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D E C I S I O N
of 11 January 2005

Case Number: T 0710/01 - 3.5.3

Application Number: 93110120.8

Publication Number: 0576012

IPC: H04H 1/00

Language of the proceedings: EN

Title of invention:
Digital broadcast receiver

Patentee:
SONY CORPORATION

Opponent:
Interessengemeinschaft für Rundfunkschutzrechte GmbH Schutzrechtsverwertung & Co. KG

Headword:
Digital broadcast receiver/SONY

Relevant legal provisions:
EPC Art. 52, 56

Keyword:
"Inventive step (no)"

Decisions cited:
-

Catchword:
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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0710/01 - 3.5.3

D E C I S I O N
of the Technical Board of Appeal 3.5.3
of 11 January 2005

Appellant: (Opponent)
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Decision under appeal:
Decision of the opposition division of the European Patent Office posted 17 April 2001 rejecting the opposition filed against European patent No. 0576012 pursuant to Article 102(2) EPC.

Composition of the Board:

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

Summary of Facts and Submissions

I. This appeal is against the decision of the opposition division rejecting the opposition filed against European patent No. 0 576 012.

II. The opposition was filed against the patent as a whole and on the ground that the claimed subject-matter did not involve an inventive step (Article 100(a) EPC). The opponent referred, *inter alia*, to the following documents:

D1: O. Klank *et al*, "DSR-Receiver for the Digital Sound Broadcasting via the European Satellites TV-SAT/TDF", IEEE International Conference on Consumer Electronics, 6 - 9 June 1989, Rosemont, Illinois, USA, pages 86 - 87; and

D5: DE 31 26 880 A1.

III. With the notice of appeal, the appellant (opponent) requested that the decision of the opposition division be set aside and the patent be revoked in its entirety. Oral proceedings were conditionally requested. In the statement of grounds the appellant argued that the claimed subject-matter lacked an inventive step having regard to D1 or a combination of D1 and D5.

IV. In response, the respondent (proprietor) requested that the appeal be rejected and argued that both D1 and D5 were concerned with the reception of signals multiplexed in a single frequency block; neither described the actual operation of changing the receive frequency, *i.e.* the frequency block, to which the

digital satellite radio was tuned. Nor would D1 or D5 suggest to the skilled person a modification of the receiver which would permit the automatic selection, after a change of frequency, of a channel at the new frequency of the same programme type as was previously selected; D5 did not mention any further frequency block and D1 specifically disclosed the possibility of manually selecting a channel with the desired programme type from a (new) frequency block. The claimed subject-matter was therefore novel and involved an inventive step having regard to D1 and/or D5. Oral proceedings were conditionally requested.

V. Oral proceedings were held on 11 January 2005, during which the respondent filed an amended set of claims by way of an auxiliary request. The appellant requested that the decision under appeal be set aside and the patent be revoked in its entirety. The respondent requested that the appeal be dismissed (main request) or that the decision under appeal be set aside and the patent be maintained on the basis of the set of claims as filed at the oral proceedings (auxiliary request). The board's decision was announced at the end of the oral proceedings.

VI. Claim 1 as granted reads as follows:

"A digital broadcast receiver for receiving a digital broadcast, in which a plurality of digital broadcast signals are multiplexed in a receive frequency and information as to, at least, the type of broadcast content of each of said digital broadcast signals, as additional information, is transmitted together with said digital broadcast signals, comprising:

frequency specifying means (34-36) for specifying a receive frequency;
content type specifying means (37, 38) for specifying the type of broadcast content; and
control means (43) for controlling signal reception with a receive frequency specified by said frequency specifying means (34-36) and controlling channel selection such that a digital broadcast signal with the broadcast content specified by said content type specifying means (37, 38) is identified among and selected from a plurality of digital broadcast signals received at the specified receive frequency,
characterized in that
said control means (43) is adapted, when a changed receive frequency is specified, for controlling the signal reception with the new receive frequency, and, in the case where a broadcast content had been specified by said content type specifying means (37, 38) before the receive frequency was changed, for controlling the channel selection such that a digital broadcast signal with the broadcast content specified by said content type specifying means (37, 38) is selected from a plurality of digital broadcast signals received at the new receive frequency.".

Claim 1 of the auxiliary request combines claims 1 and 4 as granted and adds the following wording to the above claim 1:

", and said control means (43) is adapted, when a digital broadcast signal corresponding to the broadcast content specified by said content type specifying means (37, 38) among a plurality of digital broadcast signals received through signal reception with the receive

frequency specified by said frequency specifying means (34-36) is selected and, then, if the broadcast content of the received digital broadcast signal becomes not correspondent to the program content specified by said content type specifying means (37, 38), for controlling the channel selection such that the channel selection is changed to another digital broadcast signal which is correspondent to the broadcast content specified by said content type specifying means (37, 38) and present in said plurality of received digital broadcast signals.".

Reasons for the Decision

1. *Inventive step - main request*

1.1 It was common ground between the parties that D1 disclosed all the features of the preamble of claim 1 as well as the first feature of the characterising part according to which the control means "is adapted, when a changed receive frequency is specified, for controlling the signal reception with the new receive frequency". It was also common ground that the remaining feature of claim 1 distinguished the claimed subject-matter from the receiver as described in D1. In accordance with this feature, in the case where a specific broadcast content has been selected at one receive frequency, then, after a frequency change has been made, the channel selection is controlled such that at the new frequency a channel of the same programme type is selected as was selected before the frequency was changed.

The board agrees with this analysis of the parties.

1.2 More specifically, D1 (see page 86, left col., 2nd and 4th para.) discloses a digital satellite radio (DSR) receiver for reception of a DSR signal containing 16 stereo sound channels, which are digitally coded, multiplexed and modulated on one carrier. Each of the stereo signals is provided with a subcode containing auxiliary information indicating the station and the programme type (news, sport, classical music, etc.).

Fig. 2 shows a block diagram of the DSR receiver comprising an RF/IF input section (indicated as "RF/analog part") including a tuner and an IF amplifier/demodulator, which outputs two bitstreams at 10.24 Mbit/s as the input signal for subsequent digital circuitry including a demultiplexer for the sound channels. The tuner and the demultiplexer are controlled by a program control which is also connected to a keyboard with pushbuttons and a display for displaying the auxiliary information. The output signal of the digital circuitry is applied to a D/A-converter and a filter which outputs the L and R audio signals.

The receiver features direct channel selection. Further, on page 87, left col., 4th para., manual selection of a desired programme type (*i.e.* news, sport or classical music, etc.) is described: "*The receiver is also equiped [sic] with pushbuttons for the selection of a specific type of programme. When using one of these buttons the receiver will indicate all channels with the selected type and switch to the first which is found. A second use of the button leads to the second programme which is indicated and so on.*".

It follows that, when the user selects a specific type of programme, the program control controls the demultiplexer to selectively output the first sound channel it finds for which that part of the subcode indicating the programme type matches with the selected programme type.

1.3 D1 is silent as to which channel or programme type, if any, is set after the receiver is tuned to another frequency. Likewise, D1 is silent as to which channel, if any, will be heard after switching the receiver off and on. Hence, if a person skilled in the art were to implement the receiver of D1, he would **inevitably** be faced with the problem of implementing operational states of the receiver, which are not discussed in the document, *e.g.* after a change in frequency has taken place.

1.4 In the board's view, it would be obvious to a person skilled in the art to choose an operational state in which the receiver is controlled such as to maintain the programme type after a change in frequency, or after switching the receiver off and on, in view of the following considerations:

- If a user, instead of directly selecting a channel number, expresses his personal preference for a certain type of programme by making use of the programme type selection facility of the DSR receiver of D1, *i.e.* by pushing a corresponding button for, *e.g.*, classical music, it would be reasonable to assume that this personal preference remains valid until the user informs the receiver

of a change in preference by pushing another programme type button. Hence, there would be no reason to change the programme type when the receiver is switched to another frequency or is temporarily switched off;

- The block diagram of the DSR receiver according to D1 (see Fig. 2) also suggests controlling the tuner independently of the channel selection performed by the demultiplexer, the frequency tuning on the one hand and the channel/programme type selection on the other hand being performed independently in two separate parts of the receiver, namely in the RF/analog circuitry and in the demultiplexer of the digital circuitry, respectively. Hence, there is no technical reason why the channel selection criteria should be changed whenever the tuner is retuned;

- According to D1, the station and the programme type are separately specified in the auxiliary information contained in the subcode of each stereo signal (D1, page 86, left col., 4th para., lines 4 to 8)). This suggests that a station may successively broadcast programmes of different type, for example classical music interrupted by news. The corresponding part of the subcode indicating the programme type would thus be changed accordingly. If such a change in programme type occurs, it would obviously be desirable for the demultiplexer to automatically seek for another station broadcasting a programme of the desired programme type, namely in order to comply with the user's actively expressed preference for

a specific programme type rather than a specific station. This in turn suggests that the programme type specified by the user will be memorized in the receiver's digital circuitry, independently of the tuner operation;

- D1 points towards memorizing personal settings, such as the preferred programme type, since it provides for a presetting of specific personal settings, namely individual loudness for music and speech (page 87, left col., 5th para.). User-friendly operation of the receiver would not be served by erasing such personal settings every time the receiver is switched to another frequency block or is only temporarily switched off.

1.5 In view of the above considerations, the board considers that a person skilled in the art, starting from D1 and faced with the above-mentioned problem of choosing and implementing the operational state of the receiver after a change in frequency has taken place, would provide an operational state such that, if a programme type had earlier been selected, the demultiplexer would select a channel with the same programme type as was selected before the frequency was changed. The skilled person would thus, without the exercise of any inventive skill, arrive at a DSR receiver including all the features of claim 1.

1.6 The respondent argued that the skilled person would have no reason to modify the DSR receiver disclosed in D1 so as to select automatically a channel at the new receive frequency with the previously selected programme type, since D1 already disclosed the

possibility of manually selecting a channel with the desired programme type from amongst the channels in the new frequency block.

The board does not find this argument convincing. The fact that D1 discloses a manual selection procedure does not imply that any other channel selection operation is thereby excluded. Further, what is required is not a modification of the DSR receiver, thereby departing from what is described in D1, but rather merely the addition of a feature in order to cover an operational state which is not mentioned in D1 but which will be necessary in implementing the receiver (see point 1.3).

1.7 For the above reasons, the subject-matter of claim 1 of the main request lacks an inventive step in view of the disclosure of D1 (Articles 52(1) and 56 EPC).

2. *Inventive step - auxiliary request*

2.1 The additional feature of claim 1 according to the auxiliary request is not disclosed in D1. The feature concerns the selection of another channel with the selected programme type once the currently received channel stops providing a programme of the selected type. This feature is therefore not related to a change in receive frequency as discussed above (see points 1.1 and 1.3). The claim thus defines an aggregation or collocation of features, in which the technical problem underlying the claimed subject-matter consists of two separate partial problems: a first one of providing an operational state of the receiver after a change of frequency and a second one which may be formulated as

providing an operational state of the receiver for the situation where a station changes its programme type.

2.2 Document D5 (see, in particular, page 4, lines 9 to 16) also relates to a DSR receiver and deals with the latter problem. It indicates that the programme type of a received station may change over time ("*gerade*") and states that the receiver may be programmed such that it **always**, time selectively, evaluates a station with a specified type of programme. It follows that the receiver may be adapted to automatically select another station broadcasting with the desired programme type each time the currently received station changes to another programme type. The result would be a succession of different stations, each being selected whenever its predecessor stopped broadcasting a programme of the type as selected by the user.

2.3 A person skilled in the art, starting from D1 and facing the above-mentioned second partial problem, would apply the teaching of D5 to the receiver according to D1 and provide an operational state of the receiver, in which, if a programme type has earlier been selected and thereafter the programme type, *i.e.* the broadcast content, of the station changes, the demultiplexer is controlled such that another station, *i.e.* another channel, is selected from amongst the received channels with a broadcast content which corresponds to the programme type as selected by the user.

2.4 Having solved both partial problems as discussed above at points 1.5 and 2.3, the skilled person would thus

arrive at a receiver including all the features of claim 1 without the exercise of any inventive skill.

2.5 The subject-matter of claim 1 of the auxiliary request therefore lacks an inventive step in view of the combined teaching of D1 and D5 (Articles 52(1) and 56 EPC).

2.6 There being no other requests by the respondent, it follows that 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 Chairman:

D. Magliano A. S. Clelland