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Datasheet for the decision of 12 July 2024

Case Number: T 1596/21 - 3.5.04

Application Number: 11877396.9

Publication Number: 2793193

IPC: G06T19/00

Language of the proceedings: EN

Title of invention:
DISPLAY DEVICE AND DISPLAY METHOD

Patent Proprietor:
Pioneer Corporation

Opponent:
TomTom International B.V.

Headword:

Relevant legal provisions:
EPC Art. 54(1), 56

Keyword:
main request and first to fifth auxiliary requests - inventive step (no)
distinguishing features - technical character (no)

Decisions cited:

Catchword:

Europäisches Patentamt
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Beschwerdekammern

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Case Number: T 1596/21 - 3.5.04

D E C I S I O N
of Technical Board of Appeal 3.5.04
of 12 July 2024

Appellant: (Opponent)	TomTom International B.V. De Ruijterkade 154 1011 AC Amsterdam (NL)
Representative:	Kaufmann, Tobias Bardehle Pagenberg Partnerschaft mbB Patentanwälte, Rechtsanwälte Prinzregentenplatz 7 81675 München (DE)
Respondent: (Patent Proprietor)	Pioneer Corporation 28-8, Honkomagome 2-chome Bunkyo-ku Tokyo 113-0021 (JP)
Representative:	Gill Jennings & Every LLP The Broadgate Tower 20 Primrose Street London EC2A 2ES (GB)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 7 July 2021 concerning maintenance of the European Patent No. 2793193 in amended form.**

Composition of the Board:

Chair	B. Willems
Members:	B. Le Guen
	B. Müller

Summary of Facts and Submissions

I. The appeal is against the opposition division's interlocutory decision that, account being taken of the amendments made by the patent proprietor, European patent No. 2 793 193 and the invention to which it relates meet the requirements of the EPC.

II. The documents cited in the decision included the following:

D3: US 2004/0193331 A1

III. The decision under appeal was based, *inter alia,* on the grounds that the seventh auxiliary request then on file met the requirements of the EPC.

IV. The opponent (appellant) filed a notice of appeal in which it requested that the decision under appeal be set aside and that the patent be revoked in its entirety. In its statement of grounds of appeal, the appellant provided arguments in support of its view that claim 1 of the seventh auxiliary request on which the decision under appeal was based did not meet the requirements of Article 123(2) EPC and that the subject-matter of claims 1 and 5 of that request did not meet the requirements of Article 52(1) EPC because it was not new within the meaning of Article 54(1) EPC or at least did not involve an inventive step within the meaning of Article 56 EPC.

V. In a letter of reply dated 8 March 2022 (the reply to the appeal), the proprietor (respondent) filed sets of

claims of a main request and first to fifth auxiliary requests. The respondent requested that the appeal be dismissed (i.e. that the patent be maintained in amended form on the basis of the claims of the seventh auxiliary request on which the decision under appeal was based, these claims being identical to the claims of the main request filed with the reply to the appeal) or, alternatively, that the patent be maintained as amended in accordance with the claims of one of the first to fifth auxiliary requests filed with the reply to the appeal. The respondent indicated a basis in the application as filed for the amendments and provided arguments as to why the claimed subject-matter was new and involved an inventive step.

VI. The parties were summoned to oral proceedings. In a communication under Article 15(1) RPBA, the board gave the following preliminary opinion on the respondent's requests, *inter alia*.

- The subject-matter of claim 1 of the main request lacked inventive step starting from the disclosure of D3.

- The board was minded to admit the first to fifth auxiliary requests into the appeal proceedings.

- If the board came to the conclusion that the subject-matter of claim 1 of the main request lacked inventive step starting from D3, the same conclusion would apply to the subject-matter of claim 1 of the first auxiliary request.

- The respondent did not submit arguments as to why the features added to claim 1 in accordance with the second to fifth auxiliary requests contributed

to the technical character of the distinguishing features.

VII. By letter dated 3 April 2024, the respondent informed the board that it would not be attending the oral proceedings scheduled for 10 July 2024.

VIII. By letter dated 10 June 2024, the appellant stated that in view of the respondent's statement and given the current state of the proceedings, there was no need for oral proceedings. The appellant further asked the board to inform the parties whether the oral proceedings would take place as scheduled.

IX. In a telephone conversation on 21 June 2024, the respondent confirmed that it would not be attending the oral proceedings scheduled for 10 July 2024 and indicated that it would not file any further written submissions.

X. Subsequently, the scheduled oral proceedings were cancelled.

XI. Claim 1 of the respondent's **main request** reads as follows:

"*A head-up display (2) for a vehicle, the head-up display comprising:*

a present position information obtaining unit (4b) configured to obtain present position information of a moving vehicle; and

a display control unit (4) configured to display information on an object through a transparent member based on the present position information, the object being contained in the scenery in the travelling direction of the moving vehicle, the transparent member

being positioned between a viewpoint of a driver in the moving vehicle and the scenery;

the head-up display characterized in that :

the display control unit (4) is configured to change a display position of the information on the object to an outward direction of a road (71) in a case that the display position of the information on the object based on the present position information is inside the road (71), the road being contained in the scenery."

XII. Claim 1 of the respondent's **first auxiliary request** differs from claim 1 of the main request in that the first two lines read as follows (features added to claim 1 of the main request are underlined):

"*A head-up display (2) for installation in a vehicle, the head-up display comprising:*"

XIII. Claim 1 of the respondent's **second** and **third auxiliary requests** respectively differs from claim 1 of the main request and the first auxiliary request in that it further comprises the following text before the full stop:

",

wherein the head-up display further comprises an object information obtaining unit (4) configured to obtain category information on a category of the object,

wherein the display control unit (4) is configured to determine whether or not to change the display position of the information on the object based on the category information"

XIV. Claim 1 of the respondent's **fourth** and **fifth auxiliary requests** respectively differs from claim 1 of the second and third auxiliary requests in that it further comprises the following text before the full stop:

", *and*
wherein the display control unit (4) is configured to change the display position of the information on the object to the outward direction of the road (71) in a case that the category of the object according to the category information is relevant to a facility and not to change the display position of the information on the object to the outward direction of the road (71) in a case that the category of the object according to the category information is relevant to a road sign"

Reasons for the Decision

1. The appeal is admissible.

Respondent's main request - novelty

2. Pursuant to Article 54(1) EPC, an invention must be considered new if it does not form part of the state of the art.

3. The appellant disputes that the subject-matter of claim 1 of the main request is new over the disclosure of document D3 (see point III.1 of the statement of grounds of appeal).

4. Document D3 discloses an example of a head-up display installed in a vehicle (see D3, Figure 1), the head-up display comprising a present position information obtaining unit configured to obtain present position

information of a moving vehicle (see Figure 1, 106; paragraph [0033]: "*GPS antenna 106*"; paragraph [0050]) and a display control unit (see D3, Figure 1, 102, 103, 110) configured to display information on an object (see paragraph [0035]: "*the target*") through a transparent member (see D3, Figure 1, 101; paragraph [0034]) based on the present position information (see paragraphs [0038] and [0053]), the object being contained in the scenery in the travelling direction of the moving vehicle (see paragraph [0052]: "*communicating the condition of a road*"; Figures 5 and 6), the transparent member being positioned between a viewpoint of a driver in the moving vehicle and the scenery (see Figures 1 and 3, 101), the road being contained in the scenery (see Figures 5 and 6).

5. The dispute between the parties is about whether D3 also discloses the following features of claim 1 of the main request ("**the distinguishing features**"; see point III.1 of the statement of grounds of appeal and point 3.3 of the reply to the appeal):

the display control unit (4) is configured to change a display position of the information on the object to an outward direction of a road (71) in a case that the display position of the information on the object based on the present position information is inside the road (71)

6. The board does not share the opposition division's view that claim 1 requires the display control unit to be programmed to perform a check whether the information on the object is inside the road (see point 17.5 of the decision under appeal). The claim does not specify that such a check is carried out and, even if it was read as

implying such a check, does not exclude that it is carried out by other units.

7. Paragraphs [0062] and [0063] and Figure 6 of D3 describe an example in which the position of an information conveyor (road sign) indicating the start of a winding road is changed from a position above the start of the winding road to the position of a tree standing in the vicinity of the start of the winding road.

8. The board agrees with the appellant that this example discloses a case in which the original display position is inside the road (see point III.1.c.ee of the statement of grounds of appeal) because the visual recognition position is the start of the winding road, which is inherently inside the road. The fact that "*only a smaller lower section of the information conveyor actually lies within the boundary of the road*" (see respondent's argument on page 5 of the reply to the appeal) is not pertinent since claim 1 merely requires that the display position (not the whole POI information shown for example in Figures 6A-6C of the patent in dispute) be inside the road.

9. However, the board disagrees with the appellant that the example of D3 identified above teaches changing a display position of the information on the object to an outward direction of a road (see page 14 of the statement of grounds of appeal). This example must be read in the context of paragraph [0061], which teaches that "*the visual recognition position of the information conveyor is changed to the position of an object existing at a location of about the same distance from this vehicle as the distance of an*

already existing object" if the original visual recognition position is beyond a predetermined forward-direction distance (see point 3.3 of the respondent's reply, "*Feature 1.3*"). Changing the position of the information conveyor to the location of an existing object is not the same as changing the position of the information conveyor to an outward direction of the road as the existing object is not necessarily at a position further away from the middle of the road than the original position of the information conveyor.

10. Thus, the appellant's arguments do not convince the board that the subject-matter of claim 1 of the main request is disclosed in document D3.

Respondent's main request - inventive step

11. Pursuant to Article 56 EPC, an invention is to be considered to involve an inventive step if, having regard to the state of the art, it is not obvious to a person skilled in the art.

12. The appellant disputes that the subject-matter of claim 1 of the main request involves an inventive step starting from D3 (see point IV.1 of the statement of grounds of appeal).

13. The board agrees with the appellant that the distinguishing features do not achieve a technical effect (see point IV.1.b of the statement of grounds of appeal).

14. As a preliminary remark, the board notes that claim 1 does not specify that the information on the object is displayed at the changed position. The calculation of a display position and the display of the information at

the calculated display position are two independent steps (see also column 9, lines 47 to 55 of the patent in dispute). As argued by the appellant on page 17 of the statement of grounds of appeal, the mere computation of a changed position does not achieve a technical effect.

15. For the following reasons, the distinguishing features would still not have technical character even if claim 1 of the main request was read as implying the display of the information on the object at the changed position.

15.1 In line with the established case law of the boards, a feature defining a presentation of information produces a technical effect if it credibly assists the user in performing a technical task by means of a continued and/or guided human-machine interaction process. Such a technical effect is considered credibly achieved if the assistance to the user in performing the technical task is objectively, reliably and causally linked to the feature. This is not the case if the alleged effect depends on subjective interests or preferences of the user (see Case Law of the Boards of Appeal of the European Patent Office, 10th edn., 2022 (CLBoA), I.D.9.2.10 b)).

It is also established case law that if the inventive step of a claimed invention is based on a given technical effect, the latter should, as a rule, be achievable over the whole area claimed (see CLBoA, I.D.4.3).

15.2 In point 3.4 of the reply to the appeal, the respondent submitted that the distinguishing features enabled a driver to better and more safely control and navigate a

vehicle along the road. The board can only speculate about what technical improvements are implied by the term "*better*". The board interprets "*more safely*" as relating to improved assistance in avoiding accidents.

15.3 The board is not convinced that the display position of the information on an object specified in the distinguishing features (i.e. inside or in "*an outward direction of a road*") objectively enables a driver to better and more safely control and navigate a vehicle along the road.

Firstly, the board agrees with the opposition division that changing the display position "*to an outward direction of a road*" does not necessarily mean that the display position is moved completely out of the road (see point 16.7 of the decision under appeal). Thus, the displayed information after the change of display position may still hide a part of the road including objects relevant to the driver's safety. In such a case, the driver's safety is conditioned by the scene, not the change in display position.

Secondly, changing the display position "*to an outward direction of a road*" (possibly to a position as far away from the road as allowed by the size of the transparent member and the display range of the light sources) causes the driver to deviate their gaze from the (central part of) the road, this possibly being detrimental to safety depending on the scene, irrespective of the nature of the object for which information is displayed. Whether this is *less* detrimental to safety than displaying the information on the object inside (or at a more central position in) the road depends on whether and where objects relevant to the driver's safety are situated on the road as well

as the driver's preferences and cognitive aptitudes (see page 17 of the statement of grounds of appeal: "*subjective preferences*").

As an aside, the board notes that claim 1 also covers cases in which the information on the object is displayed first at a position inside the road and then moved on the transparent member to a position outside the road. Such visual "animation" on the transparent member is clearly detrimental to safety.

15.4 In point 17.8 of the decision under appeal, the opposition division cited decision T 505/18 in which the deciding board found that stopping the output of an advertisement contributed to the safety of operation of the vehicle by reducing the level of driver distraction in a difficult driving phase that requires higher concentration (see point 7.4 of the Reasons). However, in the case in hand, the board is not convinced that the distinguishing features objectively reduce the level of driver distraction (see previous point, last two paragraphs).

15.5 Even assuming, *arguendo,* that the distinguishing features helped the driver focus on certain information (e.g. the information whose display position inside the road is not changed), the board still finds that the distinguishing features have no technical character. As argued by the appellant during the opposition proceedings (see point 19.9 of the decision under appeal) and on page 17 of the statement of grounds of appeal, the distinguishing features do not specify the object or the information that is displayed. Thus, the displayed information may be an indication of the model of a vehicle on the road, the name of a facility on the side of the road or (unspecified) information

indicating a road sign already present along the road (i.e. "this is a winding road"). Although the driver may take informed decisions on the basis of such information, the information itself is purely cognitive and does not provide the driver with *technical instructions* helping them to, for example, avoid accidents (see also CLBoA I.D.9.2.10 c)).

15.6 Paragraph [0053] of the application as filed, cited by the respondent in point 3.5 of the reply to the appeal, specifies that "*when the information to be displayed outside the roadway is actually displayed inside the roadway, it could cause misunderstandings to the driver and possibly too much information could be displayed inside the roadway*". In view of this, the problem underlying the patent in fact relates to lowering the cognitive burden of the driver. It is established case law that this problem is not technical (see CLBoA, I.D.9.10 b)i) and iii)).

16. It is also established case law that non-technical features, to the extent that they do not interact with the technical subject-matter of the claim for solving a technical problem, are to be ignored in assessing both novelty and inventive step (see G 1/19, point 30 of the Reasons, principle (F)). Thus, the board finds that the distinguishing features in the case in hand should be ignored in assessing inventive step.

17. For the above reasons, the board agrees with the appellant that the subject-matter of claim 1 of the main request lacks inventive step starting from the disclosure of D3.

Respondent's first to fifth auxiliary requests

18. The board exercises its discretion by admitting the respondent's auxiliary requests into the appeal proceedings in view, in particular, of the fact that the appellant did not question their admittance.

19. Claim 1 of the first auxiliary request differs from claim 1 of the main request in that it further specifies that the head-up display is for installation in a vehicle. This feature is disclosed in document D3, as indicated in point 4. above. Thus, the features distinguishing the subject-matter of claim 1 of the first auxiliary request from the disclosure of D3 are the same as those distinguishing the subject-matter of claim 1 of the main request from the disclosure of D3 (see point 5. above). These features should be ignored in assessing inventive step for the reasons provided in points 14. and 15. above.

20. Claim 1 of the second and third auxiliary requests differs from claim 1 of the main and first auxiliary requests in that it specifies that the head-up display further comprises an object information obtaining unit configured to obtain category information on a category of the object and that the display control unit is configured to determine whether or not to change the display position of the information on the object based on the category information.

As indicated in point 15.3 above, changing the display position "*to an outward direction of a road*" might be detrimental to safety irrespective of the nature (i.e. the "category") of the object for which information is displayed. Thus, obtaining category information on the object and determining whether to change the display

position of the information on the object on the basis of this category information does not objectively enable a driver to better and more safely control and navigate a vehicle along the road. For that reason, the board does not see how the additional features of claim 1 of the second and third auxiliary requests contribute to the technical character of the invention. The respondent did not submit arguments in that respect (see points VI. and IX. above). Therefore, the board concludes that the additional features of claim 1 of the second and third auxiliary requests do not contribute to the technical character of the invention and, thus, are also to be ignored in the assessment of inventive step.

21. Compared to claim 1 of the second and third auxiliary requests, claim 1 of the fourth and fifth auxiliary requests further specifies that the display control unit is configured to change the display position of the information on the object to the outward direction of the road if the category of the object according to the category information is relevant to a facility and not to change the display position of the information on the object to the outward direction of the road if the category of the object according to the category information is relevant to a road sign.

As indicated in point 15.5 above, the displayed information may be purely cognitive information that does not provide the driver with *technical instructions* helping them to, for example, avoid accidents. Moreover, for the reasons given in point 15.3 above, the display position of such information (i.e. inside or in "*an outward direction of a road*") does not credibly enable a driver to better and more safely control and navigate a vehicle along the road. For

these reasons, the board does not see how the additional features of claim 1 of the fourth and fifth auxiliary requests contribute to the technical character of the invention. The respondent did not submit arguments in that respect (see points VI. and IX. above). Therefore, the board concludes that the additional features of claim 1 of the fourth and fifth auxiliary requests do not contribute to the technical character of the invention and, thus, are also to be ignored in the assessment of inventive step.

22. In view of points 19. to 21. above, the board finds that the subject-matter of claim 1 of the first to fifth auxiliary requests also lack inventive step starting from the disclosure of D3.

Conclusion

23. Since none of the respondent's requests meets the requirements of Article 52(1) EPC in combination with Article 56 EPC, the patent must be revoked.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The patent is revoked.

The Registrar: The Chair:

K. Boelicke B. Willems

Decision electronically authenticated