected to under Article 100(c) in granted claim 18 (i.e. features including the term "illumination pattern") was not present in claim 1, for both claims have a number of similar or equivalent features (see for instance "enable automatic control of headlamp operation ... if the ambient light level is below a first threshold level") which should have prompted the Opponent to extend scrutiny of granted claim 18 under Article 100(c) EPC also to granted claim 1. Finally, responding to the summons to the oral proceedings the Patentee filed a first auxiliary request wherein independent claim 18 was deleted (see submissions dated 20 August 2012). Thus, the Opponent knew already well in advance of the oral proceedings, that in the event of non-allowability of the main request, the discussion would hinge only on claim 1 as granted (according to the first auxiliary request). This should have made it more than imperative for the Opponent to have at least before the oral proceedings a closer look at the subject-matter of granted claim 1 in view of Article 100(c) EPC. For these reasons the Board considers that the objections under Article 100(c) EPC submitted against claim 1 with the statement of grounds of appeal are late filed and should have been filed already during opposition proceedings.

The Board decided to exercise its discretion under Article 12(4) RPBA (Rules of Procedure of the Boards of

Appeal) not to admit said late filed submissions to the appeal proceedings. Specifically, it was considered that the objections brought forward by the Appellant against granted claim 1 comprised a number of different features of a nature such as to require opening a discussion on basic elements and aspects of the invention, which discussion should have been part of the opposition proceedings but in fact was not. This discussion covering an ensemble of several features in granted claim 1 would go well beyond the factual framework of the opposition proceedings as established by the notice of opposition, the written proceedings and the decision of the Opposition Division. Hence the Board decided not to admit into the appeal proceedings these objections based on Article 100(c) EPC and related exclusively to independent claim 1.

3. The subject-matter of claim 1 is new over D1, for at least said features II and III are not derivable from D1. In the Board's judgement feature (a) of claim 1, which reads "acquiring an image from an imaging system, the image covering the glare area including points at which the driver in a vehicle (26, 28) in front of the headlamps would perceive the headlamps as causing excessive glare if the headlamps are operating above a low beam illumination level", gives a sufficiently accurate definition of a "glare area". Accordingly the "glare area" is defined as an area of predetermined or predefined geometrical shape or spatial range, where an oncoming driver would be disturbed by excessive glare, if the headlamps are operating above a low beam operation level. This area in front of the control vehicle necessarily corresponds to an equivalent area on the image sensor and consequently, if the image sensor detects a headlamp within this area, automatic control of the headlamps is

initiated, according to steps (b) and (c) of claim 1. In particular, according to feature (b), the image is processed to determine if at least one vehicle in front of the controlled vehicle is within the glare area. By contrast, according to D1 headlamps may be detected not only within this predefined area (i.e. "glare area") but in principle anywhere (at any distance) in front of the control vehicle (see D1, page 13, lines 10-15) if the intensity of the headlamp as measured by the image sensor exceeds the corresponding predetermined threshold set by the control system (see D1, page 6, lines 11-16). Specifically, D1 states that "relatively small light sources may be detected at great distances in order to dim headlights well before they become a nuisance to the driver of the vehicle ahead of the control vehicle" (D1, page 13, cited passage). This substantial difference consisting in determining whether a vehicle is within the glare area (therefore corresponding to aforementioned features II and III, these being equivalent to or constituting part of features (b) and (c)) implies that the subject-matter of claim 1 is not anticipated by D1 (Article 54 EPC).

4. The subject-matter of claim 1 likewise involves an inventive step in view of D1. Contrary to the Appellant's view the disclosure of D1 does not render obvious to the skilled person the claimed subject-matter. Indeed, the concept of a "glare area" and of determining whether a vehicle is within the "glare area" within the meaning of claim 1 (see point 3. above) is missing in D1, for even in the embodiments according to figures 11b or 11c the principle still applies that "on-axis light sources of interest can be both at close and far away separation distance from the vehicle" (D1, page 12, lines 10-11). Therefore, what these embodiments actually do, is merely "detecting

light sources at a lower threshold centrally of the scene and at a higher threshold at the periphery of the scene" (D1, page 12, lines 24-26), or alternatively, not sensing at all (i.e. masking) portions at the periphery of the scene (D1, figure 11c, page 13, lines 7-9). As stated above, this is markedly different from the above mentioned determining step of claim 1 and D1 gives the skilled person no hint heading in that direction.

Taking into account document D2 does not alter these conclusions. D2 discloses the use of a glare sensor, and, as described in D1 (page 1, lines 19-21), this amounts to the use of "a single light sensor which integrates light in the scene forward of the vehicle" according to known prior art. This approach is remarkably different from that taken in D1, where an analysis of various single light sources detected in various locations in the scene forward of the vehicle is performed. Hence, in the first place, it would not be evident for the skilled person how to combine two entirely different headlamp detection methods. Most importantly, however, the use of a glare sensor according to D2 cannot be equated to said definition of a "glare area", given that said glare sensor disclosed in D2 as usual detects light sources depending exclusively on measured intensities and sensed wavelengths, regardless of the distance at which or of the area in which the detected light source is located.

For these reasons it ensues that the claimed subject-matter is not obvious for the skilled person in view of D1 and common general knowledge or in view of D1 and D2 (Article 56 EPC).

The Board notes that other lines of argument submitted by the Appellant in writing, disputing that inventive step is implied by the subject-matter of claim 1, were no longer pursued by the Appellant during the oral proceedings. These lines of argument, however, which are not based on most relevant prior art document D1, cannot change the above conclusions either, as none of the cited documents discloses or suggests the above mentioned determination of whether a vehicle is within a predefined glare area.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



A. Vottner

G. Pricolo

Decision electronically authenticated