

Petition for *Inter Partes* Review of
U.S. Patent No. 8,032,278

**UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD**

Verizon Connect Inc.,
Petitioner

v.

Omega Patents, LLC,
Patent Owner

Case No.: To Be Assigned
Patent No.: 8,032,278

Filing Date: July 3, 2007
Issue Date: October 4, 2011

**Title: VEHICLE TRACKING UNIT WITH DOWNLOADABLE CODES
AND ASSOCIATED METHODS**

PETITION FOR *INTER PARTES* REVIEW
OF U.S. PATENT NO. 8,032,278
UNDER 35 U.S.C. §§ 311-319 AND 37 C.F.R. § 42.100 *ET SEQ.*

Mail Stop *Inter Partes* Review
Patent Trial and Appeal Board
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

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Rules

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In accordance with 37 C.F.R. § 42.100 and Section 18 of the Leahy-Smith America Invents Act, Petitioner Verizon Connect Inc. requests *inter partes* review (“IPR”) of Claims 1-22 (“the challenged claims”) of U.S. Patent No. 8,032,278 (“’278 Patent”) (Ex. 1001).

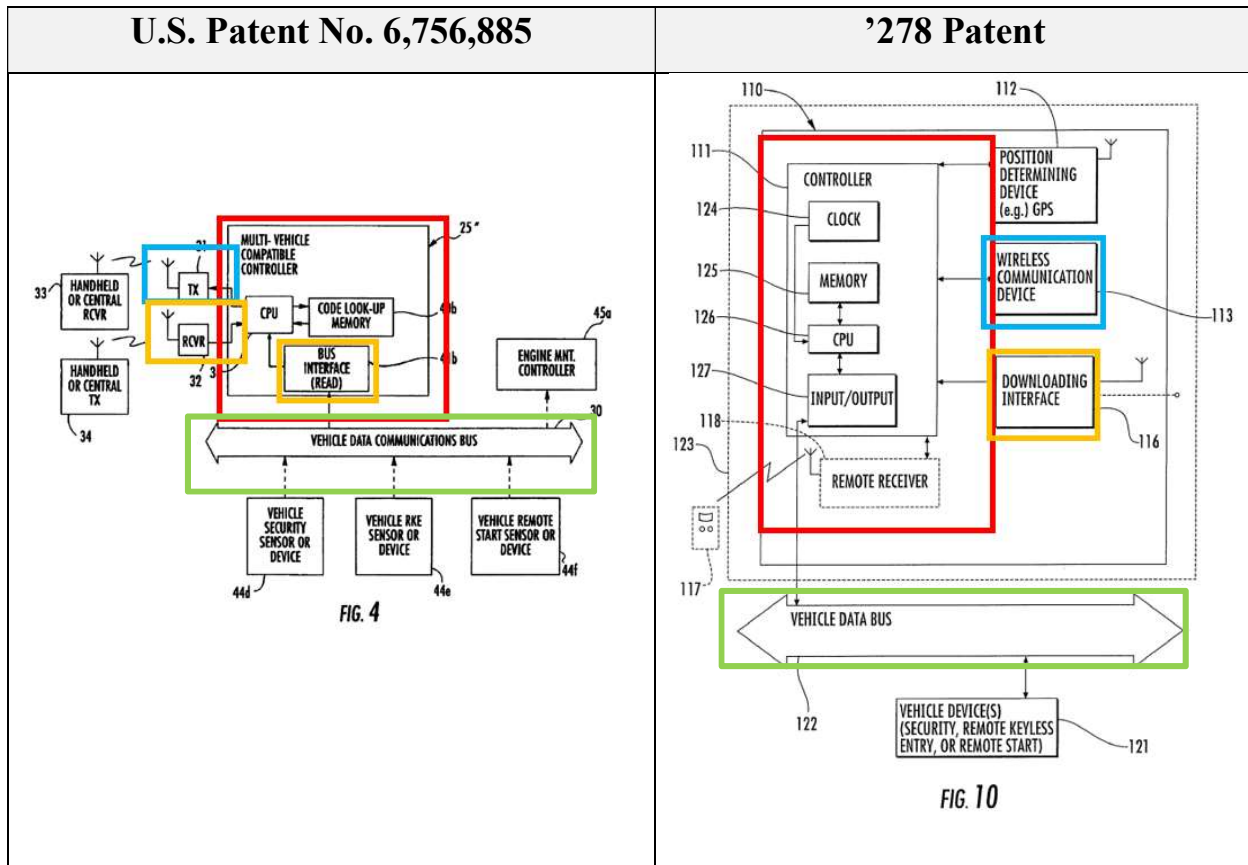
I. INTRODUCTION

The ’278 Patent is directed to a multi-vehicle compatible tracking unit comprising four components: (1) a multi-vehicle compatible controller (“MVCC”), a key feature that the inventor, Kenneth E. Flick, used to distinguish the prior art; (2) a downloading interface; (3) a wireless communications device; and (4) a vehicle tracking device. According to the ’278 claims, the MVCC is integral to every aspect of the claimed invention and is designed to be coupled to the vehicle data bus for communicating with one or more vehicle devices of different vehicles. The MVCC also uses enabling data downloaded from the downloading interface and cooperates with the wireless communications device and vehicle tracking device. Ex. 1002, ¶ 52.

Before the ’278 Patent, the inventor, Kenneth E. Flick (“Flick”), had already disclosed the MVCC feature in an unrelated application where the MVCC also is coupled to the vehicle data bus, uses enabling data from a downloading interface and cooperates with a wireless communications device. This subject matter is disclosed

in U.S. Patent No. 6,756,885 (the “’885 Patent”), which issued on June 29, 2004. The only feature added by Flick to the ’278 Patent is a vehicle tracking unit, which is disclosed in the parent of the ’278 Patent, U.S. Patent No. 6,606,561 (the “’561 Patent”).

Flick did not file the ’278 Patent application as a continuation of the ’885 Patent family because the time to file continuations lapsed. Instead, Flick filed the ’278 Patent application as a continuation-in-part to an entirely different patent family unrelated to any MVCC feature. Flick copied the disclosures from the ’885 Patent and incorporated them almost verbatim into the ’278 Patent’s specification and claims, including the figures from the ’885 Patent (with insubstantial modifications), as shown below:



As shown in the figures above, the MVCC (depicted with a red box), the vehicle data bus (depicted in green), the downloading interface (depicted with an orange box) and the wireless communication device (depicted in blue) were all taken from the '885 Patent and copied into the '278 Patent. Ex. 1002, ¶¶ 69-70.

Flick's actions are inconsistent with the purpose of a CIP, which is to add new subject matter to an existing family, not to revive a lapsed family by incorporating its subject matter into a CIP of another family. *See* MPEP 201.08 ("A continuation-in-part is an application filed during the lifetime of an earlier nonprovisional application, repeating some substantial portion or all of the earlier nonprovisional

application and adding matter not disclosed in the said earlier nonprovisional application.”) (emphasis added).

The '885 Patent is Section 102(b) prior art to the '278 Patent. The '561 Patent is also Section 102(b) prior art to the '278 Patent because the '278 claims are only entitled to the priority of the CIP filing date. *In re Chu*, 66 F.3d 292, 297 (Fed. Cir. 1995) (finding parent of CIP is prior art where the CIP added new matter). During reexamination of the '278 Patent, the Examiner made specific findings in the Order Granting the Reexamination and again in the Examiner's Non-Final Office Action that the '278 Patent added new matter and is only entitled to the priority date of July 3, 2007, the application date of the '278 Patent. Omega did not challenge the Examiner's priority date determination at any time during the reexamination including in its appeal to the Board, and is estopped from disqualifying the prior art in this Petition based on any priority date challenge. *See* Ex. 1029, *In Ex Parte A. James Smith, Jr.* (“*In Re Smith*”), 2010 WL 3269939 (BPAI August 17, 2010).

Skilled artisans would have been motivated to add a vehicle tracking unit from the '561 Patent to the MVCC system of the '885 Patent at least because both patents are directed to the same problem of deterring vehicle theft using a vehicle security system. Ex. 1002, ¶¶ 74, 75. *In re Icon Health*, 496 F.3d 1374, 1380 (Fed. Cir. 2007) (“One skilled in the art would naturally look to prior art addressing the same problem

as the invention at hand.”). A tracking unit for a stolen vehicle would be an important consideration for any vehicle security system. Ex. 1002, ¶ 75. Indeed, the ’885 Patent already discloses using sensors to monitor movement of the vehicle as a deterrent to vehicle theft. Ex. 1002, ¶ 76. Thus, the prospect of incorporating a vehicle tracking unit from the ’561 Patent would have motivated skilled artisans to include it for the vehicle security system disclosed in the ’885 Patent. Ex. 1002, ¶ 76.

Additionally, the ’278 Patent is anticipated by Lewis, which was not art of record in the ’278 Patent’s prosecution and has not previously been raised in any challenge to the ’278 patent. Lewis is directed to a multi-vehicle compatible tracking system and discloses all components of the ’278 Patent. Ex. 1002, ¶ 81. Specifically, Lewis discloses a controller that is compatible with different vehicle manufacturers, makes and models. Ex. 1002, ¶ 82. The system in Lewis monitors the diagnostics of vehicles within a peer-to-peer network and tracks the location of the vehicles using a GPS receiver. Ex. 1002, ¶ 81. The diagnostics and location of the vehicles are then transmitted over a wireless communication network to other vehicles within the peer network and downloaded onto an MVCC where a receiving party can decide how to respond to the information accordingly. Ex. 1002, ¶ 84. All elements of the ’278 Patent are therefore anticipated by Lewis.

II. GROUND

Verizon requests review and cancellation of the challenged claims on the following grounds:

Ground	Claims	Basis
Ground 1	1-22	35 U.S.C. § 103(a) based on U.S. Patent No. 6,756,885 to Flick (“’885 Patent”) (Ex. 1003) and U.S. Patent No. 6,606,561 to Flick (“’561 Patent”) (Ex. 1004)
Ground 2	1-6, 8, 10-14, 16, 18-19, 21	35 U.S.C. § 102(a) based on US Patent Application Publication No. 2006/0161315 (“Lewis”) (Ex. 1005)
Ground 2a	7, 9, 15, 17, 20, 22	35 U.S.C. § 103(a) based on Lewis and U.S. Patent Application Publication No. 2003/0182003 (“Underdahl”) (Ex. 1006)

The ’278 Patent is subject to the pre-AIA provisions of 35 U.S.C. §§ 102 & 103.

III. THE ’278 PATENT’S PRIORITY DATE IS NO EARLIER THAN JULY 3, 2007.

The ’278 Patent, entitled “Vehicle Tracking Unit with Downloadable Codes and Associated Methods,” was filed on July 3, 2007 as Ser. No. 11/773,272 and issued on October 4, 2011. The ’278 Patent is a continuation-in-part (“CIP”) of U.S. Patent No. 7,720,597. Although the ’278 Patent application claims priority to the ’561 Patent, and several provisional applications, the priority date that the ’278

claims are entitled to is no earlier than July 3, 2007 because the Patent Office has previously decided this issue and Patent Owner did not appeal this decision, which has therefore been waived.¹

A. Omega is Estopped From Disqualifying the Prior Art in this Petition.

A patent owner is estopped from disqualifying intervening art of a CIP and its parent where the patent owner failed to challenge an Examiner's priority date findings and "forwent opportunities to persuade the Examiner that there may be support for the contested subject-matter in an ambiguous disclosure that otherwise might have sufficed to obtain an earlier priority date." Ex. 1029, *In re Smith*, 2010 WL 3269939, at *6. An estoppel is especially warranted because "it would be reasonable for a competitor to believe that the applicant had disavowed priority ... based on the original Examiner's priority findings." *Id.*

In a reexamination of the '278 Patent (Control No. 90/014,675), the Examiner made specific findings in the 03-25-2021 Order Granting the Reexamination and again in the 06-21-2021 Non-Final Office Action stating that the '278 Patent is only

¹ The '278 Patent is a CIP application of Ser. No. 11/076,259 (Ex. 1016), which claims priority to a continuation Ser. No. 10/383,496 (Ex. 1017), which claims priority to a continuation Ser. No. 09/859,972 (Ex. 1018). The '278 Patent claims priority to Provisional Application Nos. 60/264,811 (Ex. 1019); 60/258,005 (Ex. 1020); 60/251,552 (Ex. 1021); 60/252,125 (Ex. 1022); 60/236,890 (Ex. 1023); 60/246,463 (Ex. 1024); 60/222,777 (Ex. 1025) and 60/205,178 (Ex. 1026).

entitled to the priority date of July 3, 2007, the application date of the '278 Patent. Ex. 1010, pp. 5-6; Ex. 1011, pp. 5-7. The Examiner identified specific claim limitations in each independent claim of the '278 Patent that were not disclosed in any earlier application or provisional cited within the '278 priority chain (including the '561 Patent). According to the Examiner:

The Office notes that each of the independent claims of the '278 patent includes *several features that were not disclosed in the earlier cited applications*, including the fact that the tracking unit and its components are *multi-vehicle compatible*, that the vehicle includes a *vehicle data bus* that extends throughout the vehicle to facilitate communication between the controller and at least one vehicle device using at least one corresponding vehicle device code, and that the tracking unit includes a *downloading interface* for permitting downloading of enabling data related to the at least one corresponding vehicle device code.

Since each of the independent claims of the '278 patent includes subject matter not supported by its parent application, the patent is entitled only to a priority date of July 3, 2007, the actual application date of the '272 application.

An estoppel is warranted because in the 08-23-2021 Response to the Examiner's Non-Final Office Action, Omega did not challenge the Examiner's

priority date finding. Ex. 1013. On April 1, 2022, Omega appealed to the Board, and again did not challenge the Examiner's priority date finding. Ex. 1014.

B. The '278 Patent Disclosures Came Directly from the '885 Patent and Was Incorporated as New Matter.

The '278 Patent describes a vehicle system that communicates with different vehicles using a MVCC, a vehicle data bus, a downloading interface, a wireless communications device, and a vehicle position determining device. Ex. 1001, 2:56-61; 3:37-41; Ex. 1002, ¶ 52. These concepts were borrowed from the '885 Patent and added as new matter in the '278 Patent. Ex. 1001, Fig 10, 23:41-54.

The '885 Patent, entitled "Multi-Vehicle Compatible Control System for Reading from a Data Bus and Associated Methods," was filed on May 31, 2000 and issued on June 29, 2004. The '885 Patent is therefore prior art under pre-AIA 35 U.S.C. § 102(b).

The '885 Patent is directed to a multi-vehicle compatible system. Ex. 1002, ¶ 78[1d]. The '885 Patent Abstract states: "***The multi-vehicle compatible controller is*** for storing a set of device codes for a given vehicle device for a plurality of different vehicles, for reading a device code from a data communications bus, and ***for determining a match between a read device code and the stored device codes to thereby provide compatibility with a plurality of different vehicles.***" Ex. 1003

(emphasis added). This passage from the '885 Patent matches the claim language in the '278 Patent.

The concept of a downloading interface was also borrowed from the '885 Patent and added as new matter into the '278 Patent. The '885 Patent discloses downloading data from the bus interface to the MVCC and incorporates by reference the entirety of U.S. Patent Nos. 6,011,460 ("'460 Patent") and 6,812,829 ("'829 Patent"), which describe a controller that downloads enabling data from a downloading device. Ex. 1007 ('460), 3:56-61; Ex. 1008 ('829), 10:43-60; Ex 1002, ¶ 65.

A wireless communications device is also described in the '885 Patent, which discloses a transmitter and a receiver that communicate over a cellular network or via satellite. Ex. 1002, ¶ 66; Ex. 1003 ('885) 3:6-8; 5:45-50. The '278 Patent also borrowed the same figures from the '885 Patent and incorporated them into the '278 Patent with minor changes, as described in Section I.

The vehicle unit of the '278 Patent includes a vehicle position determining device which may be provided by a GPS receiver or other types of transmissions. *Id.*, 5:20-26; Ex. 1002, ¶ 53. The '885 Patent also describes a vehicle position determining device by disclosing sensors that detect the movement of a vehicle: "[v]ehicle security systems use vehicle sensors that may detect . . . movement of the

vehicle.” Ex. 1003 (’885), 1:23-26; Ex. 1002, ¶ 67. The ’885 Patent also discloses “ultrasonic and microwave motion detectors”, and “radar sensors may be used to monitor the area proximate the vehicle.” Ex. 1003 (’885) 1:29-32; Ex. 1002, ¶ 67. A POSITA would understand at the time of the claimed invention that GPS, radar sensors and ultrasonic sensors existed for determining the position of a vehicle or relative position of a vehicle. Ex. 1002, ¶ 68. For example, radar sensors have widely been used since the early 20th century to track the position and velocity of a moving object. *Id.* Since at least 1990, automobile manufacturers like GM had implemented radar sensors into its vehicles to determine the position of a vehicle relative to other moving vehicles and objects. *Id.* Ultrasonic sensors similarly have been used as a position determining device to measure the distance with objects within close range by transmitting high-frequency sound waves. *Id.* For example, ultrasonic sensors have been used for parking applications to detect open parking slots, detect conditions around the vehicles for automatic parking functions (sensor to detect the proximity of objects or other cars), or in V2X (Vehicle to Other items communications, i.e., infrastructure) to sense vehicle location relative to devices and pedestrians to alert road hazards warnings. *Id.* A POSITA would know at the time of the claimed invention that a GPS receiver, and radar sensor or ultrasonic sensor could be used to determine a vehicle’s relative position and velocity (speed), and

that any of these technologies were viable options to use for vehicle safety applications, including e.g., connected vehicle applications such as vehicle platooning. *Id.*

To the extent the '885 Patent does not explicitly disclose a vehicle position determining device, the '561 Patent, which is also 102(b) prior art to the '278 Patent, does. Ex. 1002, ¶ 72. The '561 Patent was filed on May 17, 2001, and issued on August 12, 2003. The '561 Patent is prior art under 35 U.S.C. § 102(b). In *In re Chu*, 66 F.3d 292, 297 (Fed. Cir. 1995), the Federal Circuit addressed similar facts in which the Court concluded that a parent was prior art to a CIP because the CIP added new matter and was not entitled to the priority date of the parent. Similarly, the '278 Patent added new matter that was borrowed from the '885 Patent (e.g., MVCC, downloading interface, vehicle data bus). Accordingly, the '561 Patent is 102(b) prior art.

IV. OVERVIEW OF THE '278 PATENT

A. The Claims of the '278 Patent

The '278 Patent has 22 claims, of which claims 1, 13 and 18 are independent. Independent system claim 1 recites:

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:

a vehicle position determining device;

a wireless communications device;

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

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

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.

Claim 13 includes every element of Claim 1, except that it adds the element of the “downloading interface comprising a connector for temporary connection to a downloading device.”

Claim 18 includes every element of Claim 1, except that it adds the element of the “downloading interface comprising a wireless receiver for temporary connection to a downloading device.” This element came verbatim from the ’885 Patent.

B. The Prosecution of the '278 Application

During prosecution of the '278 Patent application, Flick repeatedly emphasized the novelty of the MVCC element in distinguishing the claimed invention from the prior art. The MVCC was a key element copied from the '885 Patent and added as new matter into the '278 Patent.

Of the three non-final office actions issued by the Examiner, the first non-final office action was a restriction requirement only. In the second non-final office action ("06-22-2010 Office Action") (Ex. 1009, p. 150), and third non-final office action ("01-05-2011 Office Action") (Ex. 1009, p. 176), the Examiner rejected every claim on obviousness grounds. In responding to the 06-22-2010 Office Action, Flick emphasized that the prior art failed to disclose the MVCC:

Applicant submits that Brickmeyer et al. fails to disclose **the multi-vehicle compatible controller** ... Accordingly, because of such deficiency, Applicant submits that independent Claim 1 is patentable over the prior art. Applicant submits that companion independent Claims 13 and 18 are similar to Claim 1 and are patentable for **similar reasoning**. Their respective dependent claims, which recite yet further distinguishing features, are also patentable over the prior art and require no further discussion herein.

Ex. 1009, p. 168 (emphasis added).

Similarly, in responding to the 01-05-2011 Office Action, Flick distinguished the prior art because it failed to disclose the MVCC feature:

the proposed prior art combination fails to disclose the multi-vehicle compatible controller 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 vehicle, as recited by independent claim 1, for example.

Ex. 1009, p.195 (emphasis in original).²

Flick overcame the Examiner's rejections by distinguishing the prior art based on the MVCC element. On June 28, 2011, the Examiner issued a Notice of Allowance.

V. CLAIM CONSTRUCTION

In an *inter partes* review, claims are to be “construed using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. § 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” 37 C.F.R. § 42.100(b).

² In responding to the 01-05-2011 Office Action, Flick further added that the connector for temporary connection to a downloading device (Claim 13) and a wireless receiver for temporary connection to a downloading device (Claim 18) were not disclosed in the cited art. Ex 1009 p. 195. Ex. 1002 ¶ 78[4], 78[13f], 92[1e] and 92[4], the downloading devices are disclosed in the prior art.

The '278 claims have not been construed in the co-pending litigation, and the claim construction process has not begun, but in prior litigation, Omega has taken positions on the meaning of key claim terms.

Independent claims 1, 13 and 18 are directed to “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.” Petitioner seeks a construction of the claim term “*enabling data*.”

The specification of the '278 Patent does not define the term “*enabling data*.” In a lawsuit filed against CalAmp Corp., Omega construed “*enabling data*” to mean “data related to the at least one corresponding vehicle device code for use by said multi-vehicle compatible controller.” Ex. 1027, pp. 13-14, 18. The Court adopted Omega’s proposed construction. Ex. 1028, pp. 22-23.

For purposes of this Petition, Verizon will apply Omega’s construction of “*enabling data*” to mean “data related to the at least one corresponding vehicle device code for use by said multi-vehicle compatible controller.”

No other terms are offered for construction.

VI. THE CHALLENGED CLAIMS ARE UNPATENTABLE

A. The Legal Standard for Invalidity

A patent is invalid as anticipated if the invention was patented or described in a printed publication in this or a foreign country, before the invention thereof by the

applicant for patent. 35 U.S.C. § 102 (pre-AIA). In order to anticipate the claimed invention, a prior art reference must “disclose all elements of the claim within the four corners of the document.” *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008).

A patent may also not be obtained if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. 35 U.S.C. § 103 (a) (Pre-AIA). The ultimate determination whether a patent claim is invalid for obviousness is a question of law based on underlying factual determinations. *Kinetic Concepts, Inc. v. Smith & Nephew, Inc.*, 688 F.3d 1342, 1360 (Fed. Cir. 2012). The initial factual inquiries to determine obviousness include: (1) the scope and content of the prior art; (2) the differences between the claimed invention and the prior art; and (3) the level of ordinary skill in the pertinent art. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966).

A patent claim is invalid for obviousness if a person of ordinary skill in the art would have recognized the problem to be solved and would have had a reasonable expectation of success in making the claimed invention in view of a combination of the available prior art and the knowledge of the person of ordinary skill. In *KSR*, the

Supreme Court reaffirmed that “[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007).

A motivation to combine prior art references “can come from the knowledge of those skilled in the art, from the prior art reference itself, or from the nature of the problem to be solved.” *See Acoustic Tech., Inc. v. Itron Networked Sols, Inc.*, 949 F.3d 1366, 1375 (Fed. Cir. 2020). “One skilled in the art would naturally look to prior art addressing the same problem as the invention at hand.” *In re Icon Health*, 496 F.3d 1374, 1380 (Fed. Cir. 2007).

B. Person of Ordinary Skill in the Art

A person of ordinary skill in the art of the ’278 Patent as of its filing date would have been someone knowledgeable in mobile computing systems and location technology. Ex. 1002, ¶ 39. That person would have had either (1) a Bachelor of Science degree in Electrical Engineering, Mechanical Engineering, Automotive Engineering, Computer Engineering, or an equivalent field, with at least two years of academic or industry experience in the automotive industry; or (2) a Master of Science degree in Electrical Engineering, Mechanical Engineering, Automotive Engineering, Computer Engineering, or an equivalent field, with at least a year of academic or industry experience in the same field. Ex. 1002, ¶ 40. With more

education, for example, postgraduate degrees and/or study, less experience is needed to attain an ordinary level of skill in the art. Similarly, more experience can substitute for formal education. *Id.*

C. Detailed Description of Grounds for Rejection

1. Ground 1 – Flick ’885 Patent + Flick ’561 Patent

Claims 1-22 are obvious in view of Flick ’885 Patent in combination with Flick ’561 Patent and/or the knowledge of a person of skill in the art.

The ’885 and ’561 Patents are prior art under pre-AIA 35 U.S.C. § 102(b) as discussed in Section V.B. Section V.B. includes an overview of the ’885 and ’561 disclosures.

a. Motivation to Combine

A POSITA would be motivated to combine the teachings of the ’885 and the ’561 patents to produce the inventions claimed in the ’278 patent because there are several interrelated teachings, motivations and suggestions in each of these references. Ex. 1002, ¶ 74. First, both the ’885 and the ’561 patents are directed vehicle security systems, and both address similar problems with vehicle security systems. Ex. 1002, ¶ 75. For example, the ’561 patent states that “should a vehicle be stolen, it would be beneficial to know the vehicle’s location so that authorities could be promptly and accurately directed to retrieve the vehicle.” Ex. 1004, 1:25-

28; Ex. 1002, ¶ 75. The '885 patent similarly states that: “[v]ehicle security systems are widely used to deter vehicle theft.” Ex. 1003, 1:21-22.

Second, the '885 patent discusses vehicle motion sensors that teach toward using a vehicle tracking unit discussed in the '561 patent. Ex. 1002, ¶ 76. In particular, the '885 patent discusses the use of sensors to detect “movement of the vehicle,” (Ex. 1003, 1:27-28), and also discloses “radar sensors may be used to monitor the area proximate the vehicle.” Ex. 1003, 1:32-33; Ex. 1002, ¶ 76. These teachings of sensors to detect movement would motivate a POSITA to use a tracking unit, including a GPS sensor, as disclosed in the '561 Patent. Ex. 1002, ¶ 76. The '561 disclosure similarly teaches toward the '885 Patent because of its objective to “permit ready interface to devices in the vehicle, such as those devices which may be part of an existing vehicle security system.” *Id.*, 2:16-18; Ex. 1002, ¶ 76. The prospects of incorporating a vehicle tracking unit from the '561 Patent would have motivated skilled artisans to include it for the vehicle security system disclosed in the '885 Patent. Ex. 1002, ¶ 76.

Third, a POSITA would be motivated to combine the '885 and '561 patents to develop a system that could work with multiple vehicle types because common sense and market forces would teach them to develop a system that could be implemented in any vehicle type. Ex. 1002, ¶ 77.

b. Claim Chart for Ground 1

U.S. Patent No. 8,032,278	Flick '885 Patent + Flick '561 Patent
[1pre] 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:	The '885 Patent discloses a multi-vehicle compatible tracking unit for a vehicle comprising a vehicle data bus extending throughout the vehicle. For example, Figure 1 of the '885 Patent (which appears to be very similar to Figure 10 of the '278 Patent) shows a “vehicle data communications bus” extending throughout the vehicle by connecting to various vehicle devices (“sensors, actuators, etc.”) and vehicle controllers. Figures 3, 4, 7 and 8 of the '885 Patent have a similar disclosure. FIG. 1 “[I]t is therefore an object of the invention to provide a remote control system and related method for <i>a vehicle comprising a data communications bus</i> and at least one vehicle device connected to the data communications bus, and <i>wherein the system is adapted to operate with different vehicles.</i>” Ex. 1003 ('885), 2:67-3:1-4 (emphasis added).

	As shown above, the '885 Patent inherently discloses a multi-vehicle compatible tracking unit because one of the sensors disclosed is to “detect movement of the vehicle.” <i>Id.</i>, 1:28-29. In addition to “ultrasonic and microwave motion detectors”, the '885 Patent also discloses that “radar sensors may be used to monitor the area proximate the vehicle” (<i>Id.</i>, 1:29-32). A POSITA would understand that radar sensors have long been used to track the position and velocity of a moving object, and are often used for tracking of terrestrial and airborne vehicles. To the extent that the '885 Patent does not explicitly disclose a tracking unit, the '561 Patent discloses and claims a vehicle tracking unit. “[I]t is therefore an object of the invention to provide <i>a vehicle tracking unit</i> and related methods that permit ready interface to devices in the vehicle . . .” Ex. 1004 ('561), 2:13-17 (emphasis added). Per Section VIII.C.1.a., a POSITA would be motivated to combine the disclosure of the '885 Patent with the '561 Patent at least because both patents relate to vehicle security systems. In addition, the '885's teaching of sensors to detect movement would motivate a POSITA to use the tracking unit, including a GPS sensor, as disclosed in the '561 Patent. The '561 disclosure similarly teaches toward the '885 Patent because of its objective to “permit ready interface to devices in the vehicle, such as those devices which may be part of an existing vehicle security system.” <i>Id.</i>, 2:16-18. Ex. 1002, ¶ 78 [1pre].
[1a] a vehicle position determining device;	The '561 Patent discloses a vehicle position determining device. For example, the '561 Patent states:

	“The vehicle position determining device 42 may be provided by a GPS receiver, for example. The GPS receiver typically operates by receiving multiple signals from spaced apart satellites 38 as will be appreciated by those skilled in the art.” Ex. 1004 (’561), 4:59-63. “In other embodiments, the vehicle position determining device 42 may be provided based upon communications with the cellular telephone network, or based upon other satellite transmissions, for example. As a particular example, time of arrival techniques are available based upon multiple reception paths to determine position via the cellular telephone network as will be appreciated by those skilled in the art.” <i>Id.</i>, 4:64-67-5:1-4. The ’885 Patent also likely discloses a vehicle position determining device by disclosing sensors that detect the movement of a vehicle: Vehicle security systems use vehicle sensors that “may detect . . . movement of the vehicle.” Ex. 1003 (’885), 1:23-26.
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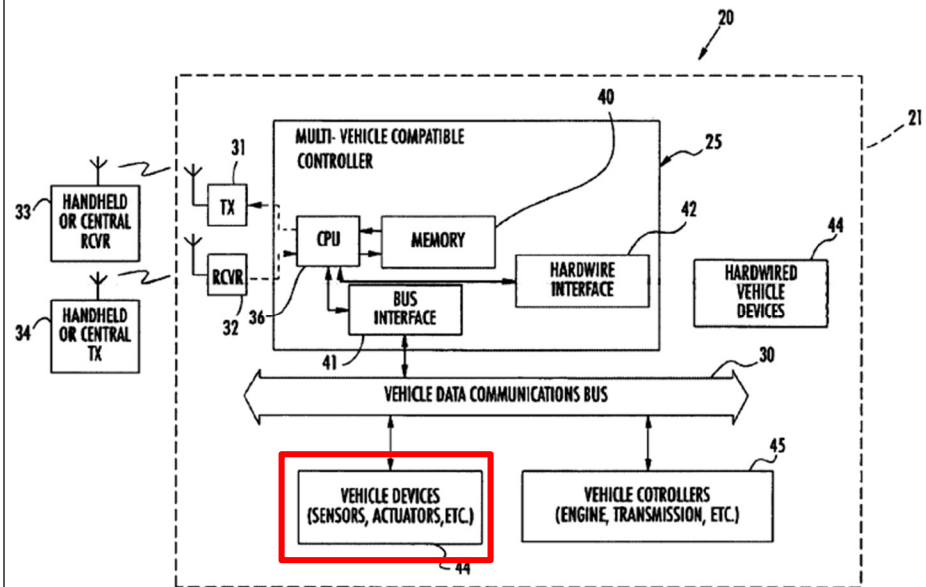


FIG. 1

The '885 Patent also discloses “ultrasonic and microwave motion detectors”, and “radar sensors may be used to monitor the area proximate the vehicle.” Ex. 1003 ('885), 1:29-32. A POSITA would understand that radar sensors have long been used to track the position and velocity of a moving object and are often used for tracking of terrestrial and airborne vehicles.

Ex. 1002, ¶ 78[1a].

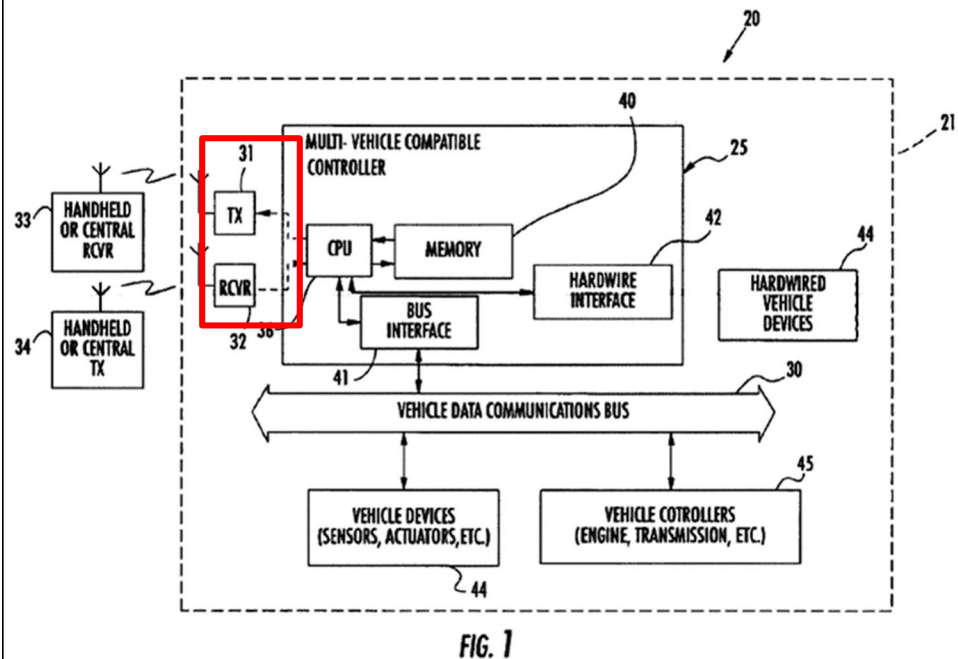
[1b] a wireless communications device;

The '885 Patent addresses problems with “hardwired” vehicle security systems (1:56-59) and discloses as “an object of the invention to provide a remote control system and related method for a vehicle comprising a data communications bus and at least one vehicle device connected to the data communications bus, and wherein the system is adapted to operate with different vehicles.” Ex. 1003 ('885), 2:66-3:4.

The '885 explicitly discloses a wireless communications device as shown in the TX in box 31 and RCVR in box 32 of Figure 1, which is at the vehicle. The '885 Patent also states:

The “control system include[es] a transmitter and a receiver for receiving signals from the transmitter.”
Ex. 1003 ('885), 3: 6-8.

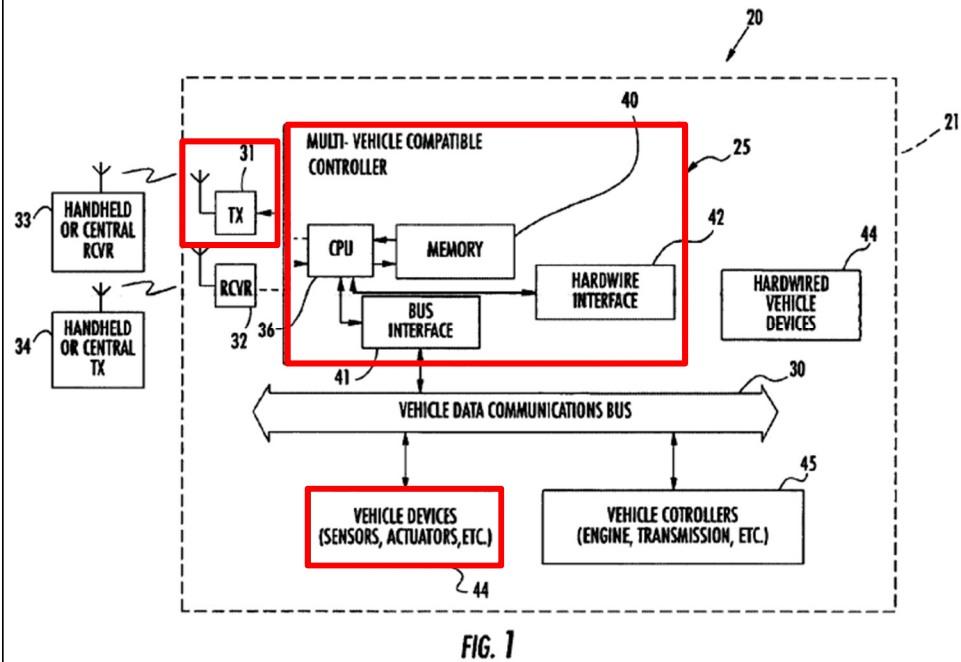
“[T]he transmitter may include at least a central station transmitter, and ***the receiver is at the vehicle.*** The central station transmitter may be part of a satellite or cellular telephone network.” *Id.*, 3:55-56 (emphasis added); 5:58-62.



The '885 Patent further states that the receiver at the vehicle is connected via a “direct radio frequency link” or “via other communications infrastructure, such as via satellite, or cellular communications, via the public switched telephone network

	(PSTN) and/or over the world wide web or Internet, as will be appreciated by those skilled in the art” <i>Id.</i>, 5:42-50. The ’561 Patent similarly discloses a wireless communications device. Ex. 1004 (’561), Claim 1, 5:8-10, 20-25. <i>See</i> Ex. 1002 ¶ 78[1b].
[1c] a multi-vehicle compatible controller for cooperating with said vehicle position determining device and said wireless communications device to send vehicle position information;	The ’885 Patent discloses an MVCC for cooperating with a vehicle position determining device and a wireless communications device to send vehicle position information. The ’885 Patent states: The “control system include[s] a transmitter and a receiver <i>for receiving signals from the transmitter, and a multi-vehicle compatible controller cooperating with the transmitter and receiver.</i>” <i>Id.</i>, 3:6-9 (emphasis added).

“The data bus 30 also illustratively connects one or more of vehicle security sensors or devices 44 *d*, vehicle remote keyless entry sensors or devices, and vehicle remote start sensors or devices 44 *f* to the multi-vehicle compatible controller 25.” Ex. 1003, 8:50-54.

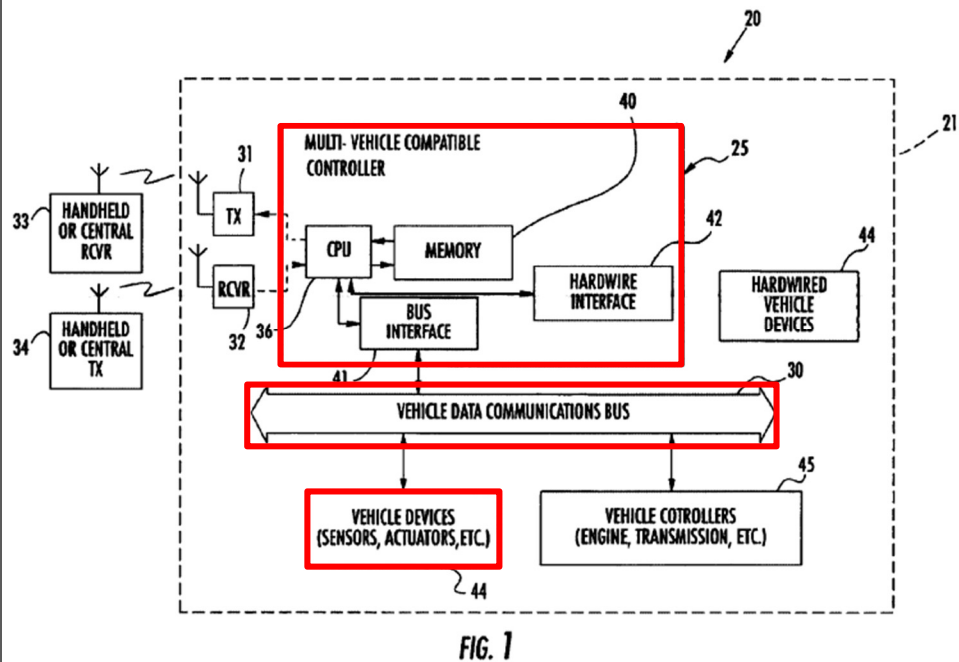


As discussed above in [1pre], the '885 Patent inherently discloses a multi-vehicle compatible tracking unit because one of the sensors disclosed is to “detect movement of the vehicle.” *Id.*, 1:28-29. In addition to “ultrasonic and microwave motion detectors”, the '885 Patent also discloses that “radar sensors may be used to monitor the area proximate the vehicle.” *Id.*, 1:29-32. A POSITA would understand that radar sensors have long been used to track the position and velocity of a moving object, and are often used for tracking of terrestrial and airborne vehicles.

The '885 Patent also states that: “as will be appreciated by those of skill in the art, the vehicle 21 includes a number of electrical/electronic devices that can be controlled and/or the status thereof read via the data communications bus 30.” Ex. 1003, 6:41-44. A POSITA would understand that a tracking

	unit is one of these devices, especially in light of the disclosure about radar sensors, and that the tracking unit sends vehicle position information to the MVCC via the data bus. The '561 Patent also discloses a controller for cooperating with said vehicle position determining device and said wireless communications device to send vehicle position information. <i>See</i> Ex. 1004 ('561), Claim 2 (“A vehicle tracking system according to claim 1 wherein said controller also cooperates with said vehicle position determining device and said wireless communications device to send vehicle position messages.”). A POSITA would understand that a MVCC is a type of controller for use in the claimed vehicle tracking system of the '561 Patent. Ex. 1002, ¶ 78[1c].
[1d] 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	The '885 Patent discloses a MVCC 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: <i>“The multi-vehicle compatible controller is for storing a set of device codes for a given vehicle device for a plurality of different vehicles, for reading a device code from a data communications bus, and for determining a match between a read device code and the stored device codes to thereby provide compatibility with a plurality of different vehicles.”</i> Ex. 1003 ('885), Abstract (emphasis added). The above disclosure of the '885 Patent – in addition to matching the language of claim 1 of the '278 Patent – is also very similar to the “new matter” added to the '278 Patent: “The multi-vehicle compatible controller may 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.” Ex. 1001, Abstract. The disclosure of the ’885 Patent is even more explicit than the disclosure of the ’278 Patent in terms of how the MVCC is coupled to the vehicle data bus and communicates with the at least one vehicle device using at least one corresponding vehicle device code from a plurality thereof for different vehicles: <i>“[T]he multi-vehicle compatible controller may comprise a multi-vehicle compatible adaptor connected to the data communications bus for determining the match between the read device code and the stored device codes and generating an output signal responsive thereto, and a controller connected to the multi-vehicle compatible adaptor and being responsive to output signals therefrom.”</i> Ex. 1003 (’885), 3:38-45 (emphasis added). <i>“The data bus 30 also illustratively connects one or more of vehicle security sensors or devices 44d, vehicle remote keyless entry sensors or devices, and vehicle remote start sensors or devices 44 f to the multi-vehicle compatible controller 24.”</i> <i>Id.</i>, 6:50-54 (emphasis added).
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See Ex. 1002 ¶ 78[1d].

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

The '885 Patent discloses a downloading interface for permitting downloading enabling data related to the at least one corresponding vehicle device code for use by the MVCC in three separate ways. First, the '885 Patent discloses a downloading interface by describing the downloading function of the MVCC with the vehicle's bus interface:

“the multi-vehicle compatible controller 25 is for storing a set of device codes for a given vehicle device for a plurality of different vehicles, for reading a device code from the data communications bus 30, and for determining a match between a read device code and the stored device codes to thereby provide compatibility with a plurality of different vehicles. Such an arrangement provides for a relatively simple and straightforward approach to interface with a vehicle having a data communications bus 30.” Ex. 1003 ('885), 9:1-10.

	A POSITA would understand the above disclosure along with the “bus interface” disclosed at column 6, lines 33-40 of the ’885 Patent to be a downloading interface because the device codes read from the data communication bus must be downloaded first in order for the controller to perform the function of matching the read codes to any stored device codes. Second, the ’885 Patent also discloses the claimed downloading interface by incorporating by reference the entirety of U.S. Patent No. 6,011,460 (“’460 Patent”) at 10:10-17. The ’460 Patent states: “The remote control system also includes <i>desired signal enabling means for causing the vehicle function controller to operate using a desired set of signals for a desired vehicle from a plurality of possible sets of digital signals for different vehicles, as may be downloaded from a downloading device temporarily connected thereto.</i>” Ex. 1007 (’460), 3:56-61 (emphasis added). Third, the ’885 Patent also incorporates by reference in their entirety two applications referred to by attorney docket number at column 10, line 62 – column 11, line 4. These correspond to issued U.S. Patent Nos. 6,346,876 and 6,812,829 (“’829 Patent”). The ’829 Patent also discloses the claimed downloading interface: “The multi-vehicle compatibility may be provided by equipping a remote start controller 55 with <i>a desired signal enabling function 57. This function or feature is for enabling operation using a desired set of signals for a corresponding desired vehicle</i> from a plurality of sets of signals for different vehicles to thereby provide compatibility with a plurality of different vehicles.” Ex. 1008 (’829), 10:30-36 (emphasis added).
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	“The desired signal enabling means 57 includes a signal set memory 81 operatively connected to the schematically illustrated download learning means 84. The <i>download learning means</i> may include an interface connected to the illustrated vehicle cellular telephone 86 <i>to permit learning or downloading of the desired signal set</i> from a remote or central monitoring and control station 88, for example.” <i>Id.</i>, 11:50-57 (emphasis added). <i>See</i> Ex. 1002 ¶ 78[1e].
[2] The multi-vehicle compatible tracking unit according to claim 1 wherein said downloading interface comprises a wired signal downloading interface.	The ’885 Patent discloses a downloading interface that comprises a wired signal downloading interface: <i>“The multi-vehicle compatible controller 25 also may optionally include a hardware interface 42 which may be directly connected to one or more vehicle devices 44.”</i> Ex. 1003 (’885), 6:16-18. The ’885 Patent also discloses: “Those of skill in the art will recognize other devices 44 that may be directly connected to the multi-vehicle compatible controller 25 via the hardwire interface 42. The hardwire interface 42 may included circuitry for sending signals to or reading signals from the vehicle devices 44 as will be appreciated by those skilled in the art.” Ex. 1003 (’885), 6:24-32) The ’460 Patent, which is incorporated by reference in the ’885 Patent, also discloses downloading interface comprising a wired signal downloading interface: “Turning now additionally to FIG. 6B, another variation of programming, learning or downloading of the download learning means 84 is explained. In this

	variation <i>the download learning means 84 is temporarily connected to a computer, such as the illustrated portable laptop computer 115. The connection, may be via a wire cable</i> or wireless communications link as will be readily understood by those skilled in the art.” Ex. 1007 (’460), 7:49-56) (emphasis added). The ’829 Patent, which is incorporated by reference in the ’885 Patent, also discloses a downloading interface comprising a wired signal downloading interface. Ex. 1008 (’829), Fig. 10, 11:66-12:6. See Ex. 1002 ¶ 78[2].
[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.	The ’885 Patent discloses a downloading interface with a temporary connection to a downloading device: “The multi-vehicle compatible controller 25’ may also include an optional hardwire interface” Ex. 1003 (’885), 7:19-20. The ’460 Patent, which is incorporated by reference in the ’885 Patent, also discloses a wired signal downloading interface comprising a connector for temporary connection to a downloading device: <i>“the download learning means 84 is temporarily connected to a computer, such as the illustrated portable laptop computer 115. The connection, may be via a wire cable</i> or wireless communications link as will be readily understood by those skilled in the art.” Ex. 1007 (’460), 7:49-56 (emphasis added). The ’829 Patent, which is incorporated by reference in the ’885 Patent, also discloses a wired signal downloading interface comprising a connector for temporary connection to a downloading device. Ex. 1008 (’829), 11:66-12:6.

	<i>See</i> Ex. 1002 ¶ 78[3].
[4] The multi-vehicle compatible tracking unit according to claim 1 wherein said downloading interface comprises a wireless signal downloading interface.	The '885 Patent discloses a wireless signal downloading interface where data from a remote transmitter can be downloaded to a receiver at the vehicle via the wireless communication network: “The communications from the remote transmitter 34 to the receiver 32 at the vehicle is typically a direct radio frequency link, that is, there is no intervening communications links. However, in other embodiments, the remote transmitter 34 may indirectly communicate with the receiver 32 via other communications infrastructure, such as via satellite, or cellular communications, via the public switched telephone network (PSTN) and/or over the world wide web or Internet.” Ex. 1003 ('885), 5:41-49. The '460 Patent, which is incorporated by reference in the '885 Patent, discloses a downloading interface comprising a wireless signal downloading interface: “The download learning means 84 may include an interface connected to the illustrated vehicle cellular telephone 86 to permit learning or downloading of the desired signal set from a remote or central monitoring and control station 88, for example. The desired signal set may also alternatively be learned from the central station 88 through the satellite link provided by the satellite 110 and vehicle mounted satellite receiver 111 and associated antennas.” Ex. 1007 ('460), 7:32-43. “the download learning means 84 is temporarily connected to a computer, such as the illustrated portable laptop computer 115. The connection, may be via a wire cable or wireless communications link as

	will be readily understood by those skilled in the art.” <i>Id.</i>, 7:49-56. See also Figs. 6A-6B. The ’829 Patent, which is incorporated by reference in the ’278 Patent, also discloses a downloading interface comprising a wireless signal downloading interface. Ex. 1008 (’829), Figs. 9-10, 11:49-12:6. <i>See</i> Ex. 1002 ¶ 78[4].
[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.	The ’460 Patent, which is incorporated by reference in the ’278 Patent, discloses a wireless signal downloading interface comprising a wireless receiver for temporary connection to a downloading device: “The desired signal set may also alternatively be learned from the central station 88 through the satellite link provided by the satellite 110 and vehicle mounted satellite receiver 111 and associated antennas.” Ex. 1007 (’460), 7:39-43. The ’829 Patent, which is incorporated by reference in the ’278 Patent, also discloses a wireless receiver for temporary connection to a downloading device. Ex. 1008 (’829) 11:57-61. <i>See</i> Ex. 1002 ¶ 78[5].
[6] The multi-vehicle compatible tracking unit according to claim 1 wherein the corresponding at least one vehicle	The ’885 Patent discloses a corresponding at least one vehicle code is for reading from a vehicle device: “The multi-vehicle compatible controller 25 also illustratively includes a bus interface 41 cooperating with the CPU 36 <i>to perform at least one of reading signals from the data communications bus 30</i>, or generating signals on the data bus.” Ex. 1003 (’885), 6:32-36 (emphasis added).

code is for reading from the at least one vehicle device.

“The compatibility to read a code and determine the message or content thereof for a vehicle device from among a plurality of vehicles can be used alone or in combination with the compatibility for writing or generating signals on the bus described above. More particularly, the multi-vehicle compatible controller 25” is ... for reading a device code from the data communications bus, and for determining a match between a read device code and the stored device codes to thereby provide compatibility with a plurality of different vehicles.” *Id.*, 8:64-67-9:1-7.

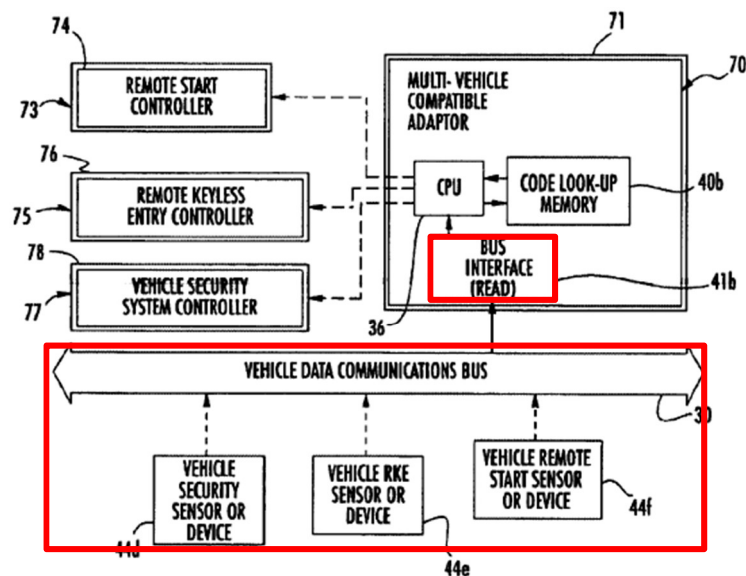


FIG. 8

See Ex. 1002 ¶ 78[6].

[7] The multi-vehicle compatible tracking unit according to claim 1 wherein the

The '885 Patent discloses data corresponding to at least one vehicle code is written to a vehicle device:

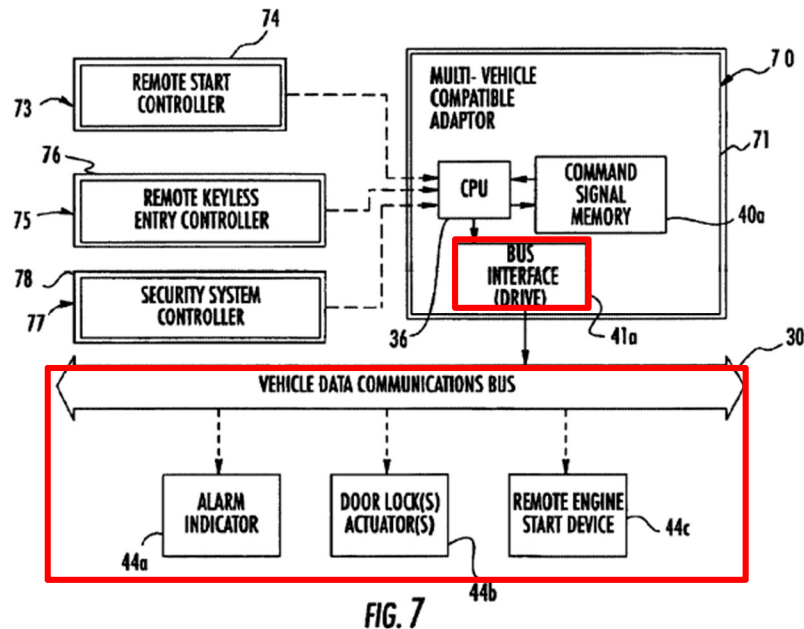
“The compatibility to read a code and determine the message or content thereof for a vehicle device from among a plurality of vehicles can be used alone or in combination with the *compatibility for writing or*

corresponding at least one vehicle code is for writing to the at least one vehicle device.

generating signals on the bus described above.” Ex. 1003 (’885) 8:64-67-9:1 (emphasis added)

“[T]he multi-vehicle compatible controller 25’ preferably generates at least one set of command signals on the data communications bus 30 for the at least one vehicle device.” *Id.*, 7:23-26; see also 6:32-36.

"In other words, the multi-vehicle compatible controller may comprise a multi-vehicle compatible adaptor connected to the data communications bus for determining the match between the read device code and the stored device codes” *Id.*, 3:38-48.



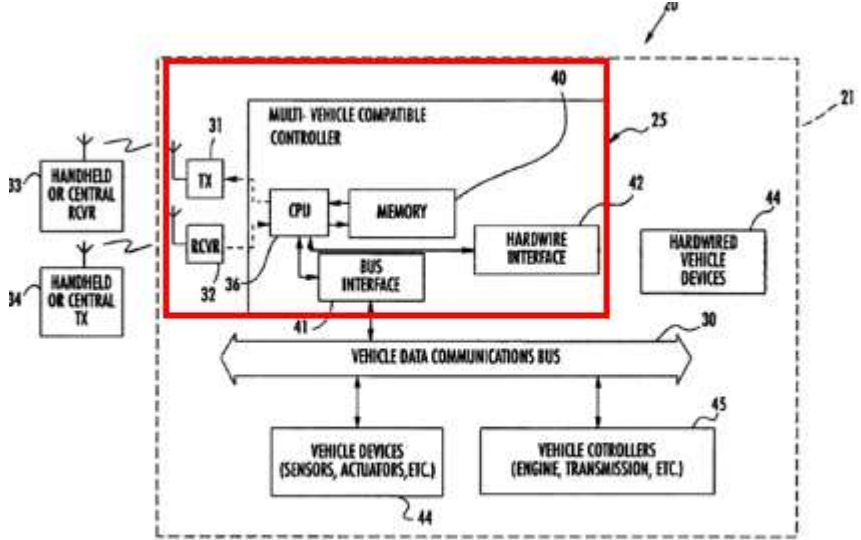
See Ex. 1002 ¶ 78[7].

[8] The multi-vehicle compatible tracking unit

The ’885 Patent discloses a downloading interface for permitting downloading of at least one programming instruction for said multi-vehicle compatible controller.

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.	“[T]he memory 40a may store the actual codes, but may also store data enabling generation of the set of command signals by the CPU 36.” Ex. 1003 (’885), 8:28-30. “The engine management controller 45a could be sent signals such as to prevent or enable starting for security or remote start applications as will be appreciated by those skilled in the art.” <i>Id.</i>, 7:15-19. The ’460 Patent, which is incorporated in the ’885 Patent, discloses a downloading interface for permitting downloading of at least one programming instruction for the MVCC: “The remote keyless entry system 90 also includes the desired signal enabling means 17 which permits the controller 91 to perform the desired door locking and trunk release remote control functions or operations” Ex. 1007 (’460), 8:9-17. <i>See</i> Ex. 1002 ¶ 78[8].
[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	The ’885 Patent discloses a remote transmitter where the MVCC performs at least one vehicle remote control function responsive to the remote transmitter: “[B]oth a transmitter 31 and a receiver 32 are provided at the vehicle 21. In addition, both a receiver 33 and a transmitter 34 are provided remotely or away from the vehicle . . . The second transmitter/receiver pair 32, 34 may be used to cause a desired function to be performed at the vehicle, such as remote starting the engine, remotely unlocking the vehicle doors, or changing the mode of a security system between armed and disarmed modes, for example.” Ex. 1003 (’885), 5:18-29; <i>see also</i> 7:4-11. <i>See</i> Ex. 1002 ¶ 78[9].

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.	<i>See</i> explanation for Claim 9 for disclosure of a vehicle security function, a remote keyless entry function and a remote engine starting function. <i>See</i> Ex. 1002 ¶ 78[10].
[11] The multi-vehicle compatible tracking unit according to claim 1 wherein said wireless position determining device comprises a Global Positioning System (GPS) receiver.	The '561 Patent discloses a wireless position determining device comprising a Global Positioning System (GPS) receiver. “The vehicle position determining device 42 may be provided by a GPS receiver The GPS receiver typically operates by receiving multiple signals from spaced apart satellites 38 as will be appreciated by those skilled in the art.” Ex. 1004 ('561), 4:59-63. Per Section VIII.C.1.a, a POSITA would have been motivated to combine the '885 Patent with the GPS tracking unit disclosed in the '561 Patent. Ex. 1002, ¶ 78[11].

[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.	The '885 Patent discloses a housing containing the wireless communications device, the MVCC and the downloading interface, as shown in figure 10 below:  FIG. 1 Per VIII.C.1.a, a POSITA would have been motivated to combine the '885 Patent with the GPS tracking unit disclosed in the '561 Patent. Ex. 1002, ¶ 78[12].
[13pre] A multi-vehicle compatible tracking unit for a vehicle comprising a vehicle data bus extending throughout the vehicle, the multi-vehicle compatible	See explanation for claim [1pre] for the disclosure of a multi-vehicle compatible tracking unit for a vehicle comprising a vehicle data bus extending throughout the vehicle. See Ex. 1002 ¶ 78[13pre].

vehicle tracking unit comprising:	
[13a] a vehicle position determining device;	<i>See</i> explanation for claim [1a] for the disclosure of a vehicle position determining device. <i>See</i> Ex. 1002 ¶ 78[13a].
[13b] a wireless communications device;	<i>See</i> explanation for claim [1b] for the disclosure of a wireless communication device. <i>See</i> Ex. 1002 ¶ 78[13b].
[13c] a multi-vehicle compatible controller for cooperating with said vehicle position determining device and said wireless communications device to send vehicle position information;	<i>See</i> explanation for claim [1c] for the disclosure of a MVCC cooperating with the vehicle position determining device and wireless communications device to send vehicle position information. <i>See</i> Ex. 1002 ¶ 78[13c].
[13d] 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	<i>See</i> explanation for claim [1d] for the disclosure of an MVCC that can be coupled to the vehicle data bus for communications thereover with at least one vehicle device using at least one corresponding vehicle device code from among a plurality thereof for different vehicles. <i>See</i> Ex. 1002 ¶ 78[13d].

corresponding vehicle device code from among a plurality thereof for different vehicles; and	
[13e] a downloading interface for permitting downloading enabling data related to the at least one corresponding vehicle device code for use by said multi-vehicle compatible controller;	<i>See</i> explanation for claim [1e] for the disclosure of a downloading interface that permits the downloading of enabling data related to the at least one corresponding vehicle device code for use by the MVCC. <i>See</i> Ex. 1002 ¶ 78[13e].
[13f] said downloading interface comprising a connector for temporary connection to a downloading device.	<i>See</i> explanation for Claim 3 for the disclosure of a downloading interface comprising a connector for temporary connection to a downloading device. <i>See</i> Ex. 1002 ¶ 78[13f].
[14] The multi-vehicle compatible tracking unit according to claim 13 wherein the	<i>See</i> explanation for Claim 6 for the disclosure of the corresponding at least one vehicle code reads from the at least one vehicle device. <i>See</i> Ex. 1002 ¶ 78[14].

corresponding at least one vehicle code is for reading from the at least one vehicle device.	
[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.	<i>See</i> explanation for Claim 7 for the disclosure of the corresponding at least one vehicle code is for writing to the at least one vehicle device. <i>See</i> Ex. 1002 ¶ 78[15].
[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.	<i>See</i> explanation for Claim 8 for the disclosure of a downloading interface for downloading programming instructions for an MVCC. <i>See</i> Ex. 1002 ¶ 78[16].

[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.	<i>See</i> explanation for Claim 9 for the disclosure of a remote transmitter and an MVCC performing a remote control function responsive to a remote transmitter. <i>See</i> Ex. 1002 ¶ 78[17].
[18pre] 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:	<i>See</i> explanation for claim [1pre] for the disclosure of a vehicle comprising a vehicle data bus extending throughout the vehicle. <i>See</i> Ex. 1002 ¶ 78[18pre].
[18a] a vehicle position determining device;	<i>See</i> explanation for claim [1a] for the disclosure of a vehicle position determining device. <i>See</i> Ex. 1002 ¶ 78[18a].

[18b] a wireless communications device;	<i>See</i> explanation for claim [1b] for the disclosure of a wireless communication device. <i>See</i> Ex. 1002 ¶ 78[18b].
[18c] a multi-vehicle compatible controller for cooperating with said vehicle position determining device and said wireless communications device to send vehicle position information;	<i>See</i> explanation for claim [1c] for the disclosure of a MVCC cooperating with the vehicle position determining device and wireless communications device to send vehicle position information. <i>See</i> Ex. 1002 ¶ 78[18c].
[18d] 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	<i>See</i> explanation for claim [1d] for the disclosure of an MVCC coupled to the vehicle data bus for communications thereover with at least one vehicle device using at least one corresponding vehicle device code from among a plurality thereof for different vehicles. <i>See</i> Ex. 1002 ¶ 78[18d].

for different vehicles; and	
[18e] a downloading interface for permitting downloading enabling data related to the at least one corresponding vehicle device code for use by said multi-vehicle compatible controller;	<i>See</i> explanation for claim [1e] for the disclosure of a downloading interface that permits the downloading of enabling data related to the at least one corresponding vehicle device code for use by the MVCC. <i>See</i> Ex. 1002 ¶ 78[18e].
[18f] said downloading interface comprising a wireless receiver for temporary connection to a downloading device.	<i>See</i> explanation for claim 4 for the disclosure of a downloading interface comprising a receiver for temporarily connecting to a downloading device. <i>See</i> Ex. 1002 ¶ 78[18f].
[19] The multi-vehicle compatible tracking unit according to claim 18 wherein the corresponding at least one vehicle code is for reading from the	<i>See</i> explanation for Claim 6 for the disclosure of the corresponding vehicle code is for reading from at least one vehicle device. <i>See</i> Ex. 1002 ¶ 78[19].

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.	<i>See</i> explanation for Claim 7 for the disclosure of a vehicle code that can be written to a vehicle device. <i>See</i> Ex. 1002 ¶ 78[20].
[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.	<i>See</i> explanation for Claim 8 for the disclosure of a downloading interface that permits downloading of programming instructions for the MVCC. <i>See</i> Ex. 1002 ¶ 78[21].
[22] The multi-vehicle compatible tracking unit according to	<i>See</i> explanation for Claim 9 for the disclosure of a remote transmitter where the MVCC performs a remote control function responsive to the transmitter. <i>See</i> Ex. 1002 ¶ 78[22].

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.	
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**2. Ground 2 – *Lewis* (Claims 1-6, 8, 10-14, 16, 18-19 and 21);
Lewis + *Underdahl* (Claims 7, 9, 15, 17, 20, and 22)**

Lewis, which was not prior art of record and has not been raised in any prior challenge to the '278 patent, anticipates Claims 1-6, 8, 10-14, 16, 18-19 and 21 of the '278 Patent. Claims 7, 9, 15, 17, 20, and 22 are obvious in view of Lewis in combination with Underdahl, U.S. 2003/0182003 (“Underdahl”), and/or the knowledge of a person of skill in the art.

Lewis (Ex. 1005) was filed on November 22, 2005 and published on July 20, 2006. Lewis therefore is prior art to the '278 Patent under pre-AIA 35 U.S.C. § 102 (a).

Underdahl was filed on January 10, 2003 and published on September 25, 2003. Underdahl is prior art to the '278 Patent pre-AIA 35 U.S.C. § 102

a. Description of Ground 2 Prior Art

Lewis is entitled “Vehicle Position and Performance Tracking System Using Wireless Communication,” and discloses a real-time multi-vehicle compatible system. The system monitors diagnostics and the location of a vehicle and transmits this data to other vehicles within a peer-to-peer network and tracks the location of the vehicles using a GPS receiver. 1002, ¶ 81. The devices use a WiFi chipset and 3G or 4G cellular networking modem or a satellite modem for communicating wirelessly between drivers in the network. *Id.* The controller is compatible with different vehicles and can interface with a vehicle’s OBD-II system. *Id.*, ¶ 82. Lewis specifies that the controller recognizes at least four communication protocols used among different automobile manufacturers, including SAE J1850 VPW (GM), J1850 PWM (Ford), SAE J1708 and ISO 9141-2 (European, Asian, and Chrysler). *Id.* The system uses a GPS receiver for tracking the vehicle’s position. Ex. 1002, ¶ 83. The diagnostics and location of the vehicles are then transmitted over a wireless communications network to other vehicles within the peer network and downloaded onto an MVCC where a receiving party can decide how to respond to information accordingly. Ex. 1002, ¶ 84.

Underdahl is entitled “Vehicle Usage Data Tracking System” and discloses a real time multi-vehicle compatible system. The system monitors diagnostics and the

location of a vehicle for automobile dealerships and fleet vehicles. Ex. 1002, ¶ 85. The system operates with different vehicles that recognize the SAE J1850 communication protocol, including VPW, PWM and ISO 9141, plus manufacturer and model specific variations. Ex. 1002, ¶ 86. The system includes a GPS receiver for tracking vehicles, a downloading interface for writing instructions to vehicle devices, *e.g.*, to lock or unlock the doors or to disable the engine, and performing one or more vehicle remote control functions responsive to a remote transmitter that can include, for example, controlling the door lock system of a vehicle. Ex. 1002, ¶ 87.

b. Motivation to Combine

Dependent claims 7, 15, and 20 recite the same element of “the corresponding at least one vehicle code is for writing to the at least one vehicle device.” Dependent claims 9, 17 and 22 recite the same element of “the multi-vehicle compatible controller performing at least one vehicle remote controller function responsive to a remote transmitter.”

A POSITA would be motivated to combine the teachings of Lewis and Underdahl to produce the inventions claimed in both categories of dependent claims because there are several interrelated teachings, motivations and suggestions in each of these references. Ex. 1002, ¶ 88. First, both Lewis and Underdahl are directed to

managing a fleet of vehicles. Ex. 1002, ¶ 89. For example, Lewis states that “[o]ne embodiment of the present system is suitable for ... fleet operators accounting for the location and contents of their vehicles.” Ex. 1005, ¶ 0014; Ex. 1002, ¶ 89. Underdahl similarly states that “[m]any company or fleet vehicles are used for personal purposes. Currently, there are no systems available to track personal mileage, and the fleet operator is dependent upon reports by the user to determine the amount of personal mileage.” Ex. 1006, ¶ 0012; Ex. 1002, ¶ 89.

Second, Lewis describes a need for monitoring the location and contents of vehicles by fleet operators. Ex. 1002, ¶ 90. This need would motivate a POSITA to use Underdahl so that an operator can send an instruction to the vehicle remotely to read the location, speed and other contents of the vehicles within the fleet. *Id.*

Third, a POSITA would be motivated to combine Lewis and Underdahl to develop a system in which a fleet operator can send instructions remotely to a fleet vehicle because common sense and market forces would teach them to develop a system that could be implemented in this way. Ex. 1002, ¶ 91.

c. Claim Chart for Ground 2

U.S. Patent No. 8,032,278	<i>Lewis</i> (Claims 1-6, 8, 10-14, 16, 18-19, 21); <i>Lewis + Underdahl</i> (Claims 7, 9, 15, 17, 20, and 22)
[1pre] [See claim language in	Lewis describes a multi-vehicle compatible tracking unit interfacing with the vehicle data bus of different vehicles through the vehicle’s OBD-II system:

Ground 1 claim chart]	“The input/output (I/O) subsystem 210 may include one or more of the following components: SAE J1850 transceiver and controller including support for GM Class 2, Ford SCP, and ISO 9141-2; a CAN/FlexRay transceiver and controller with SAE J1939 capabilities; an SAE J1708 compatible transceiver and controller.” TABLE 1 <table><tr><th>Protocols</th><th>Signal Type</th><th>Manufacturer</th></tr><tr><td>SAE J1850 VPW</td><td>Variable Pulse Width</td><td>GM</td></tr><tr><td>SAE J1850 PWM</td><td>Pulse Width Modulation</td><td>Ford</td></tr><tr><td>ISO 9141-2</td><td>Two Serial Lines: Half-duplex (L) Full-duplex (K)</td><td>European, Asia, and Chrysler</td></tr></table> <i>Id.</i>, ¶ 0048 See also ¶¶ 0085, 0098; Figure 4 (sets communication protocol based on make and manufacturer of vehicle). A GPS receiver is used in Lewis to track a vehicle’s position. “In one embodiment, a real time vehicle performance and position monitoring system is provided that comprises ... a GPS receiver to collect position data of a vehicle ... data collector software, which collects position data from the GPS receiver.” <i>Id.</i>, ¶¶ 0024-0026. See Ex. 1002 ¶ 92[1pre].	Protocols	Signal Type	Manufacturer	SAE J1850 VPW	Variable Pulse Width	GM	SAE J1850 PWM	Pulse Width Modulation	Ford	ISO 9141-2	Two Serial Lines: Half-duplex (L) Full-duplex (K)	European, Asia, and Chrysler
Protocols	Signal Type	Manufacturer											
SAE J1850 VPW	Variable Pulse Width	GM											
SAE J1850 PWM	Pulse Width Modulation	Ford											
ISO 9141-2	Two Serial Lines: Half-duplex (L) Full-duplex (K)	European, Asia, and Chrysler											
[1a] [See claim language in Ground 1 claim chart]	Lewis discloses a GPS receiver which is used to determine the position of a vehicle: “One embodiment of the present invention relates to a transportation system that integrates vehicle position ... to monitor vehicle position and performance over the Internet.” <i>Id.</i>, ¶ 0002. “[system comprises] a GPS receiver to collect position data of a vehicle.” <i>Id.</i>, ¶ 0024; see also ¶ 0093.												

	<i>See</i> Ex. 1002 ¶ 92[1a].
[1b] [See claim language in Ground 1 claim chart]	Lewis discloses a wireless communications device that transmits and receives diagnostic and position information of a vehicle over a GSM network, an integrated WiFi chip, a 3G or 4G networking modem, a satellite modem or antennae: The multi-vehicle compatible tracking system “integrates vehicle position and performance tracking and wireless networking to monitor vehicle position and performance over the Internet.” <i>Id.</i>, ¶ 0002. “The communication subsystem 230 may include ... an integrated WiFi chipset and 3G or 4G cellular networking modem; one or more universal sockets that supports the following: Mobile WiMax (IEEE 802.16e); any additional 3G or 4G modem; and/or software radio an interface for external satellite modem; and/or an interface to external SISO, SIMO, and/or MIMO antennae.” <i>Id.</i>, ¶¶ 0059-0065. In one example, a “Sony Ericsson GC-82 EDGE PC card is used to access the Cingular Wireless GSM/GPRS network.” <i>Id.</i>, ¶ 0093. <i>See</i> Ex. 1002 ¶ 92[1b].
[1c] [See claim language in Ground 1 claim chart]	Lewis describes a MVCC that enables real-time communication with the vehicle bus nodes (sensors and electronic control units). <i>See</i> Ex. 1005, Fig. 2. The system is compatible with different automotive communication protocols including: “an SAE J1850 transceiver and controller including support for GM Class 2, Ford SCP, and ISO 9141-2” <i>Id.</i>, ¶ 0049;

“a CAN/FlexRay transceiver and controller with SAE J1939 capabilities” *Id.*, ¶ 0050;

“an SAE J1708 compatible transceiver and controller” *Id.*, ¶ 0051;

“one or more programmable digital/analog inputs and outputs for ‘non-networked’ sensors” *Id.*, ¶ 0052;

TABLE 1

Protocols	Signal Type	Manufacturer
SAE J1850 VPW	Variable Pulse Width	GM
SAE J1850 PWM	Pulse Width Modulation	Ford
ISO 9141-2	Two Serial Lines: Half-duplex (L) Full-duplex (K)	European, Asia, and Chrysler

The controller in Lewis can communicate over light-duty and heavy duty communication protocols:

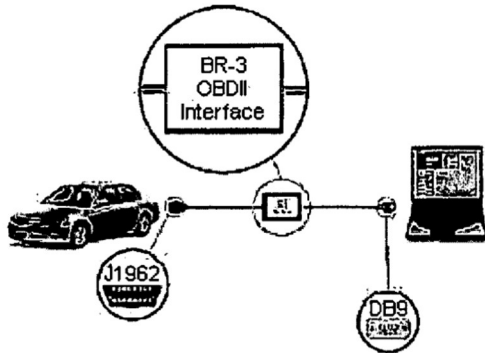
“The present design incorporates both light-duty and heavy duty communication protocols. The SAE standards J1708 (16) and J1939 (17) describe examples of heavy-duty protocols and parameters. J1939 describes the next generation of heavy duty vehicle network based on controller area network (CAN) (18). Heavy-duty vehicles include, but are not limited to, semi-trucks and buses.” *Id.*, ¶ 0085.

The controller in Lewis will set the appropriate communication protocol depending on the make of the vehicle.

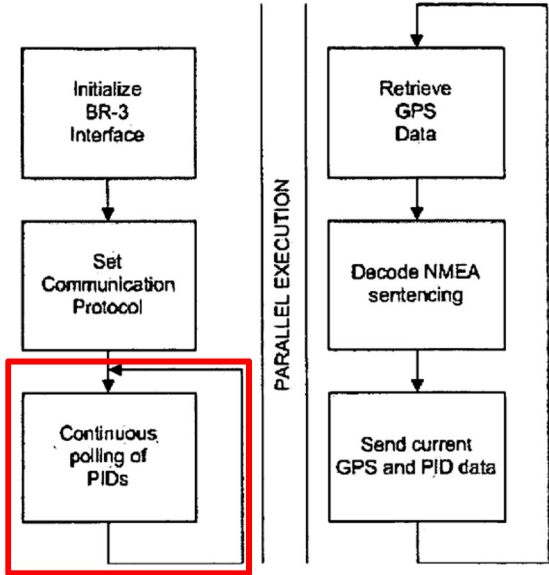
“The BR-3 must be initialized and, *depending on the make of the vehicle, a proper protocol must be set.*” *Id.*, ¶ 0098 (emphasis added).

	<i>See</i> Ex. 1002 ¶ 92[1c].
[1d] [See claim language in Ground 1 claim chart]	Lewis discloses an MVCC coupled to the vehicle data bus for communication with the vehicle devices: “The BR-3 OBD-II interface is connected to the vehicle via the SAE J1962 (13) connector located within three feet of the steering column. A serial RS232 port on the laptop allows the data collector software to communicate with the BR-3 OBD-II interface.” <i>Id.</i>, ¶ 0096. The MVCC communicates with one or more vehicle devices: “The OBD-II system allows for monitoring of most electrical systems on the vehicle. Nonlimiting examples of monitored items include speed, RPM, ignition voltage, oil, temperature, oil pressure, tire pressure, vehicle integrity, and coolant temperature.” <i>Id.</i>, ¶ 0019. The system transmits on-board diagnostics parameter IDs (PIDS), which are codes to request data from vehicle devices defined in SAE J1979. “The VPPTS 100 prototype uses generic parameter identifications or PIDs defined in SAE J1979 (14). These PIDs include vehicle speed, engine RPM, calculated throttle position sensor (TPS), engine load, engine coolant temperature, and air intake pressure. Car manufacturers such as GM and Ford have enhanced PIDs that are specialized for their vehicles.” <i>Id.</i>, ¶ 0097. “Once [communication protocols] are established polling for data will commence on a continuous basis.” <i>Id.</i>, ¶ 0098. <i>See</i> Ex. 1002 ¶ 92[1d].
[1e]	The system in Lewis allows vehicles to download vehicle diagnostic and position data of other vehicles within the peer

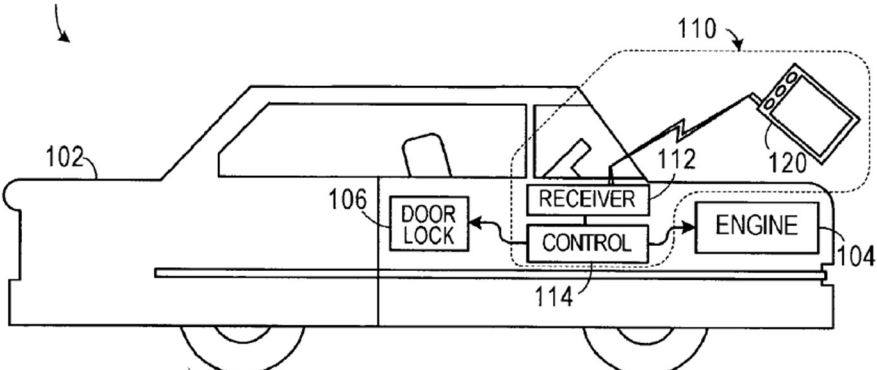
[See claim language in Ground 1 claim chart]	network. The diagnostic information includes data associated with a corresponding vehicle device code (or PID): “The communication subsystem 230 is capable of <i>vehicle-to-vehicle (peer-to-peer) communication for relaying any data</i> including vehicle location and <i>performance data</i> or Intelligent Transportation System (ITS) data; and/or exchanging personal (driver or vehicle), ITS, or Internet (restaurant location) data.” <i>Id.</i>, ¶ 0042. Lewis states that diagnostic information from one vehicle is transmitted to another vehicle through wireless communication: “Vehicles 10, 20, 30 <i>may wirelessly communicate with each other using P2P</i>, or wirelessly communicate with one or more base servers 40, 50.” <i>Id.</i>, ¶ 0022 (emphasis added). In one example, a “laptop, equipped with two serial ports (DB9) and a PCMCIA port, acts as a hub through which data is routed.” <i>Id.</i>, ¶ 0093. The downloaded data is displayed to a driver in playback form or real-time dashboard gauges, and the driver can determine what information from another vehicle is displayed: The system “may display vehicle location on a highly interactive GIS-based map and/or process and display data in various forms including playback functionality and real-time dashboard gauges. The database server may retrieve data from one or more databases and forward it to the GUI.” <i>Id.</i>, ¶ 0047. “the receiving vehicles may determine what is displayed.” <i>Id.</i>, ¶ 0091.
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	A PC interface provides “on-site debugging” of the system by which data is downloaded from the PC to the system in order to fix errors or bugs within the system. <i>Id.</i>, ¶¶ 0054. Ex. 1002, ¶ 92[1e].
[2] [See claim language in Ground 1 claim chart]	Lewis discloses a wired signal downloading interface connected to a laptop or PC: FIGURE 3  “A laptop, equipped with two serial ports (DB9) and a PCMCIA port, acts as a hub through which data is routed.” <i>Id.</i>, ¶ 0093. “A serial RS232 port on the laptop allows the data collector software to communicate with the BR-3 OBD-II interface.” Ex. 1005, ¶ 0096. “a PC interface (USB/RS232) for on-site debugging; and/or one or more visual indicators for operating modes and programmable fault conditions.” <i>Id.</i>, ¶¶ 0054-55 Ex. 1002, ¶ 92[2].
[3] [See claim language in Ground 1 claim chart]	See explanation for Claim 2, above, for disclosing a wired signal downloading interface includes a connector for temporary connection to a downloading device. Ex. 1002, ¶ 92[3].

[4] [See claim language in Ground 1 claim chart]	Lewis discloses a wireless signal downloading interface: “Vehicles 10, 20, 30 may wirelessly communicate with each other using P2P, or wirelessly communicate with one or more base servers 40, 50.” <i>Id.</i>, ¶ 0022. Ex. 1002, ¶ 92[4].
[5] [See claim language in Ground 1 claim chart]	<i>See</i> explanation for Claim 4, above, for disclosure of a wireless signal downloading interface comprising a wireless receiver for temporary connection to a downloading device. Ex. 1002, ¶ 92[5].
[6] [See claim language in Ground 1 claim chart]	Lewis discloses using vehicle device codes or PIDs for reading from one or more vehicle devices: The MVCC “uses generic parameter identifications or PIDs defined in SAE J1979 (14). These PIDS include vehicle speed, engine RPM, calculated throttle position sensor (TPS), engine load, engine coolant temperature, and air intake pressure.” Ex. 1005, ¶ 0097; <i>see also Id.</i>, ¶¶ 0006; 0098.

	 Ex. 1002, ¶ 92[6].
[7] [See claim language in Ground 1 claim chart]	Underdahl discloses that that the MVCC writes instructions to vehicle devices, including locking and unlocking doors and disabling the engine: “The control unit 114 is capable of controlling the door locking system 106 ... the control unit 114 causes the door locking system 106 to change the door lock state of at least one door of the vehicle 102.” Ex. 1006, ¶ 0033. “The control unit 114 may also be coupled to the engine 104 of the vehicle 102, so that upon changing the door lock state to ‘locked,’ the engine will be disabled, thereby providing a theft deterrent.” <i>Id.</i> Underdahl discloses a multi-vehicle compatible tracking unit: Underdahl teaches “a system and method of tracking usage habits of an operator of a vehicle that may be installed easily in a variety of vehicle types.” Ex. 1006, ¶ 0011.

	“The SAE J1850 network is used on all US vehicles manufactured since 1996. There are a number of variations, specifically VPW, PWM, and ISO 9141, plus manufacturer and model specific variations.... Advantages of the SAE J1850 interface include: they provide a standardized connector for all vehicles and variations; a connection scheme is simplified” Ex. 1006, ¶ 0011; see also ¶ 0042. Per Section VIII.C.2.b., a POSITA would be motivated to combine Lewis with Underdahl. Both references relate to fleet management and tracking vehicle diagnostics and location information using a multi-vehicle compatible tracking unit. Ex. 1002, ¶ 92[7].
[8] [See claim language in Ground 1 claim chart]	The downloading interface of Lewis permits downloading of at least one programming instruction to the MVCC, including vehicle diagnostic displayed by another vehicle: “[T]he communication subsystem 230 is capable of <i>vehicle-to-vehicle (peer-to-peer) communication for relaying any data</i> including vehicle location and performance data or Intelligent Transportation System (ITS) data; and/or exchanging personal (driver or vehicle), ITS, or Internet (restaurant location) data.” Ex. 1005, ¶ 0042. The system “may ... display data in various forms including playback functionality and real-time dashboard gauges. The database server may retrieve data from one or more databases and forward it to the GUI.” Id., ¶ 0047. The downloading interface provides on-site debugging through a PC interface:

	“The input/output (I/O) subsystem 210 may include ... a PC interface (USB/RS232) for on-site debugging.” <i>Id.</i>, ¶¶ 0054. Debugging can involve updates and fixes downloaded to the device. Ex. 1002, ¶ 92[8].
[9] [See claim language in Ground 1 claim chart]	Underdahl discloses an MVCC that performs one or more vehicle remote control functions responsive to a remote transmitter including controlling the door lock system and disabling the engine: <i>“The control unit 114 is capable of controlling the door locking system 106 so that when the signal sensor receives a predetermined signal (such as a specific code) from the transmitter 120, the control unit 114 causes the door locking system 106 to change the door lock state of at least one door of the vehicle 102.”</i> Ex. 1006, ¶ 0033 (emphasis added). “The control unit 114 may also be coupled to the engine 104 of the vehicle 102, so that upon changing the door lock state to ‘locked,’ the engine will be disabled, thereby providing a theft deterrent.” <i>Id.</i> 100  FIG. 1

	Per Section VIII.C.2.b., a POSITA would be motivated to combine Lewis with Underdahl. Both references relate to fleet management and tracking vehicle diagnostics and location information using a multi-vehicle compatible tracking unit. Ex. 1002, ¶ 92[9].
[10] [See claim language in Ground 1 claim chart]	See explanation for Claim 9, above, for disclosure of a vehicle security function, a remote keyless entry function and a remote engine starting function. Ex. 1002, ¶ 92[10].
[11] [See claim language in Ground 1 claim chart]	Lewis discloses a GPS receiver: The system includes “a GPS receiver to collect position data of a vehicle.” Ex. 1005, ¶ 0024; see also ¶ 0093. Ex. 1002, ¶ 92[11].
[12] [See claim language in Ground 1 claim chart]	Lewis discloses a housing containing the GPS, a wireless communications device, an MVCC, and a downloading interface. “One embodiment includes a single-board that integrates modular chipset solutions for the automotive bus interface, a GPS receiver, and a GSM/GPRS modem into a less than a 16 in 2 board located inside the dashboard or in the trunk of a vehicle.” Ex. 1005, ¶ 0084. Ex. 1002, ¶ 92[12].
[13pre] [See claim language in	See explanation for claim [1pre], for the disclosure of a multi-vehicle compatible tracking unit comprising a vehicle data bus extending throughout the vehicle. Ex. 1002, ¶ 92[13pre].

Ground 1 claim chart]	
[13a] [See claim language in Ground 1 claim chart]	<i>See</i> explanation for claim [1a], for the disclosure of a vehicle position determining device. Ex. 1002, ¶ 92[13a].
[13b] [See claim language in Ground 1 claim chart]	<i>See</i> explanation for claim [1b], for the disclosure of a wireless communication device. Ex. 1002, ¶ 92[13b].
[13c] [See claim language in Ground 1 claim chart]	<i>See</i> explanation for claim [1c], above, for the disclosure of a MVCC cooperating with the vehicle position determining device and wireless communications device to send vehicle position information. Ex. 1002, ¶ 92[13c].
[13d] [See claim language in Ground 1 claim chart]	<i>See</i> explanation for claim [1d] for the disclosure of an MVCC coupled to the vehicle data bus for communications thereover with at least one vehicle device using at least one corresponding vehicle device code from among a plurality thereof for different vehicles.
[13e] [See claim language in Ground 1 claim chart]	<i>See</i> explanation for claim [1e] for the disclosure of a downloading interface that permits the downloading of enabling data related to the at least one corresponding vehicle device code for use by the MVCC. Ex. 1002, ¶ 92[13e].
[13f] [See claim language in	<i>See</i> explanation for Claim 3 for the disclosure of a downloading interface comprising a connector for temporary connection to a downloading device.

Ground 1 claim chart]	Ex. 1002, ¶ 92[13f].
[14] [See claim language in Ground 1 claim chart]	<i>See</i> explanation for Claim 6 for the disclosure of the corresponding at least one vehicle code reads from the at least one vehicle device. Ex. 1002, ¶ 92[14].
[15] [See claim language in Ground 1 claim chart]	<i>See</i> explanation for Claim 7 for the disclosure of the corresponding at least one vehicle code is for writing to the at least one vehicle device. Ex. 1002, ¶ 92[15].
[16] [See claim language in Ground 1 claim chart]	<i>See</i> explanation for Claim 8 for the disclosure of a downloading interface for downloading programming instructions for an MVCC. Ex. 1002, ¶ 92[16].
[17] [See claim language in Ground 1 claim chart]	<i>See</i> explanation for Claim 9 for the disclosure of a remote transmitter and an MVCC performing a remote control function responsive to a remote transmitter. Ex. 1002, ¶ 92[17].
[18pre] [See claim language in Ground 1 claim chart]	<i>See</i> explanation for claim [1pre] for the disclosure of a vehicle comprising a vehicle data bus extending throughout the vehicle. Ex. 1002, ¶ 92[18pre].
[18a] [See claim language in Ground 1 claim chart]	<i>See</i> explanation for claim [1a] for the disclosure of a vehicle position determining device. Ex. 1002, ¶ 92[18a].

[18b] [See claim language in Ground 1 claim chart]	<i>See</i> explanation for claim [1b] for the disclosure of a wireless communication device. Ex. 1002, ¶ 92[18b].
[18c] [See claim language in Ground 1 claim chart]	<i>See</i> explanation for claim [1c] for the disclosure of a MVCC cooperating with the vehicle position determining device and wireless communications device to send vehicle position information. Ex. 1002, ¶ 92[18c].
[18d] [See claim language in Ground 1 claim chart]	<i>See</i> explanation for claim [1d] for the disclosure of an MVCC that can be coupled to the vehicle data bus for communications thereover with at least one vehicle device using at least one corresponding vehicle device code from among a plurality thereof for different vehicles. Ex. 1002, ¶ 92[18d].
[18e] [See claim language in Ground 1 claim chart]	<i>See</i> explanation for claim [1e] for the disclosure of a downloading interface that permits the downloading of enabling data related to the at least one corresponding vehicle device code for use by the MVCC. Ex. 1002, ¶ 92[18e].
[18f] [See claim language in Ground 1 claim chart]	<i>See</i> explanation for Claim 4 for the disclosure of a downloading interface comprising a receiver for temporarily connecting to a downloading device. Ex. 1002, ¶ 92[18f].
[19] [See claim language in	<i>See</i> explanation for Claim 6 for the disclosure of the corresponding vehicle code is for reading from at least one vehicle device.

Ground 1 claim chart]	Ex. 1002, ¶ 92[19].
[20] [See claim language in Ground 1 claim chart]	<i>See</i> explanation for Claim 7 for the disclosure of a vehicle code that can be written to a vehicle device. Ex. 1002, ¶ 92[20].
[21] [See claim language in Ground 1 claim chart]	<i>See</i> explanation for Claim 8 for the disclosure of a downloading interface that permits downloading of programming instructions for the MVCC. Ex. 1002, ¶ 92[21].
[22] [See claim language in Ground 1 claim chart]	<i>See</i> explanation for Claim 9 for the disclosure of a remote transmitter where the MVCC performs a remote control function responsive to the transmitter. Ex. 1002, ¶ 92[22].

VII. OMEGA’S EVIDENCE OF COMMERCIAL SUCCESS IS DEFICIENT

“Evidence of commercial success, or other secondary considerations, is only significant if there is a nexus between the claimed invention and the commercial success.” *Ormco Corp. v. Align Tech., Inc.*, 463 F.3d 1299, 1311-12 (Fed. Cir. 2006). If the feature that creates the commercial success was known in the prior art, the success is not pertinent. *Id.*, *see Tokai Corp. v. Easton Enterprises, Inc.*, 632 F.3d 1358, 1369 (Fed. Cir. 2011) (“If commercial success is due to an element in the prior art, no nexus exists”); *In re Huai-Hung Kao*, 639 F.3d 1057, 1068 (Fed. Cir. 2011).

In responding to Geotab’s IPR petition (Case No. IPR2023-00504), Omega relies on the Board’s previous decision (Ex. 1015) on commercial success of the ’278 Patent where Omega had argued that the commercial success of the ’278 was attributable entirely to the multi-vehicle compatibility of the claimed invention, the same element that was borrowed from the ’885 Patent and disclosed in the Lewis and Underdahl references. According to Omega’s expert, Joseph C. McAlexander, III, the products embodying the claimed invention would have “*limited value* if it were not for the multi-vehicle compatibility.” Ex. 1012, ¶ 24(j). McAlexander further stated that the multi-vehicle compatibility was “important for the overall licensing program of the Patent Owner” and touted the benefits of the multi-vehicle compatibility as providing for “simplified installation in a vehicle, and avoids the need for separated stock keeping units (SKUs).” *Id.* at ¶ 24(c), (e). Omega did not present any sales in the relevant market tied to the ’278 Patent or any additional evidence that the commercial success of the product was due to the merits of the claimed invention beyond what was readily available in the prior art.

The Board did not have the benefit of considering the ’885 Patent, Lewis or Underdahl when it considered Omega’s evidence of commercial success. All three references disclose the multi-vehicle compatibility which formed the basis of Omega’s commercial success argument. Accordingly, given the strength of the

prima facie case of obviousness, and the inadequacy of Omega’s commercial success, Omega cannot overcome the conclusion that the claims of the ’278 Patent are invalid. See *Leapfrog v. Fisher-Price*, 485 F.3d 1157 (Fed. Cir. 2007) (finding that “evidence of commercial success, praise, and long-felt need” was “inadequate” to overcome the “strength of the *prima facie* obviousness showing”).

VIII. FACTORS COUNSELING AGAINST DISCRETIONARY DENIAL

As noted in the mandatory notices submitted herewith, Petitioner and Omega are current parties to a pending district court matter in the Middle District of Florida where the ’278 Patent is at issue. Petitioner is timely filing its Petition many months before the 35 U.S.C. § 315(a) statutory bar date in December 2023. Trial is not scheduled to begin until April 2025. The Board’s timelines suggest it should reach a final decision at least four months before trial in the District Court. Using median time-to-trial in this District Court (34.4 months), trial may be even later (November 2025). The district court matter remains in the preliminary stage. No depositions have taken place so far. No claim construction briefs have been filed as of yet. The claim construction hearing is not scheduled until January 2024 and no substantive orders are expected prior to decision on institution of this petition (December 2023).

The Board’s *General Plastics* factors also do not favor a discretionary denial of the Petition. *General Plastic Industrial Co., Ltd. v. Canon Kabushiki Kaisha*, IPR

2016-01357, Paper 19 (PTAB Sep. 6, 2017). Verizon has not filed any serial IPR petitions on the '278 Patent. Verizon also has no relationship with Geotab USA, Inc. and Geotab, Inc. ("Geotab"), the petitioners of Case No. IPR2023-00504. *Valve Corp. v. Electronic Scripting Products, Inc.*, IPR2019-00062, Paper 11, (PTAB April 2, 2019) (precedential). Verizon and Geotab are parties to separate lawsuits. Omega sued Verizon more than three months after its lawsuit against Geotab. Verizon is not privy to and has not been involved in Geotab's IPR Petition.

Discretionary denial under 35 U.S.C. § 325(d) is also not warranted. Verizon's Petition does not involve the same or substantially the same art or the same or substantially the same arguments brought by Geotab or in any prior reexamination. *Advanced Bionics, LLC. v. Med-El-Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 at 8 (PTAB Feb. 13, 2020) (precedential). The combination of the '885 and '561 Patents has not been presented before and is not cumulative of any previous argument made before the Office. Further, Lewis is Section 102 art and Underdahl is Section 103 art, neither of which have been

disclosed to the Office before. *Thorne Research, Inc. v. Trustees of Dartmouth College*, IPR2021-00491, Paper 18 at 7-9 (PTAB Aug. 12, 2021).

IX. 37 C.F.R. § 42.8: MANDATORY NOTICES

A. 37 C.F.R. § 42.8(b)(1): Real Party-In-Interest

Verizon Connect Inc. is the real party-in-interest. Additionally, out of an abundance of caution in light of prior challenges to the named real parties-in-interest in separate and unrelated IPR petitions, Petitioner further identifies Verizon Communications Inc. and Verizon Corporate Resources Group LLC as real parties-in-interest for the IPR requested by this Petition, solely to the extent that Patent Owner contends that these separate legal entities should be named real parties-in-interest in the requested IPR, and Petitioner does so to avoid the potential expenditure of resources to resolve such a challenge. No unnamed entity is funding, controlling, or otherwise has an opportunity to control or direct this Petition or Petitioner's participation in any resulting IPR. Also, Petitioner notes that Petitioner has several hundred affiliated entities and each of these entities agrees to be estopped under the provisions of 35 U.S.C. §315 as a result of any final written decision in the requested IPR to the same extent that Petitioner is estopped.

B. 37 C.F.R. § 42.8(b)(2): Related Matters

The following judicial and administrative matters involving the '278 Patent are currently pending which would affect, or be affected by, a decision in the

proceeding. Additionally, Petitioner has listed prior matters involving the '278 Patent that are now closed:

- (i) *Omega Patents, LLC v. Verizon Connect Inc.*, 6:22-cv-02371, WGB-EJK (M.D.Fla) (pending)
- (ii) *Omega Patents, LLC v. Geotab USA, Inc.*, 1:22-cv-01044-WCB (D.Del.) (pending)
- (iii) *Omega Patents, LLC v. Geotab, Inc.*, 1:23-cv-00382-WCB (D. Del.) (pending)
- (iv) *Omega Patents, LLC v. Enfora, Inc.*, Case No. 1:13-cv-00646 (N.D. Ga.) (closed); *Omega Patents, LLC v. Enfora, Inc.*, Case No. 1:17-cv-02769 (N.D.Ga.) (closed)
- (v) *Geotab USA, Inc. and Geotab, Inc. v. Omega Patents, LLC*, Case No. IPR2023-00504 (pending)
- (vi) *Omega Patents, LLC v. CalAmp Corp.*, Case No. 6:13-cv-01950 (M.D. Fla.) (closed)
- (vii) *Omega Patents, LLC v. DEI Holdings, Inc.*, Case No. 6:20-cv-00693 (M.D. Fla.)
- (viii) Reexamination Serial No. 90/013,587, filed September 14, 2015 (closed)

- (ix) Reexamination Serial No. 90/013,851, filed October 28, 2016 (closed)
- (x) Reexamination Serial No. 90/014,309, filed May 24, 2019 (closed)
- (xi) Reexamination Serial No. 90/014,419, filed December 16, 2019
(closed)
- (xii) Reexamination Serial No. 90/014,675, filed February 16, 2021 (closed)

C. 37 C.F.R. § 42.8(b)(3) and (4): Identification of Counsel and Service Information

Lead Counsel	Back-up Counsel
Asheesh (Ashe) P. Puri Reg. No. 53,494 Maynard Nexsen LLP 10100 Santa Monica Blvd, Suite 550 Los Angeles, CA 90067 Tel: (310) 596-4344 apuri@MaynardNexsen.com	Sasha G. Rao Reg. No. 57,017 Maynard Nexsen LLP Two Embarcadero Center, Suite 1450 San Francisco, CA 94111 Tel: (415) 646-4702 srao@MaynardNexsen.com

Petitioner submits a Power of Attorney and Exhibit List with this Petition. 37 C.F.R. § 42.10(b) and 42.63(e), respectively. Petitioner may be served at the offices of its counsel shown above.

X. REQUIREMENTS FOR INTER PARTES REVIEW

A. Payment of Fees

The undersigned authorizes the Office to charge the fees required by 37 C.F.R. § 42.15(a) for this Petition to Deposit Account No. 504524. Any additional fees that might be due are also authorized.

B. Grounds for Standing

Pursuant to 37 C.F.R. § 42.104(a), Petitioner certifies that the '278 Patent is available for IPR and Petitioner is not barred or estopped from requesting an IPR challenging the patent claims on the grounds identified in this Petition.

XI. STATEMENT OF PRECISE RELIEF REQUESTED AND REASONS THEREFOR (37 C.F.R. § 42.22(A))

Verizon petitions for *inter partes* review, seeking cancellation of claims 1-22 of the '278 Patent (Ex. 1001), assigned to Omega Patents, L.L.C. The challenged claims are unpatentable under 35 U.S.C. §§ 102 & 103. This Petition is supported by the Declaration of Dr. Azim Eskandarian (Ex. 1002), an expert in vehicle communication systems.

XII. CONCLUSION

Petitioner requests *inter partes* review and cancellation of the challenged claims.

Dated: June 30, 2023

/s/ Ashe Puri

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CERTIFICATE OF WORD COUNT

Pursuant to 37 C.F.R. § 42.24(d), the undersigned certifies that the foregoing document, excluding the portions exempted under 37 C.F.R. § 42.24(a)(1), contains 13,975 words, which is under the limit of 14,000 words set by 37 C.F.R. § 42.24(a)(1)(i).

Dated: June 30, 2023

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §§ 42.6(e)(4) and 42.105, the undersigned hereby certifies that on this date, a true and correct copy of the foregoing Petition for *Inter Partes* Review of U.S. Patent No. 8,032,278, together with all supporting exhibits and the exhibit list was served via Federal Express Overnight on the Patent Owner at the following correspondence address of record for U.S. Patent No. 8,032,278:

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Dated: June 30, 2023

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APPENDIX OF EXHIBITS

Exhibit	Description
1001	U.S. Patent No. 8,032,278 to Flick
1002	Declaration of Dr. Azim Eskandarian
1003	U.S. Patent No. 6,756,885 to Flick
1004	U.S. Patent No. 6,606,561 to Flick
1005	U.S. Patent Application Publication No. 2006/0161315 to Lewis
1006	U.S. Patent Application Publication No. 2003/0182003 to Underdahl
1007	U.S. Patent No. 6,011,460 to Flick
1008	U.S. Patent No. 6,812,829 to Flick
1009	File History of Application No. 11/773,272, which issued as U.S. Patent No. 8,032,278 to Flick
1010	03-25-2021 Order Granting the Reexamination (Appl. No. 90/014,675)
1011	06-21-2021 Examiner's Non-Final Office Action (Appl. No. 90/014,675)
1012	08-21-2021 Declaration of Joseph C. McAlexander, III
1013	08-23-2021 Response to Non-Final Office Action (Appl. No. 90/014,675)
1014	04-01-2022 Patent Owner's Appeal Brief (Appl. No. 90/014,675)
1015	12-01-2022 Decision on Appeal (Appl. No. 90/014,675)
1016	Application No. 11/076,259 to Flick
1017	Application No. 10/383,496 to Flick
1018	Application No. 09/859,972 to Flick
1019	Application No. 60/264,811 to Flick
1020	Application No. 60/258,005 to Flick
1021	Application No. 60/251,552 to Flick
1022	Application No. 60/252,125 to Flick
1023	Application No. 60/236,890 to Flick
1024	Application No. 60/246,463 to Flick
1025	Application No. 60/222,777 to Flick

1026	Application No. 60/205,178 to Flick
1027	10-03-2014 Plaintiff's Opposition to CalAmp's Motion for Claim Construction, 6:13-cv-1950-ORL-40-DAB
1028	02-20-2015 Order on Claim Construction, 6:13-cv-1950-ORL-40-DAB
1029	<i>In Ex Parte A. James Smith, Jr.</i> , 2010 WL 3269939 (BPAI August 17, 2010)