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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

**PETITION FOR INTER PARTES REVIEW
UNDER 35 U.S.C. §§311-319 AND 37 C.F.R. §42.1 et seq**

TABLE OF CONTENTS

MANDATORY NOTICES.....	xvii
A. Real Party-In-Interest - §42.8(b)(1).....	xvii
B. Related Matters - §42.8(b)(2).....	xvii
1. United States Patent & Trademark Office	xvii
2. U.S. District Court.....	xviii
a. U.S. District Court for the District of Delaware	xviii
b. U.S. District Court for the Northern District of Georgia	xviii
c. U.S. District Court for the Middle District of Florida	xviii
d. U.S. District Court for the Western District of Washington.....	xix
3. U.S. Court of Appeals for the Federal Circuit	xix
C. Counsel and Service Information - §42.8(b)(3) and (4).....	xix
I. INTRODUCTION	1
A. '278 Patent.....	1
B. Grounds 1-3	1
C. The '278 Patent Survived Litigation and Reexamination Based On Phantom “Secondary Considerations”	2
II. STANDING CERTIFICATION.....	4
III. PATENTABILITY GROUNDS.....	4
A. Priority	4
B. Grounds	5
IV. '278 PATENT.....	5
A. Embodiments	6
B. Challenged Claims.....	8
C. Prosecution History	8
D. Reexaminations	8
E. Person of Ordinary Skill in the Art (“POSA”).....	9
V. CLAIM INTERPRETATION	9
VI. <u>GROUND 1</u> : Hunt Anticipates Claims 1, 4-6, 8, 11-12, 18-19, 21.	10

A. Hunt	10
B. Claim 1	13
1. Preamble [1.pre]	13
2. Element [1.a]	13
3. Element [1.b]	15
4. Element [1.c]	17
a. MVCC	17
b. “multi-vehicle compatible”	22
c. “for cooperating... to send vehicle position information”	22
5. Element [1.d]	23
a. Hunt’s MVCC Is Coupled to a Vehicle Bus For Communication Thereover and [1.d] Requires Nothing More Because “Using... [a] Vehicle Device Code” Is Non-Limiting.....	23
b. Hunt Meets Element [1.d] Even If Every Term is Limiting.....	25
i. Hunt’s MVCC is Coupled to a Vehicle Data Bus For Communication Thereover With At Least One Vehicle Device.....	25
ii. Hunt’s MVCC Uses a Vehicle Device Code From Among a Plurality for Different Vehicles	27
(1) Hunt communicates with the ECU and other devices on different vehicles	27
(2) Vehicle device code meaning.....	28
(3) Hunt’s ECU query uses one from a plurality of vehicle device codes	29
(4) Hunt’s communication with ECUs in different vehicles with different networking protocols uses codes “from among a plurality for different vehicles”	29
c. Any Suggestion That [1.d] Requires Using Different Codes on Different Vehicles Fails To Avoid Hunt.....	30
i. Omega Improperly Injects Limitations Into [1.d]	30

ii.	Omega Is Estopped From Arguing That Using Standard Codes on Different Vehicles Cannot Meet [1.d]	30
iii.	Hunt’s MVCC Uses Different Device Codes on Different Vehicles.....	32
6.	Element [1.e]	34
a.	Hunt Has a Downloading Interface To Program its MVCC.....	35
b.	Hunt’s Interface to Download Programming Data Meets [1.e]	38
i.	“Enabling Data” Imparts No Patentable Weight	38
ii.	Hunt Meets [1.e] Even If Enabling Data is Limiting	40
C.	Claim 4	41
D.	Claim 5	42
E.	Claim 6	43
F.	Claim 8	43
G.	Claim 11	44
H.	Claim 12	44
I.	Claims 18-19, 21.....	45
VII.	<u>GROUND 2</u> : Hunt Renders Obvious Claims 1, 4-6, 8, 11-12, 18-19, 21.....	45
A.	Element [1.d]	46
B.	Element [1.e]	48
VIII.	<u>GROUND 3</u> : Flick-885+Hunt Renders Obvious Claims 1-22.....	48
A.	Flick-885.....	48
B.	Flick-885+Hunt	49
1.	Reasons to Add Hunt’s Location Services To Flick-885.....	49
2.	Reasons to Add Hunt’s Housing To Flick-885.....	51
3.	Reasonable Expectation of Success	52
C.	Claim 1	53
1.	Element [1.pre].....	53

2. Element [1.a]	54
3. Element [1.b]	55
4. Element [1.c]	56
a. MVCC	56
b. position information	59
5. Element [1.d]	60
a. Non-limiting Language	60
b. Element [1.d] Is Met Even If Every Term is Limiting	61
6. Element [1.e]	64
a. downloading interface for downloading data	64
i. wireless	64
ii. wired	67
iii. for permitting downloading	68
b. Flick-885+Hunt Meets [1.e] Even If “Enabling” Data is Limiting	68
D. Claim 2	69
E. Claim 3	69
F. Claim 4	70
G. Claim 5	70
H. Claims 6-7	71
I. Claim 8	71
J. Claims 9-10	72
K. Claim 11	73
L. Claim 12	73
M. Claim 13	73
N. Claims 14-17	74
O. Claim 18	74
P. Claims 19-22	75
IX. SECONDARY CONSIDERATIONS CANNOT SAVE OMEGA’S CLAIMS	75

A.	Irrelevant to Ground 1	75
B.	Fail for Grounds 2-3	76
1.	Secondary Considerations Cannot Overcome The Strong Obviousness Showing	76
2.	Omega’s Blocking Patents Preclude Commercial Success.....	78
C.	Multi-Vehicle Compatibility Cannot Support Nexus For Any Secondary Consideration.....	79
D.	No Evidence Of Copying	80
E.	No Licenses Contravene Obviousness	81
X.	NO BASIS FOR DISCRETIONARY DENIAL	83
A.	No Basis For <i>Fintiv</i> Denial.....	83
1.	Factor 1: Litigation stay.	83
2.	Factor 2: Median-time-to-trial relative FWD.....	83
3.	Factor 3: Litigation Investment.	83
4.	Factor 4: Overlapping issues.	84
5.	Factor 5: Parties.....	84
6.	Factor 6: Other considerations.	84
B.	No Basis For <i>General Plastics</i> Denial	85
C.	No Basis For §325(d) Denial.....	85
1.	<i>Advanced Bionics</i> step one	85
a.	Hunt.....	85
b.	Flick-885+Hunt.....	88
c.	New Arguments	89
2.	<i>Advanced Bionics</i> step two.....	89
a.	Hunt.....	89
b.	Flick-885+Hunt.....	90
XI.	CONCLUSION.....	91
	U.S. Patent No. 8,032,278 Claim List	92

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<i>In re DiStefano</i> , 808 F.3d 845 (Fed. Cir. 2015)	38, 39
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<i>Omega Patents, LLC v. CalAmp Corp.</i> , 13 F.4th 1361 (Fed. Cir. 2021)	10, 31, 78
<i>Omega Patents, LLC v. CalAmp Corp.</i> , 920 F.3d 1337 (Fed. Cir. 2019)	<i>passim</i>
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<i>SHDS v. Truinject</i> , IPR2020-00937, Paper 11 (Nov. 17, 2020).....	88
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35 U.S.C. § 102	5, 10, 48, 90
35 U.S.C. § 103	5, 90
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With Parallel District Court Litigation, USPTO (June 21, 2022) 83

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37 C.F.R. § 42.104(a).....	4
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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)
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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)

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1047	SAE J1939-71 Vehicle Application Layer (rev. DEC2004)
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1071	SAE J1850 Class B Data Communications Network Interface, Rev. 2001-05 (May 2001)
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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)
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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)

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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)
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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)
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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)

MANDATORY NOTICES

A. Real Party-In-Interest - §42.8(b)(1)

Petitioners Geotab USA Inc. and Geotab Inc. (collectively “Geotab”) are real parties-in-interest under 37 C.F.R. §42.8(b)(1).

B. Related Matters - §42.8(b)(2)

A decision in this proceeding could affect or be affected by the following:

1. United States Patent & Trademark Office

U.S. Patent No. 8,032,278 (Ex. 1001, “the ’278 patent”) issued from U.S. Patent Application No. 11/773,272, which is a continuation-in-part of U.S. Patent Application No. 11/076,259 (U.S. Patent No. 7,720,597), which is a continuation of U.S. Patent Application No. 10/383,496 (U.S. Patent No. 7,149,623), which is a continuation of U.S. Patent Application No. 09/859,972 (U.S. Patent No. 6,606,561), which claims priority to U.S. Provisional Application Nos. 60/264,811, 60/258,005, 60/251,552, 60/252,125, 60/236,890, 60/246,463 [sic], 60/222,777, 60/205,178.¹

¹ The ’278 patent priority claim to U.S. Provisional App. No. 60/246,463 appears to be a typographical error that should refer to App. No. 60/246,436. Ex. 1014, 6n.3 (“The Office notes that the serial number of this provisional application [60/246,463] contains a typographical error; the provisional application presumably intended in the priority claim was actually 60/246,436.”).

U.S. Patent No. 8,032,278 was involved in the following Re-Examinations:

- (i) Re-Examination Serial No. 90/013,587, filed September 14, 2015
- (ii) Re-Examination Serial No. 90/013,851, filed October 28, 2016
- (iii) Re-Examination Serial No. 90/014,309, filed May 24, 2019
- (iv) Re-Examination Serial No. 90/014,419, filed December 16, 2019
- (v) Re-Examination Serial No. 90/014,675, filed February 16, 2021

2. U.S. District Court

a. U.S. District Court for the District of Delaware

Omega Patents, LLC v. Geotab USA, Inc. et al, Case No. 1:22-cv-01044-CFC (D. Del.) (“the Litigation”).

b. U.S. District Court for the Northern District of Georgia

Omega Patents, LLC v. Enfora, Inc., Case No. 1:13-cv-00646 (N.D. Ga.);
Omega Patents, LLC v. Enfora, Inc., Case No. 1:17-cv-02769 (N.D. Ga.).

c. U.S. District Court for the Middle District of Florida

Omega Patents, LLC v. CalAmp Corp., Case No. 6:13-cv-01950 (M.D. Fla.);
Omega Patents, LLC v. DEI Holdings, Inc., Case No. 6:20-cv-00693 (M.D. Fla.);
Omega Patents, LLC v. Verizon Connect, Inc. f/k/a Verizon Telematics, Inc., Case No. 6:22-cv-02371 (M.D. Fla.).

d. U.S. District Court for the Western District of Washington

Omega Patents LLC v. Firstech LLC, Case No. 2:20-cv-01344 (W.D. Wash.).

3. U.S. Court of Appeals for the Federal Circuit

Omega Patents, LLC v. CalAmp Corp., Case No. 18-1309; *Omega Patents, LLC v. CalAmp Corp.*, Case No. 20-1793; *Omega Patents, LLC v. CalAmp Corp.*, Case No. 20-1794.

C. Counsel and Service Information - §42.8(b)(3) and (4)

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A power of attorney is submitted with the Petition. Counsel for Petitioners consents to service of all documents via electronic mail.

Geotab requests *inter partes* review and cancellation of claims 1-22 (“Challenged Claims”) of U.S. Patent No. 8,032,278.

I. INTRODUCTION

A. ’278 Patent

The ’278 patent claims a multi-vehicle unit usable in different types of vehicles (*e.g.*, cars, trucks). The unit includes a controller that connects to a vehicle data bus and communicates thereover with “vehicle devices” (*e.g.*, an engine controller) using coded communication (“device codes”) to, for example, collect diagnostic information. The unit can communicate wirelessly allowing remote monitoring. The ’278 patent admits such units were known, including in Patent Owner (“Omega”)’s own Flick-885 patent used in Ground 3. Ex. 1001, 2:17-37.

The claimed unit additionally includes a “vehicle position determining device” (*e.g.*, GPS) for vehicle tracking. The ’278 patent concedes GPS was used in vehicle tracking systems (*id.*, 1:30-2:8), but alleges vehicle tracking and a controller to communicate with vehicle devices had never been combined in one unit (*Id.*, 2:38-41).

B. Grounds 1-3

The ’278 patent was wrong. The Office never considered Hunt. Hunt discloses a vehicle tracking unit including a controller for querying vehicle devices

like the engine controller. Hunt anticipates many Challenged Claims. That is **Ground 1**.

To the extent Omega argues that Hunt fails to disclose any limitation in the claims Ground 1 challenges, anything allegedly missing is nothing but the conventional and obvious way to implement Hunt's disclosure. **Ground 2** demonstrates that Hunt renders obvious the same claims challenged in Ground 1.

Ground 3 demonstrates that Omega's Flick-885 patent combined with Hunt renders *all* Challenged Claims obvious. The only limitations arguably missing from Flick-885 are GPS and, for claim 12, a single housing enclosing the unit's components. Hunt discloses both in the same type of multi-vehicle controller as Flick-885. Hunt would have motivated POSAs to use GPS and a single housing in Flick-885, and this predictable combination of known elements renders obvious every Challenged Claim.

C. The '278 Patent Survived Litigation and Reexamination Based On Phantom "Secondary Considerations"

Unable to refute the Grounds on their merits, Omega will undoubtedly emphasize that the '278 patent has survived various litigations and reexaminations based on secondary considerations. But secondary considerations are irrelevant to Ground 1's anticipation showing, and no *evidence* supports secondary considerations *for the '278 patent* that could overcome Grounds 2-3.

Omega has widely asserted the '278 patent with others in a large portfolio. The '278 patent has only been challenged in litigation—where it enjoys a presumption of validity inapplicable here—and in *ex parte* reexamination. Geotab—recently sued by Omega—has never had the opportunity to present its challenge to the '278 patent. Every Ground relies on prior art the Office and courts never considered on the merits.

Prompted by other litigation defendants, the Office declared four *ex parte* reexaminations against the '278 patent. In the most recent (90/014,675), the Central Reexamination Unit (“CRU”) rejected claims as obvious but the Board reversed based on secondary considerations. In that *ex parte* proceeding, the Board relied on Omega’s representations—rather than evidence—about alleged secondary considerations, and Omega misled the Board. Those alleged secondary considerations will not survive this *inter partes* proceeding.

As demonstrated *infra* §IX.E, Omega told the Office that licenses demonstrated non-obviousness (Ex. 1015, 37-39) but never provided them. Instead, Omega filed a trial “**exhibit listing**” suggesting agreements existed. The facts contradict Omega’s arguments. They show Omega passed off settlements and licenses involving **other patents** as the basis for non-obviousness **of the '278 patent**, while withholding the actual evidence that undermined its representations. From twenty-four Omega agreements presented at trial, only two license the '278

patent: one settled litigation on other patents with an 86-patent portfolio license; the other licensed a 54-patent portfolio.

Federal Circuit law discussed in Section IX makes clear that (1) settlements or licenses to portfolios with other patents are not probative of non-obviousness of the '278 patent, (2) Omega's broader "blocking patents" preclude any commercial success argument, and (3) secondary considerations requires showing a nexus to something claimed that is *novel*—a showing Omega cannot make.

II. STANDING CERTIFICATION

The '278 patent is available for IPR. Petitioners are not barred or estopped from requesting *inter partes* review of the claims. 37 C.F.R. §42.104(a).

III. PATENTABILITY GROUNDS

Petitioners request cancellation of claims 1-22 under 35 U.S.C. §311. Pre-AIA law applies because the '278 patent was filed before March 16, 2013.

A. Priority

No challenged claim warrants an effective filing date before July 3, 2007, when Omega filed the continuation-in-part application that issued as the '278 patent. Ex. 1010, 2; Ex. 1011, 5, 18; Ex. 1013, 6. For earlier priority, Omega bears a burden of production that a parent application provides written description for the challenged claims. *Dynamic Drinkware v. National Graphics*, 800 F.3d 1375, 1379-80 (Fed. Cir. 2015); *Arthrex v. Smith & Nephew*, 35 F.4th 1328, 1344-1345 (Fed. Cir. 2022) (Board may resolve priority).

B. Grounds

Hunt and Flick-885 are pre-AIA §102(b) prior art to all claims.

Ground	Reference	Claim(s)	Basis
1	Hunt	1, 4-6, 8, 11-12, 18-19, 21	102
2	Hunt	1, 4-6, 8, 11-12, 18-19, 21	103
3	Flick-885+Hunt	1-22	103

IV. '278 PATENT²

The '278 patent concerns a vehicle tracking system serving various purposes such as monitoring a fleet or recovering a stolen vehicle. 1:22-46. The patent admits other Omega patents disclosed a vehicle control system (a) capable of use with different vehicles, that (b) used device codes that allowed the control system to operate compatibly with the particular vehicle where it was installed. 2:17-37. The patent alleges that such control systems had “not yet been developed for vehicle tracking units.” 2:38-41. But the patent admits tracking systems using GPS were known. 1:47-59. The purported invention adds known GPS to Omega’s prior art control systems, then claims this combination as a “vehicle tracking unit.” Declaration of Jeffrey Miller, Ph.D. (“Miller”), ¶¶182-184.

² Section IV citations refer to Ex. 1001, and bold italics added throughout Petition, unless otherwise indicated.

A. Embodiments

The vehicle tracking unit 110 includes a “multi-vehicle compatible controller” (“MVCC”) 111, GPS 112, wireless communication device 113, and downloading interface 116. 23:41-24:51; Fig. 10. The MVCC includes CPU 126 and memory 125. 23:61-67, Fig. 10. Communication device 113 can be a cellular transceiver. 23:55-58.

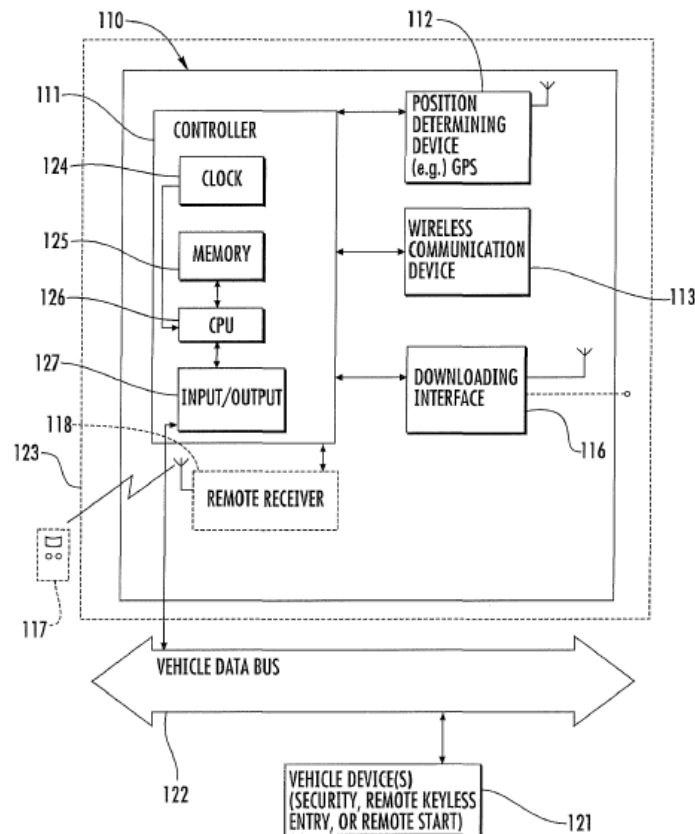


FIG. 10

The MVCC is coupled to the GPS, downloading interface and communication device. 23:46-51; 24:4-8; Fig. 10. The GPS determines vehicle position, and the MVCC sends the position over the wireless communication

device so the vehicle can be tracked. 23:41-54.

The MVCC includes “input/output circuitry 127 to interface with the vehicle device 121” via “vehicle data bus 122.” 23:59-67, Fig. 10. The MVCC communicates with vehicle devices using “at least one corresponding vehicle device code from among a plurality thereof for different vehicles.” 23:61-67. As discussed below the court “vehicle device” as an “electrical or electronic component in a vehicle that can be controlled and/or the status thereof read.” Ex. 1018 (“*CalAmp-CC*”), 25. “Vehicle device code” is “a signal to or from a vehicle device.” *Infra*, §VI.B.5.b.ii(2); Ex. 1013, 4-5 (CRU agreeing).

By 2007, reading diagnostic data from ***different devices***, on ***different vehicles***, using ***different communication protocols***, with ***different coding schemes***, was well-known and required by standards incorporated in EPA regulations requiring onboard diagnostic (OBD-II) systems. Miller, ¶¶71-90 (citing Ex. 1046, 369 (40 C.F.R. §86.1806-05(a)), 374-375 (40 C.F.R. §§86.1806-05(h), 86.1806-05(h)(1)(vi)); Ex. 1052, 1, 5-6); *generally* Ex. 1070, 68 Fed. Reg. 35792 at 35794, 35798-35801. Federal regulations ***required*** that any OBD-II compliant reader could automatically determine a host vehicle communication protocol by serially broadcasting request messages to vehicle electronics under different industry standards. Ex. 1046, 374 (40 C.F.R. §86.1806-05 (h)(1)(vi)); 1052, 5-6; Miller, ¶¶87-97.

Downloading interface 116 could be wireless (24:14:-32) or wired (24:33-51). Figs. 10-11. The downloading interface comprises “interface circuitry” “for controlling communication with a downloading device.” 24:22-26. The downloading device is a computer that downloads “enabling data,” which may be the vehicle device code(s), an instruction to select the code(s) from those already stored, or data “to allow the controller 111 to generate” the vehicle device code(s). 24:4-12, 41; Miller, ¶¶195-196.

B. Challenged Claims

This Petition challenges all 22 claims. *See* Claim List.

C. Prosecution History

The '278 patent issued from a continuation-in-part. The Examiner never evaluated the effective filing date of any claim. In response to rejections, Omega argued that a prior art combination failed to disclose the MVCC “***coupled to the vehicle data bus...***” Ex. 1002, 216 (bold added). Thereafter the Examiner allowed all claims without meaningful explanation. *Id.*, 197.

D. Reexaminations

The Office found substantial new questions of patentability in four *ex parte* reexaminations (Nos. 90/013,587 (“RX1”), 90/013,851 (“RX2”), 90/014,309 (“RX3”), 90/014,675 (“RX5”)) and denied a fifth (No. 90/014,419 (“RX4”)).

In RX2, the CRU rejected all claims but the Board reversed. Ex. 1012, 2. In RX5, the CRU rejected claims 1, 4-11, 18-22 as obvious, and the Board reversed

relying entirely on alleged secondary considerations. Ex. 1017, 5, 12-16; *supra* §IX.

E. Person of Ordinary Skill in the Art (“POSA”)

A POSA would have had a Bachelor’s degree in electrical engineering, computer engineering, computer science, automotive engineering, or a related discipline, and at least two years of experience in networking or automotive engineering. POSAs would have understood networking electronics, been familiar with vehicle data buses, regulations and industry standards involving on-board diagnostics (“OBD-II”), and at least one underlying network protocol used by OBD-II. Miller, ¶¶54-60.

V. CLAIM INTERPRETATION

The claims are construed herein using the civil standard under 35 U.S.C. §282(b) and in accordance with “the ordinary and customary meaning” as understood by a POSA and the prosecution history. 37 C.F.R. §42.100(b). The Board need only interpret terms to resolve disputes between the parties. *Nidec v. Zhongshan*, 868 F.3d 1013, 1017 (Fed. Cir. 2017); 83 Fed. Reg. 51,340 at 51,353.

Two district courts construed terms in challenged claims: Ex. 1018, D.I. 50, *Omega Patents v. CalAmp Corp.*, No. 6:13-cv-1950 (M.D. Fla. Feb. 20, 2015) (“*CalAmp-CC*”), and Ex. 1019, D.I. 34, *Omega Patents v. Firstech*, No. 2:20-cv-01344 (W.D. Wash. Nov. 22, 2021) (“*Firstech-CC*”). The Federal Circuit issued

opinions on two appeals from the *CalAmp* litigation: Ex. 1020, 920 F.3d 1337 (Fed. Cir. 2019) (“*CalAmp-I*”) and Ex. 1021, 13 F.4th 1361 (Fed. Cir. 2021) (“*CalAmp-II*”). Relevant claim constructions are discussed below in relation to the claim elements where they appear. All other terms should be given their ordinary meaning.

VI. GROUND 1: HUNT ANTICIPATES CLAIMS 1, 4-6, 8, 11-12, 18-19, 21.

A. Hunt

U.S. Patent No. 6,957,133 (Ex. 1023, “Hunt”) is pre-AIA §102(b) prior art.

Hunt describes a wireless appliance (10 in Fig. 1A, 13 in Fig. 1B) for vehicle monitoring (the “appliance”). Hunt, Abstract, 5:1-3, 25-29. The appliance provides “wireless, real-time transmission and analysis of GPS and diagnostic data.” Hunt, 4:11-18, Fig. 2. The appliance includes a microprocessor, vehicle-communication circuit, GPS module, and wireless transmitter. *Id.*, Abstract, 3:50-54. The GPS provides vehicle position. *Id.*, Abstract, 3:22-32, 4:12-28. Different vehicle-communication modules manage different communication protocols used by different vehicles. *Id.*, Abstract, 4:1-5, 5:61-6:17, Figs. 1A-1B; Miller, ¶209.

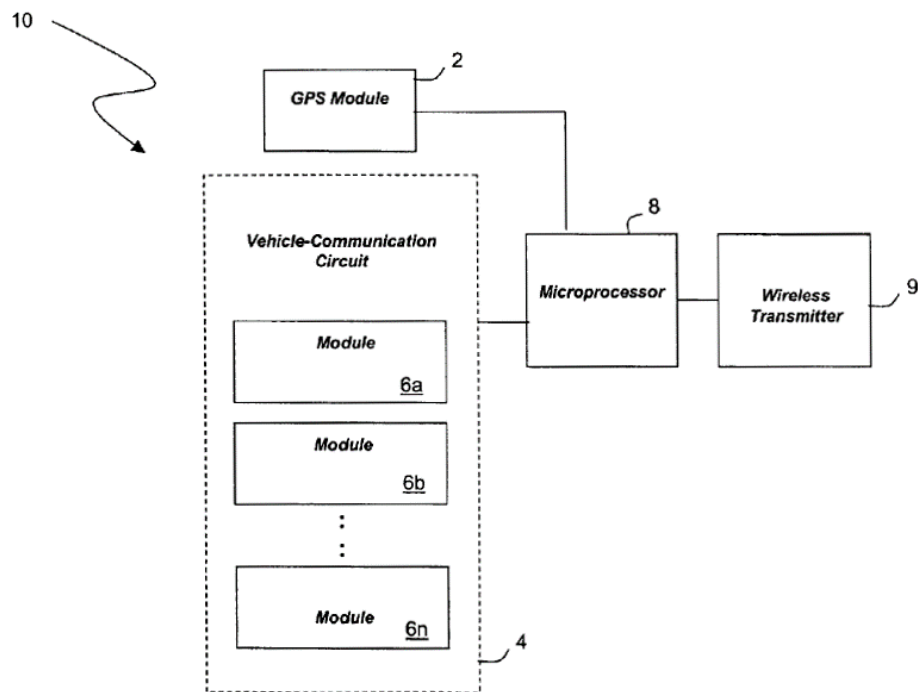


Fig. 1A

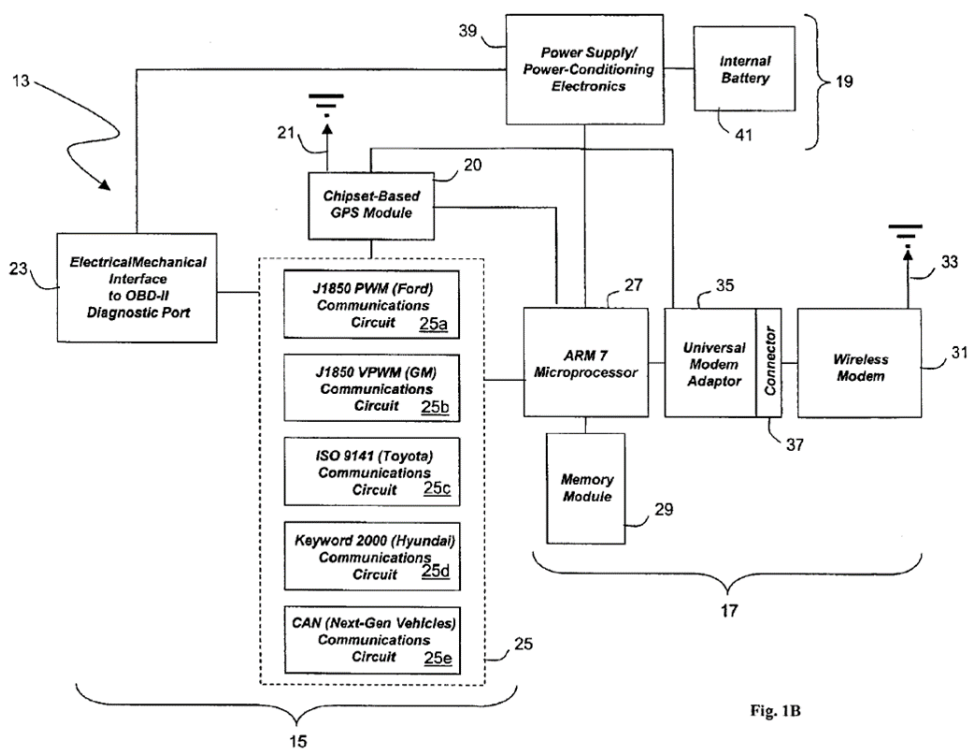


Fig. 1B

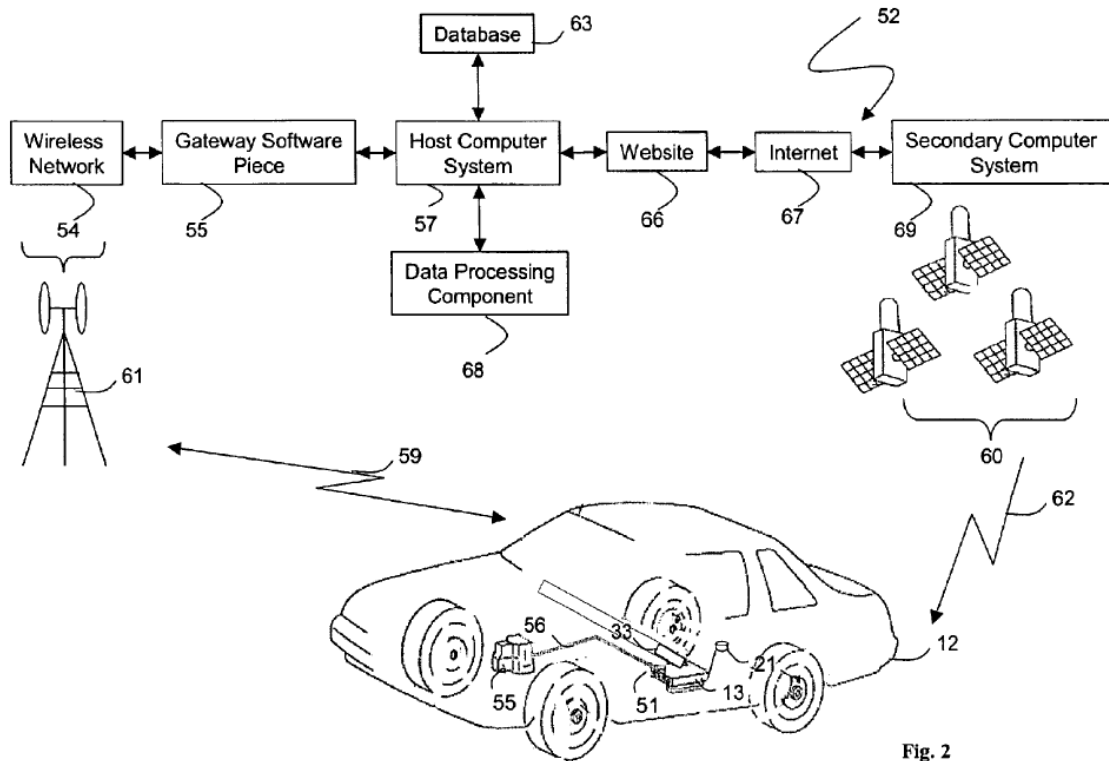


Fig. 2

Hunt's appliance works with different make, model, and type vehicles, from different manufacturers. *Id.*, Abstract, 2:48-56, 4:56-62, 5:8-18, 5:61-65, 6:9-25, Figs. 1B, 5, claim 1; Miller, ¶210. A vehicle-communication circuit comprises an "application-specific integrated circuit ('ASIC') for communicating with multiple types of OBD-II [onboard diagnostic] systems." Hunt, 2:6-11, 28-30, Figs. 6-7, claim 1; Miller, ¶211. Hunt's microprocessor runs firmware that determines a host vehicle's communication protocol, then selects and uses the vehicle-communication circuit supporting the particular host vehicle bus communications. *Id.*, 2:66-3:3, 8:66-9:17; Miller, ¶212. Hunt's appliance collects host vehicle position and diagnostic data, then wirelessly sends the data to a host computer that

makes the information Internet accessible. Hunt, 2:42-48, 5:7-29, Fig. 2; Miller, ¶213.

B. Claim 1

1. Preamble [1.pre]

1.pre	A multi-vehicle compatible tracking unit for a vehicle comprising a vehicle data bus extending throughout the vehicle, the multi-vehicle compatible tracking unit comprising:
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Hunt's appliance is a multi-vehicle compatible tracking unit that meets the preamble. Hunt, Abstract, claim 1; Miller, ¶¶214-216. The appliance is installed in "a monitorable vehicle" including an "on-board diagnostic system[.]" Hunt, 3:58-62. POSAs understood that the diagnostic system comprises a "vehicle data bus extending throughout the vehicle" because Hunt describes querying data from vehicle components—*e.g.*, the engine, transmission, brakes, and electrical system—throughout the vehicle (*id.*, 3:62-65), and because Hunt describes using OBD-II (*id.*, 5:55-65, Fig. 5). Miller, ¶¶215-216. POSAs understood the OBD-II network on a vehicle was a "data bus." *E.g.*, Ex. 1052, 13 (diagnostic communication on SAE J1850 bus); Ex. 1071, 7 (J1850 data bus topology); 1072, 4-5, 8, 19 (discussing CAN bus); Miller, ¶216.

2. Element [1.a]

1.a	a vehicle position determining device;
-----	--

A GPS receiver is a "position determining device." Ex. 1001, 3:26-28, 5:15-17, Fig. 2 (GPS 42); Ex. 1022, 3; Miller, ¶217. Hunt's appliance includes a GPS

system that “generates location-based data.” Hunt, 5:7; *id.*, Abstract, 1:8-11, 1:39-47, 2:42-48, 3:26-28, 5:43-54, 7:30-33, Figs. 1A (GPS Module 2), 1B (“GPS Module” 20 and antenna 21), 2, claim 1; Miller, ¶¶218-219. The GPS includes an integrated antenna. Hunt, 2:30-32, 5:43-45; Miller, ¶220.

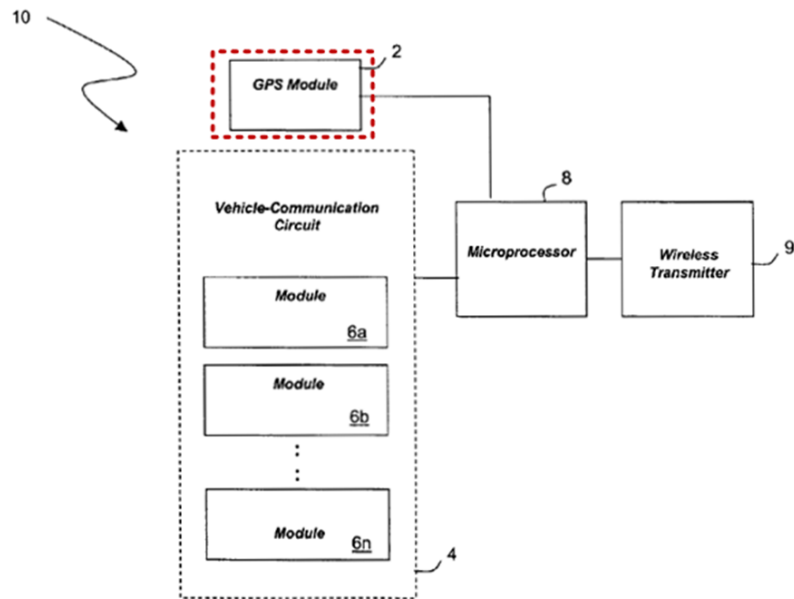


Fig. 1A

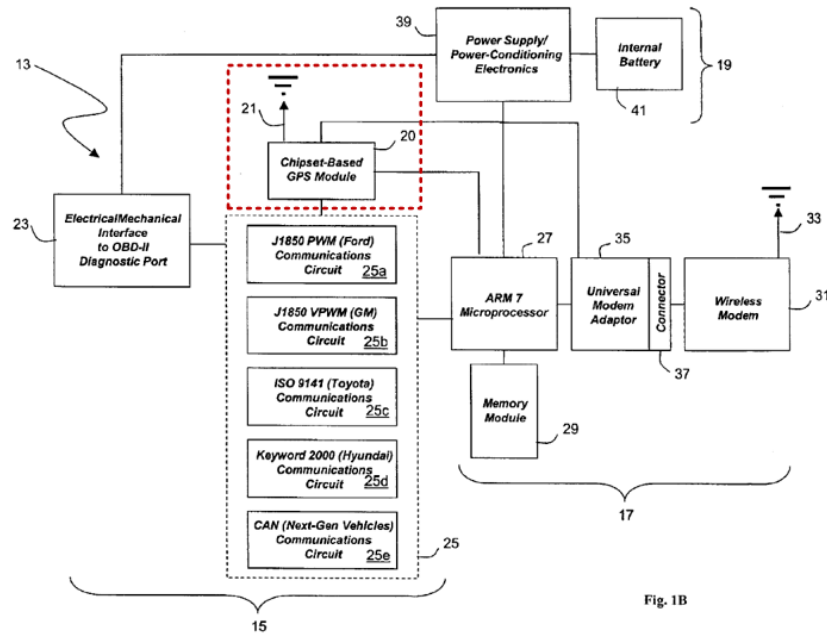
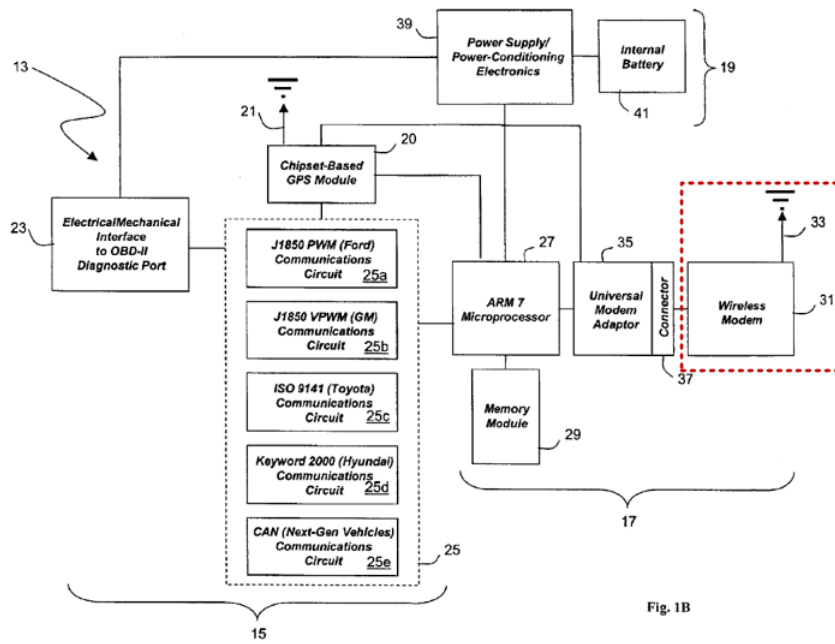
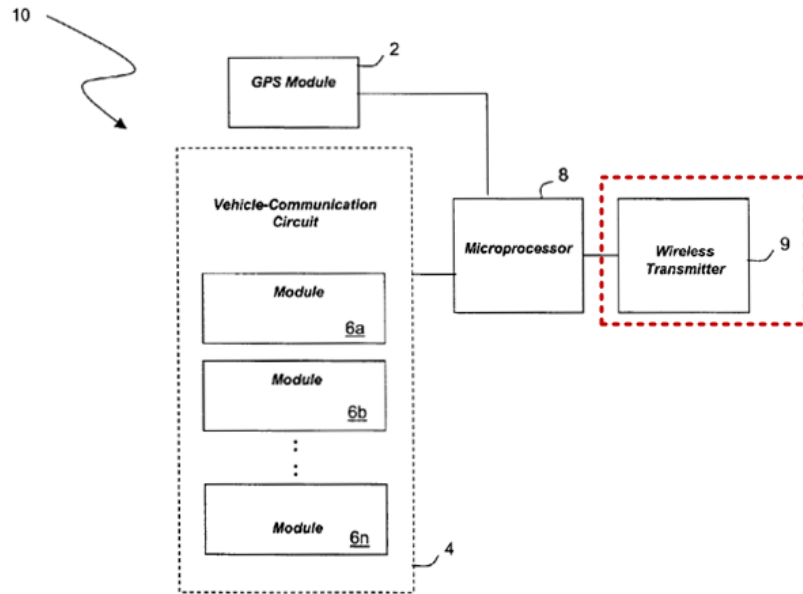


Fig. 1B

3. Element [1.b]

1.b	a wireless communications device;
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Hunt's appliance includes a wireless transmitter, or a wireless modem, which communicates with wireless network 54. Hunt, Fig. 1A (wireless transmitter 9), Fig. 1B (wireless modem 31 and antenna 33), Fig. 2 (bidirectional link 59), Abstract, 2:42-48, 3:34-49, 6:35-65, 7:34-38, claim 1; Miller, ¶221. The modem provides bidirectional communication because it modulates and demodulates signals. Ex. 1051, 67, 164; Miller, ¶222. Hunt also describes implementing the appliance in "a wireless... microcomputer, laptop, personal data assistant (PDA)... cellular phone... **or any other programmable device, which devices may be capable of configuration for transmitting and receiving data over a network.**" Hunt, 11:5-7, 11:34-40; Miller, ¶223.



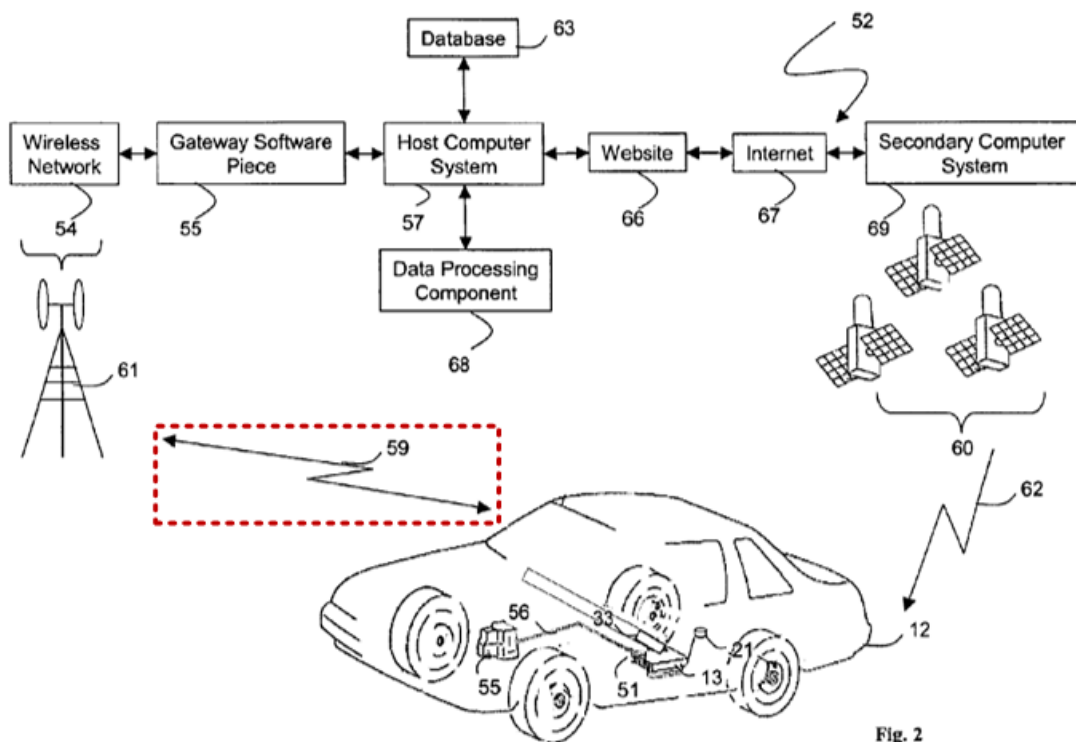


Fig. 2

4. Element [1.c]

1.c	a multi-vehicle compatible controller for cooperating with said vehicle position determining device and said wireless communications device to send vehicle position information;
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a. MVCC

In *CalAmp*, Omega stipulated (and a jury was instructed) that “multi-vehicle compatible controller” meant “electronic circuitry that performs one or more control functions, and can operate with more than one vehicle.” *CalAmp-CC*, 6; Ex. 1029, 11; Ex. 1030, 11; *see also* Ex. 1022, 6 (Omega argued that tracking unit “must be capable of operating in a plurality of different vehicles (i.e. multi-vehicle compatibility).”). This comports with the ’278 patent specification, *e.g.*, Ex. 1001, 5:50-56, 6:28-35, 8:13-25, 8:30-40, 23:59-67, and plain meaning. Ex. 1081, 215;

Miller, ¶224. It also comports with OBD-II standards on road vehicle diagnostics such as the ISO 15765-4 Controller Area Network (“CAN”), which explains that a CAN **controller**—like the claimed MVCC—shall be able to transmit and receive 11-bit and 29-bit CAN identifiers, meaning coded messages complying with the ISO standard. Ex. 1072, 14; Miller, ¶225. Omega’s expert agreed that sending a query over a bus is a control function. Ex. 1033, 73:1-22, 75:1-5; Miller, ¶226.

Hunt’s appliance includes a microprocessor, vehicle-communication circuit, and memory, collectively comprising a controller (“Hunt’s controller”). Hunt, Figs. 1A, 1B, 5; Miller, ¶227; *Firstech-CC*, 10-12 (clarifying “controller” meant a “single control system” that “need not be a single device”). Hunt’s controller is a single control system comprising electronic circuitry that performs control functions and can operate with more than one vehicle. *Id.*; *cf.* Ex. 1001, 5:50-63, 23:61-67 (MVCC 111 “illustratively” comprises CPU, memory, and input/output circuitry), Figs. 2 (controller 40), 10 (controller 111); Miller, ¶¶227-230. Hunt’s controller is the MVCC. Miller, ¶231.

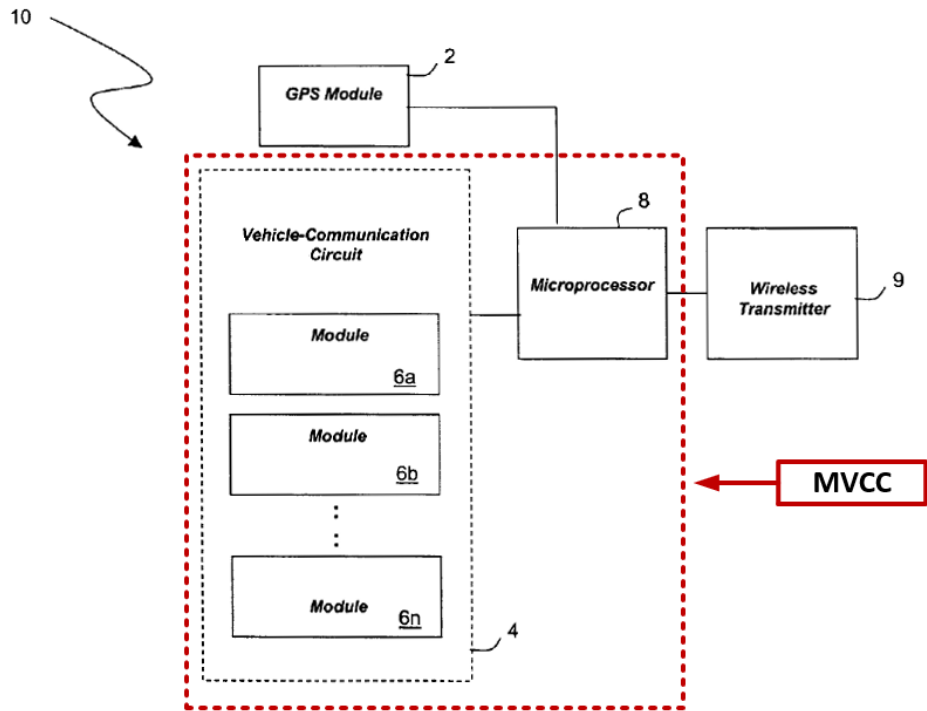


Fig. 1A

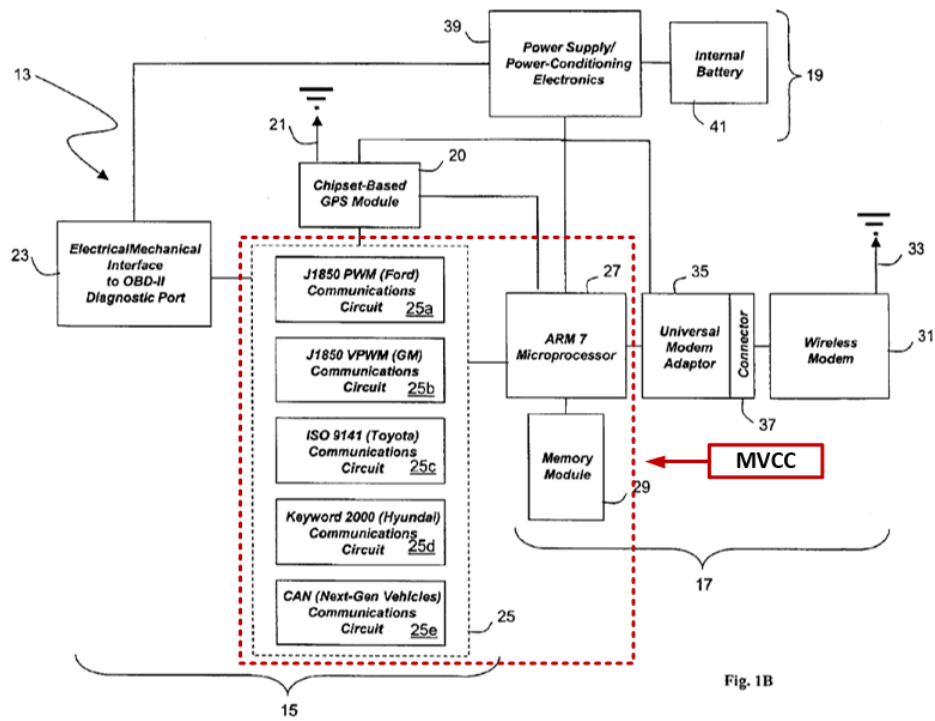


Fig. 1B

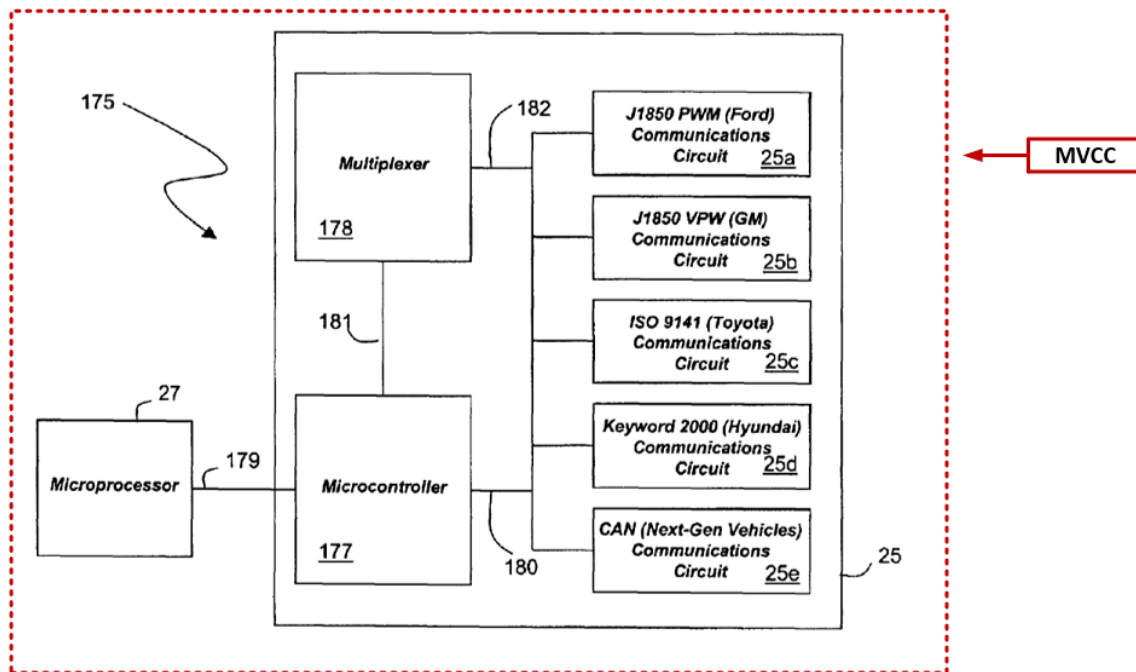


Fig. 5

Hunt’s controller performs “one or more control functions.” **First**, Hunt’s microprocessor runs firmware “that determines the vehicle-communication protocol of a host vehicle,” then “selects the appropriate module in the vehicle-communication circuit that supports the vehicle communication protocol.” Hunt, 2:66-3:3, 8:66-9:27, claim 1; Miller, ¶¶232-233.

Second, Hunt’s appliance “collects diagnostic data by querying the vehicle’s ECU [engine control unit] 55.... [which] retrieves data stored in its memory and sends it... to the wireless appliance[.]” Hunt, 7:20-26; Miller, ¶234. POSAs understood that Hunt’s reference to the “appliance” collecting data meant Hunt’s controller because through the vehicle-communication circuit Hunt’s

microprocessor 27 receives and processes vehicle diagnostic data like speed, mass air flow that POSAs would have understood are vehicle device responses to data queries using standard protocols such as those in Hunt Table 1. Hunt, 8:14-9:35; Miller, ¶235. Omega agrees these are “control functions.” Ex. 1033, 73:10-11, 75:1-5 (sending a query over a bus is a control function); Miller, ¶236.

Third, the protocol determination **process** by Hunt’s controller is a “control function” that queries vehicle devices on the bus. Miller, ¶237. Hunt uses standard communication protocols. Hunt, 1:21-46, 1:51-55, 2:28-30, 2:42-57, 4:28-32, 5:8-18, 7:20-26, 8:14-44; *e.g.*, Ex. 1071 (SAE J1850); Ex. 1072 (ISO 15675-4 (CAN)); Ex. 1074 (ISO 14230-4 Keyword Protocol 2000 (“KWP2000”)); Ex. 1070, 68 Fed. Reg. 35792 at 35799-35800; Ex. 1046, 374 (40 C.F.R. §86.1806-05(h) (July 1, 2007)); Miller, ¶238. “[T]he microprocessor determines the communication protocol of the host vehicle **by testing each protocol** in an effort to establish communication. The microprocessor **then selects the protocol that successfully communicated with the vehicle.**” Hunt, 9:3-8. Omega’s expert testified that this “bus discovery” process is done by an MVCC. Ex. 1033, 68:1-25; Miller, ¶239. Hunt’s controller “send[s] out information, expecting responses,” which Omega agrees is a control function. Ex. 1033, 75:1-5; Miller, ¶240.

b. “multi-vehicle compatible”

Hunt’s appliance is “multi-vehicle compatible” because it can communicate with devices on vehicles having different manufacturer, make, model, or type. Miller, ¶242. The vehicle-communication circuit manages communication with “different vehicle-communication protocols” for different manufacturers (*e.g.*, Ford, Toyota, Hyundai, Kenworth, CAT, and Hino). Hunt, 5:9-13; *id.*, 2:42-57, 5:61-65, Figs. 1B, 5; Miller, ¶243. Hunt’s appliance works with “automobiles and trucks, as well as commercial equipment, heavy trucks, power sport vehicles (*e.g.*, motorboats, motorcycles, all-terrain vehicles, snowmobiles, jet skis, and other powered sport vehicles), collision repair vehicles, marine vehicles, and recreational vehicles.” Hunt, 4:56-62; Miller, ¶244. Hunt’s appliance “may collect data from any vehicle that utilizes a protocol among those supported” by the vehicle-communication circuit. Hunt, 5:8-18; Miller, ¶¶245-246.

c. “for cooperating... to send vehicle position information”

Hunt’s microprocessor “receives and processes diagnostic data... and location-based data from the GPS module 20.... [T]he microprocessor 27 formats the diagnostic **and location-based data** into separate packets and serially transfers these packets through a universal modem adaptor 35 to a wireless modem 31.... The wireless modem 31 operates on a wireless network... and transmits the

packets through an antenna 33 to the network.” Hunt, 6:18-44, Figs. 1A, 1B; Miller, ¶¶247-249.

5. Element [1.d]

1.d	said [MVCC] to be coupled to the vehicle data bus for communication thereover with at least one vehicle device using at least one corresponding vehicle device code from among a plurality thereof for different vehicles; and
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Hunt meets [1.d] at least two ways. Miller, ¶250.

a. Hunt’s MVCC Is Coupled to a Vehicle Bus For Communication Thereover and [1.d] Requires Nothing More Because “Using... [a] Vehicle Device Code” Is Non-Limiting

In prosecution, Omega argued that a “prior art combination fails to disclose the [MVCC] ***coupled to the vehicle data bus***....” Ex. 1002, 216 (bold italics added). The examiner allowed the claims. *Id.*, 197-198. In the Litigation, Geotab argued that [1.d] necessitated a divided infringement analysis. Ex. 1077, 7-9. Abandoning its prosecution argument, Omega argued that [1.d] required only that the MVCC “be ***capable of*** being ‘coupled to the vehicle data bus,’” and ***additionally*** that it be “***capable of*** ‘communication thereover’” using a device code. Ex. 1022, 7. Claims must mean the same thing for patentability and infringement. *Data Engine Technologies v. Google*, 10 F.4th 1375, 1381 (Fed. Cir. 2021). The Court has not yet addressed Omega’s shapeshifting arguments—telling

the Court the claims do **not** require a combination of the MVCC coupled to the bus despite telling the Examiner the opposite.

Omega’s argument that [1.d] limits the MVCC to being “capable of ‘communication... **using at least one corresponding vehicle device code**’” (Ex. 1022, 7) finds no support in the claim language. The **prior** clause ([1.c])—not [1.d]—purports to describe the MVCC’s capabilities. Miller, ¶251. Element [1.d] and its “for communication thereover...” describe **how** the MVCC is **to be coupled to** the bus: it requires coupling in a manner allowing communication over the bus with at least one vehicle device, and excludes other types of coupling. Ex. 1071, 8, Fig. 1; Miller, ¶252.

A “vehicle device code” is specific data content that may (or may not) be communicated over the bus. The particular data content does not limit **how** the MVCC is coupled to the bus. Under the printed matter doctrine (*infra* §VI.B.6.b.i), Element [1.d]’s reference to “using” a device code does not limit [1.d] or apparatus claim 1.

Thus, Hunt meets [1.d] because Hunt describes an MVCC coupled to a bus for communication thereover with a vehicle device (*infra* §VI.B.5.b.ii) and [1.d]’s remaining language is not limiting. Miller, ¶¶253-254.

b. Hunt Meets Element [1.d] Even If Every Term is Limiting

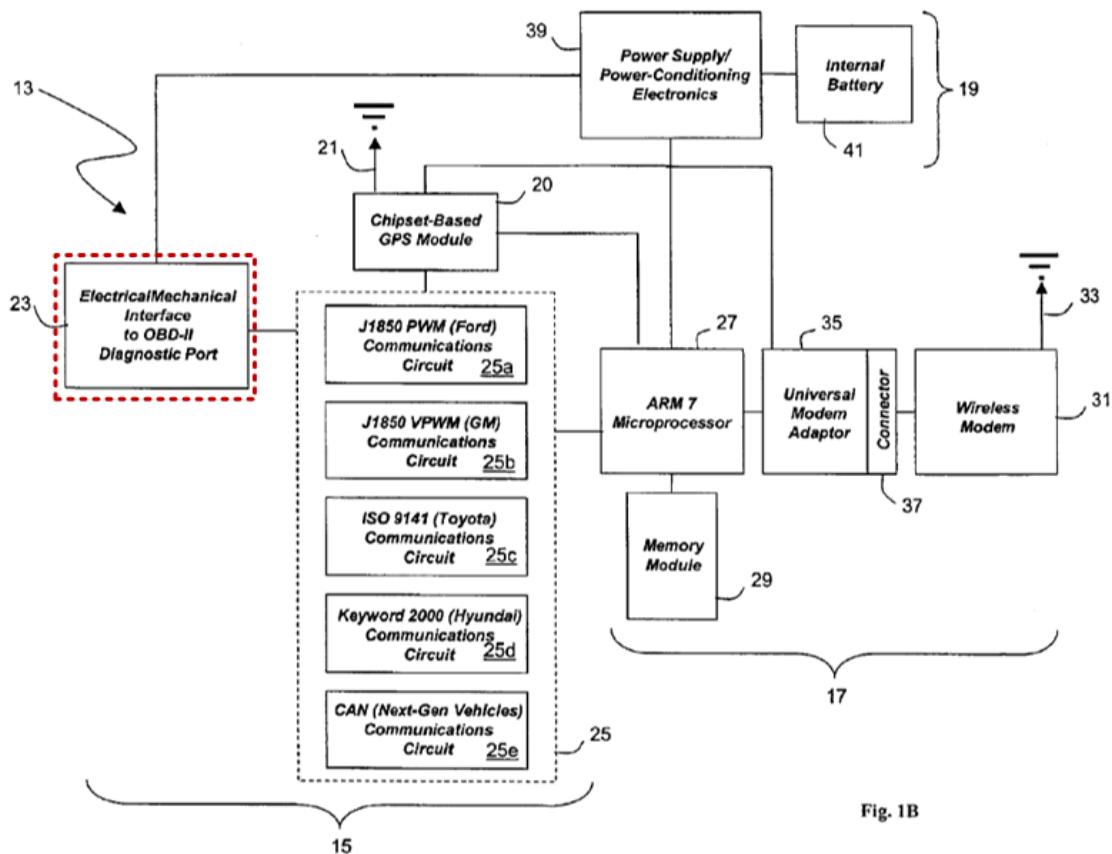
i. Hunt's MVCC is Coupled to a Vehicle Data Bus For Communication Thereover With At Least One Vehicle Device

Hunt's controller (MVCC) "manages communication through the electrical/mechanical interface 23 with separate modules 25a-25e for different *vehicle buses* (e.g., those featured in Ford, GM, Toyota)," which POSAs understood are vehicle data buses. Hunt, 5:55-65, Fig. 5; Miller, ¶255.

Hunt's MVCC is capable of communicating with vehicle devices on different vehicles using those vehicles' data buses. Hunt, 2:42-57, 5:14-17, 5:55-6:34, 8:14-65, Figs. 1B, 5, claim 13, claim 30; *supra* §VI.B.4 ([1.c]); Miller, ¶256. Hunt describes three ways of coupling the MVCC to a "vehicle data bus": (1) "electro/mechanical interface" to an OBD-II diagnostic port (Hunt, 5:55-61, Fig. 1B, claims 28, 30); (2) a "wiring harness" (Hunt, 9:58-62); or (3) "directly to a vehicle's electrical system" without using "an OBD-II connector" (Hunt, 4:47-55). Miller, ¶257.

The OBD-II system provides a vehicle data bus. Hunt, 1:21-39, 3:62-65; *e.g.*, Ex. 1052, 13 (diagnostic communication on SAE J1850 bus); Ex. 1071, 7 (J1850 data bus topology); 1072, 4-5, 7, 19 (CAN bus); Miller, ¶258. Hunt's ECU is an exemplary vehicle device, and Hunt's MVCC communicates with the ECU

through the OBD-II system to retrieve diagnostic status data. *Supra* §VI.B.4; Hunt, 1:21-33, 5:55-61, 7:20-26, 7:50-53, claim 19; Miller, ¶1259.



The '278 patent incorporates Exhibit 1025 ("Flick-460") and makes clear that electronic components in the vehicle, including an engine controller, are "vehicle devices" as claimed. Ex. 1001, 22:3-7, 24:60-67, Fig. 10; Flick-460, 2:9-30, 4:66-5:4, 5:11-30, 6:53-58, claims 9, 19, 21; Miller, ¶1260. The Federal Circuit construed "vehicle device" as "electrical or electronic component in a vehicle that can be controlled and/or the status thereof read" (*CalAmp-I*, 920 F.3d at 1346-

1347, 1349), and confirmed an ECU is a “vehicle device” (*Id.*, at 1342, 1346 n.5, 1347).

**ii. Hunt’s MVCC Uses a Vehicle Device Code From
Among a Plurality for Different Vehicles**

**(1) Hunt communicates with the ECU and
other devices on different vehicles**

“Different vehicles” includes “vehicles from different manufacturers” or “different models.” Flick-460, 6:14-18; Ex. 1006, 1479-1480. Hunt’s MVCC can communicate with devices in different vehicles, from different manufacturers, and its microprocessor 27 determines the communication circuit 25a-e (Fig. 1B) compatible with the protocol used by a particular host vehicle by “testing *each* protocol [e.g., 25a: ***J1850 PWM*** (Ford); 25b: ***J1850 VPWM*** (GM); 25c: ***ISO 9141*** (Toyota); 25d: ***Keyword 2000*** (Hyundai); 25e: ***CAN***] in an effort to establish communication.” Hunt, 9:3-8; *id.*, 1:39-46, 2:42-57, 5:8-19, Figs. 1B, 5; Miller, ¶¶262-263.

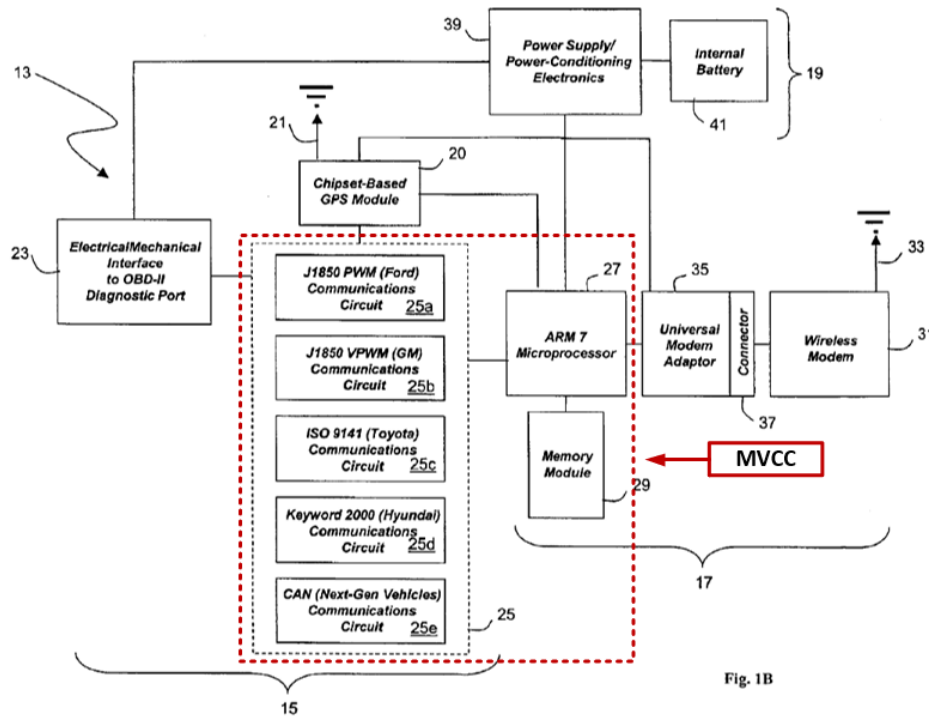


Fig. 1B

(2) Vehicle device code meaning

The '278 patent does not define vehicle device codes, but refers to Flick-885 as using vehicle device codes. Ex. 1001, 2:29-37. Flick-885 explains vehicle device codes can be “binary codes” (represented as hexadecimal codes) used to communicate with vehicle devices. Flick-885, 7:23-42, 8:12-25, 8:42-9:10; Ex. 1080, 311; Miller, ¶264. The patent recognized networking standards like SAE J1850 governed such coded communication between controllers and vehicle devices. Flick-460, 2:44-53. The courts construed a “device code” as a “signal from a vehicle device.” *CalAmp-I*, 920 F.3d at 1346, 1349; *CalAmp-CC*, 15-17; Ex. 1029, 11; Ex. 1030, 11. Because the code may be “**for writing to** the... vehicle device” (Ex. 1001, 23:67-24:3, claim 7), the “vehicle device code” should be

construed as a “signal **to or** from a vehicle device.” Ex. 1013, 4-5 (CRU agreeing); Miller, ¶265.

(3) Hunt’s ECU query uses one from a plurality of vehicle device codes

Hunt’s MVCC can query data from the ECU in different vehicles, from different manufacturers, through the OBD-II system. That data may include multiple “parameters” encoded according to a particular protocol, and 5-digit “diagnostic trouble codes (DTCs) (e.g., ‘P0001’) indicating electrical/mechanical problems with the vehicle. *Supra* §VI.B.4.a; Hunt, 1:28-33 (“parameters” include “vehicle speed (VSS), engine speed (RPM), engine load (LOAD), and mass air flow (MAF)”), 5:14-17, 5:55-61, 7:20-26, 7:50-53, Fig. 3, claim 19; Miller, ¶266. Thus, the messages between the MVCC and ECU—querying and reporting ECU’s diagnostic data (including DTCs)—use a “corresponding vehicle device code” corresponding to the vehicle device (ECU). Miller, ¶267; *see also CalAmp-I*, 920 F.3d at 1347, 1349 (Omega conceded a signal from an ECU is a “device code”).

(4) Hunt’s communication with ECUs in different vehicles with different networking protocols uses codes “from among a plurality for different vehicles”

Hunt’s MVCC therefore communicates over a host “vehicle data bus” (OBD-II bus) “with at least one vehicle device” (ECU) “using at least one corresponding vehicle device code.” Miller, ¶268. The ECU “device code” is

“from among a plurality thereof for different vehicles” because any particular ECU “device code” Hunt’s MVCC uses is “from among a plurality” for the ECU, and because Hunt can query or read device codes from ECUs on different vehicles (from different manufacturers). Miller, ¶¶269-270. Element [1.d] requires nothing more.

c. Any Suggestion That [1.d] Requires Using Different Codes on Different Vehicles Fails To Avoid Hunt

During reexamination, Omega alleged that an MVCC using standard code sets with multiple vehicles could not meet the claim because [1.d] required using different codes on different vehicles. Ex. 1006, 108-109 (6:14-21, 6:26-7:4), 116 (14:11-19), 117 (15:18-25), 120 (18:6-22), 617-619, 625. This argument fails to avoid anticipation by Hunt for three independent reasons below. Miller, ¶271.

i. Omega Improperly Injects Limitations Into [1.d]

Hunt’s multiple device codes are a “plurality of [device codes] for different vehicles” because they are used for different vehicles by different manufacturers. *Supra* §VI.B.5.b. Element [1.d] requires nothing more. Miller, ¶272.

ii. Omega Is Estopped From Arguing That Using Standard Codes on Different Vehicles Cannot Meet [1.d]

In *CalAmp*, Omega argued that accused products met [1.d] because:

On initial installation, the [MVCC] generates a sequence of device codes to determine compatibility with different vehicles, including CAN 11 Bit **7DF**

message, CAN 29 Bit **18DB33F1** message, J1850 VPW **68 6A F1** message, J1850 PWM message, K-Line messages and J1850 VPW **6C 10 F1** message.

Ex. 1065, 100. Each “message” is a “vehicle device code.” Miller, ¶¶105, 273.

Every message Omega cited is a standards-compliant query. Miller, ¶¶105-110

(discussing standards), ¶¶112-128 (CAN 11 Bit 7DF), ¶¶129-135 (CAN 28 Bit 18DB33F1), ¶¶136-144 (J1850 VPW 68 6A F1), ¶¶145-151 (J1850 PWM), ¶¶152-158 (K-Line); ¶¶159-179 (J1850 VPW 6C 10 F1), ¶¶273-274; Ex. 1052, 5-6; Ex. 1071, 8-10, Ex. 1072, 1-9, 12-13; Ex. 1073, 1, 7, 31, 123; Ex. 1074, 1; Ex. 1075, 22; Ex. 1076, 10-11, 17. Hunt’s MVCC sends the same messages that Omega calls vehicle device codes when it tests each protocol to establish communication, (Hunt, 9:3-6), or sends standards-compliant diagnostic queries using J1850 PWM, J1850 VPW, CAN, or Keyword Protocol 2000 (Hunt, 5:8-19, 6:9-25, 7:20-26, 8:46-9:17); *supra* §VI.B.5.b.ii (preceding discussion). Miller, ¶275.

Omega is estopped from arguing that Hunt’s use of the same standard codes on different vehicles does not meet [1.d], because Omega’s *CalAmp* infringement argument prevailed at trial. *Trustees in Bankruptcy of North American Rubber Thread v. United States*, 593 F.3d 1346, 1353–1354 (Fed. Cir. 2010); *CalAmp-II*, 13 F.4th at 1382 (affirming infringement).

iii. Hunt's MVCC Uses Different Device Codes on Different Vehicles

Even if the Board construed [1.d] as requiring that the MVCC be capable of using different device codes on different vehicles, Hunt still meets [1.d]. Miller, ¶276.

The different communication protocols with Hunt's circuits 25a-e (Fig. 1B) encode messages differently. Miller, ¶277. Hunt's MVCC queries on different vehicles from different manufacturers (using different networking protocols) use *different* coded messages—device codes—even when requesting the same ECU data. Miller, ¶278. For example, Hunt's MVCC uses different communication circuits (25a-b and 25d) supporting different protocols for Ford (J1850 PWM), GM (J1850 VPW), and Hyundai (KWP2000). Hunt, 2:42-57, 5:61-65, 8:14-65, Figs. 3, 5, claim 19; Miller, ¶279. Via the OBD-II interface Hunt's MVCC queries ECU RPM, for example³, using different vehicles codes depending on the host vehicle's communication protocol (Hunt, 1:28-33, 7:20-26, Figs. 3, 5; Miller, ¶280):

³ RPM is just one of a plurality of ECU parameters reported on OBD-II. Hunt, 1:28-33, 7:20-26, Fig. 3.

J1850 PWM (Ford)	J1850 VPW (GM)	Keyword 2000 (Hyundai)
61 6A F1 01 0C	68 6A F1 01 0C	C2 33 F1 01 0C

The bolded hexadecimals comport with the SAE J1979, Table 11 (Exhibit 1075, 22) standardized three-byte header for the standards identified in Hunt (*e.g.*, 61 6A F1 for J1850 PWM), while 01 0C is the standard OBD-II diagnostic query for engine RPM. Miller, ¶¶ 281-283, 298-300, ¶285 (J1850 PWM), ¶284 (J1850 VPW), ¶¶286-293 (KWP2000), ¶¶294-297 (RPM request); Ex. 1075, 1, 22, 31, 63, 67, 123; Ex. 1071, 8-9; Ex. 1074, 2; Ex. 1082, 1, 3; Ex. 1076, 11, 17; Ex. 1046, 374. Even ignoring checksums, Hunt sends *different* five-byte “messages” (the data frame or device codes) for the same query on different vehicles. Miller, ¶¶281 (discussing error detection byte), 299.

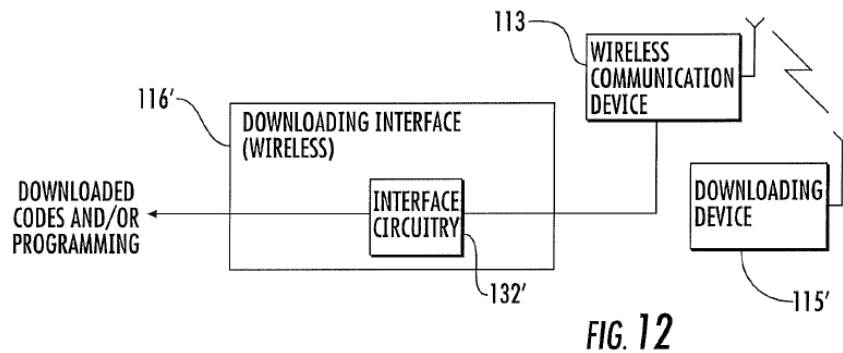
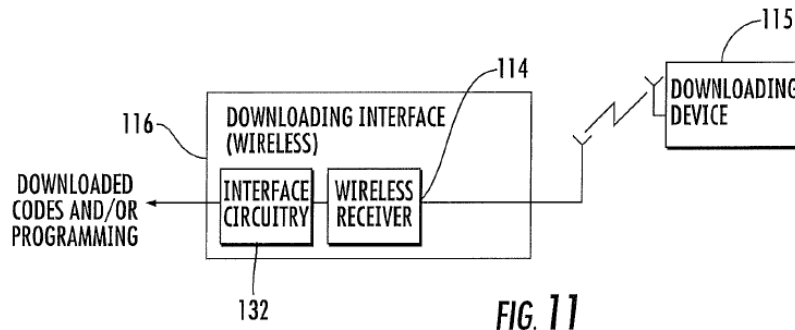
Thus, Hunt expressly discloses that its MVCC is capable of using different device codes on different vehicles from different manufacturers (Ford, GM, Hyundai) because Hunt’s messages querying the ECU for RPM use different vehicle device codes on different vehicles (with different communication protocols). Hunt, 2:42-57, 5:61-65, 8:14-65, Figs. 3, 5, claim 19; Miller, ¶300. This meets [1.d]’s “using at least one corresponding vehicle device code from among a plurality thereof for different vehicles” under any interpretation. Miller, ¶301.

Hunt’s MVCC alternatively meets [1.d] because it is compatible with automobiles, heavy trucks, motorcycles, jet skis, and marine vehicles. Hunt, 4:56-63; Miller, ¶302. POSAs understood these disparate vehicle types had different vehicle devices that communicated using different vehicle codes inapplicable in other vehicle types. Miller, ¶303 (citing Ex. 1047, 21-22, 255).

6. Element [1.e]

1.e	a downloading interface for permitting downloading of enabling data related to the at least one corresponding vehicle device code for use by said [MVCC].
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“Download” means to transfer data. Ex. 1051, 75; Miller, ¶304. The ’278 patent says the “downloading interface” is circuitry that allows downloading MVCC “programming instructions” (*e.g.*, firmware or software) “to allow remote programming[.]” Ex. 1001, 24:46-51; Miller, ¶305. The “interface circuitry” “may” comprise “logic circuitry” and “switching components” for “controlling communication” with a “downloading device” such as a laptop or other computer. Ex. 1001, 24:22-26,39-41, Figs. 11-13; Miller, ¶306. A wireless downloading interface may communicate over a cellular, satellite, or Wi-Fi receiver. Ex. 1001, 4:64-66; 5:31-33, 5:44-49, 23:55-58, 24:14-22, Figs. 11-12; Miller, ¶307.



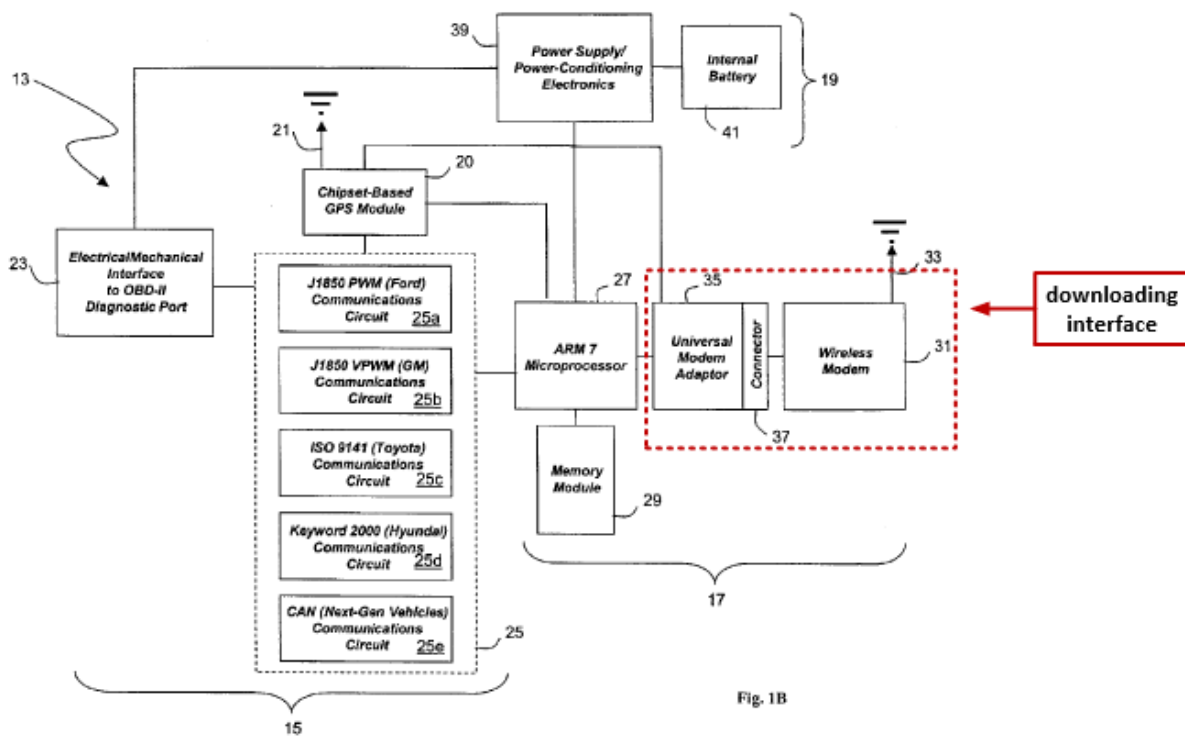
a. Hunt Has a Downloading Interface To Program its MVCC

Microprocessor 27 in Hunt’s controller runs firmware that identifies host vehicle communication protocols and controls communication with vehicle devices. Hunt, 2:66-3:3; Miller, ¶308. Hunt’s MVCC can be implemented “as a firmware program loaded into non-volatile storage, or a software program loaded from or into a data storage medium as machine-readable code.” Hunt, 10:46-54, Miller, ¶309. The computer system may be programmed when “manufactured or ***via a computer-readable medium at a later date.***” Hunt, 11:5-18; Miller, ¶310. Transferring firmware and/or software onto the MVCC “at a later date” constitutes downloading data, and POSAs understood this downloading occurs via a

downloading interface on the MVCC. Miller, ¶311. Hunt describes specific downloading interfaces examples as explained below. Miller, ¶312.

Hunt can download programming data wirelessly, and explains that “computer-readable medium” for conveying the “machine-readable code” may include “a carrier wave modulated, or otherwise manipulated, to convey instructions that can be read, demodulated/decoded and executed by a computer,” Hunt, 11:14-32; Miller, ¶313.

Hunt describes wireless communication using bidirectional cellular or satellite technologies. Hunt, 6:41-46 (CDMA, GSM, GPRS, Mobitex, ORBCOMM wireless networks); 6:50-65 (satellite modem), Fig. 1B (universal modem adapter 35 and wireless modem 31), Fig. 2 (showing bidirectional airlink 59 and cell tower or base station 61); Miller, ¶314. CDMA and GSM are communication protocols for cellular communication, while GPRS allows transmitting data packets to the Internet with cellular networks. Miller, ¶¶315-317. ORBCOMM is a satellite communication network. Miller, ¶318. POSAs understood that wireless devices using CDMA, GSM, GPRS, or ORBCOMM were capable of transmitting and receiving data. Miller, ¶319.



Microprocessor 27 runs software that controls communication through the modem. Hunt, 6:26-65; Miller, ¶320. Universal modem adaptor 35 and wireless modem 31 control communication on the wireless link. Hunt, 6:50-65; Miller, ¶321. As noted above Hunt’s appliance may be implemented on any “programmable device... *capable of configuration for transmitting and receiving data over a network*,” including a cellphone. Hunt, 11:5-7, 11:34-40; *supra* §VI.B.3 ([1.b]); Miller, ¶322.

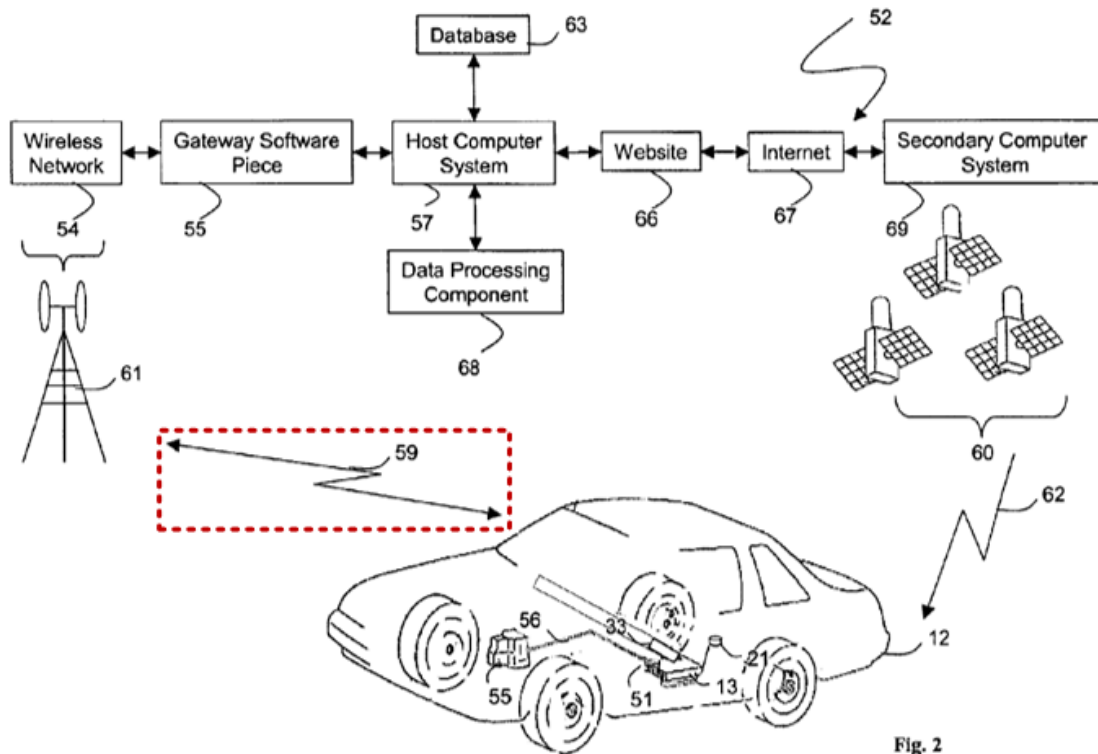


Fig. 2

b. Hunt's Interface to Download Programming Data Meets [1.e]

i. "Enabling Data" Imparts No Patentable Weight

The downloaded data *content* does not limit the "downloading interface," and the '278 patent never alleges otherwise. Miller, ¶323. Indeed, claim 8 describes the downloading interface as "also for" permitting downloading of *other* data. If Omega alleges that "enabling data relating to at least one corresponding vehicle device code" distinguishes over Hunt, the claims would be claiming "the content of information" in the enabling data. Under the printed matter doctrine this has no patentable weight. *In re DiStefano*, 808 F.3d 845, 848-851 (Fed. Cir. 2015);

Praxair Distribution v. Mallinckrodt Hospital Products IP, 890 F.3d 1024, 1032 (Fed. Cir. 2018).

In two related cases, the Board determined that “program code,” in claims requiring a “communication” that “facilitates the download of program code,” claimed “the content of information that is downloaded.” *Ingenico v. IOENGINE*, IPR2019-00929, Paper 53, 60-63 (Sep. 21, 2020) (“*Ingenico-929*”); *Ingenico v. IOENGINE*, IPR2019-00879, Paper 69, 52-53 (Sep. 21, 2020) (“*Ingenico-879*”). The conclusion is even stronger for **apparatus** claim 1—compared to the **method** claims in *Ingenico*—because [1.e] at most requires a downloading interface **capable** of downloading data. *Hewlett-Packard v. Bausch & Lomb*, 909 F.2d 1464, 1468 (Fed. Cir. 1990) (“Apparatus claims cover what a device is, not what a device does.”).

“Enabling data” has no functional relation to a “substrate” because **apparatus** claim 1 never requires **downloading** enabling data, let alone **using** it. At most claim 1 requires the device be **capable** of downloading enabling data, without requiring it ever do so. *DiStefano*, 808 F.3d at 848. Like *Iogenico*’s “program code,” the “enabling data” “serves no function” in claim 1. *Ingenico-929*, 60-62 (rejecting argument that “downloaded code is intended to be executed” by the device “referenced” in the claims); *Ingenico-879*, 52 (similar).

The capability to download “enabling data” is “no different” than a capability to download “any **other** kind of data[.]” *Ingenico-879*, 52. Nothing in “the nature of the downloaded data functionally affects the downloading process” or anything in device claim 1. *Ingenico-929*, 63; Miller, ¶324. Nothing in the ’278 patent suggests the “downloading interface” would have a structural difference, or its downloading capability “would need to be performed any differently” if non-enabling data were downloaded instead of “enabling data.” *Ingenico-929*, 63; Miller, ¶325.

Hunt meets [1.e] because it discloses a downloading interface capable of downloading data and [1.e] requires nothing more. Miller, ¶326.

ii. Hunt Meets [1.e] Even If Enabling Data is Limiting

If the Board finds that [1.e] requires downloading a particular **type** of data, Hunt still meets it because Hunt describes updating the firmware on the MVCC’s microprocessor 27, and that firmware identifies the host vehicle communication protocol and processes device codes (*supra* §VI.B.5.b.ii) read from a vehicle device. Hunt, 2:66-3:3, 6:9-12, 6:18-25; Miller, ¶¶211, 308-309, 327. Firmware that identifies the host vehicle communication protocol “by testing each protocol in an effort to establish communications,” (Hunt 9:3-6), and processes device codes, is enabling data (Ex. 1001, 24:9-12), and the MVCC’s firmware instructions that select and read vehicle device codes are “related to the at least one corresponding

vehicle device code for use by said [MVCC].” Miller, ¶328. Thus, Hunt meets [1.e]. Miller, ¶329.

Furthermore, Hunt’s disclosure that its wireless appliance can be implemented on a cell phone (Hunt, 11:5-7, 11:34-40; *supra* §VI.B.3 ([1.b])) discloses that software (e.g., an application) is downloaded (e.g., wirelessly) onto the phone to implement Hunt’s above-discussed appliance functionality. *E.g.*, Ex. 1056, Abstract; *accord* Ex. 1057, Abstract; Ex. 1058, [0026], [0092]; Ex. 1060, Abstract; Miller, ¶330. The downloaded software implementing the appliance functionality includes instructions to retrieve and process device codes and is thus also “enabling data related to at least one corresponding vehicle device code for use by said [MVCC]” in [1.e]. Miller, ¶¶331-332.

C. Claim 4

4	The... claim 1 [unit] wherein said downloading interface comprises a wireless signal downloading interface.
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Hunt anticipates claim 4 because it discloses embodiments where the downloading interface is a wireless signal downloading interface. *Supra* §VI.B.6 ([1.e]); Miller, ¶333.

D. Claim 5

5	The... claim 4 [unit] wherein said wireless signal downloading interface comprises a wireless receiver for temporary connection to a downloading device.
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Hunt anticipates claim 5 because it describes wirelessly programming Hunt's MVCC after manufacturing. Hunt, 11:11-18; *supra* §VI.B.6 ([1.e]); Miller, ¶334. POSAs would have known that remote programming or firmware downloads would conventionally have been done using a computer like Hunt host computer system 57 as a "downloading device." Ex. 1001, 24:39-41; Hunt, 7:40-49, Fig. 2; Miller, ¶334.

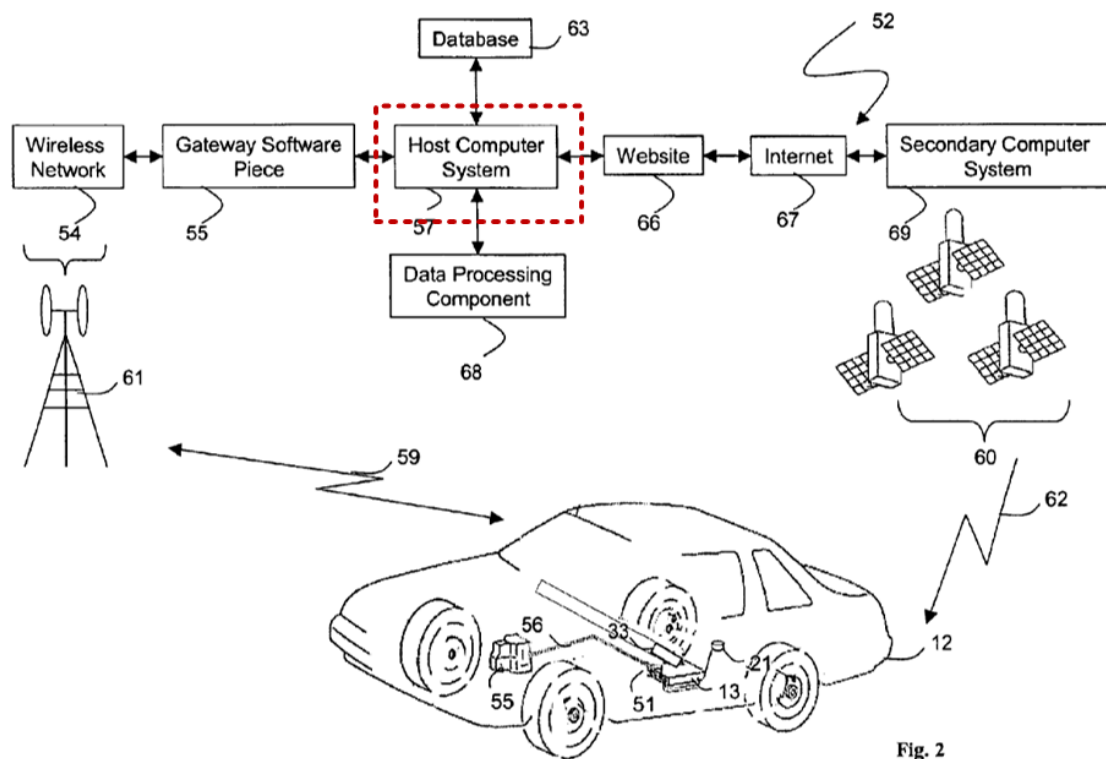


Fig. 2

Omega’s expert agrees that connections using “standard wireless communication protocols” of the type Hunt uses are “temporary.” Ex. 1033, 99:19-24, 103:13-19; Miller, ¶335.

E. Claim 6

6	The... claim 1 [unit] wherein the corresponding at least one vehicle code is for reading from the at least one vehicle device.
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As explained with [1.d], Hunt’s MVCC reads at least one vehicle device code (*e.g.*, response to a particular query) from at least one vehicle device (*e.g.*, the ECU). *Supra* §VI.B.5.b.i; Miller, ¶336.

F. Claim 8

8	The... claim 1 [unit] wherein said downloading interface is also for permitting downloading of at least one programming instruction for said multi-vehicle compatible controller.
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Claim 1 recites permitting downloading of “enabling data” which can be other things in addition to an “instruction” (Ex. 1001, 24:9-12), and claim 8 purports to narrow claim 1 by more specifically “permitting” downloading of a programming instruction. The content of the downloaded data is not limiting. *Supra* §VI.B.6 ([1.e]). Regardless, Hunt’s downloading interface downloads MVCC “programming instructions.” *Id.*; Miller, ¶337.

G. Claim 11

11	The... claim 1 [unit] wherein said wireless position determining device comprises a... (GPS) receiver.
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Hunt's wireless positioning device comprises a GPS module that POSAs understood comprised a GPS "receiver." *Supra* §VI.B.2 (discussing GPS and [1.a]); Hunt, Abstract, 1:39-47, 2:31, 3:26-27, 5:7, 5:43-54, 7:30-33, Figs. 1A-1B, 2, claim 1; Miller, ¶338; Ex. 1065, 105.

H. Claim 12

12	The... claim 1 [unit] further comprising a housing containing said vehicle position determining device, said wireless communications device, said multi-vehicle compatible controller, and said downloading interface.
----	--

Hunt discloses "***a single housing that houses*** the GPS antenna, the radio antenna, and ***all the other components*** in the wireless appliance." Hunt, 3:4-9; *id.*, claim 1 ("a single housing... houses the GPS antenna, the radio antenna, the microprocessor, the vehicle-communication circuit, the GPS module, and the wireless transmitter"), 4:34-36, 5:43-45, 6:41-46. All components can be implemented on a single circuit board (*id.*, 3:17-33), chip set (*id.*, 5:39-42), or ASIC (*id.*, 3:50-57) in a single housing. Miller, ¶339.

Thus, Hunt's housing contains said vehicle position determining device [GPS, *supra* §VI.B.2], said wireless communications device [transmitter or modem with embedded antenna, *supra* §VI.B.3], said multi-vehicle compatible controller

[appliance, *supra* §VI.B.4], and said downloading interface [appliance, *id.*].

Miller, ¶340.

I. Claims 18-19, 21

Elements [18.pre]-[18.f] are identical to elements [1.pre]-[1.e] and limitations in claim 5. Ex. 1044; Miller, ¶341. Hunt meets elements [18.pre]-[18.f] for the same reasons it meets elements [1.pre]-[1.e] and claim 5, as follows. Miller, ¶342.

Element	Corresponding	Analysis
[18.pre]	[1.p]	§VI.B.1
[18.a]	[1.a]	§VI.B.2
[18.b]	[1.b]	§VI.B.3
[18.c]	[1.c]	§VI.B.4
[18.d]	[1.d]	§VI.B.5
[18.e]	[1.e]	§VI.B.6
[18.f]	Claim 5	§VII.D

Claims 19 and 21 depend from claim 18 and repeat the limitations from claims 6 and 8, respectively. Hunt meets claims 19 and 21 for the same reasons Hunt meets claim 6 (*supra* §VI.E) and claim 8 (*supra* §VI.F), respectively. Miller, ¶343.

VII. GROUND 2: HUNT RENDERS OBVIOUS CLAIMS 1, 4-6, 8, 11-12, 18-19, 21.

Ground 2 relies on three obvious implementations of Hunt that provide alternative bases for meeting Elements [1.d] and/or [1.e]. It would have been obvious to use any of these three implementations individually or together in any

combination. Hunt implemented each way discussed in Ground 2 meets the remainder of claim 1, and the other claims challenged in Ground 2, for the same reasons explained in Ground 1. Miller, ¶344.

A. Element [1.d]

Hunt's MVCC determines which communication circuit (25a-e, Fig. 1B) to use by determining which protocol the host vehicle supports. Hunt, 2:66-3:3, 9:3-8; Miller, ¶345. SAE J1978 standardized this process as a "basic function...[required of] external test equipment" as part of OBD-II's "Automatic Determination of Communication Interface," (Ex. 1052, 1, 4-6), and federal regulations **required** compliance with J1978 for "[a]ll equipment used to interface, extract and display OBD-related information[.]" Ex. 1046, 374 (40 C.F.R. §86.1806-05 (h)(1)(vi)); Ex. 1079, 630 (§86.1806-05(h)(2)(v)); Ex. 1052, 5-6; Miller, ¶346. Hunt's MVCC is used to interface and extracts OBD-II related information, and by 2007 federal regulation thus required it to provide the J1978 automatic determination functionality. Hunt, 5:55-6:12, 7:16-26; Miller, ¶347. POSAs would have found it obvious to implement Hunt's protocol determination in a manner compliant with OBD-II regulations and standards. Miller, ¶348.

Omega's *CalAmp* allegation that [1.d] is met by "determin[ing] compatibility" on "initial installation" (*supra* §VI.B.5.c.ii) comports with OBD-II's automatic determination, and the communication protocols Omega identified

were incorporated into OBD-II (Ex. 1079, 630 (40 C.F.R. §§86.1806-05(h) (1)(i) (CAN), 86.1806-05(h) (1)(iii) (J1850, ISO 14230-4 (KWP2000)); cf. Ex. 1046, 374-375; Miller, ¶349. Thus, Omega alleged any OBD-II compliant device meets [1.d]. Miller, ¶349.

The OBD-II compliant implementation of Hunt’s protocol determination would send the same “CAN 11 Bit 7DF,” “CAN 29 Bit 18DB33F1,” and “J1850 VPW 68 6A F1” messages Omega identified in *CalAmp* as meeting [1.d]. *Supra* §VI.B.5.c.ii; Miller, ¶¶105-110, ¶¶112-128 (CAN 11 Bit 7DF), ¶¶129-135 (CAN 28 Bit 18DB33F1), ¶¶136-144 (J1850 VPW 68 6A F1), ¶¶273-274, 350-351. Omega is estopped from arguing that this obvious implementation of Hunt does not meet [1.d]. *Supra* §VI.B.5.c.ii (citing authority).

Furthermore, a conventional and obvious way to implement Hunt’s multi-vehicle compatibility (Hunt, 5:8-18, 6:9-25, 7:20-26), with a reasonable expectation of success, would have been to pre-install manufacturer-specific codes for **all** supported vehicles as taught by Flick-885. *Infra* §VIII.C.5; Miller, ¶352. That would have been a desirable design choice because it would have allowed the unit’s manufacturer to produce, stock and sell a single unit model capable of use in all vehicles, rather than many vehicle-specific unit models each loaded with manufacturer-specific codes for a single vehicle. Miller, ¶353. While nothing in [1.d] requires the MVCC be capable of communicating using manufacturer-

specific device codes for one vehicle, selected from a plurality of codes including manufacture-specific codes for different vehicles (*supra* §VI.B.5.c.i; Miller, ¶354), an obvious implementation of Hunt would meet that overly-narrow interpretation. Miller, ¶354.

B. Element [1.e]

To the extent Hunt’s disclosure of programming the system “later” than manufacture (Hunt, 11:5-18) is treated as not expressly disclosing programming the firmware, updating Hunt’s *firmware* through its wireless modem and/or wired connection would have been the conventional and obvious way to implement Hunt’s post-manufacture programming with a reasonable expectation of success. Miller, ¶355. Firmware updates download enabling data as discussed *supra* §VI.B.6 (Ground 1, [1.e]). Miller, ¶356.

The three Hunt implementations discussed *supra* §§VII.A-VII.B are each no more than the “predictable use of prior art elements according to their established functions.” *KSR International v. Teleflex*, 550 U.S. 398, 417 (2007); Miller, ¶357.

VIII. GROUND 3: FLICK-885+HUNT RENDERS OBVIOUS CLAIMS 1-22

A. Flick-885

U.S. Patent 6,756,885 (Ex. 1024, “Flick-885”) is pre-AIA §102(b) prior art.

Flick-885 describes a multi-vehicle control system “for reading from a data bus” with a MVCC and bidirectional wireless interface. Flick-885, Abstract. The

MVCC stores “a set of device codes for a given vehicle device for a plurality of different vehicles,” reads “a device code from a data communications bus,” and determines “a match between a read device code and the stored device codes to thereby provide compatibility with a plurality of different vehicles.” *Id.* The vehicle control system also provides remote vehicle control functionality like remote keyless entry or engine start. *Id.*

Flick-885 discloses everything in the challenged claims except GPS (vehicle position determining device) and a single housing. Miller, ¶¶359-360. The ’278 patent acknowledges GPS was known for vehicle tracking (Ex. 1001, 1:47-53) and alleges that using GPS distinguished the alleged invention from Flick-885 (*Id.*, 2:29-41). Miller, ¶361.

B. Flick-885+Hunt

POSAs would have combined Flick-885 with Hunt (“Flick-885+Hunt”) by modifying Flick-885’s vehicle control system to (1) obtain vehicle position information from a GPS and transmit it using a wireless communication system and (2) house its components and GPS in a housing, both of which are taught by Hunt. Miller, ¶362.

1. Reasons to Add Hunt’s Location Services To Flick-885

Flick-885’s system has a controller that monitors vehicle devices using device codes to access diagnostic data, and provides vehicle security services like

remote monitoring (*e.g.*, whether a door is open) and remote start. Flick-885, 3:27-35, 3:58-62, 6:62-7:3, 7:43-49, 8:50-63, 9:43-55, 10:31-36; *id.*, 1:21-39 (discussing vehicle security systems); Miller, ¶363.

Hunt discloses the same type of system with an MVCC that monitors vehicle devices using device codes (*supra* VI.B.4) and explains there are “many advantages” to adding GPS and location services to such systems. Hunt, 2:35-41 (“The wireless appliance monitors **location and diagnostic data** to provide services such as **roadside assistance** to a disabled vehicle **or recovery of a stolen vehicle**.... [T]he appliance provides a GPS-based system for **alerting a vehicle's owner that someone other than the owner has moved the vehicle (*e.g.*, the vehicle is stolen or towed)**.”), 4:18-22 (“The invention has **many advantages**. ... [W]ireless, real-time transmission and analysis of GPS and diagnostic data... makes it possible to... determine [a vehicle’s] location in real-time... [and] **improve conventional services such as roadside assistance, vehicle theft notification and recovery, and remote diagnostics**.”); Miller, ¶364.

POSAs would have added Hunt’s location services to Flick-885 for at least two reasons. Miller, ¶365.

First, Hunt would have motivated POSAs to add location services to Flick-885 to achieve any or all of the “advantages” Hunt describes to adding location services to a system like Flick-885, including “roadside assistance,” “alerting” the

owner when the vehicle is moved, vehicle “recovery” and “remote diagnostics.”

Hunt, 2:35-41, 4:18-22; Miller, ¶366.

Second, this combination is no more than the “predictable use of prior art elements according to their established functions.” *KSR*, 550 U.S. at 417; Miller, ¶367.

Flick-885+Hunt

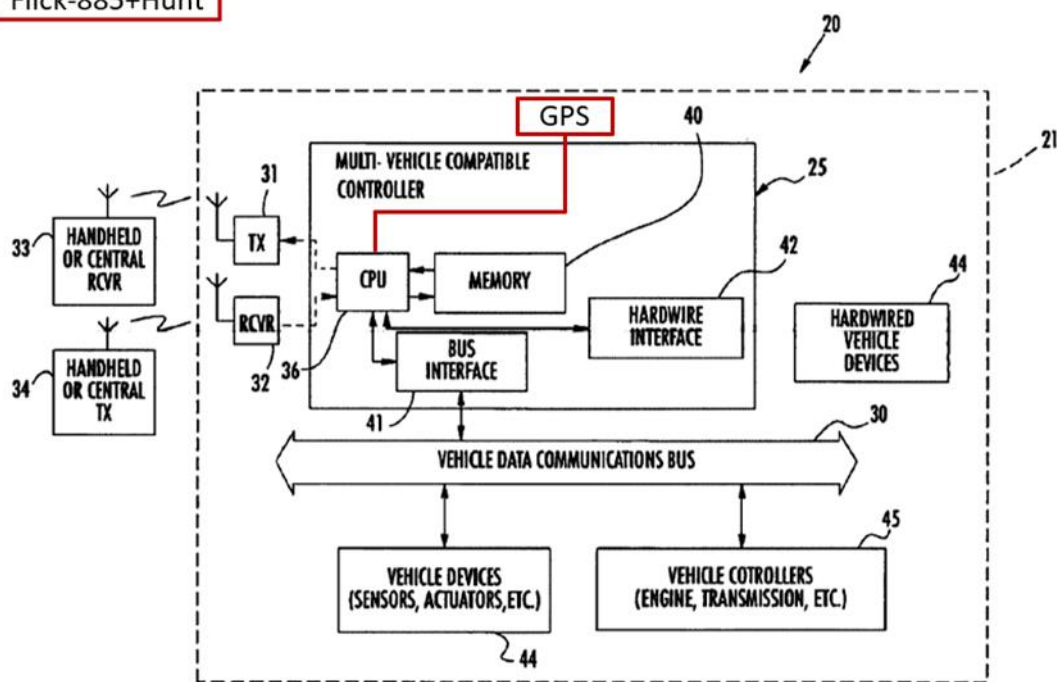


FIG. 1

2. Reasons to Add Hunt’s Housing To Flick-885

A POSA had at least two reasons to implement Flick-885’s vehicle control system – modified to use GPS location services – by, as taught by Hunt, using “**a single housing that houses** the GPS antenna, the radio antenna, the

microprocessor, the vehicle communication circuit, the GPS module, and the wireless transmitter[.]” Hunt, claim 1; *id.*, 4:28-37; *Supra* §VI.D; Miller, ¶368.

First, a POSA would have understood that housing these vehicle control system components in a single housing as a stand-alone unit “reduces installation costs,” makes the system easier to hide in the vehicle and “makes it more difficult to disable when stealing a vehicle.” Hunt, 4:34-38; Miller, ¶369.

Second, this combination is no more than the “predictable use of prior art elements according to their established functions.” *KSR*, 550 U.S. at 417; Miller, ¶370.

3. Reasonable Expectation of Success

POSAs would have had a reasonable expectation of success adding Hunt’s GPS system and position-reporting to Flick-885 because GPS systems were known and Hunt uses GPS in a vehicle control system like Flick-885’s system. Miller, ¶371; Ex. 1001, 1:52-53. By integrating Hunt’s GPS system and position-reporting in Flick-885, Flick-885+Hunt’s MVCC would determine the vehicle’s position using GPS and transmit the position using Flick-885’s wireless transmitter just like Hunt’s MVCC. Miller, ¶372.

Similarly, POSAs would have had a reasonable expectation of success in integrating the components of the Flick-885+Hunt vehicle monitor system in a

single housing because Hunt discloses that a system with all the same components can be integrated in a single housing. Miller, ¶373; *Supra* §VI.H (claim 12)).

Flick-885+Hunt uses the GPS system and housing for their normal functionality, in the same manner used in Hunt, and thus the combination is nothing more than a “predictable use of prior art elements according to their established functions.” *KSR*, 550 U.S. at 417; Miller, ¶374. Ascertaining vehicle position was a known problem for which GPS was a known solution. *KSR*, 419-420; Miller, ¶375. Adding Hunt’s GPS module and housing to Flick-885 would improve Flick-885 in the same way they improved Hunt. *KSR*, 418-419; Miller, ¶376.

C. Claim 1

1. Element [1.pre]

1.pre	A multi-vehicle compatible tracking unit for a vehicle comprising a vehicle data bus..., the... unit comprising:
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Flick-885+Hunt is a “multi-vehicle compatible tracking unit” as described in §§VIII.C.4-VIII.C.6 below. Miller, ¶377. Flick-885+Hunt’s unit is for using with Flick-885’s “vehicle data communications bus” that extends through the vehicle to

allow communication with the “engine, transmission, etc.” and other “sensors, actuators, etc.” Flick-885, Abstract, 5:5-15, Fig. 1; Miller, ¶378.

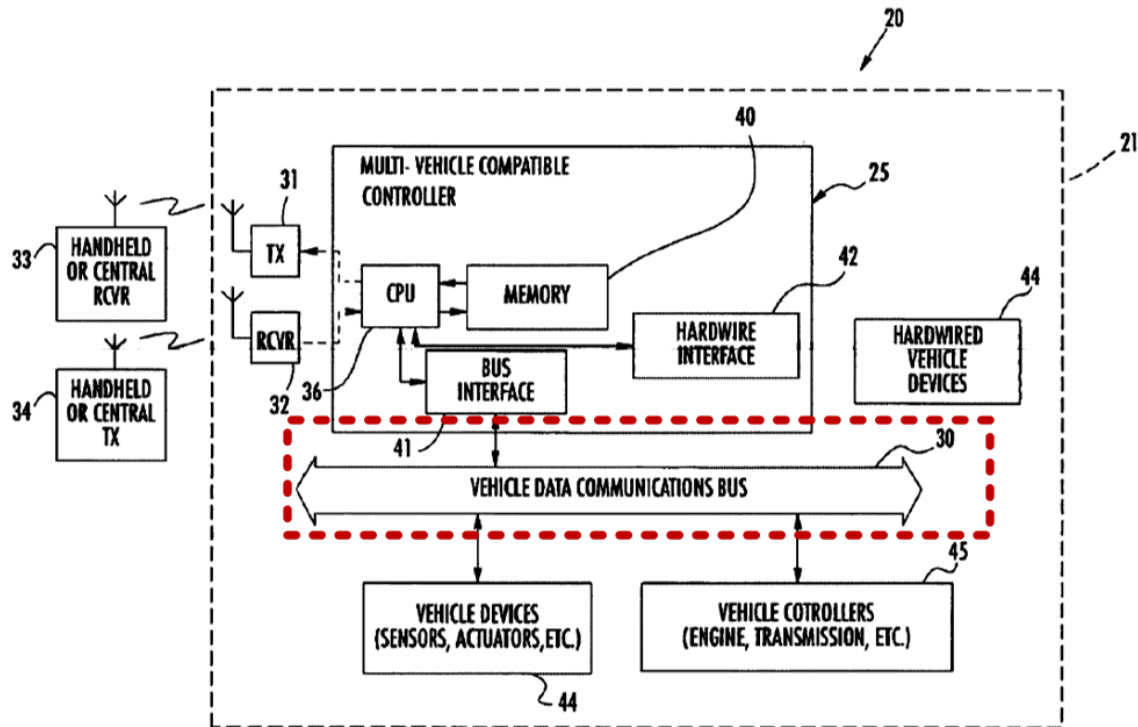


FIG. 1

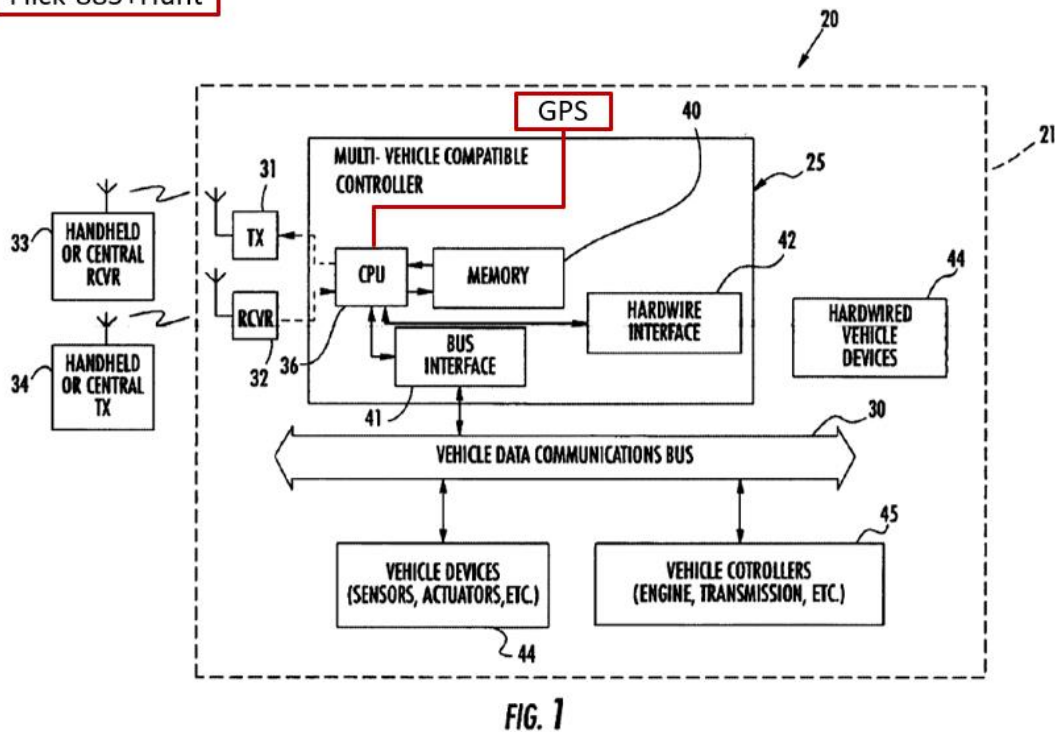
2. Element [1.a]

1.a	a vehicle position determining device;
-----	--

A GPS receiver is a “position determining device.” Ex. 1001, 3:26-28, Fig. 2; Miller, ¶379. Flick-885+Hunt includes Hunt’s GPS system and meets [1.a] for

the same reasons that Hunt meets [1.a]. *Supra* §VI.B.2; Hunt, Abstract, 1:39-47, 2:31, 3:26-27, 5:7, 5:43-45, Figs. 1A-1B, 2, claim 1; Miller, ¶380.

Flick-885+Hunt



3. Element [1.b]

1.b	a wireless communications device;
-----	-----------------------------------

Flick-885+Hunt includes Flick-885's transmitter 31 and receiver 32, which together comprise a wireless communication device. Flick-885, Abstract, 5:16-35, Figs. 1, 2, 4; Miller, ¶381. The '278 patent describes wireless communication embodiments using cellular, satellite, or "wireless internet services." Ex. 1001, 5:31-49. Flick-885 discloses the same. Flick-885, 5:45-50 (describing wireless

communication over satellite, cellular communications, PSTN, or the Internet);
Miller, ¶382.

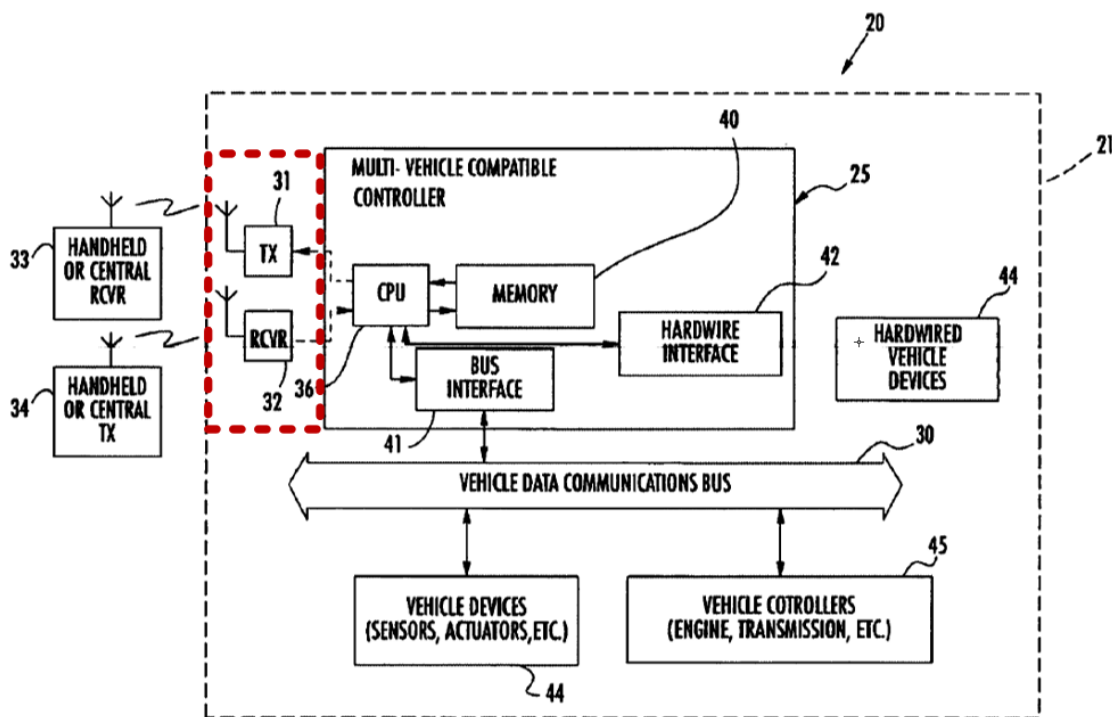


FIG. 1

4. Element [1.c]

1.c	a [MVCC] for cooperating with said vehicle position determining device and said wireless communications device to send vehicle position information;
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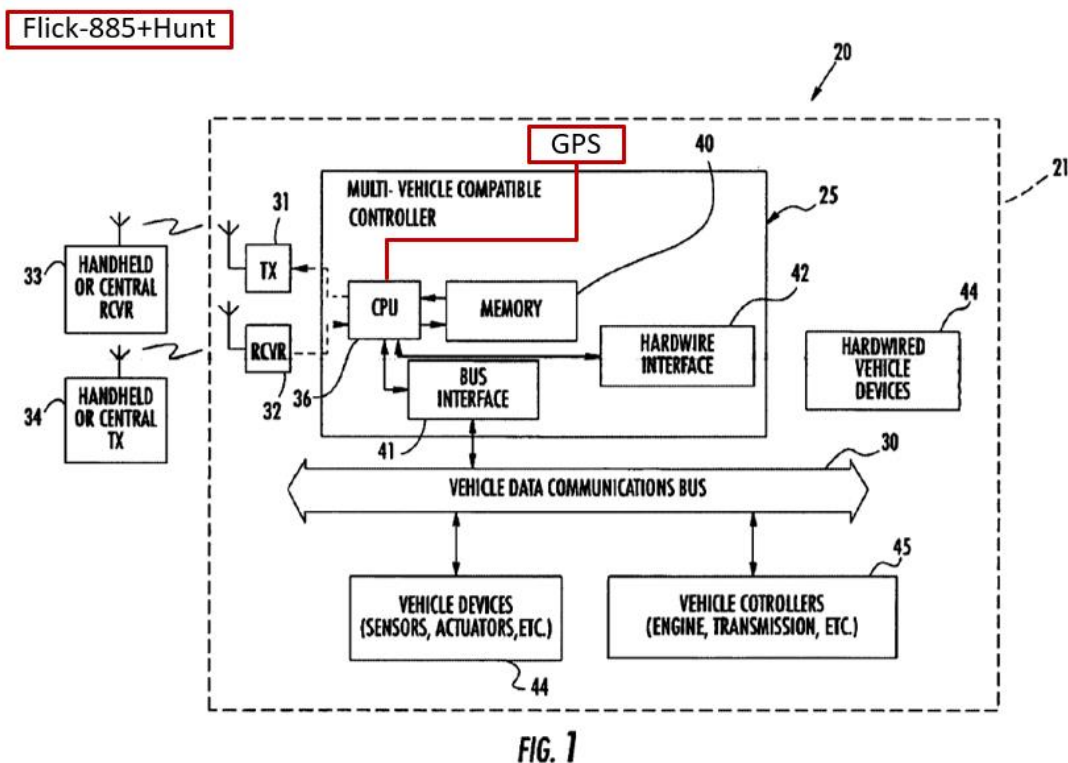
Flick-885+Hunt includes Flick-885's MVCC 25. Flick-885, 3:5-36, 5:5-15, 6:9-40, 6:53-61, 7:12-8:11, 9:1-67, Figs. 1-2, 4, claim 1; Miller, ¶383.

a. MVCC

Flick-885's MVCC "provide[s] compatibility with a plurality of different vehicles." Flick-885, 3:5-18, 8:34-40; *id.*, Abstract, claim 1; Miller, ¶384. The MVCC stores "a set of device codes for a given vehicle device for a plurality of

different vehicles,” reads a device code from the data communications bus, and determines “a match between a read device code and the stored device codes to thereby provide compatibility with a plurality of different vehicles.” Flick-885, Abstract, 8:64-9:10; Miller, ¶385.

MVCC 25 includes CPU 36, bus interface 41 and memory 40. Flick-885, Figure 1; Miller, ¶386. CPU 36 connects to the wireless communications device (transmitter 31 and receiver 32). Flick-885, Figure 1; Miller, 387. In Flick-885+Hunt, CPU 36 also connects to the GPS. *Supra*, §VI.B.2; Miller, ¶388.



Flick-885 describes sending signals *from* the MVCC *to* “vehicle devices” and/or “vehicle controllers” using Figures 2-3, adding labelling to some Figure 1

components by referring to Figure 1's MVCC 25 as 25', bus interface 41 as "bus interface (drive) 41a," and memory 40 as "command signal memory 40a." Flick-885, 6:56-61 (MVCC 25'), 7:12-8:11, 10:18-30, Fig. 2 (MVCC 25); Miller, ¶389.

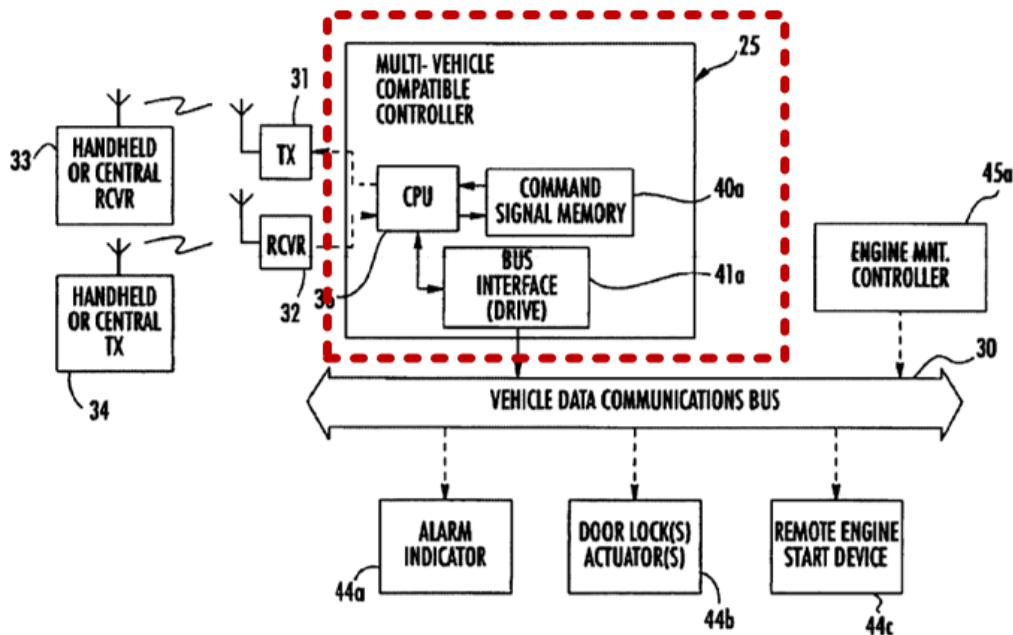


FIG. 2

Flick-885 describes communication reading signals *at* the MVCC *from* "vehicle devices" and/or "vehicle controllers" using Figures 4-5, adding labelling to some Figure 1 components, referring to Figure 1's MVCC 25 as "MVCC 25'," bus interface 41 as "bus interface (read) 41b" and memory 40 as "code look-up memory 40b." Flick-885, 8:64-9:20, Fig. 4; Miller, ¶390.

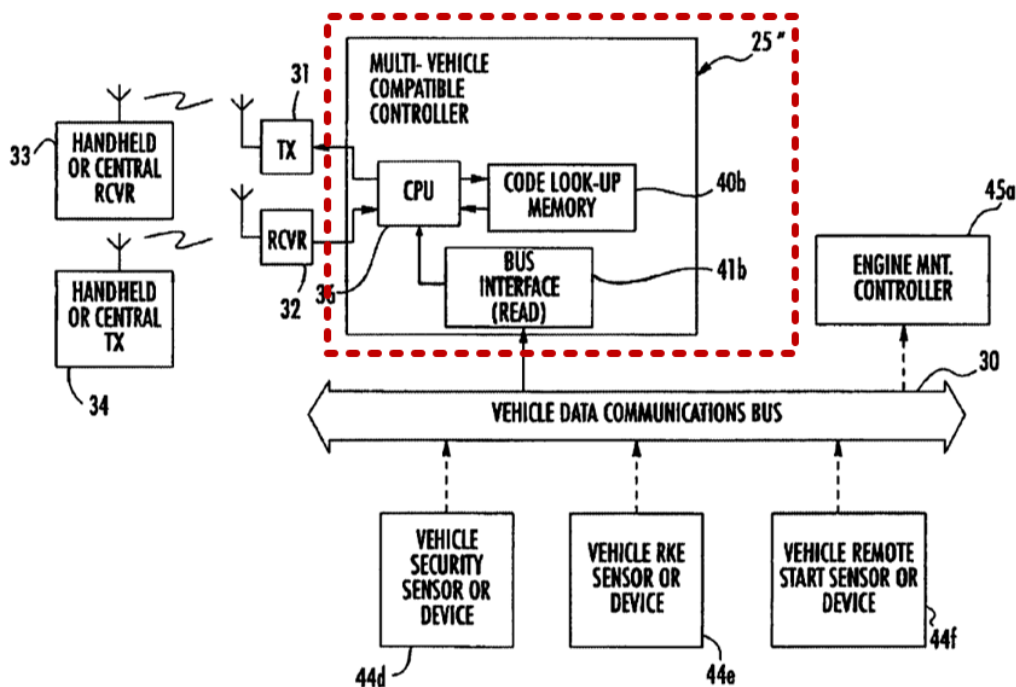


FIG. 4

Flick-885+Hunt uses Flick-885's MVCC that provides “multi-vehicle compatibility” in “**both** directions of communications via the data communications bus 30” (Flick-885, 6:53-55), which a POSA understood has all the communication functionality described in connection with Figures 2-5. Miller, ¶391.

b. position information

Flick-885's MVCC sends vehicle information via transmitter 31. Flick-885, Abstract (the MVCC “cooperat[es] with the transmitter[.]”), 5:16-24 (control system provides “a remote alert” to a user “away from the vehicle”), Figs. 1-2, 4, claim 1; Miller, ¶392. In Flick-885+Hunt, the MVCC is also coupled to the GPS and the vehicle information sent via wireless transmitter 31 includes vehicle position as taught by Hunt. *Supra* §VI.B.4 (discussing Hunt and [1.c]); Hunt,

6:18-44, Figs. 1A-1B; Miller, ¶393. Flick-885+Hunt thus meets [1.c]. Miller, ¶394.

Flick-885+Hunt

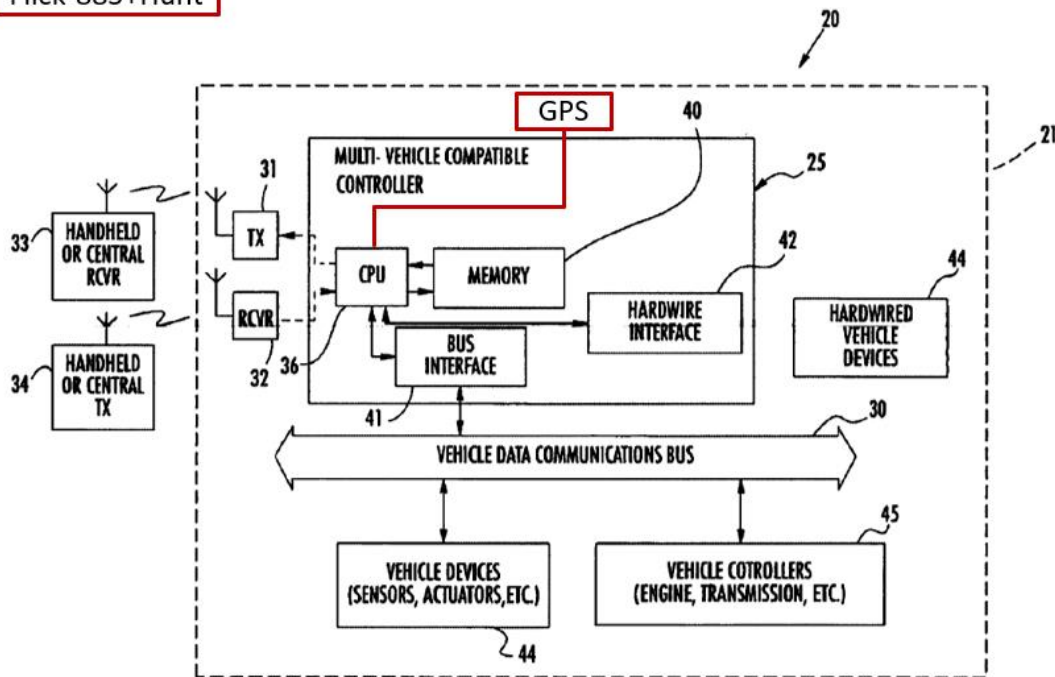


FIG. 1

5. Element [1.d]

1.d	said [MVCC] to be coupled to the vehicle data bus for communication thereover with at least one vehicle device using at least one corresponding vehicle device code from among a plurality thereof for different vehicles; and
-----	--

Flick-885+Hunt meets [1.d] at least two ways. Miller, ¶395.

a. Non-limiting Language

Flick-885+Hunt meets [1.d] if the Board agrees either that (1) “to be coupled to the vehicle data bus” is a non-limiting statement of intended use (*supra* §VI.B.5), or (2) [1.d] only requires that the MVCC be capable of being coupled to

the bus for communication thereover—*i.e.*, the device code language is non-limiting in [1.d] under the printed matter doctrine (*supra* §VI.B.6.b.i)—because Flick-885+Hunt MVCC has that capability. Miller, ¶396.

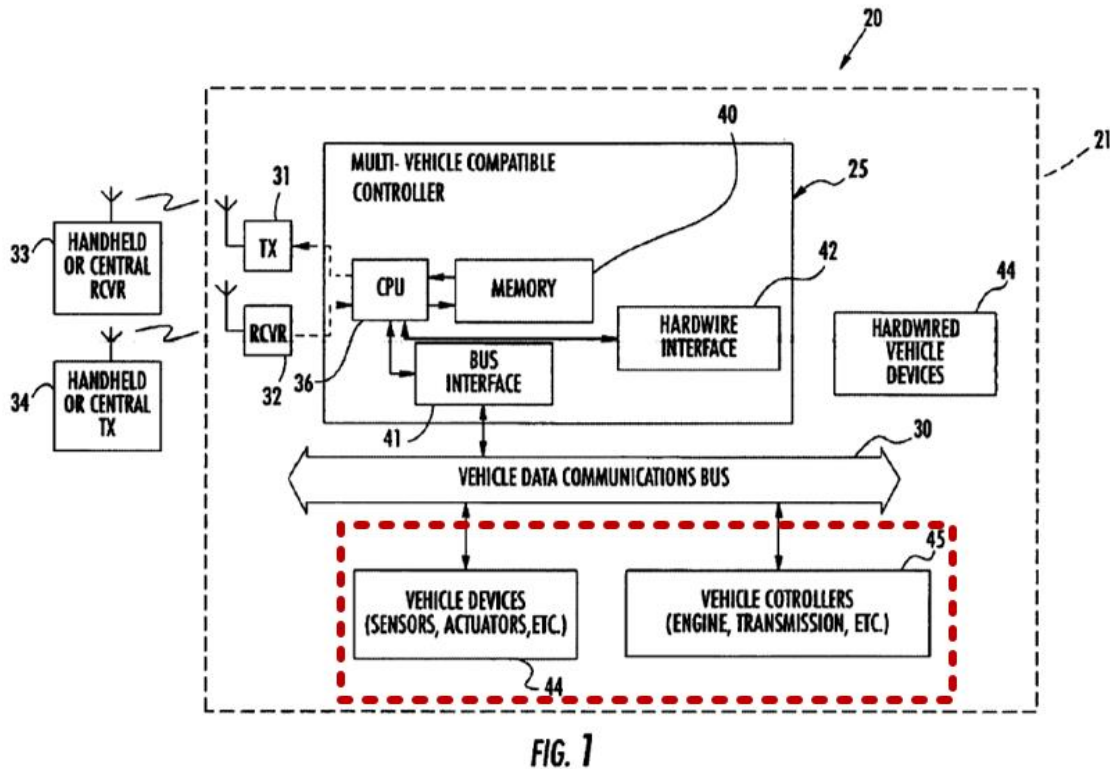
b. Element [1.d] Is Met Even If Every Term is Limiting

The Flick-885+Hunt MVCC connects to the vehicle data bus through the bus interface 41 (Flick-885, Fig. 1), 41a (Figs. 2, 7), or 41b (Figs. 4, 8). Flick-885, 5:5-15, 6:32-40; Miller, ¶397.

As discussed *supra* §VI.B.5.b.i, the Federal Circuit construed “vehicle device” as “electrical or electronic component in a vehicle that can be controlled and/or the status thereof read” (*CalAmp-I*, 920 F.3d at 1347, 1349) and found that the ECU is a “vehicle device” (*Id.*, at 1342, 1346 n.5, 1347). Miller, ¶¶108-111, 398.

Flick-885’s “vehicle devices 44” and “vehicle controllers 45” are ***both*** “vehicle devices” under the court’s construction. Flick-885’s MVCC communicates with at least one vehicle device by sending or receiving device codes over the vehicle data bus. Flick-885, 6:40-52 (“[V]ehicle 21 includes ... electrical/electronic devices that can be controlled and/or the status thereof read via the data communications bus 30. ... [T]hese devices are... labeled ‘vehicle devices (sensors, actuators...)’ and ‘vehicle controllers (engine controller, transmission controller...).’”); *id.*, 3:34-36, 4:9-23, 5:5-15, 6:32-36 (MVCC reads or generates

signals on the data bus), 9:21-55, Fig. 1 (vehicle device 44 and vehicle controllers 45), Figs. 2, 4, 7-8, *generally id.*, 6:32-8:25; *CalAmp-I*, 920 F.3d at 1341 (discussing Flick-885 MVCC communication with vehicle devices over vehicle data bus); Miller, ¶1399.



The MVCC communicates with a vehicle device via bus 30 and bus interface 41. Flick-885, Abstract, 2:66-3:4, 3:10-26, 3:63-4:5, 4:35-37, 7:60-8:40, 9:1-20, Figs. 1-5, claims 1, 4; *CalAmp-I*, 920 F.3d at 1346-1347; Miller, ¶400.

Flick-885's MVCC communicates bidirectionally with "vehicle devices" over the vehicle data communication bus using a vehicle device "code." Flick-885, 7:30-32-34 (sending a "**code**" for the given vehicle and device"), 8:64-9:10

(reading a “code” for a “vehicle device”); Miller, ¶401. This meets the construction of “device code” as a “signal to or from a vehicle device.” *Supra* §VI.B.5.b.ii; Miller, ¶402.

Flick-885+Hunt’s MVCC communicates using vehicle device codes “from among a plurality thereof for different vehicles,” even if that clause is construed to require using different vehicle codes for different vehicles. Flick-885, Abstract, *supra* §VI.B.5.b.ii ([1.d]); Miller, ¶403. Flick-885’s MVCC reads a device code from a vehicle device and compares it to “stored device codes” for a “plurality of different vehicles.” Flick-885, 3:5-26, Figs. 4-6. The comparison “uses” the “read device code” and the matching “stored device code” to identify the particular vehicle “to thereby provide compatibility with a plurality of different vehicles.” Flick-885, Abstract, 2:66-3:4, 3:10-26, 3:63-4:5, 8:42-9:10, Figs. 4-6, claims 1-8; Ex. 1033, 67:5-68:5, 86:11-19; *CalAmp-CC*, 16-17; Miller, ¶404.

Similarly, Flick-885’s MVCC sends signals to vehicle devices by generating “multiple signals or codes... on the data communication bus 30, and only that code for the **given vehicle** and device will cause an operation or response from the vehicle device.” Flick-885, 7:24-42; *id.*, 6:53-58, 7:60-8:41, 9:11-10:6, 10:18-21, Figs. 2-3, 5, 7; Miller, ¶405.

Flick-885’s MVCC read and send functionality independently and separately meet [1.d]. Miller, ¶406.

6. Element [1.e]

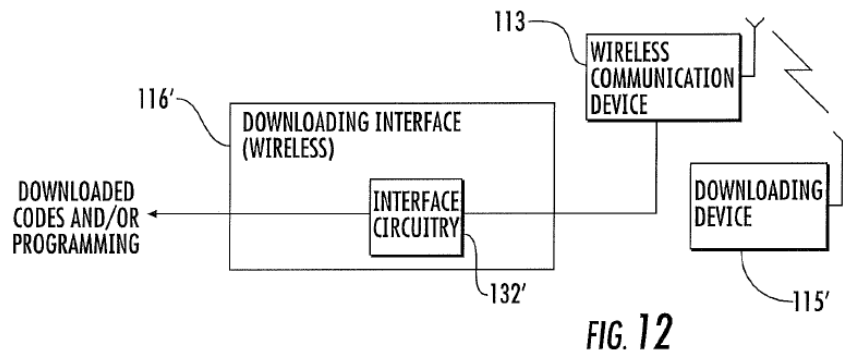
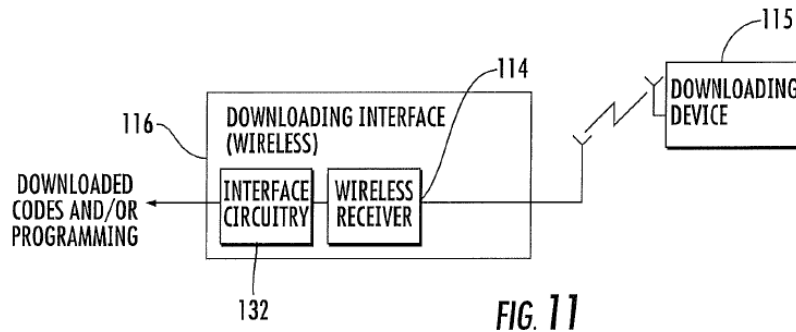
1.e	a downloading interface for permitting downloading of enabling data related to the at least one corresponding vehicle device code for use by said [MVCC].
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a. downloading interface for downloading data

Flick-885 incorporates Flick-460, (Flick-885, 10:10-17), and references its “desired signal enabling function” to learn a vehicle in which the system is installed, so Flick-460’s disclosure is part of Flick-885. *Advanced Display Systems v. Kent State University*, 212 F.3d 1272, 1282 (Fed. Cir. 2000). As detailed below, the “signal enabling function” in Flick-460 (and thus Flick-885) has a wireless and a wired “downloading interface.” Miller, ¶¶407-408. Flick-885+Hunt uses each alternative; each separately meets [1.e]’s “downloading interface.” Miller, ¶409. Indeed, the same Flick-460 disclosure meeting [1.e] is present in the ’278 patent. Ex. 1001, 22:3-7.

i. wireless

The ’278 patent Figures 11-12 show a wireless “downloading interface” that can communicate using any “wireless technology” including cellular, satellite, Bluetooth, or Wi-Fi. Ex. 1001, 24:14-22. Its “interface circuitry” is for “controlling communication” with a “downloading device.” *Id.*, 24:22-26.



Flick-460's satellite receiver 111 and cellular telephone 86 are connected to "download learning means 84" in "desired signal enabling" block 10''' (Fig. 6A) and a "wireless communications link" is described between the "download learning means" and a laptop. Flick-460, 7:31-56; Miller, ¶¶411-412.

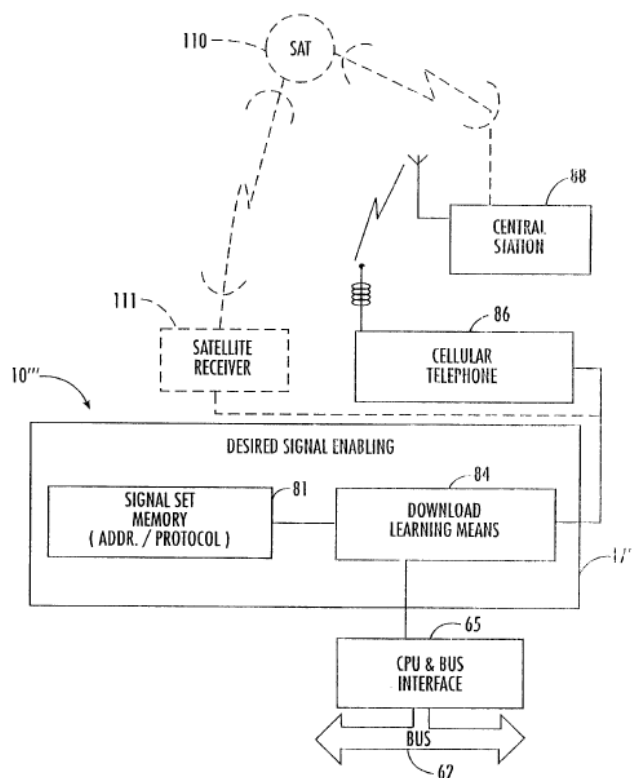


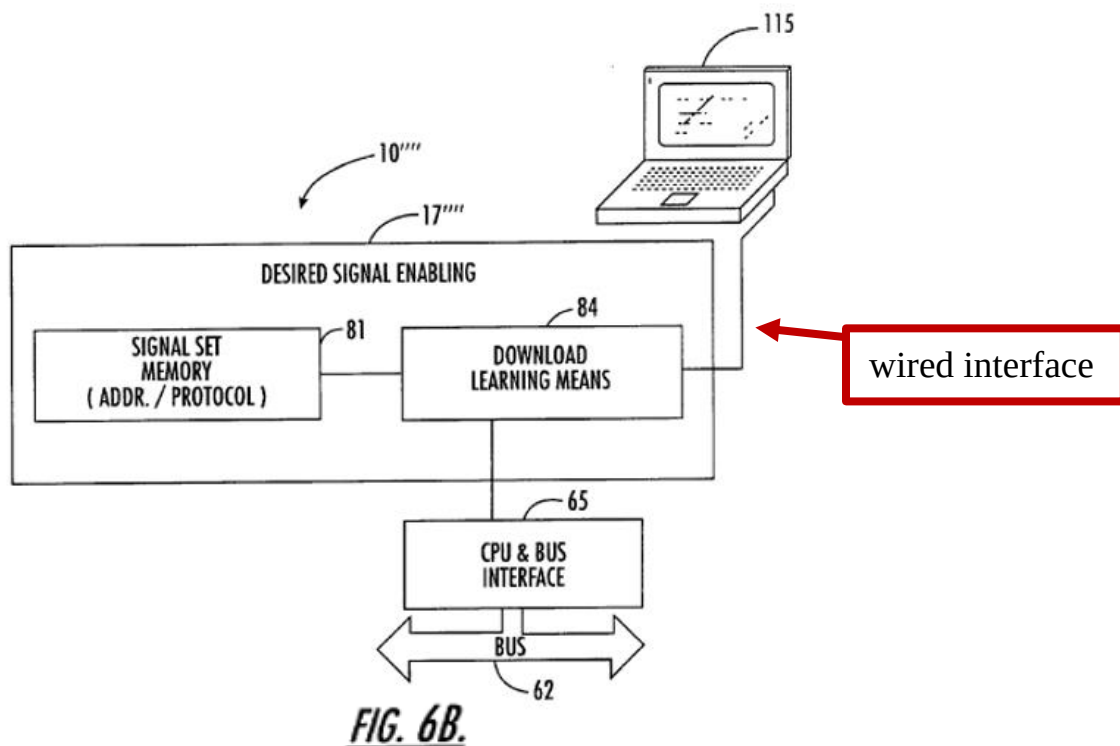
FIG. 6A.

POSAs understood that the satellite receiver, cellular telephone, and circuitry implementing the “wireless communication link” each includes logic that controls communication with a remote device (e.g., on the Internet). Miller, ¶413. Flick-460’s download learning means can be implemented by software in a CPU or in “a separate microprocessor or circuits.” Flick-460, 7:31-48.

Downloading learning means 84 together with either satellite receiver 111, cellular telephone 86, or the wireless link, each is a “downloading interface” as claimed. Miller, ¶¶414-415.

ii. wired

The '278 patent says the downloading interface can be “a connector 133a for temporary connection to a downloading device” (e.g., a laptop), may be “a socket to accept a memory card or other data storage medium capable of transferring data,” and can use “RS232/429 protocol, USB, FireWire, TCP/IP (Internet), or any other wired protocol.” Ex. 1001, 24:33-46.



Flick-460 says “download learning means 84” may be “*temporarily* connected to a computer” via “a wire cable.” Flick-460, 7:49-56, Fig. 6B, claims 1-2; Miller, ¶¶416-417. The wire cable and download learning means 84 together are a wired “downloading interface.” Miller, ¶417.

iii. for permitting downloading

Because both its wireless and wired downloading interfaces are “for permitting” downloading data, and the data’s content (“enabling”) imparts no patentable weight, Flick-885+Hunt meets [1.e]. *Supra* §VI.B.6; Miller, ¶418.

b. Flick-885+Hunt Meets [1.e] Even If “Enabling” Data is Limiting

Flick-885+Hunt’s “download learning means” is for downloading a ***“desired set of signals from the plurality of different sets of signals for different vehicles”*** (Flick-460, Abstract; *see also Id.*, claim 1, 7:40-43), which Flick-885 explains can be used for (1) allowing the MVCC to be reinstalled in another vehicle and reset to learn “another vehicle” or (2) for “initial step-up.” Flick-885, 10:7-17. Miller, ¶419. Flick-885 explains that the set of signals for a vehicle includes the vehicle device codes for that vehicle. Flick-885, 7:24-42, 7:50-8:34; Miller, ¶420. Thus, the downloaded data in Flick-885+Hunt is “enabling data related to the at least one corresponding vehicle device code for use by said [MVCC]” as in [1.e]. Miller, ¶421; *see also CalAmp-CC*, 22-23; Ex. 1026, 3.

D. Claim 2

Flick-885+Hunt meets claim 2 because it comprises a wired signal downloading interface. *Supra* §VIII.C.6.a.ii ([1.e]); Miller, ¶422.

E. Claim 3

3	The... claim 2 [unit] wherein said wired signal downloading interface comprises a connector for temporary connection to a downloading device.
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The '278 patent describes “connector 133a for a temporary connection to a downloading device 115” with a mating connector 133b.” Ex. 1001, 24:35-37. “Connector” means a physical connector, like a standard RS232 connector, USB connector, FireWire connector, or RJ45 plug for Ethernet connection. Ex. 1053, 221; Ex. 1067; Miller, ¶¶423-428.

Flick-885+Hunt’s above-discussed wired downloading interface temporarily connects to a “downloading device, such as a portable or laptop computer” (Flick-460, Abstract). *Supra* §VIII.D; Miller, ¶429. The conventional and obvious way to implement in Flick-885+Hunt the wired downloading interface Flick-460 describes would have been to use a known connector (e.g., RS232, USB, or FireWire) for temporarily connecting to a downloading computer. Miller, ¶430 (citing Ex. 1067). That renders obvious claim 3. Miller, ¶431.

F. Claim 4

Flick-885+Hunt meets claim 4 because it comprises a wireless signal downloading interface. *Supra* §VIII.C.6.a.i; Miller, ¶432.

G. Claim 5

5	The... claim 4 [unit] wherein said wireless signal downloading interface comprises a wireless receiver for temporary connection to a downloading device.
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Each Flick-460 wireless signal downloading interface in Flick-885+Hunt has a wireless receiver for temporary connection to a downloading device. *Supra* §VIII.C.6.a.i; Miller, ¶433. Omega’s expert agreed connections using “standard wireless communication protocols” are “temporary.” Ex. 1033, 99:19-24, 103:13-19; Miller, ¶434. To the extent Flick-460 is not considered to expressly teach a wireless receiver for temporary connection, an obvious and conventional way to implement what Flick-460 describes with a reasonable expectation of success is via a wireless interface having a receiver that forms a “temporary connection to a downloading device” when it is desired to download the “desired signal set” or

update the device software, or when a cellular, satellite, or other wireless connection is available to support the data download. Miller, ¶435.

H. Claims 6-7

6	The... claim 1 [unit] wherein the corresponding at least one vehicle code is for reading from the at least one vehicle device.
7	The... claim 1 [unit] wherein the corresponding at least one vehicle code is for writing to the at least one vehicle device.

The “vehicle code” in claims 6-7 is non-limiting for the same reasons Element [1.d]’s “vehicle device code” is non-limiting. *Supra* §VI.B.5; Miller, ¶436. Thus, Flick-885+Hunt meets claim 6-7 because it meets claim 1. Miller, ¶436.

Alternatively, even if every term is limiting, Flick-885+Hunt meets claim 6 because Flick-885 describes **reading** vehicle device codes from a vehicle device (*supra* §§VIII.C.4.a, VIII.C.5; Flick-885, 3:10-18, 8:42-45, Figs. 5-7, claim 24; Miller, ¶437), and meets claim 7 because Flick-885 describes **writing** device codes to a vehicle device (*supra* §VIII.C.4.a; Flick-885, 8:64-9:1; *id.*, 7:12-27; Miller, ¶437).

I. Claim 8

8	The ... claim 1 [unit] wherein said downloading interface is also for permitting downloading of at least one programming instruction for said [MVCC].
---	---

Hunt teaches that a controller can be implemented by running firmware or software that controls communication with vehicle devices. Hunt, 1:39-46; 6:26-

38, 10:49-54; Miller, ¶438. Omega agrees. Ex. 1040, 98:22-99:4 (McAndrews testimony); Miller, ¶439. Such a controller can be “programmed when the computer system is manufactured or... at a later date.” Hunt, 11:11-14; Miller, ¶440. It was well-known to update a controller’s firmware and/or software through a wired or wireless interface of the type in Flick-885+Hunt (*supra* §VIII.C.6.a.i (discussing [1.e])). Miller, ¶441.

Hunt would have motivated a POSA to implement Flick-885+Hunt so its downloading interface(s) permitted downloading programming instructions to the MVCC to allow programming and/or programming updates post-manufacture, and a POSA would have had a reasonable expectation of success because this is the “predictable use of prior art elements according to their established functions.” *KSR*, 550 U.S. at 417; Miller, ¶442. This renders claim 8 obvious over Flick-885+Hunt. Miller, ¶443.

J. Claims 9-10

9	The... claim 1 [unit] further comprising a remote transmitter; and wherein said [MVCC] also performs at least one vehicle remote control function responsive to said remote transmitter.
10	The... claim 9 [unit] wherein the at least one vehicle remote control function comprises at least one of a vehicle security function, a remote keyless entry function, and a remote engine starting function.

Flick-885 has a remote transmitter. Flick-885, 5:16-63, Figs. 1-2, 4, claim 11. Its “control system” provides “vehicle remote control functions” including “an alarm or security system controller,” “keyless entry for a vehicle,” and “remote

starting a vehicle engine.” Flick-885, 3:27-35; *id.*, 5:38-41; Miller, ¶444. The “vehicle remote control functions” are “responsive” to signals from the “remote transmitter.” Flick-885, 3:49-53, 4:5-8, 6:56-7:49, 10:18-36, claim 25; Miller, ¶445. Thus, Flick-885+Hunt renders obvious claims 9-10. Miller, ¶445.

K. Claim 11

Flick-885+Hunt’s wireless position determining device comprises a GPS receiver. *Supra* §VIII.C.2; Hunt, 3:26-27, 5:43-45; Miller, ¶446.

L. Claim 12

12	The... claim 1 [unit] further comprising a housing containing said vehicle position determining device, said wireless communications device, said [MVCC], and said downloading interface.
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Flick-885+Hunt comprises a housing containing the vehicle position determining device (GPS module and GPS antenna), the wireless communications device (radio antenna, wireless transmitter) the MVCC and the downloading interface as taught by Hunt. *Supra* §§VIII.B (combination), VI.H (discussing Hunt); Miller, ¶¶339-340, 447.

M. Claim 13

Elements [13.pre]-[13.e] recite limitations identical to elements [1.pre]-[1.e], respectively, while Element [13.f] adds the same limitations as claim 3. Ex. 1044;

Miller, ¶448. Flick-885+Hunt meets elements [13.pre]-[13.f] for the same reasons it meets elements [1.pre]-[1.e] and claim 3 (section cites below). Miller, ¶449.

Element	Corresponding	Analysis
[13.pre]	[1.pre]	§VIII.C.1
[13.a]	[1.a]	§VIII.C.2
[13.b]	[1.b]	§VIII.C.3
[13.c]	[1.c]	§VIII.C.4
[13.d]	[1.d]	§VIII.C.5
[13.e]	[1.e]	§VIII.C.6
[13.f]	3	§VIII.E

N. Claims 14-17

Claims 14-17 depend from claim 13 and add limitations identical to those in dependent claims 6-9, respectively. Ex. 1044; Miller, ¶450. Flick-885+Hunt meets claims 14-17 for the reasons it meets claims 6-9 (section cites below). Miller, ¶451.

Claim	Corresponding claim	Analysis
14	6	§VIII.H
15	7	§VIII.H
16	8	§VIII.I
17	9	§VIII.J

O. Claim 18

Elements [18.pre]-[18.e] recite limitations identical to elements [1.pre]-[1.e], respectively. Ex. 1044; Miller, ¶452. Element [18.f] requires [18.e]’s downloading interface comprises a wireless receiver for temporary connection to a downloading device. Flick-885+Hunt meets elements [18.pre]-[18.f] for the same reasons

(section cites below) discussed for elements [1.pre]-[1.e] and claim 5. Miller, ¶453.

Element	Corresponding	Analysis
[18.pre]	[1.pre]	§VIII.C.1
[18.a]	[1.a]	§VIII.C.2
[18.b]	[1.b]	§VIII.C.3
[18.c]	[1.c]	§VIII.C.4
[18.d]	[1.d]	§VIII.C.5
[18.e]	[1.e]	§VIII.C.6
[18.f]	5	§VIII.G

P. Claims 19-22

Claims 19-22 depend from claim 18 and add additional limitations identical to those in dependent claims 6-9, respectively. Ex. 1044; Miller, ¶454. Flick-885+Hunt meets claims 19-22 for the same reasons discussed for claims 6-9. Miller, ¶455.

Claim	Corresponding claim	Analysis
19	6	§VIII.H
20	7	§VIII.H
21	8	§VIII.I
22	9	§VIII.J

IX. SECONDARY CONSIDERATIONS CANNOT SAVE OMEGA’S CLAIMS

A. Irrelevant to Ground 1

Secondary considerations are irrelevant to anticipation and cannot affect a reasonable likelihood that Petitioners will prevail on at least one claim in Ground

1. *Supra* §VI; *Cohesive Technologies v. Waters*, 543 F.3d 1351, 1364 (Fed. Cir. 2008); 35 U.S.C. §314(a).

B. Fail for Grounds 2-3

The Board credited Omega’s secondary considerations arguments in reversing the CRU’s claim rejections. Ex. 1017, 16. If Omega argues secondary considerations in this proceeding, the Board should grant Petitioners the opportunity to cross-examine witnesses and present its own rebuttal evidence and argument. *Nearmap US v. Eagle View Technologies*, IPR2022-00734, Paper 10, 8-9 (Nov. 1, 2022) (instituting review despite secondary considerations evidence presented in earlier IPR). Such testing is crucial because (1) the Petition presents different obviousness arguments—using different references—than any earlier proceeding; (2) secondary considerations cannot overcome the Petition’s strong obviousness showings; and (3) the Board has never tested Omega’s secondary consideration arguments/evidence in an adversarial proceeding.

Omega’s secondary considerations “showing” from reexamination would fail here for several reasons.

1. Secondary Considerations Cannot Overcome The Strong Obviousness Showing

“[S]econdary considerations... simply cannot overcome a strong *prima facie* case of obviousness.” *Wyers v. Master Lock*, 616 F.3d 1231, 1246 (Fed. Cir. 2010) (collecting cases). The Federal Circuit has repeatedly held that “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***.” *Id.* (cleaned up); *Western Union v. MoneyGram Payment Systems*, 626 F.3d 1361, 1373 (Fed. Cir. 2010); *Ohio Willow Wood v. Alps South*, 735 F.3d 1333, 1344 (Fed. Cir. 2013); accord *One World Technologies v. The Chamberlain Group*, IPR2017-00126, Paper 56, 87 (Oct. 24, 2018) (same).

Ground 2 shows that to the extent Hunt fails to disclose any limitation in claims 1, 4-6, 8, 11-12, 18-19, or 21, such claim would have been obvious over a predictable and obvious implementation of Hunt—using known prior art elements according to their established functions. *Supra* §VII.

Ground 3 demonstrates that Flick-885+Hunt renders all claims obvious as the predictable use of prior art elements according to their established functions—*e.g.*, modifying Flick-885’s tracking unit to integrate a well-known GPS system and single housing as expressly taught by Hunt. *Supra* §VIII.B.

Under *Wyers*, *Western Union*, *Ohio Willow*, and *One World*, Omega’s secondary considerations fail ***as a matter of law*** to overcome the Petition’s *prima facie* obviousness showings.

2. Omega’s Blocking Patents Preclude Commercial Success

“A blocking patent is an earlier patent that prevents practice of a later invention[.]” *Chemours Company v. Daikin Industries*, 4 F.4th 1370, 1378-1379 (Fed. Cir. 2021) (collecting cases); *Acorda Therapeutics v. Roxane Laboratories*, 903 F.3d 1310, 1337 (Fed. Cir. 2018) (same). Omega’s Flick-885 and Flick-727 (Ex. 1064, issued 2010) are blocking patents because each issued before the ’278 patent, and in *CalAmp*, Omega argued—and the jury found—the same three products infringed the **later** ’278 patent and the **earlier** Flick-885 and Flick-727. Ex. 1028, 4-5 (’278 patent), 2-3 (Flick-885); Ex. 1027, 4 (Flick-727). The Federal Circuit affirmed. *CalAmp-II*, 13 F.4th at 1382 (’278 patent)⁴; *CalAmp-I*, 920 F.3d at 1344, 1353 (’727 patent); *see also* Ex. 1065, 94-124 (’278 patent), 71-79 (Flick-885), 81-92 (Flick-727). Omega is estopped from arguing otherwise. *Trustees*, 593 F.3d at 1353–1354.

Flick-885 and Flick-727 eviscerate Omega’s alleged commercial success because “a blocking patent may deter non-owners and non-licensees from investing the resources needed to make, develop, and market such a later,

⁴ The Federal Circuit vacated as moot the jury’s finding that CalAmp customers directly infringed the ’885 patent because Omega never appealed the judgment of no inducement by CalAmp. *CalAmp-II*, 13 F.4th at 1369.

‘blocked’ invention.” *Chemours*, 4 F.4th at 1379 (cleaned up). “Where market entry by others was precluded [due to blocking patents], the inference of non-obviousness... from evidence of commercial success, is weak.” *Galderma Laboratories v. Tolmar*, 737 F.3d 731, 740 (Fed. Cir. 2013); *Solvay USA v. WorldSource Enterprises*, PGR2019-00046, Paper 45, 36 (Aug. 10, 2020) (“We... give less weight to Patent Owner’s evidence of alleged commercial success because it does not account for potential blocking patents[.]”), *affirmed*, No. 2021-1041 (Fed. Cir. June 10, 2022).

C. Multi-Vehicle Compatibility Cannot Support Nexus For Any Secondary Consideration

In reexamination, Omega argued that “multi-vehicle compatibility” provided nexus for secondary considerations. *E.g.*, Ex. 1015, 33, 47-48. But there is no nexus “[w]here the offered secondary consideration... results from something ***other than what is both claimed and novel in the claim.***” *In re Huai-Hung Kao*, 639 F.3d 1057, 1068 (Fed. Cir. 2011); *Tokai v. Easton Enterprises*, 632 F.3d 1358, 1369 (Fed. Cir. 2011); *Ormco v. Align Technology*, 463 F.3d 1299, 1311-1312 (Fed. Cir. 2006).

Both Hunt and Flick-885 make clear that “multi-vehicle compatibility” was not novel. *Supra* §§VI.B.4 (Hunt’s MVCC re [1.c]), VIII.C.4 (Flick-885’s MVCC re [1.c]). The law precludes nexus based on known multi-vehicle compatibility.

Omega further relied on excerpted deposition testimony from Stephen Hall and Peter Hergesheimer for nexus, but the complete transcripts are not in the public record and Petitioners have not had the opportunity for cross-examination. Ex. 1015, 43-47. At trial, Omega presented testimony from Hall and Hergesheimer by playing video of their respective depositions. Ex. 1034, 2:7, 116:18-19; Ex. 1040, 2:9, 122:19-20 (Hall); Ex. 1032, 2:10, 145:11-12; Ex. 1033, 2:3, 4:5-6; Ex. 1039, 2:9, 126:15-16 (Hergesheimer). None of this testimony is publicly available because the video was not transcribed at trial. *Id.*

Omega also alleged customers needed “a simple installation type of solution.” Ex. 1015, 43-45. There is no nexus because “simple installation” is not claimed (*Kao*, 639 F.3d at 1068; *Ormco*, 463 F.3d at 1312) and is not novel, given Hunt’s explicit teaching that implementing the tracking unit as a stand-alone unit in a single housing simplifies hiding the unit in a vehicle and “reduces installation costs.” Hunt, 4:34-38; Miller, ¶369.

D. No Evidence Of Copying

“[C]opying requires **evidence** of efforts to replicate a specific product[.]” *Wyers*, 616 F.3d at 1246. An infringement verdict is not evidence of copying. *Id.* (“Not every competing product that arguably falls within the scope of a patent is evidence of copying; otherwise, every infringement suit would automatically confirm the nonobviousness of the patent.”) (citation omitted).

In reexamination, Omega argued copying but provided no **evidence**. Instead, Omega pointed to a jury finding—in a verdict involving **four patents** (including Flick-727 and Flick-885)—that found “others cop[ied] the claimed invention” but did not identify what “invention” was copied and did not identify the ’278 patent. Ex. 1015, 42-43; Ex. 1027, 9. The Board must evaluate copying based on **evidence**. There is no **evidence** anyone copied the ’278 patent.

E. No Licenses Contravene Obviousness

In reexamination, Omega argued that licenses demonstrated non-obviousness (Ex. 1015, 37-39) but never put a single license in the record. Omega filed “the exhibit **listing**” from *CalAmp* in an earlier reexamination record (No. 90/013,851) but did not file any actual **exhibits**. Ex. 1016, 11:22-23. Omega never identified a specific license to the ’278 patent. Ex. 1015, 38. Omega’s licensing argument—repeated to Examiners and the Board in **multiple** reexaminations (Exs. 1015, 38; 1016, 3:16-17; 1017, 14; 1012, 14; 1006, 167, 415-417)—was at best disingenuous, and at worst misleading in a manner material to patentability.

Omega’s *CalAmp* “exhibit listing” (Ex. 1006, 1171-1189; Ex. 1068) included twenty-four Omega agreements presented at trial. Twenty-two are **irrelevant**: one transferred the inventor’s patents to Omega (Ex. 1113); fifteen settled infringement disputes on other patents without licensing the ’278 patent

(Exs. 1094-1108); six involved portfolios without licensing⁵ the '278 patent (Exs. 1092-1093, 1109-1112).

That leaves two plausibly relevant agreements: (1) one licensing the application as part of an **86-patent portfolio** while **settling litigation** on other patents (Ex. 1090, 1-2, 10-12); and (2) another licensing the '278 patent in a **54-patent portfolio** (Ex. 1091, 9-10). These are not probative of nonobviousness. *Merck & Cie v. Gnosis S.P.A.*, 808 F.3d 829, 838 (Fed. Cir. 2015) (“[T]he Board’s finding that the evidence of licensing should not be afforded much weight was reasonable” where license covered several patents.); *Iron Grip Barbell v. USA Sports*, 392 F.3d 1317, 1324 (Fed. Cir. 2004) (licenses taken to settle litigation have no probative value on non-obviousness “because it is often cheaper to take licenses than to defend infringement suits”) (cleaned up).

Omega’s repeated reliance on a jury finding that “others accept[ed] licenses under patents because of the merits of the claimed invention” is misplaced because that finding made no distinction between a license to the '278 patent and other

⁵ Two listed the '278 patent in a large portfolio (Ex. 1092, 9-10 (47 patents); Ex. 1093, 9-10 (45 patents)) but **excluded** “Patents relating to or covering vehicle GPS Tracking technology,” thus excluding the '278 patent. Exs. 1092, 1; 1093, 1; *Supra* §§VI.B (claim 1), VI.G (claim 11).

patents-in-suit (including blocking patents Flick-885 and Flick-727). Ex. 1027, 4. No **evidence** supports such finding for the '278 patent.

X. NO BASIS FOR DISCRETIONARY DENIAL

A. No Basis For *Fintiv* Denial

The Petition provides compelling evidence of unpatentability, so under the Interim Procedure for Discretionary Denials (June 21, 2022) (“IP”), “the PTAB will not deny institution based on *Fintiv*.” IP, 5. *Fintiv* favors institution based on efficiency, fairness, and patent quality. *Apple v. Fintiv*, IPR2020-00019, Paper 11 at 5 (Mar. 20, 2020) (“*Fintiv*”) (precedential).

1. Factor 1: Litigation stay.

Factor 1 is neutral because no party has requested a stay and the district court has not addressed one. *Fintiv*, Paper 15, 12 (May 13, 2020) (informative) (“*Fintiv DI*”); *Sand Revolution II v. Continental Intermodal*, IPR2019-01393, Paper 24, 7 (June 16, 2020) (informative).

2. Factor 2: Median-time-to-trial relative FWD.

Delaware’s 36-month median-time-to-trial (Ex. 1045; IP, 9 n.12) puts trial in August 2025. Institution would result in FWD in July 2024. This favors institution. IP, 8-9.

3. Factor 3: Litigation Investment.

Factor 3 favors institution. Petitioners filed this petition early in litigation: Petitioners have not answered, discovery has not begun, no expert reports have

been filed, no trial date or Markman hearing has been set, and no substantive orders have issued. This weighs against discretionary denial. *Apple v. Seven*, IPR2020-00156, Paper 10, 11-12 (June 15, 2020) (“*Seven-156*”); *see also Amperex v. Maxell*, IPR2021-01442, Paper 16, 10-11 (April 12, 2022) (Factor 3 weighs against discretionary denial even after claim construction).

4. Factor 4: Overlapping issues.

Factor 4 favors institution. This Petition challenges all 22 patent claims, whereas Omega only asserted claim 12 in the Litigation. *Philip Morris Products v. RAI Strategic Holdings*, IPR2020-01602, Paper 9 at 14 (Apr. 2, 2021) (non-overlapping claims favors institution); *Apple v. Seven Networks*, IPR2020-00180, Paper 12 at 14 (Aug. 14, 2020) (institution favored where IPR challenges more claims than litigation) (“*Seven-180*”).

5. Factor 5: Parties.

Factor 5 is neutral because it is unlikely the court will decide invalidity before the Board given Delaware’s three-year median-time-to-trial. *Google v. Parus*, IPR2020-00846, Paper 9, 20-21 (Oct. 21, 2020).

6. Factor 6: Other considerations.

The Petition’s “strong showing on the merits” weighs against denial. *Seven-156*, 20-22.

B. No Basis For *General Plastics* Denial

There is no potential for abuse. The '278 patent has never been tested in IPR, Geotab has not challenged unpatentability in reexamination or any other forum, and Omega only recently sued Petitioners while appeal pending in a recent examination. This Petition is “the result of Patent Owner’s litigation activity, rather than Petitioner’s abuse of the review process.” *Nearmap v. Eagle View Technologies*, IPR2022-01090, Paper 9 at 8-9 (Jan. 12, 2023), citing *General Plastic Industrial v. Canon Kabushiki Kaisha*, IPR2016-01357, Paper 19 (Sep. 6, 2017) (precedential as to Section II.B.4.i).

C. No Basis For §325(d) Denial

The Office has never considered the patentability of any challenged claim over Hunt or Flick-885+Hunt. *Advanced Bionics v. Med-El Elektromedizinische Gerate*, IPR2019-01469, Paper 6, 7-8 (Feb. 13, 2020) (precedential).

1. *Advanced Bionics* step one

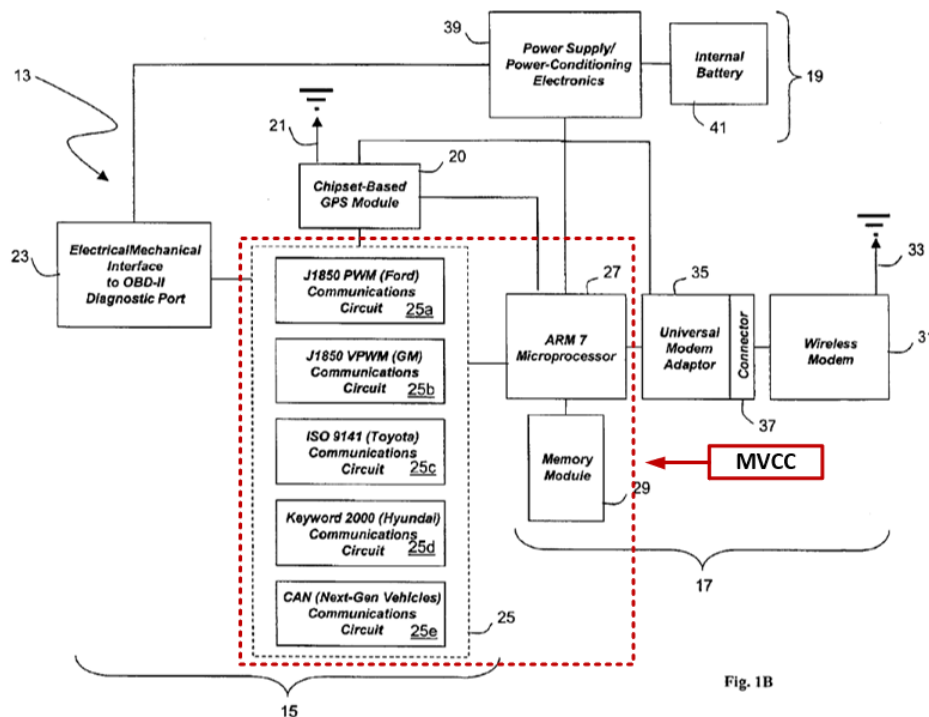
The Petition’s references and arguments differ from those the Office has previously considered and do not meet the first *Advanced Bionics* step. That ends the §325(d) discretionary denial analysis and favors institution. *Advanced Bionics*, 8.

a. Hunt

Hunt materially differs from the prior art presented to the Office. *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8, 17-22, 23-

24 (Dec. 15, 2017) (“BD”) (precedential). BD factors (a), (b), and (d) confirm Hunt is not substantially similar to any previously-presented reference, nor does Ground 1 present substantially the same invalidity arguments previously presented to the Office. *Advanced Bionics*, 9-10.

Throughout prosecution and reexamination, Omega argued the prior art lacked an MVCC “operational” in or “compatible” with many vehicles. *E.g.*, Ex. 1005, 23, 40-41; Ex. 1006, 161; Ex. 1007, 295-296, 304; Ex. 1016, 6:7-15. Hunt discloses an MVCC that communicates with different protocols used by different vehicle manufacturers. *Supra* §VI.B.4; *E.g.*, Hunt, Figs. 1B, 5.



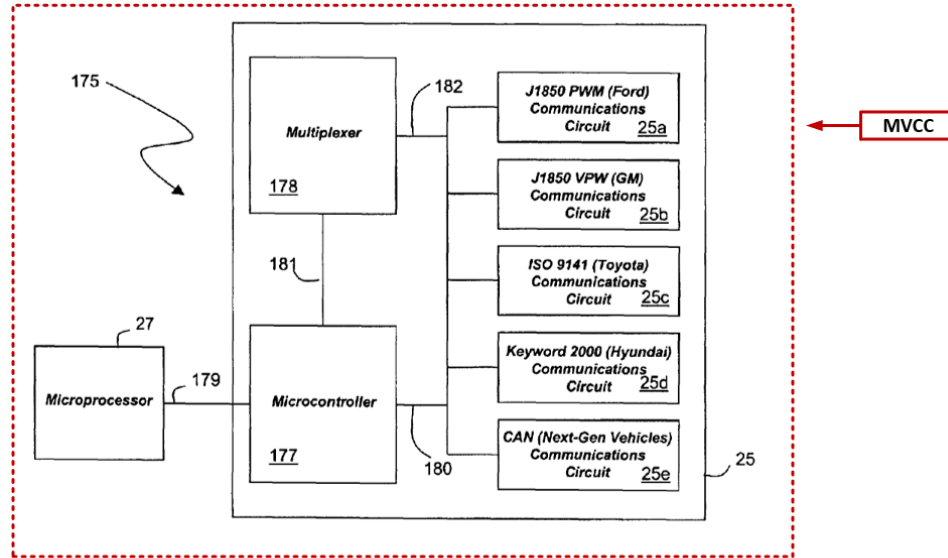


Fig. 5

Hunt is not “substantially similar” to Ex. 1059 (“Lowrey”), applied in No. 90/014,675 (Ex. 1009, “RX5”), despite Larkin Lowrey being a named inventor on Hunt. Lowery lacks Hunt’s vehicle-communication circuit component 25 (Hunt, Fig. 5) in the MVCC that supports multi-vehicle communication. Hunt also discloses the single housing in claim 12 asserted against Petitioner, *supra* §VI.H, whereas the Office determined the housing was missing in Lowery. Ex. 1009, 494.

Additionally, at the Board-level where the claims were deemed patentable over Lowery, Lowery was only considered in combination with another reference under an obviousness analysis and the Board reversed the examiner’s rejection over the Lowery combination based entirely on secondary considerations. As shown above, *supra* §IX, the Board based its decision on Omega’s

misrepresentation of the facts rather than evidence. Regardless, secondary considerations are irrelevant to Ground 1's showing that Hunt anticipates.

Hunt is therefore materially different from prior art used in reexamination under *Becton* (a), non-cumulative under *Becton* (b), and Ground 1 has no overlap with examination arguments under *Becton* (d).

b. Flick-885+Hunt

The Board never considered Flick-885 in combination with Hunt or any other reference. The '278 patent notes Flick-885 as "background" and the Examiner initialed it on an IDS, but the Office *never* discussed or used Flick-885 in a rejection. *SHDS v. Truinject*, IPR2020-00937, Paper 11, 8-12 (Nov. 17, 2020) (combination using of-record art [Flick-885] and new art [Hunt] fails step one); *Halliburton Energy Services v. U.S. Well Services*, IPR2022-00610, Paper 15, 15 (Sep. 1, 2022) (new combination fails step one even where each reference was previously considered individually).

The '278 patent alleged a MVCC system like Flick-855's had never been used with GPS for vehicle tracking (Ex. 1001, 2:29-41) but Hunt directly refutes that. *Supra* §VI.B.

Flick-885+Hunt differs from and is non-cumulative to the examined prior art under *Becton* (a)-(b), and has no overlap with examination arguments under *Becton* (d). *Advanced Bionics* step one favors institution on Flick-885+Hunt.

c. New Arguments

The Office has never addressed the claim construction issues identified herein relating to non-limiting statements of intended use (*supra* §VI.B.5.a), the printed matter doctrine (*supra* §VI.B.6.b.i), or Omega’s inconsistent positions in litigation and reexamination (*supra* §VI.B.5.c.ii).

The Office has never considered the ***actual license agreements*** Omega misrepresented to the Office as establishing secondary considerations (*Supra* §IX.E) or the impact of blocking patents on Omega’s alleged secondary considerations arguments (*supra* §IX.B.2).

* * *

For these reasons *Advanced Bionics* step one favors institution.

2. Advanced Bionics step two

a. Hunt

If Hunt is considered to be “substantially the same” as any art considered, then the Office erred by not finding claims anticipated as explained in Ground 1. *Supra* §VI.

The CRU relied on obviousness because it found that Lowery did not disclose multi-vehicle compatibility, but Hunt clearly does and removes the need to consider secondary considerations for the claims anticipated in Ground 1. *Supra* §IX.A. The Board’s reversal of the CRU’s obviousness rejection over Lowery was based ***entirely*** on secondary considerations (Ex. 1017, 16) and erroneously relied

on Omega’s misrepresentations unsupported by **evidence**. *Supra* §IX. No secondary considerations evidence refutes Ground 2’s showing of obviousness over Hunt.

b. Flick-885+Hunt

As the CRU recognized, the Examiner materially erred in prosecution by never determining the effective filing date for the ’278 patent. Ex. 1010, 2; 1011, 5, 18; Ex. 1013, 6-7. Thus, the Examiner erroneously failed to recognize that Flick-885 was **indisputable** prior art, as opposed to §102(e) art that §103(c) barred from use in an obviousness combination against the commonly-owned ’278 patent. The Office never considered Flick-885 in reexamination: no requester identified it.

If Flick-885+Hunt is considered to be “substantially the same” as any prior art combination considered, then the Office materially erred by not finding the claims obvious as shown in Ground 3. *Supra* §VIII. Ground 3 demonstrates that Flick-885 discloses every claim limitation except using GPS (or other position determination) and a single housing, while Ground 1 and Hunt refute the ’278 patent’s assertion that an MVCC had never been used in a vehicle tracking unit. Ex. 1001, 2:29-41; *Supra* §§VI, VIII.

The Office did not have the benefit of expert testimony establishing unpatentability, which weighs “heavily against denying institution.” *Adobe v. RAH Color Technologies*, IPR2019-00627, Paper 41, 20 (Sep. 10, 2019).

* * *

Advanced Bionics step two, and *Becton* Factors (c), (e), and (f), all favor institution for Hunt and Flick-885+Hunt.

XI. CONCLUSION

The Board should institute review and cancel claims 1-22.

Date: January 27, 2023

Respectfully submitted,

Geotab USA, Inc. and Geotab, Inc.

/ Adam R. Wichman /

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U.S. PATENT NO. 8,032,278 CLAIM LIST

Ref	Claim
1.pre	A multi-vehicle compatible tracking unit for a vehicle comprising a vehicle data bus extending throughout the vehicle, the multi-vehicle compatible tracking unit comprising:
1.a	a vehicle position determining device;
1.b	a wireless communications device;
1.c	a multi-vehicle compatible controller for cooperating with said vehicle position determining device and said wireless communications device to send vehicle position information;
1.d	said multi-vehicle compatible controller to be coupled to the vehicle data bus for communication thereover with at least one vehicle device using at least one corresponding vehicle device code from among a plurality thereof for different vehicles; and
1.e	a downloading interface for permitting downloading of enabling data related to the at least one corresponding vehicle device code for use by said multi-vehicle compatible controller.
2	The multi-vehicle compatible tracking unit according to claim 1 wherein said downloading interface comprises a wired signal downloading interface.
3	The multi-vehicle compatible tracking unit according to claim 2 wherein said wired signal downloading interface comprises a connector for temporary connection to a downloading device.
4	The multi-vehicle compatible tracking unit according to claim 1 wherein said downloading interface comprises a wireless signal downloading interface.
5	The multi-vehicle compatible tracking unit according to claim 4 wherein said wireless signal downloading interface comprises a wireless receiver for temporary connection to a downloading device.
6	The multi-vehicle compatible tracking unit according to claim 1 wherein the corresponding at least one vehicle code is for reading from the at least one vehicle device.
7	The multi-vehicle compatible tracking unit according to claim 1 wherein the corresponding at least one vehicle code is for writing to the at least one vehicle device.

Ref	Claim
8	The multi-vehicle compatible tracking unit according to claim 1 wherein said downloading interface is also for permitting downloading of at least one programming instruction for said multi-vehicle compatible controller.
9	The multi-vehicle compatible tracking unit according to claim 1 further comprising a remote transmitter; and wherein said multi-vehicle compatible controller also performs at least one vehicle remote control function responsive to said remote transmitter.
10	The multi-vehicle compatible tracking unit according to claim 9 wherein the at least one vehicle remote control function comprises at least one of a vehicle security function, a remote keyless entry function, and a remote engine starting function.
11	The multi-vehicle compatible tracking unit according to claim 1 wherein said wireless position determining device comprises a Global Positioning System (GPS) receiver.
12	The multi-vehicle compatible tracking unit according to claim 1 further comprising a housing containing said vehicle position determining device, said wireless communications device, said multi-vehicle compatible controller, and said downloading interface.
13.pre	A multi-vehicle compatible tracking unit for a vehicle comprising a vehicle data bus extending throughout the vehicle, the multi-vehicle compatible vehicle tracking unit comprising:
13.a	a vehicle position determining device;
13.b	a wireless communications device;
13.c	a multi-vehicle compatible controller for cooperating with said vehicle position determining device and said wireless communications device to send vehicle position information;
13.d	said multi-vehicle compatible controller to be coupled to the vehicle data bus for communication thereover with at least one vehicle device using at least one corresponding vehicle device code from among a plurality thereof for different vehicles; and
13.e	a downloading interface for permitting downloading of enabling data related to the at least one corresponding vehicle device code for use by said multi-vehicle compatible controller;
13.f	said downloading interface comprising a connector for temporary connection to a downloading device.
14	The multi-vehicle compatible tracking unit according to claim 13 wherein the corresponding at least one vehicle code is for reading from the at least one vehicle device.

Ref	Claim
15	The multi-vehicle compatible tracking unit according to claim 13 wherein the corresponding at least one vehicle code is for writing to the at least one vehicle device.
16	The multi-vehicle compatible tracking unit according to claim 13 wherein said downloading interface is also for permitting downloading of at least one programming instruction for said multi-vehicle compatible controller.
17	The multi-vehicle compatible tracking unit according to claim 13 further comprising a remote transmitter; and wherein said multi-vehicle compatible controller also performs at least one vehicle remote control function responsive to said remote transmitter.
18.pre	A multi-vehicle compatible tracking unit for a vehicle comprising a vehicle data bus extending throughout the vehicle, the multi-vehicle compatible vehicle tracking unit comprising:
18.a	a vehicle position determining device;
18.b	a wireless communications device;
18.c	a multi-vehicle compatible controller for cooperating with said vehicle position determining device and said wireless communications device to send vehicle position information;
18.d	said multi-vehicle compatible controller to be coupled to the vehicle data bus for communication thereover with at least one vehicle device using at least one corresponding vehicle device code from among a plurality thereof for different vehicles; and
18.e	a downloading interface for permitting downloading of enabling data related to the at least one corresponding vehicle device code for use by said multi-vehicle compatible controller;
18.f	said downloading interface comprising a wireless receiver for temporary connection to a downloading device.
19	The multi-vehicle compatible tracking unit according to claim 18 wherein the corresponding at least one vehicle code is for reading from the at least one vehicle device.
20	The multi-vehicle compatible tracking unit according to claim 18 wherein the corresponding at least one vehicle code is for writing to the at least one vehicle device.
21	The multi-vehicle compatible tracking unit according to claim 18 wherein said downloading interface is also for permitting downloading of at least one programming instruction for said multi-vehicle compatible controller.

Ref	Claim
22	The multi-vehicle compatible tracking unit according to claim 18 further comprising a remote transmitter; and wherein said multi-vehicle compatible controller also performs at least one vehicle remote control function responsive to said remote transmitter.

CERTIFICATE OF SERVICE UNDER 37 C.F.R. §42.6 (E)(4)

I certify that on January 27, 2023, I will cause a copy of the foregoing document, including any exhibits or appendices filed therewith, to be served via Overnight FedEx at the following correspondence address of record for the patent:

ADD+G
1135 East State Road 434, Suite 3001
Winter Springs, FL
32708

Date: January 27, 2023

/MacAulay Rush/
MacAulay Rush
Paralegal
WOLF, GREENFIELD & SACKS, P.C.

CERTIFICATE OF WORD COUNT

Pursuant to 37 C.F.R. §42.24, the undersigned certifies that the foregoing Petition for *Inter Partes* Review contains 13,953 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. Petitioners have relied on the word count feature of the word processing system used to create this paper in making this certification.

Date: January 27, 2023

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