

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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INTEL CORP., DELL INC., and DELL TECHNOLOGIES INC.,

Petitioners,

v.

GENERAL VIDEO, LLC,

Patent Owner.

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Case No. IPR2025-01039

Patent No. 7,359,437

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**PATENT OWNER'S PRELIMINARY RESPONSE**

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## I. INTRODUCTION

Patent Owner General Video, LLC submits this preliminary response to the Petition filed by Petitioners requesting *inter partes* review of claims 1-6, 8, 10-17, 19-23, 26-31, 33, 37, and 39-40 (the “Challenged Claims”) of U.S. Pat. No. 7,359,437 (the “437 Patent”).

The Board must deny institution because the Petition fails to demonstrate a reasonable likelihood that the Challenged Claims of the 437 Patent are unpatentable.<sup>1</sup> The sole ground in the Petition is based on obviousness, and the obviousness arguments are clearly based on hindsight. Each of the asserted prior art references differs significantly from the inventions claimed by the 437 Patent, claim limitations are missing from each of the asserted prior art references, and Petitioners fail to show the Challenged Claims would have been obvious over the asserted prior art references. Indeed, two of the three references the Petition relies on, Shin and Myers, were before the Examiner during examination of the 437 Patent, and the Examiner found the claims of the 437 Patent allowable over those references. *See* Ex. 1002 at 237-243, 246, 279-284.

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<sup>1</sup> Patent Owner previously filed a Request for Discretionary Denial (Paper No. 8) that includes several reasons why the Board should, for discretionary reasons, deny institution, but it did not go into detail on the merits of the Petition.

In particular, with respect to critical limitations of the claims, the Petition's arguments are not based on what the prior art references actually disclose. Instead, the Petition points to teachings of the prior art that are not the same as what is recited in the limitations of the Challenged Claims, and then, relying solely on conclusory, *ipse dixit* expert testimony, fills the gaps in the teachings by asserting that a POSITA would have somehow *understood* those teachings to be the same as the language in the limitations and/or that it would have been obvious to a POSITA to combine those teachings to arrive at the limitation. Indeed, the constant refrain of "a POSITA would have understood/recognized/found it obvious" throughout the Petition (supported solely by conclusory *ipse dixit* expert testimony that parrots Petitioners' argument) is the glue that tries, but fails, to hold Petitioners' evidence-deficient arguments together for numerous limitations of the Challenged Claims.

In that regard, with respect to the sole ground, Ground 1, the Petition has failed to show that the combination of Kim, Shin, and Myers teaches or suggests at least the following limitations recited in the challenged independent claims:

- a transmitter or circuitry that is "configured to generate a sequence of selected code words by encoding . . . input data . . . wherein each of the selected code words is a member of a robust subset of a full code word set" (recited in each of independent Challenged Claims 1, 14, 19, 20, 21, 26, 39, and 40);
- "the transmitter is configured to transmit to the receiver over the serial link a first burst of the video code words followed by a burst of the selected code words followed by a second burst of the video code words" (recited in

independent Challenged Claim 1);

- “the transmitter is configured to transmit to the receiver over the serial link a burst of the selected code words followed by a burst of the video code words” (recited in independent Challenged Claim 14); and
- “configured to transmit to the receiver over the serial link a burst of the selected code words followed by a burst of the video code words” (recited in independent Challenged Claim 21).

Because dependent Challenged Claims 2-6, 8, and 10-13 depend from Challenged Claim 1, dependent Challenged Claims 15-17 depend from Challenged Claim 14, dependent Challenged Claims 22 and 23 depend from Challenged Claim 21, and dependent Challenged Claims 27-31, 33, and 37 depend from Challenged Claim 26, the Petition likewise fails to show that the combination of Kim, Shin, and Myers teaches or suggests all the limitations of those dependent claims.

Accordingly, Petitioners have not carried their burden of showing that any of the Challenged Claims are likely unpatentable.

## **II. SUMMARY OF THE 437 PATENT**

The 437 Patent describes a novel solution that improves the transmission of encoded data over a serial link in such a manner as to reduce the bit error rate resulting from inter-symbol interference (“ISI”) or other error-causing effects during transmission. *See Ex. 1001 at 1:15-19.*

In particular, the 437 Patent relates to a communication system including a transmitter, a receiver, and a serial link, in which encoded data (*e.g.*, encoded video

data and optionally also encoded auxiliary data) are transmitted from the transmitter to the receiver. *See id.* 6:43-48. Embodiments include alternating bursts of encoded video data and encoded auxiliary data that are transmitted over each of one or more channels of the serial link. *See id.* at 6:50-52.

The data to be transmitted are encoded using a subset (a “robust” subset) of a full set of code words, and the code words in the full set have equal length (*e.g.*, each consists of N bits). *See id.* at 6:55-58. The robust subset is selected such that each stream of encoded data (comprising only selected code words) transmitted over a serial link has a bit pattern that is less susceptible to ISI during transmission than does the bit pattern determined by a transmitted, conventionally encoded version of the same data. *See id.* at 6:58-65.

Encoded data, including selected code words, can be transmitted in bursts over the serial link, and at least one of the selected code words is used as a “guard band” word that is transmitted at the start or end (or the start and end) of a burst of encoded data (to identify the leading and/or trailing edge of the burst) or at the start or end (or at the start and end) of each burst of encoded data of a specific type. *See id.* at 8:21-27.

In some embodiments, bursts of encoded auxiliary data and bursts of encoded video data are transmitted over a serial link, and the auxiliary data are encoded using the set of selected code words (also referred to in the specification as “inventive”

code words). *See id.* at 9:28-32; 6:58-62.

Encoding and transmission of data in accordance with the teachings of the 437 Patent is particularly beneficial in applications in which encoded data are to be transmitted under conditions in which there would otherwise be a high risk of error due to ISI during transmission. *See id.* at 8:16-20.

### **III. CLAIM CONSTRUCTION**

For purposes of determining whether to institute based on the Petition only, Patent Owner does not construe any claim terms of the 437 Patent, but Patent Owner does not waive its right to propose new or additional constructions in litigation involving the 437 Patent, or later in this proceeding if the Board should decide to institute a trial.

### **IV. NO REVIEW SHOULD BE INSTITUTED WITH RESPECT TO THE GROUND RAISED BY PETITIONERS**

As explained in detail below, the Petition fails to establish a reasonable likelihood that the Challenged Claims are unpatentable. The Petition proposes one ground against the 437 Patent:

- **Ground 1.** Unpatentability of claims 1-6, 8, 10-17, 19-23, 26-31, 33, 37, and 39-40 under 35 U.S.C. § 103 over U.S. Patent No. 5,835,498 (“Kim”), U.S. Patent No. 5,625,644 (“Myers”), and U.S. Patent No. 5,974,464 (“Shin”).

As discussed in more detail below, the cited references do not, individually or collectively, disclose, teach, or suggest all of the elements of the Challenged Claims.

Where none of the references discloses an element of the claims, *inter partes* review for obviousness cannot be instituted. *See CustomPlay, LLC v. ClearPlay, Inc.*, IPR2013-00484, Paper 29 at 12-13 (P.T.A.B. 2014) (claims not unpatentable where none of the asserted prior art references disclosed a claim element).

For the foregoing reasons and as further discussed below, the Petition does not establish a reasonable likelihood that the Challenged Claims are unpatentable, and the Board should therefore not institute an *inter partes* review.

**A. Claims 1-6, 8, and 10-13 Are Not Unpatentable**

The Petition does not show that there is a reasonable likelihood that the Petitioners would prevail on Ground 1 with respect to claims 1-6, 8, and 10-13. In particular, the Petition has not shown that the combination of Kim, Shin, and Myers teaches, or renders obvious, all the limitations of those claims.

- 1. “the transmitter is . . . configured to generate a sequence of selected code words by encoding the input data . . . wherein each of the selected code words is a member of a robust subset of a full code word set”**

The Petition has not shown that the combination of Kim, Shin, and Myers teaches, or renders obvious, the limitation of a “transmitter [being] . . . configured to generate a sequence of selected code words by encoding the input data . . . wherein each of the selected code words is a member of a robust subset of a full code word set” as recited in independent claim 1 (and in claims 2-6, 8, and 10-13, which depend from claim 1).

The Petition asserts that Kim discloses audio data that corresponds to “input data.” *See* Pet. at 31 (“Kim explains that the input data streams may include, for example, audio data that is received as 8 bits of information: ‘Possible multimedia data streams that can be mixed include, but are not limited to audio’ . . . . This petition thus refers to Kim’s multimedia data streams 1-n as ‘audio data streams’ or ‘audio data.’”). The Petition further states that “Kim’s encoders 40b-40n encode the audio data streams (*input data*) into encoded data (*a sequence of selected code words*)” because “Kim explains that ‘for stream 1 to n each stream has a dedicated coder 40b to 40n, respectively, to encode each particular data stream.’” Pet. at 31. The Petition then goes on to assert that “Kim in combination with Myers teaches that the “*selected code words*” are “*a robust subset of the full code word set.*” Pet. at 33. In particular, the Petition relies on Myers (which was before, and applied by, the Examiner) to teach “*wherein each of the selected code words is a member of a robust subset of the full code word set.*” Pet. at 38-39 (“Thus, Kim’s encoders 40b-40n for audio streams may encode input data using any known coding scheme, including Myers’ subset-selection technique that utilizes a subset of more robust values to prevent data loss . . .”).

While Kim may teach encoders 40b-40n that encode audio data, the Petition does not – and cannot – show that Kim discloses generating a sequence of selected code words – each of which is a member of a robust subset of the full code word set

– by encoding audio data, which the Petition says corresponds to the claimed “input data.” Indeed, Kim simply does not teach or suggest encoding audio data using a subset of code words that increase robustness. Rather, Kim teaches encoding the input data streams (e.g., audio) into **any 10-bit words other than certain special words**. See Ex. 1005 at 6:7-16 (“The encoder 40 preferably encodes the input stream into 10-bit output streams. The word output by the encoder 40 are preferably **any 10-bit words other than** those identified in Appendix A as **special code words** used as IDLE characters, isochronous data transfer characters, data stream separation characters, and link shut down characters. **Any number of conventional eight to 10 encoding schemes may be used** in addition to the specific encoding scheme identified below with respect to FIG. 5.”) (emphasis added).

Knowing this, the Petition makes conclusory, hindsight-based arguments that it would have been obvious to modify Kim’s device with Myers’ subset-selection technique so that Kim’s device does encode audio input data with robust code words.

The arguments simply do not stand up to scrutiny. First, the Petition asserts:

**A POSITA would have recognized** that audio data is more vulnerable to perceived distortion. See e.g., Ex.1008, 4:24-28; Ex.1009, 10:67-11:25. As such, **it would have been obvious to a POSITA** to use an encoding scheme for audio data that reduces data loss. Ex.1003, ¶103. While Kim states that the encoders 40b-40n may use 8b/10b encoding, Kim acknowledges that other coding schemes may be used. See Ex.1005, 5:44-49 (“For ease of understanding, the present invention

will now be described in the context of encoding from eight bits to 10 bits, and decoding from 10 bits to eight bits although those skilled in the art will recognize that the present invention may be used for various other coding rates”). Ex.1003, ¶103.

Pet. at 33-34 (emphasis added).

To start with, in making this argument, the Petition relies heavily on completely conclusory statements about what a POSITA allegedly would have recognized and found obvious. Worse, those statements are supported solely by verbatim *ipse dixit* expert testimony, which has no evidentiary weight. *See* Ex. 1003 at ¶ 103; *Kinetic Techs., Inc. v. Skyworks Solutions, Inc.*, IPR2014-00529, Paper 8 at 15 (P.T.A.B. Sept. 23, 2014) (“Merely repeating an argument from the Petition in the declaration of a proposed expert does not give that argument enhanced probative value.”); *Roxane Labs., Inc. v. Novartis AG*, IPR2016-01461, Paper 9 at 10 (P.T.A.B. Feb. 13, 2017) (“[C]onclusory expert testimony is entitled to little or no weight. . . . Where, as here, the conclusory testimony is the sole basis for establishing that a claim limitation is taught or suggested by the prior art, we find it insufficient to establish a reasonable likelihood of prevailing regarding that claim.”); *Initiative for Medicines, Access & Knowledge v. Gilead Pharmasset LLC*, IPR2018-00390, Paper 7 at 14-15 (P.T.A.B. Jul 29, 2018) (denying institution where, “by way of evidentiary support, the Petition directs us only to opinion testimony of [its expert], which merely repeats verbatim the conclusory statements set forth in the Petition,

without providing any factual analysis or citing any supporting objective proof....[this] inadequately supported opinion on the question of obviousness ‘is entitled to little or no weight’”); *Hyundai Motor Company v. Blitzsafe Texas, LLC*, IPR2016-01476, Paper 12 at 21 (P.T.A.B. Jan. 24, 2017) (denying institution where the expert’s “representations are particularly unconvincing and of minimal probative weight given that they merely repeat verbatim the precise statements in the Petition”); *see also* 37 C.F.R. § 42.104(b)(4); Director’s July 31, 2025 Memorandum regarding “Enforcement and Non-Waiver of 37 C.F.R. § 42.104(B)(4) and Permissible Uses of General Knowledge in Inter Partes Reviews” at 1 (“expert testimony, common sense, and other evidence that is not ‘prior art consisting of patents or printed publications’ . . . may not be used to supply a missing claim limitation”).

But the Petition’s arguments are flawed in other ways. First, that a POSITA allegedly “would have recognized that audio data is more vulnerable to perceived distortion” is not a reason to take Kim’s already encoded audio data and add the subset-selection technique of Myers to arrive at the invention of claim 1. Further, the tertiary references the Petition cites in support of its conclusory statement about what a POSITA allegedly would have recognized provide no such reason either. Asai (Ex. 1008) states “the human ear is more sensitive to errors or defects than the human eye,” and Pasqualino (Ex. 1009) states that “low bandwidth information

being sent is sensitive to channel errors” and that “low bandwidth information may be . . . audio” – hardly a clarion call to modify Kim’s already encoded audio data with Myers’ specific subset-selection technique.

Moreover, the Petition’s statement that “it would have been obvious to a POSITA to use an encoding scheme for audio data that reduces data loss” makes no sense because *Kim already teaches encoding audio data*. Further, Kim’s statement that “the present invention may be used for various other coding rates” is not a reason to think that Kim’s encoding method is insufficient for audio, and certainly is not a reason to incorporate Myers’ specific teachings into Kim.

The Petition further states that “Myers complements Kim’s disclosure by generally teaching a coding technique that reduces distortions in audio transmission by reducing data loss” and that a “POSITA would have been motivated to apply Myers’ selection criteria to Kim’s conventional encoding scheme for audio data to reduce distortion and data loss.” Pet. at 34. Those conclusory statements are supported solely by verbatim *ipse dixit* expert testimony, see Ex.1003 at ¶ 104, and thus are entitled to no weight. In addition, complementarity is not a reason to combine Myers’s specific teachings with Kim’s teachings as the Petition proposes, nor is the mere desire to reduce distortion and data loss, especially in view of the fact that the Petition points to no evidence that Kim’s teaching of encoding audio data resulted in data loss or distortions.

The Petition then goes on to state that a “POSITA would have found it obvious to apply Myers’ subset-selection technique to Kim’s encoders that encode the audio data for the reasons explained above at X.B.5.” Pet. at 35. The relevant portions of Section X.B.5 of the Petition state:

When encoding audio data, **a POSITA would have been motivated** to look for encoding schemes that reduce data loss during transmission and thus provide better reliability. Ex.1003, ¶75. It was known that errors or defects in the audio transmission, e.g., due to data loss, are more noticeable than those in the video transmission. Ex.1003, ¶75. This is because “the human ear is more sensitive to errors or defects than the human eye.” Ex.1008, 5:54-56. Indeed, **it was known** that when transmitting both video and audio, that audio data should be encoded more robustly. *See generally*, Ex.1010; Ex.1009, 10:67-11:25; Ex.1003, ¶75.

Accordingly, **POSITAs would have looked** to known techniques for more robustly encoding audio data when implementing Kim’s teachings. Ex.1003, ¶76. Myers describes one known example of an encoding technique that reduces data loss and consequently increases transmission reliability. In particular, Myers describes selecting a subset of the available encoder output values that provide improved transmission reliability.

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Accordingly, **because it was known** that reducing data loss in audio transmission was more critical, and Myers’ technique provides a way to reduce data loss in transmission, **a POSITA would have been**

**motivated** to apply Myers' subset selection technique to Kim's transmission of audio data. For example, in the case where the data streams from encoders 40b-40n in Kim are used for audio, it would have been obvious to use Myers' subset-selection technique. Ex.1003, ¶79.

Pet. at 25-26 (emphasis added).

This is pure hindsight-based reasoning. First, all the statements about what a POSITA allegedly would have known or been motivated to do are supported by conclusory, verbatim expert *ipse dixit*s and, therefore, carry no weight. *See* Ex. 1003 at ¶¶ 75, 76, 79. Further, even if it was known that errors in audio transmission due to data loss are more noticeable than those in video transmission as the Petition asserts, that in and of itself is not a reason to modify Kim with Myers' specific teachings as the Petition proposes. Again, Kim already teaches encoding the audio data, and the Petition points to no evidence that Kim's encoding scheme was insufficient.

Similarly, regarding the statement that "it was known that when transmitting both video and audio, that audio data should be encoded more robustly," neither of the tertiary references the Petition points to – Pasqualino (Ex. 1009) and Altmann (Ex. 1010) – teaches that the encoding that Kim does is insufficient for audio data. Moreover, neither of those references describes transmitting audio data using a set of robust code words or, more particularly, one that is less susceptible to ISI. At best

those references observe a desire to transmit or reproduce audio without substantial errors, and, to the extent those references describe any particular way to reduce errors, they employ something other than the inventions of the Challenged Claims. *See* Ex. 1010 (Altmann) (describing error correction and retransmission); Ex. 1009 (Pasqualino) (describing optional error correction codes and redundancy, *i.e.*, transmitting multiple copies of data).

Accordingly, because there is no evidence that Kim's teachings regarding encoding audio data were insufficient, the Petition has no basis (other than hindsight) for its statement that a POSITA would have "looked to known techniques for more robustly encoding audio data when implementing Kim's teachings" – let alone looked to Myers' specific teachings about selecting a subset of the available encoder output values.

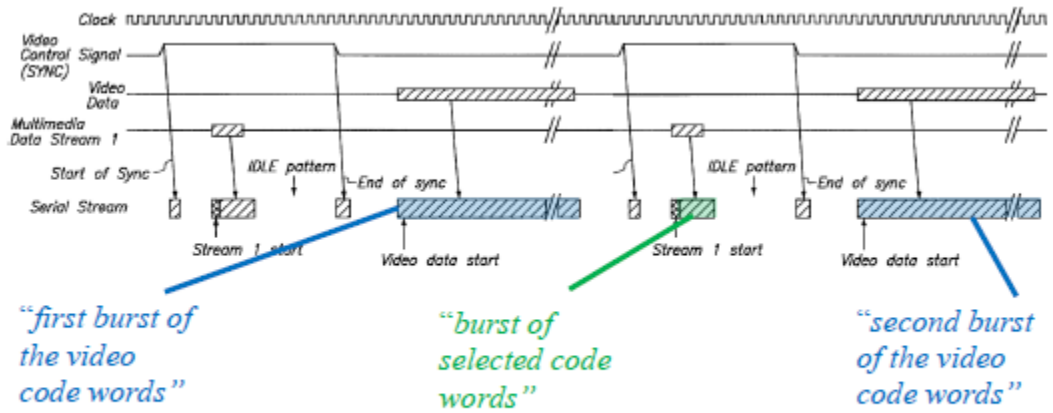
**2. "the transmitter is configured to transmit to the receiver over the serial link a first burst of the video code words followed by a burst of the selected code words followed by a second burst of the video code words"**

The Petition also has not shown that the combination of Kim, Shin, and Myers teaches, or renders obvious, the limitation of "the transmitter is configured to transmit to the receiver over the serial link a first burst of the video code words followed by a burst of the selected code words [*i.e.*, selected code words generated by encoding input data and that are part of a robust subset of the full code word set] followed by a second burst of the video code words" as recited in claim 1.

None of Kim, Shin, and Myers teaches or suggests this claimed sequence, though the Petition erroneously argues that Kim does. In that regard, the Petition asserts that:

Third, for the reasons explained above at [1.2] and [1.3], Kim's encoders 40b-40n encode an audio data stream as "*selected code words*." Because the selected code words are transmitted as a stream, they are a "*burst of selected code words*" as claimed. Ex.1003, ¶137.

Fourth, Kim teaches transmitting video data ("*a first burst of the video code words*"), **audio data** ("*the burst of the selected code words*"), and more video data ("*a second burst of the video control words*") in the order claimed. Fig. 4A is shown below in a repeated manner, given that the illustrated sequence is repeatedly transmitted over the serial link. See Ex.1005, 9:45-10:25 (describing Fig. 4A as part of a data stream); Ex.1003, ¶138.



Ex.1005, Fig. 4A (modified, annotated); Ex.1003, ¶138.

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Thus, Kim's transmission of the **audio data stream** 1 in the blanking period between bursts of video code words renders this limitation obvious. Ex.1003, ¶¶135-140.

Pet. at 47-49 (bold emphasis added).

In making this argument, however, the Petition relies on its previous (and incorrect) argument that Kim's input audio data is encoded into selected code words that are in the claimed "burst of the selected code words" transmitted between the first burst of video code words and the second burst of video code words. *See* Pet. at 47 ("[F]or the reasons explained above at [1.2] and [1.3], Kim's encoders 40b-40n encode **an audio data stream** as "*selected code words*." Because the selected code words are transmitted as a stream, they are a "*burst of selected code words*" as claimed.") (bold emphasis added). Again, as discussed above, while Kim teaches encoding audio input data with 40b-40n encoders, it does not teach or suggest encoding that input data into selected code words that are members of a robust subset of the full code word set. And, as also discussed above, it would not have been obvious to modify Kim's device to encode the audio data with such selected code words.

Accordingly, even assuming *arguendo* that Kim does teach transmitting a first burst of video code words and a second burst of video code words, it does not teach or suggest transmitting "a burst of selected code words" at all, let alone transmitting it after the first burst of video code words and before the second burst of video code

words as required by claim 1.

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For at least the reasons discussed above, it is readily apparent that Petitioners' obviousness arguments are based solely on improper hindsight, and, accordingly, Petitioners have failed to show that the cited art teaches all the limitations of Challenged Claim 1. Therefore, Challenged Claim 1 – and Challenged Claims 2-6, 8, and 10-13, which depend from Challenged Claim 1 – would not have been obvious over Kim, Shin, and Myers. *See TQ Delta, LLC v. CISCO Sys.*, 942 F.3d 1352, 1362 (Fed. Cir. 2019) (“[The expert’s] *ipse dixit* declaration ‘fail[s] to provide any meaningful explanation for why one of ordinary skill in the art would be motivated to combine these references *at the time of this invention.*’ It also ‘fails to explain why a person of ordinary skill in the art would have combined elements from specific references *in the way the claimed invention does.*’ Without this support, Dr. Tellado's declaration ultimately fails ‘to resist the temptation to read into the prior art the teachings of the invention in issue.’”) (internal citations omitted); *Delphix Corp. v. Actifio, LLC*, IPR2015-01678, Paper 8 at 20 (P.T.A.B. Feb. 10, 2016) (“[T]here are multiple instances in which Petitioner has failed to show a teaching of a claim limitation in the prior art. Petitioner has attempted to fill those gaps with conclusory expert testimony that, itself, does not cite to evidentiary support. . . . [W]e are persuaded that Petitioner’s proposed combination . . . is not driven by the

teachings of those references but, rather, is built on impermissible hindsight.”); *RPX Corp. v. Parity Networks, LLC*, IPR2018-00097, Paper 7 at 11-12 (P.T.A.B. Apr. 24, 2018) (“Petitioner’s reliance on the conclusory testimony of its Declarant to prove the unpatentability of a claim limitation is not supported by S-Ma’s disclosure or by other evidence of record. We further note that . . . ‘[e]xpert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.”).

**B. Claims 14-17 Are Not Unpatentable**

The Petition does not show that there is a reasonable likelihood that the Petitioners would prevail on Ground 1 with respect to Challenged Claims 14-17. In particular, the Petition has not shown that the combination of Kim, Shin, and Myers teaches, or renders obvious, the following limitations recited in those claims:

- “the transmitter is . . . configured to generate a sequence of selected code words by encoding the input data . . . wherein each of the selected code words is a member of a robust subset of a full code word set”; and
- “the transmitter is configured to transmit to the receiver over the serial link a burst of the selected code words followed by a burst of the video code words.”

With respect to claim 14, the Petition states for limitations [14.0]-[14.8], “[s]ee [1.0]-[1.8].” Pet. at 72. The limitation of “the transmitter is . . . configured to generate a sequence of selected code words by encoding the input data . . . wherein each of the selected code words is a member of a robust subset of a full code word

set” is part of limitations [1.1]-[1.4] of claim 1 and limitations [14.1]-[14.4] of claim 14. *See* Pet. at 96, 99. Accordingly, for the same reasons discussed above with respect to claim 1 as to why the limitation of “the transmitter is . . . configured to generate a sequence of selected code words by encoding the input data . . . wherein each of the selected code words is a member of a robust subset of a full code word set” is not taught, or rendered obvious, by the combination of Kim, Shin, and Myers, that same limitation, as recited in claim 14, is not taught, or rendered obvious, by the combination of Kim, Shin, and Myers.

The Petition further states that “[f]or the reasons explained above at [1.9], Kim renders obvious” the claim 14 limitation of “[14.9] the transmitter is configured to transmit to the receiver over the serial link a burst of the selected code words followed by a burst of the video code words.” Pet. at 72. Limitation [1.9] of claim 1 is “the transmitter is configured to transmit to the receiver over the serial link a first burst of the video code words followed by a burst of the selected code words followed by a second burst of the video code words.” Ex. 1003 at pp. 79, 112. Therefore, using the Petition’s limitation identifiers, for the same reasons discussed above with respect to claim 1 as to why limitation [1.9] is not taught, or rendered obvious, by the combination of Kim, Shin, and Myers, the claim limitation [14.9] is not taught, or rendered obvious, by the combination of Kim, Shin, and Myers. In particular, as discussed above with respect to claim 1, those references do not teach

or suggest, or render obvious, the transmission of selected code words for audio input data.

Accordingly, the Petition has failed to show that Challenged Claims 14-17 are unpatentable over Kim, Shin, and Myers.

**C. Claims 19 and 20 Are Not Unpatentable**

The Petition does not show that there is a reasonable likelihood that the Petitioners would prevail on Ground 1 with respect to Challenged Claims 19 and 20. In particular, the Petition has not shown that the combination of Kim, Shin, and Myers teaches, or renders obvious, at least the following limitation recited in those independent claims: “the transmitter is . . . configured to generate a sequence of selected code words by encoding the input data . . . wherein each of the selected code words is a member of a robust subset of a full code word set.”

Again, that limitation is recited in claim 1, and as discussed above with respect to claim 1, the combination of Kim, Shin, and Myers does not teach or suggest, or render obvious, that limitation. For claims 19 and 20, the Petition says to see its analysis with respect to claim 1 for the limitation of “the transmitter is . . . configured to generate a sequence of selected code words by encoding the input data . . . wherein each of the selected code words is a member of a robust subset of a full code word set.” *See* Pet. at 73-74, 96, 100-101. Accordingly, for the same reasons discussed above with respect to claim 1 as to why that limitation is not taught, or rendered

obvious, by the combination of Kim, Shin, and Myers, that limitation, as recited in claims 19 and 20, is not taught, or rendered obvious, by the combination of Kim, Shin, and Myers.

Accordingly, the Petition has failed to show that Challenged Claims 19 and 20 are unpatentable over Kim, Shin, and Myers.

**D. Claims 21-23 Are Not Unpatentable**

The Petition does not show that there is a reasonable likelihood that the Petitioners would prevail on Ground 1 with respect to Challenged Claims 21-23. In particular, the Petition has not shown that the combination of Kim, Shin, and Myers teaches, or renders obvious, the following limitation recited in independent claim 21 (and thus in dependent claims 22-33): “the transmitter is . . . configured to generate a sequence of selected code words by encoding the input data . . . wherein each of the selected code words is a member of a robust subset of a full code word set.”

The Petition asserts that “as described above at [1.1], Kim’s transmitter is coupled to receive input data” and “as explained above at [1.2], Kim teaches *‘configured to generate sequences of selected code words by encoding the input data.’*” Pet. at 79-80. As discussed above with respect to claim 1, the Petition asserts Kim’s **audio data** corresponds to the claimed input data. The Petition further states “[s]ee [1.4]. Ex.1003, ¶264” for the claim 21 language of “wherein each of the selected code words is a member of a robust subset of a full code word set.” Pet. at

82-83.

Accordingly, for the same reasons discussed above with respect to claim 1 as to why the limitation of “the transmitter is . . . configured to generate a sequence of selected code words by encoding the input data . . . wherein each of the selected code words is a member of a robust subset of a full code word set” is not taught or rendered obvious by the combination of Kim, Shin, and Myers, that limitation, as recited in claim 21, is not taught or rendered obvious by that combination of references. In particular, as discussed above with respect to claim 1, that combination does not teach, suggest, or render obvious encoding audio input data with selected code words.

In addition, the Petition has not shown that the combination of Kim, Shin, and Myers teaches, or renders obvious, the claim 21 limitation of “configured to transmit to the receiver over the serial link a burst of the selected code words followed by a burst of the video code words.” For that limitation, the Petition just asserts “[f]or the reasons explained above at [1.9], Kim renders this limitation obvious.” Pet. at 81. However, as discussed above with respect to claim 1, Kim does not teach or render obvious the transmission of a burst of selected code words, let alone the transmission of a burst of selected code words before a burst of video code words.

Accordingly, the Petition has failed to show that Challenged Claims 21-23 are unpatentable over Kim, Shin, and Myers.

**E. Claims 26-31, 33, and 37 Are Not Unpatentable**

The Petition does not show that there is a reasonable likelihood that the Petitioners would prevail on Ground 1 with respect to Challenged Claims 26-31, 33, and 37. In particular, the Petition has not shown that the combination of Kim, Shin, and Myers teaches, or renders obvious, at least the following limitation recited in independent claim 26 (and thus in dependent claims 27-31, 33, and 37): “circuitry . . . configured to generate a sequence of selected code words by encoding the input data . . . wherein each of the selected code words is a member of a robust subset of a full code word set.”

The Petition asserts that “[a]s explained above at [1.1], Kim renders obvious ‘at least one input for receiving input data,’” and “for the reasons explained above at [1.2], Kim renders obvious ‘configured to generate a sequence of selected code words by encoding the input data.’” Pet. at 86, 88. As discussed above with respect to claim 1, the Petition asserts Kim’s **audio data** corresponds to the claimed input data. *See* Pet. at 88 (“Kim’s encoder generates encoded **audio data** for transmission across the serial line, which renders this limitation obvious.”) (emphasis added). The Petitioner further states “[s]ee [1.4]. Ex.1003, ¶291” for the claim 26 language of “wherein each of the selected code words is a member of a robust subset of a full code word set.” Pet. at 88.

Accordingly, for the same reasons discussed above with respect to claim 1 as

to why the limitation of “the transmitter is . . . configured to generate a sequence of selected code words by encoding the input data . . . wherein each of the selected code words is a member of a robust subset of a full code word set” is not taught or rendered obvious by the combination of Kim, Shin, and Myers, claim 26’s limitation of “circuitry . . . configured to generate a sequence of selected code words by encoding the input data . . . wherein each of the selected code words is a member of a robust subset of a full code word set” is not taught or rendered obvious by that combination. In particular, as discussed above with respect to claim 1, that combination does not teach, suggest, or render obvious encoding audio input data with selected code words.

Accordingly, the Petition has failed to show that Challenged Claims 26-31, 33, and 37 are unpatentable over Kim, Shin, and Myers.

**F. Claims 39 and 40 Are Not Unpatentable**

The Petition does not show that there is a reasonable likelihood that the Petitioners would prevail on Ground 1 with respect to Challenged Claims 39 and 40. In particular, the Petition has not shown that the combination of Kim, Shin, and Myers teaches, or renders obvious, at least the following limitation recited in independent claims 39 and 40: “circuitry . . . configured to generate a sequence of selected code words by encoding the input data . . . wherein each of the selected code words is a member of a robust subset of a full code word set.”

For that limitation, the Petition says to see its analysis for claims 1 and 26. *See* Pet. at 90-91, 106-107. As discussed above with respect to claims 1 and 26, however, the combination of Kim, Shin, and Myers does not teach, suggest, or render obvious, the limitation of a transmitter or circuitry that is “configured to generate a sequence of selected code words by encoding the input data . . . wherein each of the selected code words is a member of a robust subset of a full code word set.” For those same reasons, the limitation of “circuitry . . . configured to generate a sequence of selected code words by encoding the input data . . . wherein each of the selected code words is a member of a robust subset of a full code word set” recited in claims 39 and 40 is not taught, or rendered obvious, by the combination of Kim, Shin, and Myers.

Accordingly, the Petition has failed to show that Challenged Claims 39 and 40 are unpatentable over Kim, Shin, and Myers.

## V. CONCLUSION

For at least the foregoing reasons, Patent Owner respectfully requests that the Board refuse to institute an *inter partes* review.

Dated: September 23, 2025

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**CERTIFICATE OF SERVICE**

I certify that the Patent Owner's Preliminary Response in connection with *Inter Partes Review* Case IPR2025-01039 was served on September 23, 2025 by electronic mail to:

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**CERTIFICATE OF WORD COUNT**

Pursuant to 37 C.F.R. § 42.24(d), the undersigned attorney for the Patent Owner declares that this Patent Owner Preliminary Response has a total of 6,261 words, according to Microsoft Word® word count tool, excluding the parts of the Response exempted by 37 C.F.R. § 42.24(a)(1).

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