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**Datasheet for the decision
of 18 September 2014**

Case Number: T 0659/10 - 3.5.07
Application Number: 05726919.3
Publication Number: 1716568
IPC: G11B20/10, G11B27/10
Language of the proceedings: EN

Title of invention:

Storage medium for storing text-based subtitle data including style information, and apparatus and method reproducing thereof

Applicant:

Samsung Electronics Co., Ltd.

Headword:

Text-based subtitle data/SAMSUNG ELECTRONICS

Relevant legal provisions:

EPC Art. 84, 123(2), 56

Keyword:

Inventive step - (no) (all requests)
Amendments - added subject-matter (yes) auxiliary request
Claims - clarity - (no) (auxiliary request)

Decisions cited:

Catchword:



**Beschwerdekammern
Boards of Appeal
Chambres de recours**

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Case Number: T 0659/10 - 3.5.07

**D E C I S I O N
of Technical Board of Appeal 3.5.07
of 18 September 2014**

Appellant: Samsung Electronics Co., Ltd.
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Suwon-si, Gyeonggi-do, 443-742 (KR)

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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted on 23 November 2009 refusing European patent application No. 05726919.3 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman R. Moufang
Members: M. Rognoni
P. San-Bento Furtado

Summary of Facts and Submissions

- I. The applicant (appellant) filed an appeal against the decision of the Examining Division to refuse European patent application no. 05726919.3.

- II. In the contested decision, the Examining Division came to the conclusion that the subject-matter of claims 1 and 4 filed during oral proceedings lacked an inventive step within the meaning of Article 56 EPC, having regard to the following prior art:

D2: Microsoft Corporation: "Understanding SAMI 1.0", Internet Citation, [Online] originally published October 2001 (2001-10), updated February 2003, XP007902747, retrieved from the Internet: URL:[http://msdn2.microsoft.com/en-us/library/ms971327\(d=printer\).aspx](http://msdn2.microsoft.com/en-us/library/ms971327(d=printer).aspx) [retrieved on 2007-08-06].

- III. With the statement of grounds of appeal, the appellant submitted, as a main request, a re-typed version of claims 1 to 6 of the request refused by the Examining Division, and filed a new set of claims 1 to 6 as a first auxiliary request.

- IV. In a communication accompanying the summons to oral proceedings, the Board expressed the preliminary opinion that the subject-matter of claim 1 of the main request did not appear to be inventive in view of the teaching of D2. In fact, even if the reference style information "ID=Source" was not to be regarded as "reference in-line style information" according to claim 1, as assumed by the Examining Division, it would seem obvious for a skilled person to rely on a similar functionality to apply style modifications to text

portions. As an example of prior art which taught a clear separation between design information and the content to which the design information was applied, the Board referred to the following document:

D3: US-A-5 860 073.

As to the first auxiliary request, the Board noted that some wording of claim 1 did not appear to be disclosed in the application as originally filed. In any case, claim 1 according to the first auxiliary request did not appear to be substantially different from claim 1 of the main request so that the same objections against its patentability applied.

- V. The appellant did not reply to the Board's preliminary opinion, but, with letter dated 14 August 2014, withdrew its request for oral proceedings. Furthermore, it requested that a written decision be issued.
- VI. By fax dated 4 September 2014, the Board informed the appellant that oral proceedings would be held as scheduled on 18 September 2014.
- VII. On 18 September 2014, the Board held oral proceedings in the absence of the appellant. At the end of the proceedings, the Chairman announced the Board's decision.
- VIII. In the statement of grounds of appeal, the appellant implicitly requested that the decision under appeal be set aside and a patent be granted on the basis of claims 1 to 6 according to the main request or, alternatively, on the basis of claims 1 to 6 according to the first auxiliary request.

IX. Claim 1 according to the main request reads as follows:

"A storage medium comprising:
multimedia image data (110); and

text-based subtitle data (120) for displaying subtitles on an image based on the multimedia image data, wherein the text-based subtitle data (120) includes dialog information (720) indicating subtitle contents to be displayed on the image and a plurality of units of style sheet information (710) indicating an output style of the dialog information (720); wherein

the dialog information (720) includes text information and reference style information;

characterised in that:

each unit of style sheet information (710) includes basic style information (712) and in-line style information (714) which can be applied to a portion of text information; and

the dialog information (720) includes reference in-line style information for referring to an identifier of the in-line style information (714) included in the style sheet information (710) in order to direct the in-line style information (714) to be applied to a portion of the text information."

Claim 1 according to the first auxiliary request reads as follows:

"A storage medium comprising:

multimedia image data (110); and

text-based subtitle data (120) for displaying subtitles on an image based on the multimedia image data, wherein the text-based subtitle data (120) includes dialog information (720) indicating subtitle contents to be displayed on the image and a plurality of units of style sheet information (710) indicating an output style of the dialog information (720); wherein

the dialog information (720) includes text information and reference style information;

characterised in that:

each unit of style sheet information (710) includes basic style information (712) to be applied to text information and corresponding in-line style information (714) which can be applied to a portion of the text information that the basic style information has been applied to in order to show an emphasis effect; and

the dialog information (720) includes reference in-line style information for referring to an identifier of the in-line style information (714) separately defined in the unit of style sheet information (710) selected by the user in order to direct the in-line style information (714) to be applied to a portion of the text information."

Both requests further comprise an independent claim 4 directed to an apparatus for reproducing multimedia image data and text-based subtitle data recorded on a storage medium.

- X. The appellant's arguments submitted with the statement of grounds of appeal may be summarised as follows:

The present application related to a storage medium in which multimedia image data and text-based subtitle data, including a plurality of units of style sheet information, was recorded. The main request was based on the embodiment shown in Figure 7 and addressed the problem of losing the intended emphasis in text when a new style was selected during playback. All of the documents cited against the application suffered from a problem of loss of emphasis when different styles were selected. The problem was solved according to the invention illustrated in Figure 7 by having a plurality of units of style sheet information with in-line style information separately defined for each unit of style sheet information.

Accordingly, claim 1 of the main request required the dialog information to contain both reference style information and reference in-line style information. The Examining Division's assumption that the "Source" data in the example given on pages 10 and 11 of document D2 corresponded to "the reference in-line style information" of the present invention was not correct. Rather, the "Source" data addressed a separate issue of how to apply a constant title to a string of "Sync" blocks.

Reference in-line style information was discussed in document D2 on page 4 under the heading "Inline formatting use". Document D2 taught that in-line information was applied to dialog text using the indicators shown in Table 1. Since document D2 used almost identical wording, the skilled person reading D2 would have understood Table 1 to represent in-line style information, as specified in claim 1 of the main request. Further, D2 did not disclose applying in-line

style information separately defined for each style sheet. Rather, it disclosed applying in-line style information that was constantly defined for any style sheet.

Moreover, as acknowledged by the Examining Division, the SAMI (Microsoft Synchronized Accessible Media Interchange) files shown in document D2 did not include a plurality of units of style sheet information. For instance, D2 did not disclose having a first style sheet for English subtitles and a second style sheet for French subtitles.

The contested decision suggested that the above feature would be added because it would be the simplest option in order to add a second language. Thus, according to the Examining Division, the "style" and "body" section of the SAMI files according to document D2 would be cut and pasted to arrive at the present invention. Even if this were the case, document D2 would still suffer a problem of loss of emphasis. In any case, this was not the teaching of D2. The example on page 5 showed the lines used for different languages, such as English, French and German. The formatting for each line superseded any paragraph style parameters. Moreover, the example on page 8 showed that dialogs for different languages were given in each sync block. Thus, D2 taught specifically against the inventive step argument advanced by the Examining Division to refuse the application. The skilled man, when looking to add a further language would not, without inventive activity and without any teaching to the contrary, go against the specific teaching of document D2.

As the prior art did not suggest a storage medium having the combination of features recited in claim 1

of the main request, the claimed subject-matter involved an inventive step (Article 56 EPC).

In the first auxiliary request, claim 1 had been amended to state that the basic style information was applied to text information. The in-line style information had been amended to state that it corresponded to the basic style information. Moreover, claim 1 had been amended to make it explicit that the in-line style information emphasized a portion of the text to which the basic style information had been applied. Support for all amendments could be found in the description, in particular in paragraph [51] of the published application. The novelty and inventive step arguments submitted for the main request applied also to the first auxiliary request.

Reasons for the Decision

1. The appeal is admissible.

2. The present application relates, *inter alia*, to a storage medium for storing multimedia image data and text-based subtitle data for displaying subtitles on an image based on the multimedia image data. As summarized in the abstract of the published application, the text-based subtitle data comprise dialog information (*i.e.* subtitles) to be displayed on the image, style information defining the output style of the dialog information and partial style information indicating an output style to be applied to a portion of the dialog information.
 - 2.1 The gist of the present invention, as illustrated in Figure 7, consists essentially in defining both general

"*style information*", which applies to all text-based data, and "*in-line style information*", which applies only to a portion of the subtitle text and is addressed by identifiers embedded in the text-based data, separately from the dialog information (*i.e.* the text of the subtitles). In this way, differences between the general style information and the in-line style information, which are for instance intended to emphasize portions of the text, can be preserved, even if the general style information is changed by the user.

Main request

3. As pointed out by the appellant in item 3. of the statement of grounds of appeal, the main request is based on Figure 7 of the application and addresses the "*problem of loosing the intended emphasis in the text when a new style is selected during playback*".

3.1 Claim 1 relates to "*a storage medium*" comprising the following features:

- multimedia image data,
- text-based subtitle data for displaying subtitles on an image based on the multimedia image data, wherein
 - the text-based subtitle data includes
 - dialog information indicating subtitle contents to be displayed on the image and a plurality of units of style sheet information indicating an output style of the dialog information; wherein
 - the dialog information includes text information and reference style information;

The style sheet information and the dialog information are furthermore specified as follows:

- a) each unit of style sheet information includes
 - i) basic style information and
 - ii) in-line style information which can be applied to a portion of text information; and
- b) the dialog information includes
 - i) reference in-line style information for referring to an identifier of the in-line style information included in the style sheet information in order to direct the in-line style information to be applied to a portion of the text information.

3.2 The Examining Division considered that document D2 represented the closest prior art and that the sample of a SAMI document given on pages 10 and 11 of D2 comprised "*style sheet information*" and "*dialog information*" as specified in claim 1. In particular, the "*style sheet information*" included "*basic style information*" and "*in-line style information*" ("`#Source{ .. }`"). The "*dialog information*" comprised "*reference in-line style information*" ("`ID=Source`") for referring to the identifier ("`#Source{ .. }`") of the "*in-line style information*".

3.3 Hence, according to the Examining Division, the subject-matter of claim 1 of the appellant's main request differed from document D2 only in that there was "*a plurality of units of style sheet information each including basic style information and in-line style information on a single recording medium*" (see decision, item 1.2).

Starting from document D2, the problem to be solved identified by the Examining Division consisted in

providing multiple text subtitles in multiple languages on the same recording medium.

3.4 According to item 1.4 of the contested decision, D2 already described subtitles in different languages and explained the need to modify certain text formatting parameters for the various languages. In the context of the teaching of D2, it would be the simplest option for a programmer using the script language of D2 to arrive at a second subtitle in a different language by copying and pasting the complete SAMI script specifying the text for a first language and by changing the language definition. The resulting storage medium would comprise two "STYLE" sections, each specifying a basic style "P" and an in-line style "#Source" on a single storage medium, and thus correspond to the subject-matter of claim 1.

3.5 The Examining Division reached its decision without considering whether all features of claim 1 actually contributed to the solution of a technical problem. The Board has come to the conclusion that this question need not be addressed in the present case.

4. The appellant has pointed out that document D2 related to SAMI authoring and that SAMI files did not include multimedia image data. Consequently, D2 did not disclose a storage medium comprising multimedia image data and text-based subtitle data.

4.1 As to the Examining Division's conclusion that D2 disclosed in-line style information and reference in-line style information as specified in claim 1, the appellant has essentially argued that "#Source {...}" in the style sheet information and "ID=Source" in the dialog information of D2 addressed the separate issue

of applying a constant title to a string of sync blocks of dialog information. In fact, D2 taught that in-line style information was applied to dialog text using the indicators shown in Table 1. Since D2 disclosed applying in-line information which was not separately defined for each style sheet and thus could not be changed as a function of the style sheet, a change of style sheet might cause a loss of emphasis.

- 4.2 Finally, the appellant has contested the Examining Division's conclusion that the feature "*plurality of units of style sheet information*" would be added because it would be the simplest option for providing subtitles in a second language. In fact, D2 taught that line style parameters could be defined for each language and that formatting for each line superseded any paragraph style parameters defined in the style sheet.
5. The Board agrees with the appellant that document D2 did not show a storage medium comprising multimedia image data and text-based subtitle data. However, although SAMI files are separate text files, they are meant to coexist with digital media (cf. D2, page 1, last paragraph). Therefore it is implicit for the skilled person that SAMI files and digital media can share a common storage medium.
- 5.1 As to the question whether "Source ID" referred to in D2 can be regarded as reference in-line style information, the Board notes that according to page 9, paragraph [51] of the published application, in-line style information defines a font size and a color to show an emphasis effect based on the basic style information. This definition covers also "#Source {...}" (reference by "ID=Source"), according to the

example given on page 7 of D2. However, according to paragraph [50] of the present application, in-line style information can be applied to an unspecified portion of text information, whereas the function "Source ID" is indeed used to display the source of the voice or sound that is being captioned (page 6 of D2).

Thus, if the term "reference in-line style information" in claim 1 is interpreted in the light of the description, it appears to be different from "ID=Source" in the sense that the former is applicable to any text portion.

5.2 However, the feature "Source ID" of SAMI described in document D2 (page 6) provides the same functionality and advantage as the in-line style information according to the present invention, as it allows to define the style parameters of a portion of text ("source") separately from the text information and individually for each style sheet. According to page 6 (section "Source ID"), "Source ID" is specified within a "Sync block of the text-based subtitle data, whereas the corresponding style information is separately defined as "#Source" in the "Style block".

5.3 D3 is concerned with the use of style sheets for a publishing system and highlights the advantages provided by *"a clean separation between design information and the content to which that design will be applied"* (column 8, lines 41 to 43).

As pointed out in column 7, lines 3 to 12, one important aspect taught in D3 relates to *"the concept of viewing the same content objects in many different ways. [...], content objects are viewed after being formatted by a particular linked control. The control*

knows how to format a particular piece of content by looking at the style that has been defined for that content by the designer and then comparing that style to a linked style sheet. Because each control on a page can have a different associated style sheet, different controls on the same page can each display the same linked content in varying formats".

- 5.4 Although D3 deals with desktop publishing, also the designer of multimedia products would have been aware of the advantage offered to the author of captioning for multimedia by a *"clean separation between design information and the content to which that design will be applied"* (D3, column 8, lines 41 to 43).
- 5.5 Furthermore, in document D2, "Source ID" (cf. points 5.1 and 5.2) does not constitute the only example of the "clear separation" between content and style advocated in D3. In the first two paragraphs of the section titled "ID Style" on page 5, document D2 points out that it may be advantageous to change the font size used to display captions by creating a "BigPrint ID style" which is applied at the time of synchronization according to the style selected by the user.
- 5.6 In the Board's opinion, a person skilled in the art of captioning and multimedia authoring would have easily recognized the benefits afforded by the separation of text and style information implemented in SAMI by "Source ID" and "ID Style" and realized that there would be circumstances in which this functionality could be advantageously extended to specific portions of text, for instance, for the purpose of text formatting or markup.

On the other hand, it cannot be denied that a complete separation of style information from text information could involve some more complex programming that might be avoided in case of straightforward and non-critical formatting by using the markup tags listed in Table 1 of D2.

5.7 Against this background, the Board considers that the skilled person would have recognized the advantages and possible drawbacks deriving from a complete separation of style information and text data, and thus would have been able to decide according to circumstances when it was expedient to have all style information on a style sheet separate from the text information.

5.8 The particular case of a plurality of units of style sheet information according to the present invention represents in the Board's opinion a typical situation where it would have been obvious to keep style information separate from text information so that all aspects of style and text formatting could be defined with respect to each style sheet to better match the display of all text portions to the selected language and to avoid possible compatibility issues between text formatting and style.

5.9 Furthermore, the Board essentially agrees with the finding of the Examining Division that the use of a plurality of units of style sheet information on a single recording medium represents an obvious application of the teaching of D2 with a view to providing text subtitles in multiple languages for the same recording medium.

5.10 Hence, the Board comes to the conclusion that the subject-matter of claim 1 according to the main request

results from an obvious application of the teaching of D2 in combination with the skilled person's general knowledge in the field of multimedia authoring, as exemplified in D3.

First auxiliary request

6. Claim 1 of the first auxiliary request differs from claim 1 of the main request in that the features of each unit of style sheet information are worded as follows (additions to the main request are shown in *italics*, deletions are marked in strikethrough text):
- a) each unit of style sheet information includes
 - i) basic style information *to be applied to text information* and
 - ii) *corresponding* in-line style information which can be applied to a portion of *the* text information *that the basic style information has been applied to in order to show an emphasis effect*; and
 - b) the dialog information includes
 - i) reference in-line style information for referring to an identifier of the in-line style information *separately defined* ~~included~~ in the *unit of* style sheet information *selected by the user* in order to direct the in-line style information to be applied to a portion of the text information.
- 6.1 As observed in the communication dated 24 January 2014, the Board is of the opinion that the wording "*in-line style information separately defined in the unit of style sheet information*" is not disclosed in the

application as originally filed and seems only to reflect the graphic representation of the style sheet information according to Figure 7 (Article 123(2) EPC). In fact, in paragraph [51] cited by the appellant in support of this amendment, it is specified that, even if the style sheet information is changed by the user, *"by applying in-line style information 714 separately defined by the changed style sheet information, the manufacturer's intention to emphasize a portion of text information can advantageously be realized"*.

6.2 Furthermore, as observed in the Board's communication, the impact that the term *"separately"* might have on the actual features of the unit of style sheet information is not clear (Article 84 EPC).

6.3 Apart from the features referred to above, claim 1 of the first auxiliary request further specifies that in-line information is applied to a portion of the text information to which the *"basic style information"* is applied in order to show *"an emphasis effect"*.

In the Board's opinion, an *"emphasis effect"* can only be the result of the viewer's subjective perception and, in principle, any difference in style may be regarded as producing an *"emphasis effect"*. Thus, in document D2 the style associated with "ID=Source" D2 and defined by "#Source" can also be said to produce an *"emphasis effect"* as it displays a line at the top of the caption block in a different style than the following text.

6.4 In other words, the Board considers that, as far as supported by the original disclosure, claim 1 of the first auxiliary request defines substantially the same subject-matter as claim 1 according to the main request and, in particular, the feature that each style sheet

has basic style information and in-line style information which applies only to portions of the text associated with corresponding reference in-line style information. Thus, the objections raised against the inventive step of the main request apply *mutatis mutandis* to the subject-matter of claim 1 of the first auxiliary request.

- 6.5 As the appellant has not replied to any of the objections raised by the Board against claim 1 of the first auxiliary request, the Board sees no reason to change its preliminary opinion against its allowability.
7. Since the independent claims 1 of both requests are not allowable, there is no need to deal with the further independent claims.
8. In summary, the Board comes to the conclusion that none of the appellant's requests provides a basis for the grant of a patent. Hence, the appeal has 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