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**Datasheet for the decision  
of 31 March 2011**

**Case Number:** T 1385/06 - 3.5.04

**Application Number:** 00310611.9

**Publication Number:** 1107613

**IPC:** H04N 9/82

**Language of the proceedings:** EN

**Title of invention:**

Picture recording apparatus and methods

**Patentee:**

Sony Corporation

**Opponent:**

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**Headword:**

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**Relevant legal provisions:**

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**Relevant legal provisions (EPC 1973):**

EPC Art. 111(1)

**Keyword:**

"Decision re appeals - remittal (yes)"

**Decisions cited:**

-

**Catchword:**

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Case Number: T 1385/06 - 3.5.04

**D E C I S I O N**  
of the Technical Board of Appeal 3.5.04  
of 31 March 2011

**Appellant:**

Sony Corporation  
6-7-35 Kitashinagawa  
Shinagawa-ku  
Tokyo 141 (JP)

**Representative:**

Robinson, Nigel Alexander Julian  
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**Decision under appeal:**

Decision of the Examining Division of the  
European Patent Office posted 13 March 2006  
refusing European patent application  
No. 00310611.9 pursuant to Article 97(1) EPC  
1973.

**Composition of the Board:**

**Chairman:** F. Edlinger  
**Members:** C. Kunzelmann  
B. Müller

## Summary of Facts and Submissions

- I. The appeal is against the decision of the examining division to refuse European patent application No. 00 310 611.9.
- II. The decision to refuse was based on the ground of lack of inventive step (Article 56 EPC 1973) of the picture recording apparatus according to claim 1 then on file, having regard to document  
  
D2: EP 0 685 967 A2.
- III. The applicant appealed, filed claims according to an auxiliary request with the statement of grounds of appeal and requested the reimbursement of the appeal fee by reason of a substantial procedural violation.
- IV. The board issued a communication pursuant to Article 15(1) of the Rules of Procedure of the Boards of Appeal (RPBA), annexed to a summons to oral proceedings dated 19 January 2011. In this communication the board *inter alia* expressed doubts whether claim 1 of the main request was supported by the description and comprised the essential features which an allowable claim should recite (Article 84 EPC 1973). These doubts were *inter alia* based on the finding that claim 1 then on file did not sufficiently specify the relationship between extracted pictures. The board noted that the description seemed to provide support for reduced size extracted moving picture sequences which were synchronised with the input (and stored) moving picture sequence, but not for a free

choice of irregular intervals between extracted pictures.

- V. With a letter dated 28 February 2011 the appellant submitted claims according to two additional auxiliary requests.
- VI. Oral proceedings were held before the board on 31 March 2011. In the oral proceedings the appellant filed claims 1 to 8 of a sole request (labelled "Replacement Main Request") and withdrew the requests previously on file including the request for reimbursement of the appeal fee by reason of a substantial procedural violation. The appellant's final and only request was that the decision under appeal be set aside and that the case be remitted to the first instance for further prosecution on the basis of the claims of the sole request submitted in the oral proceedings.
- VII. Claim 1 of the sole request reads as follows:

"A picture recording apparatus for compression-encoding a moving picture sequence and recording the resultant data to a record medium, comprising:  
encoding means (9) for compression-encoding an input moving picture sequence;  
recording means (4) for recording the compression-encoded data generated by said encoding means to a record medium (5');  
picture generating means (6) for *detecting changes of the input moving picture sequence by detecting a moving vector; and extracting a picture from the input moving picture sequence at each change point and extracting a picture from the input moving picture sequence at a*

*predetermined frame interval; and generating reduced size pictures from the extracted pictures, resulting in reduced size pictures spaced at irregular intervals, while the compression-encoded data is being recorded to the record medium;*

*and the encoding means (9) being operable, for each generated reduced size picture, to compression encode a group of pictures comprising the respective reduced size picture as an intra-coded picture, and to synchronise with the input moving picture sequence, a plurality of intercoded copies of the reduced size picture such that the number of pictures in each group of pictures are equivalent to the picture extraction intervals, thereby forming a reduced size extracted moving picture sequence;*

*and the picture recording apparatus is operable to record the compression encoded group of pictures to a record medium."*

Claim 8 of the sole request reads as follows:

"A picture recording method for compression-encoding a moving picture sequence and recording the resultant data to a record medium, comprising the steps of: compression-encoding an input moving picture sequence; recording the compression-encoded data to a record medium (5');

*detecting changes of the input moving picture sequence by detecting a moving vector; and extracting a picture from the input moving picture sequence at each change point and extracting a picture from the input moving picture sequence at a predetermined frame interval; and generating reduced size pictures from the extracted pictures, resulting in reduced size pictures spaced at*

irregular intervals, while the compression-encoded data is being recorded to the record medium; and for each generated reduced size picture, compression encoding a group of pictures comprising the respective reduced size picture as an intra-coded picture, and to synchronise with the input moving picture sequence, a plurality of intercoded copies of the reduced size picture such that the number of pictures are equivalent to the picture extraction intervals, thereby forming a reduced size extracted moving picture sequence; and recording the compression encoded group of pictures to a record medium."

Claims 2 to 7 are dependent on claim 1.

Amendments with respect to the claims on which the decision under appeal was based (claims 1 and 14, respectively) are set out in *italics*.

VIII. The reasons given in the decision under appeal may be summarised as follows:

D2 was regarded as the closest prior art. The subject-matter of claim 1 differed from the video recording apparatus known from D2 in that it had encoding means for compression encoding an input moving picture sequence. In D2 the input signals were already compressed data. The problem to be solved by the present invention might therefore be regarded as using the apparatus of D2 for uncompressed input signals. The solution proposed in claim 1 did not involve an inventive step because it was obvious to a person skilled in the art to include means for compression encoding in the recording apparatus of D2 if the input

picture signal was not already compressed. The method claim lacked an inventive step for similar reasons.

IX. The appellant's arguments may be summarised as follows:

The invention facilitated the creation of a thumbnail version of the input video based on an irregular sampling of the input video frames. Input frames were automatically sampled so that all the relevant scenes of the video were represented. Because the thumbnail pictures had a reduced size and were sampled at intervals such that not every picture was sampled, only low bandwidth was required, for instance, for a download. Nevertheless the created thumbnail version of the video allowed a user to navigate through the input video because of the appropriate selection of the input frames and the synchronism with the input video.

According to D2, individual pictures were extracted. But they were extracted at intervals which were too large to allow a user to navigate through the input video. Furthermore D2 did not disclose creating a synchronised thumbnail version of the input video, based on the extracted pictures. The extraction of pictures in D2 was not based on scene changes within a moving picture, and particularly not on the detection of a moving vector. Instead D2 taught the manual selection of representative frames, the selection of frames at the location of an index mark, or at the border between a commercial and a programme.

## Reasons for the Decision

1. The appeal is admissible.
2. *Amendments to the claims with respect to the claims underlying the decision under appeal*

The claims submitted in oral proceedings before the board introduce substantial amendments with respect to the claims underlying the decision under appeal (see point VII above).

- 2.1 For instance, the claims now specify that pictures are extracted at each change point of the input moving picture sequence and that pictures are extracted at a predetermined frame interval. The extraction of pictures at a predetermined frame interval and, in addition, at each change point, results in pictures spaced at irregular intervals, at least in the normal case of scene changes occurring at irregular intervals within a moving picture (see page 17, lines 16 to 25 in conjunction with page 21, lines 15 to 24 of the application as filed).
- 2.2 Furthermore, the claims specify the manner in which a reduced-size extracted moving picture sequence is formed from the extracted pictures. In particular, reduced-size pictures are generated from the extracted pictures, and for each generated reduced-size picture a group of reduced-size pictures is compression encoded. The group of pictures comprises the respective reduced-size picture as an intra-coded picture and a plurality of intercoded copies of the reduced-size picture. The number of copies is equivalent to the picture



extraction interval so that the reduced-size extracted moving picture sequence is synchronised with the input moving picture sequence (see page 19, line 23 to page 20, line 21 in conjunction with page 25, line 24 to page 26, line 7 and figure 14 of the application as filed).

2.3 Moreover, the claims specify that the compression-encoded groups of reduced-size pictures are recorded to a record medium. This record medium may be the same as, or different from, the record medium storing the compression-encoded input moving picture sequence (see page 36, lines 5 to 11 of the application as filed).

3. *The reasons given in the decision under appeal do not apply to the present substantially amended claims.*

3.1 In particular, the decision under appeal does not deal with the added features of present claim 1 specifying the extraction of pictures (see point 2.1 above), the forming of a reduced-size extracted moving picture sequence (see point 2.2 above), and the recording of the compression-encoded groups of reduced-size pictures (see point 2.3 above).

3.2 Therefore, the amendments to the claims are of such a nature that the legal ground for refusing the application, namely lack of inventive step of claim 1 (Article 56 EPC 1973), in view of the facts, evidence and arguments on which the examining division's reasoning was based, no longer applies.

4. *The board's doubts concerning Article 84 EPC 1973 raised in the communication dated 19 January 2011 have been overcome.*

The present claims specify the extraction of pictures in such a manner that the relationship between the extracted pictures and their contribution to the solution of the problem underlying the invention, as described, can be understood. More particularly, the feature of extracting pictures at irregular intervals has now been put in the context disclosed in the description. The board thus considers that the claims are now sufficiently supported by the description.

5. *Remittal (Article 111(1) EPC 1973)*

The appellant has requested that the case be remitted to the first instance for further prosecution on the basis of the claims of the sole request submitted in the oral proceedings. The first instance procedure concerned claims so different that in the board's view further investigations may be necessary and that it is appropriate for the appellant to be able to present its amended case to the first instance, despite the considerable pendency time of the present case. Under these circumstances the board exercises its discretion under Article 111(1) EPC 1973, and remits the case to the first instance for further prosecution.

**Order**

**For these reasons it is decided that:**

1. The decision under appeal is set aside.
2. The case is remitted to the first instance for further prosecution on the basis of the claims of the sole request submitted in the oral proceedings.

The Registrar:

The Chairman:

L. Fernández Gómez

F. Edlinger