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**Datasheet for the decision
of 18 September 2012**

Case Number: T 0671/08 - 3.4.03

Application Number: 00931168.9

Publication Number: 1183913

IPC: H05B 3/86, H01Q 1/12

Language of the proceedings: EN

Title of invention:

An automotive glazing panel with solar control coating
comprising a data transmission window

Patent Proprietor:

AGC Flat Glass Europe SA

Opponent:

SAINT-GOBAIN GLASS FRANCE

Headword:

-

Relevant legal provisions:

EPC Art. 104(1), 108, 123(2)

EPC R. 99

RPBA Art. 12(4), 13(3), 16(1)(a), 16(2), 23

Relevant legal provisions (EPC 1973):

EPC Art. 54(1)(2), 56, 84, 100(a)(b)(c), 111(1)(2), 113(1),
114(1)(2)

Keyword:

Sufficiency of disclosure (yes)

Novelty - main request and first auxiliary request (no),
second auxiliary request (yes)

Apportionment of costs (yes) - occasioned by new objection by
the opponent

Remittal (yes)

Decisions cited:

T 0028/10

Catchword:

Late filed argument exceptionally admitted despite causing adjournment of the oral proceedings (reasons 7.1 to 7.5).

Unidentified "prior art" cited in the patent does not form part of the state of the art within the meaning of Article 54(2) EPC 1973 and cannot be used for basing an assessment of inventive step (reasons 6.4).

Remission for consideration of new prior art documents.



Case Number: T 0671/08 - 3.4.03

DECISION
of the Technical Board of Appeal 3.4.03
of 18 September 2012

Appellant I:
(Patent Proprietor)

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Appellant II:
(Opponent)

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Representative:

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Decision under appeal:

**Interlocutory decision of the Opposition
Division of the European Patent Office posted
22 February 2008 concerning maintenance of
European patent No. 1183913 in amended form.**

Composition of the Board:

Chairman: G. Eliasson
Members: V. L. P. Frank
P. Mühlens

Summary of Facts and Submissions

- I. The appeals by the patent proprietor and the opponent are directed against the decision of the opposition division to maintain the European patent EP 1 183 918 (Article 101(3) EPC) on the basis of the 3rd auxiliary request.

The patent was opposed in its totality. Grounds of opposition were lack of novelty and inventive step (Article 100(a), 54 and 56 EPC 1973), insufficiency of disclosure (Article 100(b) EPC 1973) and added subject-matter (Article 100(c) EPC 1973).

- II. At oral proceedings before the board, the appellant proprietor requested that the decision under appeal be set aside and that the patent be maintained as granted (main request), or that the patent be maintained in amended form on the basis of one of the first, second, third or fourth auxiliary requests, all filed with letter of 13 December 2011, and that the opponent's appeal be rejected as inadmissible.

The appellant opponent requested that the decision under appeal be set aside and that the patent be revoked.

The appellant opponent further requested that the proprietor's main request, ie to maintain the patent as granted, not be admitted into the proceedings, since it had not been defended in the proceedings before the department of first instance. Having regard to whether the main request meets the requirements of Article 123(2) EPC, the appellant opponent requested

remittal to the department of first instance, and apportionment of costs.

The appellant opponent requested that documents A2 to A13 be admitted into the proceedings.

The appellant proprietor requested not to admit these documents.

III. Independent claims 1 and 9 of the granted patent, forming the appellant proprietor's main request, read as follows:

- "1. An automotive windscreen glazing panel (10) having an electrically heatable solar control coating layer (25), spaced first and second bus bars (31, 32) adapted to relay electrical power to the coating layer and a data transmission window (27) forming an interruption in the coating layer between the two bus bars, in which the data transmission window is positioned adjacent the top edge (21) of the glazing panel, the first bus bar (31) is positioned adjacent a first side edge (22) of the glazing panel and the second bus bar (32) is positioned adjacent a second side edge (24) of the glazing panel."
- "9. A method of controlling heat dissipation over at least part of the surface area of an automotive glazing panel comprising use of an automotive windscreen glazing panel in accordance with any preceding claim."

Claim 1 of the 1st auxiliary request reads (the differences to claim 1 of the previous request were underlined by the board):

"1. An automotive windscreen glazing panel (10) having an electrically heatable solar control coating layer (25), spaced first and second bus bars (31, 32) adapted to relay electrical power to the coating layer and a data transmission window (27) forming an interruption in the coating layer between the two bus bars at a portion of glazing, in which the data transmission window is positioned adjacent the top edge (21) of the glazing panel, the first bus bar (31) is positioned adjacent a first side edge (22) of the glazing panel and the second bus bar (32) is positioned adjacent a second side edge (24) of the glazing panel, characterized in that the data transmission window (27) specifically allows the passage of electromagnetic waves through that portion of glazing."

Claim 1 of the 2nd auxiliary request appends the following feature to the end of claim 1 of the 1st auxiliary request:

"and in that said data transmission window (27) has a length of less than 400 mm."

Independent method claim 9 of the 1st and 2nd requests further specifies that electrical energy is dissipated

into the solar coating layer through said first and second bus bars.

Independent claim 2 of the main, 1st and 2nd auxiliary requests differs from claim 1 of the respective requests in that the data transmission window is positioned adjacent to the bottom edge of the glazing panel instead of being positioned adjacent to the top edge.

The 3rd and 4th auxiliary requests are of no relevance to this decision.

IV. The following documents are cited in this decision:

A1 = US 5 012 255 A
A2 = DE 195 13 263 A
A3 = US 5 898 407 A
A4 = EP 0 726 232 A
A5 = EP 0 378 917 A
A6 = US 4 446 270 A
A7 = GB 2 186 769 A
A8 = EP 0 136 208 A
A9 = EP 0 702 423 A
A10 = WO 98/47703 A
A11 = WO 91/10564 A
A12 = US 5 354 966 A
D13 = WO 99/54961 A

Documents A8 to A12 were filed by the appellant opponent with his statement of grounds of appeal, while document D13 was filed with the appellant opponent's letter of 24 November 2011.

V. In the decision under appeal, the opposition division found that:

- documents A2, A3, A5 and A7 were not admitted into the proceedings, since they were belated and not considered *prima facie* to be more relevant than document A1. The opponent's argument for introducing these documents was that they disclosed a vertical disposition of the bus bars, something already disclosed in A1 (reasons, A2).

- the claims of the main request, which now form the 1st auxiliary request in appeal, fulfilled the requirements of Articles 84, 100(b) 100(c), 123(2) and 123(3) EPC (reasons, B1 to B3). The windscreen of claims 1 and 2 however lacked novelty over the windscreen disclosed in document A1, since the radio antenna slot of A1 was an interruption of the coating layer and as such would inevitably allow passage therethrough of some kind of electromagnetic waves. The antenna slot could thus be considered a data transmission window. The term "specific" did not add any particular technical property to the data transmission window so that it could be distinguished from the antenna slot of A1 (reasons, B4).

- the claims of the 3rd auxiliary request, which now form the 2nd auxiliary request in appeal, fulfilled the requirements of Articles 84, 100(c), 123(2) and 123(3) EPC (reasons, E1 and E2). The windscreen of claims 1 and 2 was novel over the windscreen shown in Figure 2 of A1. The embodiment of Figure 2 disclosed a vertical antenna slot. Hence the length

of the antenna slot had to be measured in the vertical and not in the horizontal direction as argued by the opponent. Furthermore, the antenna slot was not located adjacent to the top or bottom edges of the glazing panel (reasons E3).

- For the assessment of inventive step of the claims of the 3rd auxiliary request the opposition division started from paragraph [0013] of the opposed patent, identifying this acknowledged but not identified prior art as document A0. This prior art was closer to the invention than document A1 which was the starting point chosen by the opponent. The opposition division came to the conclusion that the windscreen of claims 1 and 2 involved an inventive step even when starting from the unidentified, but closest prior art A0. Thus these windscreens involved *a fortiori* an inventive step when starting from a more remote document such as A1. The same reasoning was valid for the method of claim 9 which was considered by the opposition division to be equivalent to a use claim directed to the use of the windscreen of any of the preceding claims (reasons, E4 and E5).

VI. With letter dated 29 December 2011 the appellant opponent raised a further objection under Article 100(b) EPC 1973 arguing essentially that even nowadays it was not possible to manufacture an electric conductive coating being sufficiently transparent for a windscreen and having an electric resistance low enough to allow sufficient heating of the windscreen. This objection had not been raised before in the opposition or opposition appeal proceedings.

At first oral proceedings held on 11 January 2012 the appellant proprietor stated that it had been impossible to prepare a proper reply to this objection due to the new year's festivities. He thus requested adjournment of the oral proceedings and repartition of costs.

After a discussion on the admissibility of the appellant proprietor's main request and the requests for adjournment and repartition of costs, the board decided to admit the appellant proprietor's main request, to adjourn the oral proceedings and that the costs of the oral proceedings of 11 January 2012 be borne by the appellant opponent (Article 104(1) EPC and Article 16 RPBA).

With letter dated 13 Mars 2012 the appellant opponent raised three objections under Rule 106 EPC in relation to the decision of the board to admit the appellant proprietor's main request into the proceedings. He argued that the board had committed for three times a fundamental procedural violation under Rule 104(b) EPC, ie that it had decided on the appeal without deciding on a request relevant to that decision, since in particular three questions should have been addressed before admitting the appellant proprietor's main request, namely

- i) which documents formed the main request?
- ii) was this request voluntarily withdrawn by the proprietor prior to the oral proceedings before the opposition division?
- iii) did the opposition division decide on this request?

Second oral proceedings were held on 18 September 2012.

VII. The appellant proprietor argued essentially as follows:

- The appeal by the opponent was not admissible, since the appeal brief was filed on a letterhead of Saint-Gobain Recherche and stating "par la present nous formons un recours contre la decision" (emphasis added). The same applied to the reasons of appeal stating "notre mémoire de recours" (emphasis added). While the appeal was signed by the same professional representative as the opposition brief, the expression "nous" and "notre mémoire" indicate that the appeal was filed in the name of the entity named on the letterhead. Accordingly, the appeal was filed in the name of Saint-Gobain Recherche, which was not a party to the proceedings and was thus not entitled to file an appeal.

- It was requested that documents A2 to A12 and D13 not be admitted into the proceedings, since only document A1 was mentioned within the opposition period and these documents were considered to be less relevant to the present invention than A1.

- Although the opponent contested the admissibility of the main request, the objection that it was not clear which documents formed the main request was incorrect, since the indication "for all requests" found on pages 1a and 2a applied obviously to all auxiliary requests and could never apply to the request to maintain the patent as granted. This was indicated explicitly on page 2 of the letter of 13 December 2011. Moreover, the contention that the request to maintain the patent as granted was

inadmissible, since such a request had not been defended in the opposition proceedings, could not hold, as a partial surrender of the patent was not foreseen in the EPC.

- The objection that the invention was not described in a manner sufficiently clear and complete was not correct. Contrary to the opponent's assumption, other voltages than 12 V were commonly used in the automotive field such as about 42 V for trucks and buses and even voltage transformers were available for much higher voltages. Thus depending on the needs the person skilled in the art would consider using voltages which could be significantly higher than the 12 V assumed by the opponent in his model calculations.

- The granted claims did not contain subject-matter extending beyond the content of the application as filed. The original description disclosed the elongated form of the data transmission window as a preferred embodiment on page 3, while the general disclosure specified that the data transmission window had the form of a gap or hole, ie an interruption in the coating.

- Contrary to the decision of the opposition division, neither document A1 nor any of the other cited references disclosed all the features of granted claim 1. In particular, document A1 did not disclose "a data transmission window", but a slot in a solar control coating, wherein said slot was exclusively used as a slot antenna. It was not considered in A1 that any further data transmission through the

window glazing panel would be necessary.

Consequently, when starting from A1, the skilled person was not confronted with a technical problem in the first place. Before the present patent, it was not realized as being problematic that electromagnetic waves having a specific wavelength could not penetrate the solar control coating and enter the interior of the car. The only teaching the skilled person could infer from A1 was that the solar control coating and heating layer of the windscreen could be conveniently used as an antenna device. The windscreen of the main request was therefore new and involved an inventive step.

- The claims of the 1st auxiliary request further specified that the data transmission window "specifically allows the passage of electromagnetic waves through that portion of the glazing". Even if the slot antenna according to A1 would be considered a window, through which electromagnetic waves might pass, said slot antenna did not specifically allow passage of said electromagnetic radiation. The disclosure of A1 could only be considered an accidental disclosure of the feature that the slot forming the antenna allowed the passage of electromagnetic waves through that portion of the glazing. The person skilled in the art would consider said slot exclusively as an antenna. Said slot was not realized as a window for specific transmission of electromagnetic radiation there through. Therefore, given that document A1 related to a technical field being different from the present invention, namely the optimization of the integration of a slot antenna into a windshield, in

order to capture electromagnetic waves, wherein the invention related to the optimization of data transfer through said windshield, the skilled person would not consider A1 as disclosing the subject-matter of claim 1. This was particularly the case, since A1 disclosed the technical means for capturing electromagnetic radiation using said slot antenna, whereas the subject-matter of claim 1 allowed substantially unperturbed transfer of electromagnetic radiation through the windshield by said data transmission window. The feature "specifically" thus distinguished the subject-matter of claim 1 from the disclosure of A1, since the slot antenna provided a different technical function compared to the data transmission window of claim 1. Considering the slot antenna as a data transmission window, therefore, was an inadmissible *ex post facto* analysis of document A1 in the light of the present invention.

- The claims of the 2nd auxiliary request comprised further the feature that "said data transmission window has a length of less than 400 mm". Document A1 disclosed that the solar control layer had a slot which length depended on the signal to be detected. Since A1 did not disclose any specific size of the slot, the dimensions of the slot could be guessed using general assumptions. Considering the frequency of a radio signal to be about 107 MHz or less, the slot had a minimum length of about 875 mm. Consequently, the slot according to A1 was much larger than the slot according to the present invention. The present invention depended on an entirely different physical principle, in particular

allowing data transmission without electrically coupling the data transmission window to the signal. Thus a skilled person would not consider document A1 as a starting point for the present invention.

- The data transmission window according to the invention provided the technical effect that electromagnetic radiation of any wavelength could be transferred through the glazing. Hence, when starting from A1 the skilled person was confronted with the objective technical problem how to provide an improved data transfer through the windscreen glazing panel. In order to solve this problem the skilled person had no suggestion to arrive at the present invention.

- It was disputed that paragraph [0013] of the patent or the "prior art" A0 used by the opposition division as starting point for the assessment of inventive step were part of the state of the art, as there was no documentary evidence of it. The analysis of the opposition division was thus acceptable for the patent proprietor only in the positive. It was requested, in case the board decided to admit further documentary evidence that the case be remitted to the opposition division for further prosecution.

VIII. The appellant opponent argued essentially as follows:

- The appeal by the opponent was admissible, since the professional representative did not file the appeal in his name, but in the name of Saint-Gobain Glass France. In particular, explicit reference to the

opponent was made in the appeal brief on page 13, before last paragraph.

- It was requested to admit documents A2 to A12 and D13 into the proceedings. Document D13 in particular had been submitted in view of the opinion of the board that a window could not be anything else than a gap or a hole. The relevance of these documents could be assessed only in the light of the arguments of the other party.

- It was not clear which documents formed the proprietor's main request. Although it was stated that the main request was to maintain the patent as granted, amended description pages 1a and 2a had been submitted which indicated "for all requests", thus also the main request.

- The proprietor had not defended the patent as granted before the opposition division and therefore it was not admissible to do so in appeal. In the event that the board admitted this request into the proceedings it was requested that the case be remitted to the opposition division for further prosecution. It was the right of the parties to have the issues of novelty and inventive step decided by two instances.

- The patent did not disclose the invention sufficiently clear and complete for it to be carried out by a skilled person. In particular, there was no concrete embodiment giving the dimensions of the windscreen and the data transmission window. Furthermore, there was no disclosure of the

parameters required for controlling the heat dissipation on the windscreen. The skilled person was thus unable to manufacture the windscreen or to control the heat dissipated through it.

- A further objection was raised in connection to lack of sufficient disclosure in that it was not possible to manufacture an electric conductive coating being sufficiently transparent for a windscreen and having an electric resistance low enough to allow sufficient heating of the windscreen. The specific dissipated power could be defined by $P = V^2 / (R_s d^2)$, wherein V was the applied voltage, R_s the surface resistivity and d the distance between the bus bars. It was desirable to dissipate between 500 and 1500 W/m² which implied that for a voltage of 12 V and a distance d of about 0.5 m a surface resistivity of about 1.15 Ω/m² was required. This was already a value very difficult to attain. For a distance between bus bars of the order of 1.8 m, the normal size of a windscreen, it resulted that R_s should be about 0.08 Ω/m². Moreover according to regulation ECE R43, annex 18, a transparency of more than 75% was required for the principal vision field ("champ de vision principal") of a windscreen. These requirements were impossible to achieve at the filing date of the patent and even nowadays were still not possible. The option to increase the applied voltage to about 50 V or more was not an option that would be commercially viable, since it increased the cost of the windscreen and its associated equipment. Moreover, it increased the degradation of the electric contacts due to ON/OFF sparks.

- Claim 1 of the granted patent had been amended to comprise the added feature "a data transmission window forming an interruption in the coating layer between the two bus bars". However, the application disclosed that the window had the form of a gap or hole (page 2, line 1) and had an elongated form which reduced the width of the interruption in the coating (page 3, lines 21 to 28). These additional features were however missing from claim 1. Moreover granted claim 1 did not comprise the feature that the data transmission window allowed the passage of electromagnetic waves (page 2, lines 8 to 10). Hence granted claim 1 had been generalized in an unallowable manner. It was requested to remit the case to the department of first instance, since there had been no decision of the opposition division on these issues. It was furthermore requested to order a repartition of costs in favour of the appellant opponent.

- The opening in the windscreen disclosed in document A1 allowed data to pass therethrough. Although this opening was used in A1 as a slot antenna it permitted the passage of eg infrared radiation or GPS signals and had hence to be considered a data transmission window. The glazing panel of the main request was thus not new over A1.

- The additional feature that the data transmission window specifically allowed the passage of electromagnetic waves through that portion of the glazing did not render new the glazing panel of claim 1 of the 1st auxiliary request over document A1.

For example, a GPS located in front of the slot antenna of A1 would receive the GPS signals.

- The feature of claim 1 of the 2nd auxiliary request that the data transmission window had a length of less than 400 mm was unclear, since it was not specified in which direction the length was measured and only the upper limit was specified. However, for a range to be clear it had to specify its upper and lower boundaries.

- Figures 4, 4a and 5 of A1 disclosed a vertical portion 42 of the slot antenna which had a length of clearly less than 400 mm. The windscreen of claim 1 of the 2nd auxiliary request was hence not new over the embodiments disclosed in A1. Although A1 disclosed in relation to Figures 4 and 4a that the portion 42 was covered by a metallic insulating layer, no such disclosure was made in relation to the embodiment of Figure 5, which was an embodiment independent from the one of Figure 4. Hence it had to be deduced that the portion 42 was left uncovered in this latter embodiment. The portion 42 should be considered a data transmission window having a length of less than 400 mm.

- The windscreen of claim 1 of the 2nd auxiliary request did not involve an inventive step, since the data transmission windows of the prior art were located at the top or bottom of the windscreen (see prior art A0 forming the starting point for the opposition division, [0013] of the patent). These conventional data transmission windows had approximately the size of a smartphone, ie they had

a length of less than 400 mm. The difference with the windscreen of claim 1 was that the bus bars were located at the lateral sides of the windscreen. This was however known from document A1.

- In the event that the appellant proprietor disputed what the opposition division had considered to be part of the state of the art, ie the "prior art" A0, it was requested that the appellant opponent's documentary evidence be admitted and the case be remitted to the opposition division to assess these documents.

Reasons for the Decision

1. *Admissibility of the appeal (Article 108 EPC and Rule 99 EPC).*
 - 1.1 The appellant proprietor argued that the appeal by the appellant opponent was inadmissible, since the notice and the statement of grounds of appeal were filed on a letterhead of Saint-Gobain Recherche and merely indicated "*par la présente nous formons un recours*" and "*notre mémoire de recours*", respectively (emphasis added by the board). However, according to the first page of the notice of opposition, Saint-Gobain Recherche was not the opponent, but Saint-Gobain Glass France. Saint-Gobain Recherche was not and has never been a party to the proceedings and thus was not entitled to appeal (Article 107 EPC 1973).
 - 1.2 The notice of opposition however clearly identifies Saint-Gobain Glass France as the opponent and Mr. J. as

its professional representative having Saint-Gobain Recherche as professional address (parts III. and IV. of form 2300.1 received by the EPO on 11 July 2005).

- 1.3 In the view of the board, the filing of the notice and statement of grounds of appeal on a letterhead porting his professional address does not shed doubts on whose name the appeal was filed, ie Saint-Gobain France Glass. This fact is not affected by the use of the unspecific identifications "*nous*" and "*notre ... recours*".

The Board decides for these reasons that the appeal of the appellant opponent is admissible.

2. *Admissibility of the main request and remittal to the department of first instance on that basis*

- 2.1 The appellant proprietor's main request is to set aside the decision under appeal and to maintain the patent as granted.

- 2.2 The appellant opponent requested that this request not be admitted, since the patent as granted had not been defended by the proprietor in the proceedings before the opposition division. The proprietor's main request during the opposition proceedings was to maintain the patent in a more restricted version, namely the claims according to the 1st auxiliary request in appeal. The board would thus decide on a request that had never been discussed before the opposition division. This was contrary to the principle that only what has been decided on first instance could be reviewed in appeal. In several decisions the boards of appeal had refused to admit requests having a scope wider than the

requests discussed before the department of first instance.

2.3 It is the discretionary power of the boards of appeal not to admit requests that could have been presented or were not admitted in the first instance proceedings (Article 12(4) RPBA). The boards when applying this discretionary power take into account all the relevant facts of the case. It contradicts the nature of a discretionary power that a given course of action be pre-established irrespective of the circumstances of the case. The board therefore considers that there is no absolute right of the patent proprietor to revert in appeal to the patent as granted nor that he is in principle hindered from doing so. There will be cases, as the present case shows, in which the admission of such a request poses no additional work and other cases in which such a request may even constitute an abuse of the proceedings. It follows thus that if such a request is submitted in appeal the board has to exercise its discretion under Article 12(4) RPBA and decide whether to admit or not such a request (see the discussion on this topic in T 28/10, reasons 3.2-3.3, in which also the previous case law of the boards of appeal is discussed).

2.4 The present main request differs from the proprietor's main request at first instance (which is identical to the 1st auxiliary request on appeal) essentially by the absence of the sole characterizing feature. This feature however makes explicit what previously was implicit, namely that the purpose of a data transmission window is to allow the passage of electromagnetic waves (data) through that portion of

glazing. The board thus considers this feature as being implicitly contained in the concept of a data transmission window.

- 2.5 The board considers moreover that the appellant opponent cannot be unprepared to deal with the claims of the granted patent, since it was against these claims that he filed the opposition. Thus all the initial arguments, facts and evidence submitted with the grounds for opposition should speak against these claims. The appellant proprietor further filed his main request with the statement of grounds of appeal, ie at the earliest possible circumstance.

Thus under the present circumstances, the board considers that by admitting the main request the proceedings are not delayed nor the other party can be considered to be taken by surprise.

- 2.6 The appellant opponent further argued that it was not clear what exactly the proprietor's main request was, since the appellant proprietor had submitted amended description pages 1a and 2a which were marked "For all requests", ie apparently also for the main request. This was however incompatible with the requested maintenance as granted.

- 2.7 The board is not persuaded that the appellant proprietor's main request was not clear at any moment. The request to maintain the patent as granted means to maintain it with the granted description, claims and drawings. The remark "for all requests" found on description pages 1a and 2a submitted with the statement of grounds of appeal seems to contradict this

request. However, this contradiction is lifted by reading carefully the proprietor's statement of grounds of appeal, since for all auxiliary requests the pages forming the description are individually identified, but not so for the main request. This clearly implies that the main request is based on the patent documents as granted with no amended description pages, ie what one would expect from a request to maintain the patent as granted. The board has thus no doubts on which patent documents the appellant proprietor requested maintenance of the patent for each one of the main or 1st to 4th auxiliary requests.

2.8 The appellant opponent further requested that the case be remitted to the opposition division in order not to lose two instances in case that the board admitted the main request into the proceedings.

2.9 Remission to the department of first instance is explicitly foreseen in Article 11 RPBA only if fundamental deficiencies are apparent in the first instance proceedings unless special reasons prevent from doing so. Thus even in case of a fundamental deficiency the discretion of the board is still required, with the emphasis being made however that remittal is the normal course of action in such a situation. This implies that in cases in which no fundamental deficiency is apparent, as in the present case, remittal of the case to the department of first instance is a discretionary issue which lies within the sole competence of the board.

2.10 The opposition division found the main request not allowable, since the windscreen of claims 1 and 2

lacked novelty over A1. It is thus unlikely that the opposition division would have a different view on a claim having allegedly a larger scope, since the removal of the characterizing feature merely renders implicit what has been previously made explicit. Remitting the case to the opposition division would thus result in a foreseeable outcome, namely that the present main request be found not allowable for exactly the same reason as before, ie lack of novelty over A1. The remittal would thus serve no other purpose than wasting time and resources.

2.11 The board for these reasons decides to admit the main request into the proceedings and not to allow the appellant opponent's request to remit the case to the department of first instance on the basis of the main request.

3. *Sufficiency of disclosure (Article 100(b) EPC 1973)*

3.1 The appellant opponent alleged that at the filing date of the patent it was not possible to manufacture a conductive coating that simultaneously possessed:

(a) the high optical transparency required for an automotive windscreen (at least 75% of transparency in the visible range) and

(b) an electric resistance that was low enough for sufficiently heating the windscreen.

Only very thin coatings were sufficiently transparent, but the resistivity of a very thin film was too high to allow sufficient electric power to be dissipated, since

the electric power (P) dissipated at the windscreen was equal to the square of the applied voltage (V) divided by the electric resistance (R) between the bus bars ($P = V^2 / R$).

3.2 The appellant proprietor argued that, since the dissipated power was proportional to the square of the applied voltage, it would suffice for example to increase the applied voltage from 12 V to 50 V to achieve a dissipated power that was about sixteen times as high. This was not an unrealistic approach, since voltages higher than the 12 V found in cars were usual in buses or trucks.

3.3 The board is persuaded by the proprietor's argument, ie that the possibility exists to increase the applied voltage in order to dissipate more power at the windscreen. Although the appellant opponent's contended that such a possibility was not a viable alternative in view of the additional costs required for increasing the applied voltage or considering that the use of higher voltages increased the degradation speed of the electric contacts, the board is not persuaded by this argument, since sufficiency of disclosure is a requirement on the technical feasibility of the invention, but not a requirement for its commercial success.

3.4 The appellant opponent also argued that the method of claim 9 directed to a method of controlling heat dissipation over at least part of the surface area of an automotive glazing panel comprising use of an automotive windscreen glazing panel in accordance with any preceding claim was not sufficiently disclosed,

since no specific working parameters were provided in the description.

3.5 The board however agrees with the opposition division and considers the method of claim 9 as the use of the windscreen of any preceding claim for dissipating heat over at least a part of the surface area of an automotive glazing panel, since the term "*controlling*" is so vague and general that it does not confer any specific characteristic to the method. For example switching on and off the power supply to heat up the windscreen falls under the concept of controlling its heat dissipation. Such a use of a heatable windscreen is sufficiently disclosed to the skilled person.

3.6 The board finds for these reasons that the invention is disclosed in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art (Article 100(b) EPC 1973).

4. *Main request*

4.1 *Added subject-matter (Article 100(c) EPC 1973)*

4.1.1 Claim 1 as granted differs from claim 1 as filed in that the "*automotive glazing panel*" is specified to be an "*automotive **windscreen** glazing panel*" and that the glazing panel comprises a data transmission window "***forming an interruption in the coating layer between the two bus bars***" (emphasis added by the board to show the amendments).

4.1.2 The appellant opponent requested that the case be remitted to the opposition division for consideration

of the objections of added subject-matter in relation to the appellant proprietor's main request.

- 4.1.3 As already discussed under point 2 of this decision, there is no provision in the EPC that every aspect of a case be dealt with at two instances. In particular Article 111(1) EPC 1973 explicitly confers on the board all the powers of the department of first instance. The board therefore refuses the request for remittal to the opposition division for consideration of this issue.
- 4.1.4 The appellant opponent objected that the feature that the data transmission window formed an interruption in the coating layer was disclosed in the originally filed application in connection with other features, namely that the window had an elongated form and that it reduced the width of the interruption in the coating (see published application, page 3, lines 21 to 28). He also argued that the data transmission window was disclosed as having the form of a gap or hole (ibid, page 2, line 1) and that this feature was not present in claim 1. In this connection, he submitted that document D13 disclosed a data transmission window for high frequency radiation having the form of multiple lines.
- 4.1.5 The appellant proprietor argued that the original description disclosed the elongated form of the data transmission window as a preferred embodiment on page 3, while the general disclosure specified the data transmission window having the form of a gap or hole, ie an interruption in the coating (ibid, paragraph bridging pages 1 and 2).

- 4.1.6 The board does not admit document D13 into the proceedings, since it is unable to change the board's view that a window is a gap or hole. Even the multiple lines of D13 are nothing more than a gap or interruption in the coating. For this reason, the board does not consider it necessary that claim 1 should include the feature that the data transmission window is in the form of a gap or hole, since this feature is implicit in the concept of a window.
- 4.1.7 The appellant opponent further argued that the description as filed explicitly specified that the data transmission window allowed the passage of electromagnetic waves therethrough (ibid, paragraph bridging pages 1 and 2). This requirement was however also not found in granted claim 1.
- 4.1.8 The appellant proprietor pointed out that the passage of electromagnetic waves through the window was implicitly contained in the name of the window, ie data transmission window, and did thus not require further explicit specification in the claim.
- 4.1.9 The board is persuaded by the arguments of the appellant proprietor and is thus satisfied that the glazing panel of claim 1 of the main request does not contain subject-matter extending beyond the content of the application as filed (Article 100(c) EPC 1973). These considerations apply as well to claim 2, since the glazing panel of this claim differs from the panel of claim 1 only in that the data transmission window is located adjacent to the other edge (ie top or bottom) of the panel.

4.2 *Novelty (Article 54 EPC 1973)*

4.2.1 It is common ground that document A1 discloses an automotive windscreen 1 having an electrically heatable solar control coating layer and first and second bus bars 7, 8 located at the lateral sides of the windscreen (cf column 2, lines 5 to 29; Figure 1). A region of the windscreen is kept uncoated to form a slot antenna for radio reception. When such a windscreen is placed in the electromagnetic field of an FM broadcast transmitter, an alternating electrical field forms over the slot and a circular alternating current flows around the slot. The length of the slot is selected to correspond approximately to the electrical value $\lambda/2$ in the FM frequency band. The breadth of the slot can be kept very small with respect to the half-wavelength $\lambda/2$ (column 2, lines 34 to 44).

4.2.2 The appellant proprietor argued that the slot antenna of A1 could not be equated to the data transmission window of the patent and pointed out that the patent defined a data transmission window as a portion of the surface area of the glazing adapted to permit electromagnetic data transmission therethrough (end of [0006]). The slot antenna did not permit that the FM signals be transmitted therethrough, but the corresponding electromagnetic field induced a current around the slot that was transmitted to the radio receiver by coaxial cable 13, ie not through the slot.

4.2.3 A data transmission window is at its name says a window for transmitting data. It is the established practice of the boards of appeal that the term "*for*" be interpreted as "*suitable for*". It has thus to be

assessed whether the slot of document A1 is suitable for transmitting data therethrough. According to the patent one possible use of such windows is to permit transmission of electromagnetic signals of sensors or emitters located inside the vehicle, for example for automatic payment at toll barriers ([0002]). Such signals usually employ infrared wavelengths that are blocked by the solar control coating layer ([0006]). The board considers that although the slot antenna of A1 does not allow the transmission of AM or FM waves, as correctly pointed out by the appellant proprietor, it allows the unhindered passage of infrared radiation. The length of the slot antenna is given in A1 to be about $\lambda/2$, which the appellant proprietor argued to be about 875 mm. The width of the slot, although not explicitly disclosed in A1, is said to be much smaller. However, even a slot having a width two orders of magnitude smaller than its length still has a width of about one centimetre, enough to transmit an appreciable amount of infrared radiation.

4.2.4 The board finds, for these reasons, that the automotive windscreen glazing panel of claim 1 is not new over the windscreen disclosed in document A1 (Articles 100(a) and 54 EPC 1973). The main request is thus not allowable.

5. *1st auxiliary request - Novelty (Article 54 EPC 1973)*

5.1 Claim 1 of this request differs from claim 1 of the main request essentially in that it specifies that "*the data transmission window (27) specifically allows the passage of electromagnetic waves through that portion of glazing*".

5.2 The appellant proprietor argued that this feature explicitly specified the purpose of the window. Document A1 was an accidental disclosure, since the slot antenna was not specifically made for transmitting data, but for capturing them. By specifying the purpose of the window it was made clear that the claimed subject-matter differed from what was disclosed in A1.

5.3 However, as already discussed under point 4.2.3, in the present case the assessment of novelty turns around the issue whether or not a certain feature is suitable for achieving the desired result and does not depend on the purpose it was made for. As discussed with respect to the main request, the board considers that the slot antenna of document A1 is suitable for transmitting infrared radiation and therefore specifically allows the passage of electromagnetic waves through that portion of glazing.

5.4 The board finds, for these reasons, that the feature added to claim 1 of the 1st auxiliary request does not render the windscreen glazing panel new over the windscreen disclosed in A1 (Articles 100(a) and 54 EPC 1973). The 1st auxiliary request is thus not allowable.

6. *2nd auxiliary request*

6.1 Claim 1 of this request adds to the features of claim 1 of the 1st auxiliary request the feature that "*said data transmission window (27) has a length of less than 400 mm*".

6.2 *Clarity (Article 84 EPC 1973)*

6.2.1 The appellant opponent argued that the feature that the window's length was less than 400 mm was not clear, since a) no lower limit was given for the length and b) it was not understood in which direction the length was to be measured.

6.2.2 The feature concerning the length of the data transmission window is however already present in granted claim 4 which *inter alia* depends on granted claim 1. Claim 1 of the 2nd auxiliary request is thus a combination of granted claims 1 and 4 with the addition that "*the data transmission window specifically allows the passage of electromagnetic waves through that portion of glazing*". The objected feature, ie the length of the window, was thus part of the granted claims and can, according to the established case law of the boards of appeal, not be objected in opposition proceedings on the basis of lack of clarity, since Article 84 EPC 1973 is not a ground for opposition foreseen in Article 100 EPC 1973.

6.2.3 The board thus finds that the objection of lack of clarity against claim 1 of the 2nd auxiliary request cannot be raised in the present opposition or opposition appeal proceedings.

6.3 *Novelty (Article 54 EPC 1973)*

6.3.1 The appellant opponent argued that the embodiment of A1 shown in figure 5 disclosed a T-shaped slot antenna 55. The vertical arm of this slot had clearly a dimension

of less than 400 mm. This embodiment disclosed thus all the features of claims 1 and 2.

6.3.2 The appellant proprietor replied that the vertical portion of the embodiment of figure 5 corresponded to the vertical connection disclosed in relation to figure 4. Document A1 however disclosed that this vertical slot was covered by a metallic insulating layer 47 which, together with edges 43, 44, formed a capacitive coupling for a circular alternating current around the slot antenna (column 3, lines 24 to 37). Since the vertical slot was covered by a metallic insulating layer it could not act as a data transmission window nor was it suitable for transmitting data therethrough.

6.3.3 The appellant opponent however held that the embodiment of figure 5 was disclosed as an independent embodiment being an improved version of the slot antenna of figure 1 (column 3, lines 44 to 52). It was thus not disclosed in A1 that the vertical slot was covered as in the embodiment of figure 4.

6.3.4 The board is not persuaded by the appellant opponent's arguments and considers that the state of the art should be looked upon through the eyes of a person skilled in the art who construes it to make technical sense. It is clear to the board that the vertical slot of both figures serve the same purpose, namely as an electric contact for the data signal, and have essentially the same features. Leaving the slot open, as shown in figure 5, does not make technical sense to a person skilled in the art, since it would not allow the antenna to operate as one. Moreover, the focus in the embodiment of figure 5 is the use of a second slot

56 for improving the antenna's gain. Thus the electric connection through the vertical slot is not further discussed for this embodiment, since it is clear to the technically skilled person that it is made in the same way as shown in figures 4 and 4a.

6.3.5 Finally, as also argued by the appellant proprietor and not disputed by the appellant opponent, the horizontal length of the slot antenna is of about $\lambda/2$, ie about 875 mm. This is above the claimed upper limit of 400 mm.

6.3.6 The windscreen of claim 2 of this request possesses all the features of the windscreen of claim 1, except that the window is positioned adjacent to the bottom edge instead of being positioned adjacent to the top edge.

6.3.7 The board finds for these reasons that the automotive windscreen glazing panel of claims 1 and 2 of the 2nd auxiliary request is new over the disclosure of document A1.

6.4 *Inventive step (Article 56 EPC 1973)*

6.4.1 The opposition division based its assessment of inventive step when discussing the proprietor's 3rd auxiliary request on a prior art that it identified as A0, which was acknowledged but not identified in the opposed patent in paragraph [0013]. It considered this prior art to be closer to the invention as document A1 and started from A0 as the closest prior art. The opposition division came to the conclusion that the invention claimed in the proprietor's 3rd auxiliary request, which corresponds to the appellant proprietor's 2nd auxiliary request in appeal, involved

an inventive step even when starting from A0 (decision under appeal, reasons E4).

6.4.2 It is however the established case law of the boards of appeal that it is not allowable to base the assessment of substantive patentability (novelty and inventive step) upon subject-matter not identified as forming part of the state of the art within the meaning of Article 54(2) EPC 1973 (cf Case Law of the Boards of Appeal of the EPO, 6th ed. 2010, I.C.1.4).

6.4.3 The appellant proprietor contested at the oral proceedings before the board that the unidentified prior art mentioned in the opposed patent at paragraph [0013] was state of the art under Article 54(2) EPC 1973.

The board is therefore impeded from considering this unidentified prior art for the assessment of inventive step.

6.4.4 On the other hand, the board shares the view of the opposition division that document A1 does not represent a realistic starting point for assessing inventive step. The skilled person would not start from a document disclosing the properties of slot antennas when confronted with the problem of how to transmit data through a heatable windscreen. Document A1 is an accidental disclosure that may be considered when assessing novelty, but not as starting point when assessing inventive step.

6.4.5 The appellant opponent requested that documents A2 to A12 and D13 be admitted into the proceedings. The

appellant proprietor requested not to admit these documents as they were belated.

- 6.4.6 The opposition division decided not to admit documents A2, A3, A5 and A7, since they were belated and *prima facie* not more relevant than document A1 (reasons, A2). The board sees no reasons to depart from this assessment and the appellant opponent did not argue that the opposition division exerted their discretionary powers in the wrong way. Documents A4 and A6 were never relied upon neither in the opposition nor in the opposition appeal proceedings.

Documents A8 to A12 were submitted with the statement of grounds of appeal and were thus never considered by the opposition division. Documents A9, A10 and A11 appear *prima facie* to correspond at least in part to the prior art mentioned in paragraphs [0012] and [0013] of the opposed patent and would appear thus to represent a realistic starting point for the assessment of inventive step.

The board finds documents A8 and A12 to be less relevant than documents A9 to A11 and thus does not admit documents A8 and A12. As decided under point 4.1.6 of this decision, the board does not admit document D13 as well.

- 6.4.7 The board decides for these reasons to admit documents A9, A10 and A11 into the proceedings and to remit the case to the department of first instance for prosecution on the basis of the appellant proprietor's 2nd auxiliary request (Article 111(2) EPC 1973).

For the sake of completeness, the board wants to emphasize that the other findings in this decision, ie the issues of sufficiency of disclosure, added subject-matter, clarity and novelty, are part of the *ratio decidendi* of this decision and binding on the opposition division (Article 111(2) EPC 1973). These issues have been finally decided by the board and cannot be raised again or contested by the parties.

7. *Apportionment of costs*

- 7.1 With letter dated 29 December 2011 the appellant opponent raised a new objection under Article 100(b) EPC 1973 arguing essentially that even nowadays it was not possible to manufacture an electric conductive coating being sufficiently transparent for a windscreen and having an electric resistance low enough to allow sufficient heating of the windscreen.
- 7.2 The objection under Article 100(b) EPC 1973 raised in the opposition proceedings was directed at the method of claim 9 of controlling heat dissipation in a windscreen with a transmission window, since the presence of a transmission window disturbed the current flow (minutes of the oral proceedings before the opposition division, points 26 to 33). The objections under Article 100(b) EPC 1973 raised in the statement of grounds of appeal relied on the position of the transmission window (letter of 24 June 2008, page 3, point c) and on the method of controlling heat dissipation in a windscreen with a transmission window (point d).

- 7.3 At first oral proceedings held on 11 January 2012 the appellant proprietor stated that it had been impossible to prepare a proper reply to this new objection under Article 100(b) EPC 1973 due to the new year's festivities. He thus requested adjournment of the oral proceedings and repartition of costs.
- 7.4 The board considers the appellant opponent's objection to be a fundamental one that could not be ignored. This objection of insufficient disclosure is however different from the previously raised objections in the opposition proceedings and in the appellant opponent's statement of grounds of appeal. It is directed to the impossibility of making an automotive windscreen glazing panel having an electrically heatable solar control coating layer independently from the presence or absence of a transmission window.
- 7.5 The fundamental nature of the new objection would hence render any discussions on novelty and inventive step meaningless, had it been left unresolved. This case is thus an exception to the principles set out in Article 13(3) RPBA where amendments to a party's case should not be admitted into the proceedings when their admission would lead to an adjournment of the oral proceedings. Article 23 RPBA specifies namely that the Rules of Procedure shall be binding on the Boards of Appeal, provided that they do not lead to a situation which would be incompatible with the spirit and purpose of the Convention. Not admitting this objection would have gone against the principle of examination of its own motion enshrined in Article 114(1) EPC 1973, since Article 114(2) EPC 1973, which limits this principle and gives the EPO the discretion to disregard late

filed facts or evidence, does not apply to late filed arguments. The appellant opponent's objection under Article 100(b) EPC 1973 is a late filed argument that, in the board's view, cannot be disregarded without going against the spirit and purpose of the EPC.

- 7.6 It was the late filing of this objection that made it impossible for it to be discussed at the first oral proceedings without violating the appellant proprietor's right to be heard (Article 113(1) EPC 1973). It was thus the behaviour of the appellant opponent that made the adjournment of the oral proceedings before the board necessary. The board considers it thus equitable that the appellant opponent bears all the costs incurred by the appellant proprietor in relation to the oral proceedings of 11 January 2012, as requested by the appellant proprietor (Article 104(1) EPC, Article 16(1)(a) and (2) RPBA).

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance for further prosecution on the basis of the second auxiliary request filed with letter of 13 December 2011.
3. The costs of the oral proceedings of 11 January 2012 shall be borne by the opponent.

Registrar

Chair

S. Sánchez Chiquero

G. Eliasson