

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

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

v.

UNIVERSAL CONNECTIVITY TECHNOLOGIES, INC.,
Patent Owner.

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

**PETITIONERS' AUTHORIZED REPLY TO PATENT OWNER'S
PRELIMINARY RESPONSE**

PETITIONERS' UPDATED EXHIBIT LIST

Ex. 1001	U.S. Patent No 7,154,905 (“’905 Patent”)
Ex. 1002	Prosecution History of U.S. Patent No. 7,154,905 (U.S. Patent Application Number 10/035,911)
Ex. 1003	Declaration of Dr. Andrew Wolfe
Ex. 1004	U.S. Patent No. 5,557,608 to Calvignac <i>et al.</i> (“Calvignac”)
Ex. 1005	United Kingdom Patent Application No. GB 2344029 to Banes (“Banes”)
Ex. 1006	U.S. Patent No. 5,974,464 to Shin <i>et al.</i> (“Shin ’464”)
Ex. 1007	European Patent Application 0582537 to Cidon (“Cidon”)
Ex. 1008	U.S. Patent No. 5,999,571 (“Shin ’571”)
Ex. 1009	U.S. Patent No. 4,486,739 to Franaszek (“Franaszek”)
Ex. 1010	U.S. Patent No. 5,304,996, to Hsu et al. (“Hsu”)
Ex. 1011	<i>Commands for Host-Processed and Host-Controlled Modems, Reference Manual</i> , Conexant Systems, Inc. (April 5, 2001)
Ex. 1012	<i>IEEE Standard 802.3, Part 3: Carrier sense multiple access with collision detection (CSMA/CD) access method and physical layer specifications</i> , The Institute of Electrical and Electronics Engineers (1998) (“802.3”)
Ex.1013	U.S. Pat. No. 6,229,859 to Jeong (“’859 patent”)
Ex.1014	“8b/10b encoding,” located at https://en.wikipedia.org/wiki/8b/10b_encoding
Ex.1015	“High-Level Data Link Control,” located at https://en.wikipedia.org/wiki/High-Level_Data_Link_Control
Ex.1016	C.V. of Andrew Wolfe, Ph.D.
Ex.1017	<i>IEEE Standard Amendment 802.3ae</i> , The Institute of Electrical and Electronics Engineers (August 30, 2002) (“802.3ae”)
Ex.1018	Petitioner HP, Inc.’s <i>Sotera</i> Stipulation
Ex.1019	Petitioners Dell Technologies, Inc. and Dell, Inc.’s <i>Sotera</i> Stipulation

Ex.1020	Petitioner Lenovo (United States), Inc.’s <i>Sotera</i> Stipulation
Ex. 1021	Lenovo Group Limited’s <i>Sotera</i> Stipulation

I. THE BOARD SHOULD REJECT PATENT OWNER’S INCORRECT IMPLICIT CLAIM CONSTRUCTIONS OF AN “IN-BAND SYMBOL” AND AN “OUT-OF-BAND SYMBOL”

Patent Owner argues that neither Banes nor Calvignac disclose the requirement that the claimed “preempt indicator” and “continue indicator” include “one or more out-of-band symbols.” POPR, at 1, 16-21, 24-28. While Patent Owner does not dispute they each disclose the claimed “preempt indicator” and “continue indicator,” Patent Owner argues that the indicators disclosed in these references are “in-band,” not “out-of-band” simply because they appear in packets.

Specifically, Patent Owner argues that Banes’ “preempt indicator,” *i.e.*, an interrupt code (e.g., interrupt code 110), and Banes’ “continue indicator,” *i.e.*, a resume code or resumption code 111, do not “include one or more out-of-band symbols” because these codes are inserted into data packets to cause preemption (e.g., within “an initial data portion 102a” of a packet). POPR, at 18-21 (“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.’”). And Patent Owner argues that Calvignac’s “preempt indicator,” *i.e.*, a trailer byte followed by an X’7E’ flag, and Calvignac’s “continue indicator,” *i.e.*, a second trailer byte and X’7E’ flag encoded with different values, do not “include one or more out-of-band symbols” because these indicators are also inserted into packets. POPR, at 26-27 (“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.”).

Thus, to make these arguments that Banes’ and Calvignac’s indicators are “in-band” and not “out-of-band,” Patent Owner has relied on an implicit claim construction that “[a] symbol that appears in a packet is an ‘in-band’ symbol” rather than an out-of-band symbol. POPR at 21; *see also id.* at 27 (“A POSITA would consider a symbol within a packet to be an ‘in-band’ symbol.”). Applying this implicit construction, Patent Owner argues that Banes’s and Calvignac’s indicators are not “out-of-band” because they are inserted into packets, which Patent Owner argues renders them “in-band.” This construction and argument, however, are directly contrary to the ’905 patent specification, which plainly states that “an out-of-band . . . is a symbol that does not **normally** appear within a packet.” Ex.1001, 11:56-60; Pet., at 18-21, 62-63; Ex.1003, ¶¶87-89, 95-96, 220, 222-224. Thus, an out-band symbol **can** appear within a packet and is not rendered “in-band” merely by appearing within a packet. Indeed, Patent Owner admits that “[i]n the ’905 Patent, an ‘out-of-band’ symbol is a symbol that does not normally appear within a packet.” POPR, at 28; *see also id.* at 17 (quoting Ex.1001 at 11:57-58). And Patent Owner points to no disclosure in the ’905 patent establishing that all symbols appearing within a packet at any time are necessarily in-band.

As the Petition also noted, the '905 patent also describes that packets transmitted on a serial communications link “**typically** comprise[] in-band symbols.” Ex. 1001, 11:49-52; Pet. at 18-21, 62-63; Ex.1003, ¶¶87, 220. Thus, again, symbols appearing in a packet *can* be and may **typically** be in-band but are not always deemed in-band merely by appearing within a packet.

Thus, mere appearance within a packet does not disqualify a symbol from being an “out-of-band” symbol. As such, the presence of Banes’ and Calvignac’s indicators in packets does not disqualify them from being out-of-band. Finally, Banes’ and Calvignac’s insertion of indicators into packets that do not normally appear in the packets is entirely consistent with the '905 patent’s description that “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 . . .*” Ex.1001, 11:67-12:11; Pet., 18-19; Ex.1003, ¶88. Patent Owner’s implicit construction and arguments based thereon should, therefore, be rejected because they are directly contrary to the '905 patent specification.¹

¹ Also contrary to Patent Owner’s argument, the '905 patent states that “[a]ll 9-bit

II. THE BOARD SHOULD NOT DENY UNDER *FINTIV*

Petitioners’ *Sotera* stipulations (Exs. 1018-1021) remove any overlap with the parallel litigation and eliminate the efficiency and fairness concerns underlying *Fintiv*. While the June 2022 Guidance was recently rescinded, Petitioners’ *Sotera* stipulations nonetheless resolve the *Fintiv* analysis strongly against denial. Patent Owner also ignores the Dell and HP cases when *Fintiv* is “holistic” as to all facts.

Factor 1 is neutral or disfavors denial, because no stay has been requested yet in the LGL Case in E.D. Tex., the Dell Case has been stayed in its entirety pending the IPRs (Ex.2003, at 9), and the HP court indicated it “generally” would stay if institution is granted. Case No. 4:24-cv-04097-YGR (N.D. Cal.), Dkt. 112 at 4:9-13.

Factor 2 is neutral or disfavors denial. The *Sotera* stipulations remove concerns with any district court trial schedules. Further, the Dell Case has been stayed and has no trial date, and trial in the HP Case is scheduled for September 21, 2026 (4:24-cv-04097-YGR (N.D. Cal.), Dkt. 93), approximately 5 months after the anticipated final written decision here. And the trial date of the LGL Case in E.D. Tex. is speculative given the growing backlog of cases in that district.

symbols with three or less transitions are referred to as ‘out-of-band symbols.’ Ex.1001, 24:44-45; Pet., 62. Calvignac, thus, teaches indicators that include one or more out-of-band symbols on this basis, as well. Pet., 62-63; Ex.1003, ¶¶222-224.

Factor 3 is neutral or disfavors denial. The *Sotera* stipulations remove any concern of investment in overlapping District Court cases. Further, no Markman hearing will even occur in the LGL Case until May 12, 2025 (Ex.2001, at 4) nor in the HP Case until May 21, 2025, both well after the anticipated institution decision. 4:24-cv-04097-YGR (N.D. Cal.), Dkt. 77 at 10. Party discovery will not begin in the HP Case until after the entry of a *Markman* order, *id.* at 6, and the Dell Court noted how little investment had been made by the time of the stay. Ex.2003 at 4-5.

Factor 4 strongly disfavors denial because of Petitioners' *Sotera* stipulations, which "mitigate[] any concerns of duplicative efforts between the district court and the Board, as well as concerns of potentially conflicting decisions," and Factor 4 thus "weighs strongly in favor of not exercising discretion to deny institution under 35 U.S.C. § 314(a)." *Sotera*, Paper 12, at 19.

Factor 5 is, at worst, neutral. *Fintiv* did not suggest Factor 5 favors denial when the petitioner is the defendant, instead noting that "if a petitioner is unrelated" this fact weighs "against exercising discretion." *Fintiv*, 13-14. Further, Patent Owner relies only on the LGL Case for Factors 1-4, of which neither Dell nor HP is a party. Thus, that Dell and HP are parties to co-pending cases has no bearing on Factor 5.

Factor 6 strongly disfavors denial because Patent Owner's only arguments on the merits are based on an implicit construction directly contrary to the '905 patent.

Dated: March 10, 2025

Respectfully submitted,

/Jason R. Mudd/

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CERTIFICATE OF SERVICE

The undersigned certifies that, in accordance with 37 C.F.R. § 42.6(e), service of the foregoing and Exhibits 1018-1021 was made on Patent Owner via e-mail as detailed below:

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