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Datasheet for the decision of 12 February 2025

Case Number:	T 0947/23 - 3.5.04
Application Number:	11830881.6
Publication Number:	2627085
IPC:	H04N19/18, H04N19/64, H04N19/70, H04N19/46, H04N19/593, H04N19/44, H04N19/60
Language of the proceedings:	EN

Title of invention:
METHOD FOR ENCODING/DECODING BLOCK INFORMATION USING QUAD TREE, AND DEVICE FOR USING SAME

Patent Proprietors:
Electronics and Telecommunications Research Institute
Korea Advanced Institute Of Science And Technology

Opponent:
Unified Patents, LLC

Headword:

Relevant legal provisions:
EPC Art. 100(c), 123(2), 123(3)
RPBA 2020 Art. 12(6)

Keyword:
Patent as granted (main request) and auxiliary requests 1 to 7 - amendments - added subject-matter (yes)
Auxiliary request 8 - amendments - broadening of claim (yes)
Auxiliary requests 9 and 10 - not admitted - error in use of discretion at first instance (no)

Decisions cited:
T 0131/15, T 1473/19

Catchword:

Europäisches Patentamt
European Patent Office
Office européen des brevets

Beschwerdekammern

Boards of Appeal

Chambres de recours

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Case Number: T 0947/23 - 3.5.04

D E C I S I O N
of Technical Board of Appeal 3.5.04
of 12 February 2025

Joint appellants: (Patent Proprietor 1)	Electronics and Telecommunications Research Institute 161 Gajeong-dong Yuseong-gu Daejeon 305-700 (KR)
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Representative:	Eisenführ Speiser Patentanwälte Rechtsanwälte PartGmbB Gollierstraße 4 80339 München (DE)
Respondent: (Opponent)	Unified Patents, LLC P.O. Box 53345 Washington, DC 20009 (US)
Representative:	HGF HGF Limited 1 City Walk Leeds LS11 9DX (GB)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 15 March 2023 revoking European patent No. 2627085 pursuant to Article 101(3)(b) EPC.**

Composition of the Board:

Chair	B. Willems
Members:	A. Seeger
	B. Burm-Herregodts

Summary of Facts and Submissions

I. The appeal is against the opposition division's decision dated 15 March 2023 revoking European patent No. 2 627 085.

II. The mention of the grant of European patent No. 2 627 085 ("the patent" or "the patent as granted") was published in the European Patent Bulletin of 25 November 2020. The joint proprietors of the patent are Electronics and Telecommunications Research Institute and Korea Advanced Institute of Science and Technology (patent proprietors).

III. Notice of opposition to the patent was filed by Unified Patents, LLC (opponent). The grounds for opposition were as follows:

(a) The subject-matter of the patent extended beyond the content of the application as filed (Article 100(c) EPC).

(b) The patent did not disclose the invention in a manner sufficiently clear and complete for it to be carried out by the person skilled in the art (Article 100(b) EPC).

(c) The subject-matter of the patent was not patentable under Article 54 EPC (Article 100(a) EPC).

(d) The subject-matter of the patent was not patentable under Article 56 EPC (Article 100(a) EPC).

IV. During the opposition proceedings the patent proprietors filed auxiliary requests 1 to 10.

V. The opposition division revoked the patent for the following reasons (Article 101(2) and (3)(b) EPC).

(a) The ground for opposition under Article 100(c) EPC prejudiced the maintenance of the patent as granted.

(b) Auxiliary requests 1 to 7 were not allowable because claim 1 of these requests infringed Article 123(2) EPC.

(c) Auxiliary request 8 was not allowable because claim 1 of this request infringed Article 123(3) EPC.

Furthermore, the opposition division did not admit auxiliary request 9 into the opposition proceedings because claim 1 of this request prima facie infringed Article 123(2) and (3) EPC.

The opposition division did not admit auxiliary request 10 into the opposition proceedings, either, because claim 1 of this request prima facie infringed Article 123(3) EPC.

1.2 The patent proprietors (appellants) filed a notice of appeal and a statement of grounds of appeal. With the statement of grounds of appeal, that appellants filed sets of claims in auxiliary requests 1 to 10, which, according to the appellants, were identical to the sets of claims in the auxiliary requests on which the decision under appeal was based.

VI. By letter dated 6 December 2023 the opponent (respondent) filed a reply to the appellants' statement of grounds of appeal.

VII. The board issued a summons to oral proceedings and a communication under Article 15(1) RPBA. In this

communication, the board gave the following preliminary opinion.

(a) The ground for opposition under Article 100(c) EPC prejudiced the maintenance of the patent as granted.

(b) Claim 1 of auxiliary requests 1 to 7 did not meet the requirements of Article 123(2) EPC for the same reasons as claim 1 of the patent as granted.

(c) Claim 1 of auxiliary request 8 did not meet the requirements of Article 123(3) EPC.

(d) The board was inclined not to admit auxiliary requests 9 and 10 into the appeal proceedings under Article 12(6), first sentence, RPBA.

(e) Should the appellants be able to convince the board that the subject-matter of the claims of the patent as granted did not extend beyond the content of the application as filed or that the claims of any of auxiliary requests 1 to 8 met the requirements of Article 123(2) and (3) EPC, the board intended to grant the appellants' request for remitting the case to the opposition division for examination of the other grounds for opposition.

VIII. In their reply dated 10 January 2025, the appellants requested suspension of the appeal proceedings in view of the pending referral G1/24. They submitted that when adhering to the general rules for claim interpretation established by the case law, the formulation "*only when the split information flag indicates the transform unit is not additionally split*" in claim 1 had to be understood as making an assertion only for the claimed

case in which there was indeed a split information flag to be decoded. The board's interpretation of said feature was not tenable. Upon proper interpretation of this feature, the subject-matter of the claims of the patent as granted did not extend beyond the content of the application as filed and auxiliary requests 1 to 7 met the requirements of Article 123(2) EPC. The appellants argued that claim 1 of auxiliary request 8 met the requirements of Article 123(2) and (3) EPC and that auxiliary requests 9 and 10 were to be admitted into the appeal proceedings. In a further letter dated 10 January 2025, the appellants requested that an accompanying person be allowed to attend the oral proceedings via videoconference.

IX. In a letter dated 22 January 2025, the respondent objected to the suspension of the appeal proceedings in view of the pending referral G1/24 and countered the appellants' arguments presented in the letter dated 10 January 2025.

X. In a communication dated 23 January 2025, the board refused the appellants' request that an accompanying person be allowed to attend the oral proceedings by videoconference. Furthermore, the board did not grant the appellants' request for suspending the proceedings in view of the pending referral G1/24.

XI. The board held the oral proceedings on 12 February 2025.

The appellants' final requests were

(a) that the appeal proceedings be suspended in view of G1/24, or

(b) that the decision under appeal be set aside and that the opposition be rejected, i.e. the patent be maintained as granted, or alternatively,
(c) that the patent be maintained as amended on the basis of the claims of one of auxiliary requests 1 to 10 filed with the statement of grounds of appeal, or
(d) that the case be remitted to the opposition division for consideration of the issues that had not formed a basis for the decision under appeal.

The respondent's final request was that the appeal be dismissed.

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

XII. Claim 1 of the patent as granted (main request) reads as follows:

"A video decoding apparatus using a quad tree structure, comprising:
an entropy decoder for
decoding integrated code block flag information,
decoding a split information flag indicating whether a transform unit is split into transform units having a smaller size only when a value of the integrated code block flag information doesn't equal a predefined value,
decoding a code block flag information cbf_luma indicating whether at least one non-zero transform quantization coefficient for a Luma component of the transform unit is present in the transform unit only when the split information flag indicates the transform unit is not additionally split, and

decoding transform coefficients in the transform unit based on the integrated code block flag information, wherein all of the transform coefficients in the transform unit are set to zero when the value of the integrated code block flag information equals the predefined value."

XIII. Claim 1 of auxiliary request 1 is identical to claim 1 of the patent as granted (main request).

XIV. Claim 1 of auxiliary request 2 reads as follows (features added compared with claim 1 of the main request are underlined and deleted features are struck through):

"A video decoding apparatus using a quad tree structure for decoding transform unit information, comprising:
an entropy decoder for
decoding integrated code block flag information, wherein, when a value of the integrated code block flag information doesn't equal a predefined value, this indicates that at least one non-zero transform coefficient is present for at least one of a Luma component, a first Chroma component, and a second Chroma component at a current or lower transform depth, and, when the value of the integrated code block flag information equals the predefined value, this indicates that no non-zero transform quantization coefficient is present for any of the Luma component, the first Chroma component and the second Chroma component at the current transform depth,
decoding a split information flag indicating whether a transform unit is split into transform units having a smaller size only when the ~~a~~ value of the integrated code block flag information doesn't equal the ~~a~~ predefined value,

wherein, when a value of the split information flag is 0, this indicates that the transform unit is not split into transform units having a smaller size, and, when the value of the split information flag is 1, this indicates that the transform unit is split into four transform units having half the width and half the height of the transform unit,
decoding a code block flag information cbf_luma indicating whether at least one non-zero transform quantization coefficient for a Luma component of the transform unit is present in the transform unit only when the split information flag indicates the transform unit is not additionally split, and
decoding transform coefficients in the transform unit based on the integrated code block flag information, wherein all of the transform coefficients in the transform unit are set to zero when the value of the integrated code block flag information equals the predefined value."

XV. Claim 1 of auxiliary request 3 reads as follows (features added compared with claim 1 of the main request are underlined and deleted features are struck through):

"A video decoding apparatus using a quad tree structure for decoding transform unit information, comprising:
an entropy decoder for
decoding integrated code block flag information, wherein, when a value of the integrated code block flag information doesn't equal a predefined value, this indicates that at least one non-zero transform coefficient is present for at least one of a Luma component, a first Chroma component, and a second Chroma component at a current or lower transform depth, and, when the value of the integrated code block flag

information equals the predefined value, this indicates that no non-zero transform quantization coefficient is present for any of the Luma component, the first Chroma component and the second Chroma component at the current transform depth, wherein the integrated code block flag information is decoded only when the current transform depth is 0,
decoding a split information flag indicating whether a transform unit is split into transform units having a smaller size only when the ~~a~~ value of the integrated code block flag information doesn't equal the ~~a~~ predefined value,
wherein, when a value of the split information flag is 0, this indicates that the transform unit is not split into transform units having a smaller size, and, when the value of the split information flag is 1, this indicates that the transform unit is split into four transform units having half the width and half the height of the transform unit,
decoding a code block flag information cbf_luma indicating whether at least one non-zero transform quantization coefficient for a Luma component of the transform unit is present in the transform unit only when the split information flag indicates the transform unit is not additionally split, and
decoding transform coefficients in the transform unit based on the integrated code block flag information, wherein all of the transform coefficients in the transform unit are set to zero when the value of the integrated code block flag information equals the predefined value."

XVI. Claim 1 of auxiliary request 4 reads as follows (features added compared with claim 1 of the main request are underlined and deleted features are struck through):

"A video decoding apparatus using a quad tree structure, comprising:
an entropy decoder for
decoding integrated code block flag information, wherein, when a value of the integrated code block flag information doesn't equal a predefined value, this indicates that at least one non-zero transform coefficient is present for at least one of a Luma component, a first Chroma component, and a second Chroma component at a current or lower transform depth, and, when the value of the integrated code block flag information equals the predefined value, this indicates that no non-zero transform quantization coefficient is present for any of the Luma component, the first Chroma component and the second Chroma component at the current transform depth, wherein the integrated code block flag information is decoded only when the current transform depth is 0,
decoding a split information flag indicating whether a transform unit is split into transform units having a smaller size only when the ~~a~~ value of the integrated code block flag information doesn't equal the ~~a~~ predefined value,
wherein, when a value of the split information flag is 0, this indicates that the transform unit is not split into transform units having a smaller size, and, when the value of the split information flag is 1, this indicates that the transform unit is split into four transform units having half the width and half the height of the transform unit,
decoding a code block flag information cbf_luma indicating whether at least one non-zero transform quantization coefficient for a Luma component of the transform unit is present in the transform unit only

when the split information flag indicates the transform unit is not additionally split, and
decoding transform coefficients in the transform unit when the value of ~~based on~~ the integrated code block flag information doesn't equal the predefined value, wherein all of the transform coefficients in the transform unit are set to zero when the value of the integrated code block flag information equals the predefined value."

XVII. Claim 1 of auxiliary request 5 reads as follows (features added compared with claim 1 of the main request are underlined and deleted features are struck through):

"A video decoding apparatus using a quad tree structure, comprising:
an entropy decoder for
decoding integrated code block flag information, wherein, when a value of the integrated code block flag information doesn't equal a predefined value, this indicates that at least one non-zero transform coefficient is present for at least one of a Luma component, a first Chroma component, and a second Chroma component at a current or lower transform depth, and, when the value of the integrated code block flag information equals the predefined value, this indicates that no non-zero transform quantization coefficient is present for any of the Luma component, the first Chroma component and the second Chroma component at the current transform depth, wherein the integrated code block flag information is decoded only when the current transform depth is 0,
decoding a split information flag indicating whether a transform unit is split into transform units having a smaller size only when the ~~a~~ value of the integrated

code block flag information doesn't equal the ~~a~~ predefined value,
wherein, when a value of the split information flag is 0, this indicates that the transform unit is not split into transform units having a smaller size, and, when the value of the split information flag is 1, this indicates that the transform unit is split into four transform units having half the width and half the height of the transform unit,
decoding at least one of a code block flag information cbf_cb indicating whether at least one non-zero transform quantization coefficient for a first Chroma component of the transform unit is present in the transform unit and a code block flag information cbf_cr indicating whether at least one non-zero transform quantization coefficient for a second Chroma component of the transform unit is present in the transform unit, only when the value of the integrated code block flag information doesn't equal the predefined value,
decoding a code block flag information cbf_luma indicating whether at least one non-zero transform quantization coefficient for a Luma component of the transform unit is present in the transform unit only when the split information flag indicates the transform unit is not additionally split, and
decoding transform coefficients in the transform unit when the value of ~~based on~~ the integrated code block flag information doesn't equal the predefined value,
wherein all of the transform coefficients in the transform unit are set to zero when the value of the integrated code block flag information equals the predefined value."

XVIII. Claim 1 of auxiliary request 6 reads as follows (features added compared with claim 1 of the main

request are underlined and deleted features are struck through):

"A video decoding apparatus using a quad tree structure, comprising:
an entropy decoder for
decoding integrated code block flag information, wherein, when a value of the integrated code block flag information doesn't equal a predefined value, this indicates that at least one non-zero transform coefficient is present for at least one of a Luma component, a first Chroma component, and a second Chroma component at a current or lower transform depth, and, when the value of the integrated code block flag information equals the predefined value, this indicates that no non-zero transform quantization coefficient is present for any of the Luma component, the first Chroma component and the second Chroma component at the current transform depth, wherein the integrated code block flag information is decoded only when the current transform depth is 0,
decoding a split information flag indicating whether a transform unit is split into transform units having a smaller size only when the ~~a~~ value of the integrated code block flag information doesn't equal the ~~a~~ predefined value,
wherein, when a value of the split information flag is 0, this indicates that the transform unit is not split into transform units having a smaller size, and, when the value of the split information flag is 1, this indicates that the transform unit is split into four transform units having half the width and half the height of the transform unit,
decoding a code block flag information cbf_cb indicating whether at least one non-zero transform quantization coefficient for a first Chroma component

of the transform unit is present in the transform unit and a code block flag information cbf_cr indicating whether at least one non-zero transform quantization coefficient for a second Chroma component of the transform unit is present in the transform unit, only when the value of the integrated code block flag information doesn't equal the predefined value, decoding a code block flag information cbf_luma indicating whether at least one non-zero transform quantization coefficient for a Luma component of the transform unit is present in the transform unit only when the split information flag indicates the transform unit is not additionally split, and
decoding transform coefficients in the transform unit when the value of ~~based on~~ the integrated code block flag information doesn't equal the predefined value, wherein all of the transform coefficients in the transform unit are set to zero when the value of the integrated code block flag information equals the predefined value."

XIX. Claim 1 of auxiliary request 7 reads as follows (features added compared with claim 1 of the main request are underlined and deleted features are struck through):

"A video decoding apparatus using a quad tree structure, comprising:
an entropy decoder for
decoding integrated code block flag information, wherein, when a value of the integrated code block flag information doesn't equal a predefined value, this indicates that at least one non-zero transform coefficient is present for at least one of a Luma component, a first Chroma component, and a second Chroma component at a current or lower transform depth,

and, when the value of the integrated code block flag information equals the predefined value, this indicates that no non-zero transform quantization coefficient is present for any of the Luma component, the first Chroma component and the second Chroma component at the current transform depth, the predefined value being 0, wherein the integrated code block flag information is decoded only when the current transform depth is 0,
decoding a split information flag indicating whether a transform unit is split into transform units having a smaller size only when the ~~a~~ value of the integrated code block flag information doesn't equal the ~~a~~ predefined value,
wherein, when a value of the split information flag is 0, this indicates that the transform unit is not split into transform units having a smaller size, and, when the value of the split information flag is 1, this indicates that the transform unit is split into four transform units having half the width and half the height of the transform unit,
decoding a code block flag information cbf_cb indicating whether at least one non-zero transform quantization coefficient for a first Chroma component of the transform unit is present in the transform unit and a code block flag information cbf_cr indicating whether at least one non-zero transform quantization coefficient for a second Chroma component of the transform unit is present in the transform unit, only when the value of the integrated code block flag information doesn't equal the predefined value,
decoding a code block flag information cbf_luma indicating whether at least one non-zero transform quantization coefficient for a Luma component of the transform unit is present in the transform unit only when the split information flag indicates the transform unit is not additionally split, and

decoding transform coefficients in the transform unit when the value of ~~based on~~ the integrated code block flag information doesn't equal the predefined value, wherein all of the transform coefficients in the transform unit are set to zero when the value of the integrated code block flag information equals the predefined value."

XX. Claim 1 of auxiliary request 8 reads as follows (features added compared with claim 1 of the main request are underlined and deleted features are struck through):

A video decoding apparatus using a quad tree structure, comprising:
an entropy decoder for
decoding integrated code block flag information in a transform unit,
decoding a split information flag indicating whether the ~~a~~ transform unit is split into transform units having a smaller size based on size information in the transform unit and the integrated code block flag information, wherein ~~only~~ when a value of the integrated code block flag information doesn't equal a predefined value, the split information flag is decoded, and when the value of the integrated code block flag information equals the predefined value, the split information is not decoded,
decoding a code block flag information cbf_luma indicating whether at least one non-zero transform quantization coefficient for a Luma component of the transform unit is present in the transform unit ~~only~~ when the split information is decoded and the split information flag indicates the transform unit is not additionally split or when according to the size information the transform unit is a minimum transform

unit, and not decoding a code block flag information cbf_luma when the split information flag indicates the transform unit is additionally split,
additionally decoding a code block flag information cbf_cb indicating whether at least one non-zero transform quantization coefficient for a first Chroma component of the transform unit is present in the transform unit and a code block flag information cbf_cr indicating whether at least one non-zero transform quantization coefficient for a second Chroma component of the transform unit is present in the transform unit, and
decoding transform coefficients in the transform unit based on the integrated code block flag information and size information in the transform unit, wherein the transform coefficients in the transform unit are decoded when the value of the integrated code block flag information doesn't equal the predefined value, wherein all of the transform coefficients in the transform unit are set to zero when the value of the integrated code block flag information equals the predefined value."

XXI. Claim 1 of auxiliary request 9 reads as follows (features added compared with claim 1 of the main request are underlined and deleted features are struck through):

A video decoding apparatus using a quad tree structure, comprising:
an entropy decoder for
decoding integrated code block flag information in a transform unit,
decoding a split information flag indicating whether the ~~a~~ transform unit is split into transform units having a smaller size based on size information in the

transform unit and the integrated code block flag information, wherein only when a value of the integrated code block flag information doesn't equal a predefined value, the split information flag is decoded, and when the value of the integrated code block flag information equals the predefined value, the split information is not decoded,

decoding a code block flag information cbf_luma indicating whether at least one non-zero transform quantization coefficient for a Luma component of the transform unit is present in the transform unit only in two different cases, namely in the case that ~~when~~ the split information is decoded and the split information flag indicates the transform unit is not additionally split and in the case that according to the size information the transform unit is a minimum transform unit, and not decoding a code block flag information cbf_luma when the split information flag indicates the transform unit is additionally split,

additionally decoding a code block flag information cbf_cb indicating whether at least one non-zero transform quantization coefficient for a first Chroma component of the transform unit is present in the transform unit and a code block flag information cbf_cr indicating whether at least one non-zero transform quantization coefficient for a second Chroma component of the transform unit is present in the transform unit, and

decoding transform coefficients in the transform unit based on the integrated code block flag information and size information in the transform unit, wherein the transform coefficients in the transform unit are decoded when the value of the integrated code block flag information doesn't equal the predefined value, wherein all of the transform coefficients in the transform unit are set to zero when the value of the

integrated code block flag information equals the predefined value."

XXII. Claim 1 of auxiliary request 10 reads as follows (features added compared with claim 1 of the main request are underlined and deleted features are struck through):

A video decoding apparatus using a quad tree structure, comprising:
an entropy decoder for
decoding integrated code block flag information in a transform unit,
decoding a split information flag indicating whether the ~~a~~ transform unit is split into transform units having a smaller size based on size information in the transform unit and the integrated code block flag information, wherein only when a value of the integrated code block flag information doesn't equal a predefined value, the split information flag is decoded, and wherein the split information is not decoded in two different cases, namely, in the case that the value of the integrated code block flag information equals the predefined value and in the case that according to the size information the transform unit is a minimum transform unit,
decoding a code block flag information cbf_luma indicating whether at least one non-zero transform quantization coefficient for a Luma component of the transform unit is present in the transform unit only in two different cases, namely in the case that ~~when~~ the split information is decoded and the split information flag indicates the transform unit is not additionally split and in the case that according to the size information the transform unit is a minimum transform unit, and not decoding a code block flag information

cbf_luma when the split information flag indicates the transform unit is additionally split,
additionally decoding a code block flag information cbf_cb indicating whether at least one non-zero transform quantization coefficient for a first Chroma component of the transform unit is present in the transform unit and a code block flag information cbf_cr indicating whether at least one non-zero transform quantization coefficient for a second Chroma component of the transform unit is present in the transform unit, and
decoding transform coefficients in the transform unit based on the integrated code block flag information and size information in the transform unit,
wherein the transform coefficients in the transform unit are decoded when the value of the integrated code block flag information doesn't equal the predefined value,
wherein all of the transform coefficients in the transform unit are set to zero when the value of the integrated code block flag information equals the predefined value."

XXIII. The features of claim 1 of the patent as granted are referenced as follows:

(a) A video decoding apparatus using a quad tree structure, comprising: an entropy decoder for

(b) decoding integrated code block flag information,

(c) decoding a split information flag indicating whether a transform unit is split into transform units having a smaller size only when a value of the integrated code block flag information doesn't equal a predefined value,

(d) decoding a code block flag information cbf_luma indicating whether at least one non-zero transform quantization coefficient for a Luma component of the transform unit is present in the transform unit only when the split information flag indicates the transform unit is not additionally split, and

(e) decoding transform coefficients in the transform unit based on the integrated code block flag information,

(f) wherein all of the transform coefficients in the transform unit are set to zero when the value of the integrated code block flag information equals the predefined value.

Reasons for the Decision

1. The appeal is admissible.

2. Interpretation of claim 1 of the patent as granted (main request)

2.1 Feature (d) of claim 1 reads as follows: "*decoding a code block flag information cbf_luma indicating whether at least one non-zero transform quantization coefficient for a Luma component of the transform unit is present in the transform unit only when the split information flag indicates the transform unit is not additionally split, and*".

2.2 According to the appellants this feature was to be interpreted as an assertion valid only for the claimed case in which there was a decoded split information

flag, and not as an assertion of "absolute" or "global" validity.

2.3 According to the respondent this feature specified that the single circumstance in which a code block flag information cbf_luma was decoded was when the split information flag indicated that the transform unit was not additionally split.

2.4 Interpretation of claim 1 based on the wording of the claim alone

2.4.1 The appellants argued that the term "only" could either be a "global" only or indicate a single occurrence in a local reference group. Often the term "only" was not used in absolute terms expressing a single circumstance. For example, a statement such as "I would only leave the house if it was not raining" would not be understood as describing the single circumstance in which a person left the house, excluding, for example, leaving the house in the event of a fire.

In claim 1, the phrase "*the split information flag*" in feature (d) referred to the phrase "*a split information flag*" introduced in feature (c). According to feature (c), the split information flag was decoded from a data stream and was then available for use in the further processing steps. Hence, feature (d) used the outcome of feature (c). This alone left no opportunity for understanding the formulation "*only when the split information flag indicates the transform unit is not additionally split*" as the only case (in absolute or global terms) in which a code block flag information cbf_luma was decoded.

The overall structure of claim 1 specified step-by-step decoding of information elements, each decoding step depending on the outcome of the previous steps. First, the integrated code block flag information was decoded. Depending on the value of this integrated code block flag information, the split information flag was decoded. The code block flag information cbf_luma was then decoded depending on the value of the split information flag. Therefore, it followed from the inner logic of claim 1 that the term "only" was not to be interpreted in a global sense, but that it described a branch in the step-by-step decoding of the following information elements: integrated code block flag information, split information flag and code block flag information cbf_luma. Hence, the conditions "only when" in features (c) and (d) only related to these information elements rather than making assertions of absolute or global validity.

The appellants further argued that the respondent had relied on this interpretation of claim 1 in its attacks of lack of novelty against the subject-matter of claim 1.

2.4.2 The respondent argued that the term "only" in feature (d) of claim 1 was used in its clear, ordinary meaning without any further qualification. Hence, feature (d) meant that a situation in which the split information flag indicated that the transform unit was not additionally split was the single circumstance in which a code block flag information cbf_luma was decoded.

The use of the definite article in the term "the split information flag" did not change the meaning of the term "only".

Claims were not to be drafted using colloquial language and signal words such as "only" were to be used with great care.

2.4.3 The board takes the view that a colloquial use of the word "only" does not affect the correct interpretation of the term in patent claims, namely expressing a single, sole event.

The board sees no reason to deviate from the normal meaning of the term "only" when interpreting the feature "*decoding a code block flag information cbf_luma ... only when the split information flag indicates that the transform unit is not additionally split*". As argued by the respondent, this feature does not contain any indication that a situation in which "*the split information flag indicates that the transform unit is not additionally split*" should not be the only or single occurrence in which "*a code block flag information cbf_luma"* is decoded.

Furthermore, the board is not convinced by the appellants' arguments that, because of the claimed step-by-step decoding of information elements and the use of the outcome of feature (c), the condition "only when" in feature (d) of claim 1 is not to be understood as a global "only". The step-by-step decoding of information elements merely means that claim 1 specifies several steps along a path in a flowchart. It is then specified whether a further step of "*decoding a code block flag information cbf_luma*" is reached based on the decoded "*split information flag*". None of these steps presents a reason not to interpret the condition "only when" in its ordinary sense, i.e. the single option for reaching the step of decoding the "*code*

block flag information cbf_luma" is "*when the split information flag indicates the transform unit is not additionally split*".

Finally, the board notes that claim interpretation is a step which conceptually precedes the examination of the novelty of the claimed subject-matter. Therefore, the question of which attacks of lack of novelty were raised by the respondent against the subject-matter of claim 1 is not relevant for the interpretation of claim 1.

2.5 Interpretation of claim 1 in the light of the description and drawings

2.5.1 The appellants submitted that the present invention aimed to achieve higher coding efficiency by optimising the transmission of side information (see paragraph [0007] of the description). The feature of the invention that side information was only transmitted when necessary, thereby improving the coding efficiency, was expressed in features (c) and (d) of claim 1 by the "only when" clauses. It was therefore clear to the person skilled in the art that the "only when" clauses in features (c) and (d) expressed that the respective side information was not decoded when the respective indicator information (i.e. the "*integrated code block flag information*" for the "*split information flag*" and the "*split information flag*" for the "*code block flag information cbf_luma*") did not indicate that it was to be decoded. This interpretation was technically sensible, because it achieved the improved coding efficiency which was the aim of the patent.

According to Figures 3 and 8, code block flag cbf_luma was decoded if either one of two requirements was met, namely either if the size of the current transform unit was at its minimum size or if the split information flag indicated that the transform unit was not additionally split.

The appellants referred to decision T 0131/15, point 5.11 of the Reasons, and argued that if the expression "only when" in feature (d) of claim 1 were taken literally and in isolation as a global only, this would exclude the first requirement mentioned in the preceding paragraph; however, it was a viable option to interpret this expression as making an assertion in the limited case that a split information flag was decoded and its value was evaluated. According to this interpretation, claim 1 did not exclude this first requirement. Hence, following the rationale of decision T 0131/15, the expression "only when" in feature (d) of claim 1 should be interpreted as making an assertion only for the claimed case that a split information flag was decoded rather than in a global sense.

2.5.2 The respondent referred to decision T 1473/19, point 4.4 of the Reasons, according to which the mere fact that a contested claim feature in accordance with a particular interpretation was not disclosed in the description or drawings did not speak against this interpretation. There was no principle of claim interpretation according to which a claim was to be interpreted in a manner which made it compliant with Article 123(2) EPC.

The respondent argued that the condition "only when" in feature (d) of claim 1 was not an expression in the same sense as in T 0131/15. In particular, there was no

definition of this condition in the description. The only location in the description of the published patent containing the formulation "only when" was paragraph [0091]. According to this paragraph, the integrated code block flag information was transmitted only when the size of the current transform unit was larger than the minimum transform unit. In this context, the formulation "only when" thus described the single circumstance in which the integrated code block flag information was transmitted. Therefore, not only was there no definition of the condition "only when" in the description, but the only time this condition was used in the description, it had the meaning of a global "only".

2.5.3 The appellants countered that paragraph [0091] described a situation similar to that in claim 1 in that the transmission of the integrated code block flag information depended on a previous information element, i.e. the size of the current transform unit. There were only two options. The size of the current transform unit could either be the minimum size or larger. Hence, the condition "only when" specified what was done for one of these two options.

2.5.4 This board endorses the view set out in decision T 1473/19, point 4.4 of the Reasons, that there is no principle of claim interpretation according to which a claim should be interpreted in a manner which made it compliant with Article 123(2) EPC. Hence, the board is not convinced by the appellants' argument that a claim interpretation has to be disregarded because it excludes some disclosed embodiments.

Clearly, technically nonsensical claim interpretations should be ruled out; however, this is not the case

here. Although the claim interpretation presented by the appellants under point 2.5.1 above makes technical sense, the same holds true for an interpretation in which the single circumstance in which a code block flag information cbf_luma is decoded occurs when the split information flag indicates that the transform unit is not additionally split. In Figure 3 this would mean that the "No" branch emerging from step 300 does not exist. As a consequence, an integrated code block flag would also be coded for transform units of a minimum transform unit size. This constitutes an alternative way of coding side information but does not create a technical contradiction and is still compatible with the general aim of the invention to increase the coding efficiency relative to the prior art.

Furthermore, the board is not convinced that the situation in case T 0131/15 is comparable to the current case. In case T 0131/15 (see point 5.12 of the Reasons) there was a definition of an expression ("*in the opposite direction*") in the description according to which this expression had a particular meaning ("*the transmitted and received beams follow substantially the same path, with a small deviation to take account of the physical sizes of the transmitter and receiver*"). In the current case, there is no definition of the condition "only when" in the description of the patent. Hence, the ordinary meaning of the condition "only when" cannot be superseded by a definition taken from the description.

2.6 The board thus finds that feature (d) of claim 1 is to be interpreted such that a situation in which the split information flag indicates that the transform unit is not additionally split is the single circumstance in

which a code block flag information cbf_luma is decoded.

3. Request for suspension of the appeal proceedings

The appellants submitted that the question of whether, and under which criteria, the description and drawings are to be taken into account for claim interpretation was the subject of a current referral to the Enlarged Board of Appeal, G1/24. The outcome of this referral could be decisive for the outcome of the present appeal proceedings. The appellants requested suspension of the appeal proceedings until a decision was rendered in G1/24.

The respondent took the view that the appellants' request for suspension was to be rejected at least because G1/24 was not directly relevant to the current case. The questions referred to the Enlarged Board in G1/24 related to the assessment of patentability under Articles 52 to 57 EPC, and not to the assessment of added subject-matter as in the current case.

However, since the board arrives at the same interpretation of feature (d) regardless of whether or not the description is taken into account for interpretation purposes (see point 2.6 above), any possible outcome of the pending referral G 1/24 has no impact on the case in hand. Consequently, the board considers the appellants' request for suspension to be moot.

4. Patent as granted (main request) - added subject-matter (ground for opposition under Article 100(c) EPC)

4.1 According to Article 123(2) EPC, the European patent application may not be amended in such a way that it contains subject-matter which extends beyond the content of the application as filed.

According to the consistent interpretation of Article 123(2) EPC by the Enlarged Board of Appeal, any amendment to the parts of a European patent application relating to the disclosure can only be made within the limits of what the person skilled in the art would derive directly and unambiguously, using common general knowledge, and seen objectively and relative to the date of filing, from the whole disclosure of the description, claims and drawings of the application as filed. After the amendment the person skilled in the art may not be presented with new technical information. The same principles also apply to the ground for opposition under Article 100(c) EPC. This is called the "gold standard" (see Case Law of the Boards of Appeal of the European Patent Office, 10th edition, 2022, "Case Law", II.E.1.1).

4.2 Claim 1 was amended to comprise feature (d) quoted under point 2.1 above.

The board interprets this feature such that a situation in which the split information flag indicates that the transform unit is not additionally split is the single circumstance in which a code block flag information cbf_luma is decoded (see point 2.6 above).

4.3 It is common ground that Figure 3 and the associated description disclose two particular circumstances when each code block flag in the current transform unit, including the cbf_luma, is coded (step 340 of Figure 3). The first being the "*No*" branch of

step S300, the second being the "*Yes*" branch of step S300 (see, inter alia, the appellants' arguments under point 2.5.1 above).

4.4 In view of the above, the board finds that there is no basis in the application as filed for feature (d) defining "*decoding a code block flag information cbf_luma ... only when the split information flag indicates the transform unit is not additionally split*" (emphasis added by the board).

This amendment would present the person skilled in the art with the new technical information that there is only one circumstance, and not two circumstances, in which the code block flag information cbf_luma is decoded.

4.5 In view of the above, the board finds that the ground for opposition under Article 100(c) EPC prejudices the maintenance of the patent as granted.

5. Auxiliary requests 1 to 7 - added subject-matter (Article 123(2) EPC)

Claim 1 of auxiliary requests 1 to 7 comprises feature (d) of claim 1 of the patent as granted.

The board thus finds that claim 1 of auxiliary requests 1 to 7 does not meet the requirements of Article 123(2) EPC for the same reasons as those set out for claim 1 of the patent as granted under point 4. above.

6. Auxiliary request 8 - extension of protection (Article 123(3) EPC)

6.1 Under Article 123(3) EPC the European patent may not be amended in such a way as to extend the protection it confers.

6.2 Claim 1 contains the following amended feature (d): "*decoding a code block flag information cbf_luma ... when the split information is decoded and the split information flag indicates the transform unit is not additionally split or when according to the size information the transform unit is a minimum transform unit, and not decoding a code block flag information cbf_luma when the split information flag indicates the transform unit is additionally split*".

6.3 The appellants argued that the amendments made to claim 1 could be equated to the following situation. A claim included a decision step that could only have two outcomes. The claim specified that an action was only performed in the event of the first outcome. Such a claim could be re-drafted without infringing Article 123(3) EPC to specify that when the outcome was the first outcome, the action was performed, and when the outcome was the second outcome, the action was not performed.

The appellants argued that feature (d) of claim 1 as granted would not be infringed by a video decoding apparatus that did not decode the code block flag information cbf_luma when the split information flag indicated that the transform unit was not additionally split and by a video decoding apparatus that also decoded the code block flag information cbf_luma when the split information flag indicated that the transform unit was additionally split. This was the same for claim 1 of auxiliary request 8.

6.4 The respondent argued that claim 1 specified at least two circumstances in which cbf_luma may be decoded. In contrast, claim 1 of the patent as granted specified that there was only a single circumstance in which cbf_luma was decoded. Claim 1 could not be considered to include a decision step having only two outcomes. Instead, there were explicitly three possible ways to decide whether to decode cbf_luma.

6.5 The board is of the opinion that claim 1 specifies at least two circumstances under which the code block flag information cbf_luma is decoded, namely

(a) when the split information flag indicates the transform unit is not additionally split and

(b) when according to the size information the transform unit is a minimum transform unit.

In contrast, claim 1 of the granted patent specified only a single circumstance under which the code block flag information cbf_luma was decoded.

Therefore, the board is of the opinion that amended feature (d) extends the protection conferred by claim 1.

As an example, feature (d) of claim 1 as granted does not confer protection for a video decoding apparatus that decodes the code block flag information cbf_luma when according to the size information the transform unit is the minimum transform unit; however, claim 1 of auxiliary request 8 confers protection for such a video decoding apparatus.

6.6 In view of the above, the board finds that claim 1 of auxiliary request 8 does not meet the requirements of Article 123(3) EPC.

7. Auxiliary requests 9 and 10 - admittance (Article 12(6) RPBA)

7.1 Under Article 12(6) RPBA the board must not admit requests which were not admitted in the proceedings leading to the decision under appeal, unless the decision not to admit them suffered from an error in the use of discretion or unless the circumstances of the appeal case justify their admittance.

Such an error may be considered to have occurred, for example, if, when exercising its discretion, the opposition division omitted a relevant factor, or if it exercised its discretion in an unreasonable way.

7.2 The opposition division did not admit auxiliary requests 9 and 10 into the proceedings because the amendments to claim 1 of these requests did not prima facie meet at least the requirements of Article 123(3) EPC (see decision under appeal, points 19 and 20).

7.3 The board is of the opinion that the opposition division's decision not to admit auxiliary requests 9 and 10 does not suffer from an error in the use of discretion. The board is not convinced that the opposition division exercised its discretion in an unreasonable way or according to the wrong principles, nor does it consider that that exercise of discretion is based on a manifestly wrong technical assumption. Auxiliary requests 9 and 10 were only filed during the oral proceedings before the opposition division. Auxiliary request 9 prima facie did not overcome the objections raised under Article 123(2) and (3) EPC to auxiliary request 8. Auxiliary request 10 was found not

to overcome at least the objection raised under Article 123(3) EPC to auxiliary request 8.

7.4 Furthermore, the board cannot identify any circumstances of the appeal case which would justify the admittance of auxiliary requests 9 or 10.

7.5 In view of the above, the board does not admit auxiliary requests 9 and 10 into the appeal proceedings under Article 12(6) RPBA.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chair:

K. Boelicke B. Willems

Decision electronically authenticated