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D E C I S I O N
of 24 September 1997

Case Number: T 0097/96 - 3.5.2

Application Number: 86310156.4

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Language of the proceedings: EN

Title of invention:
Remote control systems and commanders

Patentee:
SONY CORPORATION

Opponent:
Interessengemeinschaft für Rundfunkschutzrechte E.V.

Headword:
-

Relevant legal provisions:
EPC Art. 56

Keyword:
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Case Number: T 0097/96 - 3.5.2

D E C I S I O N
of the Technical Board of Appeal 3.5.2
of 24 September 1997

Appellant: (Proprietor of the patent)
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Decision under appeal: Interlocutory decision of the Opposition Division of the European Patent Office dated 20 December 1995 concerning maintenance of European patent No. 0 231 659 in amended form.

Composition of the Board:

Chairman: W. J. L. Wheeler
Members: M. R. J. Villemin
A. C. G. Lindqvist

Summary of Facts and Submissions

I. In the interlocutory decision under appeal the opposition division rejected the proprietor's main request to maintain European patent No. 0 231 659 in unamended form, and rejected the proprietor's first and second auxiliary requests to maintain the patent in amended form. The third auxiliary request to maintain the patent in amended form with claim 1 filed in oral proceedings on 24 November 1995 was granted.

II. The impugned decision refused the main and first auxiliary requests for the reason that the systems according to claim 1 of each of these requests did not involve an inventive step having regard to the following prior art:

D1: DE-B-2 746 523
D3: DE-A-3 139 577
D4: EP-A-0 002 434.

The second auxiliary request was refused because claim 1 included an unclear expression.

III. The proprietor contests the decision under appeal in so far as the main request and first and second auxiliary requests were not allowed. The opponent has not appealed.

IV. The appellant withdrew the second auxiliary request in a letter dated 2 December 1996. After a communication from the Board, accompanying the summons to oral proceedings, the appellant filed with the letter dated 21 August 1997 amended claims 1 to 15 and a replacement text for the description to replace page 1, lines 25 to 49 of the printed patent specification, in respect of a new first auxiliary request.

V. Claim 1 according to the main request, namely claim 1 as granted, is worded as follows:

"A system for remotely controlling a video signal reproducing apparatus (10), the system comprising:

a controller (7) provided in the apparatus (10) for controlling operation of the apparatus (10) and selecting operational modes for accomplishing different functions according to a control command; and

a remote control commander (20) including push button switch means (25A, 25B) for selecting operational modes of the apparatus (10) to cause production of a remote control signal carrying said control command to the apparatus (10), and a first rotary dial assembly (200) operable to produce signals indicative of rotation thereof so as to generate said control command; characterised in that:

a second rotary dial assembly (200d) is provided in the apparatus (10), the second rotary dial assembly (200d) also being operable to produce signals indicative of rotation thereof so as to generate said control command; and

the controller (7) is operable to control the speed of reproduction of the video signal by the apparatus (10) to one of a plurality of different speeds in response to said control command from either of the first and second rotary dial assemblies (200, 200d)."

VI. Oral proceedings were held before the Board on 24 September 1997.

VII. The appellant argued essentially as follows:

Document D1 - see figure 1 - disclosed a computer controlled telecommunication and/or sound reproducing apparatus with a rotary control 20 in the apparatus for control purposes. The apparatus was also controllable by a remote commander 2 with push-buttons. A CPU 5 in the apparatus selected commands from either the remote commander 2, the rotary control 20 or a keyboard 1 and used these commands to control the apparatus.

Document D1 dealt with the problem of controlling all operating functions by the remote commander and by controls on the apparatus itself (see column 6, lines 46 to 61). The solution was to provide "+" and "-" keys on the remote commander which simulated the functionality of the pulse generator in the rotary control in the apparatus, see D1, claims 6 and 12, and column 8, paragraphs 2 and 3. The pulses were added to or subtracted from the stored actual value - see column 12, lines 4 to 13.

D1 did not contemplate a video tape recorder (VTR). A VTR was not included in the examples mentioned in claim 1 of D1. Although a tape was mentioned in the table below columns 13 and 14, this only referred to the selection of an input and not to the control of a VTR. There was no hint anywhere in D1 that the apparatus could be, or include, a VTR. There was also no hint that a rotary control could be provided in both the remote commander and the apparatus itself.

Document D4 concerned the same technical field as D1 and disclosed a remote commander. Document D4 dealt with the problem of controlling a majority of the apparatus's functions with a minimal number of keys, sensors or switching devices on the remote commander, because too many keys caused the remote commander to

become relatively difficult and confusing to use. The remote commander was therefore provided with a tuning knob 35 replacing "+" and "-" keys and with a function preselector 6 that stored a plurality of key command data sets and was set by way of a rotary switch 1 or an insertable data carrier.

The rotary switch 1 served merely to reduce the number of keys that had to be provided on the remote commander, but did not, however, emulate the functionality of a rotary dial assembly provided on the apparatus itself and bore no functional resemblance whatsoever to a rotary dial assembly.

Thus, document D4 failed to disclose the provision of a continuously variable rotary dial assembly on a remote commander. The rotary switch of D4 was wholly unsuitable for real-time variable control of the speed of video tape playback. Document D4 also failed to disclose any hint or suggestion that might encourage the skilled person to attempt to utilise a similar rotary switch in order to control the speed of video tape playback. The known remote commander was specially designed for the control of static variables such as tuning and volume control which could be controlled by "+" and "-" pulses. The control of the tape speed in a video recorder, however, required the control of a dynamic variable and hence encoded commands.

Document D3 related to a tape transport controller in a video tape recorder which allowed the speed/direction of tape to be controlled in accordance with signals generated by the rotation of a control knob 6 on the video tape recorder in JOG and SHUTTLE modes. The tape transport controller was bulky and included a push and turn function, see D3, claim 1, lines 18 to 29, and was

therefore not suitable for a hand held remote commander. No suggestion could therefore be gathered from D3 to provide a rotary dial assembly on a remote commander.

The invention could be derived from D1 only with hindsight, since two separate problems which were not related to the technical field of D1 had to be solved by two separate steps, namely by:

(i) providing a rotary dial assembly on a remote commander, which produced signals indicative of the rotation thereof so as to generate a control command; and

(ii) providing a controller to control the speed of reproduction of a video signal to one of a plurality of speeds in response to the control command from either the remote commander rotary dial assembly or the apparatus rotary dial assembly.

VIII. The respondent's arguments can be summarised as follows:

Claim 1 only claimed a general idea, namely the provision of a rotary control on a remote control commander, which could not be considered inventive. Moreover, no specific features which enabled miniaturization of the rotary control as needed in a hand held remote commander, were recited in claim 1.

The closest prior art was the telecommunication apparatus of D1, in which all the control functions were provided both in the apparatus itself and in the remote commander, see column 6, line 44. A video tape recorder (VTR) was a computer controlled electronic telecommunication and entertainment apparatus, as was

known by any normal consumer. D1 also referred to tape recorders, see table below columns 13 and 14, references to tape 1 and tape 2. The general idea taught by D1 was therefore also clearly applicable to a VTR.

D3 concerned a VTR with a rotary control for adjustment of the tape speed provided in the VTR apparatus itself. The invention as defined in claim 1 of the patent in suit could therefore be derived from D3, since a skilled practitioner would provide the same control concepts for a remote commander in accordance with the concept explained by D1.

A prejudice against providing a rotary control also on a remote commander did not exist, see D4, which disclosed a rotary control on a remote commander for a computer controlled telecommunication apparatus.

The invention was also obvious in view of the historical development of video recorders. New technology was at first provided only for professional equipment and then at a later date, when the products became cheaper, would also be provided for consumer devices. D3 concerned a professional VTR with cutting facilities. Such professional equipment, which was used in studios, needed, however, no remote commander.

A consumer product however needed a remote commander for market acceptance. A consumer version of D3 would therefore be provided with a remote commander. In view of the teaching of D1 this consumer version would have a rotary control on the VTR and on the remote commander.

XI. The appellant requested that the decision under appeal be set aside and that the patent be maintained in unamended form, and, as a first auxiliary request, that

the patent be maintained on the basis of claims 1 to 15 and the amendment to page 1 of the description filed with the letter of 21 August 1997, the remaining parts of the patent specification being unamended. Otherwise, the patent should be maintained in the amended form allowed by the opposition division.

XII. The respondent requested that the appeal be dismissed.

Reasons for the Decision

1. The appeal is admissible.

2. The only point in dispute is the inventive step of the subject-matter of claim 1 as granted and of claim 1 according to the appellant's first auxiliary request.

3. In the oral proceedings, the respondent concentrated on D1 and D3 as being the prior art from which to argue lack of inventive step of the claimed system.

4. *Main Request*

4.1 Document D1 discloses a computer controlled telecommunication apparatus with an input keyboard 2 provided on a remote commander, and an input keyboard 1 in the apparatus itself. Each keyboard provides for a control of all the functions of the telecommunication apparatus. An additional rotary control 20 is provided in the apparatus to perform the function of "+" and "-" keys on the keyboard 1 for manual tuning and generates corresponding pulses which are added to or subtracted from the actual value stored in the microprocessor, which generates a control command for a phase locked loop in accordance with the updated value.

4.2 D1 does not suggest the provision of a rotary control in the remote commander. The examples explicitly mentioned in D1 as telecommunication apparatus are a television receiver, a radio receiver and a Hi-Fi sound reproduction device (see claim 1). A tape is only mentioned in respect of input selection - see the table below columns 13 and 14 and column 7, lines 31 to 33. An apparatus, in which the speed of the reproduction of a video signal has to be controlled is, however, not mentioned in D1.

4.3 Starting from D1, the relevant technical problem for the purpose of assessing inventive step is how to apply the teaching of D1 to a video signal reproducing apparatus and, at the same time, to provide a versatile means for controlling the speed of the video signal reproduction.

4.4 This problem is solved in accordance with the teaching of the opposed patent by the provision of a rotary control on the apparatus itself and on the remote commander for generation of commands controlling the speed of reproduction of the video signal.

4.5 The question which therefore falls to be decided by the board is whether it would be obvious to the skilled person, starting from D1, to control the reproduction speed of a video signal with two rotary dial assemblies, one of which is provided in the reproducing apparatus itself, and the other in a remote control commander.

4.6 Document D3 discloses a professional video tape recorder in which the speed of reproduction of the video signal is controlled by a rotary control provided in the device for JOG and SHUTTLE modes (see page 21, lines 4 and 5). The rotary control of D3 (see abstract and figure; and claim 1, lines 18 to 29) is bulky and

requires push and turn operations. A mode switch is provided to enable the rotary control (see page 21, lines 16 to 21). D3 does not mention any remote commander.

4.7 Even if for the sake of argument the provision of a hand held remote control commander for the video tape recorder described in D3 is considered desirable, should the VTR be adapted for marketing as a consumer electronic apparatus, this would not imply that the remote controller had to be designed for controlling all the functions provided by the VTR, nor that a rotary control for the control of the video signal reproduction speed would have to be provided in the remote commander. Moreover, the bulky construction and the necessary push and turn operations of the rotary control in the VTR of D3 render it rather unsuitable for a hand held remote control commander.

4.8 Document D4 discloses the provision of a rotary control in a remote commander as a replacement of "+" and "-" keys for adjustment of variables such as volume, balance etc. The remote commander transmits pulses representing increments or decrements of the variable, whose value is stored in the apparatus. The remote commander does not transmit a control command in the sense of claim 1 of the patent in suit. D4 does not refer to the control of the speed of reproduction of a video signal. An incentive for the provision of a remote commander comprising a rotary dial assembly for the reproduction speed of a video signal cannot therefore be derived from D4.

4.9 Hence, the board concludes that the subject-matter of claim 1 of the main request is not derivable in an obvious way from a combined consideration of documents D1, D3 and D4. Therefore the subject-matter of this claim involves an inventive step within the meaning of Article 56 EPC.

5. It follows from the above considerations that the patent can be maintained unamended.

6. There is thus no need to consider the auxiliary requests.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. European patent No. 231 659 is maintained unamended.

The Registrar: The Chairman:

N. Maslin W. J. L. Wheeler