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**Datasheet for the decision  
of 29 May 2015**

**Case Number:** T 1792/10 - 3.5.07

**Application Number:** 04788500.9

**Publication Number:** 1680783

**IPC:** G11B20/10, G11B27/10

**Language of the proceedings:** EN

**Title of invention:**

Information storage medium storing text-based subtitle, and apparatus and method for processing text-based subtitle

**Applicant:**

Samsung Electronics Co., Ltd.

**Headword:**

Text-based subtitle/SAMSUNG ELECTRONICS

**Relevant legal provisions:**

EPC Art. 56

**Keyword:**

Inventive step - (no)

**Decisions cited:**

**Catchword:**



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Case Number: T 1792/10 - 3.5.07

**D E C I S I O N  
of Technical Board of Appeal 3.5.07  
of 29 May 2015**

**Appellant:** Samsung Electronics Co., Ltd.  
(Applicant) 129, Samsung-ro  
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Suwon-si, Gyeonggi-do, 443-742 (KR)

**Representative:** Appleyard Lees  
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**Decision under appeal:** Decision of the Examining Division of the  
European Patent Office posted on 14 April 2010  
refusing European patent application No.  
04788500.9 pursuant to Article 97(2) EPC.

**Composition of the Board:**

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

## Summary of Facts and Submissions

I. The applicant (appellant) appealed against the decision of the Examining Division refusing European patent application No. 04788500.9.

II. The decision made reference to the following document:

D1: "Understanding SAMI 1.0", Microsoft Corporation, February 2003, retrieved from the Internet:  
[http://msdn2.microsoft.com/en-us/library/ms971327\(d=printer\).aspx](http://msdn2.microsoft.com/en-us/library/ms971327(d=printer).aspx).

The Examining Division decided that the subject-matter of claim 1 of a main request lacked novelty over document D1. Claim 1 of a first auxiliary request was found to infringe Article 123(2) EPC and Article 84 EPC. It was further decided that claim 1 of a second auxiliary request did not meet the requirements of Article 84 EPC and that its subject-matter again lacked novelty over document D1.

III. With a "Replacement Statement of Grounds", replacing an initial statement of grounds of appeal and still filed within the time limit of Article 108 EPC, last sentence, the appellant submitted a single main request.

IV. In a communication accompanying a summons to oral proceedings, the Board *inter alia* expressed the preliminary view that the subject-matter of claim 1 of the main request lacked an inventive step in view of document D1.

- V. With a letter dated 29 April 2015, the appellant replaced its sole substantive request with a new main request.
- VI. Oral proceedings took place on 29 May 2015. At the end of the oral proceedings, the chairman pronounced the Board's decision.
- VII. Claim 1 of the main request reads as follows:

"An information storage medium for providing information to a text subtitle processing apparatus to output text based subtitle, the information storage medium comprising:

a first region (110) configured to store dialog information which comprises script text information of the subtitle and a second region (120) comprising presentation information to be used for rendering and displaying the script text information of the subtitle;

characterised by:

the presentation information comprising a styleset comprising a plurality of stylegroups, wherein each stylegroup comprises

first style information which is usable to render and display the script text information via the text subtitle processing apparatus; and

a plurality of user-changeable styles selectable by a user whereby one of the plurality of user-changeable styles selected by the user is used together with first style information in rendering and displaying the script text information;

wherein each stylegroup comprises a name attribute to identify the stylegroup, and

wherein the dialog information further comprises information indicating a time when the output of the script text information starts and a time when the output of the script text information ends; and

information indicating the name attribute of the stylegroup to be used for rendering and displaying the script text information of the subtitle of the respective dialog information."

### **Reasons for the Decision**

1. The appeal complies with the provisions referred to in Rule 101 EPC and is therefore admissible.
2. *The invention as defined by claim 1*
  - 2.1 Claim 1 relates to an information storage medium and essentially defines a file format for storing subtitle information for a digital video stream. It defines a first region storing "dialog information" and a second region storing "presentation information". For a proper understanding of the claim it is helpful to make reference to, in particular, Figures 4A, 4B and 5A.
  - 2.2 Figure 5A shows an element of dialog information. It includes subtitle text ("script text information") to be displayed to the user during playback of the video stream. It further includes indications of the times when display of the subtitle text is to begin and end. It also includes a "name attribute" indicating a

"stylegroup" to be used for rendering and displaying the subtitle text.

- 2.3 According to claim 1, the presentation information comprises a plurality of stylegroups, each stylegroup comprising "first style information" and "a plurality of user-changeable styles selectable by a user".

The idea behind "stylegroups" and "styles" is explained in paragraphs [53] to [56] of the published application. The producer of the subtitles decides, for each item of subtitle text, the stylegroup to be applied to it. The selection of a stylegroup determines a number of "style attributes" used for rendering the subtitle text, but does not fix all of them. The remaining style attributes are determined by the selection of one of the styles defined within the stylegroup. This selection is made by a user while he is watching the video stream.

- 2.4 The claim wording "a plurality of user-changeable styles selectable by a user" appears to suggest that the user may somehow change the attribute values of a style. At the oral proceedings the appellant explained that this feature was not worded optimally and that it should be understood as "a plurality of user-selectable styles". The Board agrees with this interpretation, as it is in line with the description.

- 2.5 Figure 4A shows presentation information defining three stylegroups, named "Title", "Script" and "Casting". Each stylegroup comprises three styles, named "normal font", "small font" and "large font".

As shown in this figure, some style attributes, such as "font" and "color", are defined only once within the

stylegroup, i.e. independently of the style. In terms of claim 1, these attributes form the "first style information". Other attributes, such as "size" and "position", are defined for each style individually. The complete set of style attributes used for rendering subtitle texts is formed by combining the attributes in the "first style information" of the applicable stylegroup with the attributes defined specifically for the user-selected style. If the user has not selected a style, one of the user-selectable styles is used as the default style. See paragraphs [75] to [77] and Figure 8A.

- 2.6 Figure 4B shows a slightly different approach. The "first style information" now also defines the attributes "size" and "position". These attributes are redefined in the definitions of the individual styles. In this embodiment, the complete set of style attributes used for rendering subtitle texts consists of the attributes in the "first style information" if no user-selectable style is selected, and otherwise of the attributes in the "first style information" combined with the attributes defined specifically for the user-selected style. In forming this combination, the attributes of a user-selected style have priority over (i.e. override) the corresponding attributes in the "first style information". See paragraphs [78] to [84] and Figures 8B and 8C.

At the oral proceedings, the appellant confirmed that claim 1 covered both approaches.

3. *Inventive step - Article 56 EPC*

- 3.1 Document D1 discusses the text-based SAMI 1.0 file format for providing captioning information (see

section "SAMI" bridging pages 1 and 2). It is therefore a suitable starting point for the assessment of inventive step.

3.2 An example of a SAMI document is shown on pages 10 and 11 ("Sample SAMI document"). This example document contains the text of captions or subtitles in a body section enclosed by the "<Body>" and "</Body>" tags. It also contains a style section enclosed by the "<STYLE>" and "</Style>" tags. According to page 4, section "Style parameters", style parameters defined in the style section are used to format textual display and to provide a method for multiple language support.

3.3 The body section of the example document contains a number of caption blocks, each block preceded by a "SYNC" tag. One example is the following:

```
<SYNC Start=10>  
  <P Class=ENUSCC>Let the word go forth,  
    from this time and place to friend and foe  
    alike that the torch
```

The section "Synchronization" on page 7 of document D1 explains that the "Start" parameter defines the time at which the caption text immediately following the "SYNC" tag is displayed. A caption can be blanked by replacing the text with a non-breaking space ("&nbsp;").

3.4 Document D1, page 4, section "Paragraph tag", discloses that basic formatting can be applied to all caption blocks using a "Paragraph" style ("P"). The example SAMI document on pages 10 and 11 shows that the paragraph style is defined as a list of style attributes ("formatting parameters" in the terminology



of document D1) included in the style section. It is reproduced here:

```
P {margin-left: 29pt; margin-right: 29pt; font-size: 12pt; text-align: left; font-family: tahoma, arial, sans-serif; font-weight: normal; color: white; background-color: black;}
```

3.5 As explained on page 5, section "ID Style", a SAMI document may further define "ID styles". Such styles are defined by appending a unique name to a pound sign ("#") and include a list of formatting parameters. The style section of the example document lists the following ID styles:

```
#Source {margin-bottom: -15pt; background-color: silver; color: black; vertical-align: normal; font-size: 12pt; font-family: tahoma, arial, sans-serif; font-weight: normal;}
```

```
#Youth {color: greenyellow; font-size: 18pt;}
```

```
#BigPrint-1 {color: yellow; font-size: 24pt;}
```

The Board notes that the "#Source" ID style plays a special role. According to section "Source ID" on pages 6 and 7, that ID style defines the formatting of an additional line at the top of a caption block which may, for example, contain the name of the current speaker.

The function of regular ID styles, such as "#Youth" and "#BigPrint-1", is explained in the section "ID Style". These ID styles are intended to meet the needs of specific audiences, for example children or persons who are visually impaired. They are to be selected by the

viewer. The SAMI rendering engine applies the selected ID style to each rendered caption block.

The Board notes that the skilled reader of document D1 understands that the style attributes of the selected ID style effectively override the corresponding style attributes of the paragraph style. Thus, a caption block will be rendered with "color" set to "white" if no ID style has been selected, with "color" set to "greenyellow" if the "#Youth" ID style has been selected, and with "color" set to "yellow" if the "#BigPrint-1" ID style has been selected. See also the examples given on page 6.

- 3.6 Document D1, page 5, section "Class and Localization", further discloses that SAMI documents may define "classes" that may be used for language-specific captions. The example document on pages 10 and 11 defines one such class:

```
.ENUSCC {Name: "English Captions"; lang: en-US-  
CC;}
```

According to page 5, third paragraph, a class is referenced by placing the "Class" parameter within a paragraph tag. The caption blocks in the body section of the example document all include an identifier referring to the ENUSCC class ("`<P Class=ENUSCC>`").

The example class definitions given in section "Class and Localization" on page 5 show that a class may define language-specific formatting parameters:

```
.FRFRCC {Name: French; lang: fr-FR; color: yellow;  
margin-left: 12pt; margin-right: 12pt;}
```

3.7 In terms of claim 1, the body section of a SAMI document corresponds to the "first region" storing "dialog information" comprising "script text information of the subtitle". The style section corresponds to the "second region" storing "presentation information to be used for rendering and displaying the script text information of the subtitle".

Each "SYNC" tag contained within the body section defines "information indicating a time when the output of the script text information starts".

The paragraph style defined in the style section is "first style information which is usable to render and display the script text information".

The ID styles (apart from the "#Source" ID style) are user-selectable styles. The ID style selected by the user is "used together with first style information in rendering and displaying the script text information".

3.8 According to the decision under appeal, the language classes of document D1 may be equated to stylegroups. In this interpretation, the "first style information" of a particular stylegroup consists of the style attributes of the paragraph style together with the style attributes of a language class. Each of the ID styles then defines a user-selectable style within each stylegroup.

Given the wording of the claims, this approach is not without merit. However, the application clearly does not intend stylegroups to be used for language-specific formatting, and the definition of the language classes of document D1 does not correspond to what is shown in

Figures 4A and 4B. For the purpose of its assessment of inventive step, the Board prefers not to follow the Examining Division's approach, but to interpret claim 1 in accordance with Figures 4A and 4B. In this interpretation, document D1 discloses a single stylegroup consisting of the paragraph style as first style information and a plurality of user-selectable ID styles.

3.9 Hence, the Board considers that the subject-matter of claim 1 differs from what is disclosed in document D1 in that:

- a plurality of "stylegroups" are defined, whereas document D1 shows only a single stylegroup (the paragraph style and its associated ID styles);
- each stylegroup definition comprises a "name attribute" for identifying the stylegroup; and
- the dialog information comprises the name attribute of the stylegroup to be applied.

In addition, the dialog information according to claim 1 comprises information indicating "a time when the output of the script text information ends". This feature does not interact with the features related to the plurality of stylegroups and can therefore be treated separately in the assessment of inventive step.

3.10 In the letter dated 29 April 2015, the appellant submitted that the claimed invention further differed from the disclosure of document D1 in that the first style information comprised attributes that remained unchanged by user selection.

However, in the example document on pages 10 and 11 of document D1, the user-selectable ID styles "#Youth" and

"#BigPrint-1" only affect the attributes "color" and "fontsize". The other attributes defined in the paragraph style hence remain unchanged by user selection.

- 3.11 As explained in point 3.3 above, a "SYNC" tag in a SAMI document specifies the time when the display of a particular caption block is to begin, but not when it is to end. Instead, a new caption block will be displayed at the time specified in the next "SYNC" tag, or the caption can be blanked by replacing the caption text with a non-breaking space.

The Board considers that including an "end" attribute in a "SYNC" tag in addition to the "start" attribute is an obvious alternative to the approach of document D1.

- 3.12 The distinguishing features relating to the plurality of stylegroups allow a subtitle producer to define different paragraph styles for different caption blocks, each paragraph style being associated with its own set of user-selectable ID styles. For example, a different paragraph style and associated ID styles may be defined for the title of a movie and yet another paragraph style for the closing credits (the idea behind the stylegroups "Title", "Script" and "Casting" of Figures 4A and 4B; see paragraph [55] of the published application), or a different paragraph style may be used depending on who is speaking. At the same time, the viewer continues to be given the option of selecting one of a number of user-selectable ID styles (such as "#BigPrint-1" and "#Youth"), the selection affecting a subset of the attributes of the paragraph style.

In the Board's view, this added flexibility does not solve any further or deeper technical problem; it is only concerned with the subtitle presentation options given to the subtitle producer. The problem to be solved is therefore that of extending the SAMI format of document D1 to provide this added flexibility, i.e. to enable the definition of different paragraph styles for different caption blocks, each paragraph style being associated with a number of user-selectable ID styles.

3.13 The skilled person, starting from document D1 and faced with this problem, would realise that an identifier (or "name attribute") may be used to associate a caption block with a particular paragraph style (or "stylegroup"). Indeed, document D1 already discloses this technique for the purpose of associating caption blocks with separately defined language classes (see point 3.6 above). Consequently, the skilled person would modify the style section of a SAMI document to define plural paragraph styles and associated ID styles (i.e. stylegroups), each paragraph style definition comprising the paragraph style's identifier, and include in each caption block the identifier of the paragraph style to be applied.

3.14 At the oral proceedings, the appellant argued that the skilled person wishing to vary the paragraph style from one caption block to another would instead insert a new style section between the two caption blocks. This would not require the inclusion of "name attributes" and hence not lead to an information storage medium falling within the scope of claim 1.

The Board agrees that this approach is technically feasible. In fact, the design of a subtitle file format

is hindered by few, if any, technical constraints. However, if the skilled person is aware of multiple solutions to a particular problem, the choice of a specific solution normally does not involve an inventive step, unless in the context of the claimed invention this choice results in an unexpected technical effect.

In this respect, the appellant argued that the claimed solution was more storage-efficient in comparison to the alternative solution, as the use of identifiers referring back to an earlier style definition avoided the need to include duplicate definitions. However, even if this has to be regarded as a technical effect of the claimed solution, the use of language-class identifiers in document D1 achieves the same effect, which therefore cannot be considered surprising.

- 3.15 Consequently, the subject-matter of claim 1 does not involve an inventive step (Articles 52(1) and 56 EPC).
4. Since the sole substantive request is not 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