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D E C I S I O N
of 7 December 1994

Case Number: T 0324/93 - 3.5.2

Application Number: 88903369.2

Publication Number: 0310678

IPC: G11B 27/10

Language of the proceedings: EN

Title of invention:
Disc recording/reproducing apparatus and disc recording/reproducing method

Applicant:
SONY CORPORATION

Opponent:
-

Headword:
-

Relevant legal provisions:
EPC Art. 56

Keyword:
"Inventive step (yes, after amendment of some independent claims)"

Decisions cited:
-

Catchword:
-

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Case Number: T 0324/93 - 3.5.2

D E C I S I O N
of the Technical Board of Appeal 3.5.2
of 7 December 1994

Appellant: SONY CORPORATION
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Decision under appeal: **Decision of the Examining Division of the European Patent Office dated 27 November 1992 refusing European patent application No. 88 903 369.2 pursuant to Article 97(1) EPC.**

Composition of the Board:

Chairman: W. J. L. Wheeler
Members: R. G. O'Connell
G. Davies

Summary of Facts and Submissions

I. The Appellant contests the decision of the Examination Division refusing European patent application No. 88 903 369.2 on the ground that none of independent Claims 1 to 3 filed with letter of 7 May 1992 involved an inventive step.

II. The following prior art documents were considered in the proceedings before the Examination Division:

D1: EP-A-0 169 597
D2: EP-A-0 164 131
D3: EP-A-0 024 858
D4: EP-A-0 281 415.

III. Oral proceedings were held before the Board on 7 December 1994, at which the Appellant filed new Claims 1 to 3 and adapted pages 2 and 3 of the description.

IV. Claims 1 to 3 are now worded as follows:

"1. Recording apparatus for a recordable disc (1) having a recording region (5) in which data such as performance information is recorded and a lead-in region (6) which includes recordable information concerning separate programmes of the recorded data, the apparatus comprising:

memory means (19,20) for storing programme information relating to programmes constituted by the recorded data in the recording region (5) of the disc (1); and

means (27) for recording programme information in the lead-in region (6) of the disc (1);

characterised by:

the memory means (19,20) comprising a first memory (19) for storing programme information reproduced from the lead-in region (6) of the disc (1), and a second memory (20) for storing selected programme information;

operator-controllable information select means (29-33) for allowing selection of the recordable information in the recording region (5) concerning a plurality of the separate programmes and storing the selected programme information in the second memory (20);

display means (34) for displaying data relating to the selected programme information; and

control means (23) for controlling the recording means (27) to record the selected programme information stored in the second memory (20) in the lead-in region (6) of the disc (1).

2. Reproducing apparatus for a recordable disc (1) having a recording region (5) in which data such as performance information is recorded and a lead-in region (6) which includes recorded table of contents information concerning separate programmes of the recorded data and selected programme information, the apparatus comprising:

means (15) for reproducing the table of contents information and the selected programme information from the lead-in region (6) of the disc (1);

a first memory (19) for storing the table of contents information and a second memory (20) for storing the selected programme information; and

operator-controllable control means (23) for selectively providing a programme reproduction start command which causes the selected programme information to be read out from the second memory (20) instead of the table of contents information from the first memory

(19), and thereby controls the reproducing means (15) to reproduce the recording region (5) of the disc (1) in accordance with the selected programme information.

3. A reproducing method for a recordable disc (1) having a recording region (5) in which data such as performance information is recorded and a lead-in region (6) which includes recorded table of contents information concerning separate programmes of the recorded data and selected programme information, the method comprising:

reproducing the table of contents information and the selected programme information from the lead-in region (6) of the disc (1);

storing the table of contents information and the selected programme information respectively in first and second memories (19, 20);

detecting a programme reproduction start command selectively provided by an operator-controllable control means (23);

reading out the selected programme information from the second memory (20) in response to the detected programme reproduction start command instead of the table of contents information from the first memory (19); and

reproducing the recording region (5) of the disc (1) in accordance with the selected programme information."

V. The Appellant argued in essence that the invention was an improvement of the D1 apparatus and method for enabling a user to play, on repeated occasions, a favourite selection from a disc, in the context of a (re)recordable medium as known e.g. from D2. The latter altered the table of contents (TOC) on the lead-in region of the disc automatically to take account of newly recorded material but did not provide for the user

to manipulate the TOC independently e.g. to define a favourite selection or sequence. The present invention was not suggested by a combination of D1 and D2 because it provided for a user-definable selection and sequence to be recorded on the disc lead-in region, this data being additional to and independent of the TOC, thus providing the user with the option to play, on any suitable player - not necessarily the apparatus used to make and record his personal selection - either his personal selection and sequence or the standard sequence defined by the TOC.

There was no suggestion in D3 that the user should alter the single "program instruction sequence" prerecorded on the disc. D3 did not disclose any means of enabling the user to choose between a personal user-defined sequence and a standard sequence.

VI. The Appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the description and drawings as refused by the Examining Division, with amended pages 2 and 3 and Claims 1 to 3 as filed during the oral proceedings on 7 December 1994 replacing pages 2 and 3 and the claims of the refused application.

Reasons for the Decision

1. The appeal is admissible.

2. *Article 123(2) EPC*

The Board has satisfied itself that the application has not been amended in such a way that it contains subject-matter which extends beyond the content of the

application as filed. In particular it is noted that the omission of the term "optically" from the claims does not represent an increment of technical information when the original disclosure is considered as a whole with particular reference to the paragraph bridging pages 2 and 3 of the description of the application as filed. The terminology used has also been modified in the process of editorial revision and clarification but again without contravening Article 123(2) EPC.

3. *Inventive step*

3.1 Claim 1 is delimited with respect to D2, which, in the view of the Board, constitutes the closest prior art, being the only document which discloses a recording and reproducing apparatus having means for recording programme information in the lead-in region of the disc. Relative to D2 the problem addressed by the present application is seen by the Board as (i) providing the user of an apparatus of this type with the option of playing back the recorded material either in the recorded sequence as determined by the TOC or in accordance with a previously stored user-defined selection and sequence and (ii) enabling the user to exercise this option on any suitable playback apparatus without the need to define the selection and sequence afresh.

3.2 Regarding part (i) of the problem, D1 discloses means enabling the user to store his personal selection and sequence, accompanied by an automatically generated disc identification code, in a nonvolatile data store in the disc player, this store being selectively operable to control playback in accordance with the personal selection stored for the particular disc. Although presented in the context of non-(re)recordable discs,

the D1 teaching is directly applicable to recordable discs. However, part (ii) of the problem is neither disclosed nor suggested by any cited prior art.

3.3 The present application provides an alternative solution to partial problem (i) and a solution to partial problem (ii) by storing the personal selection data, in addition to the TOC on the lead-in region of the disc. The modification to the D2 recording apparatus required to implement this idea is specified in the characterising features of Claim 1; Claim 2 specifies the features of a reproducing apparatus having means enabling the operator to replay selectively either the personal selection and sequence recorded on the lead-in region of the disc or the standard TOC sequence, while Claim 3 specifies a reproducing method corresponding to the use of the apparatus specified in Claim 2.

3.4 Whereas the Board agrees with the finding of the Examining Division in the impugned decision that no inventive step is involved for the skilled person in applying the teaching of D1 concerning personal selection storage to the D2 recording apparatus it takes a different view on the question whether the further step of varying the teaching of D1 by storing the personal selection on the (re)recordable disc rather than in the nonvolatile RAM of the player is obvious. The present invention is of the kind in which there was no technical hurdle to be overcome in the implementation of the idea, once the idea had been conceived, but it would, of course, be wrong to conclude from that alone that the invention is obvious; cf. Guidelines for Examination, C-IV, 9.4(i). In the present case the skilled person had no obvious reason to make a change; the D1 scheme works just as well for recordable discs and on the face of it is the straightforward way of preserving compatibility between the recordable and

non-recordable varieties of discs. Prior to the Appellant's invention there was no suggestion that a disc lead-in region should contain user-definable programme selection information in addition to a "normal" TOC. Nor does it seem plausible to the Board, having regard to the cited prior art, to argue that the advantage of making the personal selection portable i.e. transferable to other playback apparatus is so manifest that the skilled person would have immediately realised, as soon as a recordable disc of the D2 type became available, that a way should be sought to implement such a portability feature. Similarly, although the skilled person would be conscious of the high cost of nonvolatile RAM as a design constraint, it does not follow that it is obvious to use the lead-in region of the disc as a substitute for the nonvolatile RAM, given that the prevailing concept was to personalise the player not the disc. The risk of inventive step assessment being prejudiced by hindsight is particularly great in this kind of invention involving no difficulties in technical implementation.

3.5 For these reasons the Board takes the view that the combined teachings of D2 and D1 do not lead to the subject matter of any of Claims 1 to 3 without an inventive step being involved.

3.6 Consideration of D3 does not lead to a different conclusion on inventive step. There is no suggestion in this document that the operator of the apparatus described should define a personal selection and/or sequence of programme items and record such a personal selection in the lead-in region of the disc in addition to the standard sequence prerecorded therein. Indeed the apparatus described records analog video and has no means provided to record digital selection data. Furthermore, there is no disclosure of means to enable

an operator to choose any nonstandard selection or sequence. Although not mentioned explicitly, the D3 disc may well have, in addition to the prerecorded "programme instructions", something like a directory or catalogue recorded on the lead-in region to keep track of recorded items, but it would be unsupported speculation to suppose that such a directory would define a performable standard sequence of items in the sense of a D1 or D2 type TOC. Hence D3 alone or combined with any one, or even both, of D1 and D2 does not render the subject-matter of any of Claims 1 to 3 obvious.

4. In view of the above considerations the Board is of the opinion that each of Claims 1-3 defines subject-matter which involves an inventive step within the meaning of Article 56 EPC and that the application otherwise meets the requirements of the EPC.

5. For the sake of completeness, the Board notes that D4 was cited against the originally filed claims for designated states AT, DE, FR and GB pursuant to Article 54(3) and (4) EPC; the present claims are novel with respect to the disclosure of this document.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the department of first instance with the order to grant a patent on the basis of:

   Claims 1 to 3 as filed at the oral proceedings on 7 December 1994;
   Description: pages 1 and 3 to 8 as filed with letter of 7 May 1992, pages 2 and 3 as filed at the oral proceedings on 7 December 1994.
   Drawings: Sheets 1/5 to 5/5 as originally filed, with the amendments to Figures 1 and 3 as requested in letter of 7 May 1992.

The Registrar: The Chairman:

M. Kiehl W J. L. Wheeler