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D E C I S I O N
of 14 December 1998

Case Number: T 0189/97 - 3.4.2
Application Number: 90201711.0
Publication Number: 0406946
IPC: G01C 21/20
Language of the proceedings: EN

Title of invention:
Method of displaying navigation data for a vehicle in an image of the vehicle environment, a navigation system for performing the method, and a vehicle comprising a navigation system

Patentee:
Koninklijke Philips Electronics N.V.

Opponent:
Siemens AG

Headword:
-

Relevant legal provisions:
EPC Art. 123(2), 84, 100(b), 54, 56

Keyword:
"Main request: novelty and inventive step (no)"
"First auxiliary request: extension of protection (no); extension of subject-matter (no); sufficiency (yes); clarity (yes); novelty (yes); inventive step (yes)"

Decisions cited:
G 0007/95, G 0001/95

Catchword:



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Boards of Appeal

Chambres de recours

Case Number: T 0189/97 - 3.4.2

D E C I S I O N
of the Technical Board of Appeal 3.4.2
of 14 December 1998

Appellant:
(Proprietor of the patent) Koninklijke Philips Electronics N.V.
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Representative:
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Respondent:
(Opponent) Siemens AG
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 23 December 1996
revoking European patent No. 0 406 946 pursuant
to Article 102(1) EPC.

Composition of the Board:

Chairman: E. Turrini
Members: M. Chomentowski
B. J. Schachenmann

Summary of Facts and Submissions

- I. The appellant is proprietor of European patent No. 0 406 946, citing E1 = JP-A-62 93 614, was granted with 7 claims on the basis of European patent application No. 90 201 711.0.

The independent claims read as follows:

"1. A method for displaying navigational information provided by an information procurement system (12, 13) for a vehicle, said information being superposed (14) on a scenic image associated with a vehicle position, characterized in that said image is real-time and independent from said information procurement system (12, 13) as being generated (11) instantaneously and continually by a video or television camera (24) that is physically joined to the vehicle."

"6. A navigation system arranged for executing a method as claimed in any of claims 1 to 5, comprising an information procurement system for providing navigational information (21), a scenic image providing system for providing a scenic image associated with a particular vehicle position, and display superposition (25) means fed in parallel by said information procurement system, and by said scenic image providing system, characterized in that said scenic image providing system is arranged for operating real-time and independently of said information procurement system by comprising a video or television camera (11, 24) that is physically joined to the vehicle for instantaneously and continuously producing said scenic image, a transformation module (22) for transforming navigation data produced by the information procurement system, a video generator (24) for generating an indication signal from the transformed navigation data,

a combination unit (25) for combining the scenic image with the video transformed indication signal, and a display (26) unit for displaying the combined signals."

"7. A vehicle comprising a navigation system as claimed in claim 6."

II. The respondent filed an opposition on the grounds of lack of inventive step of the subject-matter of the patent having regard inter alia to E1 and E2 = US-A-4 716 458.

III. The patent (main request as granted and auxiliary request in amended form) was revoked.

The opposition division took the following view:

E1 was the closest prior art document as belonging to the same technical field; however, therein, the scenic image was not real-time and independent from the information procurement system as being generated instantaneously and continually by a video or television camera that is physically joined to the vehicle. Thus, this image was not true to life.

In the patent (see page 2, lines 45 to 50), the term "navigational information" was interpreted as comprising data from the vehicle sensors as well as data representing driving instructions indicating a direction to be followed. The information displayed in the display according to E2 was data from vehicle sensors and was thus seen as navigational information.

Starting from E1, the combination with E2, wherein information from sensors of the vehicle was displayed on a scenic image taken from the vehicle, made the claimed invention obvious (main request). This was also true for a claim containing a feature about a direction

to be followed (auxiliary request), because said feature was already known from E1. Therefore, the subject-matter of claim 1 of both requests lacked an inventive step.

IV. The proprietor lodged an appeal against this decision.

V. With the grounds of appeal dated 29 April 1997, the appellant filed a new auxiliary request consisting of 6 claims, whereby the two only independent claims differed from the corresponding claims as granted in that in particular the navigational information to be displayed, which is provided by an information procurement system (12, 13), was specified as being **navigational guidance** information provided by a **navigation** system (12, 13), the only independent of this set of claims reading as follows:

"1. A method for displaying navigational **guidance** information provided by a **navigation** system (12, 13) for a vehicle, said information being superposed (14) on a scenic image associated with a vehicle position, characterized in that said image is real-time and independent from said **navigation** system (12, 13) as being generated (11) instantaneously and continually by a video or television camera (24) that is physically joined to the vehicle."

"6. A navigation system arranged for executing a method as claimed in any of claims 1 to 5, comprising an information procurement system for providing navigational **guidance** information (21), a scenic image providing system for providing a scenic image associated with a particular vehicle position and display superposition (25) means fed in parallel by said information procurement system, and by said scenic image providing system, characterized in that said scenic image providing system is arranged for operating

real-time and independently of said information procurement system by comprising a video or television camera (11, 24) that is physically joined to the vehicle for instantaneously and continuously producing said scenic image, a transformation module (22) for transforming the navigational guidance information produced by the information procurement system, a video generator (24) for generating an indication signal from the transformed navigational guidance information, a combination unit (25) for combining the scenic image with the video transformed indication signal, and a display (26) unit for displaying the combined signals."

VI. During the oral proceedings of 14 December 1998, which had been requested auxiliarily by both parties, the appellant (patent proprietor) filed inter alia an amended passage for page 2 of the description corresponding to the auxiliary request filed with the above-mentioned letter and requested that the decision under appeal be set aside and that the patent be maintained as granted (main request) or according to, inter alia, the above-mentioned auxiliary request filed with said letter and said amended page 2 (first auxiliary request).

VII. The appellant submitted the following arguments in support of his main and first auxiliary requests:

The main request, i.e. the patent as granted, is distinguished from E2 by the purpose to be achieved, and by the means and method steps, which are different accordingly. In particular, E2 is not concerned with guidance. Therefore, the main request is new.

The amendments in the first auxiliary request do not result in additional subject-matter because a continuous operation of the pick-up device (camera) for providing the scenic image is comprised in the original

disclosure, and there is no original teaching about continuously displaying guidance information because this was not and is not necessary for the claimed method.

The claims use the terms "navigational guidance information" and thus define correctly the invention, so that they are clear. The closest prior art is represented by E1, which does not display real-time, true to life scenic images. E2 belongs to another technical field, concerning driver-vehicle behavior, which the skilled person would not take into consideration. Therefore, the subject-matter of the claims is new and involves an inventive step.

VIII. The respondent (opponent) submitted the following arguments in support of his request that the appeal be rejected and that the patent be revoked:

There can be seen no feature distinguishing the method of E2 from that of the main request. The claims of the patent refer to navigational information in general and, in particular, are not restricted to guidance, so that they cover the displayed results of measurements by sensors on the vehicle, as in the known method. Therefore, the patent as granted lacks novelty.

The amendments in the first auxiliary request result in additional subject-matter because a continuous operation of the pick-up device (camera) for providing the scenic image or for displaying guidance information such as an arrow to turn left or right was originally excluded, in particular by the teaching that it is the driver who actuates the corresponding means.

Moreover, the patent does not disclose the invention sufficiently in that means capable of picking-up, calculating and displaying were not available at the priority date of the patent.

The person skilled in the art of E1 would know E2 and, although the latter document concerns a somewhat different purpose and does not involve all the means for displaying guidance information, he would take E2 into account and combine it with E1 for solving the problem of E1, which is based on the need of a real-time scenic image, which is true to life. Therefore, the subject-matter of the claims lacks an inventive step.

Reasons for the decision

1. The appeal is admissible.
2. *Main request (as granted)*
 - 2.1 Patentability
 - 2.1.1 A method for displaying information provided by an information procurement system for a vehicle, said information being superposed on a scenic image associated with a vehicle position, is known from E2 (see the whole document, and in particular Fig. 2a and 2b); said image is real-time and independent from said information procurement system as being generated instantaneously and continually by a video or television camera that for instance will capture inter alia the driver's eye view of the roadway and that is physically joined to the vehicle, for instance positioned behind the driver.

In the method of E2 (see in particular column 6, line 61 to column 8, line 62; Fig. 2a and 2b), the information which is displayed comprises signals from sensors positioned in the vehicle, in particular accelerometers; the measurements by sensors increase the utility of the system by indicating to a viewer of the data for instance the throttle and brake pressure present; thus, with this added feature all driver inputs, steering, throttle and brake pressure are visible, for instance the lines (48) and (50) along with the g forces imposed on the vehicle and displayed by a rectangle (36), within circles representing the capability of the vehicle, all of this is superimposed on the driver's view through the frontwindow.

During the oral proceedings, the respondent has argued that E2 corresponds to the closest prior art because it comprises all the means, in particular the video camera and the means for displaying, necessary for the claimed method, and that, since it is not possible to detect any feature distinguishing the method of E2 from the method in dispute, the latter lacks novelty.

Against this, the appellant has submitted the arguments that the method in dispute, which is for displaying navigational guidance information, is indeed distinguished from the content of E2, which has another purpose, i.e. displaying a driver-vehicle behavior (see in particular the title), and that it is also distinguished from the method of E2 in that the latter, which displays information superposed on a scenic image associated with a vehicle position, does not display guidance information; thus, for instance, in E2 (see the abstract), the data which are displayed represent a vehicle's performance capability envelope.

2.1.2 However, the appellant's arguments cannot convince for the following reasons:

Firstly, claim 1 in dispute does not specify that the technique is restricted to guidance of a vehicle, so that the purpose can in any case not be seen as a distinguishing feature.

In the patent in suit (see page 2, lines 3 to 23), it is referred with respect to navigational information to the content of a prior art document, which is mentioned as describing a running guidance apparatus for vehicle, whereby information necessary for running guidance such as a plurality of direction indicating marks are displayed. Indeed, as can be seen from Fig. 3 of the patent in suit (see also page 3, lines 3 to 7), stylized navigation data in the form of an arrow indicating the direction to be followed, can be used, and it is specified in this respect that, when the "navigation data" is displayed in a distinct manner, the user will see how to act. However, it is directly derivable from the wording used in the patent in suit that the navigational information is not restricted to these direction indicating marks.

Moreover, as convincingly argued in the decision under appeal (see page 4, first complete paragraph), the term "navigational information" is interpreted as comprising data from the vehicle sensors as well as data representing driving instructions indicating a direction to be followed, which interpretation is used in the present patent (see page 2, lines 45 to 50); the information displayed in the display according to E2 is data from vehicle sensors and is thus seen as navigational information.

This is indeed also to be derived from other text locations of the patent in suit (see for instance the dependent claims 2 to 5; see also Fig. 2 and the corresponding text), referring to "navigation data" which can be generated on the basis of measurement data from sensors which, after having been transformed by the system, are displayed.

Therefore, the results of measurements by sensors positioned on the vehicle are also to be interpreted as being "navigational information" or "data", so that claim 1, which does not comprise any indication that the navigational information is restricted to "guidance" information, is not distinguished from the content of E2.

- 2.1.3 According to the Decision G 7/95, OJ EPO 1996, 626 (see the Headnote; see also point 7.3 of the reasons), in a case where a patent has been opposed under Article 100(a) EPC on the grounds that the claims lack an inventive step in view of documents cited in the notice of opposition, the ground of lack of novelty based upon Article 52(1) and 54 EPC is a fresh ground for opposition and accordingly may not be introduced into the appeal proceedings without the agreement of the patentee; however, the allegation that the claim lacks novelty in view of the closest prior art document may be considered in the context of deciding upon the ground of lack of inventive step. Moreover, according to the decision of the Enlarged Board of Appeal G 1/95, OJ EPO, 615 (see in particular point 7.2 of the reasons), which is referred in the above-mentioned decision G 7/95, in a case such as that under consideration in the decision of referral in case G 7/95, if the closest prior art document destroys the novelty of the claimed subject-matter, such subject-matter obviously cannot involve an inventive step; therefore, a finding of lack of novelty in such

circumstances inevitably results in such subject-matter being unallowable on the ground of lack of inventive step.

Therefore, the subject-matter of claim 1 in dispute, which is found to lack novelty, inevitably is unallowable also on the ground of lack of inventive step, so that the main request cannot be maintained (Art. 102(1) EPC).

3. *First auxiliary request*

3.1 Admissibility of the amendments

3.1.1 The independent claims differ from the corresponding claims as granted in that in particular the navigational information to be displayed, which is provided by an information procurement system (12, 13), is restricted to navigational **guidance** information provided by a **navigation** system (12, 13).

Therefore, the Board is satisfied that the claims of the European patent have not been amended in such a way as to extend the protection conferred (Art. 123(3) EPC).

3.1.2 The respondent has submitted the following objection:

Claim 1 of the first auxiliary request comprises the feature that navigational guidance information provided by the navigation system and superposed on a scenic image associated with the vehicle position is generated instantaneously and continually by a video or television camera that is physically joined to the vehicle. However, in the application as filed (see column 1, lines 47 to 51), the image pick-up unit only picks up the most relevant environment as chosen by the

driver, for example the road ahead of the vehicle near a crossing. Therefore, present claim 1 contains inadmissible amendments.

However, as convincingly argued by the appellant, claim 1 of the first auxiliary request does not comprise the feature that navigational guidance information is continually displayed, and this is also not necessary for obtaining a reliable and useful information.

Moreover, from the original text location cited by the respondent, it is not derivable that the pick-up device which picks up the scenic image is active only when actuated by the driver and thus does not work continually; it is only disclosed that the driver chooses the part of the environment to be picked up with respect to the vehicle, for instance the road ahead of the vehicle, without any restriction in time, for instance with respect to parts of the route to be followed.

Therefore, the European patent has not been amended in such a way that it contains subject-matter which extends beyond the content of the application as filed (Art. 123(2) EPC).

3.2 Sufficiency of disclosure

It is to be noted that lack of disclosure, which is one of the grounds of opposition of the exclusive list of grounds recited in Article 100 EPC, was not objected to in the notice of opposition, and that no such lack of disclosure has been found. Therefore, although the respondent has submitted arguments in this respect, it has not been considered as necessary for the Board to ask the appellant for approval for examining this point.

3.3 Clarity of the claims

As convincingly argued by the appellant, it is directly and unambiguously derivable not only from the wording of the claim, but also from the whole content of the patent according to the first auxiliary request that because of the words "navigational guidance", the navigational guidance information displayed in the method is for the driver of the vehicle.

It is also to be noted that the description has been adapted to the new claims, so that there is no contradiction between claims and description.

Therefore, the claims satisfy the requirement of clarity of Article 84 EPC.

3.4 Novelty

A method for displaying navigational **guidance** information provided by a **navigation** system for a vehicle, said information being superposed on a scenic image associated with a vehicle position, is known from E1 (see the abstract). However, contrary to the method of the present auxiliary request, in the known method, wherein said image is a preliminary stored image of a predetermined point which is to be displayed when the vehicle approaches that point and thus is **neither** a real-time image **nor** an image independent from said **navigation** system as being generated instantaneously and continually by a video or television camera that is physically joined to the vehicle.

It is to be noted that, as convincingly argued by the appellant, the method of E2, which shows a driver-vehicle behavior display apparatus, is not for

displaying navigational **guidance** information provided by a **navigation** system for a vehicle, so that this document does not belong to the relevant technical field.

The further documents are even less relevant.

Therefore, the subject-matter of claim 1 of the first auxiliary request does not form part of the state of the art and is thus new in the sense of Article 54 EPC.

3.5 Inventive step

It is derivable from the patent in suit (see page 2, lines 5 to 23) that, in the navigation method of **E1**, images of predetermined points of a map at which the driver may need guidance are stored in advance on a storage medium and presented to the driver in combination with the guidance information, for instance direction indicating marks such as arrows, corresponding to said predetermined points which are also stored in advance; the "objective" problem in **E1** that has been solved by the invention of the opposed patent is that the presented navigational information cannot be interpreted by the driver in a sufficiently simple and quick way because the navigational data in the known method is superposed on a stored image which may no longer correspond to the actual situation, this resulting in the user person not being kept in close contact with reality.

This problem is not directly derivable from **E1** alone. As convincingly argued by the appellant, the person skilled in the art of **E1**, i.e. of navigation guidance of vehicles, would not be incited to look for matter for development in **E2**, which does not relate to navigational guidance of vehicles, but to various forms of testing the car performance using a video camera,

sensors and means for superposing the results of measurements by said sensors onto the image picked up by the video camera.

For the same reason, E2 is not a relevant starting point for the invention of the first auxiliary request.

The other documents are less relevant.

Therefore, having regard to the state of the art, the subject-matter of claim 1 of the first auxiliary request is not obvious to a person skilled in the art and, thus, it involves an inventive step in the sense of Article 56 EPC.

The same applies, for the same reasons, to the subject-matter of claim 6, which relates to a navigation system arranged for executing a method as claimed for instance in claim 1.

Therefore, the European patent can be maintained in amended form on the basis of the first auxiliary request, so that it is not necessary to take into consideration any further auxiliary request of the appellant (Art. 102(3) EPC).

Order

For these reasons it is decided that:


1. The decision under appeal is set aside.
2. The case is remitted to the first instance with the order to maintain the patent in amended form with:

Claims 1 to 6 filed with letter dated 29 April 1997
(first auxiliary request);

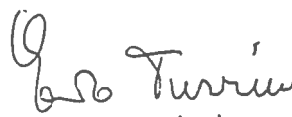
Description: page 2, lines 1 to 23, as filed in the
oral proceedings,
page 2, lines 24 to 58 as in the patent specification;
pages 3 and 4 of the patent specification;

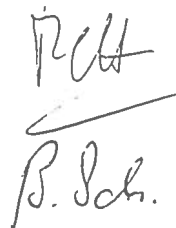
Figures 1 to 6 of the patent specification.

The Registrar:


P. Martorana

The Chairman:


E. Turrini


B. Sch.

