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Datasheet for the decision of 30 September 2015

Case Number: T 2317/10 - 3.5.07

Application Number: 00309601.3

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IPC: G11B27/028, G11B27/032, H04N5/765, G11B27/32

Language of the proceedings: EN

Title of invention:
Method of generating audio and/or video signals and apparatus therefore

Applicant:
Sony United Kingdom Limited

Headword:
Generating audio/video signals/SONY UNITED KINGDOM

Relevant legal provisions:
EPC Art. 56

Keyword:
Inventive step - (yes)

Decisions cited:

Catchword:

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Case Number: T 2317/10 - 3.5.07

D E C I S I O N
of Technical Board of Appeal 3.5.07
of 30 September 2015

Appellant: (Applicant)	Sony United Kingdom Limited The Heights, Brooklands Weybridge KT13 0XW (GB)
Representative:	D Young & Co LLP 120 Holborn London EC1N 2DY (GB)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 5 July 2010 refusing European patent application No. 00309601.3 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	R. Moufang
Members:	R. de Man
	M. Rognoni

Summary of Facts and Submissions

I. The applicant (appellant) appealed against the decision of the Examining Division refusing European patent application No. 00309601.3.

II. The decision cited *inter alia* the following documents:

D1: US 5 910 825 A, published on 8 June 1999;
D2: WO 99/04557 A, published on 28 January 1999;
D3: GB 2 312 078 A, published on 15 October 1997; and
D4: US 5 568 205 A, published on 22 October 1996.

The Examining Division decided that the subject-matter of claim 4 of the then main request and of the then first auxiliary request lacked an inventive step in view of document D1, that the subject-matter of claim 4 of the then second auxiliary request lacked an inventive step in view of documents D1 and D3, and that the subject-matter of claim 4 of the then third auxiliary request lacked an inventive step in view of documents D1, D2, D3 and D4.

III. With the statement of grounds of appeal, the appellant submitted a main request and first and second auxiliary requests, essentially corresponding to amended versions of the main request and the first and third auxiliary requests considered in the decision under appeal.

IV. In a communication accompanying a summons to oral proceedings, the Board expressed the provisional opinion that the subject-matter of claim 1 of each request lacked inventive step. In addition, a clarity objection was raised.

V. With a letter dated 19 August 2015, the appellant replaced its requests with an amended main request and amended first and second auxiliary requests in an attempt to address the clarity objection.

VI. In the course of oral proceedings held on 30 September 2015, the appellant replaced its substantive requests with a single replacement main request. At the end of the oral proceedings, the chairman pronounced the Board's decision.

VII. Independent claim 1 of the replacement main request reads as follows:

"An audio and/or video generation system which is arranged in operation to generate audio and/or video material representative of an audio and/or visual source, said audio and/or video generation system comprising:

a camera (101) and a portable data processor (112); wherein

the camera (101) is arranged in operation to generate audio and/or video signals representing said audio and/or video material, the camera (101) including a recording means (122) which is arranged in operation to record said audio and/or video signals representing said audio and/or video material on a recording medium (126), and a metadata generation processor (128) which is arranged in operation to receive said audio and/or video signals, and to generate first metadata automatically in association with said audio and/or video signals, wherein said first metadata includes

time code data representative of in and out points of one or more parts of the audio/video material,

a picture stamp providing a digital representation of an image in the video material at IN and OUT time

codes for the one or more parts of the audio/video material, and

a unique identification code for each of the parts of the audio and/or video material, each unique identification code uniquely identifying the one of the parts of audio and/or video material, and

the portable data processor (112) is connected to the metadata generation processor (128) of the camera (101) via an interface (118) having a predetermined format, and wherein

the portable data processor (112) is arranged to generate second metadata in response to user commands and to communicate the second metadata to said metadata generation processor (128) via said interface (118), said second metadata including a shot identifier, which identifies a current shot from pre-planned production information describing shots of one or more scenes for the generation of said audio/video material, the pre-planned production information having been loaded on to the portable data processor (112),

said recording means (122) is arranged to record said second metadata with said first metadata and said audio and/or video signals on said recording medium (126) to the effect that the time code data of the first metadata is recorded with the shot identifier for the one or more parts of the audio/video material represented by the time code data, and

the metadata generation processor (128) is arranged in operation to communicate the picture stamps to the portable data processor (112) via the interface (118) for display on a screen of the portable data processor (112)."

Claims 2 and 3 are dependent on claim 1.

Independent claim 4 reads as follows:

"A method of generating audio and/or video material representative of an audio and/or visual source, said method comprising

generating audio and/or video signals representative of an audio and/or visual source using a camera (101),

recording said audio and/or video signals on a recording medium (126) using a recording means (122) forming part of the camera (101),

generating first metadata automatically in response to said audio and/or video signals using a metadata generation processor (128) forming part of the camera (101), wherein said first metadata includes

time code data representative of in and out points of one or more parts of the audio/video material,

a picture stamp providing a digital representation of an image in the video material at IN and OUT time codes for the one or more parts of the audio/video material, and

a unique identification code for each of the parts of the audio and/or video material, each of the unique identification codes uniquely identifying each of the parts of audio and/or video material,

using a portable data processor (112) to generate, in association with user commands, second metadata, said second meta data including a shot identifier, which identifies a current shot from pre-planned production information describing shots of one or more scenes for the generation of said audio/video material, the pre-planned production information having been loaded on to the portable data processor (112),

communicating the second metadata from the portable data processor (112) to the metadata

generation processor (128) via an interface (118) having a predetermined format, and

recording said second metadata with said first metadata and said audio and/or video signals on said recording medium (126) using said recording means (122), the recording including recording the time code data of the first metadata with the shot identifier for the one or more parts of the audio/video material represented by the time code data, and

communicating the picture stamps from the metadata generation processor (128) to the portable data processor (112) via the interface (118) for display on a screen of the portable data processor (112)."

Claims 5 and 6 are dependent on claim 4.

VIII. The remaining application documents are as follows:

Description:

- pages 1 and 6 to 34 as originally filed;
- pages 2 and 5 filed with letter of 31 May 2005; and
- pages 3 and 4 filed with letter of 9 December 2008.

Drawings:

- sheets 1/13 to 13/13 filed with letter of 13 November 2000.

Reasons for the Decision

1. The appeal complies with the provisions referred to in Rule 101 EPC and is therefore admissible.

2. *The invention*

The claimed invention relates to recording audio/video signals on a recording medium in association with metadata useful for classifying and editing audio/video material. To this end, the application proposes a camera comprising a "metadata generation processor", which records first and second metadata.

The first metadata is generated automatically by the metadata generation processor and includes time code data indicating the beginning and end points within the video signal of the individual "parts" of the video material, "picture stamps" providing digital representations of the video image at the in and out time codes, and a unique identification code for each part of the audio/video material.

The second metadata is obtained from a portable data processor connected to the camera. This metadata includes a shot identifier for relating the current shot to one or more scenes described in pre-planned production information previously loaded onto the portable data processor.

The picture stamps included in the first metadata are communicated to the portable data processor for display. According to the description of the present application, in this way a director holding the portable data processor is provided with an indication of the current audio/video content generated by the camera, thereby providing an immediate indication of its artistic and aesthetic quality.

3. *Added subject-matter - Article 123(2) EPC*

3.1 The Board considers that the subject-matter of claim 1 can be directly and unambiguously derived from the application as originally filed, as required by Article 123(2) EPC, as follows.

3.2 The application discloses on page 7, lines 13 to 20, with reference to Figure 1 a system embodying the invention comprising a camera 101 and a personal digital assistant (PDA) 112.

According to this passage, a PDA is an example of a data processor which may be used to generate metadata in accordance with a user's requirements. The term personal digital assistant is explained as being known in the art and referring to a portable or hand-held personal organiser or data processor "which include[s] an alpha numeric key pad and a hand writing interface".

Claim 1 uses the term "portable data processor" instead of "PDA". In the Board's view, this change in terminology does not introduce subject-matter extending beyond the content of the application as filed, as the skilled person would recognise that the presence of an alphanumeric keypad and a handwriting interface is optional; Figure 3 of the application in fact shows a PDA without an alphanumeric keypad. The Board further notes that the portable data processor of claim 1 comprises a screen (in accordance with the description on page 16, lines 22 and 23) and responds to user commands, which excludes interpretations covering, for example, a smart card comprising a microcontroller.

3.3 As disclosed on page 8, lines 13 to 24, with reference to Figure 2, camera 101 includes a recording means in

the form of tape drive 122 and a metadata generation processor 128.

According to page 18, lines 17 to 20, page 33, lines 25 to 27, and original claim 1 ("recording means"), the recording means of the invention is not limited to tape drives. The claim hence does not require a corresponding limitation.

3.4 Metadata generation processor 128 automatically generates (first) metadata in association with received audio/video signals (page 9, lines 16 to 18). This metadata includes

- time codes representative of in and out points of parts of the audio/video material (page 9, lines 18 to 21, and page 10, lines 11 to 13, 20 and 21, and original claim 3);
- a picture stamp providing a digital representation of an image in the video material at IN and OUT time codes for the parts of the audio/video material (page 15, line 17, to page 16, line 5); and
- a unique identification code for each of the parts of the audio/video material (page 10, lines 11 to 13, and original claim 4).

3.5 The description discloses on page 8, lines 1 to 5 and 18 to 21, and page 12, lines 8 to 10, that PDA 112 is connected to metadata generation processor 128 via an interface 118 in accordance with a predetermined standard format. Interface 118 receives (second) metadata added by the user via PDA 112 for processing by metadata generation processor 128 (page 8, lines 4 to 9, and page 9, lines 9 to 15). This second metadata includes a shot identification number for a current shot from pre-planned production information preloaded

onto the PDA (page 13, lines 26 to 29; see also page 10, line 27, to page 11, line 12).

3.6 Recording means 122 records the first and second metadata and the audio/video signals on the recording medium (page 8, lines 6 to 9, and page 15, lines 3 and 4), whereby time code data is recorded in association with the shot identifier for the one or more parts of the audio/video material represented by the time code data (page 14, lines 11 to 18, and page 15, lines 3 to 9).

3.7 Finally, the application discloses on page 16, lines 22 to 27, that picture stamps are communicated to PDA 112 for display on the PDA screen.

3.8 Dependent claim 2 is based on page 9, lines 26 to 29, of the original description.

3.9 Dependent claim 3 is based on original dependent claim 5 and on page 10, lines 11 to 13, of the description.

3.10 In view of the above, the Board is satisfied that the subject-matter of system claims 1 to 3 and of corresponding method claims 4 to 6 does not extend beyond the content of the application as filed, as required by Article 123(2) EPC.

4. *Inventive step - Article 56 EPC*

4.1 Independent claim 1 largely corresponds to claim 1 of the third auxiliary request considered in the decision under appeal. Starting from document D1 as closest prior art and taking into account documents D2, D3 and

D4, the Examining Division found that corresponding method claim 4 of that request lacked inventive step.

4.2 In its communication accompanying the summons to oral proceedings, the Board identified in document D1 two embodiments that could serve as starting point for the assessment of inventive step of the present invention.

4.3 The first embodiment is a conventional broadcasting system as discussed in document D1, column 1, line 18, to column 2, line 23. In such a system, a video signal is first recorded using a television camera and then transmitted to a broadcasting station for editing (column 1, lines 26 to 41). In order to facilitate editing, certain metadata referred to as "attendant information" is added to the video material to identify and manage video shots or segments (column 1, lines 18 to 25 and lines 53 to 59). As explained in column 1, line 60, to column 2, line 2, conventionally the attendant information is superimposed on the video signal at the head of the video, or is formed by voice. In addition, it is known to provide the attendant information separately from the video signal, for example printed on a label (column 2, lines 3 to 17).

4.4 The second embodiment, on which the Examining Division based its reasoning, is disclosed in the detailed description of document D1.

Document D1, column 4, lines 6 to 38, and Figures 3 and 4, discloses a broadcasting system comprising a television camera 11. In this system, the audio/video signal is not recorded on a recording medium at the camera, but supplied to a composite/transmitting unit 23 for transmission to a receiving unit 41 of the

broadcasting station and stored in a video data storing unit 42 (column 5, lines 24 to 27).

In this embodiment, attendant information is generated by a CPU 24, which supplies the information to a vertical interval time code (VITC) coding circuit 31 (column 4, lines 29 to 45, and Figure 4). VITC coding circuit 31 and composite/transmitting unit 23 insert the attendant information into the vertical blanking intervals of the transmission video data (column 5, lines 7 to 23).

CPU 24 selectively uses one or more of a personal computer 26, calendar/clock input unit 27, IC card read-out unit 28 and keyboard 29 to collect the attendant information (column 4, line 39, to column 5, line 6). In particular, calendar/clock input unit 27 automatically inputs the shooting date and time data representing the shooting date and time. IC card read-out unit 28 stores previously prepared information including title, cameraman and shooting scene. Alternatively, when the video material is being recorded, keyboard 29 can be used by an operator at the broadcasting scene to input a title, shooting date and time, cameraman and shooting scene.

4.5 The second embodiment hence discloses generation and recording both of automatically generated metadata and of metadata which is manually input at the time of shooting or had been prepared earlier. The first embodiment does not disclose automatic generation of metadata, but it may be argued, as the Board did in its communication, that the skilled person would look for ways to facilitate the entering of metadata and, where possible, to automate its generation.

4.6 The subject-matter of claim 1 differs from both embodiments *inter alia* in that

- the metadata recorded with the audio/video material includes a picture stamp providing a digital representation of an image in the video material at IN and OUT time codes for the one or more parts of the audio/video material, and
- the picture stamps are communicated from the metadata generation processor to the portable data processor via the interface for display on a screen of the portable data processor used for inputting the second metadata.

4.7 The inclusion of picture stamps corresponding to takes or shots in metadata for the purpose of cataloguing video material is known from document D3, page 3, lines 6 and 7, and page 3, line 27, to column 4, line 4. The Board considers it an obvious possibility to take such picture stamps from the beginning and end of a shot, even though document D3, page 5, lines 23 to 26, warns that they may then sometimes include blanked video or colour bars.

Document D3 relates to a system for producing a catalogue of video shots from video material stored in a video store (see page 3, lines 8 to 13, and claim 1). Picture stamps are extracted automatically from the video material by an archive workstation comprising a digital video capture board (page 5, line 27, to page 6, line 3).

4.8 Whereas document D3 suggests automatically generating picture stamps for inclusion in metadata from recorded video material in a post-recording phase, present claim 1 proposes automatically generating picture stamps during recording of the video material.

Starting from either of the two embodiments discussed in points 4.3 and 4.4 above, the claimed solution to the problem of including picture stamps in audio/video metadata is, from a technical point of view, not as straightforward as the solution proposed in document D3. Indeed, in the second embodiment the generated metadata is transmitted in the vertical blanking intervals of the video data, which only provides limited bandwidth. And as the metadata of the first embodiment is either formed by voice, superimposed at the head of the video, or separately printed on a label, that embodiment too does not provide for the generation of metadata in the form of images.

4.9 In addition, in the context of the claimed invention the inclusion of picture stamps in the generated metadata during the recording phase comes with the additional benefit of allowing the picture stamps to be displayed on the screen of the portable data processor used for entering metadata. Although it may be questioned whether their display as such serves a technical purpose, enabling such display by technical means undoubtedly is a technical effect.

4.10 Since, furthermore, none of the documents on file suggests generating picture stamps of audio/video material as part of the recording phase, the Board finds that the subject-matter of claim 1 involves an inventive step within the meaning of Article 56 EPC. The same applies to the subject-matter of corresponding independent method claim 4 and of dependent claims 2, 3, 5 and 6.

5. In view of the above, the Board comes to the conclusion that the claims of the replacement main request satisfy

the requirements of the EPC. However, the description and drawings may still require adaptation.

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 6 according to the replacement main request and a description and drawings to be adapted.

The Registrar: The Chairman:

D. Magliano R. Moufang

Decision electronically authenticated