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D E C I S I O N
of 7 December 2005

Case Number: T 0857/03 - 3.5.02

Application Number: 91302686.0

Publication Number: 0451990

IPC: H03J 7/18

Language of the proceedings: EN

Title of invention:
Frequency selecting method in RDS receiver

Patentee:
Pioneer Electronic Corporation

Opponent:
01: Robert Bosch GmbH
02: Interessengemeinschaft für Rundfunkschutzrechte GmbH
    Schutzrechtsverwertung & Co. KG

Headword:
-

Relevant legal provisions:
EPC Art. 54, 56

Keyword:
"Novelty - inventive step (yes)"

Decisions cited:
-

Catchword:
-

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Beschwerdekammern   Boards of Appeal   Chambres de recours

Case Number: T 0857/03 - 3.5.02

D E C I S I O N
of the Technical Board of Appeal 3.5.02
of 7 December 2005

Appellant: (Opponent 02)	Interessengemeinschaft für Rundfunkschutzrechte GmbH Schutzrechtsverwertung & Co. KG Bahnstrasse 62 D-40210 Düsseldorf (DE)
Respondent: (Proprietor of the patent)	Pioneer Electronic Corporation No. 4-1, Meguro 1-chome Meguro-ku Tokyo-to (JP)
Representative:	Tomlinson, Kerry John Frank B. Dehn & Co. European Patent Attorneys 179 Queen Victoria Street London EC4V 4EL (GB)
Other party: (Opponent 01)	Robert Bosch GmbH Zentralabteilung Patente Postfach 30 02 20 D-70442 Stuttgart (DE)
Decision under appeal:	Interlocutory decision of the Opposition Division of the European Patent Office posted 15 May 2003 concerning maintenance of European patent No. 0451990 in amended form.

Composition of the Board:

Chairman: W. J. L. Wheeler
Members: J.-M. Cannard
                   P. Mühlens
                   M. Ruggiu
                   C. Holtz

Summary of Facts and Submissions

I.   An opposition was filed against European patent
        No. 0 451 990 on 18 March 1997 by opponent 01 and on
        19 March 1997 by opponent 02. Both opponents filed a
        first appeal against the decision of the opposition
        division dated 22 December 1998 to maintain the patent
        in amended form in accordance with the proprietor's
        request filed with a letter dated 26 October 1998. The
        case was remitted to the first instance by the Board
        for further prosecution, in particular to hear a
        witness in connection with a document D8. After hearing
        the witness, the opposition division issued a decision
        dated 15 May 2003 concerning the maintenance of the
        European patent in the same amended form approved in
        the first decision of the opposition division. The
        present appeal was filed by opponent 02 against this
        second decision of the opposition division.

II.   Prior art documents:

        D4: DE-A-38 32 455, and

        D9: EP-A-0 275 527,

        considered during the first proceedings before the
        opposition division, and

        D16: DE-C-34 39 941,

        filed for the first time by opponent 02 with the
        statement of grounds of the present appeal,

        are considered in the present decision.

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III.   Claim 1 filed on 7 December 2005 during oral
        proceedings before the Board of appeal, which is
        identical to claim 1 as maintained by the opposition
        division, reads as follows:

        "A receiving frequency selecting method in an RDS
        receiver which can receive an RDS broadcasting wave on
        which a plurality of frequency data and program ID data
        of a same network station group are superimposed, the
        program ID data including PI data, in which a receiving
        frequency is switched from a current receiving
        frequency to a frequency of another same network
        station which is given by one of said plurality of
        frequency data, comprising:

        a first step of holding the program ID data which is
        obtained from the broadcasting wave of the current
        receiving frequency in response to a command;

        a second step of tuning the receiver to another
        frequency based on said plurality of frequency data;
        and detecting the existence of a received station;

        a third step of taking in the program ID data obtained
        from the broadcasting wave of the received station
        detected in said second step;

        a fourth step of setting a timer to time-out after a
        predetermined time has elapsed from a time point when
        the existence of the received station has been detected
        in the second step; and

a fifth step of comparing whether the program ID data obtained in said third step coincides with the program ID data held in the first step or not and setting the frequency of the presently received station as a new receiving frequency when said PI data coincides; characterized by

a step of determining when the same program ID has been taken in a plural number of times in the third step, wherein the fifth step of comparing is executed either when it has been determined that the same program ID data has been taken in a plural number of times in the third step, or that the predetermined time has elapsed, whichever occurs soonest."

Claims 2 and 3 are dependent on claim 1.

IV.   Opponent 01 and appellant opponent 02 did not attend the oral proceedings, as announced in their respective letters dated 1 December 2005 and 7 November 2005.

V.   No written submission was received from opponent 01.

VI.   The written arguments of the appellant opponent 02 can be summarized as follows:

The subject-matter of claim 1 was not novel, or did not involve an inventive step in view of document D9, which related to a method for selecting frequencies in a RDS receiver which received RDS data comprising alternative frequencies data and PI data. In a first example, the receiver was tuned for a given time interval to each of the alternative frequencies which were specified in the transmitted data. These frequencies were associated

with the alternative frequencies belonging to the same
network station group by comparing their PI data with
the stored PI data of the previously received frequency.

In a second example, possibly distorted alternative
frequency data were taken in a plural number of times
to reconstruct data free from errors. It was obvious to
proceed in the same way with the PI data and to stop
the reading of the received data when they were free
from errors. The use of a timer was a common measure to
avoid endless loops.

Document D16 proved that it was a well known technique
to the skilled person in the field of wave broadcasting
to compare blocks of data repeated periodically, after
they had been received, and to stop the comparison
procedure when the data were found to be free from
errors.

Document D4 showed that RDS data were formed of
repeating data blocks and that it was necessary to wait
during a given time interval to take in a particular
block.

VII.   The arguments of the respondent proprietor can be
        summarized as follows:

        According to D9, a RDS receiver was successively tuned
        to alternative frequencies, at temporal tuning
        intervals, and remained tuned during each entire
        interval. During each tuning interval, the bit errors
        were evaluated for the data signal received on the
        alternative frequency in question to allow a selection
        of the frequency enabling the best reception. An

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alternative frequency which broadcasted the same
programme as the originally received programme was
determined by a comparison of the respective PI data.
However, D9 did not explain how this comparison was
performed. At least the features specified in the
characterizing part of claim 1 were not disclosed in D9.
Starting from D9, the technical problem was to find an
efficient method for retuning the RDS receiver. The
claimed solution provided two advantages: it was not
necessary to wait in all cases for the time given for
taking in an alternative frequency to elapse; the test
made on the PI data was more reliable and less affected
by multi-path interferences because it was based on PI
data taken at different times. There was no hint in D9,
or in document D4, of a possibility of cutting short a
tuning interval. Nor was it suggested there to
determine whether the same PI data had been received a
plurality of times on a given alternative frequency.

Document D16 related to reception of teletext data
contained in a television signal. These data were
directly used when they were free from errors, or
reconstructed by comparison of plural received blocks
when they contained errors. D16 which did not teach the
solution provided by the claimed invention should not
be admitted in the proceedings since it was late filed
and not highly relevant.

VIII.   The appellant (opponent 02) requested in writing that
the decision under appeal be set aside and that the
patent be revoked.

IX. The respondent (patentee) requested that the patent be maintained in amended form in the following version: claims 1 to 3 filed in the oral proceedings: description page 3 filed in the oral proceedings, pages 2, 4-6 of the patent specification; drawings on pages 9 to 13 of the patent specification.

Reasons for the Decision

1. The appeal is admissible.

Admissibility of the amendments

2. The Board is satisfied that the amendments made to the claims and the description satisfy the requirements of Article 84 EPC and do not contravene Article 123(2) and (3) EPC.

2.1 More specifically, present claim 1 differs from claim 1 of the granted patent in substance in that it now specifies that "the fifth step of comparing is executed either when it has been determined that the same program ID data has been taken in a plural number of times in the third step, or that the predetermined time has elapsed, whichever occurs soonest". Such a fifth step is disclosed in the application as originally filed (see the published application, column 6, line 45 to column 7, line 7 and figure 4) and restricts the scope of claim 1.

2.2 The amendments made to claim 2 and on page 3 of the description remove inconsistencies and adapt the description to the present claims.

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Document D16

3.   Document D16 relates to a method for receiving
        periodically repeating digital information blocks, in
        particular teletext data included in a television
        signal. The correctness of the received information is
        determined on the basis of test information which is
        transmitted with the information blocks. If no errors
        are detected, the information blocks are then processed
        directly. If errors are detected, an information block
        in which an error occurred is taken in a plural number
        of times and the data successively received for this
        block are compared with one another to determine the
        information content which is to be regarded as correct
        for the block in question.

3.1   D16 was filed for the first time with the opponent 02's
        statement of grounds of the present appeal and is a
        short document relating to a neighbouring field of the
        invention or to a broader general technical field.

3.2   However, insofar as D16 could be relevant to the
        present case, it simply shows that a method for
        reducing the effect of errors in the reception of
        periodically repeating digital information blocks was
        already known to skilled person. D16 neither discloses
        nor suggests any feature of the characterizing part of
        claim 1. Accordingly, D16 will not be considered
        further.

Novelty and inventive step of claim 1

4.   Claim 1 relates to a receiving frequency selecting
        method for a RDS receiver. There is agreement between
        the parties and the Board that document D9 discloses
        the closest prior art. Since at least the features
        specified in the characterizing part of claim 1 are not
        disclosed in D9, the subject-matter of claim 1 is new
        within the meaning of Article 54 EPC. More specifically:

4.1   D9 relates to a method for determining in a RDS
        receiver the alternative frequencies to a currently
        received frequency. According to a first embodiment
        (column 4, line 42 to column 5, line 21), the RDS
        receiver is successively tuned on each alternative
        frequency during a short tuning interval, the bit
        errors on the corresponding RDS data signals are
        evaluated, and the alternative frequency providing the
        best possible quality is set as the new frequency to be
        received. According to the description (column 5,
        line 49 to column 6, line 6) and claim 1 of D9, the
        alternative frequencies which broadcast the same
        programme as the currently received frequency are
        identified by comparing their PI data with the
        (implicitly stored) PI data of the currently received
        frequency. According to a second embodiment, the
        alternative frequencies lists which are contained in
        the RDS received signals can be received two or three
        times to correct distorted lists (column 6, lines 43 to
        48).

4.2   It does not appear from D9 that a comparison between received PI data on an alternative frequency and the stored PI data of the currently received frequency takes place after a timer has timed out. Nor is it disclosed in D9 that such a comparison can occur before the timer has timed out when the same program ID has been taken in a plural number of times, or that an alternative frequency is set as the new frequency to be received when said comparison is positive.

4.3   Therefore, the step of "setting the frequency of the presently received station as a new receiving frequency when said PI data coincides" recited as part of the fifth step in claim 1 and the features in the characterizing part of claim 1 are not disclosed in D9.

5.   The features according to the characterizing part of claim 1 provide two technical effects: first, it is no longer necessary to wait in all cases until the timer has timed out before deciding whether an alternative frequency broadcasting the same programme as the currently received frequency has been received; second, the determination of such an alternative frequency is more reliable because it is based on a repetitive occurrence of the same program ID data. Starting from D9 and having regard to the technical effects achieved by the invention, the technical problem addressed by the invention can be seen as providing a more efficient way of retuning a RDS receiver on an alternative frequency (i.e. a frequency on which the same programme is being broadcast). This problem is solved by the features specified in paragraph 4.3.

6.   There is no hint in the cited prior art of the solution
        provided by the invention and more specifically of a
        step of determining when the same program ID has been
        taken in a plural number of times on an alternative
        frequency for cutting short the time interval set for
        monitoring said program ID data and directly proceeding
        to the comparison of this program ID data with that of
        the currently received frequency.

6.1   This is more particularly the case for D9 wherein the
        receiver remains tuned to an alternative frequency for
        the entire tuning interval while it determines the bit
        errors on this alternative frequency and the selection
        of the frequency to be set is made on the basis of bit
        error evaluation, after all the alternative frequencies
        have been scanned.

6.2   In D4, a list of alternative frequencies having a
        reception level higher than a given threshold is
        established and the PI data for the alternative
        frequencies on the list are successively compared with
        the PI data of the currently received frequency until a
        coincidence is found. D4 neither discloses, nor
        suggests, determining whether the same program ID data
        has been taken in a plural number of times on a given
        alternative frequency.

7.   The Board concludes therefore that the appellant has
        not shown that the subject-matter of the claims does
        not involve an inventive step within the meaning of
        Article 56 EPC. The grounds for opposition mentioned in
        Article 100 EPC do not prejudice the maintenance of the
        patent in the presently amended form.

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 in the
        following version:

        claims 1 to 3 filed in the oral proceedings,
        description page 3 filed in the oral proceedings,
        pages 2, 4-6 of the patent specification, and
        drawings on pages 9 to 13 of the patent specification.

The Registrar: The Chairman:

U. Bultmann   W. J. L. Wheeler