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D E C I S I O N
of 14 February 2000

Case Number: T 0200/98 - 3.5.1

Application Number: 90307803.8

Publication Number: 0409562

IPC: H04N 5/45

Language of the proceedings: EN

Title of invention:

Television receivers having a picture-in-picture function

Patentee:

SONY CORPORATION

Opponent:

Koninklijke Philips Electronics N.V.

Headword:

PiP television receivers/SONY

Relevant legal provisions:

EPC Art. 56, 52(1)

Keyword:

"Inventive step (yes)"

Decisions cited:

-

Catchword:



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Boards of Appeal

Chambres de recours

Case Number: T 0200/98 - 3.5.1

D E C I S I O N
of the Technical Board of Appeal 3.5.1
of 14 February 2000

Appellant: Koninklijke Philips Electronics N.V.
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 13 November 1997
rejecting the opposition filed against European
patent No. 0 409 562 pursuant to Article 102(2)
EPC.

Composition of the Board:

Chairman: P. K. J. van den Berg
Members: R. Randes

S. C. Perryman

Summary of Facts and Submissions

- I. The opposition by the appellant against the present European patent was rejected by the Opposition division in the decision under appeal. As granted, independent claim 1 reads:

"Television receiving apparatus for receiving television signals broadcast over preselected broadcast channels by different television broadcast systems and including a plurality of demodulator means (27,28) for concurrently displaying television programmes broadcast by different television broadcast systems, the apparatus comprising:

processor means (26) for selecting a broadcast channel to be demodulated by at least one of said demodulator means (27,28);

detecting means (32) for detecting if television signals are broadcast over the selected broadcast channel and, if so, determining a sound carrier frequency derived from said television signals to identify as a function of the determined sound carrier frequency the television broadcast system associated with said selected broadcast channel and by which said detected television signals are broadcast;

memory means (33) for storing an indication of the selected broadcast channel and an identity of the television broadcast system associated therewith;

means for advancing said processor means (26) to select another broadcast channel whereby an indication of said other broadcast channel and the identity of a television broadcast system associated therewith are stored in said memory means (33); and

retrieval means (26) for retrieving from said memory means (33) broadcast channel indication and the identities of associated television broadcast systems and for controlling said plurality of demodulator means (27,28) therewith for concurrently displaying television programmes broadcast over said retrieved broadcast channels."

Independent claim 15 reads as follows:

"Television receiving apparatus for receiving television signals broadcast over preselected broadcast channels by different television broadcast systems and including a plurality of demodulator means (27,28) for demodulating video and audio signals from received television signals and for concurrently displaying television programmes broadcast by different television broadcast systems, said apparatus comprising:

microprocessor means (26) operative sequentially to select broadcast channels to be demodulated by at least one of said demodulator means (27,28) to determine if television signals are being broadcast over each selected channel and, if so, to identify the television broadcast system associated with each channel over which television signals are being broadcast;

memory means (33) for storing indications of the respective broadcast channels over which television signals are determined to be broadcast and identities of the television broadcast systems associated with those broadcast channels;

parameter setting means included in each demodulator means (27,28) for setting the operating parameters thereof compatible with a selected television broadcast system; and

read-out means for reading out from said memory means (33) and supplying to a selected demodulator means (27,28) a broadcast channel indication and a television broadcast system identity to set the operating parameters of said selected demodulator means (27,28) such that television signals broadcast over the read out broadcast channel are demodulated and displayed."

II. The opposition division held that the grounds for opposition mentioned in Article 100(a) EPC did not prejudice the maintenance of the patent as granted, having regard to the following relevant documents:

D1: US-A-4 746 983

D2: EP-A-0 217 123

D3: I.E.E.E. TRANSACTIONS ON CONSUMER ELECTRONICS,
vol. CE-33, no. 3, August 1987, NEW YORK,
pages 444-449; I. ISHIKUBO ET AL.:
"LSIs FLR MJLTISTANDARD TV RECEIVERS"

III. The appellant (opponent) lodged an appeal against the decision, paid the prescribed fee and filed a statement of grounds of appeal in time. The appellant requested that the decision under appeal be set aside and that the patent be revoked. In a letter of reply the respondent requested that the appeal be dismissed and that the patent be maintained as granted. Both parties made auxiliary requests for oral proceedings.

IV. In an annex to the summons to oral proceedings, the Board expressed its preliminary view in respect of the appealed decision. Having regard to the cited prior art documents, it was suggested that it did not appear to be easy to derive an objective technical problem to be solved from those documents which would lead the skilled man to the invention. Since an objective problem had not been clearly identified in the grounds of appeal, the appellant was invited to suggest a problem from which a skilled person arguably would be able to arrive at the invention.

However, already during the formal proceedings of the registry for appointing oral proceedings the appellants declared in a letter, dated 28 October 1999, that "we will not attend the oral proceedings" and "we will make no further submissions". The Board got knowledge of that letter only after the summons to oral proceedings had been dispatched.

V. In a letter, dated 29 November 1999, the respondents suggested that the oral proceedings could be cancelled, since the appellant had apparently lost interest in the case and since the preliminary view of the Board appeared to be that the decision taken by the

opposition division could be upheld. In response to that letter the Board cancelled the oral proceedings.

VI. The **appellant** in the statement of grounds of appeal argued, like the opposition division, in the following way:

- D2 disclosed a multi-standard television receiver having a memory where channel numbers in association with the standard information were stored. When a channel number was selected, the associated standard information was read out from the memory and controlled a demodulator.
- From D1 a PIP-system (i.e. Picture-In-Picture) was known. This system had a plurality of tuners and demodulators which were controlled by a system controller so that a plurality of television programs (i.e. two programs) could be received concurrently. It would have been obvious for a skilled person to include these features in the multi-standard receiver of D2 in order to make that one suitable for a PIP-system.
- Having regard to D3, disclosing integrated circuits for automatically detecting television standards in a multi-standard television receiver, the skilled man would consider to further develop the multi-standard receiver in the direction of implementing an automatic standard detection.

The only difference between this television apparatus thus arrived at and the one of the invention was that the invention included the feature that the memory was

pre-set with standard information by the automatic standard detection circuit, i.e. the automatic pre-set feature. According to the opposition division that feature was not obvious to a skilled man, since in its opinion there were no hints in the cited documents in the direction of an automatic pre-set.

However, it did appear to be obvious to replace the manually preset standard information apparatus with an automatic one. Since D2 already mentioned the possibility to include an automatic standard detection circuit in the multi-standard receiver, it was also obvious to use an automatic standard detection circuit for pre-setting. It was the more obvious, because automatic pre-set of a memory with channel information during a channel search, was widely used in commercially available television receivers at the priority date.

The **respondent** in summary argued as follows:

If reasoning as the appellant it would have been necessary to take the following steps to the skilled person to arrive at the invention.

- (a) add features of D1 to form a multi-standard PiP television set; and
- (b) disregard the entire teaching of D2 and instead follow two lines within D2 that allegedly suggest automation of particular aspects of D2;
- (c) add the features of D3 to include an automatic standards detection circuit; and

- (d) invent an arrangement for a pre-scanning stage to automatically detect whether each frequency channel has a broadcast signal and to identify the video standard of that signal; and
- (e) invent an arrangement to load the standards information from the pre-scanning stage into a standards memory for later use, despite the fact that D3 includes features showing it is optimised for an immediate standards detection, where a rapid detection time and lack of user disturbance are of the essence.

Having regard to the technical problem apparently used by the opposition division (page 7 of the appealed decision, under "Effect I"), i.e. "how to modify the multi-standard television of D2 to provide a picture-in-picture (PiP) function", it appeared that the five steps went far beyond anything needed to overcome the problem.

In particular the respondent pointed out that an automatic pre-set of a memory with channel information during channel search had not been disclosed in any prior art. The appellant had, at least, not been able to prove that. Moreover, in respect of this feature (cf. point 7, page 6 in the respondent's response), according to document D4 ("Which" Magazine, February 1993, pp 43 to 45, thus published after the priority date) channel information was input manually at the pre-set operation, but in D5 ("Which" Magazine, June 1997, pp 32 to 35) the "much more recent introduction" of an automatic pre-set of a memory was used. Both D4 and D5 were extracts from a respected British

consumers' magazine which were filed by the respondent to show that the appellant's statement about the said feature was not necessarily correct. Since the priority date of the present application was from 1989 it, in fact, appeared from the late published documents that the automatic pre-set was probably not "widely" available at the priority date.

Reasons for the 1 February Decision

1. The appeal is admissible.

2. The only issue to be dealt with in this case is the assessment of inventive step. To start with this assessment is regarded to concern the subject-matter of claim 15 which is the independent claim having the broadest scope.
 - 2.1 The technical problem as described in the patent description is the provision of a PiP television receiver capable of concurrently displaying PiP pictures transmitted using different broadcast standards, but without a subjectively disturbing delay period during which the standard is identified (see the patent specification, page 4, first paragraph).

From this very specific problem it does not appear to be impossible to the skilled person to arrive at the present invention. However, as has been made clear in the proceedings before the opposition decision as well as in the letters of the parties in the appeal proceedings, the closest prior art does not disclose a document from which such a problem could be derived.

Thus, D1 does not disclose a television receiver for receiving television broadcast by different television systems, but shows a normal PiP- receiver (i.e. "mono-standard") including a plurality of demodulators for concurrently displaying programs. D2 in turn does not disclose an arrangement for concurrently displaying television programmes, but discloses a multi-standard television receiver having a memory where channel numbers in association with the standard information are stored. It has means for retrieving from said memory means broadcast channel indications and the identities of associated television broadcast systems and for controlling a demodulator therewith. D3 discloses a multi-standard television receiver having means for automatically identifying the television standard. However, it does not disclose that the automatic system defining mode can be used to pre-set a memory with channel identity information during a sequential channel search.

Apparently it is necessary to pose an objective problem that can be derived from either D1, D2 or even D3 and is more general than the one mentioned in the description of the patent. It must then be assessed, whether this problem leads to the invention.

Thus none of the cited documents considers the problem of multi-standard PiP reception. The Board considers that D2 represents the closest prior art, since the apparatus of this document has a multi-standard television receiver and a memory for pre-setting of channels. The respondent suggested the problem (hinted at by the opposition division) to be:

"how to modify the multi-standard television of D2 to provide a PiP function".

To the Board this suggestion appears to be acceptable, although it must be recognised that nothing in D2 hints at such a problem. A more detailed problem, like the one mentioned in the present description (cf. above the beginning of this reason 2.1) would by no means be fair, since an objective problem should not contain fragments of the solution.

- 2.2 In order to assess inventive step, the Board like the respondent, therefore, feels that, it is necessary to find out whether a skilled person in an obvious way would follow all the steps (a) to (e) mentioned by the respondent (see under VI above).

Certainly the skilled person would follow step (a), because this step is almost part of the problem. However, it must be additionally investigated, whether the skilled person would also follow all the other steps, thereby using the teaching of three different documents and additionally common general knowledge, and so arrive at the invention.

Having regard to the steps (b) and (c) it is true that document D2 mentions the possibility of automatic mode detection and that D3 includes an automatic standards detection circuit. However, a first passage in D2 (column 2, lines 31 to 37) makes clear that the automatic detection circuits are expensive and, moreover, that they are not reliable. The real teaching according to D2 is, instead, concerned with the problem how to provide a multi-standard colour television

receiver in which any mode can be assigned to any one of a number of selection switches during the manual pre-set operation. In D2 there is a further passage (column 6, lines 32 to 34) mentioning that "in other embodiment, the switchings, which can be automatically and certainly detected, are carried out by automatic detection circuits". The Board in respect of this passage agrees with the respondents that it is very unclear what is meant with that "other embodiment". In the Board's opinion this "other embodiment" should not be interpreted as being an alternative automatic pre-set arrangement to the manual one described in the patent description, since according to the first passage referred to above automatic detection circuits are not reliable. It may be that this passage relates to a particular part of the described arrangement as suggested by the respondent.

Having regard to the fact, that the arrangement of D3 apparently includes a low-cost and effective automatic standards detection circuit, it is difficult to see, as has been suggested by the respondent, why a skilled person would have to use the detector of D3 in a pre-scanning manner rather than duplicating the cheap and reliable device for the two picture chains in accordance with the teaching of D1.

The Board does not see a necessity to assess in detail whether or not the skilled person would follow the steps (a) to (c), since it appears to be quite clear that the steps (d) and (e) in any case are not obvious to a skilled person. As has been mentioned above, although the appellant has stated that at the priority date the automatic pre-set of a memory with channel

information during a channel search was widely used, it has not been proved that this was the case. Moreover, in fact, the invention includes the recognition of an additional detailed problem mentioned above which occurs when trying to implement a multi-standard PiP television set, namely that caused by the subjectively disturbing standard-detecting delay when the broadcast channel is changed for one of the two or more pictures. Thus, according to the respondent "both pictures would have to be blanked for an unacceptably long time, spoiling the user's viewing of the unchanged picture, or one picture would be blanked for a long time while leaving the other picture displayed - again, an unsatisfactory situation for the viewer". This detailed problem has of course not been hinted at in any of the cited documents. This is not surprising, since as can be seen, none of the documents discloses a multi-standard PiP television set. D2 disclosing a normal PiP television set, in fact, appears to blank the pictures of both programs when the main program is changed (cf. figure 4). The Board feels that the recognition of that additional problem in fact appears to contribute to the inventive step, since this problem cannot be easily foreseen when starting from D2, but might possibly be discovered only after the rough design of the arrangement. Also as has been made clear above, the solution to the problem could have been solved quite differently (blanking of pictures, using low-cost and reliable detectors as in D3) than according to the invention.

3. The Board, therefore, is of the opinion that the subject-matter of claim 15 is not obvious to a skilled man.

Since the scope of claim 1 is narrower than that of claim 15 (it has the additional feature that the sound carrier frequency is used for identifying the television standard) also the subject-matter of this claim is not obvious to a skilled man.

Therefore, the inventions according to claims 1 and 15 meet the requirements of Articles 56 and 52(1) EPC.

4. The dependent claims 2 to 14 concern particular embodiments of the invention according to claim 1 and are likewise allowable.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

M. Kiehl

P. K. J. van den Berg