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**Datasheet for the decision  
of 1 December 2022**

**Case Number:** T 0714/20 - 3.5.06

**Application Number:** 14757497.4

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**IPC:** G06K9/00, G06T7/00, B60R1/00,  
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**Language of the proceedings:** EN

**Title of invention:**  
OBJECT SENSING DEVICE

**Applicant:**  
Hitachi Astemo, Ltd.

**Headword:**  
Pedestrian detection/HITACHI

**Relevant legal provisions:**  
EPC Art. 54  
EPC R. 116(2)  
RPBA 2020 Art. 12(4), 12(6)

**Keyword:**  
Novelty - auxiliary request (no)  
Amendment to case - exercise of discretion - Article 12(4) and  
12(6) RPBA 2020

**Decisions cited:**

T 1134/11

**Catchword:**

The principles expressed in Article 12(6) RPBA 2020 for the admittance of non-maintained or non-admitted requests may be considered in the exercise of discretion to admit amendments based on such requests under Article 12(4) RPBA 2020.



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Case Number: T 0714/20 - 3.5.06

**D E C I S I O N**  
**of Technical Board of Appeal 3.5.06**  
**of 1 December 2022**

**Appellant:** Hitachi Astemo, Ltd.  
(Applicant) 2520, Takaba  
Hitachinaka-shi, Ibaraki 312-8503 (JP)

**Representative:** MERH-IP Matias Erny Reichl Hoffmann  
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**Decision under appeal:** **Decision of the Examining Division of the  
European Patent Office posted on 18 December  
2019 refusing European patent application No.  
14757497.4 pursuant to Article 97(2) EPC.**

**Composition of the Board:**

**Chairman** M. Müller  
**Members:** T. Alecu  
A. Jimenez

## **Summary of Facts and Submissions**

- I. The appeal is against the decision of the Examining Division to refuse the application. There were three requests underlying this decision.
  
- II. The main request was refused for lack of clarity and inventive step. The first auxiliary request was not admitted under Rule 116(2) EPC and Rule 137(3) EPC. The second auxiliary request was refused for lack of inventive steps in view of  
  
D1: EP 2346014 A1, 20 July 2011.
  
- III. With the grounds of appeal, the Appellant requested that the decision of the Examining Division be set aside and that a patent be granted on the basis of a main request or one of two auxiliary requests, all filed with the grounds of appeal. These requests correspond respectively to a (main) request filed in advance of the oral proceedings before the Examining Division, but later replaced by the main request underlying the decision, to this latter main request, and to the first auxiliary request underlying the decision, all further amended in the same way to remedy the clarity objection noted in the decision in respect of the then main request.
  
- IV. In its preliminary opinion accompanying a summons to oral proceedings, the Board indicated that it tended not to admit the main and second auxiliary request (Article 12(4) and (6) RPBA 2020), that the first auxiliary request lacked novelty in view of D1 (Article 54 EPC), and that the amendment carried out for clarity

purposes appeared to extend beyond the content of the application as originally filed (Article 123(2) EPC).

V. In its reply to the summons, with letter of 2 November 2022, the Appellant brought arguments for the admittance of the main and second auxiliary requests, and also argued that the amendment carried out for clarity purposes was compliant with Article 123(2) EPC. In favour of novelty or inventive step the Appellant merely made reference to its arguments in the statement of grounds of appeal. Also during the oral proceedings before the Board, the Appellant referred to its written submissions for matters of substance and limited its oral submissions to the issues of admittance under the RPBA 2020.

VI. Claim 1 of the main request defines:

*An object sensing device (100) installable in a host vehicle, comprising:*

- an image capture unit (101; 102) configured to capture surroundings of the host vehicle; and*
- a processing device (111) configured to sequentially execute a periodic sensing process of an object to be sensed selected from a group comprising a pedestrian, a vehicle, a sign, and a lane from an image captured (1002; 1003) by the image capture unit (101; 102) one at a time and each with a specific first period, wherein the first period may be different for different elements of the group,*

*wherein the processing device (111) comprises:*

- a scene analysis unit (103) configured to analyze a travel scene of the host vehicle;*
- an existence probability calculation unit (105) configured to calculate an existence probability of the pedestrian based on static objects detected in*

*the travel scene analyzed by the scene analysis unit (103);*

*- a process priority change unit (106) configured to change a sensing process priority of the objects to be sensed based on the existence probability calculated by the existence probability calculation unit (105), such that a pedestrian sensing process is executed with priority over other objects from the group by executing the pedestrian sensing process repeatedly within the previously defined first period, thereby shortening a period to what is defined as a second period, if the existence probability of the pedestrian is higher than a predetermined value; and*

*- an object-to-be-sensed sensing unit (110) configured to sequentially sense each of the objects to be sensed of the group based on the sensing process priority changed by the process priority change unit (106).*

VII. Claim 1 of the first auxiliary request differs from that of the main request by adding at the end of the feature "a process priority change unit" the following:

*wherein if the existence probability of the pedestrian is higher than the predetermined value, a command for executing speed control by suppressing acceleration of the host vehicle is generated and output to a vehicle speed control device*

VIII. Claim 1 of the first auxiliary request differs from that of the main request by adding at the end of the claim:

*and wherein the processing device (111) comprises:*

*- an external information acquisition unit (104) configured to acquire map information; and the existence probability calculation unit (105) configured to calculate an existence probability of the pedestrian based on the map information acquired by the external information acquisition unit (104) and the travel scene analyzed by the scene analysis unit (103), wherein the existence probability calculation unit (105) is configured to calculate the existence probability of the pedestrian from the map information and the travel scene using pre-stored learned data in which travel scene types, place attributes, and existence probability values are associated.*

## **Reasons for the Decision**

### *Admittance - Article 12 RPBA 2020*

1. As stated above, the main request, first auxiliary request and second auxiliary request correspond respectively to a main request filed in advance of the oral proceedings before the Examining Division, but later replaced, to the main request underlying the decision, and to the first auxiliary request underlying the decision, all further amended to remedy a clarity objection noted in the decision.
  
2. The amendment used wording employed by the Examining Division itself when construing the claim (see the decision, point 22 of the reasons). It may therefore appear suitable to solve the clarity issue raised. When carried out on requests underlying the decision, it can therefore be considered as an appropriate response to the grounds for refusal and is not an obstacle to admittance under Article 12(4) RPBA 2020. This is the

case for the first auxiliary request, which is therefore admitted.

3. The main request is based on a request not maintained at first instance. Article 12(6) RPBA 2020 states, *inter alia*, that "[t]he Board shall not admit requests ... which were no longer maintained, in the proceedings leading to the decision under appeal". Since the non-maintained request was amended, Article 12(6) RPBA 2020 does not apply as such. However, the Board considers that the principle expressed in the cited passage may be considered in the exercise of discretion to admit amendments under Article 12(4) RPBA.
  - 3.1 In the case at hand, the amendment which has been carried out as a response to the mentioned clarity objection, in an attempt to define the periodicity of the pedestrian detection, is unrelated to the amendment carried out at first instance when the previous main request was replaced with the one underlying the appealed decision, which defined the use of the output of the pedestrian detection.
  - 3.2 So this request is effectively a return to a request that had not been maintained, plus one unrelated amendment.
4. The Appellant has provided no reasons for filing of this request in the grounds of appeal.
  - 4.1 In the reply to the Board's preliminary opinion it explained that in none of its submissions there are "statements which could be interpreted as abandonment with substantive effect". It also stated that the Examining Division had suggested in a brief telephone communication that "in order to arrive [at] a conver-



ging version of claims, Appellant may consider returning to the previously pending Main Request", though this statement is not found in the minutes. During the oral proceedings before the Board, the Appellant added that it did not return to the previous main request at that moment because it believed to have good chances of success with the requests on file.

- 4.2 Furthermore, "the sole purpose of filing an amended Main Request was to solve issues as a direct response to the appealed decision", i.e. to solve the clarity issue mentioned above.
5. The Board does not find these arguments convincing.
  - 5.1 The Examining Division may have been willing to give its consent to the re-filing of a previous request, but it was the Appellant's own choice not to file this request. As a consequence, this request was not part of the decision under appeal and its admittance is therefore within the Board's discretion.
  - 5.2 In this context, the issue at stake is how the Appellant's choice not to maintain a request at first instance may affect how the Board exercises its discretion to admit on appeal an amended request based on it under the RPBA 2020.
  - 5.3 As already stated, the Board disagrees with the allegation that the new main request was merely filed to solve the clarity issue, for the reasons given above (point 3.1).
6. Thus the Board does not see any case circumstances that would justify the admittance of this request (Article 12(4) RPBA 2020, in view of Article 12(6) RPBA 2020).

7. The second auxiliary request is based on the first auxiliary request underlying the decision, which was not admitted by the Examining Division pursuant to Rule 116(2) EPC and Rule 137(3) EPC.
- 7.1 Although, again, Article 12(6) RPBA 2020 does not apply as such, the Board is of the opinion that the principle expressed in it that "[t]he Board shall not admit requests ... which were not admitted in the proceedings leading to the decision under appeal, unless the decision not to admit them suffered from an error in the use of discretion" may be considered in the exercise of discretion to admit amendments under Article 12(4) RPBA 2020.
- 7.2 In the case at hand, this request differs from the one not admitted by the Examining Division in a way (amendment for clarity) which is unrelated to the reasons given for non-admittance (late filing and divergence, see below).
8. The Board is further of the opinion that the discretionary decision of the Examining Division not to admit the first auxiliary request underlying the decision was taken in a reasonable manner.
- 8.1 The Examining Division correctly established that the request was late filed within the meaning of Rule 116(2) EPC, first sentence, namely one week before the date scheduled for oral proceedings, and that it had discretion not to give its consent to, i.e., not to admit the request, Rule 116(2) EPC, second sentence. As a reason for not admitting, the Examining Division argued that the request went "*into a different direction*" than the main request then on file.

8.2 The Appellant did not challenge that the Examining Division could exercise its discretion to admit a request, inter alia, on whether it was converging w.r.t. higher-ranking requests, in this regard referring to T 1134/11 (page 18, first paragraph): *"whether the claims of auxiliary requests converge is to be understood in the sense that the subject-matter of the lower ranking requests is further defined [...] with the intention to counter objections with regard to the preceding requests"*. The Board agrees that, when oral proceedings are imminent, it is legitimate for the Examining Division to expect the claims of subsequent requests to converge in that sense, so that a focused discussion can be had during the oral proceedings and a decision can be arrived at in a reasonable time. The less a new set of claims "further defines" the subject matter of a previous one but changes the focus of the discussion, i.e. the more clearly a new set of claims "diverges" from an earlier one, the more will admittance of the new claims be detrimental to procedural economy. The Board also considers that this argument may bear the more weight, the later the new set of claims are filed.

8.3 In the present case, the oral proceedings were closely imminent and the (then) first auxiliary request was not convergent with the main request. Both requests represented two clearly different lines of amendments trying to overcome an inventive step objection. In the main request the Appellant tried to distinguish the subject-matter of claim 1 from the prior art by a feature defining an action in response to the detection of a pedestrian (speed control), whereas in the first auxiliary request the Appellant tried to achieve this by a fea-

ture defining how the (prior) existence probability of a pedestrian was determined.

9. The Appellant argued in its grounds of appeal, and then later in its reply to the summons, that the request did not go in a different direction. In each of the requests, the feature block referring to the process priority unit was "further limited to distinguish the present invention further against the closest prior art or the cited prior art in general" (grounds of appeal 5.4.1). In the reply to the summons (I.2) it further said that "the core of the invention in each request remains the same, namely speed control corresponding to a detection of a pedestrian" and that the newly added features "refer back to features which were already included in claim 1" and were part of the same first embodiment.
10. The Board does not agree. Contrary to the Appellant's assertion, this auxiliary request does not define speed control, unlike the main request underlying the decision, but defines a pre-learning step for pedestrian existence probability which is not present in the said main request. These aspects are technically unrelated, one referring to the consequences of the pedestrian detection, and the other to the timing of the pedestrian detection.
11. Hence the Board does not see an error in the way the Examining Division exercised its discretion not to admit the (then) first auxiliary request. It also does not see other circumstances that would justify the admittance in appeal of a new request based on it. So the second auxiliary request is not admitted (Article 12(4) RPBA 2020, in view of Article 12(6) RPBA 2020).

*RPBA 2020: general remarks*

12. The Appellant stated in its reply to the summons (I.5) "that the preliminary opinion of the Board is very much dependent on the new RPBA", but that the RPBA 2020 "lead to an increased focus on purely formal issues", and "that such increased formalism is not in line with maintaining the possibility for applicants to have a second independent instance for reconsideration and re-examination of first instance decisions on all matters, namely e.g., with regard to novelty and inventive step and on formal aspects like the admission of requests. For securing a fair procedure and in order to be in-line with the standards developed by the European Courts, the requirements for not admitting new requests, facts, and evidences should be set to the lowest possible level". It also referred the Board to "R 8/13 of March 20, 2015, wherein the Enlarged Board of Appeal stated that it was established case law of the Enlarged Board (R 2/14 of 17 February 2015: and of the Boards of appeal) that the EPC, which had been signed by contracting parties to the ECHR (e.g., European Convention on Human Rights), must be applied in a way which supports the fundamental principles of Art. 6(1) ECHR (G 1/05, OJ 2007, 362, point 22 of the Reasons; G 2/08 of 15 June 2009, point 3.3 of the Reasons)". Submissions to that effect have been also made orally during the oral proceedings before the Board.
13. These entirely generic observations do not identify any concrete deficiency of the RPBA 2020 in general, or, more importantly, indicate where the Board in this particular case may have failed to review a matter decided by the Examining Division, though it should have reviewed it "to be in-line with the standards developed by the European Courts". Nor do they establish that the

RPBA 2020, or the way this Board has applied them, is against the fundamental principles of Art. 6(1) ECHR. Thus the Board sees no need to go further into these issues.

*First auxiliary request: patentability*

14. The Examining Division considered claim 1 of this request to lack inventive step in view of D1. This document teaches a method for object detection in a vehicle environment, using the same type of cyclic detection. It also teaches, as the current application does, to modify the detection cycles depending on the driving situation (figures 13 to 15, also 38), and this according to pre-defined task tables (figures 4 to 8).
15. The Appellant argued (see 5.2.1.2 as referred to in 5.3.1.2) that claim 1 differed from D1 in that the pedestrian detection was executed with priority over other detections, and this only when the pedestrian existence probability was higher than a certain value. The Appellant stated in particular (grounds of appeal, page 9, bottom half): "Even though[] D1 teaches shortening a period similar to the present invention, in said shortened period the priority order remains the same at all time. In summary - contrary to the present invention - according to D1, the priority order of the applications is never changed, because D1 is forced to use previously defined task tables."
16. The Board is of the opinion that, on the basis of paragraphs 56 to 59, the application uses the word "priority" to provide that certain tasks are prioritised over others only in the sense that they are executed more frequently by pre-planning, and not in a sense where this priority plays a role for a scheduler

to solve a real-time conflict between tasks for accessing resources; at least there are no details in this regard in the application.

- 16.1 Hence the Board does not agree that this feature establishes a difference over D1, because the task tables of D1 fulfil the exact same pre-planning function, and the change of the task tables according to the road situation expresses the condition related to the pedestrian existence probability, as the Appellant has acknowledged - paragraph bridging pages 7 and 8 in the grounds of appeal.
17. The Appellant also argued (5.3.1.2) that D1, although disclosing automatic brake control, did not disclose the claimed brake control, i.e. "if the existence probability of the pedestrian is higher than the predetermined value, a command for executing speed control by suppressing acceleration of the host vehicle is generated and output to a vehicle speed control device." In particular, D1 disclosed a more complex brake control, calculating time to collision and lateral position of the pedestrian before taking a decision.
18. The Board remarks that the claimed brake control, if construed literally, would most likely bring the vehicle to a standstill in urban situations. It cannot therefore be reasonably considered that the car should decelerate whenever a pedestrian is detected anywhere, e.g. on a sidewalk. Hence it must be taken that the claim expresses only partly the conditions for actuating the brakes or decoupling acceleration. Under this interpretation, i.e. allowing for verification of further conditions, D1 does disclose the claimed feature.

19. The Board concludes therefore that, under a technically meaningful claim construction, claim 1 lacks novelty in view of D1 (Article 54 EPC).

## Order

### For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



L. Stridde

Martin Müller

Decision electronically authenticated