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D E C I S I O N
of 14 September 1995

Case Number: T 0448/94 - 3.5.1

Application Number: 86104110.1

Publication Number: 0196607

IPC: H04N 5/44

Language of the proceedings: EN

Title of invention:
A satellite broadcasting receiving system

Patentee:
KABUSHIKI KAISHA TOSHIBA, et al

Opponent:
(01) GRUNDIG E.M.V. Elektro-Mechanische Versuchsanstalt Max Grundig & Co. KG
(02) Interessengemeinschaft für Rundfunkschutzrechte E.V.

Headword:
-

Relevant legal provisions:
EPC Art. 56

Keyword:
"Inventive step (yes)"

Decisions cited:
-

Catchword:

Europäisches Patentamt | European Patent Office | Office européen des brevets

Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0448/94 - 3.5.1

D E C I S I O N
of the Technical Board of Appeal 3.5.1
of 14 September 1995

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Decision under appeal: **Decision of the Opposition Division of the European Patent Office dated 24 March 1994 rejecting the opposition filed against European patent No. 0 196 607 pursuant to Article 102(2) EPC.**

Composition of the Board:

Chairman: P. K. J. van den Berg
Members: A. S. Clelland
C. Holtz

Summary of Facts and Submissions

I. European Patent No. 0 196 607 was granted on 24 April 1991 on the basis of European patent application No. 86 104 110.1.

II. The independent claims of the granted patent read as follows:

"1. A satellite broadcasting receiving system for receiving broadcasting waves from a satellite arranged on a geostationary satellite orbit for broadcasting viewing purposes, said satellite broadcasting a plurality of channels, said receiving system comprising:
a) a parabolic antenna (102) capable of changing its receiving state so as to receive horizontally and vertically polarized broadcasting waves,
b) means (112) for adjusting the direction of the antenna so as to receive the broadcasting wave from a specific satellite,
c) means (142) for reproducing a signal of a specific channel of a plurality of channels from the specific satellite as received by said antenna,
d) memory means for storing the channel selection data corresponding to the reproduced signal,
e) operating means (136) including a selecting section (170) for selecting the channel and a requesting section (M) for requesting the storage of the channel selection data to said memory means,
f) receiving polarization control means (138) for controlling the receiving state of said antenna,

characterized in that

for receiving broadcasting waves from a plurality of satellites of different normal or inverse types, each broadcasting a plurality of channels

d1) said memory means (160, 178) is adapted for storing the position data of the satellite corresponding to the specific direction of said antenna besides the channel selection data
e1) said operating means (136) further includes a selecting section (168) for selecting the direction of said antenna and a label input section (166)
said requesting section (M) is adapted also for requesting the storage of the position of the specific satellite and
said label input section (166) is provided for assigning a label to the stored data for recognizing the channel of the specific satellite and for requesting that channel,
g) a control means (164, 176) is provided, for storing the data representing the position of said specific satellite and channel selection data into said memory means (160, 178) with said label when said label is input in response to a storage request by said requesting section of said operating means (136), and for reading out of said memory means (160, 178) said stored data for controlling said antenna, said direction adjusting means and said reproducing means when said label is input without any storage request, and in that
h) said antenna direction adjusting means (112) changes the direction of said antenna (104) under control of said control means (164, 176) according to the selection of the antenna direction, which is derived from said operating means (136), and generates pulses with the change of antenna direction, an accumulated value of pulses being counted by counting means (158) under control of said control means (164, 176) according to said selection of antenna direction, the satellite position data stored into said memory means (160, 178) being the accumulated value of the pulses counted by said counter (158),

i) said control means (164, 176) reads out of said memory means (160, 178) the accumulated value of pulses stored with said label when said label is input without a storage request and controls said antenna direction adjusting means (112) so that said read out pulse accumulated value is equal to a count of said counting means (158), and
j) said control means (164, 176) stores the receiving state of said antenna into said memory means (160, 178), reads out of said memory means (160, 178) the antenna receiving state and its label when said label is input from said operating means (136) without a storage request, and causes said receiving polarization control means (138) to control the receiving state of said antenna so that it is coincident with said read out antenna receiving state."

"8. A satellite broadcasting receiving system for receiving broadcasting waves from a satellite arranged on a geostationary satellite orbit for broadcasting purpose, said satellite broadcasting a plurality of channels, said receiving system comprising
a) a parabolic antenna (102) adjustable in direction and signal receiving state so as to selectively receive a horizontally or vertically polarized wave, and
b) memory means for storing the channel selection data, representing a desired channel transmitted from the satellite,

characterized in that

for receiving broadcasting waves from a plurality of satellites of different normal or inverse types, each broadcasting a plurality of channels there are further provided
c) means for gradually adjusting (112) the antenna direction;

d) means for scanning (176) receiving frequencies to receive each channel whenever said parabolic antenna is adjusted in direction;
e) means for stopping (164, 176) the gradual adjustment of said parabolic antenna to fix its direction when a signal is received by said frequency scanning;
f) means for checking (222) if the received signal belongs to an even or odd group of the channels;
g) means for detecting (138), based on information indicating that the received signal belongs to the even or odd group of the channels and that the signal receiving state of said antenna is a horizontally or vertically polarized wave receiving state, the type of a satellite present in the direction in which said antenna is oriented;
h) said memory means (160, 178) is adapted for storing besides the channel selection data the data representing the detected satellite type and the direction of said antenna when the satellite type is detected said data of said items being stored with a predetermined label attached thereto; and there are further provided
i) control means (164, 176) for reading out, by specifying said predetermined label, the corresponding data from said memory means, said corresponding data being used for controlling said antenna in the direction of a specific broadcasting satellite so as to receive the desired channel and for controlling said antenna so as to place it in a signal receiving state for receiving the horizontally or vertically polarized wave."

III. Two oppositions to the granted patent were filed, both arguing that the subject matter of all the claims lacked an inventive step (Article 100(a) EPC), and citing various documents of which the following remain relevant:

D1: CA-A-1 165 401;

D2: Symposium Record of 13th Int. TV Symposium Montreux, 28 May to 2 June 1983, pages 201 to 215; J.SHEPHERD: "Direct reception of television programmes broadcast by satellite - consumer orientated";

D3: US-A-4 352 202;

D4: DE-C-2 354 059;

D6: "Footprint", vol. 1, No. 1, 1983.

After written proceedings a decision to reject the oppositions and maintain the patent unamended was issued by the Opposition Division on 24 March 1994.

IV. On 20 May 1994 Opponent I filed a notice of appeal against this decision and paid the appropriate appeal fee. A statement setting out the grounds of appeal was received on 27 July 1994. The Appellant's request for cancellation of the decision and revocation of the patent in its full extent was supported by Opponent II, who later submitted two new documents in support of this position:

D7: "radio fernseh phono praxis" No. 10, October 1984;

D8: "Funkschau" 18/86, 29 August 1986.

V. During the appeal proceedings, the representative of the Appellant also took over the representation of Opponent II.

VI. In a communication accompanying the summons to oral proceedings the Rapporteur took the preliminary view that there was doubt as to whether the subject-matter of Claim 1 involved an inventive step, having regard to the disclosure of D3 and what would appear to be the common knowledge of the skilled person, as exemplified by other documents in the case, in particular D1, D2 and D4.

VII. The Respondent (Proprietor) submitted, on 14 August 1995, five auxiliary requests for maintenance of the patent in various amended forms.

VIII. At the end of oral proceedings held on 14 September 1995 the Board announced its decision to maintain the patent unamended in accordance with the Respondent's main request.

IX. The parties' arguments may be summarised as follows:

1. **The Appellant (Opponent I), and Opponent II:**

Fixed-position satellite antennas with tuners had been known at the priority date, and these tuners had, as a matter of common knowledge, a memory for storage of channel settings. It was also generally known that a mechanism for setting the polarisation according to the channel was important, as shown by e.g. D1, D2 and D6. In such a system the input label might be a channel number or a programme number; at any rate it would necessarily cause the tuner to look up a memory. Documents D2 and D6 also showed that positionable dishes with preprogrammable directions (and therefore memories) had been well-known at the time. It could not be considered inventive merely to combine these two devices into one, with a label for a programme indicating all the data necessary for watching it; there were technological trends to combine multiple related devices and to make them convenient to use. In detail, the claimed features could all be derived from documents D3 (alternatively D6) and D1, whereby the teaching of D2 would motivate the skilled person to create a device having the combination of features required.

Independent Claim 8 should not be considered inventive since, in addition to the features of Claim 1 already discussed, it merely specified an automatic search procedure which was known from document D4. The dependent claims too contained nothing inventive.

2. **The Respondent (Proprietor):**

It was disputed that there had been a discernable trend to combine receivers and polarisers; indeed, the idea of a combination with the consequent ability to control both receiver and satellite antenna with a single input label was itself inventive. Specifically, the skilled person would not have combined D3 and D1, since D3 related to an entirely different problem, that of directing a terrestrial antenna towards the television transmitter for a particular channel. In D3 there was only one direction for each channel. In the case of satellite reception each direction was associated with a plurality of channels. Hence the skilled person in the satellite receiver art would not have considered D3. Further, even if for the sake of argument it would have been obvious to combine D3 and D1, the skilled person would not have arrived at the invention; the memory specified in D1 was entirely different from the programme data storage memory in the invention, its function being merely that of a latch for the polarisation. As to D6, all this showed was that separate positioners were available for turning satellite dishes. The examples pointed to by the Appellant to demonstrate integrated devices did not clearly show what was integrated with what and merely disclosed vague sales slogans. Indeed, it was notable as evidence of the lack of a trend to combine

direction control and tuning control in one device that such a device was not advertised, despite the fact that the priority date of the current patent was a mere two years after this publication.

As to the Appellant's assertion that storing channel information under a label had been common knowledge, it should not be forgotten that the priority date was ten years in the past, so that what was now common knowledge was not necessarily so then. The Respondent could not judge whether such storage had been common knowledge at the time, but it was clearly the Appellant's task to establish this alleged fact. Even if storing channel information under a label were to have been common knowledge, the claim was inventively distinguished from this common knowledge by the order in which the elements were entered when a channel was stored. First the channel was selected, i.e. tuned in, then the "memory" button was pressed and finally the programme number was entered. This allowed the user to choose an appropriate programme number for a found channel, whereas setting the programme number first and then searching for a channel, which was the normal practice in the field of television receivers, did not offer this flexibility. This feature was sufficient of itself to render the claimed subject-matter inventive.

3. The Appellant asserted that whether a programme number was inputted first and then a channel search carried out, or vice versa, was irrelevant since both were common knowledge. However, the oral proceedings being the first time the Proprietor had suggested that this feature contributed in any way to the inventiveness of the claim, the Appellant had not had the opportunity to search for documents

to prove his point. He was certain that given the opportunity, he could produce many examples; this feature moreover had nothing to do with satellite receivers as such.

Reasons for the Decision

1. The appeal complies with Articles 106 to 108 and Rule 64 EPC and is, therefore, admissible.

2. *Admissibility of late-filed documents*

D7 and D8 were both submitted by Opponent II in the course of the appeal proceedings; both relate to a rotator for a terrestrial antenna, D8 having been published after the priority date of the patent in suit. In view of the late publication of D8 and since D7 discloses nothing which cannot be derived from the documents previously on file, the Board has exercised its discretion under Article 114(2) EPC not to admit either document to the proceedings.

3. *Clarity of Claim 1*

3.1 The Board notes that in the decision under appeal, see page 6, the Opposition Division indicates that Claim 1 includes the storage, with the label, of data indicating the "normal" or "inverse" state of the satellite. It appears from the patent that this designation indicates the manner in which specific frequency channels are polarised, satellites which are positioned comparatively close to one another and which might otherwise interfere having corresponding channels differently polarised.

3.2 The first characterising clause of Claim 1 refers to "receiving broadcasting waves from a plurality of satellites of **different normal or inverse types**". However, the memory means are said at feature (d1) to be adapted for storing position data and channel selection data but not satellite type. Feature (j) refers to storing "the receiving state of said antenna" which the Board takes to mean polarisation. The Board accordingly concludes that Claim 1 is limited to the storage, under a label, of satellite positional data, channel selection data and polarisation, but not satellite type in the sense used in the patent.

3.3 It is noted that Claim 8 on the other hand explicitly includes the storage of satellite type.

4. *Inventive step*

4.1 The only issue is inventive step, the arguments primarily being directed to Claim 1.

4.2 At the oral proceedings it was common ground between the parties that the single most relevant document is D1, which is acknowledged in the introduction to the patent and is the basis of the delimitation of Claim 1. D1 illustrates a satellite broadcasting receiving system incorporating switchable polarisation. Although D1 discloses the provision of a memory, see box 25 in Figure 5, it is clear from the description that this memory is for polarisation state. Since the polarisation is motor-controlled and it is desirable to avoid continual changes in polarisation during channel stepping, see page 16, lines 20 to 26, the memory 25 ensures that a new set of data is only transferred to the tuner and the motor when a switch 22 is pressed after a channel has been selected. No channel selection

data is stored, the channel frequency being set directly by means of thumbwheel switches, see page 12 lines 1 to 10.

4.3 The Board concludes that D1 does not disclose any of the features of the characterising part of Claim 1. In particular, D1 makes no provision for repositioning of the dish to receive any particular satellite. It can be seen from a perusal of Figure 1 that some form of mechanical positioning is present in order to enable alignment, but this does not appear to be of a nature which would permit repositioning to cover a plurality of satellites.

4.4 It is however clear from the prior art on file that at the priority date of the patent the use of positioners for automatic repositioning was well-known in the art. Particular reference was made by the Appellant to D6, which is a commercial publication in which various satellite receivers and positioners are illustrated. The Board concludes from the disclosure of D6 that the use of positioners for multi-satellite reception was common general knowledge in the art at the earliest claimed priority date. Although no details of construction are disclosed in D6, it appears from the positioner shown at page 4 that satellite positions are stored and are read out from memory to operate an actuator when a key is pressed.

4.5 The Appellant argued that D6 disclosed the provision of a combined receiver/positioner and referred to the inside cover of D6, which refers to an "SR30" unit with "Push button remote control rotor features built in". It was asserted that the "SR30" was a combined receiver/positioner. The Board is not convinced that the skilled person would understand the reference in this way. It appears that at the date of D6, as at the date

of D1, the standard method of controlling polarisation was by mechanical rotation of either the antenna or a polarising element, so that the reference to "rotor features" should be understood as referring to polarisation control. The Appellant also referred to page 7 of D6, on the right hand side of which a system is advertised which is said to be "Complete with Programmable Remote Dish Control Built-In Receiver", reference is also made to "horizontal/vertical". This passage, although suggestive of a combined receiver and positioner, cannot by itself bear the weight of the interpretation the Appellant places upon it. The reference to "dish control", although suggestive of tracking, must be considered without the benefit of hindsight; it is not clear to the Board that at the date in question the skilled person would have understood this as meaning anything other than polarisation control. It is noted that no reference is made to positioning or tracking, which would be the case if the satellite dish as a whole, rather than the polariser, were being moved. It is also noted that the advertised dish is of substantial size, so that tracking would not be a simple or cheap matter.

4.6 Thus, no prior art was placed before the Board which clearly and explicitly shows that a combination of a positioner and a receiver was on sale at the earliest claimed priority date.

4.7 Be that as it may, the Board has considered whether at the claimed priority date the skilled person would without the exercise of invention have combined a receiver and positioner in such a manner as to arrive at the claimed invention, as suggested by the Appellant, and has concluded that it would have been obvious for the skilled person to combine a satellite receiver as known from D1 with a positioner as visible from D6, in a

single box. It does not, however, in the Board's view, follow that such a combination would give rise to the features set forth in Claim 1.

4.8 The technical teaching on which Claim 1 is based is the use of a so-called label, meaning that by the use of stored data a single key press can be used to cause the satellite receiver to select a particular frequency and polarisation and also to cause the actuator to position the dish to receive a particular satellite. Thus, by means of the label both receiver and positioner are operated. At the oral proceedings the Appellant asserted that the use of a label was at the earliest claimed priority date standard practice throughout the entertainment industry; he referred in particular to the use of televisions in which each programme button stored a particular frequency rather than enabling a frequency channel to be inputted directly. The Board agrees; the use of a remote control for a satellite receiver as disclosed in D6 implies the use of labels which relate a button on the remote control to a pre-stored frequency in the receiver and to a particular polarisation. The Board accordingly accepts that the storage of frequency and polarisation under a label was known at the earliest claimed priority date.

4.9 The Appellant made reference to document D3 which was said to link the use of a receiver and a positioner, a single key press controlling both and thus implying the use of a label. This document is however concerned with television rather than satellite reception and discloses an antenna rotator in which each antenna position is related to a predetermined television channel. In D3 actual channels, i.e. frequencies, are associated with each button on the remote control, so that strictly speaking a label is not associated with each channel. D3

does however provide a memory which associates each remote control button with a predetermined antenna rotational position.

4.10 Although D3 points in the direction of the claimed invention, in the Board's view it does not go far enough. Only with the benefit of hindsight can it be seen that the combination of channel frequency and antenna position disclosed by D3 could also have application to a combined receiver/positioner in the satellite field, making use of a single label to store frequency, position and polarisation information. In the Board's view, the skilled person would not, at the earliest claimed priority date, have considered D3 to have any application to a satellite system. In a satellite system, as opposed to a terrestrial broadcasting system, each antenna position corresponds to a plurality of stations, whereas in D3 each position apparently corresponds to a single frequency. Thus, the skilled person would not be led by D3 to combine a satellite receiver with a positioner in the manner claimed.

4.11 The Appellant also argued that it has been for many years a trend in the entertainments industry to combine individual devices using a single remote control; a "hi/fi tower" was an example of such a device. However, such a unit is in essence a combination of separate devices rather than a conflation of all necessary functions in a single device. The remote control is used to address each device in turn and - other than D3 - no example was given of prior art in which a remote control could operate two or more devices simultaneously. It was also argued that once the decision was taken to integrate different devices in a single box all the features of Claim 1 followed as a matter of course, most of these features being common general knowledge in the

entertainments industry. This assertion is however based on an ex post facto analysis; it is certainly true that at the present time the combination of a satellite receiver and positioner is common in the art but from the prior art made available to the Board it has not proved possible to track this development back beyond the earliest claimed priority date.

4.12 Thus, in the Board's view, the Appellant has not succeeded in showing that it would have been obvious for the skilled person, having combined a satellite receiver and positioner, to provide the means set forth in the characterising part of Claim 1 in order to enable a label to control position data, tuning and polarisation. The Board accordingly concludes that the subject-matter of Claim 1 involves an inventive step.

4.13 In the course of the oral proceedings the Respondent (Patentee) drew attention to a feature of Claim 1 which he regarded as important, namely the order in which the data was stored in the memory means: from feature (g) it could be seen that first the data representing position and frequency was stored and then a label was attached to it; this was the opposite to the art, in which normally a label was first selected and thereafter a frequency associated with it. D4, cited by the Appellant, shows a television receiver incorporating such a system, in which labels are first chosen and then a frequency associated with each label. However, in view of the Board's above finding on inventive step it has not been necessary to consider this argument in further detail.

5. Although the Appellant directed his attention primarily to Claim 1, the Board considers it profitable to consider independent Claim 8 briefly. This claim is also concerned with a satellite broadcasting receiving system

but is directed to the manner in which the data is programmed into the receiver. The only document which discloses the programming of data into a receiver is D4, which is concerned with a television receiver. The Board does not consider that the skilled person, given D4, would find it obvious to modify an existing satellite receiver such as known for example from D1 in order to provide the means claimed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

M. Kiehl P. K. J. van den Berg