

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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AMAZON.COM, INC. and AMAZON.COM SERVICES LLC,  
Petitioner

v.

INTERDIGITAL VC HOLDINGS, INC.,  
Patent Owner

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Case IPR2026-00193  
U.S. Patent No. 11,936,876

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**PATENT OWNER’S SUR-REPLY TO  
PETITIONER’S PRELIMINARY REPLY**

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Patent Trial and Appeal Board  
U.S. Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450

**PATENT OWNER'S EXHIBIT LIST**

| <b>Exhibit No.</b> | <b>Description</b>                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2001               | Complaint, <i>InterDigital, Inc. v. Amazon.com Services LLC</i> , Case No. 2:25-cv-00822 (EDVA Dec. 18, 2025)                                                                                                                                                                                                                                                                                                |
| 2002               | “Licensing at InterDigital,” <i>InterDigital</i> , available at <a href="https://www.interdigital.com/licensing">https://www.interdigital.com/licensing</a> (last accessed Feb. 20, 2026)                                                                                                                                                                                                                    |
| 2003               | Declaration of Ryan Pohlman                                                                                                                                                                                                                                                                                                                                                                                  |
| 2004               | “InterDigital renews license agreement with Sony,” <i>InterDigital</i> , available at <a href="https://ir.interdigital.com/news-events/press-releases/news-details/2026/InterDigital-renews-license-agreement-with-Sony/default.aspx">https://ir.interdigital.com/news-events/press-releases/news-details/2026/InterDigital-renews-license-agreement-with-Sony/default.aspx</a> (last accessed Mar. 3, 2026) |
| 2005               | “InterDigital signs license agreement with HP,” <i>InterDigital</i> , available at <a href="https://ir.interdigital.com/news-events/press-releases/news-details/2025/InterDigital-signs-license-agreement-with-HP/default.aspx">https://ir.interdigital.com/news-events/press-releases/news-details/2025/InterDigital-signs-license-agreement-with-HP/default.aspx</a> (last accessed Mar. 3, 2026)          |
| 2006               | “2025: InterDigital’s Year In Review,” <i>InterDigital</i> , available at <a href="https://www.interdigital.com/post/2025-interdigitals-year-in-review">https://www.interdigital.com/post/2025-interdigitals-year-in-review</a> (last accessed Mar. 3, 2026)                                                                                                                                                 |
| 2007               | “InterDigital enforces patents against Amazon,” <i>InterDigital</i> , available at <a href="https://ir.interdigital.com/news-events/press-releases/news-details/2025/InterDigital-enforces-patents-against-Amazon/default.aspx">https://ir.interdigital.com/news-events/press-releases/news-details/2025/InterDigital-enforces-patents-against-Amazon/default.aspx</a> (last accessed Mar. 3, 2026)          |
| 2008               | Enforcement and Non-waiver of 37 C.F.R. § 42.104(b)(4) and Permissible Uses Of General Knowledge In <i>Inter Partes</i> Reviews (July 31, 2025), available at <a href="https://www.uspto.gov/sites/default/files/documents/aapa_memo_final__signed.pdf">https://www.uspto.gov/sites/default/files/documents/aapa_memo_final__signed.pdf</a> (last accessed March 5, 2026)                                    |
| 2009               | InterDigital, Inc. Form 10-K (Annual Report), United States Securities and Exchange Commission, File No. 1-33579                                                                                                                                                                                                                                                                                             |

| Exhibit No. | Description                                                                                                                                                                                                                                     |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2010        | <i>Amazon.com, Inc. et al. v. InterDigital et al.</i> , Claim No. HP-2025-000043 Transcript of Proceedings December 3, 2025 in the High Court of Justice, London, England                                                                       |
| 2011        | U.S. Publication No. 2010/0086029 to Chen et al.                                                                                                                                                                                                |
| 2012        | Havlicek Declaration from IPR2026-00192 ('606 patent)                                                                                                                                                                                           |
| 2013        | U.S. Publication No. 2009/0046781 to Moriya et al.                                                                                                                                                                                              |
| 2014        | Meeting Notes Accompanying VCEG-AJ21 - ITU Video Coding Experts Group (VCEG) Archive at VCEG-AJ01.zip accessible at <a href="https://www.itu.int/wftp3/av-arch/video-site/0810_San/">https://www.itu.int/wftp3/av-arch/video-site/0810_San/</a> |

**I. PETITIONER’S REPLY FAILS TO CURE THE ABSENCE OF ANY DISCLOSURE OF INTRA PREDICTION FOR 32×32 MACROBLOCKS IN XIONG.**

Petitioner contends that combining Xiong’s statement that displacement intra prediction (DIP) operates at a “macroblock level” with an unrelated mention of a “32×32 macroblock” somehow yields a disclosure of intra prediction for a 32×32 macroblock. Reply, 1. This argument fails.

Xiong’s stated goal is not to invent new intra prediction methods, but to “flexibly perform combined encoding” by selecting among *existing* methods, such as H.264/AVC, DIP, and Template Matching. EX1006, Abstract, 2. All of these are limited to block sizes of 16×16 or smaller. POPR, 20-21.

Petitioner’s reliance on Xiong’s mention of a “32×32 macroblock” ignores the disclosure’s actual context. Reply, 1. Xiong states that the unit to be encoded can be the “macroblock ... or a sub-block obtained by dividing a macroblock.” EX1006, 6. Read in context, Xiong contemplates partitioning a 32×32 macroblock into smaller sub-blocks to apply existing 16×16-limited prediction methods.

The evidentiary gap is further confirmed by the Petition itself, which was forced to invent an entirely new syntax element—“ext\_32×32\_pred\_flag”—that appears nowhere in Xiong. Pet., 29-30. Critically, the Reply does not identify any prior-art disclosure of such a parameter or otherwise cure this deficiency. Because Xiong is silent as to any intra prediction mode applied to a 32×32 macroblock, and

the Reply fails to cure that absence, Petitioner has failed to meet its burden.

## **II. PETITIONER’S ADMISSION REGARDING VCEG-AJ21 IS FATAL.**

Petitioner admits that it “does not rely on VCEG-AJ21 for disclosure of intra prediction.” Reply, 2. This concession is dispositive.

The independent claims require “an intra prediction mode for the large block that is not further split.” As already established, Xiong does not disclose such a limitation for blocks greater than  $32 \times 32$ . POPR, 32-36; *supra* Section I. By conceding that VCEG-AJ21 also does not disclose intra prediction, Petitioner leaves this claim element entirely unsupported by the proposed combination.

Petitioner attempts to avoid this deficiency by asserting that it “relies on Xiong’s teachings as applied to the  $64 \times 64$  macroblock” for intra prediction. Reply, 2. But this argument fails for the same reason discussed above: Xiong is silent on intra prediction for large blocks ( $\geq 32 \times 32$ ). The Reply does not identify any additional disclosure in Xiong curing this absence. Moreover, VCEG-AJ21 cannot supply what Xiong lacks because VCEG-AJ21 is expressly directed to *inter* prediction. EX1008, 1. Petitioner had to rely on nothing more than expert *ipse dixit* to supply the missing elements, pointing to Dr. Acton’s unsupported testimony that “there would be [an] ext\_64x64\_pred\_mode.” Pet., 29-30 (citing EX1003, ¶84).

Critically, a POSITA would not have a reasonable expectation of success in applying Xiong’s *intra* prediction method to VCEG-AJ21 when VCEG-AJ21 is

strictly limited to *inter* prediction. Petitioner cannot pick and choose the dimensional aspects of VCEG-AJ21 (e.g., 64×64 blocks) while discarding the very technical context (inter prediction) that gives those aspects meaning. Nor can Petitioner rely entirely on Xiong to supply intra prediction for large blocks when Xiong itself lacks that disclosure.

Petitioner previously argued that VCEG-AJ21 was necessary to “extend Xiong’s hierarchical block structure to larger blocks.” Pet., 20. The Reply’s attempt to retreat from that position by claiming VCEG-AJ21 is “not strictly necessary” only underscores the weakness of the proposed combination. Reply, 2-3. It confirms that Petitioner’s theory is not grounded in the teachings of the art, but instead is a hindsight-driven reconstruction assembled for litigation.

### **III. DR. HAVLICEK’S TESTIMONY CANNOT SUBSTITUTE THE LACK OF INTRA PREDICTION DISCLOSURE IN VCEG-AJ21.**

Petitioner’s Reply relies entirely on Dr. Havlicek’s testimony to argue that VCEG-AJ21 discloses intra prediction modes. Reply, 3-4. However, Dr. Havlicek’s pure conjecture cannot rewrite a reference that is, by its own terms, limited to *inter* prediction—a fact Dr. Havlicek explicitly admits. EX2012, ¶73.

Petitioner points to Dr. Havlicek’s statement that inter prediction partitions may be a “super set” of intra prediction partitions. Reply, 3. But this is a generic technical observation, which ignores the fact that VCEG-AJ21 is exclusively directed toward inter prediction with “[e]nlarging MB size.” EX1008, 1.

Moreover, as established, inter prediction and intra prediction are fundamentally distinct algorithms addressing different problems. POPR, 40-43. Inter prediction relies on temporal redundancy across frames, while intra prediction relies on spatial redundancy within a single frame. *Id.* These differences are not incidental—they are the reason VCEG-AJ21 expressly limited its proposal to inter prediction. *Id.*; EX1006, 1. Because VCEG-AJ21 is silent regarding intra prediction for large blocks, Dr. Havlicek cannot simply bridge this evidentiary gap by claiming a POSITA would “appreciate[]” that intra prediction partitions are a subset of Xiong’s inter prediction partitions of large blocks. Reply, 3-4.

Even if Dr. Havlicek believes a POSITA could conceptually extend VCEG-AJ21 to intra prediction, such an observation does not change what the reference is really about: a proposal for enlarging macroblocks in an *inter* prediction context.

#### **IV. PETITIONER’S REPLY FAILS TO RESOLVE THE LOGICAL INCONSISTENCY IN ITS “DOUBLE-DIPPING” THEORY.**

Petitioner’s Reply fails to resolve the fundamental inconsistency identified in the POPR: the improper use of a single syntax element to satisfy two distinct claim limitations. Petitioner maps a hypothetical, undisclosed “ext\_32×32\_pred\_flag” derived from Xiong’s ext\_16×16\_pred\_flag to a “binary split signaling syntax element” (Limitation 1[b]) while simultaneously mapping the same underlying mechanism—Xiong’s ext\_16×16\_pred\_flag—to a “second syntax element” (Limitation 1[e]). Reply, 4-5.

This mapping is technically and legally untenable. The '876 patent expressly distinguishes these elements as separate mechanisms with distinct functions: the “split signaling” element (e.g., `intra64_flag`, `intra32_flag`) governs block partitioning of large blocks greater than or equal to  $32 \times 32$ , while the “second syntax element” (e.g., `sip_type`) independently conveys a spatial intra partition type for a basic coding unit (e.g., a  $16 \times 16$  block). EX1001, 10:3-16, 12:9-10, Table 2. Petitioner’s theory collapses under these distinct functionalities. The claimed “binary split signaling syntax element” for the large block is undisclosed and must be invented by Petitioner. Once the hypothetical `ext_32x32_pred_flag` is assigned to Limitation 1[b], its parent mechanism (“`ext_16x16_pred_flag`”) cannot simultaneously serve as the “second syntax element” of Limitation 1[e].

Petitioner’s response—that different hierarchy levels use different flags, Reply, 5—only reinforces the deficiency. Petitioner’s theory depends on extrapolating the same underlying mechanism (`ext_NxN` flags) to undisclosed hierarchy levels to simulate the claimed structure. By advancing a theory that is rooted in reconfiguring Xiong’s system that expressly utilizes only a single “`ext_16x16_pred_flag`,” Petitioner fails to show that Xiong teaches two separate syntax elements serving different functions.

For the above reasons, Petitioner’s Reply does not overcome the deficiencies identified in the POPR, and the Petition should therefore be denied.

Respectfully submitted,

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Date: May 8, 2026

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**CERTIFICATE OF SERVICE (37 C.F.R. § 42.6(e))**

I certify that the above-captioned **PATENT OWNER'S SUR-REPLY TO PETITIONER'S PRELIMINARY REPLY** was served in its entirety on May 8, 2026, upon the following parties via electronic mail:

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