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D E C I S I O N
of 23 July 2002

Case Number: T 0956/99 - 3.5.2

Application Number: 91302713.2

Publication Number: 0453108

IPC: G11B 19/02

Language of the proceedings: EN

Title of invention:
Player for audio disk and memory disk

Patentee:
PIONEER ELECTRONIC CORPORATION

Opponent:
I. Interessengemeinschaft für Rundfunkschutzrechte GmbH Schutzrechtsverwertung & Co. KG
II. Robert Bosch GmbH

Headword:
-

Relevant legal provisions:
EPC Art. 56

Keyword:
"Inventive step - (yes) - minor editorial amendment"

Decisions cited:
-

Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0956/99 - 3.5.2

D E C I S I O N
of the Technical Board of Appeal 3.5.2
of 23 July 2002

Appellant: (Opponent II)
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Representative:
-

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Decision under appeal: **Decision of the Opposition Division of the European Patent Office posted 4 August 1999 concerning maintenance of the European patent No. 0 453 108 in amended form.**

Composition of the Board:

Chairman: W. J. L. Wheeler
Members: R. G. O'Connell
P. H. Mühlens

Summary of Facts and Submissions

I. The grant of European patent No. 453 108 was opposed by two opponents and this is an appeal by opponent II as sole appellant against the interlocutory decision of the opposition division proposing to maintain the patent in amended form.

II. The amended patent as approved by the opposition division included three independent apparatus claims 1, 5 and 6. Following minor editorial amendment in the course of the appeal proceedings these claims are now worded as follows:

"1. An on-vehicle multisource reproducing device including multiple audio sources (1, 19) one of which is a disk player and a selecting means (20) for selecting a reproduction signal from one of the audio sources (1, 19) and supplying the selected reproduction signal to a loudspeaker (22), the device comprising:

means (13) for detecting that loading a disk to a play position is complete and for generating a loading complete signal:
control means (13) for starting playing the disk in response to the loading complete signal:
discriminating means (10, 13) for determining if the disk being played is an audio disk or a memory disk: and
means (13,23) for sending a selection command to the selecting means (20) to cause it to select the reproduction signal from the disk player (1) only when the disk is an audio disk."

"5. An audio disk/memory disk player capable of playing both an audio disk and a memory disk, comprising:

discriminating means (10,13) for determining if a disk being played is an audio disk or a memory disk; characterised by:

means (18) for setting a special play mode;

detecting means (13) for detecting that playing for an area of a series of group information is complete;

further characterised in that the disk player is a multidisk player, and in that the discriminating means is responsive to a detection that playing for an area of a series of group information is complete and still further characterised by control means (17) for performing such control that, with the special play mode set, the mode is changed to a pause mode at a time of playing the memory disk when the detecting means generates a detection output, and the special play mode is enabled only at a time of playing the audio disk, and further characterised in that the special play mode is an auto repeat play mode or a random play mode, and further characterised in that the series of group information is audio information for one piece of music in the case of the audio disk, and is a group of map data corresponding to a sheet of map in the case of the memory disk.

6. A digital disk player having signal reading means (34) for reading an information signal by rotating a loaded digital disk, decoding means (37) for decoding the information signal, signal processing means including digital-to-analogue conversion means (38) for reproducing a digital signal from

the decoding means (37) as an audio signal, and

detecting means (40) for detecting if the loaded disk is a memory disk, characterised by: stop means (46) for stopping supply of the digital signal from the decoding means (37) to the signal processing means (38) when the detecting means (40) detects that the disk is a memory disk."

III. Grounds of opposition were that the subject-matters of the claims were not patentable by virtue of Article 56 EPC since they did not involve an inventive step.

IV. The following prior art documents which featured in the opposition procedure remain relevant to the present decision:

D1: Patent abstract of Japan vol. 14, No. 078 (P-1006) & JP-A-01294276 and English translation

D11: ADAC Motorwelt 11/85, pages 130 to 132.

V. Opponent I, a party to the appeal proceedings as of right under Article 107 EPC, second sentence, made no written submission in the appeal proceedings but was represented together with the appellant (opponent II) at oral proceedings held before the board on 23 July 2002. Opponent I's arguments were based on the same prior art and, as he expressed it, supported and complemented those of the appellant. To avoid repetition the respective submissions of the two opponents are therefore not recorded separately below.

VI. The opponents argued essentially as follows:

Inventive step (claim 1)

Prior art document D11 disclosed an on-vehicle multisource reproducing device as specified in the first paragraph of claim 1 in the form of a combined car radio and CD player provided with a manually operable selection button. Starting from this closest prior art the obvious problem addressed by the device specified in claim 1 was to automate the selection process so that insertion of a CD audio disc would cause the audio reproduction system to choose the CD as an audio source in place of the radio. The skilled person addressing this problem would find in D1 an appropriate way to solve this problem by recognising the presence of a CD on the basis of the synchronisation signal; cf D1, page 7, lines 1 to 12, (page references to D1 are to the English translation). There were then only two possibilities to be chosen from in applying the D1 teaching to the problem of automating the D11 radio/CD player selection; failure to recognise a CD in the player could result in either silence or selection of an alternative audio source - the radio. No inventive step was involved in making such a choice.

Inventive step (claim 5)

The problem solved by the disk player specified in this claim was the obvious one of providing a player which was marketable in the light of the existence of CDROMs likely to be inserted in the player. Discrimination between CD and CDROM was taught by D1. At page 7, lines 13 to 16 of D1 the disabling of typical CD player functions in response to detection of a CDROM was mentioned, which functions, although not explicitly

referred to, would certainly include auto repeat play mode and random play mode. It was obvious that CD features not relevant for CDROM operation should be suppressed when the player detected that the inserted disk was a CDROM rather than a CD. Neither was an inventive step involved in arranging for a series of group information to relate to audio information relating to one piece of music in the case of a CD and to relate to map data in the case of CDROM, these being mere design choices for the person skilled in the art.

Inventive step (claim 6)

The only difference between the digital disk player specified in claim 6 and the player known from prior art document D1 was the point at which the undesired signal was interrupted, ie upstream of the digital to analog converter as in the claim, or downstream thereof as in D1. Since the main energy sink was the loudspeaker the only thing that mattered from the point of view of energy saving was that the latter should be muted. Hence the location of the interruption before the D/A converter did not solve any technical problem and accordingly did not involve an inventive step.

VII. The respondent proprietor argued essentially as follows:

Inventive step (claim 1)

The claimed on-vehicle multisource reproducing device was not derivable for the person skilled in the art from the combination of prior art documents D11 and D1 relied on by the opponents. D11 disclosed a manually operated mechanical switch button for choosing between

two in-car audio sources, viz radio and CD player. D1 disclosed a disk player which discriminated between CDs and CDROMs; when a CDROM was recognised, D1 taught that the reproduced signal should be muted at the output of the audio amplifier (D1, page 7, lines 9 to 17 and Figure 1). In fact the prior art acknowledged in the opposed patent at column 1, lines 17 to 49, was more relevant than either of the documents D1 or D11 to the invention of claim 1 as it related to an on-vehicle multisource reproducing device which was designed to make use of CDs and CDROMs as disk media alongside an AM/FM tuner.

The problem arising in such a system was referred to in the last paragraph of column 1, viz giving priority to the disk player for navigation purposes caused an unnecessary and disturbing loss of audio signal if in fact the user had been listening to the tuner. This was different from the problem of automation of CD/Radio selection suggested by the opponents, starting from D11. The key element of the solution of claim 1 was to delay selection of the audio source until the disk type was identified. There was no selection means in this sense in the prior art devices. In D11 the disk player and radio were mutually exclusive manual selections and the problem addressed in the opposed patent could not arise. Neither was the muting switch in D1 a selection means in the sense of claim 1 since it was not operative to choose between audio sources. Only an analysis based on hindsight could lead the person skilled in the art to select certain features of the prior art documents D11 and D1 and to modify them to arrive at the claimed solution.

Inventive step (claim 5)

The disk player specified in claim 5 was a multiple disk player which solved the problem that the repeat and shuffle commands appropriate for CDs could take over the map functions when a CDROM was selected. The audio muting solution of the prior art was not adequate as pointed out in the opposed patent at column 2, lines 47 to 53. The claim 5 solution involving *inter alia* a change to pause mode to prevent either loudspeaker noise or disturbing map function movements was therefore not derivable from the prior art teaching, quite apart from the additional features of claim 5 relating to advantageously managing potential conflicts between related CD music and CDROM map functions.

Inventive step (claim 6)

D11 referred at page 31 to temperature fluctuations as one of the problems associated with the accommodation of digital disk players in a confined space such as a car dashboard. The disk player solved this problem by stopping supply of the digital signal to the digital-to-analog converter thus reducing power dissipation; this was more effective than merely muting the loudspeaker. There was no suggestion in the prior art which would lead the skilled person to the claimed solution.

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

IX. The respondent proprietor requested that the decision under appeal be set aside and that the patent be maintained in amended form in the following version:

- description, columns 1 to 16 as approved by the opposition division,

- claim 1 as approved by the opposition division,

- claims 2 to 6 as filed in the oral proceedings,

- drawings, Figures 1 to 12 as approved by the opposition division.

Reasons for the Decision

1. The appeal is admissible.

2. *Novelty*

Novelty is not in dispute for any of the independent claims 1, 5 and 6.

3. *Inventive step (claim 1)*

3.1 Closest prior art and objective technical problem

3.1.1 The opposition division in the decision under appeal, the appellant opponent (II) and opponent I have regarded D11 as closest prior art for claim 1. The latter document indisputably discloses "an on-vehicle multisource reproducing device including multiple audio sources one of which is a disk player", viz a car radio/CD player. It also discloses "selecting means for selecting a reproduction signal from one of the audio sources and supplying the selected reproduction signal to a loudspeaker" in the shape of a manual selection button marked R/CD on the front of the device. The

respondent proprietor accepts that the D11 device can also be regarded as disclosing implicitly (as conventional) "means for detecting that loading a disk to a play position is complete and for generating a loading complete signal: control means for starting playing the disk in response to the loading complete signal". Starting from D11 the board agrees with the submission of the opponents that as soon as the CDROM became common the person skilled in the art would immediately realise that the prior art according to D11 would have to be modified to cope with the inevitable insertion of a CDROM instead of a CD into the disk player. The board also agrees with the contention that the skilled person would seek and find a solution to this problem by applying the teaching of prior art document D1. The latter discloses a circuit which discriminates between a CD and a CDROM inserted in a disc player on the basis of a synchronisation signal which is present on a CDROM but not on a CD and which mutes the output of the audio amplifier when a CDROM is detected. The board finds it plausible that in this situation the skilled person would apply the D1 teaching directly to the D11 device given that it would solve the above problem by providing the user with an immediate warning (silence instead of the expected sound) that he has inserted a non-audio disc.

3.1.2 The above reasoning does not, however, lead to the conclusion that the device specified in current claim 1 of the patent does not involve an inventive step. The claimed device solves a somewhat different problem, namely that in a further development of the D11 device where the disc player is adapted (also) to play a CDROM with map display information for vehicle navigation purposes, giving automatic priority to the disc player

can give rise in some circumstances to an undesirable loss of audio signal (from the radio); cf description of the opposed patent, column 1, lines 42 to 58.

3.2 Claimed solution

The solution taught by the opposed patent and specified in claim 1 is to intervene at the level of the source selecting means to cause the latter to select the reproduction signal from the disk player (1) only when the disk is an audio disk.

3.3 Obviousness

The board is persuaded by the respondent proprietor's submission that neither this problem nor its solution are derivable in an obvious manner from any prior art on file and in particular not from a combination of D11 and D1. D11 is not adapted to use a CDROM input and has only a manual audio source selection means which is not commandable in response to the nature of an inserted disk, while D1 does not have audio source selection means and teaches muting the output of the audio amplifier rather than non-selection. Thus, starting from D11, a plurality of steps and considerable hindsight would be involved - starting with the formulation of the problem - in arriving at the claimed device by applying the teaching of D1 to modify the D11 device.

4. *Inventive step (claim 5)*

4.1 In the decision under appeal at point 3.2 the opposition division found that this claim included numerous features which were neither disclosed nor

suggested in the prior art documents on file. The board is not persuaded by the opponents' very general submissions that a marketable device had to include measures to deal with CD functions which were irrelevant and potentially disturbing if allowed to operate on a CDROM. The claim defines specific solutions to specific aspects of this general problem. In particular the disk player specified in claim 5 does not follow the prior art teaching of D1 that disturbing signals from a CDROM are adequately dealt with by muting the audio output, the disadvantage of which is explained in the description of the opposed patent at column 2, lines 47 to 53.

5. *Inventive step (claim 6)*

5.1 It is common ground that independent claim 6 specifies a digital disk player which is distinguished from the player known from prior art document D1 solely by the point in the signal reproduction chain at which the signal is stopped when a detecting means in the player detects that the disk is a memory disk, ie CDROM. In D1 this point is downstream of the digital-to-analog converter while in the player specified in current claim 6 it is upstream thereof.

5.2 The board is not persuaded by the opponents' submissions that this is a distinction without a technically significant difference, the important thing (they contend) being to prevent the loudspeaker being driven, this being the main energy transducer. Instead the board finds merit in the respondent proprietor's argument that the claim 6 arrangement not only solves the problem of reducing or preventing the conversion of electrical energy into acoustic energy in the

loudspeaker transducer, as is done in the prior art document D1, but, as stated at column 3, lines 26 to 29 and column 16, lines 4 to 12 of the opposed patent, also solves the problem of reducing (dissipative) power consumption in the signal processor including the digital-to-analog converter. As explained in the oral proceedings, this has the beneficial effect of avoiding a temperature rise in a confined space resulting from the conversion of electrical energy into thermal energy in the signal processor including the digital-to-analog converter. In the judgement of the board, this teaching is not derivable in an obvious manner from any combination of D1 and D11 or any other prior art on file and is therefore considered as involving an inventive step within the meaning of Article 56 EPC.

6. In the judgement of the board, the patent as amended in the oral proceedings before the board and the invention to which it relates meet the requirements of the EPC.

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 with the order to maintain the patent as amended in the following version:

- description, columns 1 to 16 as approved by the opposition division,

- claim 1 as approved by the opposition division,

- claims 2 to 6 as filed in the oral proceedings,

- drawings, Figures 1 to 12 as approved by the opposition division.

The Registrar: The Chairman:

D. Sauter W. J. L. Wheeler