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**Datasheet for the decision
of 21 April 2026**

Case Number: T 0361/25 - 3.5.04

Application Number: 18183668.5

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Language of the proceedings: EN

Title of invention:
CODEC ARCHITECTURE FOR MULTIPLE LAYER VIDEO CODING

Applicant:
InterDigital VC Holdings, Inc.

Headword:

Relevant legal provisions:
EPC Art. 54(1), 54(2), 56, 76(1), 84
RPBA 2020 Art. 13(1), 13(2)

Keyword:

Main request and first auxiliary request - subject-matter extends beyond the content of the earlier application (yes)

Main request and first auxiliary request - support by the description (no)

Main request - inventive step (no)

First auxiliary request - novelty (no)

Second auxiliary request - amendment overcomes issues raised (no) - not admitted

Decisions cited:

T 2429/17

Catchword:



Beschwerdekammern
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Case Number: T 0361/25 - 3.5.04

D E C I S I O N
of Technical Board of Appeal 3.5.04
of 21 April 2026

Appellant: InterDigital VC Holdings, Inc.
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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted/electronically transmitted on 2 July 2024 refusing European patent application No. 18183668.5 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman W. Ungler
Members: F. Sanahuja
A. Seeger

Summary of Facts and Submissions

- I. The appeal is against the examining division's decision dated 2 July 2024 to refuse European patent application No. 18 183 668.5.

This application is a divisional application of European patent application No. 13 739 902.8 ("parent application"). The parent application is a Euro-PCT application within the meaning of Article 153(2) EPC. The underlying international application was published as WO 2014/011595 A1.

- II. The documents cited in the decision under appeal included the following:

- D1 Martin Wincken et al., "*Bit-Depth Scalable Video Coding*", 2007 IEEE International Conference on Image Processing, San Antonio, TX, USA, pp. I-1 to I-5, September 2007, doi: 10.1109/ICIP.2007.4378877
- D2 Heiko Schwarz et al., "*Overview of the Scalable Extension of the H.264/MPEG-4 AVC Video Coding Standard*", Joint Video Team (JVT) of ISO/IEC MPEG & ITU-T VCEG (ISO/IEC JTC1/SC29/WG11 and ITU-T SG16 Q.6), 21st Meeting, Hangzhou, CN, 20 to 27 October 2006, document No. JVT-U145
- D3 Thomas Wiegand et al., "*Text of ISO/IEC 14496-10:200X / FDIS Advanced Video Coding (4th edition)*", ISO/IEC JTC1/SC29/WG11, Lausanne, CH, July 2007, document No. N9198, server date: 27 August 2010
- D4 US 2010/0150229 A1

- III. The application was refused on the grounds that the subject-matter of the independent claims of both the main request and the auxiliary request lacked inventive step (Article 56 EPC).
- IV. The applicant (appellant) filed notice of appeal. With its statement of grounds of appeal, the appellant submitted arguments explaining why the examining division had erred in its findings.
- V. The appellant was summoned to oral proceedings. In a communication under Article 15(1) RPBA, the board introduced the following documents *ex officio* into the appeal proceedings on the basis of Article 114(1) EPC:

- D5 Jie Dong et al., "*Description of scalable video coding technology proposal by InterDigital Communications*", Joint Collaborative Team on Video Coding (JCT-VC) of ITU-T SG16 WP3 and ISO/IEC JTC1/SC29/WG11, 11th Meeting, Shanghai, CN, 10 to 19 October 2012, document No. JCTVC-K0034_r1
- D6 Benjamin Bross et al., "*High-efficiency video coding (HEVC) text specification draft 8*", Joint Collaborative Team on Video Coding (JCT-VC) of ITU-T SG16 WP3 and ISO/IEC JTC1/SC29/WG11, 10th meeting, Stockholm, SE, 11 to 20 July 2012, document No. JCTVC-J1003_d0, server date: 23 July 2012

The board gave, *inter alia*, the following preliminary opinion.

- The subject-matter of claim 1 of the main request and the then auxiliary request extended beyond the

disclosure of the parent application as filed (Article 76(1) EPC).

- To the extent that claim 1 of the main request and the then auxiliary request encompassed unconstrained upsampling, it appeared to lack support in the description (Article 84 EPC).
- The subject-matter of claims 1 and 6 of the main request lacked an inventive step over the disclosure of document D4 combined with the disclosure of the SVC specification illustrated by documents D2 and D3 (Article 56 EPC).
- The examining division's finding that the subject-matter of claim 1 of the then auxiliary request lacked an inventive step in view of the disclosure of document D4 combined with the disclosure of either of documents D2 or D3 was not correct.
- Priority document P1 did not disclose the invention defined in claim 1 of the then auxiliary request. Therefore the earliest effective date of priority for the invention claimed in claim 1 of the then auxiliary request was the filing date of document P2. If the claimed priority P1 was deemed to be invalid, documents D5 and D6 would form part of the state of the art under Article 54(2) EPC.
- The subject-matter of claim 1 of the then auxiliary request lacked novelty over the disclosure of document D5 (Article 54 EPC).

VI. With a letter dated 16 January 2026, the appellant filed claims of a second auxiliary request. The

appellant indicated a basis for the amendments made to the claims of the second auxiliary request in the parent application as filed and in priority document P1. It commented on the issues raised in the board's communication and reasoned why the claims of the second auxiliary request met the requirements of Articles 54, 56, 76(1) and 84 EPC.

- VII. In a communication dated 23 February 2026, the board stated that it had considered the appellant's arguments submitted with the letter dated 16 January 2026 but saw no reason to deviate from its position set out in its communication under Article 15(1) RPBA for the main request and the first auxiliary request. Further, the board was minded not to admit the second auxiliary request into the proceedings, under Article 13(2) RPBA in conjunction with Article 13(1) RPBA.
- VIII. With a letter dated 30 March 2026, the appellant informed the board that neither the representative nor the applicant would be present at the oral proceedings.
- IX. The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the claims according to the main request or the first auxiliary request, both requests underlying the decision under appeal, or alternatively on the basis of the claims of second auxiliary request filed with the letter dated 16 January 2026.
- X. Oral proceedings were held on 21 April 2026 in the absence of the appellant.
- XI. Claim 1 of the main request reads as follows:

"A method comprising:

receiving base layer, BL, coded data, enhancement layer, EL, coded data, and inter-layer prediction, ILP, information, wherein the ILP information is packetized in a network abstraction unit separate from network abstraction units containing the BL coded data and the EL coded data, the ILP information comprising filter information for an upsampling filter;

reconstructing a BL picture based on the BL coded data;

performing inter-layer processing on the reconstructed BL picture to generate an inter-layer reference, ILR, picture based on the ILP information, wherein performing the inter-layer processing comprises applying the upsampling filter; and

reconstructing an EL picture based on the ILR picture and the EL coded data,

wherein the ILR picture is comprised in a set of reference pictures that further comprises a reference EL picture, and

wherein reconstructing the EL picture comprises predicting a first portion of the EL picture using the ILR picture, and predicting a second portion of the EL picture using the reference EL picture."

- XII. Claim 1 of the first auxiliary request differs from claim 1 of the main request in that, after the step of "performing inter-layer processing [...]", it has been amended as follows (additions underlined):

"determining motion information for the BL picture;

deriving, using the motion information for the BL picture, motion information for the ILR picture; and

reconstructing an EL picture based on the ILR picture, motion information for the ILR picture, and the EL coded data"

- XIII. Claim 1 of the second auxiliary request differs from claim 1 of the first auxiliary request in that the term "upsampling filter" has been amended to "upsampling filter associated with spatial scalability". In addition, the steps after the step of "performing inter-layer processing [...]" have been amended as follows (additions underlined and deletions ~~struck through~~):

"determining block motion information for the BL picture;

deriving, using the block motion information for the BL picture, block motion information for an EL reference ~~the ILR picture,~~ the block motion information for the BL picture comprising a first motion vector associated with a first time instance, the block motion information for the EL reference picture comprising a scalable ratio applied to the first motion vector associated with the first time instance; and

reconstructing an EL picture based on the ILR picture, block motion information for the EL reference ~~ILR~~ picture, and the EL coded data,

wherein the ILR picture is comprised in a set of reference pictures that further comprises ~~a~~ the EL reference EL ~~picture,~~ and

wherein reconstructing the EL picture comprises predicting a first portion of the EL picture using the ILR picture, and predicting a second portion of the EL picture using the EL reference ~~EL~~ picture."

Reasons for the Decision

1. *Invention*

The invention relates to a method for decoding video pictures comprising receiving base layer coded data, enhancement layer coded data and inter-layer prediction (ILP) information. The ILP information is packetised in network abstraction layer (NAL) units separate from NAL units containing the base layer or enhancement layer coded data.

The method comprises reconstructing a base layer picture. It further comprises generating an inter-layer reference (ILR) picture by processing the base layer picture, wherein the processing comprises applying an upsampling filter using upsampling filter information comprised in the ILP information.

The reconstruction of an enhancement layer picture is based on the ILR and the enhancement layer coded data. The reconstruction further comprises predicting first and second portions of the enhancement layer picture respectively using an ILR picture and a reference enhancement layer picture.

2. *Main request - content of the European divisional application (Article 76(1) EPC)*

2.1 A European divisional application may be filed only in respect of subject-matter which does not extend beyond

the content of the earlier application as filed (Article 76(1) EPC).

2.2 Claim 1 of the main request specifies "*performing inter-layer processing on the reconstructed BL picture to generate an inter-layer reference, ILR, picture [...] applying the upsampling filter*" and "*predicting a first portion of the EL picture using the ILR picture*".

2.2.1 Claim 1 does not specify the scalability relationship between the base and enhancement layers.

2.2.2 However, applying an upsampling filter - as part of the processing on the reconstructed base layer picture - is inextricably linked to spatial scalability, i.e. the spatial resolution of the enhancement layer being higher than that of the base layer (see paragraph [0045], Table 2 and claims 13 and 14 of the parent application). The parent application as filed does not disclose applying such upsampling filter to other types of scalability strategies, such as temporal, bit-depth or signal-to-noise.

2.2.3 The appellant argued that paragraph [0045] of the parent application described general and non-specific processing of reference pictures into a suitable format for prediction of the enhancement layer. This kind of processing required neither spatial scalability nor using upsampling. Furthermore, performing upsampling did not necessitate scalability (see section 2.1 of the letter dated 16 January 2026).

The appellant's argument is not convincing. Even if the parent application as filed disclosed scalability types other than spatial, this is inconsequential to the discussion at hand. Rather, the relevant issue is

whether the parent application discloses applying an upsampling filter in the unrestricted scope claimed. The appellant's statement that performing upsampling did not necessitate scalability lacks any support in the description of the parent application.

2.2.4 Therefore, for the reasons set out in point 2.2.2 above, the subject-matter of claim 1 extends beyond the content of the parent application as filed.

3. *Main request - support by the description (Article 84 EPC)*

3.1 Under Article 84 EPC, the claims shall be supported by the description.

A claim lacks support if, *inter alia*, the subject-matter of the claim does not reflect the actual contribution to the art of the disclosed invention. In other words, the subject-matter of the claim must be taken from the description, and it is not admissible to claim something which is not described (see Case Law of the Boards of Appeal of the European Patent Office, 11th edition, 2025, "Case Law", II.A.5.1).

3.2 Claim 1 specifies "*applying the upsampling filter*" as part of the inter-layer processing on the reconstructed base layer picture. However, applying the upsampling filter in an unconstrained manner lacks support by the description.

3.2.1 According to the description, a reconstructed base layer picture may be processed "*into a format that is suitable for prediction of the enhancement layer*" (see e.g. paragraph [0044]). In the context of spatial scalability, this processing involves upsampling a base

layer picture in order to align base layer and enhancement layer picture resolutions (see paragraph [0045]).

3.2.2 Indeed, the description links upsampling to the specific purpose of aligning base layer and enhancement layer picture resolutions within the context of spatial scalability. Therefore an upsampling operation not constrained to this purpose, as permitted by the wording of claim 1, is not disclosed as part of the invention's actual contribution to the art.

3.2.3 The appellant submitted that the application as filed, in particular paragraphs [0044] and [0045], provided a basis for the upsampling operation without any indication that spatial scalability was necessarily linked to the upsampling (see section 3.1 of the appellant's letter dated 16 January 2026).

The board considers that the disclosure in paragraph [0045] that *"if the BL [base layer] video and the EL [enhancement layer] video are of different spatial resolutions, the processing may involve upsampling in order to align the BL and EL spatial resolutions"* clearly constrains the upsampling operation to the context of spatial scalability for the purpose of aligning the resolutions of the base layer and the enhancement layer.

3.2.4 Consequently, the claimed subject-matter, to the extent that it encompasses such unconstrained upsampling, lacks support in the description (Article 84 EPC).

4. *Main request - inventive step (Article 56 EPC)*

4.1 An invention is to be considered to involve an inventive step if, having regard to the state of the art, it is not obvious to a person skilled in the art (Article 56 EPC).

4.2 The examining division identified document D4 as the starting point for assessing inventive step of the subject-matter of claim 1 of the main request (see point 4.1.1 of the decision under appeal). The appellant did not dispute this.

4.3 Document D4 discloses a method for decoding video pictures from a data stream comprising a base layer for coding a low-resolution picture and at least one improvement (or enhancement) layer for coding higher-resolution pictures (see paragraph [0026]). The method comprises decoding a low-resolution picture to provide a reconstructed low-resolution picture, determining filter coefficients of the filters to be used for over-sampling, over-sampling the reconstructed low-resolution picture using the filter coefficients to provide a prediction picture, and decoding the high-resolution picture comprising an addition of residues to the prediction picture (see paragraphs [0027] to [0030]). The filter for the over-sampling process can be calculated from filter coefficients transmitted in the data stream (see paragraph [0030]). Alternatively, the filter can be selected from a set of stored indexed filters by signalling an index to the decoder (see paragraph [0083]).

The filter coefficients or the index may be coded into the bitstream at sequence level. In such case, the syntax relative to the sequence level of the Scalable

Video Coding (SVC) extension to the H.264/AVC specification is modified to incorporate filter coefficients for the over-sampling process (see paragraphs [0066] to [0071], [0074] and [0083] and Table 1).

Document D4 also discloses a corresponding decoder (see paragraphs [0037] ff.).

The circuitry for decoding the base and enhancement layers may be of the type H.264/AVC or SVC (see paragraphs [0038], [0039] and [0047]).

4.4 The examining division considered that, compared with the subject-matter of claim 1, document D4 did not disclose that (see decision under appeal, point 4.1.2):

(a) *"the ILP information is packetized in a network abstraction unit separate from network abstraction units containing the BL [base layer] coded data and the EL [enhancement layer] coded data", and*

(b) *"the ILR picture is comprised in a set of reference pictures that further comprises a reference EL picture" and that "reconstructing the EL picture comprises predicting a first portion of the EL picture using the ILR picture, and predicting a second portion of the EL picture using the reference EL picture".*

4.5 The appellant submitted that document D4 did not disclose ILP information comprising filter information for an upsampling filter or applying such upsampling filter as specified in claim 1. In the appellant's view, the process of over-sampling disclosed in document D4 referred to a process of obtaining more

samples than necessary by sampling a signal at a sampling frequency significantly higher than the Nyquist rate, whereas the upsampling process claimed was a process of interpolating to create more samples (see second and third paragraphs on page 3 of the statement of grounds of appeal and section 3.3 of the appellant's letter dated 16 January 2026).

- 4.5.1 The board is not convinced by these arguments.
- 4.5.2 In the context of inter-layer prediction, the process of over-sampling described in document D4 and the process of upsampling in the application perform the same function using the same means. Both processes generate a higher-resolution version of a low-resolution image using an upsampling filter (see e.g. paragraphs [0018], [0019], [0031] or [0050] of document D4 and paragraphs [0030], [0045] or [0069] of the description of the application as filed).

The appellant's argument that D4's over-sampling referred to sampling a signal at a sampling frequency significantly higher than the Nyquist rate is the result of isolating the over-sampling operation from the context in which it is disclosed. It is apparent that the over-sampling described in document D4 cannot refer to sampling a signal at a sampling frequency significantly higher than the Nyquist rate, as the "signal" is a reconstructed base layer picture, i.e. a discrete signal with low resolution, with a lower sample count than the higher-resolution picture obtained after over-sampling. When considering the context of document D4, the over-sampling process applies a filter to a discrete low-resolution picture to obtain a higher-resolution picture (see e.g. paragraphs [0052] to [0065]). Hence, to the person

skilled in the art, it is unambiguously synonymous with upsampling. Consequently, the over-sampling process described in document D4 anticipates the upsampling process of claim 1.

4.5.3 Furthermore, both the filter coefficients and the filter index transmitted in the data stream for deriving the filters to be used for over-sampling in document D4 (see e.g. paragraphs [0030] and [0083]) anticipate the claimed filter information for an upsampling filter comprised in ILP information. The transmission of a filter index and filter coefficients disclosed in document D4 are two specific implementations of the broader concept of filter information. The description of the application as filed also considers these specific implementations as part of the broader concept claimed (see paragraphs [0009] and [0045]).

4.6 The appellant was of the opinion that distinguishing feature (a) achieved the technical effect of improving the efficiency of a video coding system. The objective technical problem was to be formulated accordingly (see first and second full paragraphs on page 2 of the statement of grounds of appeal).

The board finds that the appellant's formulation of the objective technical problem is too broad and that the problem should be reformulated in view of the technical effect of each of the distinguishing features, as set out below.

4.7 The board holds that distinguishing features (a) and (b) amount to measures which may be implemented in

an entirely independent way to solve unrelated problems.

- 4.7.1 Packetising ILP information in a network abstraction unit containing neither base nor enhancement layer coded data (feature (a)) seems to reduce implementation complexity of the system by minimally interfering with base and enhancement layer encoding and decoding operations (see paragraphs [0054] and [0070] of the description).

The corresponding objective technical problem may then be formulated as being to transmit ILP information to minimally interfere with base and enhancement layer encoding and decoding operations.

- 4.7.2 Using, in addition to enhancement layer reference pictures, an ILR picture as a reference picture for predicting the enhancement layer picture (feature (b)) may increase the prediction accuracy of the enhancement layer picture (see also paragraph [0050] of the description).

The corresponding objective technical problem may then be formulated as being to increase the prediction accuracy of the enhancement layer picture.

- 4.7.3 Therefore distinguishing features (a) and (b) are associated with separate partial objective technical problems and do not mutually influence each other to achieve a technical success over and above the sum of their respective individual effects. This means that the contribution of these features to an inventive step has to be individually assessed (see Case Law, I.D.9.3.2).

4.8 As to the first objective partial problem, which relates to the transmission of ILP information (feature (a)), document D4 discloses coding the filter coefficients using the SVC syntax relative to the sequence level (see point 4.3 above). According to the SVC extension to the H.264/AVC draft specification document D3, the syntax relative to the sequence level - i.e. sequence parameter set (extension) syntax - is transmitted in "non-VCL" NAL units, i.e. NAL units not containing coded slice data, which is data of pictures of base and enhancement layers (see points 3.30, 3.31, 3.138 and 3.160 and Table 7.1 on page 55 of document D3).

It would have been straightforward to the person skilled in the art to transmit the filter index or coefficients in a sequence parameter set (extension) NAL unit separate from NAL units containing base layer and enhancement layer coded data, following the SVC specification illustrated by document D3.

4.9 With regard to the second objective technical problem, which relates to the improvement of the prediction accuracy of the enhancement layer picture (feature (b)), the board concurs with the examining division's conclusion.

4.9.1 According to the overview of the SVC extension to the H.264/AVC specification provided in document D2, an encoder can freely choose between intra- and inter-layer prediction (see second paragraph in section III.B.1). Indeed, for intra-layer prediction, motion-compensated prediction may be employed within the enhancement layer using enhancement layer reference pictures (see first paragraph in section III.B and third paragraph in section II.B). Inter-layer intra

prediction - one of the inter-layer prediction tools - upsamples a reconstructed base layer picture using predefined filter coefficients. The upsampled reconstructed base layer picture - i.e. an ILR picture - is used to predict a portion of the temporally co-located enhancement layer picture (see section III.B.1.c). Thus document D2 discloses using both intra-layer and inter-layer prediction for predicting a single picture (see point 4.1.4 of the decision under appeal).

- 4.9.2 The inter-layer intra prediction tool of document D2 thus corresponds to the prediction tool disclosed in document D4, except for the use of predefined upsampling filter coefficients.
- 4.9.3 Document D4 discloses using low-resolution and high-resolution coding circuitry of SVC for decoding base and enhancement layers, respectively (see point 4.3 above).
- 4.9.4 With the circuitry of SVC at hand, it would have been obvious to the person skilled in the art when implementing the system of document D4 to keep the remaining prediction techniques of SVC, in particular motion-compensated prediction in the enhancement layer, in order to improve the prediction accuracy of the enhancement layer picture. In this manner, the person skilled in the art would have arrived at the claimed invention without exercising inventive skill.
- 4.10 The comments with respect to claim 1 above apply equally to the subject-matter of independent claim 6.
- 4.11 Therefore the subject-matter of claims 1 and 6 of the main request lacks an inventive step over the

disclosure of document D4 combined with the disclosure of the SVC specification illustrated by documents D2 and D3 (Article 56 EPC).

5. *First auxiliary request - content of the European divisional application and support by the description (Articles 76(1) and 84 EPC)*

The issues discussed in sections 2. and 3. above apply equally to the first auxiliary request. Therefore the first auxiliary request does not meet the requirements of Articles 76(1) and 84 EPC.

6. *First auxiliary request - inventive step over document D4 combined with either of documents D2 or D3 (Article 56 EPC)*

- 6.1 The examining decision concluded that the person skilled in the art would have arrived at the claimed subject-matter of claim 1 in an obvious manner by applying inter-layer motion prediction - as described for example in section III.B.1.a of document D2 (see section 5 of the decision under appeal).

- 6.2 The appellant submitted that inter-layer motion prediction did not disclose the steps of "*deriving, using the motion information for the BL picture, motion information for the ILR picture*" and "*reconstructing an EL picture based on ... motion information for the ILR picture*" (see statement of grounds of appeal, section 3.2).

- 6.3 The board agrees with the appellant.

Inter-layer motion prediction allows the enhancement layer encoder to predict motion information (i.e.

motion vectors and reference picture indices) from spatially corresponding blocks in a decoded lower layer, for example the base layer. The corresponding motion vectors are scaled and refined when appropriate (see section III.B.1.a of document D2). It follows that, to apply inter-layer motion prediction, the corresponding blocks in the lower layer have to be inter-coded.

For inter-layer intra prediction, only intra-coded reconstructed lower layer blocks may be upsampled. Consequently, these blocks do not comprise motion information (see first paragraph in section II.B.1.a and section III.B.1.c of document D2).

From the disclosure of document D2, it is not apparent that inter-layer motion prediction includes upsampling a reconstructed base layer picture. Consequently, the motion information derived in inter-layer motion prediction cannot be regarded as motion information for an upsampled reconstructed base layer picture - i.e. an ILR picture as claimed. The same conclusion applies when considering the references to document D3 in section 5 of the decision under appeal.

- 6.4 In view of the above, the examining division misinterpreted the claimed features relating to motion information for the ILR picture and identified them in documents D2 and D3. This leads to the conclusion that the examining division's finding that the subject-matter of claim 1 of the then auxiliary request (corresponding to the first auxiliary request at hand) lacked an inventive step in view of the disclosure of document D4 combined with the disclosure of either of documents D2 or D3 was not correct.

7. *First auxiliary request - validity of the claimed priority*

7.1 The application at hand claims priority from US 61/669,356 filed on 9 July 2012 (hereinafter referred to as P1) and US 61/734,264 filed on 6 December 2012 (hereinafter referred to as P2).

7.2 Priority document P1 does not disclose the invention defined in claim 1 of the first auxiliary request. Specifically, document P1 does not disclose the following underlined features:

"deriving, using the motion information for the BL picture, motion information for the ILR picture; and

reconstructing an EL picture based on the ILR picture, motion information for the ILR picture, and the EL coded data,"

7.3 Paragraph [0096] of document P1 discloses scaling motion vectors from a base layer to predict motion vectors in an enhancement layer. However, these motion vectors are for - and applied to - enhancement layer reference pictures. Thus these motion vectors cannot be considered as the claimed motion information for ILR pictures.

7.4 The appellant referred to paragraphs [0003], [0088] and [0089] to support its argument that priority document P1 disclosed the contested features (see section 4.4 of the appellant's letter dated 16 January 2026).

However, rather than disclosing the derivation of motion information for the ILR picture using the motion information for the base layer picture, these

paragraphs merely describe upsampling base layer pictures and using them as additional reference pictures for motion estimation in the enhancement layer.

- 7.5 In view of the above, the earliest effective date of priority for the invention claimed in claim 1 of the first auxiliary request could be the filing date of document P2.
8. *Introduction of prior art into the appeal proceedings under Article 114(1) EPC*
- 8.1 Under Article 114(1) EPC, "*the European Patent Office shall examine the facts of its own motion*". This also applies to the Boards of Appeal (see Case Law, V.A.3.3). Thus, even though proceedings before the Boards of Appeal in *ex parte* cases are primarily concerned with examining the contested decision, new documents can be introduced into the appeal proceedings by the board.
- 8.2 In its communication under Article 15(1) RPBA, the board introduced documents D5 and D6 *ex officio* into the appeal proceedings on the basis of Article 114(1) EPC.
- 8.3 Document D5 is a proposal of scalable video coding technology for HEVC. This document had been included in an "Information Disclosure Statement" in family-related proceedings before the United States Patent and Trademark Office. Document D6 is a version of the HEVC draft specification referenced from document D5 that includes the syntax element adaptation parameter set (see section 3.1.3 and reference [1] of document D5).

These documents were therefore assumed to be known to the appellant.

8.4 Documents D5 and D6 were published before the filing date of the previous application P2 and after the filing date of the previous application P1. Since the claimed priority P1 is deemed to be invalid (see section 7. above), these documents form part of the state of the art under Article 54(2) EPC.

9. *First auxiliary request - novelty over document D5 (Article 54(1) and (2) EPC)*

9.1 Document D6 is referenced from document D5 and was available to the public at the date of publication of document D5. The relevant teaching of document D6 is therefore to be regarded as incorporated into document D5 (see Case Law, I.C.4.2).

9.2 Document D5 discloses coding technologies aimed at improving inter-layer prediction in scalable video coding (see first paragraph in section 1).

For coding the enhancement layer, document D5 discloses generating an inter-layer reference (ILR) picture based on the base layer reconstruction, which is then used as an additional reference picture to predict the corresponding enhancement layer picture (see first paragraph on page 6).

This implies receiving all necessary data, including base and enhancement layer coded data as well as filter information (see point 9.2.1 below).

9.2.1 A first coding technique allows for selecting an upsampling filter to apply to the reconstructed base

layer picture to generate an ILR picture. This picture is used together with temporal reference pictures to predict the enhancement layer picture. The filter selection is transmitted in the syntax structure adaptation parameter set (see "Abstract", first paragraph on page 4 and section 2.2.2). The adaptation parameter set is included in a NAL unit not containing data of pictures of base and enhancement layers (see e.g. Note 1 in section 7.4.1.4.1 and section 8.2 of document D6).

This disclosure corresponds to the claimed 1) reception of filter information packetised in a NAL unit separate from NAL units containing coded data of the base and enhancement layers, 2) generation of an ILR picture by applying an upsampling filter and 3) reconstruction of an enhancement layer picture based on the ILR picture.

- 9.2.2 Document D5 discloses a second coding technique which enables temporal motion vector prediction (TMVP) using an ILR picture as collocated picture in the enhancement layer. The motion field associated with the ILR picture is generated by mapping the motion field of the corresponding base layer picture (see bullet point "Motion field mapping (MFM)" on page 6 and section 2.3.3).

This technique corresponds to the claimed derivation of motion information for the ILR picture and the reconstruction of the enhancement layer picture based on the motion information.

- 9.2.3 Reconstructing different portions of the enhancement layer picture using the different coding techniques disclosed in document D5 is part of the design of the HEVC specification draft, allowing for each coding

block to select an appropriate coding technique. The disclosure of document D5 does not modify this principle (see first paragraph on page 6).

- 9.3 In view of the above, the subject-matter of claim 1 of the first auxiliary request lacks novelty over the disclosure of document D5 (Article 54(1) and (2) EPC).
10. *Second auxiliary request - admittance (Article 13(2) in conjunction with 13(1) RPBA)*
- 10.1 Under Article 13(2) RPBA, any amendment to a party's appeal case after notification of a communication under Article 15(1) RPBA is, in principle, not to be taken into account unless there are exceptional circumstances, which have been justified with cogent reasons by the party concerned.
- 10.2 In response to the board's objections under Articles 54(2), 76(1) and 84 EPC raised for the first time in the communication under Article 15(1) RPBA, the appellant filed a second auxiliary request aimed at overcoming these objections. The board accepts that this constituted "exceptional circumstances" within the meaning of Article 13(2) RPBA.
- 10.3 However, in applying Article 13(2) RPBA, the board may also rely on the criteria set out in Article 13(1) RPBA (see Supplementary publication 2 of the Official Journal EPO 2020, explanatory notes to Article 13(2), page 60, fourth paragraph; see also T 2429/17, point 2.2 of the Reasons).

Article 13(1) RPBA stipulates that any amendment to a party's appeal case after it has filed its grounds of appeal or reply is subject to the party's justification

for its amendment and may be admitted only at the discretion of the board. The board shall exercise its discretion in view of, *inter alia*, the suitability of the amendment to resolve the issues which were raised by the board and whether the party has demonstrated that any such amendment, *prima facie*, overcomes the issues raised by the board and does not give rise to new objections.

- 10.4 In the case at hand, the amendments to the second auxiliary request do not, *prima facie*, overcome the objections regarding the content of the divisional application and lack of support by the description discussed in sections 3. and 4. above with respect to the main request.

Indeed, the specification of an upsampling filter "associated with spatial scalability" does not necessarily imply a scalability relationship between base and enhancement layers. Neither does this amendment imply upsampling a base layer picture in order to align the resolutions of the base and enhancement picture layers.

- 10.5 Therefore the board does not admit the second auxiliary request into the appeal proceedings, under Article 13(2) in conjunction with 13(1) RPBA in the exercise of its discretion.

11. *Conclusion*

Since none of the appellant's requests are 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

W. Ungler

Decision electronically authenticated