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**Datasheet for the decision
of 12 March 2019**

Case Number: T 0302/14 - 3.5.04

Application Number: 04711624.9

Publication Number: 1595405

IPC: H04N7/24, H04N5/38

Language of the proceedings: EN

Title of invention:
Picture coding method

Applicant:
Nokia Technologies Oy

Headword:

Relevant legal provisions:

EPC 1973 Art. 84, 111(1)
EPC Art. 123(2)

Keyword:

Amendments - allowable (yes)
Claims - clarity (yes)
Remittal to the department of first instance - (yes)

Decisions cited:

Catchword:



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Case Number: T 0302/14 - 3.5.04

D E C I S I O N
of Technical Board of Appeal 3.5.04
of 12 March 2019

Appellant: Nokia Technologies Oy
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Representative: Berggren Oy, Tampere
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Decision under appeal: Decision of the Examining Division of the
European Patent Office posted on 25 November
2013 refusing European patent application
No. 04711624.9 pursuant to Article 97(2) EPC.

Composition of the Board:

Chairman C. Kunzelmann
Members: R. Gerdes
T. Karamanli

Summary of Facts and Submissions

- I. The appeal is directed against the decision to refuse European patent application No. 04 711 624.9, published as international application WO 2004/075555 A1.
- II. The patent application was refused by the examining division on the grounds that claim 1 of the then main request and each of claim 1 of the then first to third auxiliary requests contained subject-matter extending beyond the content of the application as filed (Article 123(2) EPC) and did not comply with Article 84 EPC.
- III. Claim 1 of the main request underlying the decision under appeal read as follows:

"A method for transmitting media data, the media data being included in data transmission units, the data transmission units having been ordered in a transmission order which is at least partly different from a decoding order of the media data in the data transmission units and the decoding order of the media data being at least partly different from an output order of the media data, characterised in that the method comprises:

- determining in relation to the transmission units a maximum number of data transmission units that precede any data transmission unit in the transmission order and follow said any data transmission unit in the decoding order,
- setting a value to a parameter to be provided to a receiver to determine buffering space in de-packetizing to reorder packets from reception order to decoding

order, said value specifying said maximum number of data transmission units that precede any data transmission unit in the transmission order and follow said any data transmission unit in the decoding order."

- IV. In the decision under appeal, the examining division argued regarding the then main and second auxiliary requests, that the steps of "determining in relation to the transmission units a maximum number of data transmission units", "setting a value to a parameter" and the reference to a "decoding order number distance" had no basis in the application as filed (Article 123(2) EPC). These features were only disclosed in the context of IDR frames being transmitted two packet numbers before their decoding order number and in the context of NAL units transmitted via an RTP session. Taking the above features out of their context constituted an inadmissible intermediate generalisation (see Reasons, points 1.1.2 and 3.4). These objections applied *mutatis mutandis* to the content of the corresponding claims of the then first and third auxiliary requests.

The examining division also argued that "the definition of a parameter without any indication of how the claimed parameter is determined" rendered claim 1 unclear (Article 84 EPC). The parameter was defined as specifying a "maximum number of data transmission units". However, it was not clear how the maximum number of data transmission units was determined. It could be manually set to a very high value to avoid buffering problems, independent of any memory optimisation concerns. In addition, the range or sequence of data transmission units involved was not defined (see Reasons, points 1.2.2 and 3.3).

- V. The applicant appealed against this decision and, with the statement of grounds of appeal, it submitted claims of an amended main request and amended first to third auxiliary requests.
- VI. In a letter of reply dated 11 February 2019 to the board's communication annexed to a summons to oral proceedings, the appellant submitted amended claims according to a main and first to third auxiliary requests.
- VII. Oral proceedings were held before the board on 12 March 2019.

The appellant's final request was that the decision under appeal be set aside and that a European patent be granted on the basis of the claims of the sole request filed as fourth auxiliary request at the oral proceedings of 12 March 2019.

- VIII. The independent claims of the sole request read as follows:

"1. A method for transmitting media data, the media data being included in data transmission units in a network abstraction layer unit stream, the data transmission units having been ordered in a transmission order which is at least partly different from a decoding order of the media data in the data transmission units and the decoding order of the media data being at least partly different from an output order of the media data, wherein the method comprises:

- encapsulating the data transmission units into packets of a real time transmission protocol; and

- transmitting the packets of the real time transmission protocol;

characterised in that the method further comprises:

- determining the maximum number of data transmission units that precede any data transmission unit in the transmission order and follow said any data transmission unit in the decoding order in the network abstraction layer unit stream;

- setting the maximum number as a value of a parameter to be provided to a receiver to determine buffering space in de-packetizing; and

- defining a maximum decoding order number distance of data transmission units in the encoded picture stream to be provided to a receiver to determine initial buffering duration to reorder packets from transmission order to decoding order."

and

"5. A device comprising a processor (1.2) and a memory (1.3), said memory (1.3) stored with code thereon, which when executed by said processor (1.2), causes the device to process media data, the media data being included in data transmission units in a network abstraction layer unit stream, the data transmission units having been ordered in a transmission order which is at least partly different from a decoding order of the media data in the data transmission units and the decoding order of the media data being at least partly different from an output order of the media data, wherein said memory (1.3) comprises code thereon, which

when executed by said processor (1.2), causes the device to:

- encapsulate the data transmission units into packets of a real time transmission protocol; and
- transmit the packets of the real time transmission protocol;

characterised in that said memory (1.3) comprises code thereon, which when executed by said processor (1.2), causes the device to:

- determining in relation to the transmission units the maximum amount of transmission units comprising media data that precede any transmission unit in transmission order and follow said any transmission unit in decoding order in the network abstraction layer unit stream;
- setting the maximum number as a value of a parameter to be provided to a receiver to determine buffering space in de-packetizing; and
- define a maximum decoding order number distance of data transmission units in the encoded picture stream to be provided to a receiver to determine initial buffering duration to reorder packets from transmission order to decoding order."

Claims 2 to 4 are dependent claims.

Reasons for the Decision

1. The appeal is admissible.

2. *Amendments (Article 123(2) EPC)*

2.1 Compared with claim 1 of the main request underlying the decision under appeal and apart from some editorial modifications, claim 1 of the pending sole request has been amended to refer to

(a) transmission units "in a network abstraction layer unit stream".

It recites additional steps of:

(b) "encapsulating the data transmission units into packets of a real time transmission protocol; and"

(c) "transmitting the packets of the real time transmission protocol".

Furthermore, the claim has been amended to contain the feature of:

(d) "defining a maximum decoding order number distance of data transmission units in the encoded picture stream to be provided to a receiver to determine initial buffering duration".

2.2 A basis for feature (a) can be found in the application as published on page 3, lines 4 to 8, and page 16, lines 11 and 12. Features (b) and (c) are disclosed on page 13, line 37, to page 14, line 2, and page 19, lines 27 to 31. Feature (d) is disclosed on page 26, lines 12 to 22.

2.3 According to the decision under appeal, the steps of "determining in relation to the transmission units a maximum number of data transmission units", "setting a

value to a parameter" and the reference to a "decoding order number distance" (the latter phrase in the previous claim 1 of the second auxiliary request) had no basis in the application as filed. These features were only disclosed in the context of IDR frames being transmitted two packet numbers before their decoding order number and in the context of NAL units transmitted via an RTP session. Taking these individual features out of their context constituted an inadmissible intermediate generalisation (see also point IV above).

- 2.4 Claim 1 has been amended by the addition of features (a) to (c) that establish the context of NAL units being transmitted via an RTP session. Hence, the corresponding objections in the decision under appeal have been overcome.
- 2.5 Regarding the objection that the features of "determining ... a maximum number ..." and "setting ... a parameter" were only disclosed in the context of IDR frames being transmitted two packet numbers before their decoding order number, the board disagrees with the decision under appeal.
- 2.6 According to the established case law of the boards of appeal, it is not normally allowable under Article 123(2) EPC to base an amended claim on the extraction of isolated features from a set of features originally disclosed only in combination. Such an amendment results in an intermediate generalisation, which is justified only in the absence of any clearly recognisable functional or structural relationship between the features of the specific combination or if the extracted feature is not inextricably linked with those features (see Case Law of the Boards of Appeal of

the European Patent Office, 8th edition 2016, II.E.1.7).

- 2.7 Present claim 1 specifies "data transmission units having been ordered in a transmission order which is at least partly different from a decoding order". The specific context of IDR frames being "transmitted two packet numbers before their decoding order number" (emphasis by the board) is clearly designated as an example in the description (see page 21, line 23; page 23, lines 22 and 23; and page 24, lines 4 and 5). Hence, it would have been straightforward for the skilled person to realise that the features of "determining ... a maximum number ... ", "setting ... a parameter" and the reference to a "decoding order number distance" are dissociated from the context of that example. The skilled person would have easily realised that the teaching of the application also applied to, for example, I-frames being transmitted four packet numbers before their decoding order number. As a consequence, the method steps of "determining ... a maximum number ... " and "setting ... a parameter" are not inextricably linked with the other features of that example.
- 2.8 The same observations apply with respect to the further independent claim 5, which specifies a corresponding device for transmitting RTP packets.
- 2.9 Hence, the claims of the appellant's main request do not contain subject-matter which extends beyond the content of the application as filed, and they thus comply with Article 123(2) EPC.

3. *Clarity (Article 84 EPC 1973)*

- 3.1 The examining division argued in the decision under appeal that "the definition of a parameter without any indication of how the claimed parameter is determined" rendered claim 1 unclear. The parameter was defined as specifying a "maximum number of data transmission units". However, it was not clear how the maximum number of data transmission units was determined. It could be manually set to a very high value to avoid buffering problems, independent of any memory optimisation concerns. In addition, the range or sequence of data transmission units involved was not defined (see Reasons, points 1.2.2 and 3.3).
- 3.2 The board is not convinced by this objection. According to the application, the parameter (corresponding to the "maximum number" in claim 1) should be determined for the interleaved packetisation mode and corresponds to a parameter specifying the interleaving depth of the VCL NAL units (see page 20, lines 10 to 13, and page 26, lines 1 to 6). Hence, this parameter should be determined like any interleaving depth parameter, either as a system requirement or based on an interleaved data stream. In any case, it should correspond to the actual interleaving employed as it is apparent from the data stream. This correspondence between the parameter and interleaving depth is specified in claim 1, according to which the parameter is set as the maximum number of data transmission units that precede any data transmission unit in the transmission order and follow this data transmission unit in the decoding order in the network abstraction layer unit stream. Hence, setting it to a very high value to avoid buffering problems is excluded by the

determination of the parameter as the specified maximum number. It is also inappropriate to specify the range or sequence of data transmission units involved, because that range is not essential and could vary depending on the circumstances.

3.3 For these reasons, claim 1 of the present sole request does not lack clarity. The same considerations apply with respect to independent claim 5, which specifies the device for transmitting RTP packets corresponding to the method of claim 1, and to dependent claims 2 to 4.

4. *Remittal*

4.1 The decision under appeal was only based on the grounds of added subject-matter of the claims then on file and lack of clarity of those claims. These grounds for refusal do not apply to the present claims. However, at this stage, a patent cannot be granted without the application first being examined for compliance with the other requirements of the Convention such as inventive step (Article 56 EPC 1973) over the available documents. The department of first instance has not yet carried out such an examination for the subject-matter of the claims of the sole request, and the board considers it inappropriate at the present stage of the proceedings to examine the amended claims itself.

4.2 Under these circumstances, the board exercises its discretion under Article 111(1) EPC 1973 and remits the case to the department of first instance for further prosecution.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance for further prosecution.

The Registrar:

The Chairman:



K. Boelicke

C. Kunzelmann

Decision electronically authenticated