UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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SNAP INC.,
Petitioner

v.

NOKIA TECHNOLOGIES OY
Patent Owner

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Case No. IPR2025-01338
Patent. No. 7,724,818

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**PATENT OWNER'S PRELIMINARY RESPONSE**

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| **2002** | Petition for *Inter Partes* Review of U. S. Patent No. 7,724,818 in IPR2024-00572 |
| **2003** | *Certain Video Capable Electronic Devices, Including Computers, Streaming Devices, Televisions, and Components and Modules Thereof*, Inv. No. 337-TA-1380, Initial Determination (Dec. 20, 2024) |
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# I. INTRODUCTION

Snap Inc. ("Petitioner" or "Snap") petitioned for *inter partes* review of claims 1- 23 ("Challenged Claims") of U.S. Patent No. 7,724,818 ("'818 Patent"), which is owned by Nokia Technologies Oy ("Patent Owner" or "Nokia"). Petitioner asserts two grounds of unpatentability. The Board should decline institution because neither ground has a reasonable likelihood of rendering even a single claim unpatentable.

The '818 Patent was conceived during development of the H.264 Video Coding Standard ("H.264 Standard"), during which the industry eliminated the use of headers to code sequence and picture parameters into the bitstream. Initially, the industry settled on a design using a *single* parameter set concept from a proposal called VCEG-N52 (Petitioner's Ground 2 reference). This design was considered an improvement over the previously used headers because a single transmission could be used for all parameters, allowing out-of-band transmissions to improve efficiency.

The '818 Patent inventors, however, were the first to identify several disadvantages with VCEG-N52's single parameter set, including inefficiencies when only a few parameters required updating. In early 2002, the inventors fully described their invention, which (unlike VCEG-N52) uses separate picture and sequence parameter sets, in proposals to the H.264 Standard group. The invention was seen as a significant improvement over VCEG-N52 and was adopted into the standard.

Given this timeline, Ground 1 has a critical flaw; it is not prior art. In Ground 1, Petitioner relies on an Au reference, filed on November 22, 2002, which appears on the face of the ’818 Patent and was before the patent examiner during prosecution. Critically, Petitioner relies on Au for its description of parts of the H.264 Standard that were already conceived by the ’818 Patent inventors back on May 1, 2002, and were proposed for incorporation into the H.264 Standard by the ’818 Patent inventors themselves. Therefore, Au is simply a description of the invention of the ’818 Patent and is not “by another” under 35 U.S.C. § 102(e). Indeed, Au was previously asserted in an ITC Investigation involving the ’818 Patent, and in that Investigation, the ALJ found that the ’818 Patent was entitled to a priority date of May 1, 2002, rendering references like Au *not* prior art. Ex. 2003, 36-41 (“the 818 patent is entitled to a priority date of May 1, 2002); Ex. 2021, 8.

Moreover, Petitioner relies on pure expert testimony alone for numerous elements in the independent claims, in violation of 35 U.S.C. § 311(b) (petition may be based “only on the basis of prior art consisting of patents or printed publications”) and 37 C.F.R. § 42.104(b)(4) (“The petition must specify where each element of the claim is found in the prior art patents or printed publications relied upon.”). For this additional reason, Ground 1 fails.

For Ground 2, the combination of VCEG-N52 and Sriram fails because a POSITA would not have combined the two conflicting references, just as the ITC already concluded. Ex. 2003, 38-41. VCEG-N52's purpose was to replace sequence and picture headers with a *single* parameter set, which allegedly improved compression and efficiency. Sriram, which predates VCEG-N52, requires the exact *multiple header* structure that VCEG-N52 eliminated. Therefore, VCEG-N52 expressly teaches away from Sriram.

Moreover, the proposed modification of VCEG-N52 to create *multiple* parameter sets of different types is based on pure hindsight and contravenes VCEG-N52's central objective. A single transmission of all parameters was central to VCEG-N52's design, and no teaching in Sriram or otherwise would have motivated a POSITA to ignore VCEG-N52's central purpose. Instead, prior to the '818 Patent, industry experts expressly approved of VCEG-N52's design. Only *after* the inventors disclosed the '818 Patent's benefits did industry experts acknowledge VCEG-N52's flaws. Indeed, in a previous IPR proceeding involving this exact same Ground, Petitioner's expert, Dr. Saber, corroborated that a POSITA would not have viewed the inefficiencies of updating parameters with VCEG-N52's single parameter set as a problem. Ex. 2022, 132:4-135:10. He admitted that only the Nokia inventors recognized this problem. *Id*. Therefore, Dr. Saber's declaration that in the proposed combination parameters "would need to be transmitted only once" and "that sequence and GOP parameters would not need to be repeated," constitutes impermissible hindsight. Ex. 1003, ¶¶ 194, 203.

Further, although Dr. Saber predicates his motivation to combine on "promot[ing] Sriram's stated goal of reducing 'data bandwidth'" requirements and "increasing bandwidth" availability (Ex. 1003, ¶¶ 203, 194), Dr. Saber admitted the VCEG-N52/Sriram combination actually *triples* the number of transmitted fields, thereby *decreasing* available bandwidth and *increasing* bandwidth requirements (the exact opposite of what the proposed combination is intended to accomplish). Ex. 2022, 152:12-154:22; Ex. 2011, ¶¶ 125-129.

And finally, as with Ground 1, Petitioner relies on pure expert testimony alone for numerous elements in the independent claims, in violation of 35 U.S.C. § 311(b) and 37 C.F.R. § 42.104(b)(4). For this additional reason, Ground 2 fails.

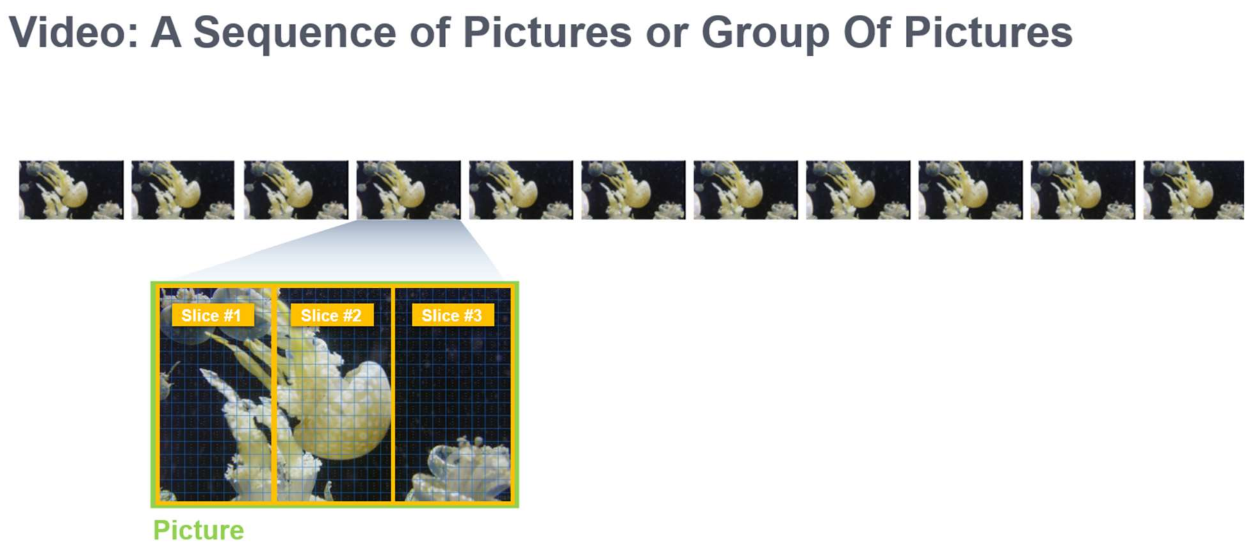
Notably, each of the issues identified above has already been tested in a previous ITC proceeding in 2024 (about 7 months before this Petition was filed). There, the ALJ determined the '818 Patent was entitled to a May 1, 2002, priority date and that there was no motivation to combine VCEG-N52 with Sriram. Ex. 2003, 36-47. Although the Board previously instituted IPR on the '818 Patent, the Board at that time did not have the benefit of the ITC record, ALJ determination, or Dr. Saber's own later testimony in that IPR proceeding that contradicts his declaration and confirms the patentability of all the Challenged Claims. Despite knowing all the fatal flaws exposed by multiple proceedings after that previous IPR's institution, Petitioner admits to submitting substantially the same flawed Petition here. Pet., 1 ("This petition is substantially similar to the previously instituted decision.").

Accordingly, Patent Owner requests that the Board deny institution of *inter partes* review.

## II. BACKGROUND

### A. The '818 Patent

Video is made of a sequence of pictures. To reduce the size of video stored and transmitted during streaming, an encoder compresses data before transmission using certain coding parameters, after which a decoder uncompresses the video to its original format using the same coding parameters. Ex. 1001, 11:9-34. As illustrated below, the '818 Patent relates to coding sequences of pictures in a bitstream, where parameters are defined in parameter sets, and each picture is made up of one or more slices. *Id.*, 1:6-9, 1:46-2:5.




Prior to the ’818 Patent, the conventional mechanism for an encoder to inform the decoder of the coding parameters used was to include those parameters in sequence, picture, and slice headers transmitted in the bitstream with the video data. *Id*., 2:49-51. These headers were used in video coding standards for over a decade prior to the ’818 Patent. Ex. 2011, ¶¶ 75-76, 88-94; Ex. 2023, 1429 (1716:3-17). During development of the H.264 Standard, a proposal by Stephen Wenger and Thomas Stockhammer (“VCEG-N52”) recommended a *single* parameter set to replace headers. Ex. 1001, 2:49-56[1]; Ex. 2011, ¶¶ 92-96. VCEG-N52 acknowledges multiple layers of information (*e.g.*, sequence, picture, and

[1] Nokia does not dispute that the ’818 Patent’s reference to VCEG-N55 should read “N52.” Pet., 3 n.2.

slice), but it specifically proposed consolidating that information into a single parameter set:

> Within this framework, however, each *parameter set*, as referenced by the slice header, uses one location which contains information of all four syntax levels. In other words, all storage spaces for parameter sets contain information of all the sequence, GOP, picture and slice layers.

Ex. 1012, 8. VCEG-N52 explained a key design benefit was reducing transmissions as compared to picture headers. *Id.* ("making more transmissions (e.g. picture headers) unnecessary"). VCEG-N52 was adopted by VCEG.[2] Ex. 2023, 1430-1431 (1717:7-1718:8); Ex. 2011, ¶¶ 107-109.

The '818 Patent explains that after VCEG-N52, parameters at the picture and sequence layers were included together in a single parameter set. Ex. 1001, 2:51-56. The '818 Patent explains at least two benefits of this single parameter set design: (i) "[i]f parameter sets are transmitted in-band, they can be repeated multiple times to improve error resilience," and (ii) "[p]arameter sets can be transmitted out-of-band using a reliable transmission protocol." *Id.*, 2:61-67.

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[2] VCEG (Video Coding Experts Group), comprising the foremost video coding experts across industry and academia, developed multiple standards, including MPEG-2 and H.263. Ex. 2011, ¶¶ 88-90, 107-109. VCEG was a part of the Joint Video Team (JVT) that developed H.264.

The inventors of the ’818 Patent, however, were the first to identify significant problems with this design. Ex. 2022, 132:7-134:16, 135:4-10; Ex. 2023, 1431-1432 (1718:9-1719:11). First, if sent in-band, a single parameter set creates problems related to compression and latency. Specifically, if a single picture parameter or sequence parameter changes, the entire parameter set must be retransmitted. Ex. 1001, 3:17-28, 6:54-57; Ex. 2011, ¶ 76. Second, if sent out-of-band, the transmission, reception, and storage of parameter sets with repetitive information was wasteful, and caused latency and reliability issues. *Id*.

The ’818 Patent is directed to a novel solution to coding parameters that “split[s] the parameter set structure [in]to multiple parameter set structures according to the persistency and target of the parameters.” Ex. 1001, 4:15-19. The ’818 Patent discloses the unconventional solution of placing parameters that may change in every slice or are likely to change in every picture into the slice header, placing those that are allowed (but unlikely) to change in every picture in a picture parameter set (PPS), and placing the parameters that will not change in the video sequence in a sequence parameter set (SPS). *Id*., 4:15-31, 6:50-59, 7:39-42. The ’818 Patent allows for less parameter data to be stored, coded, and transmitted, as less frequently changing parameters are sent less often, which improves compression efficiency and was a significant advancement over existing technology. *Id.*; Ex. 2011, ¶¶ 76-77, 92-93.

Another key part of the invention is including at least one parameter value likely to change with every picture (*i.e.*, "picture parameter value") in the slice header. This is important because if every picture parameter whose value changed in each picture were in the PPS, a different PPS would be needed for every picture, which would reduce the efficiency and compression benefits of having split parameters into different types of parameter sets. *See, e.g.*, Ex. 1001, Abstract, 4:15-48. The '818 Patent solves this problem by including at least one picture parameter value in the slice header instead of the PPS. Ex. 2011, ¶ 79.

Figure 1 of the '818 Patent illustrates an example of the parameter sets included in the invention:

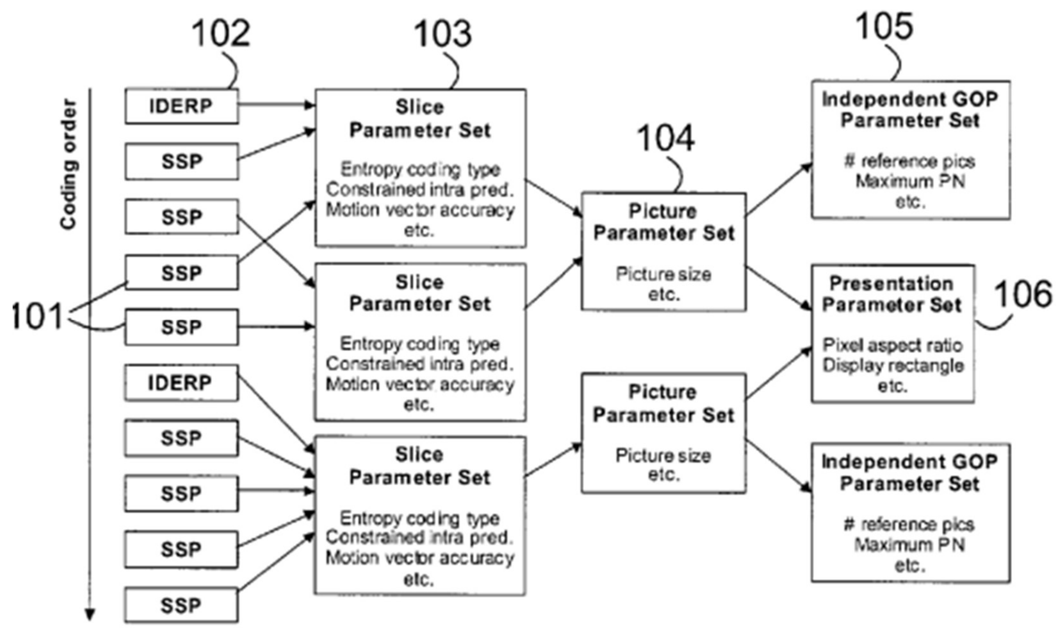


Figure 1 shows four parameter sets (independent GOP, picture, presentation, and slice) and slices (SSP), with arrows indicating references between the structures. Ex. 1001, 7:45-60; Ex. 2011, ¶¶ 75-81, 95.

As described in detail below, the inventors presented the ’818 Patent invention to the JVT, and the invention was adopted into the H.264 Standard and then uniformly praised in numerous publications.

**B. ITC Investigation**

The ’818 Patent was asserted against different parties in an ITC proceeding in 2024. Pet., 93. The ITC held a full evidentiary hearing, with testimony from fact and expert witnesses, regarding infringement and validity of the ’818 Patent.

Of relevance here, the ALJ determined the ’818 Patent was entitled to a May 1, 2002, conception date based on Nokia’s proposal of the invention to the H.264 Standard. Ex. 2003, 36-41. The ALJ found the invention was adopted and diligently reduced to practice in software by Mr. Suehring with the assistance of Dr. Wenger, both of whose work inured to the benefit of the inventors, as they acted under the inventors’ authorization and delegation. *Id*. As such, the ALJ determined that references after May 1, 2002 (such as Ground 1 here) were not prior art. *Id*., 42. The ALJ also determined the combination of VCEG-N52/Sriram (Ground 2) failed because a POSITA would not have been motivated to combine the references. *Id*., 44-47.

The evidence and testimony here is even stronger than that presented at the ITC, and therefore the Board should similarly conclude that there is no reasonable likelihood that the asserted Grounds invalidate any of the ’818 Patent claims.

### C. Person of Ordinary Skill in the Art (POSITA)

Patent Owner contends that a POSITA for the ’818 Patent would have a bachelor’s degree in electrical engineering, computer engineering, or a related field, with about two years of experience in video decoding and encoding technologies. Ex. 2011, ¶ 20. Additional work or practical experience may qualify one not having requisite education as a POSITA while a higher level of education could offset less experience. *Id.*

While Petitioner provides a slightly different definition, Patent Owner does not believe the ultimate definition of a POSITA impacts the issues presented herein for the purposes of institution. Pet., 8.

### D. Claim Construction

Petitioner contends that the claims “should be construed ‘in accordance with the ordinary and customary meaning of such claim[s] as understood by one ordinary skill in the art and the prosecution history pertaining to the patent.’ 37 C.F.R. § 42.100(b).” Pet., 9-10. Petitioner also proposes constructions for Claim 22’s and 23’s “means for” terms. Pet., 10. Petitioner asserts that no further constructions are necessary at this time. Pet., 9.

While Nokia applies the "means for" constructions offered in the Petition and agrees that no additional terms need to be construed in order to deny institution, Nokia reserves the right to construe claim terms, should this case be instituted.

## III. THE BOARD SHOULD NOT INSTITUTE *INTER PARTES* REVIEW

### A. Petitioner Has Failed to Establish a Reasonable Likelihood that Any Challenged Claim Is Unpatentable under 37 C.F.R. § 42.108(c).

Petitioner has failed to meet its obligations with respect to the challenged claims in the Petition. Pursuant to 37 C.F.R. § 42.108(c), Petitioner must demonstrate a reasonable likelihood "at least one of the claims challenged in the petition is unpatentable" to warrant institution of an *inter partes* review for that claim. Petitioner has not done so.

#### 1) Ground 1 – Au Does Not Render Obvious the Challenged Claims of the '818 Patent

##### a) Au is not "by another"

Petitioner alleges Au is prior art under 35 U.S.C. § 102(e)(2). Pet., 1. However, Au is not "by another" as required by § 102(e)(2) because the disclosures relied upon by Petitioner in Au were conceived of by the inventors of the '818 Patent.

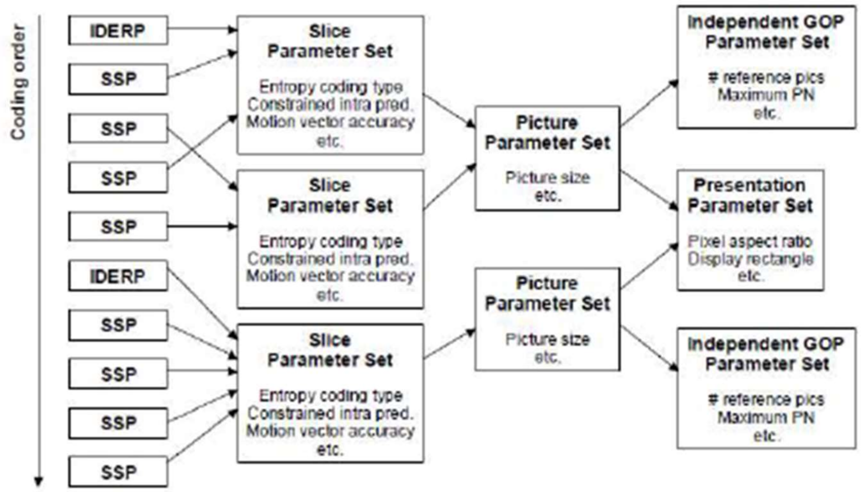
Inventors Miska Hannuksela and Ye-Kui Wang conceived of and publicly submitted JVT-C078 and JVT-C078 Annex A for adoption into the H.264

Standard. *See* Ex. 2013; Ex. 2014; Ex. 2019, ¶¶ 3-4; Ex. 2020, ¶¶ 3-4. These contributions were eventually adopted and included in that Standard. These same sections, which were developed from the inventors' contributions, are now being cited against their own patent. As a result, the portions of Au relied upon in the Petition were conceived by inventors Miska Hannuksela and Ye-Kui Wang and, thus, are not "by another" as is required under § 102(e)(2).

For at least these reasons, Ground 1 fails.

#### i. The Inventors conceived of the relevant portion of the standard

The proposals conceived of by Miska Hannuksela and Ye-Kui Wang were submitted to the JVT on May 1, 2002 as JVT-C078 and JVT-C078 Annex A. *See* Ex. 2013; Ex. 2014; Ex. 2019, ¶¶ 3-4; Ex. 2020, ¶¶ 3-4. Miska Hannuksela and Ye-Kui Wang were the first to recognize that the single parameter set concept as disclosed in VCEG-N52 had several drawbacks. Ex. 2011, ¶ 92; Ex. 2022, 132:7-134:16, Ex. 2013, 2. In the draft proposals, Miska Hannuksela and Ye-Kui Wang proposed using multiple parameter set structures, rather than the single parameter set structure of VCEG-N52. Ex. 2011, ¶ 93; Ex. 2013, 2. Additionally, JVT-C078 disclosed a figure showing the hierarchical parameter sets. Ex. 2011, ¶ 95. The same figure is in the '818 Patent.



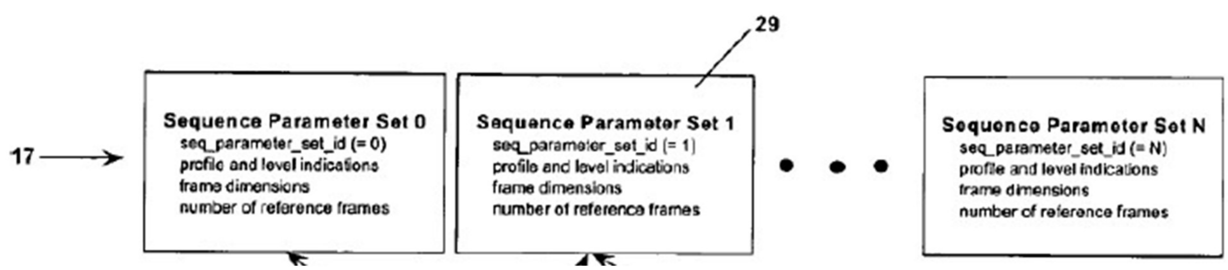

Ex. 2013, 3; Ex. 1001, Fig. 1.

While JVT-C078 was not adopted immediately in its entirety (*see* Ex. 2015, 29), its concepts were eventually adopted. Ex. 2011, ¶¶ 96-106. In the intervening period, additional details further explaining the picture parameter set concept of JVT-C078 and explaining various implementation details, such as syntax, were added. Ex. 2017, 32 (adopting "high-level syntax output"). Additional working groups provided additional syntax and additional semantic descriptions. *See* Ex. 2018. Despite these additional details relevant to implementation of the inventor's concepts, the concepts of JVT-C078 that were conceived of by the inventors were eventually adopted into the H.264 Standard and have been relied upon in the Petition. Ex. 2017, 56-57; Ex. 2011, ¶¶ 96-106; Ex. 2023, 151-159 (162:25-170:21), 164 (175:2-12).

### ii. The Petition relies on portions of Au that were conceived of by the inventors of the '818 Patent

The concepts that the inventors conceived of in JVT-C078 were included in Au, are included in the '818 Patent claims, and as is demonstrated below, are being relied upon in the Petition. As such, these concepts are not "by another."

The Petition admits that the "parameter sets" disclosed in Au are the "sequence 17 and picture level 19 ***in the H.264 Standard***." Pet., 10-11 (citing Ex. 1008, 8:9-11) (emphasis added). More specifically, when referring to limitations 1[a] and 6[a], which in turn are cited for every independent claim, Petitioner relies on "sequence parameter set 29" in Figure 2. Pet., 14-15 (citing Ex. 1008, 8:16-19). But this disclosure ("independent_GOP_parameter set") was conceived of in the JVT-C078 contribution on pages 4-5 and 10. *See* Ex. 1003, ¶ 46 (noting that "a sequence comprises a group of pictures (GOP)").

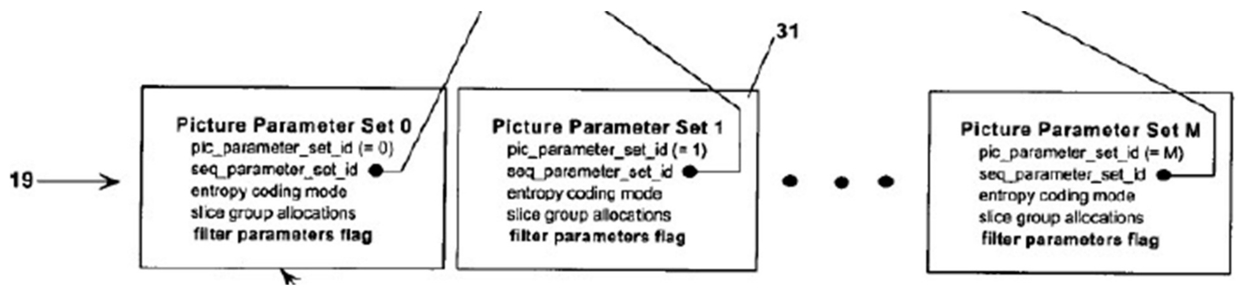



Pet., 12 (citing Ex. 1008, Fig. 2).

| independent_GOP_parameter_set( ) { | Category | Mnemonic |
|---|---|---|
| parameter_set_id(independent_GOP_parameter_set) | | |
| **profile** | | ecselbf |
| **level** | | ecselbf |
| **version** | | ecselbf |
| **log2_max_picture_number_minus_4** | | ecselbf |
| **number_of_reference_picture_buffers_minus_1** | | ecselbf |
| **required_picture_number_update_behavior** | | uimsbf(1) |
| } | | |

Ex. 2013, 5.

When referring to limitations 1[b] and 6[b], which in turn are cited for every independent claim, Petitioner relies on "picture parameter set 31" in Figure 2. Pet., 16-17 (citing Ex. 1008, 9:8-13). But this disclosure ("picture_parameter_set()") was conceived of in the JVT-C078 contribution. Ex. 2013, 6, 10.



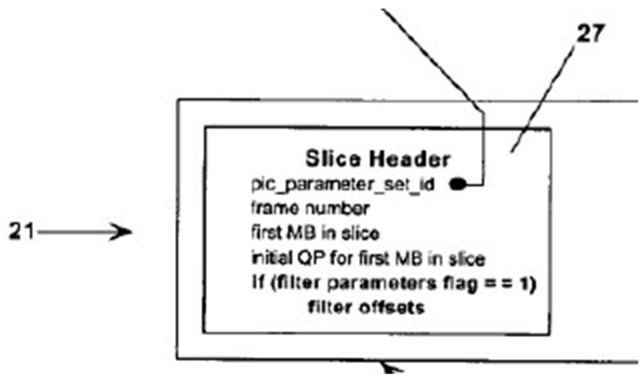

Pet., 12 (citing Ex. 1008, Fig. 2).

| picture_parameter_set( ) { | Category | Mnemonic |
|---|---|---|
| parameter_set_id(picture_parameter_set) | | |
| parameter_set_id(independent_GOP_parameter_set) | | |
| parameter_set_id(presentation_parameter_set) | | |
| **picture_width_in_MBs_minus_1** | | ecselbf |
| **picture_height_in_MBs_minus_1** | | ecselbf |
| } | | |

Ex. 2013, 6.

When referring to limitations 1[c], 6[c], and 6[d], which in turn are cited for every independent claim, Petitioner relies on "slice header 27." Pet., 17 (citing Ex.

1008, 8:39-40). But the use of a slice header and related concepts was conceived of in the JVT-C078 contribution. Ex. 2013, 9.




Pet., 12 (citing Ex. 1008, Fig. 2).

**3.9 Slice Header**

The proposed slice header modifications relative to JVT WD2 are included in the accompanying annex of the contribution. In addition to including a parameter set identifier in the slice header, the annex proposes removal of redundancies and inconsistencies from the slice header. See the comments in-line for the justification of the each detailed proposal.

Ex. 2013, 9.

As can be seen above, while additional details and parameters were varied according to choices made during the standardization process, the concepts conceived of by the inventors in the JVT-C078 contribution are present in Au. Petitioner relies on these same citations from Au for corresponding claim elements in each of the claims challenged in this Petition.

Indeed, Dr. Saber admitted that Au merely describes the H.264 Standard derived from adopted proposals by November 2002. Ex. 2022, 93:17-96:18, 97:8-21. However, the '818 Patent inventors already invented and incorporated those features into the standard by at least May or July 2002. Ex. 2011, ¶¶ 39, 85, 91, 97, 114; Ex. 2023, 97-117 (108:14-128:14), 128-130 (139:8-141:8), 144-164 (155:11-175:17); Ex. 2003, 39 ("There can be no doubt that JVT-D145 [Ex. 2018], containing the invention of the 818 patent, was going to be implemented into the standard"). Therefore, the '818 Patent inventors contributed in significant part, if not entirely, to the relied-upon disclosures of Au. Ex. 2011, ¶¶ 39, 85, 91, 97, 114. Thus, Au is not prior art.

#### iii. To Qualify as Prior Art Under § 102(e)(2), Subject Matter in Au Must Be Invented "By Another."

An inventor's own work is not prior art under § 102(e)(2). *See In re Katz*, 687 F.2d 450, 454 (C.C.P.A. 1982).

Under § 102(e)(2), a claim is invalid only if "the invention was described in … a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent." The statute's reference to "by another" means that an application issued to the same inventive entity cannot qualify as § 102(e) prior art. *EmeraChem Holdings, LLC v. Volkswagen Grp. of Am., Inc.,* 859 F.3d 1341, 1345 (Fed. Cir. 2017) (citing *Riverwood Int'l Corp. v. R.A. Jones & Co.,* 324 F.3d 1346, 1355-56 (Fed. Cir. 2003)). Whereas here, when a patent was issued to a different inventor Au, "the relevant question is not whether the references list different inventors, but '*whether the portions of the reference* *relied on as prior art, and the subject matter of the claims in question, represent the work of a common inventive entity*.'" *EmeraChem*, 859 F.3d at 1345 (citing *Riverwood*, 324 F.3d at 1356) (emphasis added).

To determine whether "a reference…is by another," the Federal Circuit applies the following test:

> (1) Determine what portions of the reference patent were relied on as prior art to anticipate the claim limitations at issue, (2) evaluate the degree to which those portions were conceived "by another," and (3) decide whether that other person's contribution is significant enough, when measured against the full anticipating disclosure, to render him a joint inventor of the applied portions of the reference patent.

*Duncan Parking Techs., Inc. v. IPS Grp., Inc*., 914 F.3d 1347, 1358 (Fed. Cir. 2019), *see, e.g., Etchicon LLC v. Intuitive Surgical, Inc.*, 847 F. App'x 901, 908-09 (Fed. Cir. 2021) (applying the *Duncan Parking* test and reversing the Board).

There is no dispute that Miska Hannuksela and Ye-Kui Wang are inventors of the '818 Patent. *See* Ex. 1001. There also is no dispute that Miska Hannuksela and Ye-Kui Wang are the sole contributors of JVT-C078. Ex. 2003, 1; Ex. 2019, ¶¶ 3-4; Ex. 2020, ¶¶ 3-4. This means that under the *Duncan Parking* test, for Au to be prior art, someone other than the named inventors must have "conceived" of some significant contribution to the relied-upon portions of the reference. But as can be seen above, the portions of Au relied upon by the Petition are simply adopted from the original contributions of Miska Hannuksela and Ye-Kui Wang. Any additional details in Au are not new concepts but instead are related to mere syntax and other implementation details derived as a result of the original contributions in JVT-C078, and were in any event not relied upon by the Petition for its analysis.

To the extent the Board is concerned that any of the relied-upon portions do not represent the work of Miska Hannuksela and Ye-Kui Wang in view of the subsequent standards development and implementation efforts that occurred prior to Au, such concerns are misplaced. So too are any concerns that unrelated portions of Au or implementation details, such as syntax, were contributed by others. The law is clear that the "by another" analysis asks who invented the relied-upon portions in the context of the reference. Indeed, the "by another" test in *Duncan Parking* presumes that the relied-upon portions are inventive by asking whether those applied portions were "conceived" and "joint[ly] invent[ed]" by some other person. *Duncan Parking*, 914 F.3d at 1358; s*ee also CSL Behring LLC v. Bioverativ Therapeutics Inc.*, IPR2018-01313, Paper 10, 11 (P.T.A.B. Jan. 9, 2019) ("As to what inquiry is relevant, in *Katz* the Federal Circuit determined that a reference by an inventor co-authored with non-inventors was not § 102(a) prior art on the basis that the co-authors contribution fails to rise to joint inventorship …

." (citing *In re Katz*, 687 F.2d 450, 455-56 (1982))). Moreover, the *Duncan Parking* test requires an identifiable "other person[]" in order for a reference to be "by another," and does not contemplate that relied-upon portions of a reference can be contributed generally by "those in the prior art." *Duncan Parking*, 914 F.3d at 1358. Here, the Petition does not identify such "other person" as to the relied upon portions in Au, which at best would have been unidentified participants in the H.264 Standard, and not Au himself. Ex. 1008, 8:9-11 (citing the H.264 Standard as the source); Ex. 2022, 93:17-96:18, 97:8-21 (admitting Au merely describes the H.264 Standard).

Accordingly, the portions of Au relied upon, which merely describe the H.264 Standard at that time, represent the work of the inventors. All of this evidence combined therefore points to the undeniable conclusion that the subject matter relied on in the Au reference is not "by another," and not prior art under § 102(e)(2), as alleged in the Petition. In addition to Au not being "by another," the '818 Patent has an earlier invention date based at least on the contribution documents JVT-C078 and JVT-C078 Annex A submitted by Miska Hannuksela and Ye-Kui Wang. *See* Ex. 2013; Ex. 2014; Ex. 2019, ¶¶ 3-4; Ex. 2020, ¶¶ 3-4; Ex. 2003, 36-41 (relying on JVT-C078 (Ex. 2013), JVT-C078 Annex A (Ex. 2014), JVT-D145 (Ex. 2018)); Ex. 2023, 99 (110:4-19), 102-103 (113:18-114:18), 106-

107 (117:23-118:13), 108-110 (119:20-121:4), 151-159 (162:25-170:21), 164 (175:2-12); Ex. 2011, ¶¶ 39, 85, 91, 97, 114.

#### b) Petitioner's Reliance Solely on Expert Testimony for Elements Missing from Au Should be Rejected

For each of the independent claims, the Petition relies solely on expert testimony for at least one element missing from the alleged prior art. 35 U.S.C. § 311(b) requires that the grounds for a petition may be based "only on the basis of prior art consisting of patents or printed publications," and 37 C.F.R. § 42.104(b)(4) states that the petition 'must specify where each element of the claim is found in the prior art patents or printed publications relied upon.'" Section 311(b)'s requirements mean that other sources—such as "common sense," applicant-admitted prior art, and expert testimony—may not be used to supply missing claim limitations that are not found in the prior art forming the grounds for *inter partes* review.[3] *Qualcomm Inc. v. Apple Inc.*, 134 F.4th 1355, 1364-65 (Fed.

[3] *See also* July 31, 2025 Memorandum by Coke Morgan Stewart, "Enforcement and Non-Waiver of 37 C.F.R. § 42.104(b)(4) and Permissible Uses of General Knowledge in Inter Partes Review," ("2025 Memorandum"), available at https://www.uspto.gov/sites/default/files/documents/aapa_memo_final__signed.pd

Cir. 2025) ("'the basis' of an IPR ground asserting unpatentability can 'only' include 'prior art consisting of patents or printed publications'" and cannot include AAPA); *Arendi S.A.R.L. v. Apply, Inc.*, 832 F.3d 1355, 1361–62 (Fed. Cir. 2016) (holding that reliance on common sense in an obviousness analysis is "typically invoked to provide a known motivation to combine, not to supply a missing claim limitation").

Petitioner's reliance solely on expert testimony for certain missing limitations in each of the independent claims should be rejected.

#### i. Petitioner Relies Solely on Expert Testimony for 1[c]/10[d]/12[d]/14[d]/16[e]/20[c]/22[c]

For limitation 1[c], which requires "the picture parameter value remaining unchanged at least in all slice headers of one picture," Petitioner cites only to expert testimony and nothing in any alleged prior art reference itself. Pet., 18 (citing Au only for "picture data" but not for a "value remaining unchanged at least in all slice headers of one picture"). Likewise, Dr. Saber cites to Au only for "picture data" but not for a "value remaining unchanged at least in all slice headers of one picture." Ex. 1003, ¶¶ 74-75. Limitations 10[d], 12[d], 14[d], 16[e], 20[c],

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f. While this updated guidance applies to petitions for *inter partes* review filed on or after September 1, 2025, the concerns identified in the guidance also apply here.

22[c] all cite to 1[c]. Pet., 28, 34, 36, 38, 40, 44. Petitioner's reliance solely on expert testimony to supply this element missing from Au therefore violates 35 U.S.C. § 311(b) and 37 C.F.R. § 42.104(b)(4) and should be rejected.

Additionally, for 1[c]'s "defining, in an encoder" limitation, the Petition cites back to "Section VII.A.2.b; Saber, ¶¶68-70," both of which refer only to values in a sequence parameter set and in a picture parameter set, but *not* to the required "at least one picture parameter value in a slice header." Pet., 17. Thus, there is no evidence at all to support that Au discloses this element in any of the independent encoding claims.

For at least these reasons, the Petition fails to set forth a reasonable likelihood that any of the encoding claims are obvious over Au.

#### ii. Petitioner Relies Solely on Expert Testimony for 6[c]/11[d]/12[i]/15[d]/21[c]/23[c]

For limitation 6[c], which requires "the at least one second picture parameter value remaining unchanged at least in all slice headers of one picture," Petitioner cites only to expert testimony and nothing in any alleged prior art reference itself. Pet., 24 (citing Au only for "picture data" but not for a "value remaining unchanged at least in all slice headers of one picture"). Likewise, Dr. Saber cites to Au only for "picture data" but not for a "value remaining unchanged at least in all slice headers of one picture." Ex. 1003, ¶ 95. Limitations 11[d], 12[i], 15[d], 21[c], and 23[c] all rely on 6[c]. Pet., 31, 34, 41, 47. Petitioner's reliance solely on expert testimony to supply this element missing from Au therefore violates 35 U.S.C. § 311(b) and 37 C.F.R. § 42.104(b)(4) and should be rejected.

Additionally, for 1[c]'s "forming, in the decoder" limitation, the Petition cites only to Dr. Saber's declaration, which in turn also fails to cite to any alleged prior art reference to disclose or render obvious the limitation. Pet., 24; Ex. 1003, ¶ 94.

For at least these reasons, the Petition fails to set forth a reasonable likelihood that any of the decoding claims are obvious over Au.

**c) Dependent claims 2-5, 7-9, 13, 17-19**

Claims 2-5, 7-9, 13, 17-19 all depend from various independent claims. As discussed above, Au fails to disclose or render obvious any of the independent claims. Therefore, Au also fails to disclose or render obvious any of the dependent claims.

**2) Ground 2 – The Combination of VCEG-N52 and Sriram Does Not Render Obvious the Challenged Claims of the '818 Patent**

Petitioner proposes to modify VCEG-N52's single parameter set design using the header designs of Sriram to create the sequence and picture parameter sets of the '818 Patent. As described above, VCEG-N52's entire premise was to replace sequence and picture headers with a *single* parameter set, and VCEG-N52 expressly touted the benefits of a *single* set because it limited the number of transmissions and allowed out-of-band signaling. Ex. 2011, ¶¶ 92, 107-109, 132-134. A POSITA would not have been motivated to modify VCEG-N52 to incorporate features (multiple smaller set types) it expressly eliminated. Ex. 2011, ¶¶ 121-148. Additionally, the asserted combination fails to render obvious numerous claim elements.

Notably, the ALJ in the previous ITC proceeding considered all the same arguments presented in the Petition and found no motivation to combine. Ex. 2003, 44-47; Ex. 2011, ¶ 120.

**a) There is no motivation to combine VCEG-N52 and Sriram**

Petitioner argues a POSITA would have combined VCEG-N52 and Sriram because a POSITA would have been motivated to split VCEG-N52's single parameter set into multiple parameters sets considering Sriram's disclosure of "smaller data structures for holding the several parameters extracted from the picture, sequence and GOP headers." Pet., 52. Petitioner is wrong for the following several reasons. Ex. 2011, ¶¶ 121-148.

**i. VCEG-N52 and Sriram are inapposite**

Petitioner argues that a POSITA would have been motivated to combine VCEG-N52 and Sriram because both references disclose video decoding and processing parameters for video decoding. Pet., 51-52. However, Petitioner fails to consider that the references are inapposite and have distinct and incompatible implementations.

VCEG-N52 states that its "main design consideration is to distinguish clearly between such media information that has to be transported in real-time and non-real-time information, which is transported by means other than the media RTP stream." Ex. 1012, 1. This consideration led the authors of VCEG-N52 to propose a parameter set concept at the encoder separate from the rest of the data, which "leads to non self-contained RTP packet streams." *Id.*; Ex. 2011, ¶¶ 136-148.

In contrast, Sriram is directed to splitting the video bitstream into multiple independent parts at the decoder (not the encoder) that can be processed independently. Ex. 1021, 1:43-57; Pet., 49-50. Moreover, Sriram describes extracting parameters from the picture, sequence, and GOP *headers* at the decoder and then creating smaller data structures out of those parameters with pointers between the structures. Ex. 1021, 12:64-13:13; Pet., 50.

Based on the teachings of VCEG-N52 and Sriram, a POSITA reading VCEG-N52 would not have been motivated to look to Sriram, as the references deal with entirely different and unrelated issues, and seek to solve those issues in entirely different ways (*e.g.*, parameter set versus headers). Ex. 2011, ¶¶ 122-123, 133-135.

The Board's previous Institution Decision disagreed that parameter sets were fundamentally very different than headers (Ex. 2005, 79), but all the experts agree that "[a] header and parameter set are different architectures and serve different functions." Ex. 2024, ¶ 349; Ex. 2022, 120:15-121:17; Ex. 2011, ¶¶ 133-135. Headers had been used for over a decade until VCEG-N52 proposed a fundamental shift away from that design and towards a single parameter set. Ex. 2023, 1429 (1716:3-17); Ex. 2022, 115:19-116:19, 119:18-21, 129:15-130:7; Ex. 2011, ¶¶ 92-94. There is no debate among the experts regarding the differences. Headers are transmitted in-band at pre-defined locations within the bitstream, while parameter sets are transmitted out-of-band specifically to avoid breaking up the bitstream. Ex. 2022, 115:20-117:1, 40:5-18, 125:6-21; Ex. 2011, ¶ 133-134. Notably, in the ITC, the ALJ found this difference was important for efficiency and error resiliency. Ex. 2003, 44-45. Because Sriram requires headers to create its data structures, and VCEG-N52 eliminates sequence and picture headers, combining the references would be unsuitable for VCEG-N52's intended purpose and renders VCEG-N52 inoperable. Ex. 2022, 141:6-143:6, 145:12-146:8; Ex. 1021, 12:64-66; Ex. 2011, ¶ 135; Ex. 2023, 1434 (1721:15-17), 1436 (1723:2-23). *ASUSTeK Computer, Inc. v. LiTL LLC*, IPR2024-00532, Paper 20, 21, 23 (PTAB May 23, 2024).

#### ii. Sriram's data structures contradict the basic objective of VCEG-N52's parameter set concept

Petitioner argues that a POSITA would have been motivated to combine VCEG-N52 and Sriram because "a POSITA would have been motivated to improve VCEG-N52's parameter set concept based on Sriram's teaching of '[s]everal smaller data structures' for holding the 'several parameters' extracted from the 'picture, sequence and GOP headers.'" Pet., 52.

This argument runs contrary to VCEG-N52's basic objective, which specifically replaced the header architecture with a *single* parameter set. Ex. 2011, ¶ 132. Both experts in this proceeding and a patent challenger's expert in a previous ITC Investigation (Dr. Storer) agree that VCEG-N52 introduced parameter sets to replace headers, which had been used in all previous coding standards. Ex. 2022, 125:22-126:4, 115:20-117:1, 129:15-130:7; Ex. 1012, 8; Ex. 2011, ¶¶ 132-135; Ex. 2024, ¶ 183. Sriram pre-dates VCEG-N52 and requires using the very headers that VCEG-N52 expressly eliminated. Ex. 2011, ¶¶ 107-113, 122-124; Ex. 2022, 141:6-143:6, 145:12-146:8; Ex. 1021, 12:64-66. VCEG-N52 therefore teaches away from using the sequence and picture headers disclosed Sriram, and a POSITA would not have been motivated to combine the references. Ex. 2011, ¶ 135.

Moreover, as described above, VCEG-N52 acknowledged that multiple layers of information exist (*e.g.*, sequence, picture, and slice layers), but it specifically proposed that all information be included in a single parameter set:

> Within this framework, however, each *parameter set*, as referenced by the slice header, uses *one location which contains information of all four syntax levels*. In other words, all storage spaces for *parameter sets contain information of all the sequence, GOP, picture and slice layers*.

Ex. 1012, 8 (emphasis added); Ex. 2011, ¶ 132. VCEG-N52 described that a *single* parameter set led to significant benefits, including reducing the number of transmissions compared to using picture headers. Ex. 1012, 8 ("making more transmissions (e.g. picture headers) unnecessary"). Modifying VCEG-N52 considering Sriram to produce *multiple* types of parameter sets would contravene VCEG-N52's goal because it would require more transmissions to convey each set of parameters. Ex. 2011, ¶¶ 125-129; Ex. 2023, 1432-1433 (1719:23-1720:3), 1435 (1722:9-24).

Notably, Dr. Saber admitted the whole idea behind VCEG-N52 was consolidation of all the parameters into a single parameter set to reduce transmissions, but his proposed combination would run counter that goal. Ex. 2022, 128:18-129:3; Ex. 2011, ¶¶ 130-135. The Federal Circuit has rejected modifications that would "destroy the basic objective" of the reference. *TriVascular v. Samuels*, 812 F.3d 1056, 1067-68 (Fed. Cir. 2016).

#### iii. Dr. Saber admits his combination *decreases* bandwidth availability rather than *increases* bandwidth availability

Dr. Saber opines that "a POSITA would be motivated to break up VCEG-N52's parameter set into multiple parameter sets" so that "each level of parameters would need to be transmitted only once," thereby "increasing bandwidth" availability. Ex. 1003, ¶ 194. However, the proposed combination would contravene Dr. Saber's own stated goal of increasing compression efficiency because Dr. Saber admitted the proposed combination *adds* fields of data not previously needed, resulting in an *increase* in the amount of data required. Ex. 2022, 151:12-154:22, 157:2-9; Ex. 2011, ¶¶ 125-129. Due to the additional identifiers and pointers needed to break up VCEG-N52's parameter sets, what took 4 fields of data in VCEG-N52, now *triples* to 12 in the asserted combination. Ex. 1003, ¶¶ 196-197; Ex. 2011, ¶¶ 127-128. The asserted combination therefore *decreases* bandwidth availability (and *increases* bandwidth required), in contrast to Sriram's teaching to "significantly reduce[] the number of fields . . . and reduce[] the data bandwidth requirements." Ex. 1021, 6:29-33; Ex. 2005, 55, 77. Not only does the combination fail to satisfy the alleged motivation to combine, the *decreased* bandwidth availability (*increased* bandwidth requirements) *teaches away* from the proposed combination. Ex. 2011, ¶¶ 122-123, 127-128, 133-135.

The Board's previous Institution Decision relied on Dr. Saber's explanation that "[i]n the combination, each level of parameter would need to be transmitted only once." Ex. 2005, 72 (citing Dr. Saber's declaration). As described above, however, VCEG-N52 already expressly requires one transmission for each, full parameter set, and therefore teaches away from the proposed combination with Sriram which requires multiple transmissions for the broken-up parameter sets. Ex. 2011, ¶¶ 130-131. In fact, Sriram acknowledges with its data structures, parameters may in fact be repeated since they are being used to process parallel bit streams. Ex. 2011, ¶¶ 113, 137; Ex. 1021, 6:40-43.

The Petition and Board's previous Institution Decision also cite Sriram's alleged teaching of "efficiently process[ing] the parameters" and "increasing bandwidth" availability. Pet., 51-52; Ex. 2005, 76-77. But a general desire "to improve VCEG-N52's parameter set" is legally insufficient to support a motivation to combine. Pet., 52; Ex. 2005, 71. *Google LLC v. Sonos, Inc.*, 2024 U.S. App. LEXIS 12394, *5-6 (Fed. Cir. 2024). As described repeatedly, VCEG-N52 taught that a single parameter set was efficient and reduced bandwidth requirements. Ex. 1012, 8. VCEG, the foremost experts in the video coding industry, accepted this proposal. Ex. 2011, ¶¶ 88-90; Ex. 2023, 1426-1427 (1713:25-1714:24). The '818 Patent inventors were the first to identify that a single parameter set had disadvantages and that separate sequence and picture parameter sets were far superior for compression and efficiency. Ex. 2011, ¶¶ 91-106. Thus, the mere statement that increasing efficiency and reducing bandwidth is favorable would not lead a POSITA to the ’818 Patent.

#### iv. Dr. Saber admitted his motivation to combine was based on hindsight

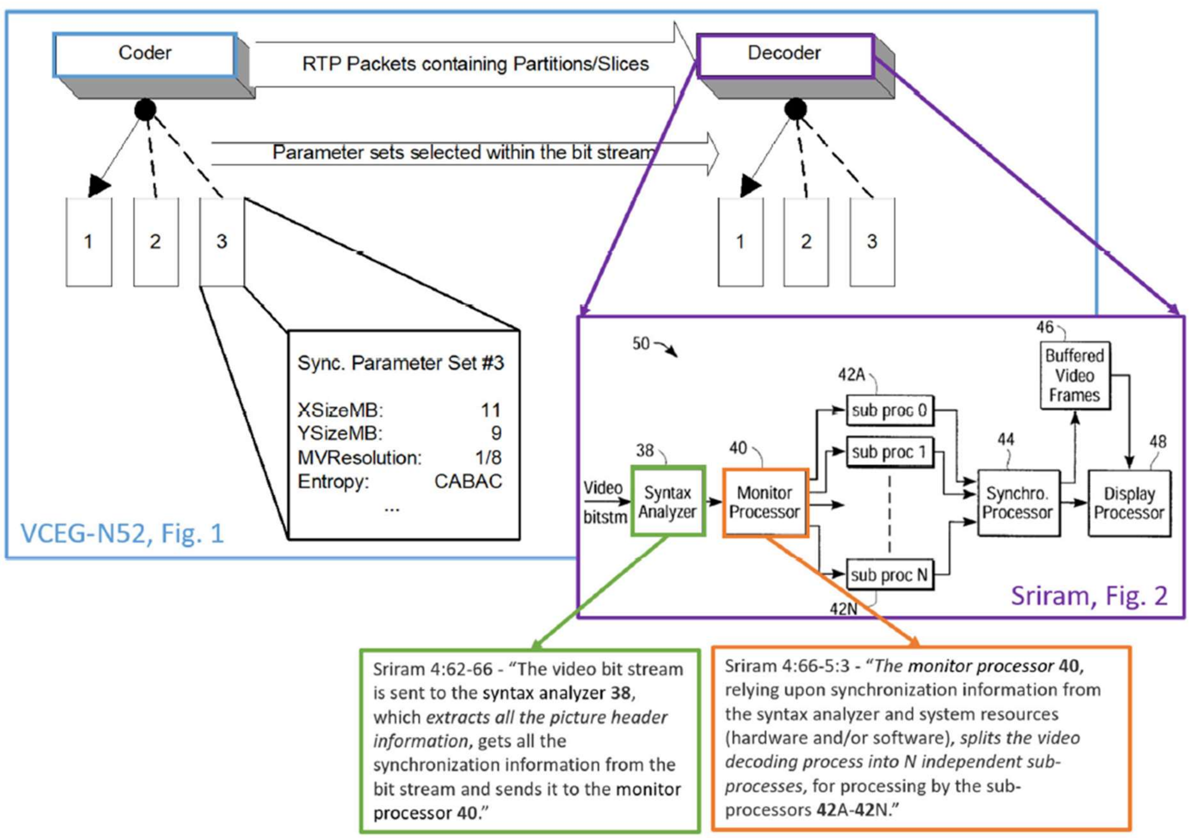
Dr. Saber testified that a POSITA would not have thought VCEG-N52’s repeated transmission of unchanged parameters was a problem. Ex. 2022, 132:7-134:16. He admitted that only the ’818 Patent inventors recognized the problems with VCEG-N52. Ex. 2022, 135:4-10. Dr. Saber’s motivation to combine “to improve VCEG-N52’s parameter set” is therefore textbook hindsight. *Sci. Plastic Prods. Inc. v. Biotage AB*, 766 F.3d 1355, 1359 (Fed. Cir. 2014).

Moreover, Dr. Saber admitted he could not opine on whether a POSITA would have even known about both VCEG-N52 and Sriram. Ex. 2022, 139:3-14; Ex. 2011, ¶ 124. Dr. Saber cannot support any opinion that a POSITA *would have* combined the references, as legally required, without an opinion that a POSITA would have even been aware of the references at all. *See Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015).

#### v. Petitioner fails to explain how Sriram’s *decoder* would be compatible with VCEG-N52’s *encoder* parameter sets

As illustrated below, Petitioner seeks to apply Sriram’s *decoder* process to VCEG-N52’s *encoder*. In so doing, Petitioner fails to explain how the decoder processing of Sriram (shown in PURPLE below) would be compatible with the encoder parameter sets of VCEG-N52 (shown in BLUE below). Ex. 2011, ¶ 137.

Sriram describes the decoder receiving the bitstream and extracting the header information at the syntax analyzer 38 (shown below in GREEN), so that the monitor processor 40 (shown below in ORANGE) can split the video stream and create smaller data structures for sharing parameter data. *Id.*; *see also, e.g.,* Ex. 1021, 4:59-5:27, Fig. 2, claim 1.




Ex. 2011, ¶ 137.

Sriram does not teach or suggest applying such a technique at the *encoder*, nor does Petitioner's expert provide any reason why a POSITA would attempt to apply Sriram's decoder technique to the encoder. *Id.*, ¶ 139. Indeed, as confirmed by Dr. Kia, a POSITA would not have been motivated to do so because splitting the bitstream and creating smaller data structures at the encoder would increase the number of transmissions needed, which is exactly contrary to what VCEG-N52 teaches. *Id*.

Petitioner's expert also erroneously asserts that "extending VCEG-N52's parameter set concept with Sriram's multiple parameter sets would involve only routine engineering tasks that would yield predictable results." Ex. 1003, ¶ 196. Petitioner's expert is at best conclusory and oversimplifies the engineering process for designing systems with multiple components that require interoperation with each other. Ex. 2011, ¶ 138. A POSITA would understand that changing aspects of the encoder necessarily impacts other aspects of the encoder and its operation. *Id*. As such, a POSITA would not expect that making arbitrary changes to the encoder would yield predictable effects to the encoder or the entire system. *Id*.

Moreover, nothing supports cherry-picking the disclosures this way. *Takeda Chem. Indus. v. Alphapharm Pty., Ltd.*, 492 F.3d 1350, 1356-1357 (Fed. Cir. 2007). Indeed, Dr. Saber admitted Sriram does not suggest modifying anything at the *encoder* or any transmissions from the encoder to the decoder. Ex. 2022, 146:9-

18. Sriram only teaches creating data structures at the *decoder* after extracting the headers received at the *decoder*. Ex. 2022, 147:10-16; Ex. 2023, 1434 (1721:7-10); Ex. 2011, ¶¶ 136-137. And Dr. Saber's opinions that separating the parameter sets would have been routine offers no substantive explanation how Sririam's teaching of extracting parameters from *headers at the decoder* could be applied to *parameter sets at the encoder* with any reasonable expectation of success given how different headers and parameter sets are structured and function. Ex. 1003, ¶¶ 196-197; Ex. 2011, ¶¶ 136-138.

The Board should reject these conclusory and oversimplified assertions.

#### vi. Petitioner never established a reasonable expectation of success

In addition to the issues identified above, Petitioner fails to make the necessary showing regarding reasonable expectation of success in modifying either the encoder or decoder of VCEG-N52 with the teachings of Sriram. Indeed, other than a passing reference, Petitioner never substantively addresses reasonable expectation of success. *See* Pet., 51. The burden of proving a reasonable expectation of success is on the Petitioner. *See Eli Lilly & Co. v. Teva Pharms. Int'l GmbH*, 8 F.4th 1331, 1348–49 (Fed. Cir. 2021) ("at all times, [it is petitioner's] burden to show that the claims would have been obvious, including that the skilled artisan would have had a reasonable expectation of success in achieving the claimed invention").

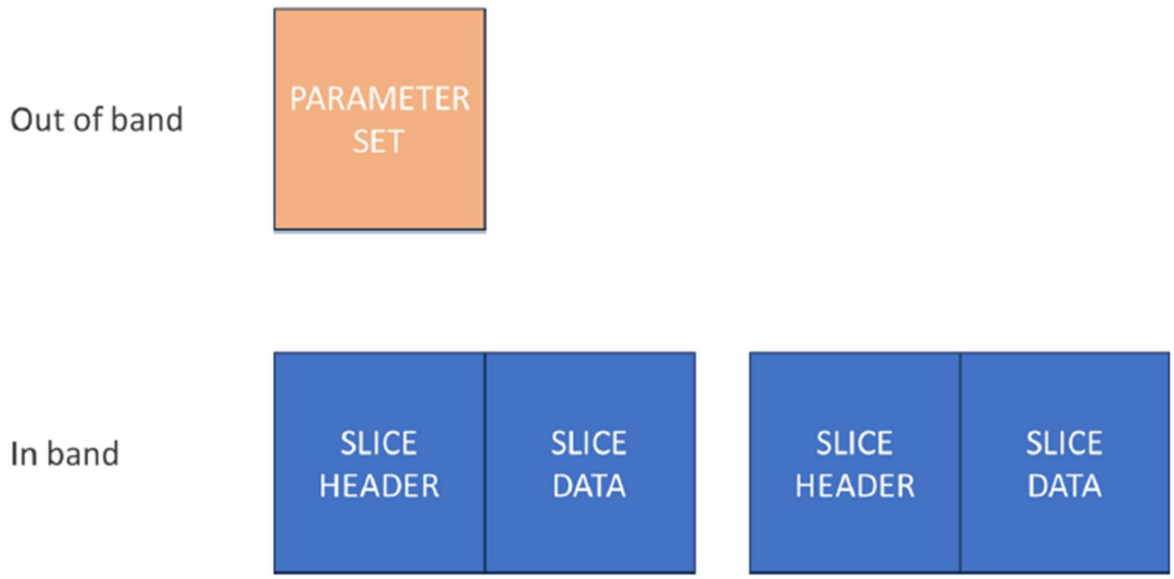
At best, Dr. Saber's opinion that "extending VCEG-N52's parameter set concept with *Sriram's multiple parameter sets* would involve only routine engineering tasks that would yield predictable results" is based on a false premise. Ex. 1003, ¶ 196 (emphasis added). That is, Dr. Saber admitted that Sriram does not have multiple parameter sets at all. Ex. 2022, 142:17-143:6. Indeed, the ALJ in the previous ITC Investigation agreed that Sriram "does not disclose the concept of breaking [parameter structures] apart so as to avoid any sort of redundant transmissions." Ex. 2003, 46. Dr. Saber's underlying rationale for combining the references, and that any such combination would be "routine engineering tasks that would yield predictable results," is therefore false. Ex. 2011, ¶¶ 122-123, 138.

Regardless, there is no reasonable expectation of success. At best, Sriram discloses extracting parameter information from sequence, GOP, and picture *headers*, which do not exist in VCEG-N52 at either the encoder or decoder. Ex. 2011, ¶¶ 140-147. These do not exist in VCEG-N52 because VCEG-N52 *expressly eliminated* these headers and replaced them with a single parameter set. *Id*.

Parameter sets are fundamentally very different than headers and Petitioner's expert does not account for these fundamental differences. As shown in the example below, packetized data is transmitted by first sending a header followed by the coded data representative of the coding layer. Ex. 2011, ¶¶ 140-147. In this case, a sequence header would be followed by a picture header, which would be followed by a slice header, which would be followed by the slice data. *Id*. If there are multiple slices, there will be multiple slice headers and slice data. If there are multiple pictures in the sequence, there will be multiple picture headers followed by slice headers and slice data. *Id*. Using this configuration, the decoder of Sriram would know exactly where to expect the sequence header and picture header in the bitstream and therefore could extract information according to the methods described there. *Id*., ¶ 142.


*Id*., ¶ 141.

In contrast, VCEG-N52 eliminates the sequence and picture headers and instead transmits all the information associated with the picture and higher layers within a single parameter set out-of-band. *Id*., ¶ 143; *see, e.g.,* Ex. 1012, 8. Dr. Kia provides an example, shown below to illustrate this design.




Ex. 2011, ¶¶ 143.

The parameter set concept is enabled by the low-level packetized data package called Network Abstraction Layer (NAL). *Id.*, ¶ 144. In the NAL design, an encoder transmits different types of NALs as complete and distinct packages of parameters to both configure the decoder for decoding and video data such as slice data to be processed by the decoder. *Id.*

The parameter set concept is markedly different than the header concept. *Id.* One of the main differences between using headers and parameter sets is how often the encoder transmits parameter set data. *Id.*, ¶ 145. For headers, parameter sets associated with the respective header are always present in the headers and are always transmitted, while parameter sets in NAL units are transmitted only as needed. *Id.* Using parameter sets in NAL units, the encoder has the freedom to implement a solution best suited for the application they are intended for, such as broadcast video, video teleconference or on-demand video streaming among other applications that require different types of parameter set management. *Id*.

At bottom, Sriram will not work with VCEG-N52 and would render VCEG-N52 inoperable. *Id*., ¶ 146. Sriram requires the above information to be included in headers, as illustrated above, and does not provide any method or ability to extract parameters out of a single consolidated parameter set transmitted out-of-band. *Id*. No solution is provided by Petitioner, and a POSITA would not have had any reasonable expectation of success in applying Sriram's method of header extraction to VCEG-N52, where there are no sequence headers or picture headers or any demarcation of sequence parameters versus picture headers within the new single parameter set. *Id*.

In sum, Petitioner cannot establish that a POSITA *would have* combined VCEG-N52 with Sriram in the proposed manner, which is needed for motivation to combine. Ex. 2011, ¶¶ 121-148; *Belden*, 805 F.3d at 1073. There is no evidence that a POSITA *would have* broken up parameter sets at the encoder, contradicting VCEG-N52's fundamental purpose without any suggestion from Sriram, absent using impermissible hindsight. Again, this very combination was tested before the ITC after testimony from both parties' experts, and the ALJ found no motivation to combine the references. Ex. 2003, 44-47.

For at least these reasons, a POSITA would not have been motivated to combine VCEG-N52 and Sriram.

#### b) The combination of VCEG-N52 and Sriram fails to disclose or render obvious 1[a]-[b]/6[a]-[b]/10[b]-[c]/11[b]-[c]/12[b]-[c]/12[g]-[h]/14[b]-[c]/15[b]-[c]/16[b]-[c]/20[a]-[b]/21[a]-[b]/22[a]-[b]/23[a]-[b]

Dr. Saber admits that neither VCEG-N52 nor Sriram discloses the claimed sequence parameter set or picture parameter set, as each of the independent claims require. Ex. 2022, 135:21-136:3, 142:17-143:6; Ex. 2011, ¶¶ 119-148. A POSITA therefore would not understand the combination to disclose or render obvious what neither reference alone teaches. *Id.*

#### c) Petitioner's Reliance Solely on Expert Testimony for Elements Missing from VCEG-N52/Sriram Should be Rejected

For each of the independent claims, the Petition relies solely on expert testimony for at least one element missing from the proposed combination of Ground 2, in violation of 35 U.S.C. § 311(b) and 37 C.F.R. § 42.104(b)(4). As with Ground 1, Petitioner's reliance solely on expert testimony for certain missing limitations in each of the independent claims should be rejected.

##### i. Petitioner Relies Solely on Expert Testimony for 1[c]/10[d]/12[d]/14[d]/16[e]/20[c]/22[c]

For limitation 1[c], which requires "defining, in an encoder," the Petition fails to cite anywhere in either VCEG-N52 or Sriram that discloses or suggests the limitation, instead relying solely on a citation to Dr. Saber. Pet., 61 (citing "Saber,

¶212”). However, Dr. Saber simply repeats that the limitation is met without citing to any disclosures in either VCEG-N52 or Sriram. Ex. 1003, ¶ 212. Limitations 10[d], 12[d], 14[d], 16[e], 20[c], and 22[c] all cite to 1[c]. Pet., 74, 77, 80, 82, 84, 88. Petitioner’s reliance solely on expert testimony to supply this element missing from the VCEG-N52/Sriram combination therefore violates 35 U.S.C. § 311(b) and 37 C.F.R. § 42.104(b)(4) and should be rejected.

For at least these additional reasons, the Petition fails to set forth a reasonable likelihood that any of the encoding claims are obvious over the VCEG-N52/Sriram combination.

**ii. Petitioner Relies Solely on Expert Testimony for 6[c]/11[d]/12[i]/15[d]/21[c]/23[c]**

For limitation 6[c], which requires “forming, in the decoder,” the Petition cites only to Dr. Saber’s declaration, noting that he in turn cites to disclosures in the alleged art. Pet., 69. However, Dr. Saber’s declaration makes clear that he does not cite to any disclosures in either VCEG-N52 or Sriram for his opinion that the “forming, in the decoder” is met. Ex. 1003, ¶ 236. Limitations 11[d], 12[i], 15[d], 21[c], and 23[c] all rely on 6[c]. Pet., 76, 78, 81, 86, 91. Petitioner’s reliance solely on expert testimony to supply this element missing from the VCEG-N52/Sriram combination therefore violates 35 U.S.C. § 311(b) and 37 C.F.R. § 42.104(b)(4) and should be rejected.

For at least these additional reasons, the Petition fails to set forth a reasonable likelihood that any of the decoding claims are obvious over the VCEG-N52/Sriram combination.

#### d) Dependent claims 2-5, 7-9, 13, 17-19

Claims 2-5, 7-9, 13, 17-19 all depend from various independent claims. As discussed above, the combination of VCEG-N52 and Sriram fails to disclose or render obvious any of the independent claims. Therefore, the combination of VCEG-N52 and Sriram also fails to disclose or render obvious any of the dependent claims.

## IV. CONCLUSION

For the above-stated reasons, Patent Owner requests that the Board deny institution of the Petition.

Dated: November 5, 2025

Respectfully submitted,

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**CERTIFICATE OF WORD COUNT**

Under the provisions of 37 C.F.R. § 42.24, the undersigned hereby certifies that the word count for the foregoing Patent Owner Preliminary Response totals 8,312 words, which is less than the 14,000 allowed words under 37 C.F.R. § 42.24(a)(1)(i),(b)(1).

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**CERTIFICATE OF SERVICE**

Pursuant to 37 C.F.R. §42.6(e), the undersigned hereby certifies that true and correct copies of the above-captioned **PATENT OWNER'S PRELIMINARY RESPONSE and NOKIA EXHIBITS 2011-2025** were served in their entirety on November 5, 2025 via filing through the Patent Trial and Appeal Case Tracking System (P-TACTS) and electronic mail on the following counsel of record for Petitioner:

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