

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

INTEL CORPORATION,
Petitioner

v.

AX WIRELESS,
Patent Owner.

IPR2023-01146

U.S. Patent No. 11,212,146

PETITIONER'S REPLY

EXHIBIT LIST

Exhibit	Reference
1001	U.S. Patent 11,212,146
1002	File History of the '146 patent
1003	Declaration of Thomas LaPorta, Ph.D. in Support of <i>Inter Partes</i> Review of U.S. Patent 11,212,146
1004	Curriculum Vitae of Dr. Thomas LaPorta
1005	IEEE 802.11-05/0149r5, "WWiSE Proposal: High Throughput Extension to the 802.11 Standard" to Kose, et al, uploaded and publicly available on July 9, 2005 ("July 2005 WWiSE")
1006	U.S. Patent Publication 2006/0182017 to Hansen, et al ("Hansen")
1007	Declaration of James L. Lansford, Ph.D.
1008	U.S. Provisional Application 61/235,909 ("the '272 Provisional")
1009	U.S. Patent 8,737,189 to Hansen, et al ("Hansen Patent")
1010	U.S. Provisional Application 60/653,429 ("Hansen Provisional")
1011	IEEE 802.11-04/0889r3, "TGn Sync Proposal Technical Specification" to Mujtaba, uploaded and publicly available on January 20, 2005
1012	IEEE 802.11-04/0886r6, "WWiSE Proposal: High Throughput Extension to the 802.11 Standard" to Hansen, et al, uploaded and publicly available on January 6, 2005 ("January 2005 WWiSE")
1013	IEEE Std. 802.11a-1999, "Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications: High-Speed Physical Layer in the 5 GHz Band", approved September 16, 1999 ("802.11a")
1014	Declaration of David Ringle
1015	Heiskala, et al., "OFDM Wireless LANs: A Theoretical and Practical Guide", Sams Publishing (2002) ("Heiskala")
1016	Tse, et al., "Fundamentals of Wireless Communication", Cambridge University (2005) ("Tse")
1017	U.S. Publication No. 2010/0260159 to Zhang et al. ("Zhang")

Exhibit	Reference
1018	U.S. Patent No. 7,349,436 to Maltsev et al. (“Maltsev”)
1019	U.S. Provisional Application 61/229,900 (“the ’900PROV”)
1020	IEEE 100: The Authoritative Dictionary of IEEE Standard Terms (IEEE 7th ed., 2000)
1021	R. Van Nee, et al., “OFDM for Wireless Multimedia Communications”, Artech House Publishers (2000) (“Van Nee”)
1022	B. Sklar, “Digital Communications: Fundamentals and Applications” (2d ed. 2001) (“Sklar”)
1023	M. Gast, “802.11 Wireless Networks: The Definitive Guide” (O’Reilly, 2002) (“Gast”)
1024	RESERVED
1025	CopperGate Communication, “G.hn: Using Two Symbols for the Header of a PHY frame on Coax,” ITU-T SG15/Q4, 09XC-100, Xian, China July 2009, as filed in file wrapper of the ’146 patent
1026	Intellon Corporation, “G.hn: Extended PHY frame header,” ITU-T SG15/Q4, 09XC-119, Xian, China, July 2009, as filed in file wrapper of the ’146 patent
1027	O’Hara
1028	Editor for G.9960, “ITU-T Recommendation G.9960 Next Generation Wire-line Based Home Networking Transceivers-Foundation”, ITU-T SG15/Q4, January 2009, as filed in file wrapper of the ’146 patent
1029	IEEE 802.11-04/422r4, “New Participant Orientation”, presentation submission (July 2004) (Appendix A to Lansford Declaration, IEEE 802wirelessworld website, “New Participant Orientation” slides, available at https://mentor.ieee.org/802.11/dcn/04/11-04-0422-04-0000-newparticipantorientation.ppt (Appendix A to INTEL-1007)
1030	IEEE 802.11-04/736r1, “Approved Minutes of the IEEE P802.11 Full Working Group,” Minutes (July 2004) (Appendix B to Lansford Declaration, INTEL-1007) IEEE 802wirelessworld website, July 2004

Exhibit	Reference
	Meeting Minutes, available at http://grouper.ieee.org/groups/802/11/Minutes/Cons_Minutes_July-2004.pdf (Appendix B to INTEL-1007).
1031	U.S. Patent 7,415,074 (Appendix C to INTEL-1007)
1032	A. Stephens, “802.11 ‘Decrypted’”, ACM SIGCOMM Computer Communication Review, Vol. 35, No. 2 (April 2005) Stephens Paper (Appendix D to Lansford Declaration, INTEL-1007).
1033	Lörincz, et al, “Physical Layer Analysis of Emerging IEEE 802.11n WLAN Standard”, 8th International Conference Advanced Communication Technology (February 20-22, 2006); added to IEEE Xplore May 8, 2006
1034	Cox, “Stage Set for Compromise on IEEE High-Speed Wireless”, Network World (March 21, 2005)
1035	Kay, “Sidebar: The Battle for 11n”, ComputerWorld (March 13, 2006)
1036	“‘WWiSE’ Consortium, Motorola Team on Proposal for IEEE 802.11n”, Wireless Design Online (February 24, 2005)
1037	WWiSE Industry Organization Press Release, “‘WWiSE’ Consortium and Motorola Team to Offer Enhanced Proposal for IEEE 802.11n” (February 24, 2005); <i>archived</i> on April 6, 2005 at https://web.archive.org/web/20050406073808/http://www.wwise.org/pressrelease-feb23.htm .
1038	Jan. 11, 2024 Letter from Sarah Piepmeier letter to Kevin Wheeler regarding Dell Stipulation
1039	Jan. 11, 2024 Letter from Sarah Piepmeier letter to Kevin Wheeler regarding Lenovo Stipulation
1040	Fourth Amended Docket Control Order, <i>AX Wireless LLC v. Dell Inc.</i> , No. 2:22-cv-00277-RWS-RSP (E.D. Tex. Jan. 2, 2024), ECF No. 161
1041	Third Amended Docket Control Order, <i>AX Wireless LLC v. Lenovo Grp. Ltd.</i> , No. 2:22-cv-00280-RWS-RSP (E.D. Tex. Oct. 31, 2023), ECF No. 130

Exhibit	Reference
1042	Docket Control Order, <i>LightGuide, Inc. v. Amazon.com, Inc., et al</i> , No. 2:22-cv-00433-RWS-RSP (E.D. Tex. May 15, 2023)
1043	Docket Control Order, <i>Textron Innovations Inc., v. SZ DJI Tech. Co., Ltd, et al</i> , No. 2:22-cv-0351-RWS-RSP (E.D. Tex. May 11, 2023)
1044	Plaintiff's Opening Claim Construction Brief, <i>AX Wireless LLC v. Dell Inc.</i> , No. 2:22-cv-00277 (E.D. Tex. September 15, 2023), ECF No. 121

I. The *Fintiv* Factors

The *Fintiv* factors weigh heavily against discretionary denial. Patent Owner (“PO”) brought four separate litigations asserting U.S. Patent No. 11,212,146 (“the ’146 patent”) against Dell Technologies and Dell Inc. (collectively, “Dell”), against Lenovo Group Ltd. (“Lenovo”), against HP Inc. (“HP”), and against Acer Inc. (“Acer”)¹. Pet., 79. Petitioner, who is not a party to any litigation brought by PO, named Dell and Lenovo as real parties-in-interest in this IPR. Both Dell and Lenovo have offered separate stipulations in their respective litigations, consistent with *Sotera Wireless*. See INTEL-1038; INTEL-1039.

The *Sotera* stipulations made by Dell and Lenovo remove any overlap between the present IPR and the Dell and Lenovo litigations. “Consistent with *Sotera Wireless, Inc.*, the PTAB will not discretionarily deny institution in view of parallel district court litigation where a petitioner presents a stipulation not to pursue in a parallel proceeding the same grounds or any grounds that could have reasonably been raised before the PTAB.” See *Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation* (June 21,

¹ PO does not dispute that discretionary denial is inappropriate based on either the HP or Acer litigations. See *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11, at 13-14 (PTAB Mar. 20, 2020) (precedential).

2022) (“*Fintiv* Memo”), 3. Given the *Sotera* stipulations by Dell and Lenovo, and the *Fintiv* Memo guidance, the Board should decline to exercise its discretion to deny institution.

Should the Board consider the remaining *Fintiv* factors, no stay has been requested, rendering *Fintiv* factor 1 neutral. As acknowledged by PO, the median time to trial for Judge Schroeder is “just over thirty months.” POPR, 28, *citing* AXW-2020. The final written decision will issue within two months of that. Although the trials in the Dell and Lenovo litigations are both currently scheduled for July 15, 2024, this date remains speculative because the district court has at least two other patent trials scheduled for the same date. INTEL-1040, INTEL-1041, INTEL-1042, INTEL-1043. Therefore, *Fintiv* factor 2 is neutral. Due to multiple adjustments to the litigation schedules, much substantive work remains including expert discovery and dispositive motions, rendering *Fintiv* factor 3 at a minimum neutral.

Regardless, discretionary denial is inappropriate here because the Petition presents a “compelling, meritorious challenge.” *Fintiv* Memo, 4; Pet. 77-78. The challenged claims merely recite the concept of distinguishing between two formats of physical layer packets by detecting the presence or absence of a repeated header and PO admittedly co-opted the concept of different packet formats and repeated header fields from ITU-T G.hn submissions. (See Pet., 30–36, 61–66, 77–78.) The

detection of repeated headers would have been obvious to a POSITA because the use of header repetition and different packet formats in wireless communication was known in the art. See Pet., 77-78.

PO alleges that the “merits of the Petition are weak.” POPR, 33. But PO does not even argue that the Huang and Sun references presented in the petition are missing any claim limitations. POPR at 8, 25. Rather, PO only contends that “[b]ecause the ’146 patent has written description support in its ancestral applications, Huang and Sun are not prior art.” See, POPR, 25. But that contention is based on (1) an incorrect characterization of Petitioner’s priority argument and (2) inconsistencies in PO’s own positions about claim scope between this proceeding and the co-pending district court litigations, as further discussed below. See also Pet., 9–19.

Accordingly, Petitioner’s arguments and evidence, if unrebutted in trial, “would plainly lead to a conclusion that one or more claims are unpatentable by a preponderance of the evidence.” *Fintiv* Memo, 4.

II. Patent Owner’s Claim Construction Argument

The ’146 Patent’s written description includes embodiments in which a transmitter explicitly tells the receiver whether a header symbol is repeated in a packet—the transmitter includes in the header a “D” value that the receiver decodes to learn the number of repeated header symbols in the packet. PO argues that (i) such explicit

decode-to-learn-“D” embodiments support the full reach of the claims, and (ii) Petitioner’s written description challenge rests on a hidden construction that would exclude those embodiments. POPR at 9-15. But Petitioner’s written description challenge does not depend on such a construction, and Petitioner is not arguing that written description support is missing because the explicit decode-to-learn-“D” embodiments fall outside the reach of the claims.

Petitioner’s challenge rests instead on the missing written description support for the broader claim scope that PO is pursuing in the parallel district court cases. In district court, PO has consistently maintained that the challenged claims cover receivers that detect the presence or absence of a repeated header field without the transmitter explicitly sending a “D” value for the receiver to decode. PO’s own application of the claims in its Preliminary Infringement Contentions accuse receivers that never receive or decode an explicit “D” value to learn whether header symbols are repeated. (*See* Pet. at 12-15). During the *Markman* proceedings, PO did not argue that the decode-to-learn-“D” embodiments reflect or support the reach of the claims. PO told the district court that the receiver “detecting” claimed in the ’146 Patent involves **“recognizing the packet format, from the received wireless packet, based on a determination of whether a second header field that repeats the first header field is present (i.e., second packet format) or absent (i.e., first packet format).”** *See* INTEL-1044 [at 13](#) (emphasis added). PO further explained

that “[t]he format of the wireless packet may thus be determined based on the presence of the second header field carried by a second OFDM symbol, which is absent from the first packet format.” *Id.* at 14.

The Petition details how the explicit decode-to-learn-“D” embodiments—although disclosed in the patent (Pet. at 4-5)—are different from approaches where a receiver detects by inference whether header fields are repeated without the need to decode to learn “D” (Pet. at 15-17). The two are not the same. The latter reflects the claim scope that must be fully supported by the written description for the claims of the ‘146 patent to qualify for priority to the earlier filed applications in the chain. *See X2Y Attenuators, LLC v. ITC*, 757 F.3d 1358, 1365 (Fed. Cir. 2014) (“[A] claim is entitled to the priority date of an earlier application only if the earlier specification provides sufficient written support for the full scope of the claim.”); *ICU Med., Inc. v. Alaris Med. Sys., Inc.*, 558 F.3d 1368, 1374-75 (Fed. Cir. 2009). And that would be true whether the decode-to-learn-“D” embodiments are inside or outside the reach of the claims. Either way, the missing written description support is for detecting a repeated header field by inference ***without*** decoding to learn “D.”

To the extent that PO or the Board reads the Petition’s discussion of the difference between detecting by inference and the embodiments in the patent as an argument that the claims do not cover decoding to learn “D,” it does not follow that the Petition’s written description challenge depends upon such a construction. The

controlling question remains whether there is written description support for detecting a repeated header field by inference without decoding to learn “D.”

Having advanced and advocated a broad claim scope in district court to cover detecting a repeated header field by inference, PO should not be permitted to argue to the Board that the focus of the claims and the required written description support are the narrower decode-to-learn-“D” embodiments. *See, e.g., Edwards Lifesciences v. Aortic Innovations, LLC*, IPR2023-01151, Paper 9 at 3 (P.T.A.B. Nov. 22, 2023) (noting inconsistent positions taken by Patent Owner and its expert in parallel district court litigation); *see Textron Specialized Vehicles Inc. v. SZ DJI Technology Co. Ltd.*, IPR2023-01217, Paper 9 at 2-4 (P.T.A.B. Nov. 29, 2023) (criticizing inconsistent constructions); *see also Ericsson v. Intellectual Ventures II LLC*, IPR2014-00915, Paper 37 at 8 (P.T.A.B. Dec. 7, 2015) (criticizing inconsistent positions).

Respectfully submitted,

/Jon R. Carter/

Jon R. Carter
Reg. No. 75,145
Backup Counsel, Petitioner

PERKINS COIE LLP
1155 Avenue of the Americas,
22nd Floor
New York, NY 10036-2711

Date: January 11, 2024

CERTIFICATE OF SERVICE

The undersigned hereby certifies that the foregoing **PETITIONER'S RE-PLY** and **EXHIBITS 1038-1043** were served electronically via e-mail on January 11, 2024, in its entirety on the following counsel of record for Patent Owner:

S. Giri Pathmanaban
giri.pathmanaban@lw.com
Jonathan M. Strang
jonathan.strang@lw.com
Diane E. Ghrist
diane.ghrist@lw.com
Jacob Vannette
jake.vannette@lw.com
David J. Hlavka
david.hlavka@lw.com

Respectfully submitted,

/Jon R. Carter/

Jon R. Carter
Reg. No. 75,145
Backup Counsel, Petitioner

Date: January 11, 2024