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Datasheet for the decision of 26 March 2018

Case Number: T 2126/12 - 3.5.07

Application Number: 10000249.2

Publication Number: 2180478

IPC: G11B20/10, G11B27/10, H04N5/93, G11B20/00

Language of the proceedings: EN

Title of invention:
A reproducing apparatus, a reproducing method, a content recording medium, a control program and a computer-readable recording medium

Applicant:
Sharp Kabushiki Kaisha

Headword:
Reproducing apparatus II/SHARP

Relevant legal provisions:
EPC Art. 56, 76(1), 84

Keyword:
Amendments - main request - added subject-matter (yes) - first auxiliary request - added subject-matter (no)
Claims - clarity - first auxiliary request (yes)
Inventive step - claim 1 of first auxiliary request (yes)

Decisions cited:
T 1194/97, T 2330/12

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Case Number: T 2126/12 - 3.5.07

D E C I S I O N
of Technical Board of Appeal 3.5.07
of 26 March 2018

Appellant: (Applicant)	Sharp Kabushiki Kaisha 22-22, Nagaike-cho Abeno-ku Osaka-shi, Osaka 545-8522 (JP)
Representative:	Treeby, Philip David William Maucher Jenkins 26 Caxton Street London SW1H 0RJ (GB)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 2 May 2012 refusing European patent application No. 10000249.2 pursuant to Article 97(2) EPC**

Composition of the Board:

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

Summary of Facts and Submissions

I. The applicant (appellant) appealed against the decision of the Examining Division refusing European patent application No. 10000249.2.

II. The application had been filed in English as a divisional application of European patent application No. 04792222.4 (the parent application), which had been filed as international application PCT/JP2004/014954 and published in Japanese as WO 2005/036544 and in English as EP 1 679 706 A1.

III. The reasons for the decision made reference to the following documents:

D1: EP 0 961 279 A1, published on 1 December 1999; and
D2: US 2003/161615 A1, published on 28 August 2003.

The Examining Division refused the application for lack of inventive step in the subject-matter of claim 1 of a main request and claim 1 of first to third auxiliary requests in view of document D1 and also in view of document D2.

IV. Along with the statement of grounds of appeal, the appellant resubmitted the claims of the main and first to third auxiliary requests.

V. In a communication accompanying a summons to oral proceedings, the Board raised objections under Articles 76(1) and 84 EPC to all the requests and expressed the preliminary view that the subject-matter of claim 1 of all the requests lacked inventive step. It also noted that the description appeared to contain matter extending beyond the content of the parent

application as filed and suggested that that objection could be overcome by deleting the text on page 94, line 22, to page 95, line 11.

VI. By letter of 13 December 2017, the appellant informed the Board that it would not attend the oral proceedings. It agreed to the Board's suggestion to delete the text on page 94, line 22, to page 95, line 11, of the description and commented on the substantive points raised in the Board's communication.

VII. Oral proceedings were held in the appellant's absence on 15 January 2018. At the end of the oral proceedings, the chairman announced that the decision would be given in writing.

VIII. The appellant requests that the decision under appeal be set aside and that a patent be granted on the basis of the claims of the main request or, in the alternative, on the basis of the claims of one of the first to third auxiliary requests.

IX. Claim 1 of the main request reads as follows:

"A reproducing apparatus including:

data acquiring means (50) for acquiring video data, a play list indicating an order in which the video data is reproduced, a computer program which is to be executed in synchronization with the video data and which constitutes a single content along with the video data, and program management information for controlling execution of the computer program;

decoding means (20) for decoding the video data; and

program executing means (70) for executing the computer program,

the reproducing apparatus characterized in that:

the program executing means controls reproduction of the video data on the basis of the computer program thus executed and displays image data generated by execution of the computer program so that the image data is overlaid with the video data,

the program management information includes program specifying information (*program-file-name*) for specifying the computer program; and

the reproducing apparatus is arranged to carry out, with reference to the program management information, a process of instructing the decoding means to start decoding of the video data in the order indicated by the play list, and a process of instructing the program executing means to execute the computer program specified by the program specifying information so that computer program execution preparation and video data reproduction preparation are concurrently carried out."

X. Claim 1 of the first auxiliary request reads as follows:

"A reproducing apparatus including:

data acquiring means (50) for acquiring video data, a computer program which is to be executed in synchronization with the video data and which constitutes a single content along with the video data, and program information for controlling execution of the computer program;

decoding means (20) for decoding the video data; and

program executing means (70) for executing the computer program,

the reproducing apparatus characterized in that:

the program executing means controls reproduction of the video data on the basis of the computer program thus executed and displays image data generated by execution of the computer program so that the image data is overlaid with the video data,

the program management information, which is prepared for the computer program, includes program specifying information (*program-file-name*) for specifying the computer program and play list information indicating an order in which the video data is reproduced; and

when reproduction of the content constituted by the computer program and the video data is started, the reproducing apparatus is arranged to carry out, with reference to the program management information, a process of instructing the decoding means to start decoding of the video data in the order indicated by the play list information, and a process of instructing the program executing means to execute the computer program specified by the program specifying information so that computer program execution preparation and video data reproduction preparation are concurrently carried out."

Claim 2 of the first auxiliary request reads as follows:

"A method for reproducing video data on a reproducing apparatus including: decoding means (20) for decoding the video data; and program executing means (70) for executing a computer program,

the method characterized by comprising the steps of:

acquiring the video data, a computer program which is to be executed in synchronization with the video data and which constitutes a single content along with

the video data, and program management information for controlling execution of the computer program, the program management information, which is prepared for the computer program, including program specifying information (*program-file-name*) for specifying the computer program and play list information indicating an order in which the video data is reproduced; and

when reproduction of the content constituted by the computer program and the video data is started, carrying out, with reference to the program management information, a process of instructing the decoding means to start decoding of the video data in the order indicated by the play list information, and a process of instructing the program executing means to execute the computer program specified by the program specifying information so that computer program execution preparation and video data reproduction preparation are concurrently carried out,

wherein the program executing means controls reproduction of the video data on the basis of the computer program and displays image data generated by execution of the computer program so that the image data is overlaid with the video data."

Claim 3 reads as follows:

"A content recording medium (2) characterized by comprising, the computer program which is to be executed in synchronization with the video data and which constitutes a single content along with the video data, and the program management information for controlling execution of the computer program, such that the computer program, and the program management information are able to be supplied to the reproducing apparatus as set forth in claim 1,

the computer program being for controlling reproduction of the video data and for generating image data to be displayed so that the image data is overlaid with the video data, and

the program management information, which is prepared for the computer program, and including program specifying information for specifying the computer program and play list information indicating an order in which the video data is reproduced."

Claim 4 reads as follows:

"Software for performing all the method steps of claim 2."

Claim 5 reads as follows:

"A computer-readable recording medium (2) characterized by comprising the software as set forth in claim 4."

XI. In view of the outcome of the appeal, the text of the claims of the second and third auxiliary requests need not be given.

XII. The appellant's arguments as relevant to the decision are discussed in detail below.

Reasons for the Decision

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

2. *The invention*

2.1 The application relates to an apparatus for reproducing content, including video data and computer programs. The content is acquired from a content-recording medium such as an optical disc by means of a "data acquiring means". The apparatus includes a "decoding means" for decoding video data and a "program executing means" for executing programs.

2.2 In addition to video data and programs, the apparatus processes "program management information". As explained in paragraphs [0175] to [0185] of the A1 publication, a program-management-information item may include a "program_file_name" field specifying a computer-program file, a "video_file_name" field specifying a video-data file and various flags controlling the reproduction process.

2.3 Independent claim 1 of all the requests is directed to an optimisation whereby the reproducing apparatus, when video data is to be reproduced in synchronisation with the execution of a program, uses the program-management information to shorten the time needed to start video reproduction by concurrently carrying out the preparation of program execution and the preparation of video reproduction.

3. *The description*

The Board is aware that the passage on page 94, line 22, to page 95, line 11, of the application as filed ("In cases where ... irrelevant to the program.") may contain a mistranslation of the original PCT application (see decision T 2330/12 of 15 January 2018, reasons 3.1, which deals with another divisional

application of the same parent application). Since the appellant has agreed to delete this passage from the description of the application at issue, this potential violation of Article 76(1) EPC has now been removed.

Main request

4. *Added subject-matter - Article 76(1) EPC*

4.1 Claim 1 of the main request relates to a reproducing apparatus which includes data-acquiring means for acquiring "video data, a play list indicating an order in which the video data is reproduced, a computer program ... and program management information for controlling execution of the computer program".

The claim specifies that the apparatus is arranged "to carry out, with reference to the program management information, a process of instructing the decoding means to start decoding of the video data in the order indicated by the play list, and a process of instructing the program executing means to execute the computer program specified by the program specifying information so that computer program execution preparation and video data reproduction preparation are concurrently carried out".

4.2 Concurrently carrying out computer-program-execution preparation and video-data-reproduction preparation is disclosed in paragraphs [0182], [0194], [0195] and [0211] to [0214] of the English publication of the parent application with reference to Figure 27. These passages explain that, if a video_file_name field is included in the program-management information for a particular program, the preparation of video-data reproduction (in particular, reading out the video data

from the optical disc) can be started before the program is executed.

Claim 1, however, expresses that the video data to be reproduced is listed in a "play list" which is acquired in addition to the program-management information ("data acquiring means for acquiring ... a play list ... and program management information") instead of being specified in a video_file_name field included in the program-management information.

4.3 The only mention in the parent application of the term "play list" is in paragraph [0300], which reads as follows:

"In each of the foregoing embodiments, the video data is directly referred in accordance with the program and the program management information; however the present invention is not limited to this. For example, the video disk player may make a reference to [...] play list information indicating an order in which the video data is reproduced."

Without using the term "play list", paragraph [0220] of the description discloses that the video_file_name field can specify a plurality of file names in an order corresponding to the order in which the video data is to be reproduced.

4.4 The appellant argued that paragraph [0300] described a modification whereby the video data is no longer "directly referred" to by the video_file_name field in the program-management information, but by the playlist information. It would have been clear to the skilled person that, if this modification were employed, the teaching "instructs the video reproducing section 20 to

start the video reproduction" in paragraph [0211] would be modified to "instructing the decoding means to start decoding of the video data in the order indicated by the play list".

4.5 However, the arrangement described in paragraphs [0182], [0194], [0195] and [0211] to [0214], in which the video_file_name field included in the program-management information allows concurrent preparation of program execution and of video reproduction, is just one of several disclosed arrangements. The general disclosure in paragraph [0300] that video data can also be specified by means of playlist information does teach the skilled person that the reproducing apparatus can be modified to support playlist information, but it does not explain how any specific arrangement is to be modified.

In particular, in the above-mentioned arrangement the time needed for starting video reproduction can be reduced because the program-management information includes a video_file_name field specifying the video data and a program_file_name field specifying the program. In the Board's view, paragraph [0300] does not directly and unambiguously disclose that this specific arrangement can be modified by replacing the video_file_name field in the program-management information with playlist information separate from the program-management information. But even if it did, paragraph [0300] would leave open whether the program-management information of the modified arrangement would still specify the program (as now claimed) and even whether program-management information would continue to play a role at all.

The Board further notes that if the skilled person were to understand paragraph [0300] as applying to the specific arrangement, he would understand it to refer to paragraph [0220], which discloses that the video_file_name field in the program-management information can specify an ordered list of video-data file names, i.e. a playlist. But in claim 1 the playlist information is not defined as being included in the program-management information.

4.6 The Board concludes that the parent application does not directly and unambiguously disclose the subject-matter of claim 1. Thus the main request does not comply with Article 76(1) EPC.

First auxiliary request

5. *Added subject-matter - Articles 76(1) and 123(2) EPC*

5.1 Claim 1 of the first auxiliary request specifies that the program-management information includes playlist information indicating an order in which the video data is reproduced.

This feature finds a basis in paragraph [0220] of the parent application, which discloses that the video_file_name field can specify a plurality of file names, in which case the order of the file names corresponds to the order in which the video data is to be reproduced.

The first auxiliary request therefore overcomes the objection raised under Article 76(1) EPC to the main request.

5.2 The parent application also discloses the other features of claim 1 in combination.

5.2.1 Claim 1 is based on Embodiment 4, which is described in paragraphs [0146] to [0226] with reference to Figures 19 to 27. Paragraph [0148] discloses a reproducing apparatus comprising a disc-reading section, a video-reproducing section and a program-executing section. The disc-reading section acquires video data, a computer program and program-management information (paragraph [0149]), and the video-reproducing section decodes the video data (paragraph [0154]).

5.2.2 According to paragraph [0152], the program-executing section executes the program, thereby controlling reproduction of the video data. When executed, the program generates bitmap data to be overlaid on the video data (paragraphs [0152], [0155] and [0158]).

5.2.3 In addition to the video_file_name field, the program-management information includes a program_file_name field specifying a computer program (paragraph [0179]).

5.2.4 One type of content supported by the reproducing apparatus is "video-based content" as discussed in paragraphs [0208] to [0216]. Such content consists of video data and a program to be executed in synchronisation with the video reproduction (paragraph [0208]), which means that the program constitutes "a single content along with the video data".

As explained in paragraphs [0210] to [0214], for such content a "general control section 80" of the reproducing apparatus instructs the program-executing means and the decoding means to carry out the

preparation of program execution and the preparation of video reproduction concurrently, the latter type of preparation involving starting to read out and decode the video data. Since the general control section performs no other functions in the context of the claim, the Board considers it allowable for claim 1 to refer more generally to "the reproducing apparatus".

5.3 The subject-matter of claim 1 is therefore directly and unambiguously derivable from the parent application as filed.

5.4 The same applies to the subject-matter of corresponding independent method claim 2.

Independent claims 4 and 5 are directed to the corresponding control program and computer-readable recording medium storing the control program disclosed in paragraphs [0001] and [0011].

Independent claim 3 is directed to a content-recording medium storing the computer program, video data and program-management information acquired by the reproducing apparatus of claim 1, as also disclosed in paragraphs [0001] and [0011].

5.5 Hence, the first auxiliary request complies with Article 76(1) EPC. Since the description of the application at issue is identical to the English translation of the parent application, it also satisfies the requirements of Article 123(2) EPC.

6. *Clarity and support - Article 84 EPC*

6.1 In its communication, the Board raised questions in respect of the clarity of the features "the program

executing means controls reproduction of the video data on the basis of the computer program" and "computer program which is to be executed in synchronization with the video data and which constitutes a single content along with the video data", in particular in view of the description, which appeared to disclose two different types of program.

6.2 On the one hand, the description refers, for example in paragraph [0158] of the published application, to programs specified in the action_id field contained in a "synchronization control signal". As explained in paragraphs [0054], [0059] to [0065] and [0080] to [0095], the synchronisation-control signal is based on synchronisation-timing information, which consists of a number of entries including action_id fields specifying certain instructions to be executed at certain time points during reproduction of video data. These "programs" or "instructions" can therefore be said to be "executed in synchronization with the video data" and, arguably, to "constitute a single content along with the video data".

On the other hand, the program of claim 1 is specified in the program_file_name field of a program-management-information item. It also appears to make little sense for the "execution preparation" of programs specified in the action_id field of synchronisation-timing information - which implement individual actions to be performed at specified time points during video reproduction - to be carried out concurrently with the preparation of video-data reproduction.

6.3 In the letter of 13 December 2017, the appellant argued that the skilled person would understand that the synchronisation-timing information specified timings of

individual processes to be carried out by a single program.

6.4 The Board agrees with the appellant's reading of the application. The description variously refers to the action_id field as specifying a program (in paragraphs [0041], [0104] and [0158]), a process (in paragraphs [0084] and [0107] to [0113]) or an instruction (in paragraph [0064]). Given that Figure 23, illustrating the data allocation in an optical disc according to the invention, does not distinguish between programs specified in program-management-information items and programs carrying out the actions specified in action_id fields, and that paragraph [0176] states that each program corresponds to one program-management-information item, the skilled person would realise that the terminology used in the application is not always entirely accurate and that the action_id fields in synchronisation-timing information refer to processes to be carried out by a single program.

6.5 The Board concludes that no discrepancy exists between claim 1 and the description and that claim 1 is clear and supported by the description within the meaning of Article 84 EPC.

7. *Inventive step - Article 56 EPC*

7.1 Document D1 discloses a reproducing apparatus (paragraph [0020]) comprising a data-acquiring means in the form of an optical stylus 11 (paragraph [0021]) for reading data from a record carrier in the form of an optical disc. This data includes video data for reproduction ("user data", cf. paragraph [0020]) and control data.

The video data is supplied to decoding means (paragraph [0022]).

The control data includes playlist information specifying user-data items playable in sequence and a computer program in the form of "Command Lists" (paragraph [0025]).

The computer program includes instructions specifying operations to be carried out by program-executing means in the form of a processor 15 (paragraph [0028]; Figure 1). The instructions can influence the status of an overlay graphics and text channel (paragraphs [0033] and [0035]).

7.2 The appellant argued that paragraphs [0033] and [0035] of document D1 do not disclose generation of image data. But the Board considers it to be at least an obvious possibility that overlaying text (see paragraph [0035]) involves converting textual data to image data representing that text and hence generating image data.

7.3 Document D2 discloses a reproducing apparatus in the form of a DVD-video player 100 (paragraphs [0064] and [0084]; Figure 1) comprising data-acquiring means for acquiring DVD-video contents and "ENAV contents" (paragraphs [0065] and [0086]).

The DVD-video contents are supplied to the decoder unit 210 of the DVD-video playback engine 200 (paragraph [0089]).

The "ENAV contents" comprise "playback information", which includes a computer program in the form of a script and describes a playlist (paragraphs [0065] and [0066]; script language, playback order).

The computer program is executed by program-executing means in the form of an ENAV interpreter 330 (paragraph [0113]). The program-executing means controls reproduction of the DVD-video contents on the basis of the computer program, causing the display of information contained in the "ENAV contents" to be overlaid on the DVD-video contents (paragraphs [0067], [0087] and [0181]). The Board considers it again to be at least an obvious possibility that causing the display of such information involves generating image data.

7.4 According to the contested decision, document D1 discloses, in Figure 9 and paragraph [0037], concurrent preparation of program execution and video reproduction, and document D2 discloses those features in paragraph [0209]. The Board does not agree.

Paragraphs [0036] and [0037] of document D1 disclose that a processor first interprets a command list relating to an English-language course, the commands instructing the processor to initialise certain program-specific counters such as "a measure for the knowledge of grammar, for the usage of words, for the number of trials etc.". Next, the processor interprets the playlist, leading to the presentation to the user of a first English module with audio or video data. This passage therefore does not disclose the concurrent preparation of program execution and video reproduction, but rather the sequential execution of a program and reproduction of video data.

Document D2 refers, in paragraph [0209], to the "fetching" of ENAV contents. The Examining Division argued that fetching contents constituted "preparation"

and that it followed from paragraph [0065] that the ENAV contents included both programs and video data. Paragraph [0065] does not, however, refer to the DVD-video contents to be reproduced by the DVD-video playback engine 200; it refers to "audio data, still image data, text data, moving image data, and the like" which are to be displayed, by the program, in synchronisation with the DVD-video contents (see e.g. Figure 12).

7.5 The reproducing apparatus of claim 1 therefore differs from the disclosures of both documents at least in the provision of program-management information, separate from the program data and video data, specifying both a program and video data which are to be executed/ reproduced in synchronisation, and in the arrangement to concurrently carry out the preparation of program execution and the preparation of video-data reproduction.

As the application explains in paragraphs [0182], [0194], [0195] and [0211] to [0214], the program-management information as claimed allows the reproducing apparatus to begin reading out and decoding video data before execution of the program has started, thus shortening the time needed to start synchronised execution/reproduction of the program and video data.

7.6 In the Board's judgment, the skilled person, starting from either document D1 or document D2 and faced with the technical problem of shortening the time required to start video reproduction, would not arrive at the claimed solution on the basis of his common general knowledge alone. Although the skilled person is arguably aware that, as a general principle, a process can be sped up by carrying out two or more subprocesses

in parallel, in the present case it is the provision of separate program-management information specifying the program and the video data (in the form of playlist information) that allows this general principle to be put into practice.

7.7 The Board concludes that the subject-matter of claim 1 of the first auxiliary request is not rendered obvious by documents D1 and D2.

8. *Remittal*

8.1 In view of the above, none of the grounds on which the refusal decision was based and of the concerns expressed in the Board's communication justify a rejection of the first auxiliary request.

8.2 However, the Board is not yet in a position to order the grant of a patent. In particular, whereas the subject-matter of independent claims 2, 4 and 5 corresponds to that of claim 1, claim 3 is directed to a content-recording medium storing a computer program, video data and program-management information which are "able to be supplied to the reproducing apparatus as set forth in claim 1". It is not immediately apparent to the Board that the data structure of claim 3 inherently comprises the combination of technical features of the reproducing apparatus of claim 1 that render the subject-matter of that claim non-obvious over documents D1 and D2 (cf. decision T 1194/97, OJ EPO 2000, 259, in particular reasons 3.3, and Guidelines for Examination (November 2017), G-II, 3.7.2).

8.3 In addition, the description still needs to be adapted in view of point 3 above.

8.4 The case is therefore to be remitted to the department of first instance for further prosecution on the basis of the first auxiliary request.

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 for further prosecution.

The Registrar: The Chairman:

I. Aperribay R. Moufang

Decision electronically authenticated