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**Datasheet for the decision
of 14 December 2017**

Case Number: T 1547/13 - 3.5.07
Application Number: 07021010.9
Publication Number: 1916660
IPC: G11B27/36, H04N5/00, H04N5/445,
G06F3/048
Language of the proceedings: EN

Title of invention:

Apparatus and method for providing additional information of
media content

Applicant:

Samsung Electronics Co., Ltd.

Headword:

Additional information/SAMSUNG ELECTRONICS

Relevant legal provisions:

EPC Art. 56, 84

Keyword:

Claims - clarity - main request and first to sixth auxiliary
requests (no)
Inventive step - seventh to tenth auxiliary requests (no)

Decisions cited:

T 1214/09



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Case Number: T 1547/13 - 3.5.07

D E C I S I O N
of Technical Board of Appeal 3.5.07
of 14 December 2017

Appellant: Samsung Electronics Co., Ltd.
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Decision under appeal: Decision of the Examining Division of the
European Patent Office posted on 25 February
2013 refusing European patent application No.
07021010.9 pursuant to Article 97(2) EPC

Composition of the Board:

Chairman R. Moufang
Members: R. de Man
P. San-Bento Furtado

Summary of Facts and Submissions

- I. The applicant (appellant) appealed against the decision of the Examining Division refusing European patent application No. 07021010.9.
- II. The Examining Division decided that the then main request did not comply with Article 123(2) EPC and that the first and second auxiliary requests did not meet the requirements of Articles 84 and 123(2) EPC.
- III. With the statement of grounds of appeal, the appellant filed an amended main request and resubmitted copies of the first and second auxiliary requests considered in the decision under appeal. It also filed amended description pages and drawings.
- IV. In the course of the first-instance proceedings, the Examining Division had cited *inter alia* the following documents:

D1: US 2006/0080716 A1, published on 13 April 2006;
D2: US 2002/0012526 A1, published on 31 January 2002;
and
D3: EP 1 513 151 A1, published on 9 March 2005.
- V. In a communication accompanying a summons to oral proceedings, the Board expressed the preliminary view that all requests infringed Articles 84 and 123(2) EPC and that the subject-matter of claim 1 of each request lacked inventive step over document D1.
- VI. With its submissions in preparation for the oral proceedings, the appellant filed third, fourth, fifth and sixth auxiliary requests.

- VII. In the course of the oral proceedings held on 14 December 2017, the appellant filed seventh, eighth, ninth and tenth auxiliary requests. At the end of the oral proceedings, the chairman pronounced the Board's decision.
- VIII. The appellant requested 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 tenth auxiliary requests.
- IX. Claim 1 of the main request reads as follows:
- "An apparatus (100) for providing additional information of media content in digital contents management, the apparatus comprising:
a media source (110) adapted to receive media and additional information from at least one of a local file, a portable storage medium and a network, the received media being rendered in an audio or video format, and adapted to transfer the received media and additional information into the apparatus (100), the additional information comprising at least one of at least one chapter information, highlighted information, and a representative image for a chapter;
a media renderer (130) operationally connected to the media source (110) adapted to render the received and transferred media and additional information to a user;
an additional information analyzer (120) operationally connected to the media source (110) and media renderer (130) adapted to analyze the received and transferred additional information and adapted to output analyzed received and transferred additional information;
a smart progress bar (140) operationally connected to the media renderer (130) adapted to control a playback

of the received and transferred media based on user input and the output analyzed received and transferred additional information; and
an additional information renderer (150) operationally connected to the smart progress bar (140) and the additional information analyzer (120) adapted to display the received and transferred additional information to the user by controlling the smart progress bar based on user input,
the apparatus being arranged:

- To display a highlighted section on a progress bar (180) in said smart progress bar (140) and a representative image of the highlighted section in the additional information renderer window (160) if said user changes a state of a playback indicator (190) into a highlighted state, the playback indicator (190) indicating a current playback time of the media and being used to move a media playback time to a time desired by said user, and move to a next highlighted section for continuous playback immediately after playing back one highlighted section."

X. Claim 1 of the first auxiliary request differs from claim 1 of the main request in that "and a representative image for a chapter" has been replaced with "and a representative image for each chapter of said at least one chapter information" and in that the following text has been inserted after "the apparatus being arranged:"

"- If a user has changed a playback indicator (190) into a chapter state (S340), to display an additional information index, like a chapter index, on a progress bar (180) in said smart progress bar (140) as well as a preview pop-up area (210) in a media renderer window

(135) for each chapter (S350), to allow the user to select a desired particular chapter by moving the playback indicator (190) and to play back the desired chapter of media as well as a next chapter immediately after play back of the preview chapter (S360),"

In addition, "To display a highlighted section on a progress bar (180) in said smart progress bar (140)" has been replaced with "To display a highlighted section on the progress bar (180)".

XI. Claim 1 of the second auxiliary request differs from claim 1 of the main request in that "and a representative image for a chapter" has been replaced with "and a representative image for each chapter of said at least one chapter information" and in that the following text has been inserted after "the apparatus being arranged:":

- "- To determine if an additional information renderer window (160) is set by a user (S320),
 - If the additional information renderer window (160) is not set
 - To set a playback indicator in a default state and to continuously play back the media without showing additional information on a progress bar (180) in said smart progress bar (140) (S330),
 - If a user has changed said default state of said playback indicator into a chapter state (S340), to display an additional information index, like a chapter index, on said progress bar (180) as well as a preview pop-up area (210) in a media renderer window (135) for each chapter (S350), to allow the user to select a

desired particular chapter by moving the playback indicator (190) and to play back the desired chapter of media as well as a next chapter immediately after play back of the preview chapter (S360)

- If the additional information renderer window (160) is set
 - To set the additional information renderer window (160) to be selectively displayed according to a user setting (S370),
 - To display representative images of the respective chapter sections, one of a small-capacity moving image and summary as well as the chapter index and the chapter section in the additional information renderer window (160) (S380),"

In addition, "To display a highlighted section on a progress bar (180) in said smart progress bar (140)" has been replaced with "To display a highlighted section on the progress bar (180)".

XII. Claim 1 of the third auxiliary request reads as follows:

"An apparatus (100) for providing additional information of media content in digital contents management, the apparatus comprising:
a media source (110) adapted to receive media and additional information from at least one of a local file, a portable storage medium and a network, the received media to be rendered in an audio or video format, and the media source adapted to transfer the received media and additional information into the

apparatus (100), the additional information comprising at least one of at least one chapter information, highlighted information, and a representative image for a chapter;

a media renderer (130) operationally connected to the media source (110), the media renderer adapted to render the received and transferred media to a user;

an additional information analyzer (120) operationally connected to the media source (110) and media renderer (130), the additional information analyzer adapted to analyze the received and transferred additional information and adapted to transfer analyzed received and transferred additional information to a smart progress bar (140) and to an additional information renderer (150);

the smart progress bar (140) adapted to control a playback of the received and transferred media in response to a user input and the additional information analyzed by the additional information analyzer; and

the additional information renderer (150) operationally connected to the additional information analyzer (120), the additional information renderer adapted to display the additional information analyzed by the additional information analyzer to the user by controlling the smart progress bar in response to a user input, the apparatus being arranged:

to display a highlighted section on a progress bar (180) of said smart progress bar (140) and a representative image of the highlighted section in an additional information renderer window (160) comprised in the additional information renderer if said user changes a state of a playback indicator (190) into a highlighted state, the playback indicator (190) indicating a current playback time of the media and being used to move a media playback time to a time desired by said user, and to move to a second

highlighted section for continuous playback immediately after playing back a first highlighted section."

XIII. Claim 1 of the fourth auxiliary request differs from claim 1 of the third auxiliary request in that the text after "the apparatus being arranged:" has been replaced with the following text:

"- if a user has changed a playback indicator (190) into a chapter state (S340), to display an additional information index, like a chapter index, on a progress bar (180) of said smart progress bar (140) as well as a preview pop-up area (210) in a media renderer window (135) for each chapter (S350), to allow the user to select a desired particular chapter by moving the playback indicator (190) and to play back the desired chapter of media as well as a next chapter immediately after play back of the desired chapter (S360),
- to display a highlighted section on the progress bar (180) and a representative image of the highlighted section in an additional information renderer window (160) comprised in the additional information renderer if said user changes a state of a playback indicator (190) into a highlighted state, the playback indicator (190) indicating a current playback time of the media and being used to move a media playback time to a time desired by said user, and to move to a second highlighted section for continuous playback immediately after playing back a first highlighted section."

XIV. Claim 1 of the fifth auxiliary request differs from claim 1 of the fourth auxiliary request in that the text between "the apparatus being arranged:" and "to display a highlighted section" has been replaced with the following text:

- to determine if an additional information renderer window (160) comprised in the additional information renderer is set to be displayed by a user (S320)
 - if the additional information renderer window (160) is not set
 - to set a playback indicator in a default state and to continuously play back the media without showing additional information on a progress bar (180) in said smart progress bar (140) (S330)
 - if a user has changed said default state of said playback indicator (190) into a chapter state (S340), to display an additional information index, like a chapter index, on said progress bar (180) as well as a preview pop-up area (210) in a media renderer window (135) for each chapter (S350), to allow the user to select a desired particular chapter by moving the playback indicator (190) and to play back the desired chapter of media as well as a next chapter immediately after play back of the desired chapter (S360),
 - if the additional information renderer window (160) is set
 - to set the additional information renderer window (160) to be selectively displayed according to a user setting (S370),
 - to display representative images of the respective chapter sections, one of a small-capacity moving image and summary in the additional information renderer window (160) (S380)"

XV. Claim 1 of the sixth auxiliary request differs from claim 1 of the third auxiliary request in that the following text has been inserted after "comprised in the additional information renderer":

" , wherein the representative image of the highlighted section is a small-capacity moving image, "

In addition, "to display a highlighted section on a progress bar (180) of said smart progress bar (140)" has been replaced with "to display a highlighted section on the progress bar (180)".

XVI. Claim 1 of the seventh auxiliary request reads as follows:

"An apparatus (100) for providing additional information of media content in digital contents management, the apparatus comprising:
a media source (110) adapted to receive media and additional information from at least one of a local file, a portable storage medium and a network, the received media to be rendered in an audio or video format, and the media source adapted to transfer the received media and additional information into the apparatus (100), the additional information comprising at least one of at least one chapter information, highlighted information, and a representative image for a chapter;
a media renderer (130) operationally connected to the media source (110), the media renderer adapted to render the received and transferred media to a user;
an additional information analyzer (120) operationally connected to the media source (110) and media renderer (130), the additional information analyzer adapted to analyze the received and transferred additional

information and adapted to transfer analyzed received and transferred additional information to a smart progress bar (140) and to an additional information renderer (150);

the smart progress bar (140) adapted to control a playback of the received and transferred media in response to a user input; and

the additional information renderer (150) operationally connected to the additional information analyzer (120), the additional information renderer adapted to display the additional information analyzed by the additional information analyzer to the user,

the apparatus being arranged, if said user changes a state of a playback indicator (190) into a highlighted state:

to display a plurality of highlighted sections on a progress bar (180) of said smart progress bar (140) and corresponding representative images of the highlighted sections in an additional information renderer window (160) of the additional information renderer, wherein the plurality of highlighted sections comprise at least a first highlighted section and a second highlighted section, wherein the first and second highlighted sections are separated by a non-highlighted section; and

to immediately playback the second highlighted section after playing back the first highlighted section."

XVII. Claim 1 of the eighth auxiliary request differs from claim 1 of the seventh auxiliary request in that the text starting with "the apparatus being arranged ..." has been replaced with the following text:

"the apparatus being arranged:

- if said user changes a state of a playback indicator (190) into a chapter state (S340), to

display an additional information index, like a chapter index, on a progress bar (180) of said smart progress bar (140) as well as a preview pop-up area (210) in a media renderer window (135) for each chapter (S350), to allow the user to select a desired particular chapter by moving the playback indicator (190) and to play back the desired chapter of media as well as a next chapter immediately after play back of the desired chapter (S360),

- if said user changes the state of the playback indicator (190) into a highlighted state, to display a plurality of highlighted sections on the progress bar (180) of said smart progress bar (140) and corresponding representative images of the highlighted sections in an additional information renderer window (160) of the additional information renderer, wherein the plurality of highlighted sections comprise at least a first highlighted section and a second highlighted section, wherein the first and second highlighted sections are separated by a non-highlighted section, and to immediately playback the second highlighted section after playing back the first highlighted section."

XVIII. Claim 1 of the ninth auxiliary request differs from claim 1 of the eighth auxiliary request in that the text between "the apparatus being arranged" and "if said user changes the state of the playback indicator (190) into a highlighted state" has been replaced with the following text:

"- to determine if an additional information renderer window (160) comprised in the additional information renderer is set to be displayed by said user (S320)

- if the additional information renderer window (160) is not set
 - to set a playback indicator in a default state and to continuously play back the media without showing additional information on a progress bar (180) in said smart progress bar (140) (S330)
 - if said user has changed said default state of said playback indicator (190) into a chapter state (S340), to display an additional information index, like a chapter index, on said progress bar (180) as well as a preview pop-up area (210) in a media renderer window (135) for each chapter (S350), to allow the user to select a desired particular chapter by moving the playback indicator (190) and to play back the desired chapter of media as well as a next chapter immediately after play back of the desired chapter (S360),
- if the additional information renderer window (160) is set
 - to set the additional information renderer window (160) to be selectively displayed according to a user setting (S370),
 - to display representative images of the respective chapter sections, one of a small-capacity moving image and summary in the additional information renderer window (160) (S380)"

XIX. Claim 1 of the tenth auxiliary request differs from claim 1 of the seventh auxiliary request in that the following text has been inserted after "to display a

plurality of highlighted sections ... of the additional information renderer,":

"wherein the representative images are small-capacity moving images,"

XX. 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*

The invention relates to improving media-content playback with the help of "additional information" about the media content. The additional information may comprise "chapter information", indicating the beginning and end of chapters in the media content and including a representative image for each chapter (see point 5.2.2 below). It may also comprise "highlighted information", indicating the beginning and end of highlights in the media content. An apparatus for playback of media content according to the invention is arranged to display the beginning and end of chapters or highlights on a progress bar and the corresponding representative images in either a "preview pop-up area" or an "additional information window", thereby helping the user to navigate the media content during playback. In a "highlighted state", the apparatus plays back just the highlights.

3. *Main request and first and second auxiliary requests - clarity*

- 3.1 The apparatus of claim 1 of the main request includes a media source, a media renderer, an additional information analyzer, a smart progress bar and an additional information renderer.

Media and additional information are received by the media source and rendered by the media renderer. The additional information analyzer "analyzes" the additional information and outputs it to the smart progress bar and to the additional information renderer.

The smart progress bar is adapted "to control a playback of the received and transferred media based on user input and the output analyzed received and transferred additional information".

The additional information renderer is adapted "to display the received and transferred additional information to the user by controlling the smart progress bar based on user input".

- 3.2 In the Board's view, the skilled person understands that controlling media playback "based on user input" refers to allowing the user to control media playback by means of suitable input controls (such as a fast-forward button). But in this context, it is not clear what is meant by controlling playback of media "based on ... the output[ted] analyzed received and transferred additional information". Controlling playback of media on the basis of "additional information" is not a standard concept in the art, nor does the claim explain how it is to be understood. In

particular, the wording of the claim does not allow the interpretation that the user is to control playback on the basis of additional information displayed to him, as it is the smart progress bar that "controls".

At the oral proceedings, the appellant argued that the feature referred to the use of the "highlighted information" contained in the additional information to restrict playback to just the highlights. The Board agrees that this is a form of playback control based on the additional information, but the mere fact that an example can be given of such control does not mean that the claim feature is clear. And although the claim does include another feature relating to this use of the highlight information ("and move to a next highlighted section for continuous playback immediately after playing back one highlighted section"), the claim as it stands makes no connection between the two features.

The feature "a smart progress bar ... adapted to control a playback of the received and transferred media based on ... the output analyzed received and transferred additional information" therefore renders claim 1 unclear.

- 3.3 The Board also considers the feature "an additional information renderer ... adapted to display the received and transferred additional information to the user by controlling the smart progress bar based on user input" to be unclear. This feature states that the additional information renderer controls the smart progress bar "based on user input" and, by doing so, somehow displays the additional information. But it is not apparent what kind of user input is meant here, how the smart progress bar is being controlled by the information renderer on the basis of this input, and in

what way this control leads to the display of additional information.

At the oral proceedings, the appellant stated that it had not intended the claim to express that the smart progress bar was controlled by the additional information renderer. But the claim as it stands does express this and, without a correcting amendment, is therefore not clear.

3.4 The Board concludes that the main request does not meet the requirements of Article 84 EPC for lack of clarity of claim 1.

3.5 Since the two features objected to in respect of the main request are also contained in claim 1 of the first and second auxiliary requests and none of the amendments made in these requests affects the clarity objections, these requests likewise do not comply with Article 84 EPC.

4. *Third, fourth, fifth and sixth auxiliary requests - clarity*

4.1 Claim 1 of the third auxiliary request states that the smart progress bar is "adapted to control a playback of the received and transferred media in response to a user input and the additional information analyzed by the additional information analyzer". Compared with claim 1 of the main request, which uses the wording "based on ...", it is now even less clear what is meant by controlling media playback "in response to ... the additional information" (see point 3.2 above).

4.2 Likewise, the feature of claim 1 specifying that the additional information renderer is "adapted to display

the additional information analyzed by the additional information analyzer to the user by controlling the smart progress bar in response to a user input" still suffers from the lack of clarity noted in point 3.3 above.

4.3 Claim 1 of each of the fourth, fifth and sixth auxiliary requests contains the same unclear features.

4.4 Hence, the third, fourth, fifth and sixth auxiliary requests do not meet the requirements of Article 84 EPC.

5. *Seventh auxiliary request - inventive step*

5.1 The amendments made to claim 1 of the seventh auxiliary request overcome the problems of clarity discussed above. Although the claim's wording is still not ideal (e.g. "highlighted" instead of "highlight") and there may be some questions as to whether its subject-matter is directly and unambiguously derivable from the application as filed (which contains a number of mistakes which the appellant has sought to correct by filing amended description pages and drawings with the statement of grounds of appeal), the Board prefers to deal first with inventive step.

5.2 *The invention as defined by claim 1*

5.2.1 Claim 1 of the seventh auxiliary request is directed to an apparatus for providing additional information of media content in digital contents management. The apparatus comprises a media source, a media renderer, an additional information analyzer, a smart progress bar and an additional information renderer.

5.2.2 The media source is adapted to receive media and additional information from at least one of a local file, a portable storage medium and a network. The additional information comprises "at least one of" chapter information, highlight information and a representative image for a chapter.

The Board understands the chapter and highlight information as referring, in particular, to indications of the beginning and end of chapter and highlight sections of the media content (as shown in the progress bars depicted in Figures 5 to 8). It follows from the last paragraph of claim 1 that the additional information also includes representative images of highlight sections.

5.2.3 The media renderer is adapted to render the media to a user. At the oral proceedings, the appellant explained that "rendering" is distinguished from "playback" in that rendering refers to a lower-level process of converting the media data to video and sound, whereas playback refers to a higher-level process of controlling what part of the media is being rendered.

5.2.4 The additional information analyzer is adapted to analyse the additional information. Neither the claim nor the description explains what this analysis process entails and how analysed additional information differs from non-analysed additional information, but for the purpose of assessing inventive step the Board accepts the appellant's submission that it is the additional information analyzer's task to provide the smart progress bar and the additional information renderer with the parts of the additional information that they need.

- 5.2.5 The smart progress bar is adapted to control media playback in response to user input. The Board understands the smart progress bar primarily as referring to a part of the user interface of the claimed apparatus. This part includes a conventional progress bar and any user input controls necessary for the "smart" progress-bar functionality provided by the application.
- 5.2.6 The additional information renderer is adapted to display the additional information.
- 5.2.7 The claim further specifies that the user may change "a state of a playback indicator into a highlighted state". The playback indicator is a graphical element of the progress bar indicating the current media playback time.

Although changing the "state" of the playback indicator "into a highlighted state" suggests that the visual appearance of the playback indicator is brought into a "highlighted state", it can be understood from the application as a whole that the "highlighted state" is a state or operating mode of the apparatus. Indeed, the description of the application refers variously to the "state" of the apparatus (e.g. on page 6, lines 25 to 29), the "state" of the media (e.g. on page 6, line 32, to page 7, line 2) and the "state" of the playback indicator (e.g. page 7, lines 7 to 9) when apparently describing the same concept.

In the "highlighted state", the apparatus displays "a plurality of highlighted sections", i.e. markings of the beginning and end points of media highlights, on the progress bar and corresponding representative images in an "additional information renderer window".

The claim specifies that there are at least first and second highlight sections separated by a non-highlight section.

In this "highlighted state", the apparatus is arranged to immediately play back the second highlight section after playing back the first highlight section, thus skipping playback of the intermediate non-highlight section.

5.3 *Document D1 and distinguishing features*

5.3.1 Document D1 is one of three documents discussed during the first-instance proceedings in the context of novelty and inventive step. Document D1 discloses a digital video recorder (DVR) that allows users to navigate video content during playback with the help of markers placed at suitable locations within video content (see abstract and paragraph [0017]). The markers, which are also referred to as bookmarks or chapter marks, can be placed manually by the user but can also be inserted automatically by the DVR at the beginning and end of a recorded program (paragraphs [0017] and [0018]). Representative thumbnail images are generated for each automatically or manually placed marker (paragraph [0019]). The markers may be inserted into the actual recorded video content file or stored in a separate metadata file (paragraph [0030]).

5.3.2 The user interface of the DVR includes a status bar overlaid on the video content being displayed (paragraphs [0035] and [0041] and Figures 6 and 7; status bars 610 and 710). The status bar includes a progress bar, which shows the locations of the automatically and manually placed markers (paragraphs [0036], [0038], [0042] and [0043] and Figures 6 and 7;

progress bars 615 and 715 and markers 635_a-635_h and 725_a-725_d). The progress bar is divided into one or more segments, each segment corresponding to an individual program and including beginning and end markers (paragraphs [0036] and [0038] and Figure 6; segments 620₁-620₃). The user may use the markers to quickly jump to a particular point in the recorded video content by pressing a "Next" or "Previous" button on a user input device (paragraphs [0038] and [0043]). A playback indicator on the progress bar shows the current viewing location (paragraphs [0039] and [0043] and Figures 6 and 7; play status boxes 640 and 730).

- 5.3.3 In response to a user request, the DVR displays a thumbnail view showing the thumbnail images representative of the video content at the marked locations (paragraphs [0032], [0033] and [0045]; Figure 8). When the user selects a thumbnail, the current viewing location jumps to the corresponding marker, and the video content is played back from that point (paragraphs [0034] and [0046]).

- 5.3.4 Hence, document D1 discloses an apparatus for providing "additional information" of media content in the form of markers and representative thumbnail images. The apparatus includes an implicitly disclosed media source adapted to receive previously recorded media content together with associated additional information from a local file. It also includes a media-renderer component for rendering the media content. The user controls playback of recorded content by means of a "smart progress bar" in the form of the status bar, which includes a progress bar on which the markers are displayed. An "additional information renderer" component displays the corresponding representative images in a thumbnail view. And document D1 implicitly

discloses an "additional information analyzer" component that takes care of providing the necessary "additional information" to the status-bar and additional-information-renderer components (cf. point 5.2.4 above).

5.3.5 The appellant argued that, in document D1, the markers are added by the user or the DVR and not by the producer of the media content. The Board agrees but notes that claim 1 does not rule out that the additional information is added by the user or the DVR.

5.3.6 The appellant also argued that document D1 does not disclose "chapter information". However, the document does disclose that markers are placed at the beginning and end of recorded program segments and in fact refers to the markers as "chapter marks". Although consecutive recorded program segments need not correspond to consecutive "chapters" of a larger volume of media content (see e.g. paragraph [0040] and Figure 6, which mention three segments titled "Carey Show", "Current Show" and "Future Show"), the Board cannot, in this respect, identify a concrete difference that finds expression in the claim.

5.3.7 The subject-matter of claim 1 therefore differs from the apparatus of document D1 in the following respects:

- the additional information includes "highlighted information" identifying the beginning and end of highlights in the recorded media content, at least two highlight sections being separated by a non-highlight section; and
- the user can set the apparatus into a "highlighted" state or mode, in which

- the beginning and end of highlight sections are indicated on the progress bar,
- representative images of the highlight sections are displayed in an additional information renderer window, and
- the highlight sections are played back while the non-highlight sections are skipped.

5.4 *Technical effect and formulation of the objective technical problem*

5.4.1 In the statement of grounds of appeal, the appellant based the formulation of the technical problem solved by the invention as defined by claim 1 of the main request - which essentially corresponds to claim 1 of the seventh auxiliary request - on a feature of document D1 rather than on a feature of the claim distinguishing the claimed invention from the apparatus of D1. In the Board's view the appellant's problem formulation, namely "to utilize additional information related to content in various ways to maximally [render] characteristic features of media content and ultimately [make] the media content become higher value-added products", is not appropriate, since the apparatus of document D1 already utilises additional information and the remaining elements of this problem formulation are of a highly subjective nature.

5.4.2 As to the features related to automatically skipping non-highlight sections during playback, the appellant argued that they allowed the user "to seamlessly view plural highlighted images". That was an effect not taught or suggested by document D1.

However, the problem-and-solution approach, which is the normal framework for assessing whether the claimed

subject-matter involves an inventive step under the EPC, does not require the document serving as "closest prior art" to teach or suggest the effect achieved by the distinguishing features in order for there to be lack of inventive step. Rather, this effect is to serve as the basis for formulating the objective technical problem, which is that of modifying or adapting the closest prior art to achieve the technical effect (cf. Guidelines for Examination, G-VII, 5.2). The question to be answered is then whether the skilled person, faced with this problem, would modify the closest prior art to achieve the technical effect in a manner that would bring him to something that falls within the scope of the claim, which is typically the case only if the prior art or his common general knowledge prompted him to do so.

- 5.4.3 In its written submissions in preparation for the oral proceedings, the appellant argued that the distinguishing features "enabled effective searching and sorting of relevant information". Document D1 did not suggest modifying the markers in order to automatically provide context information for the user and in order to improve searching.

The Board cannot agree that the distinguishing features improve searching and sorting of relevant information. In so far as the additional information of the invention allows the user to seek through the media content and locate a desired passage more quickly in that the user can easily navigate between sections and recognise their content with the help of the representative images, the same advantages are achieved in the same manner by the markers and representative thumbnail images of document D1.

5.4.4 At the oral proceedings, the appellant initially submitted that, by skipping non-highlight sections during playback, the distinguishing features shortened playback time and provided an improved user experience.

It is true that playing back only highlight sections shortens playback time, and the Board is also willing to accept that marked highlight sections and the ability to skip non-highlight sections during playback contribute to the overall user experience. But it would not be appropriate to formulate the problem as that of achieving those effects and to acknowledge inventive step if none of the cited documents taught that playback time could be shortened or user experience improved by means of the distinguishing features. This is because the distinguishing features include non-technical elements and reflect non-technical considerations, which should not be allowed to contribute to inventive step.

5.4.5 In particular, the Board considers that both the concept of media-content highlights and the desire to view only the highlights of certain media content are non-technical. Viewing only the (typically non-contiguous) highlights means that playback time is shortened, but this is not the result of a technical consideration but merely the consequence of the non-technical choice to limit playback to the highlights, comparable to the reduction in paper usage by printing out a document abstract rather than the full document.

5.4.6 In the Board's view, the technical problem solved by the distinguishing features is therefore that of modifying the apparatus of document D1 to display only the (non-contiguous) highlights of the video content. This is similar to the problem formulation proposed by

the appellant at a later stage of the oral proceedings ("to display only the parts of the media data that are of interest") and corresponds to the technical effect identified by the appellant in the statement of grounds of appeal (see point 5.4.2 above).

5.5 *Assessment of inventive step*

5.5.1 The appellant argued that, starting from the apparatus of document D1, the skilled person would see no need for modification, since the user could simply use the "Next" button to navigate from marker to marker and thereby skip non-highlight sections (cf. point 5.3.2 above). The skilled person had no incentive to automate that process.

5.5.2 The Board considers, however, that at the priority date of the present application it was a routine matter for the skilled person to look for ways to automate manual tasks. The skilled person tasked with the problem of modifying the apparatus of document D1 to display only the highlights of the video content would therefore not only realise that markers can be used to mark the beginning and end of highlight sections, but also implement a playback mode in which non-highlight sections are automatically skipped. He would thereby arrive at an apparatus in which the "additional information" of document D1 includes the claimed "highlighted information", the beginning and end markers indicate the beginning and end of highlight sections, and highlight sections are played back while non-highlight sections are skipped. In this modified apparatus, the representative thumbnail images shown in the thumbnail view of Figure 8 (see point 5.3.3 above) would include representative images of highlight sections.

5.5.3 Hence, the skilled person would arrive at an apparatus falling within the scope of claim 1. The subject-matter of claim 1 of the seventh auxiliary request therefore lacks inventive step (Article 56 EPC).

6. *Eighth auxiliary request - inventive step*

6.1 Compared with claim 1 of the seventh auxiliary request, claim 1 of the eighth auxiliary request adds that the apparatus supports a further user-selectable state referred to as "chapter state". In the chapter state, the apparatus displays "an additional information index, like a chapter index" on the progress bar and a "preview pop-up area" in the media renderer window for each chapter. The user can select a desired chapter by moving the playback indicator and play back the selected and subsequent chapters.

According to the description of the application on page 7, lines 7 to 13, the preview pop-up area is either displayed all the time or selectively displayed "in a pop-up manner" when the user selects a particular section of content.

6.2 The apparatus of document D1 displays a "chapter index" on the progress bar in the sense that it displays markers indicating the beginning and end of recorded program segments (see points 5.3.2 and 5.3.6 above). The user can select a chapter/recorded program segment from where to start playback by means of "Next" and "Previous" buttons, thereby effectively moving the playback indicator (see point 5.3.2 above). At the oral proceedings, the appellant did not dispute that the claim wording "to select a desired particular chapter by moving the playback indicator" covered such a user

interaction and implied no limitation to a more "direct" manipulation of the playback indicator (e.g. by means of a mouse or a touch screen).

6.3 The apparatus of document D1 further displays "previews" of markers in the form of representative thumbnail images, in particular to allow the user to select a marker from where to start playback (see point 5.3.3 above). Although the thumbnail view of Figure 8 of document D1 displays a sequence of representative images, whereas the "preview pop-up area" shown in Figure 5 of the application displays only the single representative image for the currently selected chapter, this difference - if at all expressed in the claim - is a non-technical matter of presentation of information, not contributing to inventive step.

6.4 The appellant submitted that document D1 did not disclose the multiple apparatus "states" of the claimed invention. In addition to a default state, the apparatus had a "chapter state" allowing for improved user navigation and a "highlighted state" allowing the user to watch only those parts he was interested in. That provided for a more complete user experience.

Supporting multiple operation states is, however, in itself not new: the apparatus of document D1 implements at least the state shown in Figure 6, in which video content is being displayed along with a status bar (see paragraph [0035]) and the state shown in Figure 8, in which a thumbnail view is shown that allows the user to select a marker corresponding to a representative thumbnail image. Each of the three states supported by the apparatus of claim 1 is either known from or obvious over the prior art. Combining these specific states in one apparatus may be convenient and may

arguably be said to lead to "a more complete user experience", but the Board cannot identify a specific technical effect arising from this combination that goes beyond the expected benefits of the individual states. The combination is therefore obvious.

6.5 Hence, the Board concludes that the subject-matter of claim 1 of the eighth auxiliary request lacks inventive step (Article 56 EPC).

7. *Ninth auxiliary request - inventive step*

7.1 Compared with claim 1 of the eighth auxiliary request, claim 1 of the ninth auxiliary request essentially adds that the "additional information renderer window" may optionally be displayed in the "default" and "chapter" states. If the user selects it to be displayed, it shows "representative images of the respective chapter sections, one of a small-capacity moving image and summary in the additional information renderer window".

7.2 These added features relate to what additional information is displayed to the user ("one of a small-capacity moving image and summary" in addition to the representative images) and to how the additional information is displayed (in a "pop-up area" or in an "additional information renderer window") and therefore to presentation of information. Although the appellant submitted that they "further improve[d] the searching and multimedia playing and the adaptation to the media being displayed", the Board fails to see how these features specifically improve any of these aspects of the claimed apparatus or what other specific technical effect they could achieve beyond their obvious implementation. In the absence of such an effect,

features relating to presentation of information do not contribute to inventive step.

7.3 The subject-matter of claim 1 of the ninth auxiliary request therefore lacks inventive step (Article 56 EPC).

8. *Tenth auxiliary request - inventive step*

8.1 Claim 1 of the tenth auxiliary request is based on claim 1 of the seventh auxiliary request and adds that the representative images of highlight sections are "small-capacity moving images".

8.2 The appellant argued that the use of a moving image to represent a chapter provided additional context and assisted the user in selecting a chapter. It prevented unnecessary trial and error and reduced excess processing which occurred if the user "guessed" the wrong chapter and had to navigate back and forth.

8.3 The Board has some doubt that the amendment complies with Article 123(2) EPC, but this question need not be answered. Moving images are well-known in the art, and the choice for moving images as representative images relates to the non-technical cognitive content of the information displayed to the user, which therefore does not contribute to inventive step. Even if it were to be accepted that the display of "small-capacity moving images" credibly resulted in more accurate navigation by the user and a corresponding reduction in the number of user interactions and the amount of processing, this effect would rely on an improvement in the cognitive evaluation of the displayed images and therefore not qualify as a technical effect (cf. decision T 1214/09 of 18 July 2014, reasons 4.8.3 to 4.8.8).

8.4 Hence, the subject-matter of claim 1 of the tenth auxiliary request lacks inventive step (Article 56 EPC).

9. *Conclusion*

Since none of the requests on file is allowable, the appeal is to be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



I. Aperribay

R. Moufang

Decision electronically authenticated