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D E C I S I O N
of 30 November 1993

Case Number: T 0241/93 - 3.5.1

Application Number: 88305381.1

Publication Number: 0295148

IPC: H04N 5/78

Language of the proceedings: EN

Title of invention:
Recording, reproduction and editing of data

Applicant:
Sony Corporation

Opponent:
-

Headword:
-

Relevant legal norms:
EPC Art. 52(1), 56

Keyword:
"Inventive step (no)"

Decisions cited:
-

Catchword:
-

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Case Number: T 0241/93 - 3.5.1

D E C I S I O N
of the Technical Board of Appeal 3.5.1
of 30 November 1993

Appellant: Sony Corporation
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Decision under appeal: **Decision of the Examining Division of the European Patent Office dated 30 October 1992 refusing European patent application No. 88 305 381.1 pursuant to Article 97(1) EPC.**

Composition of the Board:

Chairman: P.K.J. van den Berg
Members: C.G.F. Biggio
G. Davies

Summary of Facts and Submissions

I. The European patent application No. 88 305 381.1, claiming the priorities of patent applications Nos. 145 892/87 and 146 420/87 filed respectively on 11 and 12 June 1987 in Japan, was filed on 13 June 1988.

II. By a decision dated 30 October 1992, the Examining Division refused the application pursuant to Article 97(1) EPC.

This decision was based on the application containing the claims according to the main and auxiliary request, as filed during the Oral Proceedings held on 16 September 1992.

The Examining Division held that the subject-matters of

- independent (apparatus) Claims 1 and 11, respectively independent (method) Claims 16 and 26, according to the main request, and

- independent (apparatus) Claims 1 and 10, respectively independent (method) Claims 15 and 24, according to the auxiliary request,

lacked an inventive step over prior art documents D1 = EP-A-0 223 423, in particular, and D4 = US-A-4 480 273, which were expressly referred to in the appealed decision.

III. The Appellant filed an appeal on 29 December 1992 and paid the appropriate appeal fee the same day.

The Grounds of Appeal were filed on 2 March 1993 and the Appellant filed therewith newly drafted

- (apparatus) Claims 1 to 14, whereby (apparatus) Claims 2 to 14 are all dependent on Claim 1, and

- (method) Claims 15 to 28, whereby (method) Claims 16 to 28 are all dependent on Claim 15.

The Appellant requested that the appealed decision be set aside, and that a patent be granted on the basis of the newly drafted claims.

Subsidiarily, it was requested that oral proceedings be appointed.

IV. Independent Claims 1 (apparatus) and 15 (method), as filed on 3 March 1993, read:

Claim 1:

"A recording apparatus for use with a recording medium (1) having a plurality of mutually separated data recording regions (21-250) each being identified by a different identification number and having a capacity for recording a field of video data or a given period of audio data supplied from an external source, the apparatus comprising:

- first means for recording the video data on a selected one of said data recording regions (2_1-2_{50}) which is identified by a first identification number; characterised by
- second means, which is triggered in an after-recording mode entered after a user input distinct from that initiating video data recording, for subsequently recording on another of said data recording regions (2_1-2_{50}) the audio data along with a second identification number and a group

identification number of at least one data recording region to designate a group of data recording regions whose recorded data are to be reproduced in synchronism with each other, wherein

- said first means is operative to record a plurality of items of video data (V1-V3) on a plurality of mutually different data recording regions spaced apart by at least one data recording region (E) that is left blank, and said second means is operative to record said audio data (A1 to A8) in said at least one blank data recording region (E) between the data recording regions storing video data."

Claim 15:

"A recording method for use with a recording medium having a plurality of mutually separated data recording regions (2_1-2_{50}) each being identified by a different identification number and having a capacity for recording a field of video data or a given period of audio data supplied from an external source, the method comprising:

- recording the video data on a selected one of said data recording regions (2_1-2_{50}) which is identified by a first identification number; characterised by
- subsequently recording in an after-recording mode, entered after a user input distinct from that initiating video data recording, on another of said data recording regions the audio data along with a second identification number and a group identification number of at least one data recording region to designate a group of data recording regions whose recorded data are to be reproduced in synchronism with each other, wherein
- said step of video data recording comprises recording a plurality of items of video data (V1-V3) on a plurality of mutually different data recording regions spaced apart by at least one data recording

region (E) that is left blank, and said step of audio data recording comprises recording said audio data in said at least one blank data recording region between data recording regions storing video data."

V. During the written part of the procedure and at the oral proceedings, which were held on 30 November 1993, the Appellant argued as follows.

- D1 represented the closest prior art available to a person skilled in the art at the priority date claimed by the application at issue; the pre-characterising clause of independent Claims 1 and 15 being so drafted as to reflect this prior art.

- D1 merely disclosed the "editing" of a series of audio signals, but did not disclose the use of the second means (11-17, 31-40) "in an after-recording mode which is entered after a user input distinct from the one initiating video data recording", so that this "after-recording feature", which is the first one mentioned by the characterising clause of independent Claims 1 and 15, was novel over this citation.

- D1 neither disclosed nor even suggested the feature of reserving blank recording regions between the video signal recording regions; said reserved blank recording regions
  - being intended to be used for recording therein audio data related to the video data stored in the immediately neighbouring recording region, and
  - representing a "deliberate fragmentation" of the data stored on the disk, which was directly contrary to the technical prejudice in the field.

- This feature, which is the second one mentioned by the characterising clause of independent Claims 1 and 15, served the purpose of reducing the access time necessitated to read a set of video data and the thereto corresponding set of audio data, when both these sets were to be "reproduced in synchronism with each other".

- A further prejudice against adopting the solution of the invention should be seen in the fact that the leaving of blank recording regions strongly interacts with the use, in the after-recording and editing mode, of the region identification numbers and group identification numbers, and thereby increases the complication of the after-recording and editing processes.

The Appellant concluded that, since the combination of the two features mentioned by the characterising clause of independent Claims 1 and 15 was neither disclosed nor suggested by any of the prior art documents on file, it should be recognized that the subject-matter of these claims involved an inventive step.

Reasons for the Decision

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

2. *Article 123(2) EPC*

It is noted that the newly drafted

- independent (apparatus) Claim 1 and independent (method) Claim 15 correspond to independent Claim 1 and independent Claim 15 of the auxiliary request submitted to the Examining Division,

- dependent (apparatus) Claim 10 and dependent (method) Claim 24 differ from Claim 10 and Claim 24, respectively, according to said auxiliary request, in that they have been rendered explicitly dependent on Claim 1 and on Claim 15, respectively, and
- dependent apparatus claims 2 to 9 and 11 to 14, as well as dependent method Claims 16 to 23 and 25 to 28, do not differ from those submitted to the Examining Division.

Upon inspection of the application as filed, the Board finds that the newly drafted claims are duly supported by the originally filed disclosure, so that they are not open to an objection pursuant to Article 123(2) EPC.

Insofar as the newly drafted claims correspond to those of the auxiliary request submitted to it, the Examining Division arrived at the same conclusion, albeit implicitly.

3. *Novelty*

The subject-matter of independent Claims 1 and 15 is new over the disclosure of any of the prior art documents on file, in particular over D1.

Insofar as the second feature - reserving blank recording regions between the video signal recording regions - mentioned by the characterising clause of independent Claims 1 and 15 is concerned, the Board agrees with the analysis of D1, as made by the Appellant; such a feature is not disclosed by said citation.

Insofar as the first feature - after-recording - mentioned by the characterising clause of independent Claims 1 and 15 is concerned, the Board notes that

citation D1 does not mention, at least not explicitly, the use of the second means (11-17, 31-40) "in an after-recording mode which is entered after a user input distinct from the one initiating video data recording", so that "after-recording", as such, is not disclosed by D1.

The Board thus agrees with the Examining Division which, in the appealed decision (see page 8), arrived at the same conclusions.

4. *Inventive step*

4.1 The Board disagrees, however, with the assertion of the Examining Division that D1 - on page 3, lines 21 to 33; on page 9, lines 7 to 9; and on page 14, lines 14 to 26 - merely "suggests" the "editing" of a series of audio signals.

In the Board's view,
- "editing" is positively "disclosed" by D1 in the cited passages, and
- "editing" includes all the operations which may be carried out on previously recorded information, i.e. modifying their presentation, erasing and replacing some portions thereof, adding new information to that already recorded, and even adding some fully new information, which is merely related to that previously stored.

Since, moreover, "editing" of a series of audio signals, "previously recorded" on a recording region of a magnetic medium (disk or tape), may only be achieved by "subsequently recording" some new audio signals on the same region of said magnetic medium, the Board is of the opinion that some kind of "after-recording" is disclosed by D1, albeit implicitly.

Since it is evident that such a "subsequent recording" must permit later editing of a specific information recorded in a specific recording region, this obligatorily necessitates the identification of said recording region. Therefore, the Board is of the opinion that the features mentioned by independent Claims 1 and 15 - pre-characterising clause and first sentence of the characterising clause thereof - do not contribute to an inventive step implied by the subject-matter of said claims. First and second identification numbers and a group identification number (N_c, respectively, N_t, N_f and N_n) are, in fact, disclosed by D1 (page 6, line 34 to page 7, line 9).

4.2 In respect of the second feature mentioned by the characterising clause of independent Claims 1 and 15, i.e. reserving blank recording regions between the video signal recording regions, the Appellant mainly argued that said feature

- represented a "deliberate fragmentation" of the data stored on the disk, which was directly contrary to the technical prejudice in the field, and
- served the purpose of reducing the access time necessitated to read a set of video data and the set of audio data corresponding thereto, when both these sets were to be "reproduced in synchronism with each other".

4.2.1 The expression: "fragmentation" is normally used by a person skilled in the art, to indicate that files are so stored on a disk that a portion of a file is stored in a first given recording region of the disk and further portions of the same file are stored in other recording regions, said first and other recording regions being non-contiguous.

According to the application, recording regions, containing video data corresponding to different images from the still camera, are not contiguous, but are interleaved with recording regions containing audio data.

According to the application, it appears further that

- all the video data, which correspond to one image from the still camera, represent a "video-file" having its own "filename", represented by its identification number (N_c), and containing all the video data pertaining to said still image, i.e. a "video-file" which is complete in itself and stored in a single recording region,

- all the audio data, which correspond to each audio information, represent an "audio-file" having its own "filename", represented by its identification numbers (N_t, N_f, N_n), and containing all the audio data pertaining to said audio information, i.e. an "audio-file" which
  - is complete in itself,
  - is stored in a single recording region, or in recording regions which are contiguous to each other, and
  - is associated or "appended", if and when it effectively exists, to a corresponding "video-file", so that it may be reproduced in synchronism therewith.

According to the application, it is hence, justified to consider

- that neither said "video-files" nor said "audio-files", as such, suffer from any "fragmentation", and

- that a "video-file" and its associated or "appended" corresponding "audio-file", as a whole, do not represent a single "composite-file", but remain two distinct "files" of different nature, which happen to be associated or "appended" to each other, for the purpose of synchronous reproduction.

Having regard to the above, the Board cannot share the Appellant's view that a "deliberate fragmentation" was intentionally introduced into the claimed invention, merely because two distinct "video-files", representing two distinct images from the still camera, are not stored contiguously, thus leaving, during their recording, one or more blank tracks between them. The Board is, accordingly, of the opinion that there was no technical prejudice against the feature of reserving blank recording regions between the video signal recording regions, within the context of the invention as claimed.

4.2.2 For the reasons stated below, the Board considers, on the contrary, that it was obvious, for a person skilled in the art, to provide for such blanks destined to serve as recording regions for the subsequent after-recording of the audio data, to the effect that said audio data are recorded between video data which relate to that audio data, as illustrated by figure 5A and 5B.

The Board considers that, since a "video-file" and its associated or "appended" corresponding "audio-file" are, according to the application, associated or "appended" to each other, for the purpose of synchronous reproduction, it would have been obvious for a person skilled in the art to store said two "files" immediately contiguous to each other, in order to strongly reduce

the space to be travelled by the reading head and, consequently, the time necessary to access both said "files", during their synchronous reproduction.

It is, in fact, well-known that the time necessary to access, i.e. to read, a specific piece of information stored on a disk is essentially determined by the time which is necessary for the reading head to travel to the regions of the disk, where said information is stored, that time being obviously the shortest, when the regions of the disk, where said information is stored, are contiguous to each other.

4.2.3 The Board is also not in agreement with the Appellant's submission that a further prejudice against adopting the solution of the invention should be seen in the fact that the leaving of blank recording regions strongly interacts with the use, in the after-recording and editing mode, of the region identification numbers and group identification numbers, and thereby increases the complication of the after-recording and editing processes.

In respect of the increased complication of the after-recording and editing processes, which allegedly results from the presence of said blank regions and from the consequent interleaved recording of audio and video data, the Board points out that, according to the application as filed, said complication is

- rather a consequence of obvious security measures intended, during said after-recording and editing processes, to prevent
  - newly inputted audio data from becoming incidentally associated with unrelated video data, or

- already existing (or just edited) audio data from being, possibly wrongly, edited once again,

- than a consequence of the addressing technique - use of second identification numbers and a group identification number (N_c, respectively, N_t, N_f and N_n) - which, as already mentioned in previous point 4.1, does not differ from that disclosed by D1 (page 6, line 34 to page 7, line 9).

The Board points out further that the Appellant's submission is also in contradiction with the application as filed (see: page 6, lines 5 to 7), where it is stated that: "... since the tracks for performing audio recording are left blank before after-recording, the after-recording operation and detection of the recording state of each track becomes simplified".

4.3 According to the considerations mentioned in previous points 4.1 to 4.2.3, the subject-matter of independent Claims 1 and 15 has to be considered as lacking an inventive step pursuant to Article 56 EPC.

Hence, the Appellant's request may not be granted.

Order

For these reasons, it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

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