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Datasheet for the decision of 5 September 2018

Case Number: T 1448/13 - 3.5.07

Application Number: 05789801.7

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Language of the proceedings: EN

Title of invention:
Cyclic referencing management method and apparatus, parsing method and apparatus

Applicant:
Samsung Electronics Co., Ltd.

Headword:
Cyclic referencing management/SAMSUNG ELECTRONICS

Relevant legal provisions:
EPC Art. 56, 123(2)

Keyword:
Inventive step - main request (no)
Amendments - added subject-matter - first auxiliary request (yes)

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Case Number: T 1448/13 - 3.5.07

D E C I S I O N
of Technical Board of Appeal 3.5.07
of 5 September 2018

Appellant: (Applicant)	Samsung Electronics Co., Ltd. 129, Samsung-ro Yeongtong-gu Suwon-si, Gyeonggi-do, 443-742 (KR)
Representative:	Appleyard Lees IP LLP 15 Clare Road Halifax HX1 2HY (GB)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 28 January 2013 refusing European patent application No. 05789801.7 pursuant to Article 97(2) EPC**

Composition of the Board:

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

Summary of Facts and Submissions

I. The appeal lies from the decision of the Examining Division to refuse European patent application No. 05789801.7, which was filed as international application PCT/KR2005/000899 and published as WO 2006/004274. The refusal was issued by means of a "decision according to the state of the file", using EPO Form 2061 and referring to a communication dated 14 November 2012.

The subject-matter of the independent claims was found to lack inventive step (Articles 52(1) and 56 EPC) over a conventional method performed by an XML/MPV parser to process/parse a file compliant with the OSTA MPV specification in the following document:

D3: "MPV Core Specification Revision 1.01", OSTA.org (Optical Storage Technology Association), 11 March 2003.

The Examining Division further expressed the opinion that the subject-matter of the dependent claims seemed to lack inventive step. The features of these claims were either common general knowledge or known from or suggested by the closest prior art D3 or by one of the following documents:

D1: EP 0 977 130 A1, published on 2 February 2000;

D2: May, W. et al.: "A Logical, Transparent Model for Querying Linked XML Documents", *Tagungsband der 10. BTW-Konferenz, Datenbanksysteme in Business, Technologie und Web (BTW 2003)*, Leipzig, 26 to 28 February 2003.

II. In the statement of grounds of appeal, the appellant requested that the decision be set aside and that a patent be granted on the basis of the request

considered in the appealed decision, which is the set of claims 1 to 11 submitted by letter dated 7 September 2009.

III. In a communication accompanying a summons to oral proceedings, the Board found that some claims lacked clarity or support in the description. It expressed the preliminary opinion that the subject-matter of claim 1 was not inventive over the closest prior art considered in the contested decision and that none of the claims seemed to overcome that objection. The Board was of the view that the distinguishing features were within the normal skills of a programmer and that document D1 disclosed solutions similar to that of the invention under consideration.

IV. With a letter of reply the appellant filed a first auxiliary request. In a further letter it informed the Board that it would not attend the oral proceedings.

V. Oral proceedings were held in the appellant's absence. At the end of the oral proceedings, the chairman pronounced the Board's decision.

VI. The appellant's final request was that the contested decision be set aside and that a patent be granted on the basis of the main request or, alternatively, of the first auxiliary request.

VII. Claim 1 of the main request reads as follows:
"A parsing method for parsing a file provided to control assets in a multimedia application environment, the method comprising:
parsing the file with respect to each of the assets; and

generating reproduction control information that controls reproduction of the assets according to the parsing;

characterised by:

detecting an asset generating cyclic referencing while parsing the file with respect to the asset; and

generating the reproduction control information to prohibit reproduction of the asset generating the cyclic referencing."

Claim 1 of the first auxiliary request differs from that of the main request in that the characterising portion reads as follows:

"detecting an asset generating cyclic referencing while parsing the file with respect to the asset;

detecting a child asset referring to the detected asset, among child assets of the detected asset by comparing an identifier of the detected asset with a reference identifier of the child asset referring to another asset and detecting the child asset having the reference identifier identical to the identifier of the detected asset;

generating the reproduction control information to prohibit reproduction of the child asset referring to the detected asset generating the cyclic referencing and reproduction of the detected asset."

VIII. The appellant's arguments, where relevant to this 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.

Invention

2. The application relates to controlling assets such as digital content in a multimedia application environment, and in particular to the management of cyclic references in MPV (MusicPhotoVideo) files (see paragraphs [1] and [47] to [52] of the international publication).

2.1 The MPV standard was produced by the Optical Storage Technology Association (OSTA) with the purpose of facilitating the exchange, processing and reproduction of metadata and content assets in consumer electronics and IT apparatuses (paragraph [8]).

An MPV file is an extensible markup language (XML) document file in accordance with the MPV standard which includes a list of assets (paragraphs [8] and [9]). An asset is a basic unit of content processed by MPV software and can be simple or composite. A simple media asset may be, for instance, a digital photo, video or document. A composite media asset may consist, for example, of digital photos combined with digital audio or of a digital still panorama sequence. The application further refers to composite media assets Seq and Par (paragraphs [9] and [13] to [15]). Based on the content of an MPV file, MPV software controls the way an asset is read and reproduced (paragraph [9]), for example in a content generation product such as a PC or a DVD or MP3 player (see also paragraphs [92] and [93] and Figure 8).

An MPV file includes a cyclic reference when a loop of references is established by the definitions of composite assets in the file (paragraphs [47] to [54], Figures 6A and 6B, assets 61, 62, and 63,

paragraphs [55] and [56], Figure 7). According to paragraph [57], in conventional systems, if a cyclic referencing problem occurs while an MPV parser parses an MPV file, the parser reports to the application that the MPV data is incorrect, or the system operates incorrectly as if it were halting (since it enters an infinite loop; see also paragraphs [52] and [91]). Accordingly, data contained in the MPV file cannot be used any more.

2.2 The invention provides cyclic referencing management such that, even when a cyclic reference occurs in an MPV file, a system can be operated normally and data contained in the MPV file can be used (paragraph [58]). That is achieved by detecting an asset generating cyclic referencing and ignoring that asset (see original claim 1).

Those steps are performed by a cyclic referencing management unit in the parser, which generates reproduction control information to prohibit reproduction of the asset generating the cyclic reference, and transmits the generated reproduction control information to an apparatus for controlling reproduction of the asset contained in the MPV file (paragraph [85], Figure 8, paragraphs [94] to [97]).

Main request

3. *Inventive step - claim 1*

3.1 In the decision under appeal, the Examining Division considered a conventional method performed by an XML/ MPV parser to process/parse a file compliant with the OSTA MPV specification in document D3 to be the closest prior art.

3.2 The appellant did not contest the finding in the decision under appeal that the subject-matter of claim 1 differed from that closest prior art in that it included the characterising features, i.e. the steps, of:

(a) detecting an asset generating cyclic referencing while parsing the file with respect to the asset; and

(b) generating the reproduction control information to prohibit reproduction of the asset generating the cyclic referencing.

The Board notes that, in its view, cyclic reference detection by the parser is also known from prior-art MPV systems, as acknowledged in paragraph [57] of the application. The detection of a cyclic reference could thus be considered to imply the detection of an asset which generates the cyclic reference, in which case feature (a) would be considered to be known from the closest prior art. For the sake of argument, in the following the Board nevertheless treats features (a) and (b) as distinguishing features.

3.3 The decision under appeal considered that the aim and effect of the distinguishing features were that other asset(s) described in the MPV file and not causing a cyclic referencing problem would be reproduced, i.e. the user would be able to view or hear the multimedia content corresponding to those other asset(s). The aim and effect fell within the non-technical field of user needs and requirements and had, as far as technicality was concerned, merely the normal and obvious technical consequences of using technical resources (e.g. processor cycles) needed for reproduction of the other asset(s).

In the grounds of appeal, the appellant contested the findings on technicality in the appealed decision and argued that step (b) was of a technical nature, firstly because of the synergy with step (a) and secondly because it was not about doing nothing, but about actively controlling a device to prevent something from happening.

The Board notes that the decision under appeal did not ignore features (a) and (b), but rather considered them to be obvious for the skilled person. The Board agrees that the motivation behind the invention – the user's wish to view or hear most of the content – is non-technical. Moreover, when considering which content to output in the event of detecting a cycle, there may be non-technical considerations regarding the presentation of information, which may be included in the formulation of the technical problem to be solved. These points alone, however, do not mean that the distinguishing features lack technical character.

Claim 1 specifies that the file is "provided to control assets in a multimedia application environment", and that the reproduction control information "controls reproduction of the assets according to the parsing". For the skilled person, it is implicit from the claim that "reproduction of the assets" refers to outputting content, e.g. video or audio, in an output device, e.g. a display or a speaker, of a reproducing apparatus, such as a DVD player. In the Board's opinion, the claimed method therefore generates control information for controlling a technical apparatus and has a technical character by virtue of controlling a technical apparatus.

With regard to feature (b), the Board agrees with the appellant that an explicit instruction to a technical apparatus not to perform a technical operation, such as reproduction, as a rule has the technical effect of altering the technical function of the apparatus. The Board therefore agrees with the appellant that feature (b), at least if the claim is interpreted in the light of the description, contributes to the technical character of the claimed subject-matter. It changes the function of the reproduction apparatus in that it avoids, together with feature (a), the apparatus indefinitely reproducing the assets referenced in a cycle.

3.4 As mentioned in paragraphs [57] and [91] of the application under consideration, when the MPV data is incorrect, a conventional system halts or enters an infinite loop and hence the MPV file cannot be used any more, with the consequence that at least part of the content can no longer be reproduced. The distinguishing features seem thus to solve the problem of modifying the prior-art method to avoid an infinite loop in the event of a cyclic reference, at the same time reducing content-reproduction failures.

In its reply to the Board's preliminary opinion, the appellant did not contest that formulation of the problem.

3.5 Cycle detection and infinite-loop prevention are well-known problems in the area of computer programming and it is within the normal skills of a programmer to deal with them.

In the Board's opinion, it is obvious for the skilled person with ordinary programming skills that the above-

mentioned problem can be solved by avoiding reproduction of the content asset generating the infinite loop. The skilled person would recognise that one way of implementing that in the prior-art method would be to detect the content asset generating the loop and to modify the prior-art generation of reproduction control information to prohibit reproduction of the detected content asset, thereby arriving at features (a) and (b).

3.6 The Board therefore concludes that the subject-matter of claim 1 does not involve an inventive step within the meaning of Article 56 EPC.

First auxiliary request

4. Compared with claim 1 of the main request, claim 1 of the first auxiliary request essentially further specifies that the child assets of the detected asset, which is the detected "asset generating cyclic referencing", are searched to detect "a child asset referring to the detected asset" and that the control information prohibits reproduction of the "child asset referring to the detected asset generating cyclic referencing" and reproduction of the detected asset, i.e. prohibits reproduction of both the detected child asset and the detected asset. In addition, it specifies the use of identifiers in the step of detecting such a child asset.

5. *Added subject-matter - claim 1*

5.1 In its letter of reply, the appellant said that the amendments were based on claims 3 and 4 which had been deleted. In doing so, the appellant compared claim 1 with the claims of the main request, which was

submitted with its letter of 7 September 2009, but it did not indicate any basis in the application as originally filed. In that letter of 7 September 2009, the applicant had cited the original claims and paragraphs [13] to [15] of the international application as a basis for the claims. Paragraphs [13] to [15] describe the composite assets and are not further relevant to the question of support discussed in the following paragraphs. The original claims are dealt with below.

5.2 The application as originally filed discloses generalisations of the invention (see e.g. original claims 1, 7 and 8, paragraphs [112] and [113] and Figure 10), each essentially including steps of:

(i) detecting an asset generating cyclic referencing while parsing the asset, and

(ii) ignoring that detected asset, for example by generating reproduction control information to prohibit its reproduction.

It also describes more detailed embodiments (see e.g. original claims 3 and 6, 11 and 14, paragraphs [112] to [122] and Figure 11), each including steps of:

(iii) detecting an asset capable of generating cyclic referencing,

(iv) detecting a child asset referring to the detected asset, among child assets of the detected asset and

(v) ignoring that detected child asset, for example by generating reproduction control information to prohibit its reproduction.

An asset capable of generating cyclic referencing is a composite asset Seq or Par (see paragraphs [46] and [103]; paragraphs [116], [117] and [124] and

Figure 11, steps 112 and 113; and original claims 4 and 12).

It is clear from the original disclosure that steps (iii) to (v) of the detailed embodiments are not performed in addition to, but constitute an implementation of steps (i) and (ii) of the generalisations.

By merely aggregating or juxtaposing features corresponding to steps (i) and (ii) of the generalisations and features corresponding to steps (iv) and (v) of the detailed embodiments, claim 1 of the first auxiliary request defines a combination of features which cannot be directly and unambiguously derived from the application as originally filed, as explained in more detail below.

5.3 Several passages of the original application disclose embodiments in which a child asset is detected in order to detect cyclic referencing, as in claim 1 of the first auxiliary request. For example, such an embodiment is described in paragraphs [114] to [125] with reference to Figure 11, and in each of original independent claims 3, 11 and 18 and original dependent claims 5, 6, 13 and 14.

However, the cyclic-referencing management method according to each of those embodiments comprises steps (iii) to (v) above (see e.g. original claims 3 and 6). Each of those passages, as well as claim 3 of the main request, consistently refers to the asset detected in the first detection step as an "asset capable of generating cyclic referencing" (see feature (iii) above), not as an "asset generating a

cyclic reference", as in claim 1 of the first auxiliary request.

As explained in the description with regard to the method of Figure 11, when the parser detects an asset capable of generating cyclic referencing, i.e. a Seq or Par asset, the identifier of that asset is stored in a set of identifiers; then the child assets are parsed (paragraphs [115] to [120], Figure 11). The method checks for each child asset whether it contains a reference to an asset listed in the stored set of identifiers. If so, the child asset is ignored as mentioned in feature (v) above (paragraphs [121] and [122], Figure 11).

5.4 None of the embodiments describes steps (ii) and (v) together of ignoring, or prohibiting the reproduction of, both the "child asset referring to the detected asset generating cyclic referencing" and the detected asset, i.e. both the referring and the referred-to assets.

Paragraphs [108] to [113] describe with reference to Figure 10 a generalisation of the invention, and paragraph [114] establishes a connection between that generalisation and the detailed embodiment of Figure 11, by explaining that "FIG. 11 is a detailed flowchart of the method to solve cyclic referencing shown in FIG. 10". However, the skilled person understands that step 105 of Figure 10 of ignoring the asset generating the cyclic referencing (see paragraph [113]) is not to be performed in addition to step 119 of Figure 11, which ignores a child asset (see paragraph [122]), but instead that the method of Figure 11 corresponds to a more detailed implementation

of some of the steps of the generalisation depicted in Figure 10.

According to the description of each embodiment, only one asset is ignored, described as being either the "asset generating cyclic referencing" in the generalised embodiments (paragraphs [97], [106], [113], Figure 10, original claims 1, 7 to 9, 15 to 17 and 19), or the detected "child asset referring to the detected [capable] asset" in the more detailed embodiments (paragraphs [122] and [130], Figure 11, original claims 3, 6, 11, 14 and 18).

5.5 The Board therefore concludes that the juxtaposition in claim 1 of the steps of detecting an asset generating cyclic referencing, detecting a child asset referring to the detected asset and generating the reproduction control information to prohibit reproduction of the child asset and reproduction of the detected asset (corresponding to steps (i), (ii), (iv) and (v) above) goes beyond the content of the application as originally filed.

Therefore, claim 1 of the first auxiliary request does not fulfil the requirements of Article 123(2) EPC.

Final remarks

6. It follows from Articles 15(3) and (6) RPBA that a Board should come to a decision at the conclusion of the oral proceedings, even if a party duly summoned is absent, unless there are special reasons to the contrary. One such special reason would be a violation of the right to be heard (Article 113(1) EPC). However, an appellant which submits amended claims in advance of the oral proceedings and subsequently does not attend

them must expect a decision based on objections to such claims which might arise in its absence. According to the established case law, in such a case the appellant's right to be heard has not been violated (see the decisions cited in Case Law of the Boards of Appeal, 8th Edition 2016, IV.E.4.2.6 d)).

In the present case, the appellant had to expect the Board to examine the claims of the first auxiliary request, which was submitted in advance of the oral proceedings, with regard to added subject-matter. The Board was therefore, despite the absence of the duly summoned appellant, in a position to take a final decision on that ground at the oral proceedings, without violating the appellant's right to be heard.

7. As none of the appellant's requests is allowable, the appeal is to be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

G. Nachtigall R. Moufang

Decision electronically authenticated