

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

HP INC., DELL TECHNOLOGIES INC., DELL INC., AND
LENOVO (UNITED STATES) INC.,

Petitioners,

v.

UNIVERSAL CONNECTIVITY TECHNOLOGIES INC.,

Patent Owner.

Case IPR2024-01428
U.S. Patent No. 7,154,905

**PATENT OWNER’S PRELIMINARY RESPONSE
TO THE PETITION**

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2002	Lenovo Group Limited’s Invalidity Contentions, <i>Universal Connectivity Technologies Inc. v. Lenovo Group Limited</i> , No. 2:23-cv-00449-JRG (E.D. Tex. July 24, 2024), pp. 1-27, 229-230; A-0; A-1; A-3
2003	Dell Technologies Inc. and Dell Inc.’s Invalidity Contentions, <i>Universal Connectivity Technologies Inc. v. Dell Inc.</i> , No. 1:23-cv-01506-RP (W.D. Tex. July 24, 2024), pp. 1-27, 227-228; A-1; A-3
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I. INTRODUCTION

Petitioners have failed to show a reasonable likelihood of success in demonstrating any of the challenged claims are anticipated or obvious over the cited prior art. Neither of the two prior art references relied upon by Petitioners discloses, teaches or suggests a limitation found in all of the independent claims – “the indicators include one or more out of band symbols.”

In Grounds 1 and 2, Petitioners erroneously assert that a predetermined spare or unused code is an out-of-band symbol despite the fact that a spare or unused code is nothing more than an in-band symbol that had not been used (which it would have to be for it to be a preempt or continue indicator). *See* Petition at 20-21.

In Grounds 3 and 4, Petitioners rely on the same flawed insertion argument, erroneously asserting that “trailer bits” allegedly corresponding to preempt and resume indicators include out-of-band symbols because they are inserted into a packet, even though the agnostic process by which a symbol becomes part of a packet is irrelevant to whether the symbol is an “in-band” symbol.. *Id.*, 62-64. Petitioners’ argument is particularly flawed in view of the prosecution history as the

primary reference relied upon by the Patent Examiner, European Patent Application 0582537 to Cidon (“Cidon”), discloses the same alleged preempt and continue indicators and the Patent Examiner explicitly allowed the claims because Cidon did not disclose indicators that include one or more out-of-band symbols. *See* Petition at 5-6.

Institution should also be denied on discretionary grounds in light of the advanced stage of relevant district court litigation and the extensive overlap in issues concerning validity. Petitioners have shown no reasonable likelihood of success, and the Board should deny institution of the '905 Patent IPR Petition.

II. OVERVIEW

A. The '905 Patent

U.S. Patent No. 7,154,905 (“the '905 patent” (Ex. 1001)) to Shin et al is titled “Method and System for Nesting of Communications Packets” and has a priority date of November 22, 2000, based upon Provisional Application No. 60/252,724. The '905 patent has a comprehensive specification and the subject matter corresponding to the challenged claims is generally disclosed in 1.4 Packet Preemption, Ex. 1001, 19,61-21:20, and also at *id.*, 7:2-6; 11:49-12:11; 15:39-50; and 24:41-46.

1.4 Packet Preemption

In one embodiment, a communications node may preempt or interrupt the transmission of a packet when a packet with a higher priority is to be transmitted on the same communications link. Packet preemption helps ensure that data store devices receive control packets as soon as possible without being slowed by network congestion as a result of data packets. In particular, the transmission of a data packet, which may be large, may be preempted so that a control packet, which is typically small, may be transmitted. When a data packet is to be preempted, the transport layer of the communications node stops providing the codes of the data packet to the link layer, signals the link layer to transmit a preempt primitive, and then starts providing the code of the control packet to the link layer for transmission as a preempting packet. When the preempting packet has been completely transmitted, the transport layer of the communications node signals the link layer to transmit a continue primitive and then resumes providing the remainder of the codes of the data packet to the link layer. The link layer of the receiving communications node detects the preempt primitive while it is receiving the codes of the data packet and signals its transport layer. The transport layer then starts storing the subsequent codes as a control packet. When the link layer detects the continue primitive, it signals the transport layer, which continues receiving the preempted data packet. The preempt and continue primitives, which are control primitives, serve to delimit transmission of a preempting packet. One skilled in the art will appreciate that packet preemption could be nested to any level. For example, a status packet might preempt a command packet that already preempted a data packet.

FIG. 13 is a diagram illustrating the preemption of a packet in one embodiment.

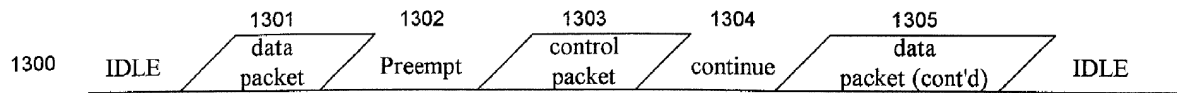


Fig. 13

Serial link content diagram 1300 illustrates a data packet that is preempted by a control packet. Initially, the transmitting communications node transmits the first portion of data packet 1301. When the packet is to be preempted, the communications node then transmits the preempt primitive 1302. After transmitting the preempt primitive, the transmitting communications node transmits the preempting control packet 1303. After the control packet is transmitted, the communications node transmits the continue primitive 1304, and then resumes transmitting the remainder of the preempted data packet 1305.

FIG. 14 is a logic diagram illustrating the processing of packet preemption by a transmitting communications node in one embodiment.

In block 1401, the component of the transport layer retrieves the next packet from the transmit memory. In block 1402, the component retrieves the next code of the retrieved packet. In decision block 1403, if all the codes have already been retrieved from the packet, then the component continues at block 1401 to retrieve the next packet, else the component continues at block 1404. In block 1404, the component provides the retrieved code to the link layer. In decision block 1405, if a preempt signal has been raised (e.g., as a result of being provided a

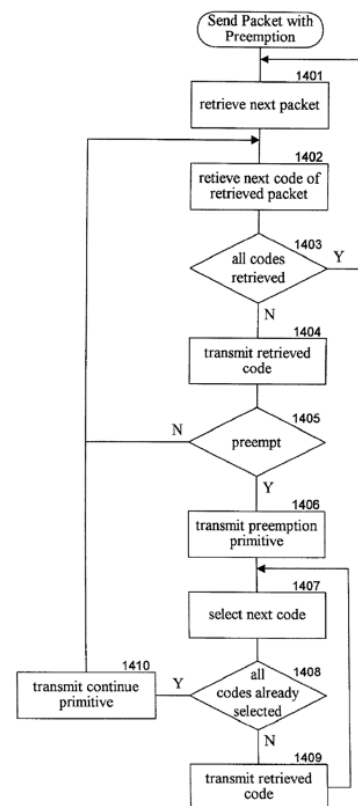


Fig. 14

control packet by an upper layer), then the component continues at block 1406, else the component continues at block 1402 to retrieve the next code of the packet. In block 1406, the component notifies the link layer to transmit a preempt primitive. In blocks 1407–1409, the component provides each code of the preempting packet to the link layer. In block 1407, the component selects the next code of the preempting packet. In decision block 1408, if all the codes of the preempting packet have already been selected, then the component continues at block 1410, else the component continues at block 1409. In block 1409, the component provides the selected code to the link layer and then continues at block 1407 to select the next code of the preempting packet. In block 1410, the component signals the link layer to transmit a continue primitive and then continues processing the preempted packet at block 1402.

FIG. 15 is a logic diagram illustrating processing of packet preemption by a receiving communications node in one embodiment. In block 1501, the component of the transport layer retrieves the next code from the link layer. In decision block 1502, if the link layer signals that a preempt primitive has been received, then the component continues at block 1504, else the component continues at block 1503. In block 1503, the component adds the code to the current packet and retrieves the next code in block 1501. In block 1504, the component saves current packet information so that it can continue storing codes in the packet after the preemption is complete. In block 1505, the component processes

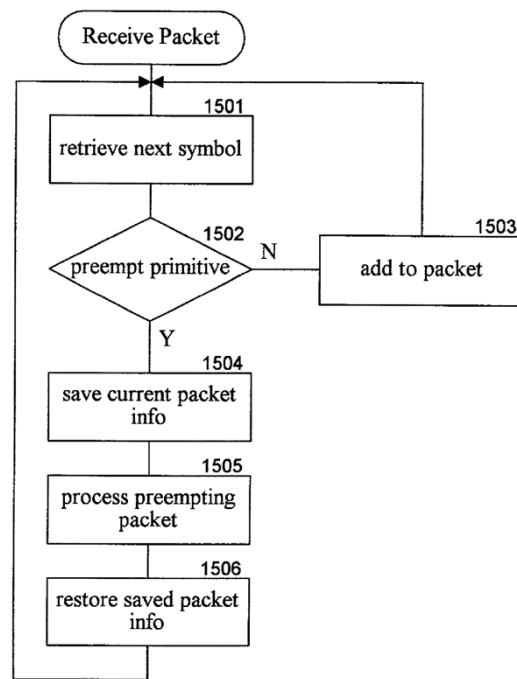


Fig. 15

the preempting packet. The processing includes receiving each code and storing the codes in a preempting packet until the link layer indicates that it received a continue primitive. In block 1505, the component restores the saved packet information so that subsequent received codes can be stored in the preempted packet. The component then selects the next code of the preempted packet in block 1501.

Ex. 1001, 19: 61-21:20.

B. Claim Construction

For purposes of *inter partes* review, disputed claim terms are construed to give them “the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.” *See* 83 Fed. Reg. 51341 (Oct. 11, 2018) (adopting the standard of *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005)). The proper construction is considered in the context of, and must be consistent with, the specification—and the claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art. *See, e.g., Phillips*, 415 F.3d at 1313.

“[T]he petition must set forth ... [h]ow the challenged claim is to be construed.” 37 C.F.R. § 42.104(b)(3). In addition, “where a party believes that a specific term has meaning other than its plain meaning, the party

should provide a statement identifying a proposed construction of the particular term and where the disclosure supports that meaning.” *See* Trial Practice Guide, 77 Fed. Reg. at 48,764. The Board has denied institution when “the dispute requires a determination of the meaning of a claim limitation” but the petitioner does not provide “an adequate claim construction analysis” or “adequately or persuasively explain[s] why a person of skill in the art reading the claim in light of the Specification” would have understood it the prior art disclosures to satisfy the disputed limitation. *See Mediatek, Inc. v. Mosaid Technologies Inc.*, IPR2024-00718, Paper 10 at 18-20 (PTAB October 9, 2024) (Institution Decision).

Petitioners have submitted that no terms require construction for this proceeding. Petition at 6. Patent Owner does not disagree at this time, but reserves the right to propose construction in any subsequent filings.

C. Person of Ordinary Skill in the Art

A person of ordinary skill in the art of the subject matter of the '905 patent would have the equivalent of a bachelor's degree in electrical engineering, computer engineering, computer science, or equivalent training and three years of work experience with data communications

systems or interfaces, including at least some experience with serial or display data communications systems or interfaces. Additional education may compensate for lesser work experience, and vice versa.

D. Prior Art

1. Banes (Ex. 1005)

The first prior art reference relied upon by petitioners is a published UK Patent Application No. GB 2344029 to Banes (“Banes” Ex. 1005) that is titled “Transmission of data packets of different size and priority.” Banes teaches packet preemption using an interrupt code and a resumption code in an ATM network.

In a first method aspect, the invention provides a method of communicating data over a network comprising transmitting a first data packet, receiving a higher priority data packet, interrupting transmitting the first data packet to transmit the higher priority data packet, and resuming transmission of the first data packet.

Ex. 1005, 2:9-13.

Referring now to Fig. 4, a second embodiment will now be described; this schematic diagram illustrates the order of data transmission when a high priority packet interrupts a lower priority packet. A first, lengthy, data packet is transmitted as a header 100 including a priority flag 101 and an initial data portion 102a. During transmission of the initial data portion 102a, a higher priority packet is received for sending along the

same path. The higher priority packet comprises a header portion 120 including a priority flag 121, in this case set to high priority, and a data portion 122. To send this packet without having to wait until the first packet has finished, an interrupt code 110 is inserted in the data portion 102a, which signals to an appropriately configured receiver that sending of the first packet has been interrupted. The higher priority packet is then sent, followed by a resumption code 111, followed by the remainder 102b of the data of the first packet.

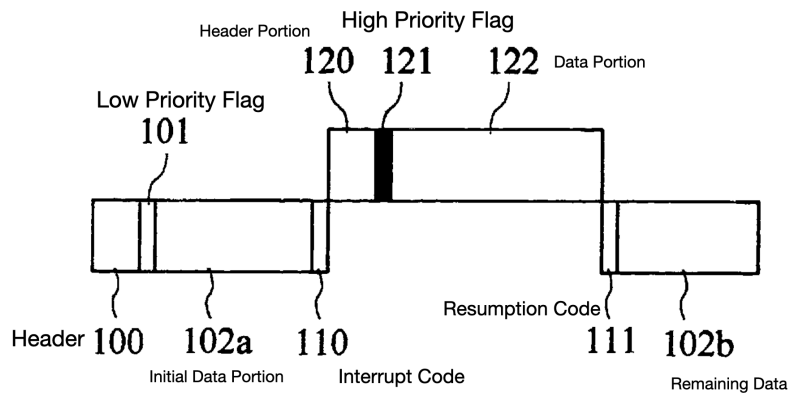


Fig. 4

Ex. 1005, 11:18-30; 4/5.

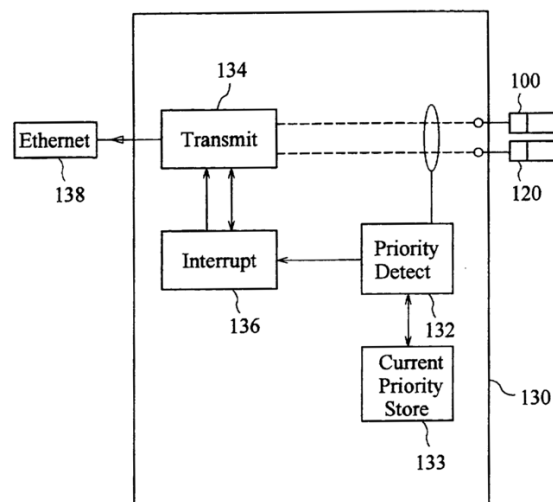
Referring to Fig. 5, apparatus for performing the interruption described above will now be described. A network interface 130 is arranged to receive data packets for onward transmission. Received packets pass by priority detector 132 which determines whether interruption is required, by reference to the priority of the packet in transit stored in current priority store 133. In the normal course of events, packets are passed to transmitter 134 in the order received for transmission over a network, here a 1Gbit/s ethernet 138.

However, if the priority detector determines that interruption

is required, a signal is sent to interrupt device 136 which inserts an interrupt code, here chosen to be a pre-determined "spare" code from the 10bit coding scheme used for the Ethernet, buffers the remainder of the packet in transit as necessary, and instructs the transmitter to commence output of the higher priority packet. After the higher priority packet has been sent, a resume code is sent (this may not always be necessary, as the header 120 of the higher priority packet will contain the packet length, but this may simplify reassembly of the fragmented packets and increase fault tolerance), followed by the remainder of the first packet.

Signalling of interruption is preferably implemented at the physical layer, for example by using an otherwise unused 10 bit code in the case of Ethernet.

Fig. 5



Ex. 1005, 12:1-19; 5/5.

2. Calvignac (Ex. 1004)

The second prior art reference relied upon by petitioners is U.S. Patent No. 5,557,608 to Calvignac et al ("Calvignac" Ex. 1004) that is

titled “Method and apparatus for transmission of high priority traffic on low speed communication links.” Calvignac is prior art that was cited during the prosecution of the ’905 Patent. *See* File History of U.S. Patent 7,154,905, Ex. 1002, at 10. Although the Patent Examiner did not specifically discuss Calvignac, the Patent Examiner did, as discussed below, consider and apply prior art that discloses the protocol used in Calvignac to signal presumption and resumption, European Patent Application 0582537 to Cidon (“Cidon” Ex. 1007). *See* Petition, 5-6; Ex. 1002, 250-270.

In Calvignac, “Real-time traffic is given priority over non-real-time traffic [(i.e., is high priority and] both non-real time traffic and non reserved traffic will be considered as low priority traffic.” Ex. 1004, 3:51-57. Calvignac teaches that “an incoming real-time packet is imbedded after the next block of data of the non-real-time packet being transmitted ... by transmitting each packet along with at least a 1-byte trailer which is used to indicate the packet type, whether the current block of non real time data is preempted or whether the current block of non real time data is resumed.” Ex. 1004, 2:42-49.

Calvignac teaches using a standard HDLC protocol in which a shared 7E (0111 1110) flag indicates the start and end of a frame (or packet) (i.e., there is one flag between packets defining byte alignment). *Id.*, 4:16-22. Calvignac also teaches using a byte aligned starting preempt (SP) flag (0111 1111 0) and ending preempt (EP) flag (0111 1111 10). *Id.*, 4:45-49.

As explained in Calvignac, “[f]or preemption with resume service policy, a modified HDLC MAC-layer protocol is described wherein three types of flags are used to delimit packets for allowing high-priority packets to temporarily preempt low-priority packets. The HDLC starting, ending or idle flag is defined as the 8-bit sequence B`01111110`(X`7E`). The start preempt flag is defined as the 9-bit sequence B`011111110`and the end-preempt flag is defined as the 10-bit sequence B`0111111110`. All flags are on byte boundaries with respect to the packet data that they delineate. *Id.*, 2:5-15.

Calvignac also discloses a specific set of rules governing the validity of the preemption.

The validity of the preemption is defined by the following set of rules:

X`7E` defines byte alignment.

Six 1's preceded by a 0 that is not byte-aligned is an invalid code.

Nine 1's preceded by a 0 that is not byte-aligned is an invalid code.

Receipt of an invalid code aborts the current packet and subsequent packets, until X`7E`.

Must verify that the preempted packet is a non-real-time packet (C1 bit of control byte 1 in the network header must be 1).

Must verify that the packets received during preemption are real-time packets (C1 bit of control byte 1 in the network header must be 0).

Cannot preempt a non-real-time packet before first byte is transmitted,

Ex. 1004, 5:1-19.

The operation of Calvignac's preemption protocol is shown in Figure 2 (reproduced below).

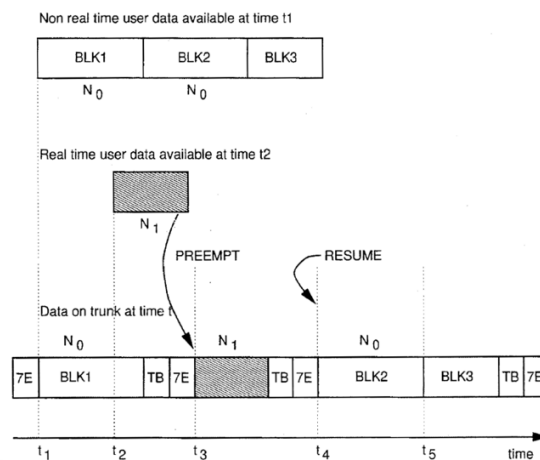


Figure 2

Ex. 1004, Fig. 2.

[E]ach packet is transmitted along with at least a 1-byte trailer which is used to indicate whether the packet is preempted. Each preempt/resume transition is marked by the transmission of a X`7E` flag preceded by a 1-byte trailer.

NRT (and NR) packets are segmented into short blocks ($N_0 = 128$ bytes). The scheduler sends each block over the line after it has checked that the RT queue is empty. At T1 speed, the block length corresponds to a 0.7 microsecond transmission delay.

If a RT packet arrives after the transmission of a NR or NRT packet has started, the scheduler notices the presence of the RT packet at the next inter-block checking. It then inserts a 1-byte trailer into the current NR or NRT packet which indicates that this packet is going to be preempted by at least one RT packet, triggers the transmission of a X`7E` flag and inserts the RT packet.

After the RT packet has been transmitted, the scheduler inserts a 1-byte trailer which indicates that this packet was a RT packet, triggers the transmission of a X`7E` flag, and checks again the RT queue. If the RT queue is empty, the scheduler resumes the transmission of the NRT (or NR) packet. Else, it transmits the next RT packet and then inserts a new 1-byte trailer and a X`7E` flag.

Assume that the transmission of a non-real-time packet has started at time $t=t_1$, and that a N_1 byte real-time packet arrives at time $t=t_2$. The real-time queue is checked before sending a new block of the non-real time packet, so in our example the preemption will be activated at time $t_3 = t_1 + T$. After the real-time packet has been transmitted, the transmission of the non-real-time packet is resumed by blocks of N_0 bytes.

The trailer byte [TB] actually includes: three state control bits that are used by the preempt/resume protocol; one reserved bit; and four other bits used for protection.

Id., 5:34-67. The trailer byte disclosed in Calvignac is depicted in Figure 3 [reproduced below] and is structured as follows.

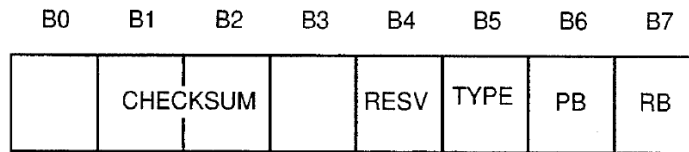


Figure 3

Id., Fig. 3.

B0 to B3:

Trailer byte check sum. Equal to the inverted value of bits B4 to B7.

B4: Reserved

B5: PT (Packet Type) bit:

0 Real-Time

1 Non-real time/Non reserved

B6: PB (Preempted Block) bit:

If B5=1 (meaning current clock has NRT packets),
then

0 Current block is not preempted

1 Current block is preempted

If B5=1 [sic] (meaning current block has RT packets),
then

0 Not applicable

1 Always inserted RT packet

B7: RB (Resumed Preempt) bit:

NRT (B5=1)

0 Current block is not resumed

1 Current block is resumed

RT (B5=0)

0 Not last RT packet; next = RT

1 Last RT packet; next = NRT

anticipates or renders obvious the challenged claims because Banes does not disclose, teach or suggest at least one limitation of each of independent claims 1, 8, 15 and 21 – “the indicators include one or more out-of-band symbols.” There are two “indicators” in the independent claims. The first is the “preempt indicator” recited in [1(e)], [8(b)], [15(b)], and [21(b.1)]. The second is the “continue indicator” recited in [1(g)], [8(d)], and [15(d)]. The limitation “the indicators include one or more out-of-band symbols” is recited in [1(i)] “wherein the packets include in-band symbols and the indicators include one or more out-of-band symbols,” [8(f)] “wherein the symbols of the packets include in-band symbols and the indicators include one or more out-of-band symbols,” [15(f.1)] “further the packets include in-band symbols and the indicators include one or more out-of-band symbols,” and [21(c)] “wherein packets include in-band symbols and the indicators include one or more out-of-band symbols.” The Petition relies on the same arguments for each of these limitations. See Petition at 18-21, 33, 38, 48.

The '905 Patent teaches that “an out-of-band symbol, ... is a symbol that does not normally appear within a packet....” Ex. 1001, 11:57-58. As the '905 Patent explains, “a sequence of two out-of-band symbols is a

primitive that is used to exchange control information (e.g., XON and XOFF) between link layers ... Because control information is encoded as out-of-band symbols, the control symbols can be inserted into a sequence of in-band symbols and readily detected as control symbols when received. The control symbols can be interspersed with the transmission of symbols of a packet so that one end of a communications link can provide link control information to the other end even while packets are being transmitted in both directions (i.e., full-duplex mode).” *Id.*, 11:67-12:11.

Banes teaches using the same coding for data and the interrupt code (allegedly corresponding to the preempt indicator in the claims). Banes teaches that “[p]referably interrupting transmission comprises sending a special code to signify interruption. For example, in the case of high speed Ethernet, 10 bit coding is used to carry 8 bit data, and an unused code can be used to flag an interruption.” Ex. 1005, 2:21-24.

In the second embodiment of Banes, which is the first embodiment in which interrupt and resumption codes are disclosed, the codes have the same format as the priority flag as disclosed with reference to Fig. 4.

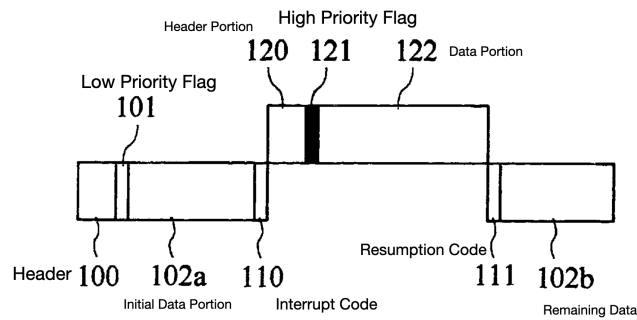


Fig. 4

Id., 4/4 (annotated).

A first, lengthy, data packet is transmitted as a header 100 including a priority flag 101 and an initial data portion 102a. During transmission of the initial data portion 102a, a higher priority packet is received for sending along the same path. The higher priority packet comprises a header portion 120 including a priority flag 121, in this case set to high priority, and a data portion 122. To send this packet without having to wait until the first packet has finished, an interrupt code 110 is inserted in the data portion 102a, which signals to an appropriately configured receiver that sending of the first packet has been interrupted. The higher priority packet is then sent, followed by a resumption code 111, followed by the remainder 102b of the data of the first packet.

Id., 11:20-30.

Banes further notes that, “an interrupt code, here [is] chosen to be a pre-determined ‘spare’ code from-the 10bit coding scheme used for the Ethernet,” *Id.*, 12:9-11. Banes also adds that “Signalling of interruption is preferably implemented at the physical layer, for example by using an

otherwise unused 10 bit code in the case of Ethernet.” *Id.*, 12:18-19. Thus, Banes reiterates that the same coding technique is used for the data and the interrupt code.

The Petition asserts that the interrupt code is an out-of-band symbol (preempt indicator) because it is a spare or unused code.

[It] can be a “spare” or “unused code,” such as when “10 bit coding is used to carry 8 bit data.” Ex.1005, 2:17-20, 12:8-13. For example, “a pre-determined ‘spare’ code from the 10 bit coding scheme used for [Ethernet]” may be used for the interrupt code. *Id.*, 12:8-13; *see also id.* at 12:18-19. Further, Banes teaches that the interrupt code can be “inserted in the [initial] data portion 102a” of the first packet, indicating that it is inserted and does not normally appear in packets. Ex.1005, 11:26-28. Because Banes teaches using a “spare” or “unused” code from a 8b/10b encoding scheme for the interrupt code, a POSITA would have understood that such a code included one or more symbols (because 8b/10b encoding is used) and also that such one or more symbols would have been out-of-band symbols, because they are “spare” or “unused” and also “inserted” into the first packet, which all demonstrates they do not normally appear within a packet.

Petition at 20-21 (citing Wolfe Declaration, ¶95).

The Petitioners’ apparent understanding of an “out-of-band” symbol is erroneous. Whether a symbol was “spare” or “unused” would not be relevant to a POSITA’s evaluation of whether the symbol was “in-

band” or “out-of-band.” A POSITA would understand that any data set would include spare or unused symbols in anticipation of future needs, in much the same way that certain pins or values may be marked as unused in a standard but the value is one that would normally appear (i.e., is within the range of permissible values) or the pin is one of several on a plug and available for use, but that use hasn’t been defined in the standard. That spare or unused value would still be “in-band.”

A POSITA would also not consider the process by which a symbol was placed in the packet as indicative of whether the symbol was “in-band” or “out-of-band.” A symbol that appears in a packet is an “in-band” symbol.

A POSITA would also consider all of the teachings of Banes, including the absence of any teaching regarding special implementation of a “resume code” and the explicit teaching that implementing interruption signaling at the physical layer, while preferred, is plainly not necessary. *See* Ex. 1005, 12:18-19.

Petitioner’s argument that a POSITA would have been motivated to implement a “resume code”/“resumption code” in the same way that Banes suggests an interrupt code could be implemented, Petition at 21,

should be rejected because Banes plainly did not contemplate doing so and, furthermore, teaches that a “resume code” is not even necessary. Ex. 1005, 12:14-15 (“this [sending a resume code] may not always be necessary, as the header 120 of the higher priority packet will contain the packet length,...”).

Banes does not teach implementing the resume code the same way as the interrupt code. However, each of the independent claims recites that “the indicators include one or more out-of-band symbols” and a POSITA would understand that this recited limitation refers to both indicators, a preempt indicator and a continue indicator. Accordingly, Banes does not disclose this limitation if the continue indicator corresponds to the resume code. Nor does Banes teach or suggest this limitation in the absence of any teaching or suggestion that the possibly unnecessary resume code could be implemented in the same way that an interrupt code could be implemented. A POSITA would not have been motivated to modify Banes as suggested by Petitioners. *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015) (“[O]bviousness concerns whether a skilled artisan not only could have made but would have been motivated to make the combinations or modifications of prior

art to arrive at the claimed invention.”); *Virtek Vision Int’l ULC v. Assembly Guidance Sys., Inc.*, 97 F.4th 882, 888 (Fed. Cir. 2024). Where, as here, a Patent Owner presents strong evidence that there would not have been a motivation to modify the asserted reference, it is proper for the Board to consider Patent Owner’s evidence and find that Petitioner has failed to meet its burden of showing unpatentability. *See Lab’y Corp. of Am. Holdings v. Ravgen, Inc.*, Nos. 2023-1342, 2023-1345, 2025 U.S. App. LEXIS 171, at *10 (Fed. Cir. Jan. 6, 2025) (*citing Arctic Cat Inc. v. Bombardier Recreational Prods. Inc.*, 876 F.3d 1350, 1363 (Fed. Cir. 2017) (affirming PTAB decision that Petitioner failed to establish the requisite motivation)).

And, because a dependent claim cannot be obvious if the independent claim from which it depends is not obvious, Petitioners have not established that dependent claims 3, 5, 7, 10, 12, 14, 17, 20, 23 and 26 are unpatentable. *See, e.g., Comaper Corp. v. Antec, Inc.*, 596 F.3d 1343 (Fed. Cir. 2010). If an independent claim is nonobvious, then the dependent claim is also nonobvious. *In re Fine*, 837 F.2d 1071, 1076 (Fed. Cir. 1988) (“A claim that depends from a non-obvious independent claim is non-obvious because it contains all the limitations of the independent

claim, plus a further limitation.”). The Board does not need to consider “arguments that certain dependent claim limitations would have been obvious where the base claim has not been proven invalid.” *SynQor, Inc. v. Artesyn Techs., Inc.*, 709 F.3d 1365, 1375 (Fed. Cir. 2013). *See also Zimmer Surgical, Inc. v. Stryker Corp.*, 365 F.Supp. 3d 466, 487-488 (D. Del. 2019) (“As a dependent claim contains at least one more limitation than the independent claim upon which it depends, it cannot be invalid under § 102 . . . if the independent claim upon which it depends is not anticipated.”) (citing *CA, Inc. v. Simple.com, Inc.*, 780 F. Supp. 2d 196, 260 (E.D.N.Y. 2009), *Duhn Oil Tool, Inc. v. Cooper Cameron Corp.*, 2012 U.S. Dist. LEXIS 24088, 2012 WL 604138 (E.D. Cal. Feb. 23, 2012)).

B. Grounds 3 and 4: Claims 1, 2, 5, 8, 9, 12, 15, 16, 20, 21 and 22 are neither anticipated nor rendered obvious by Calvignac.

Grounds 3 and 4 fail to show any reasonable likelihood that Calvignac anticipates or renders obvious the challenged claims because Calvignac does not disclose, teach or suggest at least one limitation of each of independent claims 1, 8, 15 and 21 – “the indicators include one or more out-of-band symbols.” This limitation appears in [1(i)] wherein the packets include in-band symbols and the indicators include one or

more out-of-band symbols, [8(f)] wherein the symbols of the packets include in-band symbols and the indicators include one or more out-of-band symbols, [15(f.1)] further the packets include in-band symbols and the indicators include one or more out-of-band symbols, and [21(c)] wherein packets include in-band symbols and the indicators include one or more out-of-band symbols. The Petition relies on the same arguments for each of these limitations. *See* Petition at 62-64, 70, 73, 80.

Calvignac teaches that existing HDLC MAC-layer protocols provide flags indicating “start preempt” and “end-preempt.”

Both the priority with no preemption and the preemption with retransmission service policies can be implemented using the existing HDLC MAC-layer protocol. For preemption with resume service policy, a modified HDLC MAC-layer protocol is described wherein three types of flags are used to delimit packets for allowing high-priority packets to temporarily preempt low-priority packets. The HDLC starting, ending or idle flag is defined as the 8-bit sequence B`01111110`(X`7E`). The start preempt flag is defined as the 9-bit sequence B`011111110` and the end-preempt flag is defined as the 10-bit sequence B`0111111110`. All flags are on byte boundaries with respect to the packet data that they delineate.

Calvignac, 2:3-15. Calvignac further explains that “[i]n the system described in

the prior art, the preempt/resume protocol uses a couple of special flags:

`011111110`: Starting preempt flag

`011111110`: Ending preempt flag

Both flags are byte aligned.” *Id.*, 4:45-49. In Calvignac, “each packet is transmitted along with at least a 1-byte trailer which is used to indicate whether the packet is preempted. Each preempt/resume transition is marked by the transmission of a X`7E` flag preceded by a 1-byte trailer.” *Id.*, 5:34-38.

Although Calvignac plainly discloses using in-band symbols as indicators, the Petition erroneously argues (1) that they are out-of-band symbols because they are inserted into the packet (*i.e.*, allegedly not normally contained within the packet) and (2) because a X`7E` flag has a sequence of seven or eight ones and therefore three or less transitions, even though the number of transitions is not determinative of whether a symbol is an “in-band” symbol or an “out-of-band” symbol.

Calvignac indicates that these “trailer bits” include *one or more out-of-band symbols*, because they are “insert[ed] [] into the current NR or NRT packet” (*id.*, 5:43-49), meaning they are not normally contained within the packet, and because a “flag detector” which “continuously monitors the bit stream received from a communications link 51” is able to detect the trailer byte

as separate from the packet data to facilitate potential preemption or resumption of transmission. Ex.1004, 9:14-18, 9:39-42; Ex.1003, ¶¶222-223. Calvignac also discloses that the X'7E' flag *includes one or more out-of-band symbols*, because it can be “insert[ed]” in the RT packet along with the new 1-byte trailer, which means it is not normally contained within the packet. *Id.* at 5:55-56. In addition, the X'7E' flag can have a sequence of “011111110” (seven “1’s”) when forming part of a *preempt indicator* to indicate the start of preemption and can have a sequence of “0111111110” (eight “1’s”) when forming part of a *continue indicator* to indicate the end of preemption. *Id.* at 4:47-48. Both of these sequences has “three or less transitions” and therefore both *include out-of-band symbols* in a manner described by the '905 Patent.

IPR Petition at 63 (citing Wolfe Declaration, ¶222-224).

A POSITA would also not consider the process by which a symbol was placed in the packet as indicative of whether the symbol was “in-band” or “out-of-band.” The fact that the symbol was inserted in the packet would rather suggest to a POSITA that it is an “in-band” symbol and not an “out-of-band” symbol. A POSITA would consider a symbol within a packet to be an “in-band” symbol

Nor would a POSITA consider flag detection indicative of whether a symbol is in-band or out-of-band. Petitioners do not suggest, and a POSITA would not understand, that a normal starting/ending/idle flag is

an out-of-band symbol. Nor is there any suggestion that a priority flag would be an out-of-band symbol, either with Calvignac or Banes.

The Petitioners' apparent understanding of an "out-of-band" symbol is erroneous. In the '905 Patent, an "out-of-band" symbol is a symbol that does not normally appear within a packet. However, the '905 Patent does not disclose that the number of transitions is determinative of whether a symbol is an in-band symbol or an out-of-band symbol. And the claims of the '905 Patent clearly disclose that it is not. Dependent claims 3, 10, 17 and 23 all recite the identical limitation "wherein the in-band symbols are transition optimized and the out-of-band symbols are not transition optimized."

The independent claims are broader than the dependent claims. *See Littelfuse, Inc. v. Mersen USA EP Corp.*, 29 F.4th 1376, 1380 (Fed. Cir. 2022) ("By definition, an independent claim is broader than a claim that depends from it"); *Intamin Ltd. v. Magnetar Techs., Corp.*, 483 F.3d 1328, 1335 (Fed. Cir. 2007) ("An independent claim impliedly embraces more subject matter than its narrower dependent claim.").

Claim differentiation also weighs against incorporating these transition optimization limitations into the independent claims.

See Liebel-Flarsheim Co. v. Medrad, Inc., 358 F.3d 898, 910 (Fed. Cir. 2004) (“[W]here the limitation that is sought to be ‘read into’ an independent claim already appears in a dependent claim, the doctrine of claim differentiation is at its strongest.”). “Moreover, even when claim differentiation does not apply, differences between claims may ‘provide[] guidance as to the scope’ of a patent’s claims.” *AMP Plus, Inc. v. DMF, Inc.*, Nos. 2021-1595, 2021-1636, 2022 U.S. App. LEXIS 31208, at *17 (Fed. Cir. Nov. 10, 2022) (quoting *Netflix, Inc. v. DivX, LLC*, No. 2021-1931, 2022 U.S. App. LEXIS 17573, 2022 WL 2298983, at *4 (Fed. Cir. June 27, 2022)). “Indeed, ‘[i]t is highly disfavored to construe terms in a way that renders them void, meaningless, or superfluous.’ *Id.*, quoting *Intel Corp. v. Qualcomm Inc.*, 21 F.4th 801, 810 (Fed. Cir. 2021).

Petitioners’ asserted motivation for modifying Calvignac to include out-of-band signals in control signals is based on impermissible hindsight application of the benefits identified by the ’905 Patent and entirely conclusory. Petition at 63-64. Petitioners have not even made a prima-facie showing and a POSITA would not have been motivated to modify Calvignac as suggested by Petitioners. *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015) (“[O]bviousness concerns whether a

skilled artisan not only could have made but would have been motivated to make the combinations or modifications of prior art to arrive at the claimed invention.”); *Virtek Vision Int'l ULC v. Assembly Guidance Sys., Inc.*, 97 F.4th 882, 888 (Fed. Cir. 2024). Where, as here, a Patent Owner presents strong evidence that there would not have been a motivation to modify the asserted reference, it is proper for the Board to consider Patent Owner’s evidence and find that Petitioner has failed to meet its burden of showing unpatentability. *See Lab'y Corp. of Am. Holdings v. Ravgen, Inc.*, Nos. 2023-1342, 2023-1345, 2025 U.S. App. LEXIS 171, at *10 (Fed. Cir. Jan. 6, 2025) (*citing Arctic Cat Inc. v. Bombardier Recreational Prods. Inc.*, 876 F.3d 1350, 1363 (Fed. Cir. 2017) (affirming PTAB decision that Petitioner failed to establish the requisite motivation)).

And, because a dependent claim cannot be obvious if the independent claim from which it depends is not obvious, Petitioners have not established that dependent claims 2, 5, 9, 12, 16, 20, and 22 are unpatentable. *See, e.g., Comaper Corp. v. Antec, Inc.*, 596 F.3d 1343 (Fed. Cir. 2010). If an independent claim is nonobvious, then the dependent claim is also nonobvious. *In re Fine*, 837 F.2d 1071, 1076 (Fed. Cir. 1988)

(“A claim that depends from a non-obvious independent claim is non-obvious because it contains all the limitations of the independent claim, plus a further limitation.”). The Board does not need to consider “arguments that certain dependent claim limitations would have been obvious where the base claim has not been proven invalid.” *SynQor, Inc. v. Artesyn Techs., Inc.*, 709 F.3d 1365, 1375 (Fed. Cir. 2013). *See also Zimmer Surgical, Inc. v Stryker Corp.*, 365 F.Supp. 3d 466, 487-488 (D. Del. 2019) (“As a dependent claim contains at least one more limitation than the independent claim upon which it depends, it cannot be invalid under § 102 . . . if the independent claim upon which it depends is not anticipated.”) (*citing CA, Inc. v. Simple.com, Inc.*, 780 F. Supp. 2d 196, 260 (E.D.N.Y. 2009), *Duhn Oil Tool, Inc. v. Cooper Cameron Corp.*, 2012 U.S. Dist. LEXIS 24088, 2012 WL 604138 (E.D. Cal. Feb. 23, 2012)).

1. Calvignac should be disregarded because it is essentially duplicative of the prior art considered and applied by the Patent Examiner during the Prosecution of the '905 Patent.

Calvignac is essentially duplicative of the prior art that was considered and applied by the Patent Examiner during the prosecution of the '905 Patent. European Patent Application 0582537 to Cidon (“Cidon” Ex. 1007) was the basis for the Patent Examiner’s rejection of

the pending claims. *See* Ex. 1002, 252-270.

The Patent Examiner rejected the pending independent claims, noting that “[w]ith regard to claim 1, Cidon teaches receiving a low priority data packet and beginning its transmission, followed by receiving a second, high priority packet, followed by stopping the transmission of the first, data packet. See page 4 lines 45+ and page 5 lines 38+. Cidon also teaches that this is followed by transmitting a preempt indicator. See the SP flag mentioned on page 5, line 43. Following the preempt indicator, the second, high priority packet is transmitted. See line 44. The end preempt indicator is the equivalent of the continue indicator as claimed. This is followed by transmission of the remainder of the low priority packet.” *Id.*, 252.

The Patent Examiner further noted that “[c]laims 3-4, 11-12, 19-20, and 26-27 are objected to as being dependent upon rejected independent claims, would be allowable if rewritten to include the limitations of the base claims and any intervening claims.” *Id.*, 254.

The Patent Applicants amended the pending independent claims by adding virtually identical limitations to each pending independent claim: “wherein the packets include in-band symbols and the indicators include

one or more out-of-band symbols,” ““wherein the symbols of the packets include in-band symbols and the indicators include one or more out-of-band symbols,” “and wherein further the packets include in-band symbols and the indicators include one or more out-of-band symbols,” “wherein packets include in-band symbols and the indicators include one or more out-of-band symbols.” *Id.*, 24-27.

Cidon discloses and relies on the same HDLC MAC-layer protocol disclosed in Calvignac. “Both the priority with no preemption and the preemption with retransmission service policies can be implemented using the existing HDLC MAC-layer protocol.” Ex. 1007, 2:58-3:1. Cidon discloses using the same starting and ending flags as Calvignac.

According to this invention, packets of information are embedded in frames having starting and ending flags, control headers to designate the packet's priority, and any required routing information. The flags, in addition to defining the boundaries of a packet, also define byte alignment of the packet data. The flags also indicate when a low-priority packet has been preempted by a high-priority packet and when the transmission of a low-priority packet is being resumed. The control bits designate whether or not a particular packet is high-priority or low-priority and hence whether or not the packet is preemptable.”

Ex. 1007, 3:18-23. Cidon details using the same flags that

Calvignac discloses.

The protocol for allowing high-priority packets to temporarily preempt low-priority packets uses three types of flags to delimit packets : a normal flag which can be a starting, ending or idle flag, a start-preempt flag and an end-preempt flag. The normal flag is defined as the 8-bit sequence B'01111110'(X'7e'). The start-preempt flag is defined as the 9-bit sequence B'011111110' and the end-preempt flag is defined as the ten-bit sequence B'0111111110'. All flags are on byte boundaries with respect to the packet data that they delineate.

Ex. 1007, 4:49-53. Cidon also discloses using the same rules for preemption. *Compare* Cidon, 5:1-12 *with* Calvignac, 5:1-20.

The following is a set of rules adopted for a practical preempt/resume protocol.

- . The bit sequence B'01111110' (X'7E') always defines byte alignment and may occur any number of times before and after complete packets.
 - . Si[x] '1' bits preceded by a '0' bit that is not byte aligned with received packet data is an invalid code.
 - . Nine '1' bits preceded by a '0' bit that is byte aligned is also an invalid code.
 - . Receipt of an invalid code aborts the current packet and all subsequent packets are aborted until X'7E' occurs.
 - . Verification that the preempted packet is a low priority packet is performed.
 - . Verification that packets received during preemption are high-priority packets is also performed.
- A low-priority packet cannot be preempted until the first byte is transmitted.

. Receipt of the start-preempt flag (B'011111110') immediately followed by the end-preempt flag (B'011111110') aborts the preempted packet and ends preempt mode.

Ex. 1007, 5:1-2.

The validity of the preemption is defined by the following set of rules:

X`7E` defines byte alignment.

Six 1's preceded by a 0 that is not byte-aligned is an invalid code.

Nine 1's preceded by a 0 that is not byte-aligned is an invalid code.

Receipt of an invalid code aborts the current packet and subsequent packets, until X`7E`.

Must verify that the preempted packet is a non-real-time packet (C1 bit of control byte 1 in the network header must be 1).

Must verify that the packets received during preemption are real-time packets (C1 bit of control byte 1 in the network header must be 0).

Cannot preempt a non-real-time packet before first byte is transmitted,

Ex. 1005, 5:1-19.

A POSITA with knowledge of the prosecution history of the '905 Patent would immediately recognize that Calvignac's nearly identical disclosure does not disclose, teach or suggest out-of-band indicators in view of the Patent Examiner's explicit recognition that these HDLC flags

are not out-of-band indicators.

2. Calvignac should not be the sole basis for institution as it presents substantially the same art and arguments considered during prosecution.

If the Board determines that Petitioners have failed to show a reasonable likelihood of success in demonstrating any of the challenged claims are anticipated or obvious over Banes but not Calvignac, then the Board should deny institution of *inter partes* review by exercising its discretion under 35 U.S.C. § 325(d). As detailed above, Grounds 3 and 4 of the Petition rely on prior art and arguments that were already presented to the Patent Office and expressly considered during prosecution.

In *Advanced Bionics, LLC v. Med-El Elektromedizinische Geräte GmbH*, the PTAB denied institution under Section 325(d) after evaluating the petition under a two-part test:

- 1) whether the petition presents to the Office the same or substantially the same art or arguments previously presented to the Office; and,

2) if either condition is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to patentability of the challenged claims.

IPR2019-01469, Paper 6 (PTAB Feb. 6, 2020) (precedential). As part of this analysis, the Board considers the non-exclusive *Becton, Dickinson* factors:

(a) the similarities and material differences between the asserted art and the prior art involved during examination [or any proceeding];

(b) the cumulative nature of the asserted art and the prior art evaluated during examination [or any proceeding];

(c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection;

(d) the extent of the overlap between the arguments made during examination and the manner in which Petitioner relies on the prior art or Patent Owner distinguishes the prior art;

(e) whether Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art; and

(f) the extent to which additional evidence and facts presented in the Petition warrant reconsideration of the prior art or arguments. *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 at 17–18 (PTAB Dec. 15, 2017) (precedential); *Advanced Bionics* at 10.

Grounds 3 and 4 of the Petition rely solely on Calvignac and assert that Calvignac discloses the out-of-band symbol wherein clause limitations of the independent claims. *See* Petition at 62-64, 70, 73, 80.

Calvignac is essentially duplicative of the prior art that was considered and applied by the Patent Examiner during the prosecution of the '905 Patent. As discussed above, European Patent Application 0582537 to Cidon (“Cidon” Ex. 1007) was the basis for the Patent Examiner’s rejection of the pending claims, but the Patent Examiner recognized that Cidon does not disclose the out-of-band symbol wherein clause limitations of the independent claims. The Patent Examiner considered Calvignac as well (*see* Ex. 1002, 10) but did not explicitly apply it to the pending claims, presumably because of its nearly identical relevant disclosure. Both Cidon and Calvignac were commonly assigned to IBM, so it is unsurprising that there are extensive similarities in their

disclosures.

As discussed above, the first four non-exclusive *Becton, Dickinson* factors support denial in view of (a) the similarities and material differences between Cidon and Calvignac; (b) the cumulative nature of Cidon and Calvignac; (c) the extent to which the substantially similar art, Cidon, as well as the asserted art, Calvignac, was evaluated during examination, including that Cidon was the basis for rejection, and (d) the extent of overlap between the arguments made during examination and the manner in which Petitioners rely on the art.

The last two non-exclusive *Becton, Dickinson* factors support denial as well since (e) Petitioners did not assert that the Patent Examiner erred in its evaluation of the prior art and (f) there is no additional evidence and facts presented in the Petition that warrant reconsideration of the prior art arguments. Petitioners bear the burden to “demonstrate[] that the Office erred in a manner material to the patentability of challenged claims.” *Advanced Bionics*, Paper 6 at 8. Petitioners have not done so here.

Accordingly, the two-part test articulated in *Advanced Bionics* is met for Grounds 3 and 4 and the Board should use its discretion to deny

institution under § 325(d).

IV. THE *FINTIV* FACTORS WEIGH AGAINST INSTITUTION

The Board has discretion under 35 U.S.C. § 314(a) to deny institution of the requested *inter partes* review due to the advanced state of parallel district court litigation regarding the same issues. *See NHK Spring Co. v. Intri-Plex Techs., Inc.*, IPR2018-00752, Paper 8 (PTAB Sept. 12, 2018) (precedential, designated May 7, 2019). The Board has set forth six factors (known as the “Fintiv factors”) for determining whether discretionary denial is appropriate:

- whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
- proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision;
- investment in the parallel proceeding by the court and the parties;
- overlap between issues raised in the petition and in the parallel proceeding;
- whether the petitioner and the defendant in the parallel proceeding are the same party; and
- other circumstances that impact the Board’s exercise of discretion, including the merits.

Apple Inc. v. Fintiv, Inc., IPR2020-00019, Paper 11 at 5-6 (PTAB Mar. 20, 2020) (precedential, designated May 5, 2020) (“*Fintiv I*”); *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15 at 7-8 (PTAB May 13, 2020) (decision denying institution of inter partes review) (“*Fintiv II*”). “These

factors relate to whether efficiency, fairness, and the merits support the exercise of authority to deny institution in view of an earlier trial date in the parallel proceeding.” *Fintiv I* at 6. In evaluating the factors, “the Board takes a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review.” *Id.*

As set forth below, each *Fintiv* factor weighs against institution. To avoid duplication of efforts, wasting resources, and potentially inconsistent decisions, the Board should deny institution.

A. Factor 1: No stay has been entered in the LGL Case and there is no evidence that a stay will be granted

There are presently four active district court cases involving the ’905 Patent: one pending in the Eastern District of Texas (*Universal Connectivity Technologies Inc. v. Lenovo Group Limited*, No. 2:23-cv-00449-JRG (the “LGL Case”)); one pending in Delaware (*Lenovo (United States) Inc. v. Universal Connectivity Technologies Inc.*, No. 1:24-cv-01126-RGA (the “Lenovo US Case”)¹; one pending in the Northern

¹ Lenovo US case is a declaratory judgment action filed by LGL’s wholly-owned, U.S.-based subsidiary Lenovo (United States) Inc., over a year after the LGL Case was filed. On December 2, 2024, UCT filed a Motion to Dismiss the Lenovo US Delaware action based on the first-to-file rule. See Case No. 1:24-cv-01126-RGA, Dkt. 10. Lenovo US filed its response on January 6, 2025, and UCT’s reply is due on January 20, 2025.

District of California (*Universal Connectivity Technologies Inc. v. HP Inc.*, No. 4:24-cv-04097-YGR (the “HP Case”))²; and one pending in the Western District of Texas (*Universal Connectivity Technologies Inc. v. Dell Inc.*, No. 1:23-cv-01506-RP (the “Dell Case”))³. The LGL Case is proceeding ahead of the other three cases, with a jury trial set to begin in November 2025. LGL has not filed a motion to stay in the LGL Case, nor is there any evidence to suggest a stay would be granted if such a motion was filed.

The LGL Case is not in its early stages. Jury selection is scheduled for later this year, on November 3, 2025. *See* Case No. 2:23-cv-00449-JRG at Dkt. No. 27. This is “a deadline that cannot be changed without an acceptable showing of good cause. Good cause is not shown merely by indicating that the parties agree that the deadline should be changed.” *Id.* at 5. Fact discovery – including extensive third-party discovery - is ongoing. An institution decision on the ’905 IPR Petition is not due until April 30, 2025. By that date, the parties will have substantially

² HP filed a motion to stay in the HP Case which was denied. See HP Case, Dkt. No. 92.

³ Dell filed a motion to stay in the Dell Case which was granted. See Dell Case, Dkt. No. 69.

completed the claim construction process, with the *Markman* hearing scheduled for May 12, 2025. *See id.* at 4. A Final Written Decision would not be due until April 30, 2026, five (5) months after trial is scheduled to begin. *See id.* at 1.

It is unlikely that a stay would be granted in the LGL Case at this time. *Trover Group, Inc. v. Dedicated Micros USA*, No. 2:13-cv-1047-WCB, 2015 WL 1069179, at *6 (E.D. Tex. Mar. 11, 2015) (Bryson, J.) (“This Court’s survey of cases from the Eastern District of Texas shows that when the PTAB has not yet acted on a petition for inter partes review, the courts have uniformly denied motions for a stay.”); *see also Samsung Elecs. Co. Ltd. v. Evolved Wireless LLC*, IPR2021-00950, Paper 10 at 10-11 (PTAB Nov. 29, 2021) (“*Evolved*”) (finding this factor weighed in favor of denial and denying institution where patent owner showed a stay was unlikely based on the advanced stage of the case and the court’s past decisions denying stays); *Samsung Elecs. Co. Ltd. v. Clear Imaging Research, LLC*, IPR2020-0152, Paper 12 at 12-13 (PTAB Mar. 3, 2021) (denying institution because, in part, Judge Gilstrap deemed unlikely to stay a case in similar circumstances).

The Eastern District of Texas is likely to find that a stay in this situation would unduly prejudice UCT, disfavoring a stay. *See, e.g., MyPort, Inc. v. Samsung Electronics Co., Ltd., et al.*, No. 2:22-cv-00114-JRG, Dkt. No. 73 (E.D. Tex. June 12, 2023) at 4 (Noting that patent owner has an interest in the timely enforcement of its patent rights and that granting a stay could delay the case by nearly two years where the PTAB decision is not due until over two months after jury trial is set to begin.). The district court is also likely to find that the stage of litigation disfavors a stay. As noted above, by the date an institution decision is due in this proceeding, the parties will have substantially completed claim construction in the district court litigation and, as further evidenced by the docket sheet, a substantial amount of work and financial resources have been invested in the district court case. Under similar circumstances, the district court has found that the stage of litigation disfavors a stay. *Id.* at 5.

Moreover, because LGL has asserted multiple invalidity theories and there are other defendants who are asserting invalidity defenses, a stay in the district court would be unlikely to simplify the issues. As district courts have recognized, when a party has raised multiple

invalidity theories that will not go before the PTAB, a stay would leave in limbo these invalidity theories that will not go before the Board, weighing against a stay. *Id.* at 5-6.

As explained by the Board, a stay of the district court litigation pending resolution of the PTAB proceedings “allays concerns about inefficiency and duplication of efforts.” *Fintiv I* at 6; *Fintiv II* at 12. But here, the district court has not stayed the pending litigation, nor is there any evidence that a stay will be granted. Allowing this IPR to proceed simultaneously with the district court litigation would be wasteful and inefficient. This factor weighs against institution.

B. Factor 2: The proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision.

The ’905 Patent IPR Petition was filed on October 2, 2024, a decision whether to institute is expected approximately on April 31, 2025, and, if instituted, any final written decision is expected approximately on April 31, 2026. 37 C.F.R. § 42.100.

Jury selection in the LGL Case is scheduled to begin on November 3, 2025. *See* LGL Case, Dkt. No. 27 at 1. This is “a deadline that cannot be changed without an acceptable showing of good cause. Good cause is

not shown merely by indicating that the parties agree that the deadline should be changed.” *Id.* at 5.

Even if the Board disregards the scheduled trial date, an analysis of the current median time-to-trial statistics still weighs against institution. *See* Ex. 2001, U.S. District Courts—Federal Court Management Statistics—Profiles—September 30, 2024 Reporting Period. The most recent statistics, for a 12-month period ending September, 2024, show a median time-to-trial in the Eastern District of Texas of 21.9 months. *Id.* at 35. Accordingly, the projected trial date for purposes of *Fintiv* in accordance with Director’s June 21, 2022 Memorandum on Discretionary Denials would be in July 2025 – close to the scheduled trial date and more than nine months before the expected timing of a Final Written Decision if proceedings are instituted.

This factor weighs against institution.

C. Factor 3: The parties and the courts have made a substantial investment in the parallel proceeding.

This factor relates to the “amount and type of work already completed in the parallel litigation by the court and the parties at the time of the institution decision.” *Fintiv I* at 9 (emphasis added). For example, “if, at the time of the institution decision, the district court has

issued substantive orders related to the patent at issue in the petition,” this factor favors denial. *Id.* at 9-10. Claim construction orders entered by the district court likewise “indicate that the court and parties have invested sufficient time in the parallel proceeding to favor denial.” *Id.* at 10.

As discussed above, fact discovery between the parties is ongoing in the LGL Case. In addition, UCT has conducted extensive third-party discovery from LGL’s suppliers. By the date the institution decision is due, the parties will have substantially completed the claim construction process with the *Markman* hearing scheduled for May 12, 2025. *See* LGL Case, Dkt. No. 27 at 5. As shown in the district court docket sheet, the courts and the parties have made a substantial investment in the LGL Case to date: the parties have already having briefed, and the Court has denied, LGL’s Motion to Dismiss (*see* LGL Case, Dkt. Nos. 47) and the parties have already briefed, and the Court has granted, UCT’s Motion to Compel (*see* LGL Case, Dkt. Nos. 44).

Thus, the parties and the district court will have invested significant time and resources in the litigation by the time the Board reaches an institution decision in this matter. This favors discretionary

denial. *Fintiv I* at 10; *Fintiv II* at 13-14 (finding that “the level of investment and effort already expended on claim construction and invalidity contentions” favored denial).

D. Factor 4: There is complete overlap between this IPR and the LGL Case

This factor looks at “whether all or some of the claims challenged in the petition are also at issue in district court,” and whether the “petition includes the same or substantially the same claims, grounds, arguments, and evidence” as the parallel district court case. *Fintiv I* at 12-13.

Here, Petitioners have challenged all of the asserted claims of the '905 patent and applied the same prior art references. For example, LGL's Preliminary Invalidity Contentions in the district court case identify the same Banes and Calvignac references asserted in the Petition. See Ex. 2002, LGL Invalidity Contentions at 1, 15, 19-20, 25, and Exs. A-0, A-1, and A-3. Likewise, the other two Petitioners – HP and Dell – also identified the same references in their invalidity contentions. Ex. 2003, Dell Invalidity Contentions at 1, 15, 19, and Exs. A-1 and A-3; Ex. 2004, HP Invalidity Contentions at 2, 13, 16, and Exs. A-1 and A-3.

Thus, there is complete overlap with respect to the arguments and evidence presented here and in the district court litigation for each of

Grounds 1-4. That the district court case involves additional prior art references not asserted in this IPR is “not relevant to the question of the degree of overlap for this factor.” *Fintiv II* at 15.

Notably, none of the Petitioners have stipulated to not pursue in a parallel district court proceeding the same grounds as in the petition or any grounds that could have reasonably been raised in the petition (*i.e.*, a *Sotera* stipulation). Had the Petitioners done so, that could mitigate concerns of potentially conflicting decisions and duplicative efforts between the district court and the PTAB. *See Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 at 18-19 (PTAB Dec. 1, 2020) (precedential as to § II.A). Those concerns are particularly relevant when, as here, the Petitioners are asserting the same prior art in the district court and the PTAB, guaranteeing duplicative efforts between the district court and the PTAB and potentially conflicting decisions.

In sum, this IPR and the district court case involve the same claims—which will be construed under the same *Phillips* standard—and the same prior art (and, as discussed below, the same parties), which raises substantial “concerns of inefficiency and the possibility of

conflicting decisions.” *Fintiv I* at 12. This factor thus weighs in favor of a discretionary denial. *See Fintiv II* at 15; *NHK Spring* at 19–20.

E. Factor 5: Petitioner is the defendant in the LGL Case.

There is no dispute that Petitioners are defendants in the LGL Case, Dell Case, and HP Case. “Because the petitioner and the defendant in the parallel proceeding are the same party, this factor weighs in favor of discretionary denial.” *Fintiv II* at 15.

F. Factor 6: Other circumstances that impact the Board’s exercise of discretion, including the merits.

The Board may consider other circumstances in the exercise of its discretion, including the merits of the case. *Fintiv I* at 14. However, “a full analysis of the merits is not necessary to evaluate this factor.” *Fintiv II* at 17. And, it is important to note that the compelling merits standard is a higher standard than the standard for institution set by statute. “A challenge can only ‘plainly lead to a conclusion that one or more claims are unpatentable’ if it is highly likely that the petitioner would prevail with respect to at least one challenged claim.” *OpenSky Indus., LLC v. VLSI Tech. LLC*, IPR2021-01064, Paper 102, 49 (PTAB Oct. 4, 2022) (precedential). Petitioners have not done so here, and, when considered

together with the five other *Fintiv* factors discussed above, this factor also favors discretionary denial.

As discussed in detail above, the Petition does not present a reasonable likelihood of invalidity under any ground or challenged claim, let alone compelling evidence of unpatentability, and factor 6 weighs against institution.⁴ All six *Fintiv* factors strongly favor discretionary denial, and the Petition should be denied on this basis alone.

V. CONCLUSION

Petitioners have failed to show a reasonable likelihood of success in demonstrating any of the challenged claims are anticipated or obvious over the cited prior art. Institution should also be denied on discretionary grounds in light of the advanced stage of relevant district court litigation and the extensive overlap in issues concerning validity. Accordingly, the Board should deny institution of the '905 Patent IPR Petition.

Date: January 31, 2025

Respectfully submitted,

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⁴ The Petition is defective for other reasons as well, but a full discussion of the merits is not required in the Patent Owner's Preliminary Response.

CERTIFICATION REGARDING WORD COUNT

Pursuant to 37 C.F.R. § 42.24(d), Patent Owner certifies that there are no more than 10,392 words in the paper, excluding the portions exempted under 37 C.F.R. § 42.24(a)(1).

Dated: January 31, 2025

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CERTIFICATE OF SERVICE (37 C.F.R. § 42.6(e)(1))

The undersigned hereby certifies that the above document was served on January 31, 2025, by filing this document through the Patent Trial and Appeal Case Tracking System as well as delivering a copy via electronic mail upon the following attorneys of record for the Petitioners:

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