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Paper No. ____

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GEOTAB USA, INC. AND GEOTAB, INC.,
Petitioners,

v.

OMEGA PATENTS, LLC,
Patent Owner.

Case No. IPR2023-00504

Patent No. 8,032,278

PETITIONERS' REPLY TO PATENT OWNER'S RESPONSE

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<i>Intel Corp. v. Qualcomm Inc.</i> , 21 F.4th 784 (Fed. Cir. 2021)	3, 4
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<i>Lectrosonics, Inc. v. Zaxcom, Inc.</i> , IPR2018-01129, Paper 33 (Jan. 24, 2020) (precedential)	7, 8
<i>Omega Patents, LLC v. CalAmp Corp.</i> , 13 F.4th 1361 (Fed. Cir. 2021)	6, 7, 11
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<i>Xerox Corp. v. Bytemark, Inc.</i> , IPR2022-00624, Paper 9 (Aug. 24, 2022) (precedential)	3, 9, 15

EXHIBIT LIST

Exhibit	Description
1001	U.S. Patent No. 8,032,278
1002	Prosecution History of U.S. Patent No. 8,032,278
1003	Declaration of Jeffrey Miller, Ph.D.
1004	Curriculum Vitae of Jeffrey Miller, Ph.D.
1005	Prosecution History of Ser. No. 90/013,587 (RX1)
1006	Prosecution History of Ser. No. 90/013,851 (RX2)
1007	Prosecution History of Ser. No. 90/014,309 (RX3)
1008	Prosecution History of Ser. No. 90/014,419 (RX4)
1009	Prosecution History of Ser. No. 90/014,675 (RX5)
1010	Claim Rejection, mailed May 6, 2016 in No. 90/013,587 (RX1)
1011	Decision granting <i>ex parte</i> reexamination request, mailed December 15, 2016 in No. 90/013,851 (RX2)
1012	<i>Ex parte Omega Patents, LLC</i> , No. 2018-008119 (Nov. 3, 2018)
1013	Decision granting <i>ex parte</i> reexamination request, mailed March 25, 2021 in No. 90/014,675 (RX5)
1014	Non-Final Rejection, mailed October 5, 2021 in No. 90/014,675 (RX5)
1015	Patent Owner's Appeal Brief, No. 90/014,675 (April 1, 2022)
1016	Transcript of oral argument in <i>Ex parte Omega Patents, LLC</i> , No. 2022-003758, Reexamination No. 90/014,675 (Oct. 28, 2022)
1017	<i>Ex parte Omega Patents, LLC</i> , No. 2022-003758 (Nov. 30, 2022)
1018	D.I. 50, Claim Construction Order, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Feb. 20, 2015) (" <i>CalAmp-CC</i> ").
1019	D.I. 34, Claim Construction Order, <i>Omega Patents, LLC v. Firstech, LLC</i> , No. 2:20-cv-01344 (W.D. Wash. Nov. 22, 2021) (" <i>Firstech-CC</i> ").
1020	<i>Omega Patents, LLC v. CalAmp Corp.</i> , 920 F.3d 1337 (Fed. Cir. 2019) (" <i>CalAmp-I</i> ")
1021	<i>Omega Patents, LLC v. CalAmp Corp.</i> , 13 F.4th 1361 (Fed. Cir. 2021) (" <i>CalAmp-II</i> ")
1022	D.I. 14, Omega Patents Answering Brief In Opposition to Geotab USA, Inc.'s Motion to Dismiss, <i>Omega Patents, LLC v. Geotab USA, Inc. and Geotab, Inc.</i> , No. 1:22-cv-01044-CFC (D. Del. Nov. 16, 2022)
1023	U.S. Patent No. 6,957,133 (" <i>Hunt</i> ")
1024	U.S. Patent No. 6,756,885 (" <i>Flick-885</i> ")
1025	U.S. Patent No. 6,011,460 (" <i>Flick-460</i> ")

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1026	D.I. 040, Omega Patents Opposition to CalAmp Motion For Claim Construction, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Oct. 3, 2014)
1027	D.I. 144, Jury Verdict, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Sep. 30, 2019)
1028	D.I. 310, Jury Verdict, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Feb. 24, 2016)
1029	D.I. 143, Jury Instructions, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Nov. 24, 2016)
1030	D.I. 309, Jury Instructions, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Sep. 30, 2019)
1031	Y. Park and A. Fumiyuki, eds. <i>Enhanced Radio Access Technologies For Next Generation Mobile Communication</i> . Dordrecht: Springer, 2007.
1032	F. Delli Priscoli and M. Neri, “Integration of the ORBCOMM satellite network with the GSM Short Message Service.” <i>Space Communications</i> , Vol. 19, no. 1, pp. 47-57, 2003.
1033	D.I. 180, Transcript, Civil Jury Trial–Day 3, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Feb. 18, 2016)
1034	Pages from D.I. 181, Transcript, Civil Jury Trial–Day 4, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Feb. 19, 2016)
1035	<i>RESERVED</i>
1036	<i>RESERVED</i>
1037	<i>RESERVED</i>
1038	<i>RESERVED</i>
1039	Pages from D.I. 338, Transcript, Civil Jury Trial–Day 2, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Sep. 24, 2019)
1040	Pages from D.I. 339, Transcript, Civil Jury Trial–Day 3, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Sep. 25, 2019)
1041	<i>RESERVED</i>
1042	<i>RESERVED</i>
1043	<i>RESERVED</i>
1044	Comparison of limitations in ’278 patent claims 13-22 with limitations in ’278 patent claims 1-12
1045	U.S. District Court – Judicial Caseload Profile for the District of Delaware, <i>available at</i> https://www.uscourts.gov/sites/default/files/fcms_na_distprofile0630.2022_0.pdf (last visited December 19, 2022)

Exhibit	Description
1046	Title 40 Code of Federal Regulations, Part 86, Subpart S—General Compliance Provisions for Control of Air Pollution From New and In-Use Light Duty Vehicles, Light-Duty Trucks, and Complete Otto-Cycle Heavy-Duty Vehicles (July 1, 2007)
1047	SAE J1939-71 Vehicle Application Layer (rev. DEC2004)
1048	SAE J1708 Serial Data Communications Between Microcomputer Systems in Heavy-Duty Vehicle Applications (rev. AUG2004)
1049	<i>RESERVED</i>
1050	International Standard ISO 15031-4 Road Vehicles—Communication between vehicle and external equipment for emissions related diagnostics—Part 4: External test equipment (1st ed. June 15, 2005) (“ISO 15031-4:2005”)
1051	Pages from Microsoft Internet & Networking Dictionary (2003)
1052	SAE J1978 OBD-II Scan Tool – Equivalent to ISO/DIS 15031-4: December 14, 2001 (revised 2002-04)
1053	Pages from IEEE 100 The Authoritative Dictionary of IEEE Standard Terms (7th Ed. 2000)
1054	D.I. 265, Federal Circuit Mandate, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. July 1, 2019)
1055	D.I. 392, Order Dismissing With Prejudice, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. June 16, 2022)
1056	U.S. Patent No. 8,856,266 B2
1057	U.S. Patent Application Publication No. US 2005/0032511 A1
1058	U.S. Patent Application Publication No. US 2004/0138790 A1
1059	U.S. Patent No. 6,611,740
1060	U.S. Patent No. 7,209,813
1061	<i>RESERVED</i>
1062	<i>RESERVED</i>
1063	<i>RESERVED</i>
1064	U.S. Patent No. 7,617,727
1065	D.I. 145-85, PL104, 4/15/2015 Expert Report of Joseph C. McAlexander, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Feb 25, 2016)
1066	13 Cal. Code Reg. §1968.2 Malfunction and Diagnostic System Requirements—2004 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles and Engines (2004)
1067	February 19, 2007 Internet Archive capture of startech.com webpage on computer cables at

Exhibit	Description
	https://web.archive.org/web/20070219050320/http://www.startech.com/Product/Category.aspx?WCID=7&WCLID=2&MLID=2&menu=1&from=more&c=US
1068	D.I. 145, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Feb 25, 2016)
1069	<i>RESERVED</i>
1070	Control of Air Pollution From New Motor Vehicles and New Motor Vehicle Engines; Modification of Federal On-Board Diagnostic Regulations for: Light-Duty Vehicles, Light-Duty Trucks, Medium Duty Passenger Vehicles, Complete Heavy Duty Vehicles and Engines Intended for Use in Heavy Duty Vehicles Weighing 14,000 Pounds GVWR or Less; Extension of Acceptance of California OBD II Requirements, 68 Fed. Reg. 35792 (June 17, 2003)
1071	SAE J1850 Class B Data Communications Network Interface, Rev. 2001-05 (May 2001)
1072	ISO 15765-4:2005(E) Road vehicles – Diagnostics on Controller Area Networks (CAN) – Part 4: Requirements for emissions-related systems (1st ed. ISO January 15, 2005)
1073	ISO 15031-5:2006(E) Road vehicles — Communication between vehicle and external equipment for emissions-related diagnostics — Part 5: Emissions-related diagnostic services (ISO 1st ed. January 15, 2006)
1074	ISO 14230-4 Road vehicles — Diagnostic systems — Keyword Protocol 2000 —Part 4: Requirements for emission-related systems (ISO 1st ed. June 1, 2000)
1075	SAE J1979 (R) E/E Diagnostic Test Modes – Equivalent to ISO/DIS 15031-5:April 30, 2002 (April 2002)
1076	SAE J2178-1 Class B Data Communication Network Messages— Detailed Header Formats and Physical Address Assignments (reaffirmed July 2004).
1077	D.I. 10, Geotab USA, Inc.’s Opening Brief In Support Of Motion To Dismiss, <i>Omega Patents, LLC v. Geotab USA, Inc. and Geotab, Inc.</i> , No. 1:22-cv-01044 (D. Del. Nov. 2, 2022)
1078	SAE J2178-4 Class B Data Communication Network Messages— Message Definitions for Three Byte Headers (reaffirmed July 2004).
1079	Pages from Title 40 Code of Federal Regulations, Part 86, Subpart S— General Compliance Provisions for Control of Air Pollution From New and In-Use Light Duty Vehicles, Light-Duty Trucks, and Complete Otto-Cycle Heavy-Duty Vehicles (July 1, 2014)

Exhibit	Description
1080	Pages from Collins English Dictionary (5th ed. 2000)
1081	Pages from Newton’s Telecom Dictionary (2005)
1082	ISO 14230-2 Road vehicles—Diagnostic systems—Keyword Protocol 2000 – Part 2: data link layer (1st ed. Mar. 15, 1999)
1083	<i>RESERVED</i>
1084	<i>RESERVED</i>
1085	<i>RESERVED</i>
1086	<i>RESERVED</i>
1087	<i>RESERVED</i>
1088	<i>RESERVED</i>
1089	<i>RESERVED</i>
1090	D.I. 145-80, PL99, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Feb 25, 2016)
1091	D.I. 145-54, PL68, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Feb 25, 2016)
1092	D.I. 145-53, PL67, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Feb 25, 2016)
1093	D.I. 145-67, PL81, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Feb 25, 2016)
1094	D.I. 145-42, PL45, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Feb 25, 2016)
1095	D.I. 145-57, PL71, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Feb 25, 2016)
1096	D.I. 145-68, PL82, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Feb 25, 2016)
1097	D.I. 145-69, PL83, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Feb 25, 2016)
1098	D.I. 145-70, PL84, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Feb 25, 2016)
1099	D.I. 145-73, PL88, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Feb 25, 2016)
1100	D.I. 145-74, PL90, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Feb 25, 2016)
1101	D.I. 145-75, PL92, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Feb 25, 2016)
1102	D.I. 145-76, PL93, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Feb 25, 2016)

Exhibit	Description
1103	D.I. 145-77, PL96, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Feb 25, 2016)
1104	D.I. 145-79, PL98, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Feb 25, 2016)
1105	D.I. 145-81, PL100, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Feb 25, 2016)
1106	D.I. 145-83, PL102, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Feb 25, 2016)
1107	D.I. 145-84, PL103, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Feb 25, 2016)
1108	D.I. 145-88, PL141, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Feb 25, 2016)
1109	D.I. 145-55, PL69, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Feb 25, 2016)
1110	D.I. 145-71, PL85, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Feb 25, 2016)
1111	D.I. 145-72, PL86, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Feb 25, 2016)
1112	D.I. 145-82, PL101, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Feb 25, 2016)
1113	D.I. 145-78, PL97, <i>Omega Patents, LLC v. CalAmp Corp.</i> , No. 6:13-cv-1950 (M.D. Fla. Feb 25, 2016)
1114	Board E-Mail Authorizing Reply to Patent Owner’s Preliminary Response (May 15, 2023)
1115	Declaration of Jeffrey Miller, Ph.D., In Support Of Petitioners’ Reply to POR
1116	J. Bray and C.F. Sturman, Bluetooth 1.1: Connect Without Cables (2d ed. Prentice Hall PTR 2002) (“Bray”)
1117	Affidavit of Nathaniel E. Frank-White, Internet Archive Records Request Processor, with Exhibit B, “The Bluetooth Wireless Technology White Paper, Rev. 1991A-11/00” (Atmel 2000) (“Atmel”)
1118	U.S. Patent No. 8,495,615 (“Alberti”)
1119	Data Sheet SN55LBC176, SN65LBC176, SN65LBC176Q Differential Bus Transceiver (Texas Instruments)
1120	Data Sheet, LTC1487 Ultra-Low Power RS485 with Low EMI, Shutdown and High Input Impedance (Linear Technology)
1121	Data Sheet, Si9243AEY Single-Ended Bus Transceiver (Vishay Siliconix)

Exhibit	Description
1122	Data Sheet, L9637 ISO 9141 Interface (STMicroelectronics)
1123	Transcript, Deposition of Joseph C. McAlexander III (January 5, 2023)
1124	Transcript, Deposition of Christian Tregillis (December 22, 2023)
1125	U.S. Patent No. 6,606,561 (“Flick-561”)
1126	Errata to Transcript, Deposition of Joseph C. McAlexander III (January 5, 2023)

Omega's POR rehashes arguments the Board rejected at institution. Omega repeatedly argues that the '278 patent survived prior challenges but ignores that *none* involved Hunt or Flick-885+Hunt, *none* included a reference like Hunt that explicitly taught combining GPS vehicle tracking with a controller in a single unit, and *none* bind the Board or Petitioners.

Omega does not dispute that its earlier Flick-885 discloses every claim limitation except GPS or a single housing. No secondary consideration can support the idea that combining GPS with a vehicle controller was non-obvious—because Hunt taught doing so years before Omega filed the '278 patent. There are no other disputes for Ground 3. Flick-885+Hunt renders *every* claim obvious.

Hunt also anticipates (Ground 1) and renders obvious (Ground 2) many challenged claims. As shown below, Omega's arguments mischaracterize Grounds 1-2 and/or the evidence. The Board should reject Omega's arguments and find every challenged claim unpatentable.

I. Flick-885+Hunt Renders Obvious Claims 1-22 (Ground 3).

Petitioners established that POSAs had reasons to modify Flick-885 to use Hunt's location services (Pet., 49-51) and housing (Pet., 51-52). Paper 11 ("D.I"), 43-47.

Omega does not dispute that POSAs would have combined Flick-885 with Hunt's housing, or that the Flick-885+Hunt combination meets every challenged

claim. D.I, 42-43 (finding same). Omega challenges *only* whether POSAs had reasons to combine Flick-885 with Hunt’s GPS and alleges that secondary considerations demonstrate non-obviousness. Omega’s arguments fail.

A. Reasons to Combine Flick-885 with Hunt’s GPS Are Not Meaningfully Disputed.

Hunt’s appliance monitored vehicle devices and provided vehicle security services just like Flick-885’s vehicle controller. Pet., 49-50. Hunt taught “advantages” to adding GPS location services to such a controller, including providing roadside assistance, stolen vehicle notification/recovery, and remote diagnostics. Pet., 50 (citing Hunt, 2:35-41, 4:18-22). Petitioners established that POSAs would have added Hunt’s GPS to Flick-885 to improve Flick-885’s vehicle security services the same way GPS improved Hunt’s. Pet., 50-51; Miller, ¶¶365-366. That combination is the predictable use of prior art elements—Hunt’s GPS and Flick-885’s controller—according to their established functions (Pet., 51).

Omega provided no evidence meaningfully refuting any of this. Omega’s arguments disputing Petitioners’ reasons to use Hunt’s GPS in Flick-885 are baseless. POR, 57-60.

1. Omega’s “ongoing compatibility” Argument Fails.

Omega’s contention that Hunt “does not address ongoing compatibility with different vehicles” (POR, 57) (emphasis original) is wrong. D.I., 46 (rejecting same argument from POPR, 41); EX1115 (“Miller-Reply”), ¶¶14-18.

Even if Omega were correct that Hunt is limited to supporting only certain protocols (it is not), Omega never explains why that would render the advantages Hunt describes of using GPS inapplicable in Flick-885's system. Omega provides no evidence or explanation refuting Petitioners' showing that GPS would give Flick-885's system the same benefits it gave Hunt. Pet., 49-52; *infra* §I.A.3; Miller, ¶¶360-376.

2. Omega's "slower" Argument Fails.

Omega's contention that POSAs would not add Hunt's GPS to Flick-885 because "it would make the device slower" (POR, 58) relies on conclusory testimony parroting the POR (EX2010, ¶¶190-191) that warrants no weight. *Xerox v. Bytemark*, IPR2022-00624, Paper 9, 15 (Aug. 24, 2022) (precedential).

Neither Hunt nor the '278 patent describe GPS making any device "slower." The '278 patent describes no techniques for overcoming this alleged problem.

Even if there were a speed tradeoff for achieving the benefits the Board recognized from adding GPS to Flick-885 (D.I., 46), the law only requires that a combination provide "a suitable option." *Intel v. Qualcomm*, 21 F.4th 784, 800 (Fed. Cir. 2021). Hunt demonstrates using GPS with a vehicle controller was a "suitable option."

3. Omega's Hindsight Argument Fails.

Omega's contention that adding GPS to Flick-885 is "hindsight" (POR, 58-

60) disregards that Hunt added GPS to a vehicle controller *in 2003*, before Omega filed its application *in 2007*.

In *Intel*, the Federal Circuit rejected “hindsight” arguments ignoring “the facts and reasoning of *KSR*.” 21 F.4th at 800. “[I]f a technique [GPS] has been used to improve one device [Hunt]” and POSAs “would recognize that it would improve similar devices [Flick-885] in the same way, *using the technique is obvious* unless its actual application is beyond his or her skill.” *Id.*, quoting *KSR v. Teleflex*, 550 U.S. 398, 417 (2007).¹ Omega never disputes that POSAs understood that adding GPS would improve Flick-885’s controller the same way that it improved Hunt’s (Miller, ¶¶360-367), nor that this was within the POSA’s skill. Miller, ¶¶10-12, 64 (adding GPS to a controller), 58 (Hunt evidences POSA’s skill), 217-220 (discussing Hunt’s GPS); Pet., 13-15 (similar). This refutes Omega’s “hindsight” argument. *Intel*, 21 F.4th at 800.

4. Hunt’s GPS Provides “advantages.”

Omega’s argument (POR, 60) that Hunt’s “advantages” do not result from GPS misrepresents Hunt, which explains that GPS “makes it possible to... determine [a vehicle’s] location in real-time[.]” Hunt, 4:15-17. This facilitates the advantageous controller functionality (*supra*, §I.A)—including “vehicle theft

¹ All emphasis is added throughout unless otherwise noted.

notification and recovery” (Hunt, 4:21)—motivating the combination. Pet., 49-51.

B. Omega’s Secondary Consideration Arguments Fail.

1. Secondary Considerations Cannot Overcome Obviousness Over Flick-885+Hunt.

Secondary considerations cannot overcome a strong *prima facie* case of obviousness. D.I. 18-19; *Wyers v. Master Lock*, 616 F.3d 1231, 1246 (Fed. Cir. 2010). “Hunt... in combination with Flick ’885 provides **strong** evidence of unpatentability.” D.I., 18.

“Where the inventions represent no more than the predictable use of prior art elements according to their established functions the secondary considerations ***are inadequate to establish nonobviousness as a matter of law.***” *Wyers*, 616 F.3d at 1246 (cleaned up), cited Pet., 76-77 (collecting cases). In Flick-855+Hunt, Hunt’s “housing... houses” (Hunt, 3:7-9) and Hunt’s “**conventional** GPS” (Hunt, 1:15-20) determines vehicle position. Miller, ¶¶362-370. Flick-885+Hunt is nothing more than the predictable use of Flick-885’s controller with Hunt’s housing and GPS according to their “established functions.” Pet., 49-53.

The **sole** disputed issue for Ground 3 is whether in 2007 POSAs had reasons to add GPS to a vehicle controller like Flick-885’s. POR, 57-60. Omega alleges that secondary consideration “evidence” shows they did not. POR, 62 (“adding of a vehicle position determining device and a multi-vehicle compatible controller ... [was] not obvious”). But Omega never explains how its alleged secondary

consideration “evidence” could erase *Hunt’s explicit teaching to combine GPS with a multi-vehicle compatible controller in 2003*. Pet., 10-14, 17-23, 49-53; *supra*, §I.A.3. It cannot.

2. No Nexus.

Secondary considerations require *nexus* to a challenged claim. *Fox Factory v. SRAM*, 944 F.3d 1366, 1373 (Fed. Cir. 2019). Omega’s burden of production includes a burden to show nexus. *Id.* Omega failed to carry that burden.

a. Unclaimed Features Preclude Coextensiveness.

Omega never meets its burden to show any product allegedly supporting a secondary consideration is coextensive with any challenged claim.

Omega contends CalAmp products “correspond to the claimed invention” (POR, 49) but does not even allege the absence of significant unclaimed features. The identified products—CalAmp LMU-3000 and LMU-3030—*include significant unclaimed features* like a “3-axis accelerometer” for “hard braking, cornering” and “impact detection,” and an “on-board alert engine PEG (Programmable; Event Generator).” EX2016, 1, 2 (“KEY FEATURES”); EX2017, 1; *CalAmp-II*, 13 F.4th at 1377 (“[T]here is *no question that the LMUs have conventional components that are not the inventive aspects* of the ’278 patent.”), 1378 (“*It is undisputed* that [‘3-axis accelerometer’ and ‘industry leading on-board alert engine’] *are not inventive aspects* of the asserted [’278

patent] claims[.]”). And *CalAmp-II* precludes Omega from arguing otherwise. *Papst Licensing v. Samsung*, 924 F.3d 1243, 1251 (Fed. Cir. 2019).

Having significant unclaimed features means the products ***are not coextensive*** with any claim because coextensiveness requires that a product is “limited” to what is claimed. *Fox Factory*, 944 F.3d at 1373-1374. Without coextensiveness, no presumption of nexus applies. *Id.*, 944 F.3d at 1373.

b. Known Features Preclude Nexus.

Nexus cannot turn on features known in the art. *In re Kao*, 639 F.3d 1057, 1068-1069 (Fed. Cir. 2011) (“[T]here must be a nexus ***to some aspect of the claim not already in the prior art.***”); *Lectrosonics v. Zaxcom*, IPR2018-01129, Paper 33, 33, 61 (Jan. 24, 2020) (precedential). Nexus must rely on claim 1 (the broadest claim) because Omega makes no distinction among challenged claims (POR, 60-62). Hunt ***anticipates*** claim 1 (Pet., 10-41; *infra*, §II); excepting [1.a] (*supra* §I; Pet., 53-68) Flick-885 meets all limitations in claim 1—including [1.e], the sole limitation that Omega (wrongly) contends Hunt lacks. The claimed subject matter was known and cannot support nexus.

Omega alleges combining “a vehicle position determining device and a multi-vehicle compatible controller” was “not obvious” (POR, 62). Yet Hunt indisputably disclosed this. Pet., 13-15 (limitation [1.a]), 17-23 (limitation [1.c]). Given that combining a vehicle controller with a vehicle positioning device ***was***

known, that feature *cannot provide nexus* for *any* alleged secondary consideration evidence. *Kao*, 639 F.3d at 1068-1069; *Lectrosonics*, Paper 33, 61.

3. Omega's Evidence Fails.

Omega's secondary consideration "evidence" fails to overcome obviousness over Flick-885+Hunt. *Graham* requires weighing secondary considerations against the challenged claims and asserted art. *Graham v. John Deere*, 383 U.S. 1, 17-18 (1966). Grounds 2-3 challenge *different claims* with *different art*. But even if the Board considers Omega's secondary consideration allegations against Hunt (POR, 44-53) together with Omega's allegations against Flick-885+Hunt (POR, 60-62), they fail to overcome Ground 3's obviousness showing.

a. Evidence Cited Against Ground 3 Fails.

Omega cites a Board decision from *ex parte* appeal (EX1017, 14) and expert testimony relying on irrelevant third-party testimony (EX2010, ¶200, citing EX2004-EX2006 incorrectly as EX2003-EX2005) as secondary considerations evidence showing non-obviousness over Flick-885+Hunt. POR, 61-62. This "evidence" fails.

i. Board Decision Fails.

The Board's decision (EX1017) is not *evidence*. The decision cannot help Omega here because the Board did not weigh secondary considerations *against Flick-885+Hunt* (D.I., 18-19). The Board's analysis further fails for reasons discussed with Ground 2 (*infra* § I.B.3.b.i).

Omega failed to meet its burden of production with respect to the underlying evidence cited in the decision, because Omega never explained its relevance to Ground 3. Thus, the Board should not consider that evidence. *Parus Holdings v. Google*, 70 F.4th 1365, 1371-1372 (Fed. Cir. 2023).

Furthermore, the Petition explained why the underlying evidence fails (Pet., 76-83). Omega's POR provided no response.

ii. McAlexander's Testimony Fails.

McAlexander's testimony (EX2010, ¶200) parrots the POR with unexplained string cites to EX2004-EX2006 and warrants no weight. *Xerox*, IPR2022-00624, Paper 9 at 15.

McAlexander's testimony and the hearsay it cites (EX2004-EX2006) further fail to support non-obviousness for at least two reasons.

First, the relied-upon evidence is ***irrelevant*** to obviousness:

- **EX2004, 26:11-20**, concerns third party license terms. Omega never explains how these license terms evidence non-obviousness for any claim. *Parus*, 70 F.4th at 1371-1372. They do not.
- **EX2005, 45:3-19**, concerns whether a third-party (CalAmp) pursued "alternative designs" to avoid unidentified patent claims. This does not establish copying of anything, let alone the '278 patent. The witness had no memory of which among at least 30 claims across 4

patents were considered for design-arounds, and never identified a claim challenged here. EX2005, 44:23-45:2.

- **EX2006, 155:4-13**, concerns third-party CalAmp branding an “LMU-3030” as “LMU-3050” in Europe, while manufacturing in China and testing in the U.S. Omega never explains how this has any relevance to a claimed feature or evidences non-obviousness. *Parus*, 70 F.4th at 1371-1372. It has none.

Second, McAlexander cites testimony concerning *known* product features, which cannot support nexus for any secondary consideration. *Supra* §I.B.2.

- **EX2005, 46:25-47:19**, concerns *known* multi-vehicle compatibility. EX1001, 2:17-37 (admitting known); Pet., 22 (Hunt discloses), 56-59 (Flick-885 discloses).
- **EX2006, 64:15-24**, concerns a *known* “plug-in solution.” Hunt, Fig. 1B (interface 23 to OBD-II port); EX1072, 18, Fig. 8 (OBD connector to vehicle bus); EX1070, §§86.1806-04(h) (“OBD system shall provide standardized access”), 86.1806-04(h)(1)(iv) (connection interface requirements for “Diagnostic Connector”); Miller, ¶73; Miller-Reply, ¶¶19-23; EX2014, ¶29 (“standard includes a data port”).
- **EX2006, 102:16-103:13** concerns automated bus protocol discovery *standardized* in SAE J1978 before the ’278 patent was filed. EX1052,

5-6; Miller, ¶¶87-97.

b. Evidence Cited Against Ground 2 Fails.

i. *Ex parte* appeal decisions

Non-obviousness decisions in *ex parte* appeals involving *different* prior art are irrelevant to obviousness in this proceeding. D.I., 19. Omega ignores this. Arguing non-obviousness over Hunt, Omega simply quotes language apparently from EX1017. POR, 45-47. This adds nothing to the record at institution and does nothing to alter the *Graham* analysis demonstrating obviousness over *Hunt* (Ground 2) and *Flick-885+Hunt* (Ground 3).

Furthermore, the obviousness analysis in Omega’s *ex parte* appeal decisions lacks evidentiary support because Omega misrepresented the content of licenses allegedly showing non-obviousness, and never provided them to the Office. Pet., 3-4, 8, 81-82.

ii. *CalAmp* Verdicts

Omega cites *CalAmp* jury verdicts reporting jury findings. POR, 47-50 (citing EX1027-EX1028).² Those findings—in a forum where the patent enjoyed a

² Omega’s reliance on damages in EX1028 (POR, 49-50) is incredible. The jury did not consider invalidity; the Federal Circuit found the award “unsustainable,” vacated it, and remanded for new damages trial. EX1021 (“*CalAmp IP*”), at 1376, 1382; EX1124, 92:18-93:20.

presumption of validity inapplicable here—are not *evidence*. The juries never considered patentability over Hunt or Flick-885+Hunt. The findings and verdicts do not bind the Board or Petitioners.

Furthermore, for EX1027, jury form question 5 concerned licensing (POR, 48), commercial success (POR, 49), and copying (POR, 50) “with respect to *the claimed invention*” (EX1027, 9) in a case with *thirty* claims in *four* patents (EX1027, 2-6). Unlike the jury’s specific infringement findings for particular claims, *id.*, the jury’s responses are untethered from any ’278 patent claim. For those additional reasons EX1027 fails to support Omega’s non-obviousness arguments.

iii. Licensing

Omega cites six licenses (EX1090-1093, 2020-2021) it contends “included” the ’278 patent. POR, 47, citing EX2014, ¶¶18-20; EX2014, ¶18 n.1 (identifying licenses). None license the ’278 patent by itself. Four are settlement agreements (EX1090, 1092, 2020-2021) and five are portfolio licenses (EX1090-1093, 2021), each covering at least 45 patents and applications. EX2014, ¶18; EX1124, 64:12-66:11 (settlements), 66:12-67:20 (portfolios). No portfolio royalty rate can be tied to the ’278 patent. EX1124, 71:10-15, 73:14-17.

Exhibit	Number patents/applications
1090	86
1091	54
1092	47
1093	45
2021	83

Omega ignores the Petition’s caselaw (Pet., 81-83) establishing that settlements and portfolio licenses are irrelevant to non-obviousness.

Some Omega exhibits suffer additional problems. EX2021 was signed *before the ’278 patent was even filed* (EX2021, 9). EX1124, 42:2-43:4. EX2020 is irrelevant because it settled two litigations on nine Omega patents (EX2020, 1) and does not license the ’278 (EX2020, 6). EX1124, 60:11-62:11.

Omega also ignores the Petition’s explanation (Pet., 82 n.5) that EX1092-EX1093 *exclude* the ’278 patent by excluding “claim(s)... relating to... vehicle GPS tracking technology” (EX1092, 1; EX1093, 1). All ’278 claims recite a “vehicle positioning determining device” (limitation [1.a]) that includes GPS (claim 11) and “relate to” vehicle “GPS tracking technology.” EX2014, ¶43 (’278 covers “Tracker technology”); EX2021, 45 (“Exhibit G” classifying ancestor ’561 patent as a “GPS Patent”), §5, 4-5 (classifying ancestor ’561 patent as a “tracker patent”); EX1124, 50:11-51:15, 56:4-57:4, 77:2-80:16.

Omega’s reliance on a jury finding that “others accept[ed] licenses *under patents* because of merits *of the claimed invention*” (POR, 48, citing EX1027) is

misplaced. The jury finding concerned *thirty* claims in *four* patents. Licensing “*other* asserted patents” beyond the ’278 patent is irrelevant. Omega’s suggestion that the jury found that settlement and portfolio licenses establish non-obviousness of the challenged claims is contrary to law (Pet., 81-83) that Omega ignores. And licenses taken on prior art patents lack nexus because those prior art inventions were known. POR, 47 (citing EX2014, ¶¶18-20); *supra* §I.B.2.b.

iv. Commercial Success

Jury findings about “the claimed invention” (POR, 48-49) are irrelevant because they are not tied to the ’278 patent, let alone any challenged claim. *Supra* §I.B.3.b.ii.

Furthermore, the Petition explained that blocking patents preclude Omega’s commercial success arguments (Pet., 78-79) and Omega’s reliance on infringing sales. POR, 49-50. Omega does not dispute there were blocking patents and ignores the Petition’s caselaw.

Even without blocking patents Omega failed to show nexus. *Supra* §I.B.2. Without nexus infringing sales are irrelevant. *Id.* Unclaimed features like competitive pricing (EX2017, 1) or those touted in CalAmp’s marketing (*supra* §I.B.2.a; EX1124, 73:24-74:20, 75:10-76:7) preclude nexus.

v. Copying

In addition to lacking nexus Omega submitted no credible evidence of

copying. Omega’s conclusory expert testimony parroting the POR warrants no weight. EX2010, ¶¶209-210 (cited POR, 47); *Xerox*, IPR2022-00624, Paper 9 at 15.

The Petition explained that an infringement verdict (POR, 50) does not evidence copying. Pet., 80-81 (*citing Wyers*, 616 F.3d at 1246). Omega has no answer.

Omega identifies no evidence of efforts to replicate a specific product and does not even try to distinguish the Petition’s caselaw. Omega mischaracterizes third-party deposition testimony as CalAmp “admitting to copying.” POR, 47 (citing EX2004-2006). The deponents did not admit to copying *anything*. The testimony has no relevance to any secondary considerations. *Supra* §I.B.3.a.ii. The cited testimony is also hearsay for which no exception applies and warrants no weight. *Denso v. Collision Avoidance Technologies*, IPR2017-01715, Paper 27, 30 (Jan. 22, 2019).

A *CalAmp* jury answering “yes” to “Did others copy *the claimed invention*” (POR, 50) does not specify the ’278 patent and fails as explained *supra* §I.B.3.b.ii.

vi. Customer need

Omega’s customer need arguments fail because there is no nexus. Omega’s alleged “customer need” relies on “multi-vehicle databus compatibility in a vehicle tracking system.” POR, 50-51. Omega’s “simple installation and enhanced

capability” (POR, 50) is unexplained but appears to mean “a self-contained box that just plugs into an existing [OBD-II] connector[.]” EX2006, 41:5-12. These features were known (*supra* §I.B.2.b) and cannot provide nexus.

II. Hunt Anticipates Claims 1, 4-6, 8, 11-12, and 18-19 (Ground 1).

Omega only disputes whether Hunt meets limitation [1.e]’s “downloading interface.” POR, 11-31. The Board rejected this argument at institution. D.I., 28-38. Omega gives the Board no reason to reach a different conclusion.

A. Hunt Meets [1.e]’s “downloading interface.”

The Board agreed that Hunt meets [1.e] because Hunt discloses downloading and installing firmware, which is “enabling data” because it “communicat[es] the vehicle’s specific protocol to Hunt’s [vehicle communication circuit 25].” D.I., 36; *id.*, 32-37; Pet., 34-37, 40-41.

1. Omega Mischaracterizes the Petition.

Omega’s argument that “*running*” or “*executing*” firmware “on a microprocessor” is not “downloading” (POR, 16, 23) mischaracterizes the Petition, which establishes that wirelessly *installing* firmware involves downloading. Pet., 34-37, 40-41.

2. Omega’s Arguments Against Hunt’s Firmware Updates Fail.

“[D]ownload” means to transfer data. Pet., 34 (citing EX1051, 75; Miller, ¶304). Hunt teaches downloading firmware to its MVCC’s microprocessor at least

because Hunt discloses programming its system at a “later date” than when it is manufactured. Pet., 34-37; D.I., 33-34. Programming Hunt’s microprocessor post-manufacture “via a computer-readable medium” that can be “a carrier wave modulated... to convey instructions” (Hunt, 11:5-32) wirelessly downloads Hunt’s firmware to the MVCC. Pet., 34-36; Miller, ¶¶309-313. Hunt’s hardware meets the “downloading interface.” Pet., 35-37; D.I., 32-35.

a. Hunt’s Firmware is Enabling Data.

Omega acknowledges that Hunt’s microprocessor “communicates the protocol to the ASIC” and has updatable firmware that “tests ‘each protocol.’” POR, 28-29. Omega alleges that Hunt nevertheless lacks a downloading interface for downloading *enabling data* because Hunt’s communication protocols “are in the ASIC and cannot be changed.” *Id.*

To the extent Omega suggests that Hunt’s firmware is not “enabling data,” that fails as a matter of claim construction. Hunt’s firmware meets the Board’s construction of “enabling data” because it is data “that enables... the controller to use a particular vehicle device code” and “enables the controller to select or generate the code.” D.I., 25, 36. Omega does not dispute that Hunt’s MVCC uses firmware to identify the host vehicle’s communication protocol (Pet., 21, 35-36, 40-41; D.I., 34, 36-37; POR, 28) and cause the MVCC to generate the correct vehicle device codes specified by the protocol to allow the MVCC to communicate

with the vehicle's devices (Hunt, 9:18-27).

b. Hunt Discloses Post-Manufacture Firmware Download.

Omega alleges that because Hunt uses an ASIC that “cannot be changed” Hunt had no reason to download new “device codes” the ASIC could not use. POR, 18-19. That is a red herring because neither the claims, Petitioners’ “enabling data” construction that the Board adopted, nor Ground 1’s showing require that Hunt’s MVCC download new device codes. “Enabling data” is met by firmware that enables the MVCC to identify the vehicle’s host communication protocol and its specified device codes. Pet., 21, 35-36, 40-41; D.I., 34, 36-37.

Omega alleges that because the ASIC is “fixed” there is no need for downloading firmware allowing the controller “to generate the vehicle device codes.” POR, 19. If Omega suggests there was no reason to download firmware onto Hunt’s MVCC microprocessor (POR, 18-19) because the supported communication protocols were allegedly “fixed” by ASIC communication circuits 25a-e, that fails for multiple reasons.

First, Hunt expressly describes installing firmware by wireless download at a “later date” than Hunt’s MVCC is manufactured. (Pet., 35-36, 40-41; Hunt, 11:5-18). Thus, Hunt describes downloading the firmware for the initial programming of the MVCC’s microprocessor. Miller, ¶¶308-313, 327-331.

Second, even after Hunt’s MVCC microprocessor had been initially

programmed, POSAs understood there were reasons to update its firmware via download (e.g., to fix software bugs) unrelated to adding a capability to support a new protocol or new device codes. Miller-Reply, ¶¶26-29.

Third, Omega admits that Hunt discloses an embodiment where the MVCC comprises a microprocessor that is not on the ASIC, and that it would have been obvious to replace an existing ASIC with a new ASIC to support new communication protocols. POR, 40; EX2010, ¶¶154-155. In that circumstance it would have been obvious to update the microprocessor’s firmware to support the new communication protocol hardware. Miller-Reply, ¶¶30-31.

3. Omega’s “boilerplate” Arguments Fail.

As the Board noted, a POSA would not ignore Hunt’s disclosure that Omega mischaracterizes as “boilerplate.” POR, 24-27; D.I., 40.

4. Omega’s Enablement Arguments Fail.

Omega’s argument that Hunt does not enable its downloading interface (POR, 24-25) fails for several reasons.

First, Omega mischaracterizes the Petition as arguing that Hunt discloses “updating the *protocols*... ignoring [Hunt’s] ASIC teachings.” POR, 25. The Petition relied on Hunt’s disclosure of downloading new *firmware* – not new protocols.

Second, Hunt is a prior art patent presumed enabled for all it discloses.

Amgen v. Hoechst Marion Roussel, 314 F.3d 1313, 1354-1355 (Fed. Cir. 2003).

Omega cannot overcome that presumption and provides no evidence that implementing Hunt’s microprocessor to be programmable by wirelessly-downloaded firmware was beyond a POSA’s skill.

5. Omega’s Cellphone Argument Misrepresents Hunt.

Hunt’s cellphone embodiment independently meets [1.e]. Pet., 41. Omega’s contention that Hunt’s ASIC cannot be a cellphone (POR, 30-31) disregards Hunt’s *explicit disclosure* that software executing on a computer—that may be a cellphone—can provide controller processes. Hunt, 10:46-54; 11:5-7, 11:34-40; Pet., 35, 37; Miller, ¶¶223, 322, 330.

Omega’s assertion that Hunt’s *microprocessor 27* must be “installed in a vehicle” (POR, 30)—rather than wirelessly connected to an “installed” *vehicle-communication circuit 25*—is wrong and provides no basis to disregard Hunt’s cellphone embodiment that provides an alternative basis for meeting [1.e]. Miller-Reply, ¶¶32-33.

Only Hunt’s circuit 25 (comprising a physical layer, *supra* §II.B.1.b) must be “installed” in a vehicle. Miller-Reply, ¶34. Circuit 25 connects to microprocessor 27 (Hunt, 8:55-58, 9:18-20, Fig. 5)—which may be in a cellphone (Hunt, 11:34-40)—*through “asynchronous serial connection” data link 179* (Hunt, 2:62-65, 8:55-58, Fig. 5, claim 11). POSAs knew that Bluetooth provided a

wireless asynchronous serial connection that could implement Hunt’s data link 179. EX1060, 6:25-41 (Bluetooth connecting cellphone to vehicle network); EX1116, 1, 5-6, 8, 11, 177; EX1117, 2, 4; Miller-Reply, ¶¶35-49; *cf.* Hunt, claim 58 (limiting “data link” to “an electrical line”).

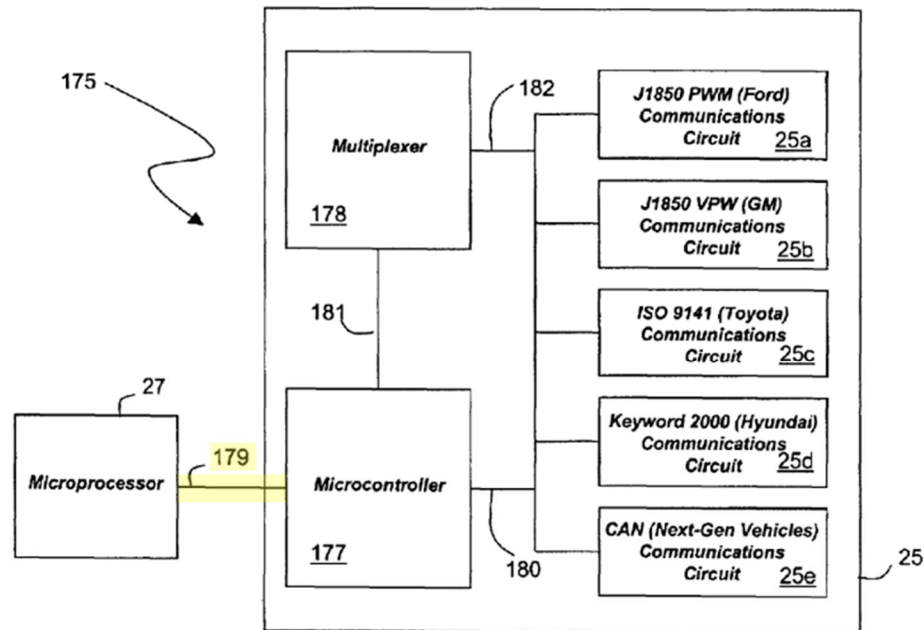


Fig. 5

B. Omega’s ASIC Arguments Are Irrelevant Obfuscation That Mischaracterize Hunt.

Omega’s contentions that device codes are “fixed” or “programmed... at manufacture” in Hunt’s ASIC, and that Hunt’s ASIC “generate[s]... vehicle device codes” (POR, 17-19), are irrelevant because they do not respond to the Petition’s showing of how Hunt meets limitation [1.e].

As the Board found at institution Hunt downloads firmware to its microprocessor, and that firmware is enabling data because it identifies the host vehicle's communication protocol. *Supra* §II.A.2.

Hunt also discloses implementing its invention in software executing on a microprocessor that can be provided by a cellphone. *Supra* §II.A.5; Pet., 41. Software downloaded to a cellphone to implement Hunt's appliance is also "enabling data" meeting limitation [1.e]. Pet., 41; D.I., 25-26 (construing enabling data).

Omega's irrelevant ASIC arguments also mischaracterize Hunt.

1. Hunt Does Not Require An ASIC.

Omega misrepresents Hunt as limited to a "system in the form of a single ASIC." POR, 17. Hunt does not require an ASIC.

Hunt's vehicle-communication modules can "implement" communication protocols using an ASIC "*or using transistors or conventional circuit elements.*" Hunt, 9:41-44; *id.*, claim 35 (no ASIC). As Omega's expert admits, Hunt Figures 6-7 show "logic diagrams" that "implement" communication protocol *physical layers* using *off-the-shelf* transceiver components *instead of* an ASIC. EX1123, 112:2-4, 125:21-127:2; Hunt, 2:6-11, 9:28-35, Fig. 6 (J1850 VPWM and PWM), 8:14-29, Table 1 (describing "managing communication protocols" in terms of *physical layer* parameters baud rate and pulse width); EX1118-EX1121; Miller-

Reply, ¶¶50-58.

As Omega's expert admits, a protocol's *physical layer does not generate device codes*. EX1123, 78:7-21, 54:22-57:1 (message generated in application, formatted in application layer), 79:22-81:8 (same), 112:2-19; Miller-Reply, ¶¶59-62. Vehicle device codes are part of a message payload transmitted over a network conforming to a communication protocol. EX1123, 68:5-69:14, 75:2-9, 107:17-24; Miller-Reply, ¶62. The *physical layer* modulates messages sent over a network according to *physical* communication protocol requirements (e.g., bit rate, modulation, drive type). Miller, ¶¶75-77, 95-107, 136-151, 159-179, 252-253; EX1071, 8, Fig. 1 (VPW and PWM); EX1123, 58:5-59:19.

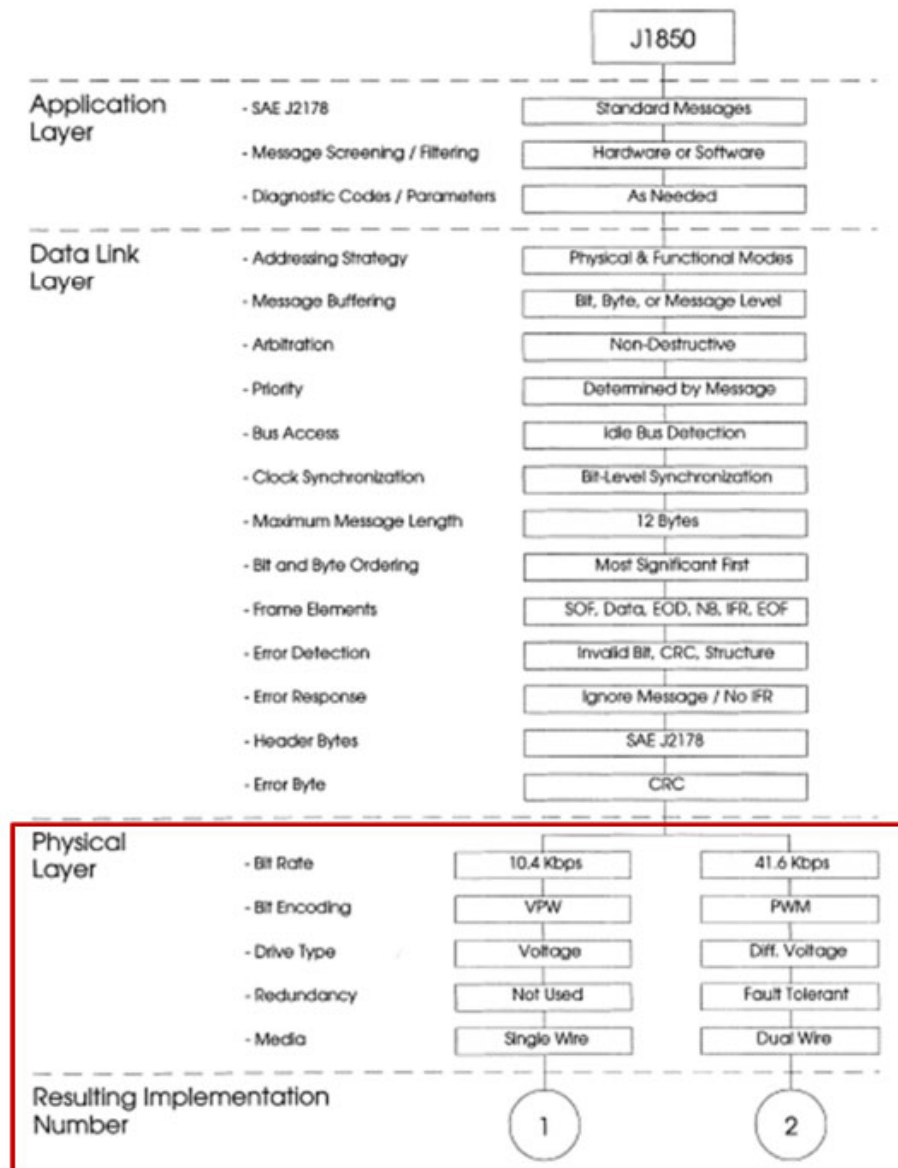


FIGURE 1—MAP OF SAE J1850 TO THE ISO OSI MODEL

EX1071, 8, Fig. 1.

As Omega's expert admits, every layer of a communication protocol network stack *above* the *physical layer*—and even portions *of* the *physical layer*—can be implemented *in software*. EX1123, 57:11-58:1 (data link layer), 86:4-7 (application layer), 102:19-25, 103:9-104:5; Miller-Reply, ¶63. As Omega's

expert explained, POSAs would implement communication protocols in software to trade ASIC speed for software flexibility. EX1123, 137:20-138:19; Miller-Reply, ¶¶64-68. Hunt says its system “may be implemented in part or in whole” as “a firmware program... or a software program... executable by... a microprocessor.” Hunt, 10:46-54; Pet., 35; *supra* §II.A.5 (cellphone embodiment); *cf.* EX1123, 85:4-9 (query message formulated in software). Omega presents no evidence disputing that programming a microprocessor to implement Hunt’s invention was well-within the POSA’s ordinary skill. Hunt, 10:55-11:3.

Hunt thus describes implementing communication protocols in a microprocessor, using off-the-shelf components providing a protocol *physical layer*, without using an ASIC at all. Downloading new firmware can of course impact “the operation of the device” (POR, 19). Miller-Reply, ¶¶67-68. Hunt’s disclosures that *an ASIC is not needed*—and that its system can be implemented in firmware/software—are fatal to Omega’s ASIC arguments.

2. Hunt’s ASIC Is Programmable By Firmware/Software Because It Includes A Microprocessor.

Omega’s focus on Hunt’s ASIC being “programmed” into circuit elements patterned at manufacture (EX2010, ¶¶74, 81; EX1123, 95:17-97:6) is obfuscation because it ignores that an ASIC that includes a processor is programmable by software/firmware that the ASIC’s processor executes. EX1123, 93:19-95:2; Miller-Reply, ¶¶69-73. Omega bases argument that Hunt’s ASIC cannot be

“updated” by firmware/software (POR, 17-19) on its expert’s erroneous assertion that an ASIC does not include a microprocessor (EX1123, 90:24-91:5, 91:14-18). ***But Hunt explicitly says its ASIC may include a microprocessor.*** Hunt, 3:50-51, 16:32-34 (claim 63). Hunt’s microprocessors are programmed. Pet., 35-36, 40-41; EX1123, 94:11-17. This contradicts Omega’s argument that Hunt’s ASIC cannot be “programmed” to run firmware/software.

3. Omega’s Contention That Hunt’s ASIC Is “programmed” With Or “generates” Vehicle Device Codes Has No Support.

Omega bases its assertion that Hunt’s ASIC “generates device codes” so the codes are fixed in hardware (POR, 18-19; EX2010, ¶¶77-78) on its contention that Hunt only refers to “communication protocols” in connection with an ASIC. EX1123, 116:8-120:14, 122:22-125:13. Hunt contradicts this by describing using off-the-shelf components—instead of an ASIC—to “implement” protocols. *Supra* §II.B.1; Miller-Reply, ¶¶74-78. As Omega’s expert admitted, such off-the-shelf components do not include or generate “device codes.” EX1023, 112:2-8; Miller-Reply, ¶¶59-62.

Hunt’s reference to an ASIC “implementing,” “managing,” or “supporting” a ***communication protocol*** does not support Omega’s assertion that Hunt’s ASIC is “programmed” with or “generates” ***device codes*** because: (1) Omega’s expert admits device codes and communication protocols are “***totally different matters***” (EX1123, 66:1-20); and (2) Hunt never describes “generating” device codes in an

ASIC (EX1123, 146:11-15). Miller-Reply, ¶¶80-83.

C. “enabling data” Imparts No Patentable Weight.

Hunt further meets [1.e] because Hunt’s downloading interface is indisputably capable of downloading data and nothing else is required because “enabling data” imparts no patentable weight. Pet., 38-40.

Petitioners agree that EX1001, 24:8-13 defines “enabling data” consistent with the construction in the RX2 *ex parte* appeal. D.I., 25-26. But “enabling data” *as claimed* is non-limiting because the downloaded data’s content in no way limits the downloading interface.

1. “enabling data” Is Printed Matter.

The Board noted the Federal Circuit’s guidance that printed matter is limited to matter “claimed for its communicative content.” D.I., 26. Omega purportedly distinguishes Hunt’s downloading interface based solely on the “*communicative content*” of the data it downloads. POR, 29 (“the *data* the modems process *is not enabling data*”), 39 (Hunt’s modem “does not... operate on *enabling data*”). That triggers the printed matter doctrine. *In re DiStefano*, 808 F.3d 845, 848–851 (Fed. Cir. 2015).

2. Using Downloaded Data Does Not Limit the Downloading Interface.

The downloading interface need only be *capable* of downloading enabling data (claim 1) and a programming instruction (claim 8). EX1022, 7-8 (limitation

[1.e] “defines a required *capability*”). Omega does not identify any downloading interface characteristic allegedly permitting it to download data, having particular content, that Hunt’s interface cannot also download.

Omega argues that *other* claimed system components *use* downloaded data in ways Hunt’s system allegedly does not. POR, 27-28. The Board suggested that the “controller” (not the downloading interface) uses enabling data to perform a particular function. D.I., 26. But while Omega could have pursued method claims that required *using* “enabling data,” it did not; the claims do not require using downloaded data. How the *controller* uses downloaded data does not limit the *downloading interface* in [1.e]—the only limitation Omega alleges Hunt lacks.

3. *Lowry* Is Distinguishable.

In *Lowry* (discussed D.I., 26-27) the claims recited a data structure that imparted “a physical organization on the information” that was “the essence of electronic structure.” *In re Lowry*, 32 F.3d 1579, 1583 (Fed. Cir. 1994). In this case data content does not impose structure on the downloading interface. The “downloading interface” can be “a socket to accept a memory card” (EX1001, 24:44-46). The content of data stored on an “accept[ed]” memory card does not limit the socket. Miller-Reply, ¶¶84-85. Omega does not argue otherwise.

III. Hunt Renders Obvious Claims 1, 4-6, 8, 11-12, and 18-19 (Ground 2).

The Petition established that in addition to anticipation, obvious

implementations of Hunt's disclosure meet limitations [1.d] or [1.e]. Pet., 45-48.

A. Limitation [1.d]

Omega does not dispute that POSAs would have known to implement Hunt's protocol discovery by complying with OBD-II standards (Pet., 46-47) or reinstalling device code libraries (Pet., 47-48), each meeting [1.d]. Omega challenges whether [1.d] is met in an argument that appears only in a footnote and is thus waived. POR, 36 n.6. If considered, this argument is based entirely on Omega's arguments concerning [1.e] which fail as discussed below.

B. Limitation [1.e]

Omega disputes that post-manufacture firmware download was a conventional and obvious way to implement Hunt's disclosure (POR, 35-44) based on the same arguments used against [1.e] for Ground 1. The Board rejected these arguments at institution (D.I., 39-41) and they fail again for the same reasons.

Omega's assertion that POSAs would not have updated Hunt's ASIC communication modules (POR, 42-43) is irrelevant obfuscation. The claims do not require that downloaded "enabling data" change supported communication protocols; Hunt's downloaded firmware meets "enabling data." *Supra* §II.A.2.a. Hunt's communication modules implement a physical layer for a communication protocol, whereas the programmable microprocessor implements the application layer that generates and parses messages (*supra* §II.B.1). Omega's boilerplate

arguments are baseless (*supra* §II.A.3).

Omega’s argument “there is only one embodiment in Hunt” making an ASIC an “essential structural feature” (POR, 39) ignores Hunt’s disclosure of “*embodiments... implemented... in whole...* as a firmware program ... or a software program.” Hunt, 10:46-61. Unlike *Silicon Graphics* (cited POR, 37), nothing in Hunt requires “exclusively” using ASIC logic lacking a programmable microprocessor. *Supra* §II.B.

C. Secondary Considerations

Because the “inventions represent no more than the predictable use of prior art elements according to their established functions” “secondary considerations *are inadequate to establish nonobviousness as a matter of law.*” *Wyers*, 616 F.3d at 1246 (cleaned up), cited *Pet.*, 76-77 (collecting cases).

At institution, the Board found that “Hunt ...alone [Ground 2] ... provides *strong* evidence of unpatentability.” D.I., 18. Omega’s POR provides no reason to reach a different conclusion. POSAs knew to install firmware in Hunt’s microprocessor through wireless post-manufacture download because Hunt discloses it (Hunt, 11:5-18) and because this was a conventional mechanism for firmware/software distribution. *Pet.*, 48; *Miller*, ¶¶355-356. Omega does not dispute that using Hunt’s adapter 35 with wireless modem 37, to download firmware/software to program the microprocessor in Hunt’s controller, was a

conventional and predictable use of those elements according to their established functions. Miller, ¶¶308-322, 327-331, 355-356; Hunt, 11:5-18, 11:34-40; POR, 39 (“modem... deliver[s] packets of data”). Hunt’s cellphone embodiment confirms this software download was conventional. Pet., 41; Miller, ¶¶330-332; EX1056, Abstract; EX1057, Abstract; EX1058, [0026], [0092]; EX1060, Abstract.

Given this, no secondary consideration evidence can overcome Ground 2’s strong showing of obviousness. Omega’s evidence also fails for the reasons discussed *supra* §I.B, including lacking nexus between any secondary consideration evidence and a novel feature of any challenged claim.

Respectfully submitted,
Geotab USA, Inc. and Geotab, Inc.

Dated: January 24, 2024

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CERTIFICATE OF WORD COUNT

Pursuant to 37 C.F.R. § 42.24, the undersigned certifies that the foregoing **PETITIONERS' REPLY TO PATENT OWNER'S RESPONSE** contains 5,591 words excluding; a table of contents, a table of authorities, Mandatory Notices under § 42.8, a certificate of service or word count, or appendix of exhibits or claim listing. Petitioner has relied on the word count feature of the word processing system used to create this paper in making this certification.

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I certify that on January 24, 2024, I will cause a copy of the foregoing document, including any exhibits or appendices filed therewith, to be served via electronic mail, as previously consented to by Patent Owner, upon the following:

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