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**Datasheet for the decision
of 27 May 2025**

Case Number: T 1455/23 - 3.5.04

Application Number: 16200327.1

Publication Number: 3151566

IPC: H04N21/00, H04N19/167,
H04N19/70

Language of the proceedings: EN

Title of invention:
VIDEO DATA STREAM CONCEPT

Patent Proprietor:
GE Video Compression, LLC

Opponent:
Unified Patents, LLC

Relevant legal provisions:
EPC Art. 100(a), 56
RPBA 2020 Art. 13(2)

Keyword:
Granted patent - lack of patentability (yes)
Auxiliary requests 1 to 9 - inventive step (no)
Auxiliary request 10 -
amendment after notification of Art. 15(1) RPBA communication
- taken into account (no)

Decisions cited:

T 1473/19



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Case Number: T 1455/23 - 3.5.04

D E C I S I O N
of Technical Board of Appeal 3.5.04
of 27 May 2025

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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 5 June 2023
revoking European patent No. 3151566 pursuant to
Article 101(3) (b) EPC.**

Composition of the Board:

Chair B. Willems
Members: F. Sanahuja
G. Decker

Summary of Facts and Submissions

- I. The appeal is against the decision of the opposition division dated 5 June 2023 revoking European patent EP 3 151 566.
- II. In the opposition proceedings, the grounds for opposition under Article 100(a) together with Articles 54(1) and 56 EPC, Article 100(b) and Article 100(c) EPC, were raised.
- III. The documents cited in the decision under appeal included the following:
- D3 B. Bross et al., "*High efficiency video coding (HEVC) text specification draft 7*", Joint Collaborative Team on Video Coding (JCT-VC) of ITU-T SG16 WP3 and ISO/IEC JTC1/SC29/WG11, 9th Meeting, Geneva, CH, 27 April to 7 May 2012, document No. JCTVC-I1003_d9
- D9 Hendry Byeong Moon Jeon, "*AHG4: Unified marker for Tiles' and WPP's entry points*", Joint Collaborative Team on Video Coding (JCT-VC) of ITU-T SG16 WP3 and ISO/IEC JTC1/SC29/WG11, 9th Meeting, Geneva, CH, 27 April to 7 May 2012, document No. JCTVC-I0080
- D24 Y.-K. Wang et al., "*Tile groups*", Joint Collaborative Team on Video Coding (JCT-VC) of ITU-T SG16 WP3 and ISO/IEC JTC1/SC29/WG11, 7th Meeting, Geneva, CH, 21 to 30 November 2011, document No. JCTVC-G318
- D29 B. Bross et al., "*High efficiency video coding (HEVC) text specification draft 6*", Joint Collaborative Team on Video Coding (JCT-VC) of

ITU-T SG16 WP3 and ISO/IEC JTC1/SC29/WG11,
8th Meeting, San José, CA, USA,
1 to 10 February 2012, document No. JCTVC-H1003

D37 K. Misra and A. Segall, *"New results for parallel decoding for Tiles"*, Joint Collaborative Team on Video Coding (JCT-VC) of ITU-T SG16 WP3 and ISO/IEC JTC1/SC29/WG11, 6th Meeting, Turin, IT, 14 to 22 July 2011, document No. JCTVC-F594

D38 G. Sullivan and J.-R. Ohm, *"Meeting report of the sixth meeting of the Joint Collaborative Team on Video Coding (JCT-VC), Torino, IT, 14-22 July 2011"*, Joint Collaborative Team on Video Coding (JCT-VC) of ITU-T SG16 WP3 and ISO/IEC JTC1/SC29/WG11, 6th Meeting, Turin, IT, 14 to 22 July 2011, document No. JCTVC-F800

IV. The opposition division revoked the European patent for the following reasons.

- The ground for opposition under Article 100(a) EPC prejudiced maintenance of the patent as granted because the subject-matter of claims 1 and 14 of the main request was not new over the disclosure of document D9.
- The subject-matter of claims 1 and 14 of auxiliary requests 1, 6 and 7 and claims 1 and 12 of auxiliary request 5 lacked inventive step over the disclosure of document D38 combined with common general knowledge (Article 56 EPC).
- The subject-matter of claim 1 of auxiliary request 2 lacked inventive step over the combined disclosures of documents D38 and D24 (Article 56 EPC).

- Auxiliary request 3 was not admitted into the opposition proceedings.
- The subject-matter of claims 1 and 14 of auxiliary request 4 was not new over the disclosure of document D9 (Article 54 EPC).

V. The patent proprietor (appellant) filed notice of appeal. With the statement of grounds of appeal, the appellant filed new auxiliary requests 1, 3 and 5 and auxiliary requests 2, 4 and 6 to 9, corresponding to auxiliary requests 1, 5, 4, 6, 7 and 2, respectively, which had formed the basis for the decision under appeal. The appellant submitted arguments stating why it was of the opinion that the opposition division had erred in its findings. Furthermore, the appellant filed documents D39 and D40.

D39 G. Sullivan and J.-R. Ohm, *"Meeting report of the fifth meeting of the Joint Collaborative Team on Video Coding (JCT-VC), Geneva, CH, 13-23 March 2011"*, Joint Collaborative Team on Video Coding (JCT-VC) of ITU-T SG16 WP3 and ISO/IEC JTC1/SC29/WG11, 5th Meeting, Geneva, CH, 16 to 23 March 2011, document No. JCTVC-E_Notes_d8

D40 K. Misra and A. Segall, *"Tiles for parallel decoding"*, Joint Collaborative Team on Video Coding (JCT-VC) of ITU-T SG16 WP3 and ISO/IEC JTC1/SC29/WG11, 5th Meeting, Geneva, CH, 16 to 23 March 2011, document No. JCTVC-E412

VI. The board issued summons to oral proceedings and a communication under Article 15(1) RPBA ("the board's communication"). In this communication, the board gave, *inter alia*, the following preliminary opinion.

- The opposition division's finding that the subject-matter of granted claims 1 and 14 and the claims of auxiliary request 6 lacked novelty in view of the disclosure of document D9 was not correct.
- The board was minded to admit documents D39 and D40 into the appeal proceedings.
- The subject-matter of granted claims 1 and 14 was new over the disclosure of document D38 incorporating the teaching of document D37.
- The subject-matter of granted claims 1 and 14 lacked inventive step over the disclosure of document D38 in combination with the common general knowledge of the person skilled in the art. Consequently, the ground for opposition under Article 100(a) EPC appeared to prejudice maintenance of the granted patent.
- It appeared that the issues raised against the granted claims applied equally to the claims of auxiliary requests 1 to 8.
- In the context of auxiliary request 9, it was to be discussed whether the person skilled in the art, in view of document D38 and faced with the problem of a fast and easy decision about which data to transmit to each of the parallel decoders, would have found it obvious to use SEI messages identifying tiles in subsequent NAL units for this purpose.

- VII. In its letter of reply dated 24 April 2025, the appellant provided arguments in favour of inventive step for all the claim requests.
- VIII. With a letter filed on 25 April 2025, the respondent filed a document D41 titled "H.264 Motion Estimation and Applications" which, in the respondent's opinion, evidenced common general knowledge that in parallel decoders different portions of data were assigned to different decoders.
- IX. By letter dated 2 May 2025, the respondent commented on the arguments presented in the appellant's letter dated 24 April 2025.
- X. At the oral proceedings, the appellant filed auxiliary request 10.
- XI. The appellant's final requests were that the decision under appeal be set aside and that the opposition be rejected, or, alternatively, that the patent be maintained on the basis of the claims according to one of auxiliary requests 1 to 9 filed with the statement of grounds of appeal or according to auxiliary request 10 filed at the oral proceedings before the board.
- XII. The respondent's final request was that the appeal be dismissed, i.e. that the patent be revoked in its entirety.
- XIII. Claim 1 of the **patent** and of **auxiliary request 1** reads as follows (including the references to the features adopted in the decision under appeal):

- a) *"Video data stream having video content (16) encoded therein,"*
- b) *"using predictive and entropy coding, in units of slices (24) into which pictures (18) of the video content (16) are spatially sub-divided, using a coding order among the slices (24), with restricting predictions of the predictive coding and/or entropy coding to the inner of tiles (70) into which the pictures of the video content are spatially sub-divided, wherein the sequence of the slices (24) are packetized into payload packets (32) of a sequence of packets of the video data stream in the coding order,"*
- c) *"the sequence (34) of packets being divided into a sequence of access units (30) so that each access unit collects the payload packets (32) having packetized therein slices (24) relating to a respective picture (18) of the video content (16),"*
- d) *"wherein the sequence (34) of packets has tile identification packets (72) interspersed therein between payload packets of one access unit,"*
- e) *"identifying one or more tiles (70) overlaid by any slice (24) packetized into one or more payload packets (32) immediately following the respective tile identification packet (72) in the sequence (34) of packets."*

XIV. Claim 1 of **auxiliary request 2** differs from claim 1 of the patent in that the following text has been added at the end of feature b):

"the packets being NAL (network abstraction layer) units,"

- XV. Claim 1 of **auxiliary request 3** differs from claim 1 of the patent in that the following text has been added at the end of the claim:

", wherein the tile identification packets (72) identify the one or more tiles (70) overlaid by any slice (24) packetized into exactly the immediately following payload packet"

- XVI. Claim 1 of **auxiliary request 4** differs from claim 1 of the patent in that the following text has been added at the end of the claim:

", wherein the tile identification packet (72) is encoded as an SEI message"

- XVII. Claim 1 of **auxiliary request 5** differs from claim 1 of the patent in that it incorporates the amendments to claim 1 of auxiliary requests 3 and 4.

- XVIII. Claim 1 of **auxiliary request 6** differs from claim 1 of the patent in that feature e) has been amended as follows (additions underlined and omissions ~~struck through~~):

e) "identifying, out of the tiles into which the respective picture is spatially sub-divided,~~one or more~~ each tiles (70) overlaid by any slice (24) packetized into one or more payload packets (32) immediately following the respective tile identification packet (72) in the sequence (34) of packets."

XIX. Claim 1 of **auxiliary request 7** differs from claim 1 of the patent in that the following text has been added at the end of feature b):

"wherein each of the slices is individually packetized into a respective payload packet, "

XX. Claim 1 of **auxiliary request 8** differs from claim 1 of the patent in that it incorporates the amendments to claim 1 of auxiliary requests 6 and 7.

XXI. Claim 1 of **auxiliary request 9** reads as follows:

"Network entity configured to

receive a video data stream,

*the video data stream having video content (16)
encoded therein,*

*using predictive and entropy coding, in
units of slices (24) into which pictures
(18) of the video content (16) are
spatially sub-divided,*

*using a coding order among the slices (24),
with restricting predictions of the
predictive coding and/or entropy coding to
the inner of tiles (70) into which the
pictures of the video content are spatially
sub-divided,*

*wherein the sequence of the slices (24) are
packetized into payload packets (32) of a sequence
of packets of the video data stream in the coding
order, the sequence (34) of packets being divided*

into a sequence of access units (30) so that each access unit collects the payload packets (32) having packetized therein slices (24) relating to a respective picture (18) of the video content (16),

wherein the sequence (34) of packets has tile identification packets (72) interspersed therein between payload packets of one access unit, identifying one or more tiles (70) overlaid by any slice (24) packetized into one or more payload packets (32) immediately following the respective tile identification packet (72) in the sequence (34) of packets, and

identify, based on the tile identification packets (72), tiles (70) which are overlaid by slices (24) packetized into one or more payload packets (72) immediately following the respective tile identification packet (72) in the sequence of packets, and

wherein the network entity is configured to use a result of the identification so as to decide on transmission tasks pertaining the [sic] video data stream."

XXII. Claim 1 of **auxiliary request 10** differs from claim 1 of auxiliary request 9 in that the following text has been added at the end of the claim:

", wherein the network entity is configured to handle different tiles with different priority for playback, wherein the network entity is configured to, in case of packet loss, prefer payload packets relating to tiles of higher priority for a retransmission over payload

packets relating to tiles of lower priority by first requesting the retransmission of lost payload packets relating to tiles of higher priority, and merely in case of enough time being left depending on the transmission rate, proceeding with requesting the retransmission of lost payload packets relating to tiles of lower priority"

Reasons for the Decision

1. *Interpretation of the term "identifying"*

- 1.1 In the statement of grounds of appeal, the appellant submitted that, in the context of claim 1 of the granted patent, the expression "*identifying one or more tiles*" should be interpreted as indicating the identity of the tiles overlaid by any packetised slice immediately following the respective tile identification packet (see section "*Novelty over D10*" starting on page 13 and section "*iii) The disclosure of D38, D37, D9, and D6*" starting on page 19 of the statement of grounds of appeal).

A technically sensible interpretation of claim 1 required that the identity of the tiles be revealed by the tile identification packet. Otherwise, a receiver would not be capable of inferring, from a slice header with multiple entry points, to which tiles among the tiles of the picture the entry points referred (see section "*iii) The disclosure of D38, D37, D9, and D6*" starting on page 19 of the statement of grounds of appeal).

- 1.2 For the sake of argument, the board based its assessment of novelty and inventive step on the

interpretation of the term "identifying" as put forward by the appellant. The respondent did not object.

2. *Documents D39 and D40 - admittance (Article 12(2) and (4) RPBA)*

2.1 Under Article 12(2) and (4) RPBA, a submission constitutes an amendment if it is not directed to the requests, facts, objections, arguments and evidence on which the decision under appeal was based. Any such amendment may be admitted only at the discretion of the board.

2.2 During the first-instance opposition proceedings, the appellant argued that it was not clear from the phrase "[t]he SEI [*Supplemental Enhancement Information*] approach discussed at the preceding meeting was further discussed..." on page 122 of document D38 what had been discussed at the preceding meeting (see point 18.1.2 of the decision under appeal).

2.3 With the statement of grounds of appeal, the appellant filed documents D39 and D40. It submitted that these documents clarified the disclosure of documents D37 and D38, and requested that documents D39 and D40 be admitted into the appeal proceedings (see section 1.1 of the statement of grounds of appeal).

The respondent did not comment on their admittance.

2.4 Document D39 is a report of the preceding meeting and document D40 is the contribution discussed in the relevant section of document D39.

2.5 The board finds that the filing and discussion of documents D39 and D40 constitute a normal development

of one of the appellant's lines of argument on which the decision under appeal was based. Therefore neither the documents' filing nor the discussion of their relevant sections amount to amendments within the meaning of Article 12(2) and (4) RPBA. Accordingly, the board has no discretion not to admit them into the proceedings.

3. *Granted patent - novelty over document D38 (Article 100(a) EPC in conjunction with Article 54(1) EPC)*
- 3.1 In point 7.2 of its reply to the statement of grounds of appeal, the respondent submitted that claim 1 lacked novelty over the disclosures of document D38 and cross-referenced document D37.
- 3.2 According to the case law of the boards of appeal, if a document (the "primary" document) explicitly refers to another document (the "secondary" document) as providing more detailed information on certain features, the teaching of the latter is to be regarded as incorporated into the primary document if the document was available to the public on the publication date of the primary document (see Case Law of the Boards of Appeal of the European Patent Office, 10th edition, 2022, "Case Law", I.C.4.2).

This is the case for document D37 (the "secondary" document), which provides detailed information on contribution JCTVC-F594 discussed on page 112 of document D38. Thus document D37 may be regarded as being incorporated into document D38 (the "primary" document).

3.3 It is undisputed that the HEVC text specification draft (e.g. documents D3 or D29), the context in which documents D37 and D38 have to be understood, discloses a method for generating a video data stream according to features a) to c) of claim 1. Thus it needs to be ascertained whether documents D37 and D38 disclose features d) and e) of claim 1.

3.4 The board finds that document D38, which incorporates the teaching of document D37, does not disclose features d) and e) of claim 1.

3.4.1 The board agrees with the appellant that document D37 discloses signalling entry points in the slice header and signalling entry points as markers within the slice data (see section "*Novelty over D38*" starting on page 17 of the statement of grounds of appeal). Neither document D37 nor the HEVC text specification draft - the context in which document D37 must be read - discloses that the portions of coded slice data falling between subsequent markers can be equated with the normal meaning of "payload packets" in the art. Therefore document D37 alone does not disclose tile identification packets interspersed between payload packets containing slice data as specified by features d) and e) of claim 1.

3.4.2 In the context of the discussion of document D37, document D38 states that "*[t]he SEI approach discussed at the preceding meeting was further discussed, and the possibility of something like an SEI message that could fall between slices in NAL unit order*" (see page 112).

According to the appellant, the vague discussion of the "SEI approach" in document D38 did not directly and unambiguously disclose any of the features of claim 1.

To the person skilled in the art, document D38 merely disclosed providing a single SEI message between NAL units of the video stream (see e.g. section "Novelty over D38" starting on page 17 and section 4.2 of the statement of grounds of appeal). The phrase "an SEI message" on page 112 of document D38 should be interpreted as referring to a single SEI message per access unit that preceded all the slices of the access unit. This interpretation was confirmed by the reference to the "*SEI approach discussed at the preceding meeting*", which related to the discussion of contribution E412 (document D40) in document D39. Document D39 envisaged only one SEI message sent ahead of all the slices of an access unit (see pages 124 and 125).

Furthermore, document D38 did not disclose where the SEI message should be signalled in the NAL unit stream, whereas claim 1 required that tile identification packets be interspersed between payload packets of one access unit (see first full paragraph on page 22 in section "*iii) The disclosure of D38, D37, D9, and D6*" of the statement of grounds of appeal and section 1.1.1 of the appellant's letter dated 24 April 2025).

The board agrees with the appellant that the approach discussed in document D39 relates to one SEI message per access unit. However, as argued by the respondent, the phrase "*the possibility of something like an SEI message that could fall between slices in NAL unit order*" in document D38 discloses an embodiment distinct from that of document D39 (see section 7.2.1 and penultimate full paragraph on page 51 of the respondent's reply to the statement of grounds of appeal). Moreover, the board also agrees with the respondent that the wording "an SEI message" employs an

undefined article and merely describes one instance of an SEI message. Since slices are individually packetised into slice NAL units in HEVC (see e.g. D3, section 3.26 or D29, section 3.24, and section 1.1.1 of the appellant's letter dated 24 April 2025), document D38 discloses the claimed location of tile identification packets as SEI messages.

- 3.4.3 At the oral proceedings before the board it was undisputed between the parties that the contents of the SEI message included tile entry point information.

Document D38 discloses SEI messages in the context of providing tile entry points in the video stream for parallel decoding. However, it is not directly and unambiguously derivable from the disclosure of document D38, incorporating the teaching of document D37, that *"something like an SEI message that could fall between slices in NAL unit order"* includes information for uniquely identifying one or more tiles overlaid by any slice packetised into one or more payload packets immediately following the respective tile identification packet in the sequence of packets, as specified in claim 1.

- 3.5 In view of points 3.1 to 3.4.3 above, the subject-matter of claim 1 is new over the disclosure of document D38 incorporating the teaching of document D37.

4. *Granted patent - inventive step in view of document D38 (Article 100(a) EPC in conjunction with 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 Document D38 does not disclose features d) and e) of claim 1 (see section 3. above).
- 4.3 The appellant submitted that the technical effect achieved by tile identification packets being interspersed between payload packets and revealing the identity of the upcoming tiles - which broadly refers to features d) and e) of claim 1 - was that a network entity receiving the stream of NAL units may determine, without parsing the payload packets carrying the slices, to which tiles of the picture the data of the immediately following payload packet referred. This allowed for improved tile-specific handling of the payload packets, e.g. for the transmission of tile data to another network entity (see e.g. section "*Embodiment 1 as starting point*" starting on page 24 of the statement of grounds of appeal). At the oral proceedings, the appellant formulated the objective technical problem as being how to improve tile-specific handling of the video data stream.
- 4.3.1 The respondent countered that, in the context of parallel decoding of document D38, it was necessary to identify the data in the stream corresponding to specific tiles so that the data could be dispatched to specific decoder cores (e.g. tile 1 to decoder core 1, tile 2 to decoder core 2, etc.). The technical effect as formulated by the appellant was already achieved by sending location information (tile entry points) in the slice header or in the SEI message of document D38. The respondent submitted that the objective technical problem should instead be formulated as being how to provide an alternative method of signalling the tile

identification information (see also last paragraph on page 49 and first paragraph on page 50 of the respondent's reply to the statement of grounds of appeal). Alternatively, the technical effect could be regarded as an absolute identification of tiles - as opposed to a relative tile identification within a slice - and a corresponding technical problem could be formulated as being how to absolutely identify the tiles.

- 4.3.2 The board notes that the tiles carried in a slice could be identified from tile information in the picture parameter set (PPS), the slice address and the entry points in the slice header or SEI messages. However, such identification of tiles would require parsing the PPS, storing the tile information, parsing the slice header and then determining the slice's position within the access unit as well as which tiles are overlapped by the slice. This is a more complex process than merely extracting tile identifiers from SEI messages. Therefore the board does not share the respondent's view that the technical problem is a mere alternative to signalling the tile identification information. Furthermore, the problem of absolutely identifying tiles does not account for the simplified parsing provided by the claimed approach.

In addition, the problem formulated by the appellant does not adequately take into account the context of document D38, namely that of using SEI messages for parallel decoding. Accordingly, the board finds that the objective technical problem is to be formulated as being to facilitate tile-based handling of the video data stream for parallel decoding.

4.4 The board considers that the person skilled in the art would have arrived at the claimed solution in an obvious manner for the following reasons.

4.4.1 Starting from document D38, the person skilled in the art would have found the discussion on page 112 regarding the use of SEI messages in the context of providing tile entry points in the video stream to be relevant to the problem at hand. Although document D38 does not identify the content of the SEI message, both parties submitted at the oral proceedings that, in the context of parallel decoding, it was necessary to know or keep track of which tiles were dispatched to each decoder core. Therefore the board finds that it would have been obvious for the person skilled in the art to include tile entry point information and tile identifiers in the SEI message for that purpose, for example by using the information available from the slice header of scheme 1 in document D37.

The board notes that scheme 1 in document D37 does not explicitly specify tile identifiers. However, the person skilled in the art would have been aware from the context of HEVC (in which document D37 is to be read) that tile identifiers for tiles contained in a slice could be easily derived from the PPS and the slice header. Therefore there would have been no need to include tile identifiers in the slice header in that scenario.

The board is of the opinion that document D38 suggests including in the SEI messages all information necessary for dispatching data to different decoder cores. When faced with the problem of facilitating tile-based handling of the video data stream for parallel decoding, the person skilled in the art would have

included not only tile entry point information but also tile identifiers, because otherwise additional and costly parsing of the PPS structure would be required.

4.4.2 Document D38 discloses "*something like an SEI message that could fall between slices in NAL unit order*" (see page 112). It would have been apparent to the person skilled in the art that using these messages to provide both tile entry point information and tile identifiers for tiles contained in data packets for a slice immediately following the SEI message is an obvious option, mimicking the location and purpose of tile entry points in a slice header (see also section 8.3.1 of the respondent's reply to the statement of grounds of appeal).

4.4.3 In summary, the person skilled in the art, using only ordinary skills, would have used an SEI message - including tile entry point information and tile identifiers for tiles contained in data packets for a slice immediately following the SEI message - to facilitate tile-based handling of the video data stream for parallel decoding.

4.5 The appellant argued that entry point information and tile identifiers for the tiles contained in a slice could be easily identified from parsing the PPS and the slice header. Therefore the person skilled in the art would not have had any incentive to include this information in SEI messages, as including it would be superfluous, creating overhead, and was not accompanied by any advantage.

Moreover, if the SEI message were to be used for dispatching tile data to a decoder core - which was not disclosed in the prior art - the decoder core would

still have to parse all the information on tiles from the slice header, which was needed for decoding. Therefore including tile identifiers in an SEI message did not facilitate parallel decoding.

4.5.1 The respondent argued that using an SEI message including tile entry point information and tile identifiers for tiles contained in slice data packets immediately following the SEI message avoided the need to parse slice headers for dispatching tile data to decoder cores.

4.5.2 The board considers that the task of dispatching data to decoder cores is well known in the art. The board agrees with the respondent that using SEI messages for this purpose facilitates dispatching tile data and, consequently, solves the technical problem. Although this approach comes at the expense of increased signalling overhead, such an overhead is a well-known trade-off in the field.

Whether a decoder core needs to decode the slice header anyway is a question of efficiency that is unrelated to the technical problem at hand.

4.6 For the reasons outlined above, the subject-matter of claim 1 lacks inventive step over the disclosure of document D38 in combination with the common general knowledge of the person skilled in the art. Consequently, the ground for opposition under Article 100(a) EPC prejudices maintenance of the granted patent.

4.7 In view of the conclusion reached on the basis of document D38, the board need not consider the question

of novelty and inventive step over the disclosure of document D9.

5. *Auxiliary requests 1 to 8 - inventive step in view of document D38 (Article 56 EPC)*

5.1 The amendments to claim 1 of auxiliary requests 1 to 8 (see points XIII. to XX. above) fail to overcome the objection of lack of inventive step. The reasons set out in section 4. above apply equally to claim 1 of auxiliary requests 1 to 8 (Article 56 EPC).

5.2 The respondent did not object to the admittance of auxiliary requests 1 to 8, provided that the same conclusion as for the granted patent applied to these requests.

Since claim 1 of auxiliary requests 1 to 8 does not involve an inventive step, the admittance of these requests into the appeal proceedings need not be decided on.

6. *Auxiliary request 9 - inventive step in view of document D38 (Article 56 EPC)*

6.1 Auxiliary request 9 corresponds to auxiliary request 2 which formed the basis of the decision under appeal (see section 1.2 of the statement of grounds of appeal).

Claim 1 of auxiliary request 9 specifies a network entity configured to receive a video stream defined in the same terms as claim 1 of the granted patent, to identify tiles based on the tile identification packets and to use a result of the identification to decide on

transmission tasks pertaining to the video stream (see also point XXI. above).

- 6.2 The board considers that the claimed network entity can be equated with the decoder of document D38 because, as argued by the respondent, paragraph [140] of the patent (corresponding to page 30, lines 7 to 23 of the description as filed) discloses that "[t]he network entity may be ... a decoder". Thus the appellant's argument that a network entity was an entity in the network which could not be equated with a decoder is not convincing.

In addition to the distinguishing features identified with respect to claim 1 of the granted patent (see point 4.2 above), document D38 does not disclose that the network entity is configured to *"identify, based on the tile identification packets (72), tiles (70) which are overlaid by slices (24) packetized into one or more payload packets (72) immediately following the respective tile identification packet (72) in the sequence of packets, and wherein the network entity is configured to use a result of the identification so as to decide on transmission tasks pertaining the video data stream"*.

- 6.3 The appellant submitted that the person skilled in the art would understand that the phrase "transmission task" referred to the communication between entities of the transmission network, irrespective of whether the phrase was interpreted in the context of the claim or in the light of the description. The phrase "transmission task" was used in the patent only to refer to a request for re-transmitting data from one entity in a network to another. Moreover, using the term "transmission" for signal distribution within an

entity was uncommon. Consequently, the technical problem had to be reformulated as being how to facilitate tile-specific handling of the video data stream at the application layer.

6.3.1 The respondent submitted that claim 1 was broad and did not specify whether the transmission task referred to an internal transmission within the network entity or to a transmission between two distinct entities on the network. Furthermore, the application described the retransmission request only as an example of the claimed "transmission tasks".

6.3.2 The board finds that the context of claim 1 does not dictate that the "transmission tasks" have to be restricted to transmission between network entities.

It is well established that transmission tasks take place within an entity - for example to transmit data between its components (e.g. processing cores, memory). In the context of claim 1 it is thus technically sensible to consider transmission tasks internal to the network entity to be part of the claimed "transmission tasks".

The board considers that interpreting claim 1 in the light of the description does not narrow the broad interpretation of the expression "transmission tasks". The description does not provide a definition for this expression and the "*re-transmission requests concerning defect packets*" represents only a specific embodiment of the broader concept of "transmission tasks".

Further, a claim need not be interpreted as covering only the embodiments described in the application.

The mere fact that a claim feature is interpreted in a technically sensible manner not explicitly disclosed in the description does not invalidate this interpretation, in particular if neither the description nor the drawings exclude it (see T 1473/19, point 4.4 of the Reasons).

The board considers that a broad interpretation of the expression "transmission tasks" which includes transmission tasks internal to the network entity does not contradict the disclosure of the description and drawings of the patent. Rather, the claim wording encompasses additional alternatives.

6.4 In view of the above conclusion, the board sees no reason to deviate from the objective technical problem formulated for the higher-ranking requests, i.e. that of facilitating tile-based handling of the video data stream for parallel decoding.

6.5 The board further considers that the person skilled in the art would have arrived at the claimed solution in an obvious manner for the following reasons.

The board agrees with the respondent that it was common general knowledge that, in parallel decoding, different portions of data were assigned/transmitted to different decoder cores (see pages 3 and 4 of the respondent's letter filed on 25 May 2025). Starting from document D38, it would have been obvious to include tile entry point information and tile identifiers in an SEI message for tiles contained in subsequent data packets for a slice for the reasons set out in section 4. above, and to use the information in the SEI messages

to dispatch portions of data to respective decoder cores.

6.6 In view of the above, the subject-matter of claim 1 of auxiliary request 9 lacks inventive step over the disclosure of document D38 in combination with the common general knowledge of the person skilled in the art (Article 56 EPC).

6.7 Since claim 1 of auxiliary request 9 does not involve an inventive step, the issue of the admittance of this request into the appeal proceedings need not be decided.

6.8 In view of the conclusion reached on the basis of document D38 alone, the board need not consider the question of inventive step over the combined disclosure of documents D38 and D24.

7. *Auxiliary request 10 - Article 13(2) RPBA*

7.1 The claims of auxiliary request 10 were filed during the oral proceedings before the board, i.e. after the board's communication, and are therefore considered amendments within the meaning of Article 13(2) RPBA.

7.2 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.

Article 13(2) RPBA requires the party to explain not only why the case involved exceptional circumstances but also why its amendment, in terms of both content

and timing, was a justified response to these circumstances. In particular, where a party sought to amend its case at a very late stage in the proceedings, the cogent reasons referred to in Article 13(2) RPBA should include reasons why it had not been possible to file such an amendment earlier (see Case Law, V.A.4.5.4 c)).

- 7.3 The appellant submitted that the amendments to claim 1 of auxiliary request 10 were filed in response to, and addressed, the objection of lack of inventive step over document D38 alone, which was developed for the first time during the oral proceedings before the board. This situation constituted exceptional circumstances within the meaning of Article 13(2) RPBA. In addition, the amendments were not complex.

In the appellant's view, there was no difference between filing amended claims after the board's communication and at the oral proceedings if there were exceptional circumstances within the meaning of Article 13(2) RPBA.

- 7.4 The respondent submitted that section 22.8 of the board's communication raised the objection of inventive step exclusively on the basis of document D38 in the same terms as those discussed at the oral proceedings.

- 7.5 The board does not take auxiliary request 10 into account, under Article 13(2) RPBA.

- 7.5.1 Even assuming that a new objection had been raised in the board's communication and that exceptional circumstances could thereby be acknowledged, the board finds that the filing of auxiliary request 10 only at the oral proceedings before the board is not justified by cogent reasons as required by Article 13(2) RPBA.

The discussion relating to this objection during the oral proceedings is a natural development of the case which takes account of the appellant's arguments - for instance, regarding the interpretation of the expression "transmission tasks" - and is not to be considered an exceptional circumstance within the meaning of Article 13(2) RPBA.

Consequently, the appellant, who had been aware of the objection from the board's communication, has not convincingly justified why it had not been possible to file auxiliary request 10 earlier, in response to that communication.

- 7.5.2 Moreover, the board is not persuaded by the appellant's argument that the amendments to auxiliary request 10 are not complex. At first glance, there appears to be no clear relationship between the "result of the identification" or the "transmission tasks" and the "retransmission".

8. *Conclusion*

- 8.1 The ground for opposition under Article 100(a) EPC prejudices maintenance of the patent as granted. Claim 1 of auxiliary requests 1 to 9 does not meet the requirement of Article 56 EPC. Auxiliary request 10 is not taken into account, under Article 13(2) RPBA. 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 Chair:



K. Boelicke

B. Willems

Decision electronically authenticated