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Datasheet for the decision of 5 February 2020

Case Number: T 2302/14 - 3.5.04

Application Number: 09152752.3

Publication Number: 2131591

IPC: H04N7/24, H03M7/40, H04N7/34, H03M13/07, H03M13/35

Language of the proceedings: EN

Title of invention:
Image encoding method and apparatus thereof

Applicant:
Panasonic Intellectual Property Corporation of America

Headword:

Relevant legal provisions:
EPC Art. 54
RPBA Art. 13
RPBA 2020 Art. 25(3)

Keyword:
Novelty - main request and first auxiliary request (no)
Late-filed second and third auxiliary requests - admitted (no)

Decisions cited:

Catchword:

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Case Number: T 2302/14 - 3.5.04

D E C I S I O N
of Technical Board of Appeal 3.5.04
of 5 February 2020

Appellant: (Applicant)	Panasonic Intellectual Property Corporation of America 20000 Mariner Avenue, Suite 200 Torrance, CA 90503 (US)
Representative:	Eisenführ Speiser Patentanwälte Rechtsanwälte PartGmbB Postfach 10 60 78 28060 Bremen (DE)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 17 September 2014 refusing European patent application No. 09152752.3 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	C. Kunzelmann
Members:	B. Le Guen
	T. Karamanli

Summary of Facts and Submissions

I. The appeal is against the decision to refuse European patent application No. 09 152 752.3, published as European patent application EP 2 131 591 A1. It is a divisional application of earlier European patent application No. 02 755 918.6, published as European patent application EP 1 422 944.

II. The examining division refused the patent application on the ground that the subject-matter of independent claims 1, 5, 8 and 9 of the then sole request on file lacked inventive step (Article 56 EPC) in view of the prior-art picture coding apparatus described in Figure 1 of the present application combined with the common general knowledge of a person skilled in the art of video coding.

III. The applicant filed notice of appeal against this decision. With its statement of grounds of appeal, 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 request forming the basis for the decision under appeal (main request). If the board agreed with the appellant's position on inventive step but nevertheless was not willing to grant its main request for other reasons, the appellant further requested that the case be remitted to the department of first instance, with a confirmation by the board that the claimed subject-matter involved an inventive step (first auxiliary request). The appellant provided arguments as to why the subject-matter of independent claims 1 and 5 involved an inventive step in view of the apparatus of Figure 1 of the present application.

IV. In a letter dated 24 July 2018, the appellant stated, for the first time in the proceedings, that the subject-matter of Figures 1-3 of the present application, together with the accompanying description, represented in-house knowledge and, therefore, did not form part of the state of the art within the meaning of Article 54(2) EPC.

V. The board issued a summons to oral proceedings dated 28 October 2019. In a communication under Article 15(1) RPBA 2007 (Rules of Procedure of the Boards of Appeal in the version of 2007, OJ EPO 2007, 536), annexed to the summons, the board introduced the following document into the appeal proceedings:

D5: Telecommunication standardization sector of ITU: "*ITU-T Recommendation H.263*", 6 February 1998, pages 1-167, XP017464180, retrieved from <https://www.itu.int/itu-t/recommendations/rec.aspx?rec=7497>.

A copy of pages 13-44 and Annex K (pages 85-88) of document D5 was annexed to the board's communication.

The board gave its provisional opinion that the subject-matter of independent claims 1 and 5 lacked novelty (Article 54(1) EPC) in view of the disclosure of document D5, and that claim 5 contained subject-matter which extended beyond the content of the earlier application as filed, contrary to the requirements of Article 76(1) EPC.

VI. With its reply dated 30 December 2019, the appellant filed amended claims of a main request and of auxiliary request I. The appellant provided a basis for the amendments in the application as filed, as well as

arguments as to why the independent claims of the requests met the requirements of Articles 54(1), 56 and 76(1) EPC.

VII. On 5 February 2020 oral proceedings were held before the board.

During these proceedings, the board referred to Annex E of document D5 and handed over a copy of the corresponding pages (pages 56 to 64) to the appellant.

The appellant filed claims of auxiliary request II and auxiliary request III.

The appellant's final requests were that the decision under appeal be set aside and that a European patent be granted on the basis of the claims of the main request filed by letter dated 30 December 2019 or, as an auxiliary measure, of one of auxiliary request I filed by letter dated 30 December 2019, auxiliary request II filed at the oral proceedings of 5 February 2020 or auxiliary request III filed at the oral proceedings of 5 February 2020.

At the end of the oral proceedings, the chairman announced the board's decision.

VIII. Claim 1 of the main request reads as follows:

"A picture coding method for coding information including picture signals of a plurality of units, the units being frames, fields or slices, wherein the information to be coded (Vin) includes common information for all the picture signals of the units and information concerning the picture signals of the

units (Frame Data), the picture coding method comprising:

a plural coding step (S64, S65, S66) for coding the common information for all the picture signals of the units using a plurality of coding methods;

a common coding step (S68) for coding the information concerning the picture signals of the units; and

a multiplexing step (S70) for multiplexing the coded common information (Str_H) for all the picture signals of the units and the coded information (Str_F) concerning the picture signals of the units, and

characterized in that

the common coding step (S68) is performed, without switching between coding methods, by using a variable length coding method, which is common to all units, using a single code table, or an arithmetic coding method,

wherein the common information for all the picture signals of the units is header information, and

the information concerning the picture signals of the units is slice data which is information not part of a slice header."

IX. Claim 1 of auxiliary request I corresponds to claim 1 of the main request, with the characterising portion of the claim amended as follows (amendments with respect to claim 1 of the main request are underlined and deletions are indicated by strikethrough):

"the common coding step (S68) is performed, without switching between coding methods, by using only an arithmetic coding method ~~a variable length coding method,~~ which is common to all units~~, using a single code table, or an arithmetic coding method~~,

wherein the common information for all the picture signals of the units is header information, and

the information concerning the picture signals of the units is slice data which is information not part of a slice header."

X. Claim 1 of auxiliary request II corresponds to claim 1 of the main request, with the characterising portion of the claim amended as follows (amendments with respect to claim 1 of the main request are underlined):

"the common coding step (S68) is performed, without switching between coding methods according to syntaxes, by using a variable length coding method, which is common to all units, using a single code table, or an arithmetic coding method,

wherein the common information for all the picture signals of the units is header information, and

the information concerning the picture signals of the units is slice data which is the slice information not part of a slice header."

XI. Claim 1 of auxiliary request III corresponds to claim 1 of auxiliary request I, with the characterising portion of the claim amended as follows (amendments with respect to claim 1 of auxiliary request I are underlined):

"the common coding step (S68) is performed, without switching between coding methods according to syntaxes, by using only an arithmetic coding method which is common to all units,

wherein the common information for all the picture signals of the units is header information, and

the information concerning the picture signals of the units is slice data which is the slice information not part of a slice header."

XII. The appellant essentially argued that, upon proper interpretation of the claim by a mind willing to understand, the features defining the "*common coding step*" in the characterising portion of the independent claims of all requests cannot be considered as being disclosed in document D5.

Reasons for the Decision

1. The appeal is admissible.

2. *Main request - novelty (Article 54(1) EPC)*

2.1 According to Article 54(1) EPC, an invention "*shall be considered to be new if it does not form part of the state of the art*".

It is established case law that for an invention to lack novelty, it must be clearly and directly derivable from the state of the art, and all its features – not just the essential ones – must be known from the state of the art. The disclosure of a publication is

determined by what knowledge and understanding can and may be expected of the average skilled person in the technical field in question (see Case Law of the Boards of Appeal of the European Patent Office ("Case Law"), 9th edition 2019, I.C.4).

2.2 Document D5 discloses a picture coding method for coding information including picture signals of a plurality of units, the units being frames or slices (see D5, cover page, "*Video coding for low bit rate communication*", page iv, "*5.1: Picture layer*", page vii, "*Annex K – Slice Structured mode*"). The information to be coded includes common information for all the picture signals of the units, which is header information, and information concerning the picture signals of the units, which is slice data which is the information not part of a slice header (see D5, page 22, section 5.1, first sentence, "*picture header ... followed by data ... for slices*". As shown in Annex K, page 86, Figure K.1, a slice includes a slice header and information (i.e., macroblock data) that is not information part of the slice header). The picture coding method disclosed in document D5 comprises a plural coding step for coding the common information for all the picture signals using a plurality of coding methods (see D5, sections 5.1.1 to 5.1.28, a plurality of coding methods are used, the method used depends on each syntax element), a common coding step for coding the information concerning the picture signals of the units (each slice is coded in the manner described in Annex K on pages 85 to 88 of document D5; the macroblock data, in particular, is coded as described in section 5.3, see Annex K, page 86, section K.2), and a multiplexing step for multiplexing the coded common information for all the picture signals of the units and the coded information concerning the picture

signals of the units (see D5, page 22, Figure 7, the bitstream is generated by multiplexing the coded syntax elements).

2.3 According to claim 1, the common coding step is performed without switching between coding methods by using either:
(a) a variable length coding method common to all units, using a single code table; or
(b) an arithmetic coding method.

2.4 For the subject-matter of claim 1 to be new over the disclosure of document D5, neither of these alternatives should be disclosed in that document.

2.5 Sections 5.2 to 5.4 of document D5 disclose a plurality of coding methods, each adapted to a particular syntax element contained in a slice. Some of these coding methods are variable length coding methods "*using a single code table*" (see, for example, Table 7 or 8 on pages 34 and 35). A same variable length coding method is used to code a same syntax element in all slices and is therefore "*common to all units*" and not switched between two successive slices for a same syntax element. This means that alternative (a) is clearly and directly derivable from the disclosure of document D5. Hence, the subject-matter of claim 1 is not new over this disclosure.

2.6 The appellant argued that, upon proper interpretation of the claimed subject-matter, the features of lines 15 to 17 of claim 1 could not be considered as being disclosed in document D5. It submitted that a mind willing to understand would construe these features in light of Figure 6B and lines 15 and 16 on page 15 of the present application as meaning that no switching

between coding methods could occur between syntax elements within a particular slice. This interpretation would rule out video coding standards such as H.263 (document D5) where different syntax elements within a particular slice were coded with different coding methods and different code tables. The board's interpretation did not make technical sense, because it disregarded this teaching. The fact that the features in lines 15 to 17 of claim 1 were part of the characterising portion of the claim was an indication that they could not be construed as merely reflecting standard video coding techniques cited in the present application.

2.7 The argument based on the concept of "*a mind willing to understand*" has not convinced the board.

2.7.1 The board refers to the well-established case law according to which a non-specific definition in a claim should be given its broadest technically sensible meaning (Case Law, I.C.4.1, page 113, fourth paragraph). In the present case, the definition of the common coding step in claim 1 does not refer to syntax elements and does not stipulate that switching between coding methods cannot occur between syntax elements within a slice. Since switching of coding methods between some syntax elements within a slice is a technically sensible approach, it should therefore be considered as encompassed by the broadest technically sensible meaning of the common coding step. Thus, a proper interpretation of the claim encompasses this technical meaning.

2.7.2 Moreover, the board follows the established case law according to which the requirement that a claim should be read with a "*mind willing to understand*" only means

that technically illogical interpretations should be excluded, not that broad terms be interpreted more narrowly (see also Case Law, II.A.6.1, second paragraph).

The board is not convinced that a claim interpretation should be considered as technically illogical for the reason that it encompasses a disclosure which forms part of the state of the art acknowledged in the application. It is established case law on the interpretation of claims that the technical meaning of a feature of a claim must be determined by taking into account the whole disclosure of the application (or patent) (see Case Law, II.A.6.1), thus the state of the art acknowledged there as well. Hence, a feature of a claim may well be known from the state of the art acknowledged in the application. According to Rule 43(1)(a) EPC, such a feature should, wherever appropriate, be part of the pre-characterising portion of the claim.

The fact that the present application is drafted in a way that the feature "*without switching between coding methods*" is present in the characterising portion of claim 1 (Rule 43(1)(b) EPC) expresses, at best, the applicant's understanding that this feature does not form part of the state of the art acknowledged in the application. The board, however, is of the view that the interpretation of a claim cannot be influenced by the applicant's own understanding of which features defined in the claim should be seen as forming part of the state of the art acknowledged in the application.

2.8 In view of the above, the board has come to the conclusion that claim 1 of the main request does not meet the requirements of Article 54(1) EPC, because its

subject-matter is not new over the disclosure of document D5.

3. *Auxiliary request I - novelty (Article 54(1) EPC)*

3.1 In comparison with claim 1 of the main request, claim 1 of auxiliary request I stipulates that "*the common coding step (S68) is performed, without switching between coding methods, by using only an arithmetic coding method which is common to all units*".

3.2 Annex E of document D5 (pages 56 to 64) provides a coding mode in which all the corresponding variable length coding/decoding operations of the H.263 recommendation are replaced with arithmetic coding/ decoding operations (page 57, first paragraph). The use of this mode is indicated in a syntax element ("*PTYPE*") which is part of a picture header (page 57, first paragraph and page 22, section 5.1 and Figure 7). It follows that, in this mode, all the syntax elements identified in sections 5.2 to 5.4 as coded using a variable length coding method are coded using arithmetic coding. This means that "*only an arithmetic coding method*" is used to code a same syntax element in all slices and is therefore "*common to all units*" and not switched between two successive slices for a same syntax element. The board has therefore come to the conclusion that, upon proper interpretation, the subject-matter of claim 1 is also clearly and directly derivable from the disclosure of document D5.

3.3 The appellant argued that the board's interpretation was incorrect and that, upon proper interpretation, the features of lines 15 and 16 of claim 1 could not be considered as being disclosed in document D5.

3.4 However, the board has not been convinced by this argument, for the reasons given in points 2.7 to 2.7.4.

3.5 The board has therefore come to the conclusion that claim 1 of auxiliary request I does not meet the requirements of Article 54(1) EPC, because its subject-matter is not new in view of the disclosure of document D5.

4. *Auxiliary requests II and III - admission into the proceedings (Article 13(1) RPBA 2007)*

4.1 According to Article 25(3) of the revised version of the Rules of Procedure of the Boards of Appeal (RPBA 2020, OJ EPO 2019, A63), where the summons to oral proceedings has been notified before its date of entry into force (i.e. 1 January 2020, see Article 24(1) RPBA 2020), Article 13(2) RPBA 2020 shall not apply. Instead, Article 13 RPBA 2007 shall continue to apply.

4.2 Under Article 13(1) RPBA 2007, any amendment to a party's case after it has filed its grounds of appeal or reply may be admitted and considered at the Board's discretion. The discretion is exercised in view of inter alia the complexity of the new subject-matter submitted, the current state of the proceedings and the need for procedural economy.

It is established case law that requests filed for the first time at the oral proceedings can be considered only in exceptional cases, for example if a party is confronted with unexpected developments during the proceedings or if it would be immediately apparent to the board, with little or no investigative effort on

its part, that the new requests are clearly and obviously allowable (Case Law, V.A.4.5.1(b)).

4.3 Auxiliary requests II and III were filed for the first time during the oral proceedings.

In comparison with claim 1 of the main request (respectively, claim 1 of auxiliary request I), claim 1 of auxiliary request II (respectively, claim 1 of auxiliary request III) provides that no switching between coding methods is performed "*according to syntaxes*", and that the information concerning the picture signals of the units is slice data which is "*the slice*" information not part of a slice header.

4.4 The appellant submitted that these requests should be admitted into the proceedings because they were filed in reaction to the discussions with the board at the oral proceedings. In particular, the appellant submitted that only during these discussions had it become clear that, in the board's view, the wording of claim 1 of the main request and of claim 1 of auxiliary request I did not necessarily imply that all the data within a slice, including several syntax elements within a slice, was coded without switching between coding methods.

4.5 The board has not been convinced that the discussions during the oral proceedings relating to the main request and auxiliary request I constituted an unexpected development for the appellant. The board's interpretation had already been made clear in points 5.5.1 and 6.1 of the communication under Article 15(1) RPBA 2007.

Additionally, the board noted that, at first glance, the added term "*syntaxes*" in claim 1 of each of auxiliary requests II and III did not have any antecedent. In view of this *prima facie* deficiency, the board considered that admitting the requests would open extensive discussions about the interpretation of the expression "*without switching between coding methods according to syntaxes*". Discussing this complex issue at such a late stage would be at odds with the need for procedural economy.

4.6 In view of the above, the board exercised its discretion under Article 13(1) RPBA 2007 and decided not to admit auxiliary requests II and III into the proceedings.

5. Since 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:

K. Boelicke C. Kunzelmann

Decision electronically authenticated