BESCHWERDEKAMMERN DES EUROPÄISCHEN PATENTAMTS

BOARDS OF APPEAL OF THE EUROPEAN PATENT OFFICE

CHAMBRES DE RECOURS DE L'OFFICE EUROPEEN DES BREVETS

Internal distribution code:
(A) [ ] Publication in OJ
(B) [ ] To Chairmen and Members
(C) [ ] To Chairmen
(D) [X] No distribution

D E C I S I O N
of 21 October 2004

Case Number: T 0993/00 - 3.5.3

Application Number: 93119058.1

Publication Number: 0599330

IPC: H04H 1/00

Language of the proceedings: EN

Title of invention:
RDS receiver

Patentee:
CLARION Co., Ltd.

Opponents:
Robert Bosch GmbH
Interessengemeinschaft für Rundfunkschutzrechte GmbH Schutzrechtsverwertung & Co. KG

Headword:
-

Relevant legal provisions:
EPC Art. 100(b), 111(1)

Keyword:
Disclosure - sufficiency (yes)"

Decisions cited:
-

Catchword:
-

Europäisches Patentamt | European Patent Office | Office européen des brevets

Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0993/00 - 3.5.3

D E C I S I O N
of the Technical Board of Appeal 3.5.3
of 21 October 2004

Appellant: (Proprietor of the patent)
CLARION Co., Ltd.
5-32-2, Hakusan
Bunkyo-ku
Tokyo (JP)

Representative:
Winter, Brandl, Fürniss, Hübner, Röss, Kaiser, Polte
Partnerschaft
Patent- und Rechtsanwaltskanzlei
Alois-Steinecker-Strasse 22
D-85354 Freising (DE)

Respondent I: (Opponent I)
Robert Bosch GmbH
Zentralabteilung Patente
Postfach 30 02 20
D-70442 Stuttgart (DE)

Representative:
-

Respondent II: (Opponent II)
Interessengemeinschaft
für Rundfunkschutzrechte GmbH
Schutzrechtsverwertung & Co. KG
Bahnstrasse 62
D-40210 Düsseldorf (DE)

Representative:
Kinnstätter, Klaus Dipl.-Phys.
Maryniok & Eichstädt
Kuhbergstrasse 23
D-96317 Kronach (DE)

Decision under appeal:
Decision of the Opposition Division of the European Patent Office posted 7 July 2000 revoking European patent No. 0599330 pursuant to Article 102(1) EPC.

Composition of the Board:

Chairman: A. S. Clelland
Members: F. van der Voort
R. T. Menapace

Summary of Facts and Submissions

I. This appeal is against the decision of the opposition division to revoke European patent No. 0 599 330.

II. Two oppositions were filed against the patent as a whole and were based on the grounds pursuant to Article 100(a) and (b) EPC. The opposition division held that the ground pursuant to Article 100(b) EPC prejudiced the maintenance of the patent as granted and took no position on the ground pursuant to Article 100(a) EPC.

III. The proprietor (appellant) lodged an appeal against the decision and requested that the decision be set aside and the patent be maintained as granted.

IV. In response the opponents (respondents I and II) requested that the appeal be dismissed. Respondent II further requested that the case be remitted to the first instance should the appeal not be dismissed.

V. All parties conditionally requested oral proceedings. In a communication accompanying the summons to attend oral proceedings, the board gave a preliminary opinion.

VI. Oral proceedings were held on 21 October 2004. The parties maintained their requests and at the end of the oral proceedings the chairman announced the board's decision.

VII. Claim 1 as granted reads as follows:

"An RDS receiver which automatically selects the highest one in broadcast signal field strength of a plurality of radio stations broadcasting one and the same program according to AF codes corresponding to the radio stations included in transmission data in a radio data system, comprising:
receiving means (1) for receiving the transmission data;
automatic tuning means (4) for automatically selecting one from among the plurality of radio stations broadcasting one and the same program according to the AF codes included in the transmission data which are received by said receiving means (1);
characterised in that said RDS receiver further comprises
interference detecting means (4, 5, 6 or 7) for detecting whether or not the broadcast signal of an AF code radio station being received suffers from adjacent frequency interference before the automatic selecting operation by said automatic tuning means; and
decreasing means (4 or Q) for decreasing a value of data on the field strength of the broadcast signal of the AF code radio station when said interference detecting means detects that the broadcast signal of the AF code radio station suffers from adjacent frequency interference."

Reasons for the Decision

1. *Technical background*

RDS (radio data system) receivers include an AF (alternative frequency) switching function for automatically switching the receiver frequency to an alternative frequency out of a list of alternative frequencies for receiving the same program (also known as the AF list) whenever the audio quality of the presently received station is no longer satisfactory. For example, in case of a car radio including an RDS function, the same program may be continuously received at a sufficient audio quality by automatic switching of the reception frequency as the car passes through different coverage areas.

2. *Article 100(b) EPC*

2.1 It was common ground between the parties that all specific embodiments in the description included an AF switching function for selecting an alternative frequency when the field strength of the alternative radio station broadcasting the same program was **higher** than that of the station currently received; claim 1 and the corresponding statement of invention on the other hand defined an RDS receiver which automatically selected the **highest** one in broadcast signal strength of a plurality of radio stations broadcasting the same program. It was also common ground between the parties that the patent did not explicitly disclose how a selection of the station with the **highest** field strength from amongst more than two stations could be achieved. The board agrees with these conclusions.

2.2 The respondents argued that Article 100(b) EPC prejudiced the maintenance of the patent as granted for the reasons given below.

2.2.1 Respondent I argued that the patent specification gave no details of how the station with the **highest** field strength was selected in accordance with claim 1. It was argued that in accordance with the flow chart of Fig. 2 (referring to the patent specification as published), after a station having a higher field strength was selected at step 20, the switching operation ended. There was no suggestion to continue or repeat the switching operation.

The board does not accept this argument. In accordance with established case law of the boards of appeal, sufficiency of disclosure must be assessed on the basis of the patent specification as a whole, read by the skilled person in the light of the common general knowledge in the art. Applying these general principles to the present case leads the board to the conclusion that a person skilled in the art would have no difficulty in selecting the broadcast station with the highest field strength as defined in claim 1 for the following reasons:

Fig. 2 of the patent specification illustrates the AF switching operation of the RDS receiver shown in Fig. 1. In particular, at step 13 ("better station?"), if a better station, that is a station having a higher field strength than that of the station which is received at present, has been found, it is subsequently selected at step 20 (see col. 4, lines 24 to 28). The

reference to "better" would imply to a person skilled in the art that the station found at step 13 is not necessarily yet the best station amongst a plurality of stations, i.e. the station having the highest field strength. However, the selection of the best station, as pointed out by respondent I, is what is required for the RDS receiver according to claim 1 (col. 8, lines 48 to 53). The skilled person would therefore consider how to find the best and not merely a better station.

The board notes that the description refers to a plurality of radio stations which are registered in the AF list (col. 4, lines 20 to 24). At step 12 of Fig. 2, these radio stations are **successively** received (col. 4, line 22) and, if there is no better station than the current station, then step 10 is effected again (col. 4, lines 28 to 29). The description does not explicitly state whether for each stored frequency in the AF list the signal strength is already available (first case), e.g. stored after having been determined previously, or whether the signal strength is assessed only whenever the switching operation is carried out (second case).

In the first case, it is self-evident how to find the best station: the list of stored signal strengths need merely be scanned. In support of this, the appellant submitted at the oral proceedings that algorithms for sorting data contained in a list according to their value, in order to find the highest value, were well-documented in prior art computer textbooks. This was not contested by the respondents. Hence, it would be a matter of routine for the skilled person to implement

means for finding within the list that radio station which has the highest signal strength.

As regards the second case, the board notes that the AF switching operation according to the flow chart in Fig. 2 is performed by a CPU 4 (col. 3, lines 32 to 36, and Fig. 1). In order to find the best station, it would merely be necessary for the switching operation to be controlled by the CPU such that **all** alternative frequencies in the AF list are successively received and, for each received alternative frequency, the signal strength is assessed and stored, e.g. together with the alternative frequency in the AF list. Thereafter, for the same reasons as given above, the station having the highest signal strength can easily be found by scanning the signal strength entries.

The board therefore concludes that, even if there is no explicit disclosure or suggestion in the description to continue or repeat the switching operation, the patent specification read in the light of the common general knowledge contains sufficient information for a person skilled in the art to implement the feature of automatically selecting the **highest** one in broadcast signal field strength of a plurality of radio stations broadcasting one and the same program according to AF codes corresponding to the radio stations included in transmission data in a radio data system, as defined in claim 1.

2.2.2 Respondent I further argued that the embodiment according to Fig. 2 would not be suitable for selecting a radio station having a higher, let alone the highest, signal field strength under all circumstances. In

particular, see Fig. 2, if the presently received radio signal were to have a signal field strength which is larger than the reference value V_a (see step 14) but is impaired by interference, the S-meter value would be forcibly set to zero (step 17) and, as a consequence, an alternative station would be found and selected (steps 18 and 20) which might have a signal field strength which is **lower** than that of the presently received station, since any field strength greater than zero would be accepted at step 18.

Respondent II raised a similar objection by arguing that the embodiment according to Fig. 2 does not always permit the automatic selection of the station with the highest signal field strength; if the signal of the present station is already the one having the highest signal field strength but is impaired by interference, the S-meter value of that signal would be forcibly set to zero and any selection of alternative stations would necessarily correspond to a selection of a signal field strength which is **not** the highest.

The board does not accept these arguments, since they presuppose that a high S-meter signal (see Fig. 2, step 14) necessarily corresponds to the selected signal having a high strength. However, as follows from Fig. 2, step 14, a high S-meter signal can also mean a strong interfering signal (see also col. 1, lines 37 to 45, and col. 3, lines 53 to 58). Hence, if the S-meter voltage value is larger than the reference voltage value V_a and no RDS data is received, the voltage value of the S-meter is rejected as incorrect and regarded as zero (cf. col. 4, lines 34 to 37 and 44 to 46). Regarding the S-meter voltage value as zero can

therefore mean that the signal field strength of the selected signal as perceived by the receiver is actually too weak. The AF switching operation is then started in an attempt to find an alternative station having a better, i.e. higher field strength (Fig. 2, step 17). It follows that the embodiment according to Fig. 2 is adapted to select a radio station having a higher field strength and indeed, in view of the considerations given under point 2.2.1, the highest field strength.

2.2.3 Respondent I argued that the skilled person would not be in a position to implement the AF switching operation at either step 15 or 17 in Fig. 2, since, as follows from step 11, the required RDS data, and consequently the AF codes in the AF list necessary for the AF switching operation, would not be available.

The board notes however that the determination of whether or not RDS data (including the AF codes) are available at step 11 relates to the RDS broadcast signal which is being received *at present* (col. 4, lines 18 to 20, and Fig. 2, step 10). On the other hand, claim 1 defines that the AF codes are to be received by the receiving means (col. 9, lines 2 to 4), but does not define when they are to be received; in claim 1, the AF switching operation is defined in more general terms, namely as an automatic selection "according to AF codes corresponding to the radio stations included in transmission data in a radio data system", i.e. without requiring that the AF codes are received at the same time as the AF switching operation is to be carried out. From this, a person skilled in the art would understand that the AF codes may have

been earlier received by the receiver. By using previously received AF codes, the skilled person would not encounter any difficulty in implementing the invention according to the embodiment as illustrated in Fig. 2 of the patent specification.

2.3 Respondent II additionally argued that the subject-matter of claim 1 as granted was not originally disclosed.

The board notes however that, apart from the insertion of the phrase "characterised in that said RDS receiver further comprises", claim 1 as granted is identical to claim 1 as originally filed; this objection is accordingly without merit.

2.4 There being no other objections, the board concludes that the patent discloses the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art.

2.5 Consequently, the opposition ground pursuant to Article 100(b) EPC does not prejudice the maintenance of the patent as granted and the impugned decision is to be set aside.

3. *Remittal to the first instance*

The impugned decision does not contain any statement as to whether or not the claimed subject-matter complies with the requirements of Articles 52 to 57 EPC, although both opponents invoked the corresponding ground for opposition (Article 100(a) EPC) and, in support of this ground, filed further prior art with

their notices of opposition. In order not to deprive the parties of an examination of this further opposition ground by two instances, the board considers it appropriate to allow the auxiliary request made by respondent II and remit the case to the first instance pursuant to Article 111(1) EPC for further prosecution.

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 for further prosecution.

The Registrar: The Chairman:

D. Magliano A. S. Clelland