February 15, 2024 Non-Final Office Action at 11.

The '470 Patent's master control unit includes a type of microcontroller that has the programmable and processing features of a microprocessor, but also includes other features such as timers, communication interfaces, and analog-to-digital converters. '470 Patent at 10:48-61; FIG. 6.

The '470 Patent's master control unit is designed to identify a driver profile in which the vehicle operates and for controlling various vehicle system components and has all the necessary features on-board a singular device versus the highly "componentized" approach taught by Cherouny. For example, the master control unit 430 of the '470 Patent includes a driver identification and validation module 502, a GPS antenna processing module 504, a master micro controller/processor 506, a memory module 508 and a function indicators module 510. '470 Patent at FIG. 6.

The communications interfaces of the master control unit 430 include outputs such as starter enable 518, alarm enable 516, and internal definable outputs 512. The inputs include clean power 520 and other internal definable inputs 514. '470 Patent at 10:48-11:52; FIG. 6. The master control unit is to be understood in a specific systemic context, namely its relationship to the "slave control unit" claimed in claim 1 and discussed in "Limitation 1(e)" below.

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Cherouny, in contrast, merely discloses a microprocessor that is a ***chip*** that performs basic calculations and processes data based on inputs. These inputs include inputs from an automobile speed sensor 108, a key fob reader 109, and power conditioning 110. Cherouny at [0073], FIG. 20A. The microprocessor in turn provides instructions to other components to execute functions such as engine slowdown 120 and audible noise generator 121. Cherouny at [0077], [0078], FIG. 20A. Cherouny's microprocessor is a general-purpose computing device that is used for processing data and executing instructions and requires an ecosystem of other components for controlling vehicle functions, while the '470 Patent's master control unit is a microcontroller designed for controlling the vehicle in an integrated manner in conjunction with the slave control unit.

This distinction is critical because the '470 Patent's microcontroller method allows for vehicle-agnostic deployment with broad functionality versus Cherouney's microprocessor-based approach adapted to control dedicated devices and which has thus substantial limitations.

Limitation 1(c)

Examiner further asserts that Cherouny discloses:

> c) **a module for receiving at least location and speed information in association with a movement of said vehicle** (see disclosure of speed sensor 108, [0073]; see

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> also disclosure of a global positioning receiver linked to the CPU that receives the location of the vehicle from the GPS satellite system, [0020]; see also disclosure of a wireless transmitting means associated with the moderator to send signals representing location and speed data of the vehicle at any given time to a central server, claim 1).

February 15, 2024 Non-Final Office Action at 11.

This limitation of the '470 Patent requires that speed information is received "in association with a movement of said vehicle." Cherouny, in contrast, discloses that speed information is determined ***not*** from "movement of said vehicle," but rather clock cycles associated with wheel sensors. Cherouny never uses vehicle movement/location in determining speed. On the contrary, Cherouny states:

> ***The instant device*** counts clock cycles between rising edges as well as any other part, such as the falling edges or even voltage levels, of the square wave coming from an additional wheel sensor similar to the antilock ABS sensors on one of the wheels. This digital computer ***version of speed detection is unique when used with the other features of the device***.

Cherouny at [0011], [0015] (emphasis added). Hence, Cherouny's methodology for determining speed information does not teach or suggest this claim limitation.

Cherouny's sole mention of GPS is so that, for example, the system can be made aware of school zones. Cherouny, at [0010], [0020]. Cherouny never teaches or suggests using GPS for speed determinations based on vehicle movement.

Limitation 1(d)

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Examiner further asserts:

> d) **a data logging device that records vehicle operation data associated with a use of said vehicle, the vehicle operation data comprising at least said speed information received from said module*** (see disclosure that the system records the driving speed over a given period of time, [0036]; see also disclosure that the system shows a daily driving record, and measures car speed and provides data logs of time and severity of infraction [i.e., car speed that is over the defined speed limits], [0080]-[0081]).

February 15, 2024 Non-Final Office Action at 12.

Claim 1 of the '470 Patent requires two separate devices/modules: (1) a data logging device and (2) an identification and data logging module. However, the car monitor 170 of Cherouny appears to be argued for both devices/modules in the claim rejection.

The PTAB has determined that it would be "problematic" to rely on one component of a prior art reference as teaching two separate components of a claim. In *Hopkins*, the PTAB held that the prior art disclosure of an accelerometer with an output signal could not be applied as teaching both a "deceleration signal" and an "inclination signal" as claimed. H*opkins Manufacturing Corp. v. Cequent Performance Products, Inc.* (IPR 2015-00613, Paper 9, August 7, 2015).

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Furthermore, according to *Becton*, "[w]here a claim lists elements separately, 'the clear implication of the claim language is that those elements are distinct component[s]' of the [claimed] invention." *Becton, Dickinson and Co. v. Tyco Healthcare Gr., LP*, 616 F.3d 1249 (Fed. Cir. 2010). Where a claim provides for two separate elements (*e.g.*, a "second portion" and a "return portion"), these two elements "logically cannot be one and the same." *Engel Indus., Inc. v. Lockformer Co.*, 96 F.3d 1298 (Fed. Cir. 1996).

Therefore, it is improper to rely on the same structure (car monitor 170) of a prior art reference as teaching the two separate claim elements (a data logging device and an identification and data logging module) of claim 1 of the '470 Patent, without at a minimum identifying how they are distinctly present.

Limitation 1(e)

Examiner further alleges that Cherouny discloses:

> e) **a slave control unit in said vehicle and which communicates with said master control unit, wherein said slave control unit receives commands from said master control unit and generate an alarm signal** (see disclosure of engine slow down module 120 and audible noise generator 121, [0077]-[0078] and Figs. 20A &20B; see also disclosure that functions of the driver monitor include engine slowdown 181 and audible noise alarms 182, [0082] and Figs. 21A &21B; see also disclosure of the possible audio alarms, [0021]-[0024] and [0031]).

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February 15, 2024 Non-Final Office Action at 12.

As a threshold matter, neither the request nor the Examiner provide a construction of the term "slave control unit." A POSITA would, in view of the teachings of the specification and claims, understand a "slave control unit" in the context of its required communication with a "master control unit." Both contain processors and are programmable, as set forth in the intrinsic record and discussed below.

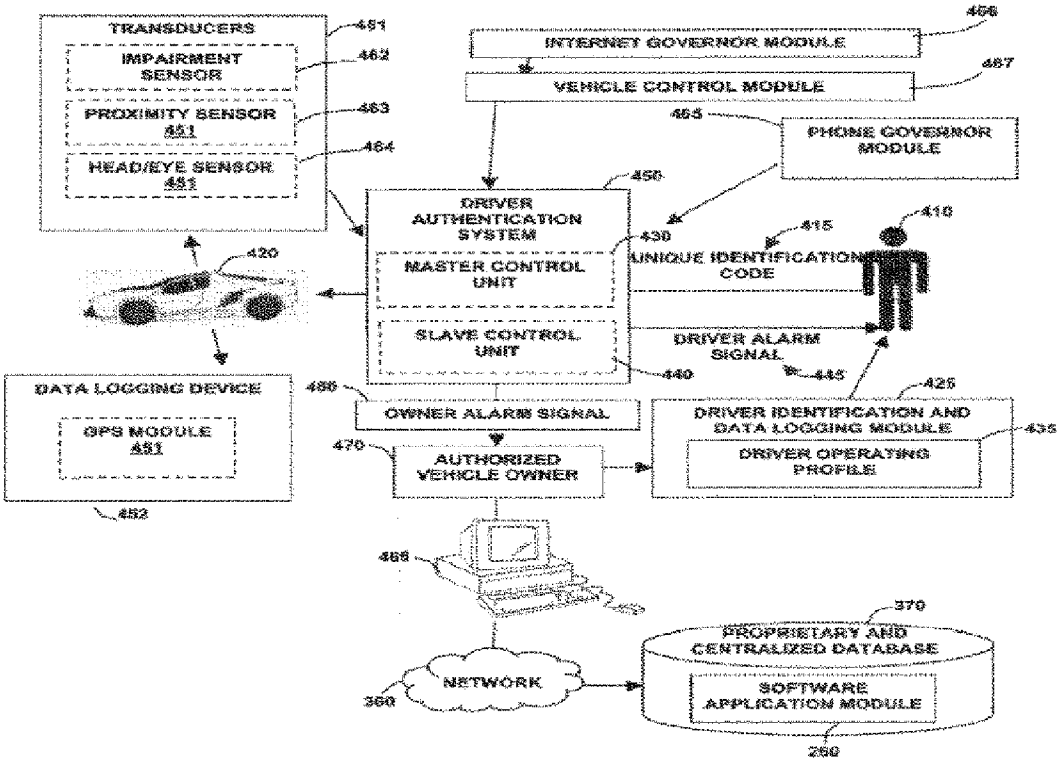

FIG. 5

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The "slave control unit" 440 itself has a microprocessor and can be programmed.

> The system 450 generally includes a master control unit 430 and a slave control unit 440 that can be accessed and programmed via the software application module 260 stored in the proprietary and centralized database 370.

'470 Patent at 6:8-12; *accord* 8:9-24. The slave control unit processes inputs from sensors:

> The slave control unit **440** can process the data collected from the sensors and determine if the data indicates a condition that requires a warning. For example, the sensors may indicate that the vehicle is speeding, veering off the road, approaching an obstruction in the road, too close to another vehicle, that the vehicle driver is distracted, sleepy, or not paying attention, that the vehicle driver is impaired etc. If one of these conditions is identified, the slave control unit **440** signals the master control unit **430** and the master control unit issues a driver alarm signal **445** as described above. In the case where the impairment sensor **462** provides a signal to the slave control unit **440** indicating that the driver's impairment is above a prescribed limit, the slave control unit can prevent the vehicle from starting.

'470 Patent at 8:43-56; 10:48-61.

The Examiner contends that the microprocessor 101 is the "master control unit" and appears to argue that engine slow down module 120 and audible noise generator 121 together form the "slave control unit." Rather than being a "unit," as claimed, the slow down module 120 and audible noise generator 121 are not even depicted as being in communication with one another.

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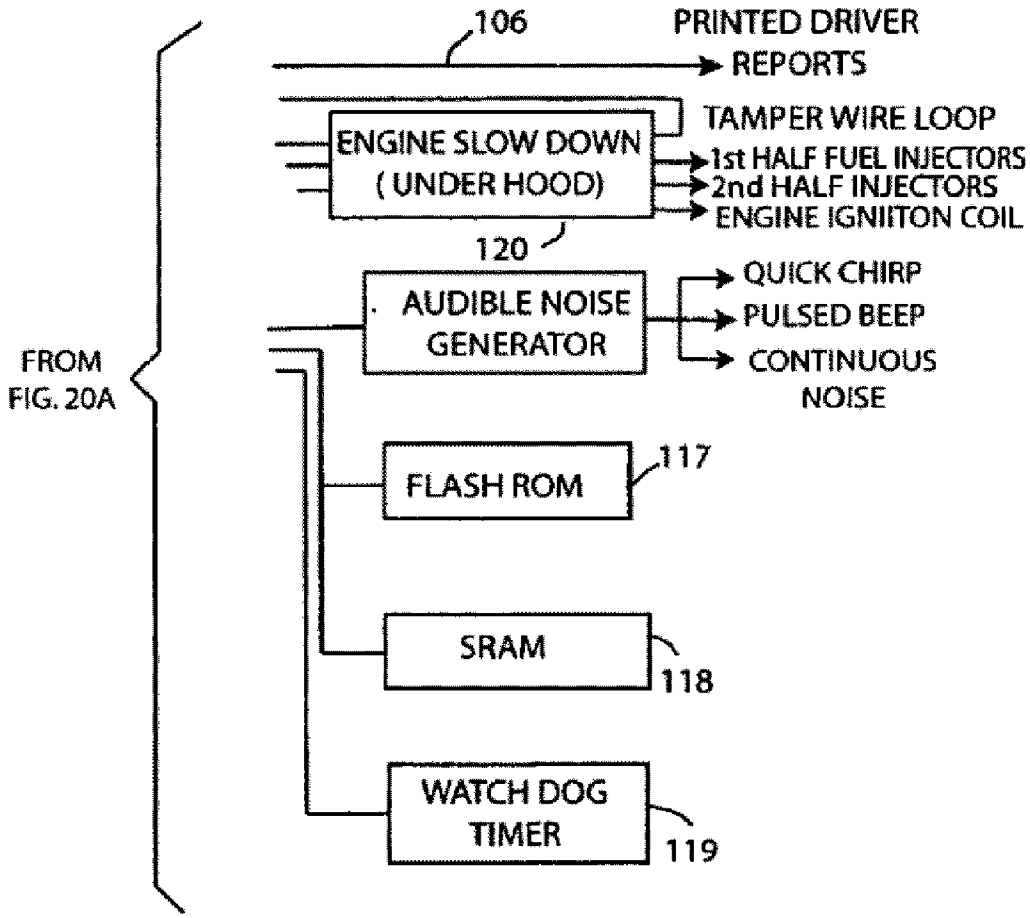
FIG. 20B



Cherouny at Fig. 20B. There is no teaching of any programmability of audible noise generator, no return communication to the master control unit, no communication of any kind to the engine slow down, and no function other than making a noise based on an input signal. Cherouny at [0078].

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The Examiner does not appear to contend that engine slow down module 120 generates an alarm signal as required by the claim language. The only disclosure remaining is audible noise generator 121, which as indicated by the name, is a simple noise generator:

> **[0078]** An audible noise generator **121** is also connected to the microprocessor for provision of various warning noises such as a quick chirp, a pulsed beep and a continuous noise. These provide warnings of increasing severity to the driver of the vehicle.

Cherouny at 6 [0078]. This does not meet the requirements of the slave control unit when it is properly construed as discussed *supra*.

Claim 4

Claim 4 is allowable for the same reasons previously discussed. Because it is a dependent claim, and thereby incorporates all of the limitations of independent claim 1 from which it depends, the disclosure lacking in Cherouny related to the independent claim limitations discussed herein prevent the combination of Cherouny and Harter from rendering dependent claim 4 obvious.

Ground 2 Under 35 U.S.C. § 103 (Cherouny in View of Shuman)

The arguments in Ground 1 also apply to this rejection. Examiner recognizes that "Cherouny does not explicitly teach a vehicle control system wherein the data logging device records location information." February 15, 2024 Non-Final Office

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Action at 23. Because Shuman was added only to address this specific shortcoming of Cherouny, its disclosure has no relevance to the other limitations of independent claim 1 that are not disclosed by Cherouny, and it cannot cure the deficiencies of Cherouny related to these limitations.

Ground 3 Under 35 U.S.C. § 103 (Cherouny in View of Petrik)

The arguments in Ground 1 also apply to this rejection. Examiner recognizes that "Cherouny does not explicitly teach a vehicle control system wherein the data logging device records location information." February 15, 2024 Non-Final Office Action at 29. Because Petrik was added only to address this specific shortcoming of Cherouny, its disclosure has no relevance to the other limitations of independent claim 1 that are not disclosed by Cherouny, and it cannot cure the deficiencies of Cherouny related to these limitations.

Ground 4 Under 35 U.S.C. § 103 (Cherouny in View of Bouchard)

The arguments in Ground 1 also apply to this rejection. Examiner recognizes that "Cherouny does not explicitly teach a vehicle control system wherein the data logging device records location information." February 15, 2024 Non-Final Office Action at 35. Because Bouchard was added only to address this specific shortcoming of Cherouny, its disclosure has no relevance to the other limitations of independent

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claim 1 that are not disclosed by Cherouny, and it cannot cure the deficiencies of Cherouny related to these limitations.

CONCLUSION

In light of the foregoing remarks, the Patent Owner respectfully requests the Office to withdraw the pending rejection to claims 1 and 4 of the '470 Patent. If any outstanding issues remain, the undersigned would welcome an Applicant interview with the Office to expedite the resolution of this application.

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Date: April 15, 2024

Respectfully submitted,

/s/ Gregory S. Donahue

Gregory S. Donahue
Reg. No. 47,531
DiNovo Price LLP
7000 North MoPac Expressway
Suite 350
Austin, TX 78731
Telephone: (512) 539-2625
Facsimile: (512) 539-2627

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CERTIFICATE OF SERVICE

I hereby certify that on this 15th day of April 2024, a true and correct copy of the foregoing RESPONSE TO FEBRUARY 15, 2024 NON-FINAL OFFICE ACTION was served pursuant to 37 C.F.R. § 1.550(f) via Priority Mail Express® (9405503699300679602894) upon the following counsel of record for third-party requesters:

Unified Patents, LLC
4445 Willard Ave.
Suite 600
Chevy Chase, MD 20815

/s/ Gregory S. Donahue
Gregory S. Donahue
Reg. No. 47,531
DiNovo Price LLP
7000 North MoPac Expressway
Suite 350
Austin, Texas 78731

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PATENT & TRADEMARK OFFICE

4-19-24 Reexam

CERTIFICATE OF EXPRESS MAILING UNDER 37 C.F.R. § 1.10

I hereby certify that this correspondence is being deposited with the United States Postal Service as Priority Mail Express® mail in an envelope addressed to: Mail Stop "Ex Parte Reexam," Central Reexamination Unit, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450 on the date shown below:

Priority Mail Express No.: 9405503699300679602863

Date: April 15, 2024

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No.: 10,259,470	
Application No.: 90/015,287	
Filed: 08/31/2023	Art Unit: 3992
Inventor: Phelan	
Title: DRIVER AUTHENTICATION SYSTEM AND METHOD FOR MONITORING AND CONTROLLING VEHICLE USAGE	Examiner: Wassum, Luke S.

Mail Stop "Ex Parte Reexam"
Central Reexamination Unit
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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APR 15 2024
PATENT & TRADEMARK OFFICE

Dear Sir/Madam:

RESPONSE TO FEBRUARY 15, 2024 NON-FINAL OFFICE ACTION

Responsive to the Non-Final Office Action dated February 15, 2024, the Patent Owner presents the following in complete response pursuant to 37 C.F.R. § 1.550. Attached to this Response are the following:

Amendments to the Claims are unnecessary given the remarks. No claim amendments are made herein as discussed on page 3 of this paper.

Remarks begin on page 4 of this paper.

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CLAIM AMENDMENTS

Based on the remarks below, no claim amendments are necessary to put this application in condition for allowance and issuance of a reexamination certificate for United States Patent No. 10,259,470 ("'470 Patent").

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REMARKS

Applicant submits that challenged claims 1 and 4 of the '470 Patent along with all unchallenged claims of the '470 Patent are allowable.

STATUS OF THE CLAIMS

Claims 1 and 4 of the '470 Patent were rejected in the February 15, 2024 Non-Final Office Action. Claims 1 and 4 were rejected under 35 U.S.C. § 103 as being rendered obvious by Cherouny in view of Harter. Claim 1 was rejected under 35 U.S.C. § 103 as being rendered obvious by Cherouny in view of Shuman. Claim 1 was rejected under 35 U.S.C. § 103 as being rendered obvious by Cherouny in view of Petrik. Claim 1 was rejected under 35 U.S.C. § 103 as being rendered obvious by Cherouny in view of Bouchard.

Background of the '470 Patent

The '470 Patent is "generally related to techniques for use in ensuring motor vehicle operation safety." '470 Patent at 1:32-33. More specifically, it relates "to systems and methods for monitoring and controlling vehicle usage by high-risk drivers." '470 Patent at 1:33-35. "A proprietary and centralized database comprising a software application can be accessed by an authorized user via a network utilizing a remote computer in order to configure a desired operating profile

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that matches requirements of the high-risk driver." '470 Patent at 2:37-41. The '470 Patent explains:

> The operating profile can be loaded to a driver identification and data logging module in conjunction with the remote computer. A master control unit can receive a unique identification code from the data logging device to authenticate the high-risk driver and to operate the vehicle within the desired operating profile. A slave control unit receives commands from the master control unit and generates a real time alarm signal if the driver violates the preprogrammed operating profile unique to the driver. The alarm signal generated by the slave control unit can remain until the driver corrects the operating condition and brings the vehicle within the desired operating profile.

'470 Patent at 2:41-53.

Central to the teachings of the '470 Patent, and claim 1 in particular, are the claimed relationship between two control units, namely the "master control unit" and the "slave control unit." Both are control units, meaning that they have certain characteristics known to a person of skill in the art, including the ability to communicate, process data and control features of the claimed system. A "controller" in the context of a computerized system such as the "vehicle control system" of claim 1 is defined in the IEEE Dictionary as follows:

> (2) A device or group of devices that serves to govern, in some predetermined manner, the electric power delivered to the apparatus to which it is connected.

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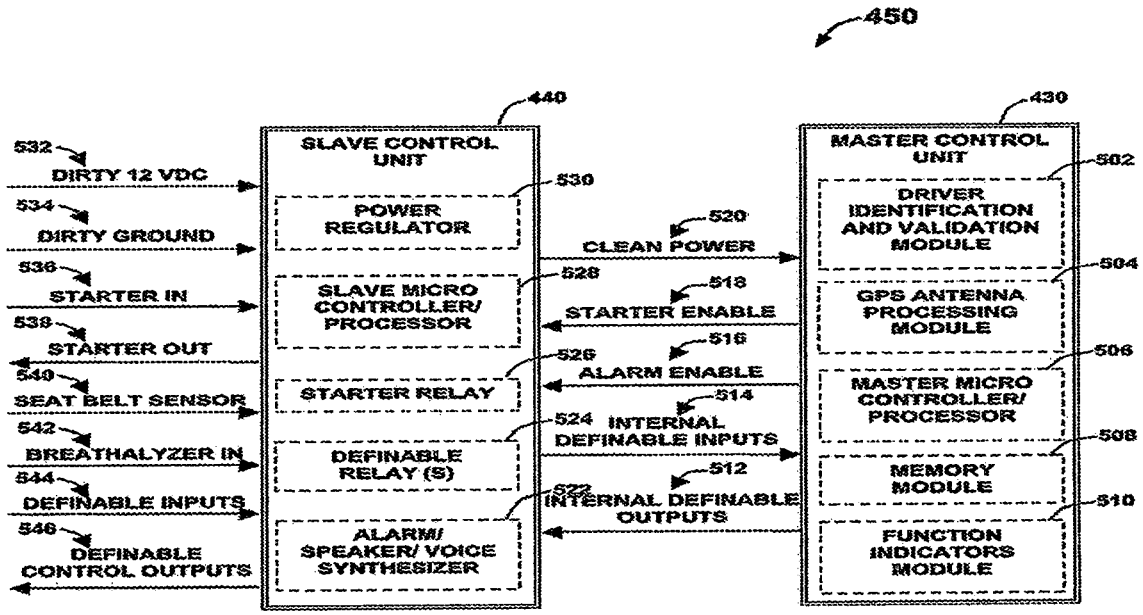
> (3) (packing machinery) A device or group of devices that serves to control in some predetermined manner the apparatus to which it is connected.
>
> (4) The component of a system that functions as the system controller. A controller typically sends program messages to and receives response messages from devices.

IEEE 100: The Authoritative Dictionary of IEEE Standards Terms, edited by Kim Breitfelder and Don Messina, Seventh Ed., Standards Information Network IEEE Press, December 2000, p. 234.

> As explained in the specification of the '470 Patent:
>
> The system **450** generally includes a master control unit **430** and a slave control unit **440** that can be accessed and programmed via the software application module **260** stored in the proprietary and centralized database.

'470 Patent at 6:8-13.



'470 Patent at Fig. 6. "When the driver enters the vehicle, the device **425** can automatically, or at the user's request, connect to the master control unit **465**." '470 Patent at 7:37-39.

As a programmable controller, the slave control unit's output can take varied and complex forms, including remote communication relating to vehicle operation by an interested party such as a fleet manager or other owner.

> The master control unit **430** can enable vehicle operation within the programmed operating profile **435**. If the driver **410** violates the preprogrammed operating profile **435** the master control unit **430** can communicate with the slave control unit **440** and generate a real time driver alarm signal **445**. The alarm signal **445** can result in an actual audible alarm, or it can be used to control/govern operational aspects of the vehicle. ***For example, the real time driver alarm signal 445 can be used to communicate conditions to the driver, limit/disable radio functionality, limit/disable mobile cellular devices in the vehicle, limit/disable internet applications provided in the vehicle, limit/disable GPS related applications provided by the vehicle, limit/disable the drivers cellular telephone or other such devices in the vehicle, govern mechanical operations (e.g., lower/limit speed), remotely contact vehicle owners/fleet managers, and other electrical or mechanical functions, while maintaining driver and occupant safety.***

Id. at 10:48-61 (emphasis added).

Priority of the '470 Patent

Examiner asserts that the grandparent patent ("'101 Patent") to the '470 Patent does not support the limitation of claim 1 of the '470 Patent related to "a wireless identification and data logging module." February 15, 2024 Non-Final Office

Action at 3. Patent Owner hereby reserves its rights related to the priority date determination and believes that the '470 Patent is entitled to priority through the '101 Patent and potentially even beyond. Nevertheless, this priority date issue is not relevant to the arguments made herein as the arguments presented do not rely on whether the pre-AIA or AIA provisions apply to this re-examination.

Background of Cherouny

Cherouny is entitled "Electronic Programmable Speed Limiter." It discloses an "electronic programmable speed limiter for drivers of vehicles which can be preprogrammed and controlled from a remote location via a radio link to update driver performance and adjust the controls on the speed limiter." Cherouny at Abstract. Cherouny focuses on speed monitoring and does not address other safety controls.

Background of Harter

Harter involves a "system for logging performance of a driver operating a vehicle that has a vehicle information system from which [at] least one vehicle operating parameter may be obtained." Harter at Abstract. "The vehicle operating parameter collected through the vehicle information system and operator information collected from a portable device are wirelessly communicated to a remote host through a network such as the Internet." Harter at Abstract. Harter's

invention aims to evaluate and enhance driver performance over time rather than enforcing immediate compliance with driving profiles or authentication of driver identity.

Background of Shuman

Shuman discloses a computing architecture for a vehicle. Shuman states:

> The computing architecture includes a data network comprised of a plurality of interconnected processors, a first group of sensors responsive to environmental conditions around the vehicle, a second group of sensors responsive to the vehicle's hardware systems, and a map database containing data that represent geographic features in the geographic area around the vehicle. A vehicle-environment modeling program, executed on the data network, uses the outputs from the first and second groups of sensors and the map database to provide and continuously update a data model that represents the vehicle, past, present, and future environmental conditions around the vehicle, and geographic features, including structures, objects and obstacles around the vehicle. Vehicle operations programming applications, executed on the data network, use the data model to determine desired vehicle operation in the context of the vehicle's past, present, and future environment.

Shuman at 2:11-29

Background of Petrik

Petrik is entitled "GPS Monitoring Biometric Smartcard, Intelligent Speed Management." It discusses a "method and system, which, provides GPS based

vehicle monitoring, management and cruise control, incorporating intelligent speed adaptation, recording driver and vehicle operating parameters." Petrik at [0001].

Background of Bouchard

Bouchard discloses a "method and apparatus for evaluating a driver's performance under actual real-time conditions and for using such evaluation to determine the driver's ability to safely operate a vehicle." Bouchard at Abstract. "[C]onditions monitored are used to make a determination as to whether the driver is performing in conformity with normal driving standards and the driver's own past performance." Bouchard at 5:21-24.

CLAIM REJECTIONS

Ground 1 Under 35 U.S.C. § 103 (Cherouny in View of Harter)

Limitation 1(b)

Examiner alleges that Cherouny discloses:

> b) **a master control unit in a vehicle for authenticating at least one occupant via said driver identification and logging module and associating an operating profile with said at least one occupant** (see microprocessor 101 which connects to key fob reader 109 to check the identity of the user of the automobile to ensure the instant user's data table is used, [0073]; see also disclosure that a moderator can preprogram operational parameters [i.e., an operating profile for an individual driver in its system, [0018] and [0020]).

February 15, 2024 Non-Final Office Action at 11.

The '470 Patent's master control unit includes a type of microcontroller that has the programmable and processing features of a microprocessor, but also includes other features such as timers, communication interfaces, and analog-to-digital converters. '470 Patent at 10:48-61; FIG. 6.

The '470 Patent's master control unit is designed to identify a driver profile in which the vehicle operates and for controlling various vehicle system components and has all the necessary features on-board a singular device versus the highly "componentized" approach taught by Cherouny. For example, the master control unit 430 of the '470 Patent includes a driver identification and validation module 502, a GPS antenna processing module 504, a master micro controller/processor 506, a memory module 508 and a function indicators module 510. '470 Patent at FIG. 6.

The communications interfaces of the master control unit 430 include outputs such as starter enable 518, alarm enable 516, and internal definable outputs 512. The inputs include clean power 520 and other internal definable inputs 514. '470 Patent at 10:48-11:52; FIG. 6. The master control unit is to be understood in a specific systemic context, namely its relationship to the "slave control unit" claimed in claim 1 and discussed in "Limitation 1(e)" below.

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Cherouny, in contrast, merely discloses a microprocessor that is a ***chip*** that performs basic calculations and processes data based on inputs. These inputs include inputs from an automobile speed sensor 108, a key fob reader 109, and power conditioning 110. Cherouny at [0073], FIG. 20A. The microprocessor in turn provides instructions to other components to execute functions such as engine slowdown 120 and audible noise generator 121. Cherouny at [0077], [0078], FIG. 20A. Cherouny's microprocessor is a general-purpose computing device that is used for processing data and executing instructions and requires an ecosystem of other components for controlling vehicle functions, while the '470 Patent's master control unit is a microcontroller designed for controlling the vehicle in an integrated manner in conjunction with the slave control unit.

This distinction is critical because the '470 Patent's microcontroller method allows for vehicle-agnostic deployment with broad functionality versus Cherouney's microprocessor-based approach adapted to control dedicated devices and which has thus substantial limitations.

Limitation 1(c)

Examiner further asserts that Cherouny discloses:

> c) **a module for receiving at least location and speed information in association with a movement of said vehicle** (see disclosure of speed sensor 108, [0073]; see

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> also disclosure of a global positioning receiver linked to the CPU that receives the location of the vehicle from the GPS satellite system, [0020]; see also disclosure of a wireless transmitting means associated with the moderator to send signals representing location and speed data of the vehicle at any given time to a central server, claim 1).

February 15, 2024 Non-Final Office Action at 11.

This limitation of the '470 Patent requires that speed information is received "in association with a movement of said vehicle." Cherouny, in contrast, discloses that speed information is determined ***not*** from "movement of said vehicle," but rather clock cycles associated with wheel sensors. Cherouny never uses vehicle movement/location in determining speed. On the contrary, Cherouny states:

> ***The instant device*** counts clock cycles between rising edges as well as any other part, such as the falling edges or even voltage levels, of the square wave coming from an additional wheel sensor similar to the antilock ABS sensors on one of the wheels. This digital computer ***version of speed detection is unique when used with the other features of the device.***

Cherouny at [0011], [0015] (emphasis added). Hence, Cherouny's methodology for determining speed information does not teach or suggest this claim limitation.

Cherouny's sole mention of GPS is so that, for example, the system can be made aware of school zones. Cherouny, at [0010], [0020]. Cherouny never teaches or suggests using GPS for speed determinations based on vehicle movement.

Limitation 1(d)

Examiner further asserts:

> d) **a data logging device that records vehicle operation data associated with a use of said vehicle, the vehicle operation data comprising at least said speed information received from said module*** (see disclosure that the system records the driving speed over a given period of time, [0036]; see also disclosure that the system shows a daily driving record, and measures car speed and provides data logs of time and severity of infraction [i.e., car speed that is over the defined speed limits], [0080]-[0081]).

February 15, 2024 Non-Final Office Action at 12.

Claim 1 of the '470 Patent requires two separate devices/modules: (1) a data logging device and (2) an identification and data logging module. However, the car monitor 170 of Cherouny appears to be argued for both devices/modules in the claim rejection.

The PTAB has determined that it would be "problematic" to rely on one component of a prior art reference as teaching two separate components of a claim. In *Hopkins*, the PTAB held that the prior art disclosure of an accelerometer with an output signal could not be applied as teaching both a "deceleration signal" and an "inclination signal" as claimed. H*opkins Manufacturing Corp. v. Cequent Performance Products, Inc.* (IPR 2015-00613, Paper 9, August 7, 2015).

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Furthermore, according to *Becton*, "[w]here a claim lists elements separately, 'the clear implication of the claim language is that those elements are distinct component[s]' of the [claimed] invention." *Becton, Dickinson and Co. v. Tyco Healthcare Gr., LP*, 616 F.3d 1249 (Fed. Cir. 2010). Where a claim provides for two separate elements (*e.g.*, a "second portion" and a "return portion"), these two elements "logically cannot be one and the same." *Engel Indus., Inc. v. Lockformer Co.*, 96 F.3d 1298 (Fed. Cir. 1996).

Therefore, it is improper to rely on the same structure (car monitor 170) of a prior art reference as teaching the two separate claim elements (a data logging device and an identification and data logging module) of claim 1 of the '470 Patent, without at a minimum identifying how they are distinctly present.

Limitation 1(e)

Examiner further alleges that Cherouny discloses:

> e) **a slave control unit in said vehicle and which communicates with said master control unit, wherein said slave control unit receives commands from said master control unit and generate an alarm signal** (see disclosure of engine slow down module 120 and audible noise generator 121, [0077]-[0078] and Figs. 20A &20B; see also disclosure that functions of the driver monitor include engine slowdown 181 and audible noise alarms 182, [0082] and Figs. 21A &21B; see also disclosure of the possible audio alarms, [0021]-[0024] and [0031]).

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February 15, 2024 Non-Final Office Action at 12.

As a threshold matter, neither the request nor the Examiner provide a construction of the term "slave control unit." A POSITA would, in view of the teachings of the specification and claims, understand a "slave control unit" in the context of its required communication with a "master control unit." Both contain processors and are programmable, as set forth in the intrinsic record and discussed below.

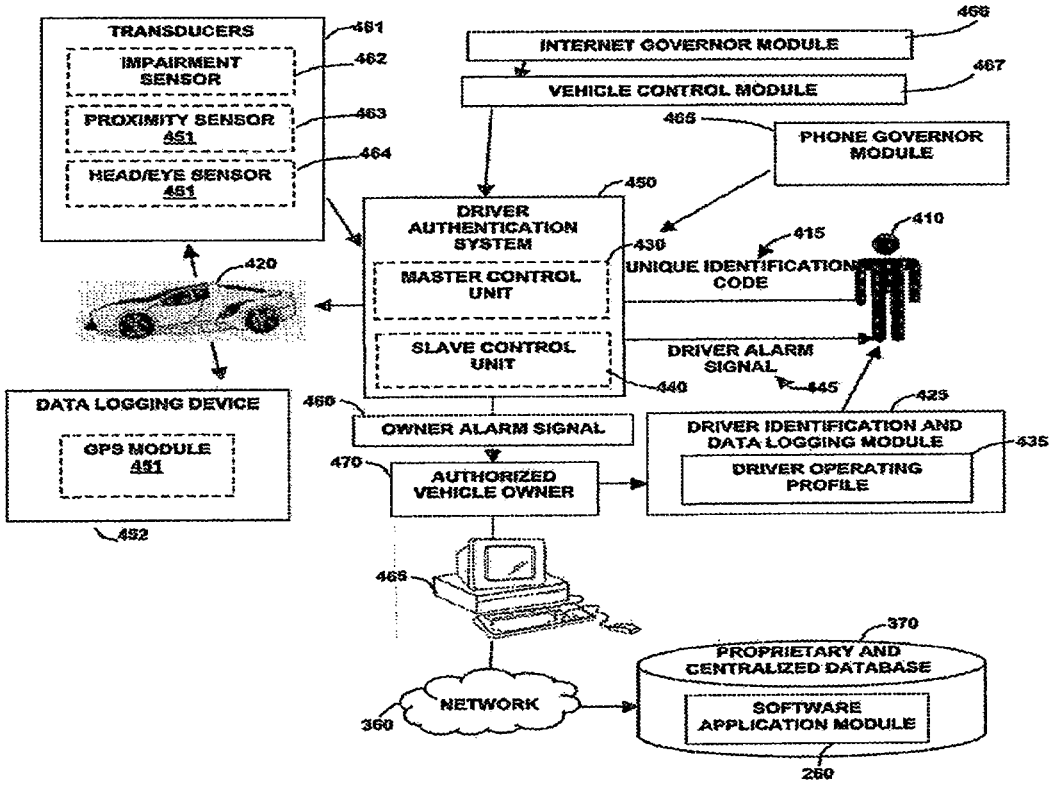

FIG. 5

The "slave control unit" 440 itself has a microprocessor and can be programmed.

> The system 450 generally includes a master control unit 430 and a slave control unit 440 that can be accessed and programmed via the software application module 260 stored in the proprietary and centralized database 370.

'470 Patent at 6:8-12; *accord* 8:9-24. The slave control unit processes inputs from sensors:

> The slave control unit **440** can process the data collected from the sensors and determine if the data indicates a condition that requires a warning. For example, the sensors may indicate that the vehicle is speeding, veering off the road, approaching an obstruction in the road, too close to another vehicle, that the vehicle driver is distracted, sleepy, or not paying attention, that the vehicle driver is impaired etc. If one of these conditions is identified, the slave control unit **440** signals the master control unit **430** and the master control unit issues a driver alarm signal **445** as described above. In the case where the impairment sensor **462** provides a signal to the slave control unit **440** indicating that the driver's impairment is above a prescribed limit, the slave control unit can prevent the vehicle from starting.

'470 Patent at 8:43-56; 10:48-61.

The Examiner contends that the microprocessor 101 is the "master control unit" and appears to argue that engine slow down module 120 and audible noise generator 121 together form the "slave control unit." Rather than being a "unit," as claimed, the slow down module 120 and audible noise generator 121 are not even depicted as being in communication with one another.

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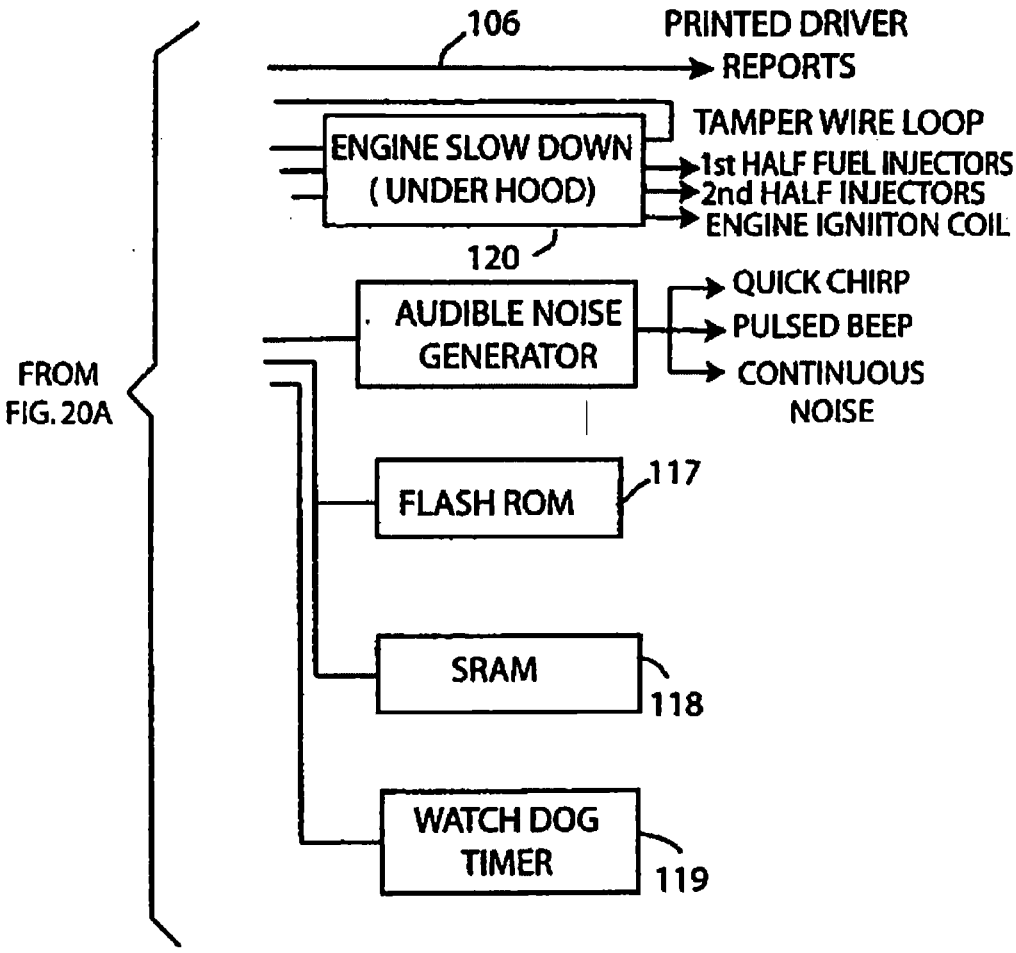
FIG. 20B



Cherouny at Fig. 20B. There is no teaching of any programmability of audible noise generator, no return communication to the master control unit, no communication of any kind to the engine slow down, and no function other than making a noise based on an input signal. Cherouny at [0078].

The Examiner does not appear to contend that engine slow down module 120 generates an alarm signal as required by the claim language. The only disclosure remaining is audible noise generator 121, which as indicated by the name, is a simple noise generator:

> **[0078]** An audible noise generator **121** is also connected to the microprocessor for provision of various warning noises such as a quick chirp, a pulsed beep and a continuous noise. These provide warnings of increasing severity to the driver of the vehicle.

Cherouny at 6 [0078]. This does not meet the requirements of the slave control unit when it is properly construed as discussed *supra*.

Claim 4

Claim 4 is allowable for the same reasons previously discussed. Because it is a dependent claim, and thereby incorporates all of the limitations of independent claim 1 from which it depends, the disclosure lacking in Cherouny related to the independent claim limitations discussed herein prevent the combination of Cherouny and Harter from rendering dependent claim 4 obvious.

Ground 2 Under 35 U.S.C. § 103 (Cherouny in View of Shuman)

The arguments in Ground 1 also apply to this rejection. Examiner recognizes that "Cherouny does not explicitly teach a vehicle control system wherein the data logging device records location information." February 15, 2024 Non-Final Office

Action at 23. Because Shuman was added only to address this specific shortcoming of Cherouny, its disclosure has no relevance to the other limitations of independent claim 1 that are not disclosed by Cherouny, and it cannot cure the deficiencies of Cherouny related to these limitations.

Ground 3 Under 35 U.S.C. § 103 (Cherouny in View of Petrik)

The arguments in Ground 1 also apply to this rejection. Examiner recognizes that "Cherouny does not explicitly teach a vehicle control system wherein the data logging device records location information." February 15, 2024 Non-Final Office Action at 29. Because Petrik was added only to address this specific shortcoming of Cherouny, its disclosure has no relevance to the other limitations of independent claim 1 that are not disclosed by Cherouny, and it cannot cure the deficiencies of Cherouny related to these limitations.

Ground 4 Under 35 U.S.C. § 103 (Cherouny in View of Bouchard)

The arguments in Ground 1 also apply to this rejection. Examiner recognizes that "Cherouny does not explicitly teach a vehicle control system wherein the data logging device records location information." February 15, 2024 Non-Final Office Action at 35. Because Bouchard was added only to address this specific shortcoming of Cherouny, its disclosure has no relevance to the other limitations of independent

claim 1 that are not disclosed by Cherouny, and it cannot cure the deficiencies of Cherouny related to these limitations.

CONCLUSION

In light of the foregoing remarks, the Patent Owner respectfully requests the Office to withdraw the pending rejection to claims 1 and 4 of the '470 Patent. If any outstanding issues remain, the undersigned would welcome an Applicant interview with the Office to expedite the resolution of this application.

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Date: April 15, 2024

Respectfully submitted,

/s/ *Gregory S. Donahue*
Gregory S. Donahue
Reg. No. 47,531
DiNovo Price LLP
7000 North MoPac Expressway
Suite 350
Austin, TX 78731
Telephone: (512) 539-2625
Facsimile: (512) 539-2627

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APR 15 2024
PATENT & TRADEMARK OFFICE

CERTIFICATE OF SERVICE

I hereby certify that on this 15th day of April 2024, a true and correct copy of the foregoing RESPONSE TO FEBRUARY 15, 2024 NON-FINAL OFFICE ACTION was served pursuant to 37 C.F.R. § 1.550(f) via Priority Mail Express® (9405503699300679602894) upon the following counsel of record for third-party requesters:

Unified Patents, LLC
4445 Willard Ave.
Suite 600
Chevy Chase, MD 20815

/s/ *Gregory S. Donahue*
Gregory S. Donahue
Reg. No. 47,531
DiNovo Price LLP
7000 North MoPac Expressway
Suite 350
Austin, Texas 78731

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Dear Sir/Madam:

RESPONSE TO FEBRUARY 15, 2024 NON-FINAL OFFICE ACTION

Responsive to the Non-Final Office Action dated February 15, 2024, the Patent Owner presents the following in complete response pursuant to 37 C.F.R. § 1.550. Attached to this Response are the following:

Amendments to the Claims are unnecessary given the remarks. No claim amendments are made herein as discussed on page 3 of this paper.

Remarks begin on page 4 of this paper.

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CLAIM AMENDMENTS

Based on the remarks below, no claim amendments are necessary to put this application in condition for allowance and issuance of a reexamination certificate for United States Patent No. 10,259,470 ("'470 Patent").

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REMARKS

Applicant submits that challenged claims 1 and 4 of the '470 Patent along with all unchallenged claims of the '470 Patent are allowable.

STATUS OF THE CLAIMS

Claims 1 and 4 of the '470 Patent were rejected in the February 15, 2024 Non-Final Office Action. Claims 1 and 4 were rejected under 35 U.S.C. § 103 as being rendered obvious by Cherouny in view of Harter. Claim 1 was rejected under 35 U.S.C. § 103 as being rendered obvious by Cherouny in view of Shuman. Claim 1 was rejected under 35 U.S.C. § 103 as being rendered obvious by Cherouny in view of Petrik. Claim 1 was rejected under 35 U.S.C. § 103 as being rendered obvious by Cherouny in view of Bouchard.

Background of the '470 Patent

The '470 Patent is "generally related to techniques for use in ensuring motor vehicle operation safety." '470 Patent at 1:32-33. More specifically, it relates "to systems and methods for monitoring and controlling vehicle usage by high-risk drivers." '470 Patent at 1:33-35. "A proprietary and centralized database comprising a software application can be accessed by an authorized user via a network utilizing a remote computer in order to configure a desired operating profile

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that matches requirements of the high-risk driver." '470 Patent at 2:37-41. The '470 Patent explains:

> The operating profile can be loaded to a driver identification and data logging module in conjunction with the remote computer. A master control unit can receive a unique identification code from the data logging device to authenticate the high-risk driver and to operate the vehicle within the desired operating profile. A slave control unit receives commands from the master control unit and generates a real time alarm signal if the driver violates the preprogrammed operating profile unique to the driver. The alarm signal generated by the slave control unit can remain until the driver corrects the operating condition and brings the vehicle within the desired operating profile.

'470 Patent at 2:41-53.

Central to the teachings of the '470 Patent, and claim 1 in particular, are the claimed relationship between two control units, namely the "master control unit" and the "slave control unit." Both are control units, meaning that they have certain characteristics known to a person of skill in the art, including the ability to communicate, process data and control features of the claimed system. A "controller" in the context of a computerized system such as the "vehicle control system" of claim 1 is defined in the IEEE Dictionary as follows:

> (2) A device or group of devices that serves to govern, in some predetermined manner, the electric power delivered to the apparatus to which it is connected.

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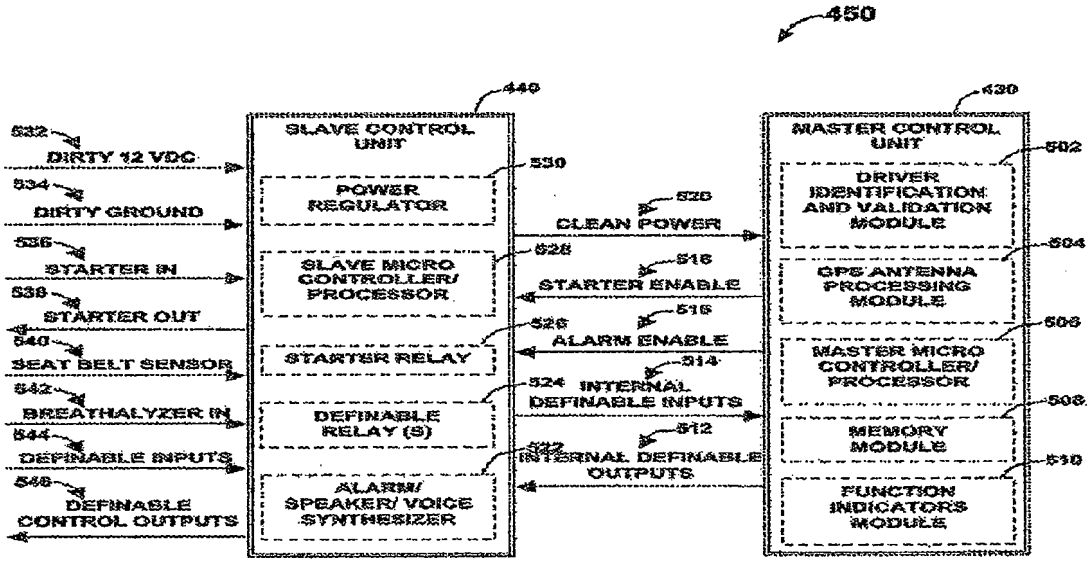
> (3) (packing machinery) A device or group of devices that serves to control in some predetermined manner the apparatus to which it is connected.
>
> (4) The component of a system that functions as the system controller. A controller typically sends program messages to and receives response messages from devices.

IEEE 100: The Authoritative Dictionary of IEEE Standards Terms, edited by Kim Breitfelder and Don Messina, Seventh Ed., Standards Information Network IEEE Press, December 2000, p. 234.

As explained in the specification of the '470 Patent:

> The system **450** generally includes a master control unit **430** and a slave control unit **440** that can be accessed and programmed via the software application module **260** stored in the proprietary and centralized database.

'470 Patent at 6:8-13.



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'470 Patent at Fig. 6. "When the driver enters the vehicle, the device **425** can automatically, or at the user's request, connect to the master control unit **465**." '470 Patent at 7:37-39.

As a programmable controller, the slave control unit's output can take varied and complex forms, including remote communication relating to vehicle operation by an interested party such as a fleet manager or other owner.

> The master control unit **430** can enable vehicle operation within the programmed operating profile **435**. If the driver **410** violates the preprogrammed operating profile **435** the master control unit **430** can communicate with the slave control unit **440** and generate a real time driver alarm signal **445**. The alarm signal **445** can result in an actual audible alarm, or it can be used to control/govern operational aspects of the vehicle. ***For example, the real time driver alarm signal 445 can be used to communicate conditions to the driver, limit/disable radio functionality, limit/disable mobile cellular devices in the vehicle, limit/disable internet applications provided in the vehicle, limit/disable GPS related applications provided by the vehicle, limit/disable the drivers cellular telephone or other such devices in the vehicle, govern mechanical operations (e.g., lower/limit speed), remotely contact vehicle owners/fleet managers, and other electrical or mechanical functions, while maintaining driver and occupant safety.***

Id. at 10:48-61 (emphasis added).

Priority of the '470 Patent

Examiner asserts that the grandparent patent ("'101 Patent") to the '470 Patent does not support the limitation of claim 1 of the '470 Patent related to "a wireless identification and data logging module." February 15, 2024 Non-Final Office

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Action at 3. Patent Owner hereby reserves its rights related to the priority date determination and believes that the '470 Patent is entitled to priority through the '101 Patent and potentially even beyond. Nevertheless, this priority date issue is not relevant to the arguments made herein as the arguments presented do not rely on whether the pre-AIA or AIA provisions apply to this re-examination.

Background of Cherouny

Cherouny is entitled "Electronic Programmable Speed Limiter." It discloses an "electronic programmable speed limiter for drivers of vehicles which can be preprogrammed and controlled from a remote location via a radio link to update driver performance and adjust the controls on the speed limiter." Cherouny at Abstract. Cherouny focuses on speed monitoring and does not address other safety controls.

Background of Harter

Harter involves a "system for logging performance of a driver operating a vehicle that has a vehicle information system from which [at] least one vehicle operating parameter may be obtained." Harter at Abstract. "The vehicle operating parameter collected through the vehicle information system and operator information collected from a portable device are wirelessly communicated to a remote host through a network such as the Internet." Harter at Abstract. Harter's

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invention aims to evaluate and enhance driver performance over time rather than enforcing immediate compliance with driving profiles or authentication of driver identity.

Background of Shuman

Shuman discloses a computing architecture for a vehicle. Shuman states:

> The computing architecture includes a data network comprised of a plurality of interconnected processors, a first group of sensors responsive to environmental conditions around the vehicle, a second group of sensors responsive to the vehicle's hardware systems, and a map database containing data that represent geographic features in the geographic area around the vehicle. A vehicle-environment modeling program, executed on the data network, uses the outputs from the first and second groups of sensors and the map database to provide and continuously update a data model that represents the vehicle, past, present, and future environmental conditions around the vehicle, and geographic features, including structures, objects and obstacles around the vehicle. Vehicle operations programming applications, executed on the data network, use the data model to determine desired vehicle operation in the context of the vehicle's past, present, and future environment.

Shuman at 2:11-29

Background of Petrik

Petrik is entitled "GPS Monitoring Biometric Smartcard, Intelligent Speed Management." It discusses a "method and system, which, provides GPS based

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vehicle monitoring, management and cruise control, incorporating intelligent speed adaptation, recording driver and vehicle operating parameters." Petrik at [0001].

Background of Bouchard

Bouchard discloses a "method and apparatus for evaluating a driver's performance under actual real-time conditions and for using such evaluation to determine the driver's ability to safely operate a vehicle." Bouchard at Abstract. "[C]onditions monitored are used to make a determination as to whether the driver is performing in conformity with normal driving standards and the driver's own past performance." Bouchard at 5:21-24.

CLAIM REJECTIONS

Ground 1 Under 35 U.S.C. § 103 (Cherouny in View of Harter)

Limitation 1(b)

Examiner alleges that Cherouny discloses:

> b) **a master control unit in a vehicle for authenticating at least one occupant via said driver identification and logging module and associating an operating profile with said at least one occupant** (see microprocessor 101 which connects to key fob reader 109 to check the identity of the user of the automobile to ensure the instant user's data table is used, [0073]; see also disclosure that a moderator can preprogram operational parameters [i.e., an operating profile for an individual driver in its system, [0018] and [0020]).

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February 15, 2024 Non-Final Office Action at 11.

The '470 Patent's master control unit includes a type of microcontroller that has the programmable and processing features of a microprocessor, but also includes other features such as timers, communication interfaces, and analog-to-digital converters. '470 Patent at 10:48-61; FIG. 6.

The '470 Patent's master control unit is designed to identify a driver profile in which the vehicle operates and for controlling various vehicle system components and has all the necessary features on-board a singular device versus the highly "componentized" approach taught by Cherouny. For example, the master control unit 430 of the '470 Patent includes a driver identification and validation module 502, a GPS antenna processing module 504, a master micro controller/processor 506, a memory module 508 and a function indicators module 510. '470 Patent at FIG. 6.

The communications interfaces of the master control unit 430 include outputs such as starter enable 518, alarm enable 516, and internal definable outputs 512. The inputs include clean power 520 and other internal definable inputs 514. '470 Patent at 10:48-11:52; FIG. 6. The master control unit is to be understood in a specific systemic context, namely its relationship to the "slave control unit" claimed in claim 1 and discussed in "Limitation 1(e)" below.

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Cherouny, in contrast, merely discloses a microprocessor that is a ***chip*** that performs basic calculations and processes data based on inputs. These inputs include inputs from an automobile speed sensor 108, a key fob reader 109, and power conditioning 110. Cherouny at [0073], FIG. 20A. The microprocessor in turn provides instructions to other components to execute functions such as engine slowdown 120 and audible noise generator 121. Cherouny at [0077], [0078], FIG. 20A. Cherouny's microprocessor is a general-purpose computing device that is used for processing data and executing instructions and requires an ecosystem of other components for controlling vehicle functions, while the '470 Patent's master control unit is a microcontroller designed for controlling the vehicle in an integrated manner in conjunction with the slave control unit.

This distinction is critical because the '470 Patent's microcontroller method allows for vehicle-agnostic deployment with broad functionality versus Cherouney's microprocessor-based approach adapted to control dedicated devices and which has thus substantial limitations.

Limitation 1(c)

Examiner further asserts that Cherouny discloses:

> c) **a module for receiving at least location and speed information in association with a movement of said vehicle** (see disclosure of speed sensor 108, [0073]; see

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> also disclosure of a global positioning receiver linked to the CPU that receives the location of the vehicle from the GPS satellite system, [0020]; see also disclosure of a wireless transmitting means associated with the moderator to send signals representing location and speed data of the vehicle at any given time to a central server, claim 1).

February 15, 2024 Non-Final Office Action at 11.

This limitation of the '470 Patent requires that speed information is received "in association with a movement of said vehicle." Cherouny, in contrast, discloses that speed information is determined ***not*** from "movement of said vehicle," but rather clock cycles associated with wheel sensors. Cherouny never uses vehicle movement/location in determining speed. On the contrary, Cherouny states:

> ***The instant device*** counts clock cycles between rising edges as well as any other part, such as the falling edges or even voltage levels, of the square wave coming from an additional wheel sensor similar to the antilock ABS sensors on one of the wheels. This digital computer ***version of speed detection is unique when used with the other features of the device.***

Cherouny at [0011], [0015] (emphasis added). Hence, Cherouny's methodology for determining speed information does not teach or suggest this claim limitation.

Cherouny's sole mention of GPS is so that, for example, the system can be made aware of school zones. Cherouny, at [0010], [0020]. Cherouny never teaches or suggests using GPS for speed determinations based on vehicle movement.

Limitation 1(d)

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Examiner further asserts:

> d) **a data logging device that records vehicle operation data associated with a use of said vehicle, the vehicle operation data comprising at least said speed information received from said module*** (see disclosure that the system records the driving speed over a given period of time, [0036]; see also disclosure that the system shows a daily driving record, and measures car speed and provides data logs of time and severity of infraction [i.e., car speed that is over the defined speed limits], [0080]-[0081]).

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Claim 1 of the '470 Patent requires two separate devices/modules: (1) a data logging device and (2) an identification and data logging module. However, the car monitor 170 of Cherouny appears to be argued for both devices/modules in the claim rejection.

The PTAB has determined that it would be "problematic" to rely on one component of a prior art reference as teaching two separate components of a claim. In *Hopkins*, the PTAB held that the prior art disclosure of an accelerometer with an output signal could not be applied as teaching both a "deceleration signal" and an "inclination signal" as claimed. *Hopkins Manufacturing Corp. v. Cequent Performance Products, Inc.* (IPR 2015-00613, Paper 9, August 7, 2015).

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Furthermore, according to *Becton*, "[w]here a claim lists elements separately, 'the clear implication of the claim language is that those elements are distinct component[s]' of the [claimed] invention." *Becton, Dickinson and Co. v. Tyco Healthcare Gr., LP*, 616 F.3d 1249 (Fed. Cir. 2010). Where a claim provides for two separate elements (*e.g.*, a "second portion" and a "return portion"), these two elements "logically cannot be one and the same." *Engel Indus., Inc. v. Lockformer Co.*, 96 F.3d 1298 (Fed. Cir. 1996).

Therefore, it is improper to rely on the same structure (car monitor 170) of a prior art reference as teaching the two separate claim elements (a data logging device and an identification and data logging module) of claim 1 of the '470 Patent, without at a minimum identifying how they are distinctly present.

Limitation 1(e)

Examiner further alleges that Cherouny discloses:

> e) **a slave control unit in said vehicle and which communicates with said master control unit, wherein said slave control unit receives commands from said master control unit and generate an alarm signal** (see disclosure of engine slow down module 120 and audible noise generator 121, [0077]-[0078] and Figs. 20A &20B; see also disclosure that functions of the driver monitor include engine slowdown 181 and audible noise alarms 182, [0082] and Figs. 21A &21B; see also disclosure of the possible audio alarms, [0021]-[0024] and [0031]).

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February 15, 2024 Non-Final Office Action at 12.

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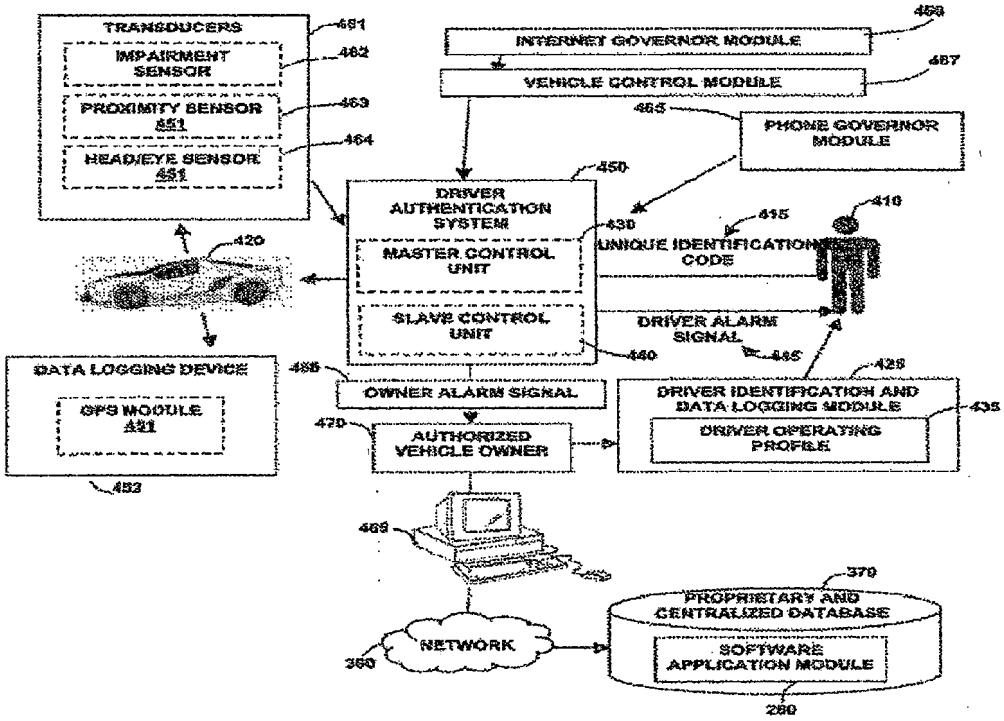

FIG. 5

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The "slave control unit" 440 itself has a microprocessor and can be programmed.

> The system 450 generally includes a master control unit 430 and a slave control unit 440 that can be accessed and programmed via the software application module 260 stored in the proprietary and centralized database 370.

'470 Patent at 6:8-12; *accord* 8:9-24. The slave control unit processes inputs from sensors:

> The slave control unit **440** can process the data collected from the sensors and determine if the data indicates a condition that requires a warning. For example, the sensors may indicate that the vehicle is speeding, veering off the road, approaching an obstruction in the road, too close to another vehicle, that the vehicle driver is distracted, sleepy, or not paying attention, that the vehicle driver is impaired etc. If one of these conditions is identified, the slave control unit **440** signals the master control unit **430** and the master control unit issues a driver alarm signal **445** as described above. In the case where the impairment sensor **462** provides a signal to the slave control unit **440** indicating that the driver's impairment is above a prescribed limit, the slave control unit can prevent the vehicle from starting.

'470 Patent at 8:43-56; 10:48-61.

The Examiner contends that the microprocessor 101 is the "master control unit" and appears to argue that engine slow down module 120 and audible noise generator 121 together form the "slave control unit." Rather than being a "unit," as claimed, the slow down module 120 and audible noise generator 121 are not even depicted as being in communication with one another.

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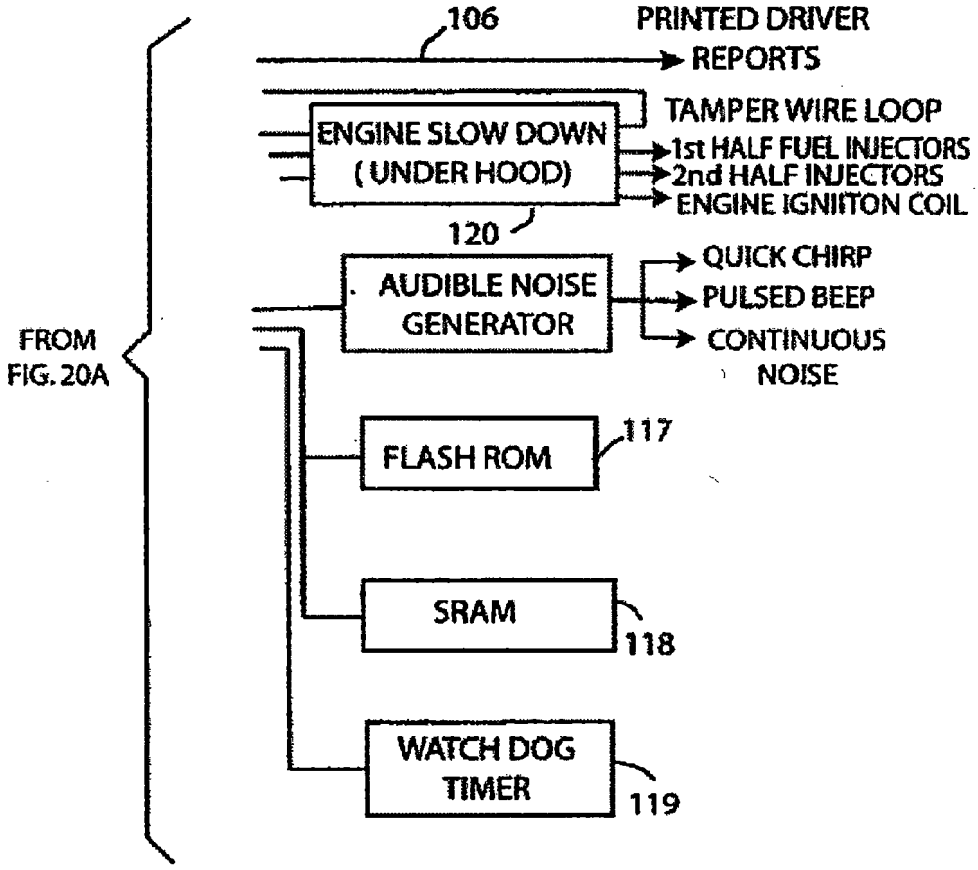
FIG. 20B



Cherouny at Fig. 20B. There is no teaching of any programmability of audible noise generator, no return communication to the master control unit, no communication of any kind to the engine slow down, and no function other than making a noise based on an input signal. Cherouny at [0078].

PAGE 19/24 * RCVD AT 4/15/2024 5:10:54 PM [Eastern Daylight Time] * SVR:W-PTOFAX-DTS-E1/46 * DNIS:2738300 * CSID:15127276691 * DURATION (mm-ss):13-59

The Examiner does not appear to contend that engine slow down module 120 generates an alarm signal as required by the claim language. The only disclosure remaining is audible noise generator 121, which as indicated by the name, is a simple noise generator:

> **[0078]** An audible noise generator **121** is also connected to the microprocessor for provision of various warning noises such as a quick chirp, a pulsed beep and a continuous noise. These provide warnings of increasing severity to the driver of the vehicle.

Cherouny at 6 [0078]. This does not meet the requirements of the slave control unit when it is properly construed as discussed *supra*.

Claim 4

Claim 4 is allowable for the same reasons previously discussed. Because it is a dependent claim, and thereby incorporates all of the limitations of independent claim 1 from which it depends, the disclosure lacking in Cherouny related to the independent claim limitations discussed herein prevent the combination of Cherouny and Harter from rendering dependent claim 4 obvious.

Ground 2 Under 35 U.S.C. § 103 (Cherouny in View of Shuman)

The arguments in Ground 1 also apply to this rejection. Examiner recognizes that "Cherouny does not explicitly teach a vehicle control system wherein the data logging device records location information." February 15, 2024 Non-Final Office

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PAGE 20/24 * RCVD AT 4/15/2024 5:10:54 PM [Eastern Daylight Time] * SVR:W-PTOFAX-DTS-E1/46 * DNIS:2738300 * CSID:15127276691 * [illegible] * DURATION (mm-ss):13-59

Action at 23. Because Shuman was added only to address this specific shortcoming of Cherouny, its disclosure has no relevance to the other limitations of independent claim 1 that are not disclosed by Cherouny, and it cannot cure the deficiencies of Cherouny related to these limitations.

Ground 3 Under 35 U.S.C. § 103 (Cherouny in View of Petrik)

The arguments in Ground 1 also apply to this rejection. Examiner recognizes that "Cherouny does not explicitly teach a vehicle control system wherein the data logging device records location information." February 15, 2024 Non-Final Office Action at 29. Because Petrik was added only to address this specific shortcoming of Cherouny, its disclosure has no relevance to the other limitations of independent claim 1 that are not disclosed by Cherouny, and it cannot cure the deficiencies of Cherouny related to these limitations.

Ground 4 Under 35 U.S.C. § 103 (Cherouny in View of Bouchard)

The arguments in Ground 1 also apply to this rejection. Examiner recognizes that "Cherouny does not explicitly teach a vehicle control system wherein the data logging device records location information." February 15, 2024 Non-Final Office Action at 35. Because Bouchard was added only to address this specific shortcoming of Cherouny, its disclosure has no relevance to the other limitations of independent

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PAGE 21/24 * RCVD AT 4/15/2024 5:10:54 PM [Eastern Daylight Time] * SVR:W-PTOFAX-DTS-E1/46 * DNIS:2738300 * CSID:15127276691 * DURATION (mm-ss):13-59

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claim 1 that are not disclosed by Cherouny, and it cannot cure the deficiencies of Cherouny related to these limitations.

CONCLUSION

In light of the foregoing remarks, the Patent Owner respectfully requests the Office to withdraw the pending rejection to claims 1 and 4 of the '470 Patent. If any outstanding issues remain, the undersigned would welcome an Applicant interview with the Office to expedite the resolution of this application.

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PAGE 22/24 * RCVD AT 4/15/2024 5:10:54 PM [Eastern Daylight Time] * SVR:W-PTOFAX-DTS-E1/46 * DNIS:2738300 * CSID:15127276691 * DURATION (mm-ss):13-59

Date: April 15, 2024

Respectfully submitted,

/s/ Gregory S. Donahue

Gregory S. Donahue
Reg. No. 47,531
DiNovo Price LLP
7000 North MoPac Expressway
Suite 350
Austin, TX 78731
Telephone: (512) 539-2625
Facsimile: (512) 539-2627

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CERTIFICATE OF SERVICE

I hereby certify that on this 15th day of April 2024, a true and correct copy of the foregoing RESPONSE TO FEBRUARY 15, 2024 NON-FINAL OFFICE ACTION was served pursuant to 37 C.F.R. § 1.550(f) via Priority Mail Express® (9405503699300679602894) upon the following counsel of record for third-party requesters:

Unified Patents, LLC
4445 Willard Ave.
Suite 600
Chevy Chase, MD 20815

/s/ Gregory S. Donahue
Gregory S. Donahue
Reg. No. 47,531
DiNovo Price LLP
7000 North MoPac Expressway
Suite 350
Austin, Texas 78731

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Page 435 of 1244

PAGE 24/24 * RCVD AT 4/15/2024 5:10:54 PM [Eastern Daylight Time] * SVR:W-PTOFAX-DTS-E1/46 * DNIS:2738300 * CSID:15127276691 * ANI:[redacted] * DURATION (mm-ss):13-59

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FAX COVER SHEET

TO	
COMPANY	Commissioner of Patents
FAX NUMBER	15712738300
FROM	Adam Price
DATE	2024-04-15 21:10:18 GMT
RE	90/015,287

COVER MESSAGE

Attached please find the Patent Owner's Response to Feb 15, 2024 Non-Final Office Action.

PAGE 1/24 * RCVD AT 4/15/2024 5:10:54 PM [Eastern Daylight Time] * SVR:W-PTOFAX-DTS-E1/46 * DNIS:2738300 * CSID:15127276691 * DURATION (mm-ss):13-59

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Priority Mail Express No.: 9405503699300679602863

Date: April 15, 2024

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No.: 10,259,470	
Application No.: 90/015,287	
Filed: 08/31/2023	Art Unit: 3992
Inventor: Phelan	
Title: DRIVER AUTHENTICATION SYSTEM AND METHOD FOR MONITORING AND CONTROLLING VEHICLE USAGE	Examiner: Wassum, Luke S.

Mail Stop "Ex Parte Reexam"
Central Reexamination Unit
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PAGE 2/24 * RCVD AT 4/15/2024 5:10:54 PM [Eastern Daylight Time] * SVR:W-PTOFAX-DTS-E1/46 * DNIS:2738300 * CSID:15127276691 * ANI:[redacted] * DURATION (mm-ss):13-59

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FAX COVER SHEET

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FAX NUMBER	15712738300
FROM	Adam Price
DATE	2024-04-12 17:36:50 GMT
RE	Reexam 90/015,287

COVER MESSAGE

Please find attached the patent owner's signed Power of Attorney.

-TaylorBrewer
817 692 0715

Reexam

PAGE 1/4 * RCVD AT 4/12/2024 1:37:24 PM [Eastern Daylight Time] * SVR:W-PTOFAX-DTS-E1/29 * DNIS:2738300 * CSID:15127276691 * ANI:50[illegible]924 * DURATION (mm-ss):03-41

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Control Number(s)	90/015,287
Filing Date(s)	8/31/2023
First Named Inventor	Phelan
Title	Driver Authentication System and Method For Monitoring And Controlling Vehicle Usage
Patent Number	10,259,470
Examiner Name	Luke Wassum
Attorney Docket No(s)	PHE101

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I am the:
☐ Inventor, having ownership of the patent being reexamined.
OR
☒ Patent owner.
Statement under 37 CFR 3.73(c) (Form PTO/AIA/96) submitted herewith or filed on _____

Signature of Inventor or Patent Owner		Date	4/12/2024
Name	Michael Phelan	Telephone	305.660.0527
Title and Company	MEMBER, THE PHELAN GROUP LLC		

NOTE: Signatures of all the inventors or patent owners of the entire interest or their representative(s) are required. If more than one signature is required, submit multiple forms, check the box below, and identify the total number of forms submitted in the blank below.

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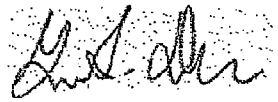

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/015,287	08/31/2023	10259470	PHE101	7777

64064 7590 02/15/2024
Ortiz & Lopez, PLLC
P.O. BOX 4484
ALBUQUERQUE, NM 87196-4484

EXAMINER
WASSUM, LUKE S

ART UNIT	PAPER NUMBER
3992	

MAIL DATE	DELIVERY MODE
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EX PARTE REEXAMINATION COMMUNICATION TRANSMITTAL FORM

REEXAMINATION CONTROL NO. *90/015,287* .

PATENT UNDER REEXAMINATION *10259470* .

ART UNIT *3992* .

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified *ex parte* reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a reply has passed, no submission on behalf of the *ex parte* reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).

Office Action in Ex Parte Reexamination	**Control No.** 90/015,287	**Patent Under Reexamination** 10259470	
	Examiner Luke S Wassum	**Art Unit** 3992	**AIA (FITF) Status** Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

a. ☐ Responsive to the communication(s) filed on _____.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

b. ☐ This action is made FINAL.

c. ☑ A statement under 37 CFR 1.530 has not been received from the patent owner.

A shortened statutory period for response to this action is set to expire 2 month(s) from the mailing date of this letter. Failure to respond within the period for response will result in termination of the proceeding and issuance of an *ex parte* reexamination certificate in accordance with this action. 37 CFR 1.550(d). **EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.550(c).** If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☐ Notice of References Cited by Examiner, PTO-892.
2. ☐ Information Disclosure Statement, PTO/SB/08.
3. ☐ Interview Summary, PTO-474.
4. ☐ _____.

Part II SUMMARY OF ACTION

1a. ☑ Claims 1 and 4 are subject to reexamination.
1b. ☐ Claims _____ are not subject to reexamination.
2. ☐ Claims _____ have been canceled in the present reexamination proceeding.
3. ☐ Claims _____ are patentable and/or confirmed.
4. ☑ Claims 1 and 4 are rejected.
5. ☐ Claims _____ are objected to.
6. ☐ The drawings, filed on _____ are acceptable.
7. ☐ The proposed drawing correction, filed on _____ has been (7a) ☐ approved (7b) ☐ disapproved.
8. ☐ Acknowledgment is made of the priority claim under 35 U.S.C. 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the certified copies have
   1 ☐ been received.
   2 ☐ not been received.
   3 ☐ been filed in Application No. _____.
   4 ☐ been filed in reexamination Control No. _____.
   5 ☐ been received by the International Bureau in PCT application No. _____.
   * See the attached detailed Office action for a list of the certified copies not received.
9. ☐ Since the proceeding appears to be in condition for issuance of an *ex parte* reexamination certificate except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte* Quayle, 1935 C.D. 11, 453 O.G. 213.
10. ☐ Other: _____

cc: Requester (if third party requester)

Ex Parte Reexamination

A request for Ex Parte Reexamination of claims 1 and 4 of U.S. Patent Number 10,259,470 ("the '470 patent") was filed on 31 August 2023 ("the Request"). The '470 patent was issued to **Michael Phelan** on 16 April 2019, from application 15/336,110 ("the '110 application"), filed 27 October 2016.

The Office mailed a Decision granting reexamination of claims 1 and 4 on 17 October 2023.

Claims 1 and 4 are subject to reexamination.

Related Proceedings

After review of the '470 patent and its prosecution history, the examiner has located two instances of currently ongoing litigation (see Litigation Review sheet). The examiner has failed to locate any previous reexaminations (*ex parte* or *inter partes*), supplemental examinations, or other post issuance proceedings before the Office.

Priority

The '470 patent is a continuation of application number 14/464,188, filed 20 August 2014, now U.S. Patent 9,493,149 ("the parent patent"), which is a continuation-in-part of application number 13/858,930, filed 8 April 2013, now U.S. Patent 9,045,101

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("the grandparent patent"), which is a continuation of application number 12/496,509, filed 1 July 2009, now U.S. Patent 8,417,415. The '470 patent also claims priority under 35 U.S.C. § 119(e) to U.S. Provisional Application 61/077,568, filed 2 July 2008.

With respect to the priority date to which the '470 patent is entitled, the Office notes that claim 1 includes the limitation of 'a wireless identification and data logging module'. After review of the disclosure of the grandparent patent, the Office concludes that this limitation of claim 1 is not supported therein.

For instance, the grandparent patent includes only a disclosure of a driver identification and data logging device, while the '470 patent claims a *wireless* driver identification and data logging *module*. Implementation of this feature as wireless or as a module is not supported by the grandparent patent, which can be seen (for example) by comparing analogous portions of the specifications of the respective disclosures:

> The data logging device **425** can be connected to the remote computer **465** and the operating profile **435** can be stored. Once the required information is copied into the data logging device **425**, the device **425** can be disconnected from the remote computer **465** and can be placed on a driver key ring (not shown). The master control unit **430** can authenticate the driver **410** utilizing a unique identification code **415** provided by the driver identification and data logging device **425**.

Grandparent patent, col. 6, lines 52-60.

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The Office notes that the above disclosure regarding disconnecting the data logging device from the remote computer and placing it on the driver's key ring (i.e., a *device* embodiment) was omitted from the specification of the '470 patent, as can be seen below.

> The driver authentication and data logging module or device **425** can be connected to the remote computer **465** wirelessly or otherwise, and the operating profile **435** can be stored. The master control unit **430** can authenticate the driver **410** utilizing a unique identification code **415** provided by the driver identification and data logging module **425**.

'470 patent, col. 7, lines 26-32.

As highlighted above, disclosure of an embodiment of the data logging device as a *module*, present in the specification of the '470 patent, was absent in the specification of the grandparent patent, as was the *wireless* embodiment.

In summary, the Office has reviewed the disclosure of the grandparent patent and found no support for a data logging *module*, nor a *wireless* data logging module, therein.

Since the above identified features of claim 1 are not supported by the grandparent patent, the earliest priority date of the '470 patent is 20 August 2014, the application date of the parent patent.

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Because the effective filing date of the '110 application is presumed to be on or after March 16, 2013, the AIA First Inventor to File ("AIA-FITF") provisions will apply.

In the event the determination of the status of the '110 application as subject to AIA 35 U.S.C. §§ 102 and 103 (or as subject to pre-AIA 35 U.S.C. §§ 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

Claim Construction

During reexamination, claims are given the broadest reasonable interpretation consistent with the specification and limitations in the specification are not read into the claims (*In re Yamamoto*, 740 F.2d 1569, 222 USPQ 934 (Fed. Cir. 1984)).

The examiner has reviewed of the original specification and prosecution history and found no instance of lexicographic definitions, either express or implied, that are inconsistent with the ordinary and customary meaning of the respective terms. Therefore, for the purposes of claim interpretation, the examiner concludes that there

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are no claim terms for which Patent Owner is acting as their own lexicographer. See MPEP § 2111.01(IV).

Additionally, upon review of the claims subject to reexamination, the examiner finds no instances where the claim terms include language which would invoke the provisions of 35 U.S.C. § 112(f) or pre-AIA 35 U.S.C. §112, sixth paragraph.

The Claimed Invention

The '470 patent is titled "Driver Authentication System and Method for Monitoring and Controlling Vehicle Usage." The '470 patent discloses a "driver authentication and safety system and method for monitoring and controlling vehicle usage by high-risk drivers.", Abstract. The '470 patent does so through the use of "operating profiles" that "can be loaded to a driver identification and data logging module in conjunction with a remote computer.", *Id.* Furthermore, the system includes components such as a "master control unit" that receives an identification code to authenticate the high-risk driver to "operate the vehicle within the desired operating profile.", *Id.* Finally, a "slave control unit" is disclosed that "receives commands from the master control unit" and can "generate[] a real time alarm signal if the driver violates the preprogrammed operating profile unique to the driver.", *Id.*

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The '470 patent acknowledges that "[w]ith more young drivers getting licenses each year, there has been an unfortunate increase in accidents along with the ensuing damage, debilitating injuries and sometimes death" attributable to "generally poor driving habits.", col. 1, lines 39-48. The '470 patent further acknowledges other categories of "high-risk driver[s]," including "teen driver, fleet or rental drivers, habitual reckless drivers, aged drivers, drunk drivers, drowsily (sic) drivers, distracted drivers etc." that could benefit from the '470 patent's invention, col. 2, lines 31-50. As mentioned, the '470 patent is designed to improve driver safety through the use of an alarm signal generated by a slave control unit when the driver violates a preprogrammed operating profile unique to the driver. This alarm could continue until the driver corrects the operating condition (e.g., speed, location) and brings the vehicle within the desired operating profile (e.g., if the driver is going too fast, slowing the vehicle to be within the operating profile range), col. 2, line 51 through col. 3, line 3. The system further "can include a GPS (Global Positioning System) module to determine and measure parameters such as, time of day, speed and location data associated with the vehicle.", *Id*.

The '470 patent describes a software system and general process through which an authorized user (e.g., a parent) can establish an operating profile for the at-risk driver, col. 4, lines 3-67 and col. 2, lines 54-55. The profile may include, for example,

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"maximum allowable vehicle speed, user infraction limits … vehicle locations," and so on, col. 6, line 46 through col. 7, line 2. Relevant to challenged claim 1, the system further discloses a "data logging device" that "can be used to record vehicle operation data associated with operation of the vehicle," which may include the vehicle's speed and location, col. 7, lines 46-57. Finally, a "master control unit" and "slave control unit" are in communication with one another, and, may generate an alarm signal or take control of the vehicle (e.g., to "lower/limit speed") when the driver operates outside of the established operating profile, col. 7, line 58 through col. 9, line 37.

Prior Art Cited in the Request

The following references were cited by the third party Requester in the Request for *Ex Parte* Reexamination:

U.S. Patent Application Publication 2006/0052909 to Peter H. Cherouny ("**Cherouny**")

U.S. Patent Application Publication 2008/0188217 to Thomas C. Harter et al. ("**Harter**")

U.S. Patent 6,577,937 to Valerie Shuman et al. ("**Shuman**")

U.S. Patent Application Publication 2007/0168125 to Stephen Petrik ("**Petrik**")

U.S. Patent 5,465,079 to Paul J. Bouchard et al. ("**Bouchard**")

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None of these references were cited or discussed on the record during the original prosecution of the '110 application.

Summary of Grounds of Rejection

Ground 1: Claims 1 and 4 are obvious under 35 U.S.C. § 103 over **Cherouny** in view of **Harter**.

Ground 2: Claim 1 is obvious under 35 U.S.C. § 103 over **Cherouny** in view of **Shuman**.

Ground 3: Claim 1 is obvious under 35 U.S.C. § 103 over **Cherouny** in view of **Petrik**.

Ground 4: Claim 1 is obvious under 35 U.S.C. § 103 over **Cherouny** in view of **Bouchard**.

Relevant Statutes

The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

> A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a

person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries for establishing a background for determining obviousness under 35 U.S.C. 103 are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.

3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim Rejections

Ground 1: Cherouny and Harter

Claims 1 and 4 are obvious under 35 U.S.C. § 103 over **Cherouny** in view of **Harter**.

Claim 1

With respect to claim 1, **Cherouny** teaches **a vehicle control system** (see disclosure of an improved electronic programmable speed limiter for drivers of vehicles, Abstract), comprising:

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a) **an identification** (see disclosure of a key fob that identifies to the mobile computer who was or is about to operate the vehicle, ¶ [0018]) **and data logging module** (see disclosure of car monitor **170**, which measures car speed, and provides data logs of time and severity of infraction, ¶ [0081]);

b) **a master control unit in a vehicle for authenticating at least one occupant via said driver identification and logging module and associating an operating profile with said at least one occupant** (see microprocessor **101** which connects to key fob reader **109** to check the identity of the user of the automobile to ensure the instant user's data table is used, ¶ [0073]; see also disclosure that a moderator can preprogram operational parameters [i.e., an operating profile] for an individual driver in its system, ¶¶ [0018] and [0020]);

c) **a module for receiving at least location and speed information in association with a movement of said vehicle** (see disclosure of speed sensor **108**, ¶ [0073]; see also disclosure of a global positioning receiver linked to the CPU that receives the location of the vehicle from the GPS satellite system, ¶ [0020]; see also disclosure of a wireless transmitting means associated with the moderator to send signals representing location and speed data of the vehicle at any given time to a central server, claim 1);

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d) **a data logging device that records vehicle operation data associated with a use of said vehicle, the vehicle operation data comprising at least said speed information received from said module*** (see disclosure that the system records the driving speed over a given period of time, ¶ [0036]; see also disclosure that the system shows a daily driving record, and measures car speed and provides data logs of time and severity of infraction [i.e., car speed that is over the defined speed limits], ¶¶ [0080]-[0081]);

e) **a slave control unit in said vehicle and which communicates with said master control unit, wherein said slave control unit receives commands from said master control unit and generate an alarm signal** (see disclosure of engine slow down module **120** and audible noise generator **121**, ¶¶ [0077]-[0078] and Figs. 20A & 20B; see also disclosure that functions of the driver monitor include engine slowdown **181** and audible noise alarms **182**, ¶[0082] and Figs. 21A & 21B; see also disclosure of the possible audio alarms, ¶¶ [0021]-[0024] and [0031]); and

f) **wherein said master control unit provides operation governance of said vehicle within said operating profile** (see disclosure of a system for regulating the driving performance of a given individual whereby operation of the engine of a vehicle is automatically curtailed when received

exceeds preset or personalized limits of the individual driver, claim 1; see also disclosure that a moderator can regulate operation of the engine in response to the car going faster than the speed limit, ¶¶ [0020], [0025]-[0027], [0031], [0038], and [0077]).

Cherouny does not explicitly teach a vehicle control system wherein the various system modules, including the identification and data logging module, communicate via wireless means.

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the claimed identification and data logging module as a module that communicates wirelessly, since wireless short-range communications were common at the time of the invention, including the use of wireless fobs for use in authentication of a driver of a vehicle. Implementing wireless communication would have involved a modification that was well within the skill of an ordinary artisan at the time of the invention, and would have had the benefit of enabling communication between vehicle components without the need for a physical connection, thus increasing ease of use.

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Furthermore, to the extent that one could argue that **Cherouny** fails to disclose all aspects of the logging of data regarding the operation of the vehicle through the use of a wireless device, **Harter** teaches these features.

For instance, **Harter** discloses a portable device **120** that receives identifying information from the driver (¶ [0007] and Fig. 4), and communicates such data to a base unit **116** via a wireless link **122** (¶ [0033]). See also illustration that the portable device, in this case a smart phone **400**, is used for logging data, as displayed on status screen **900** in Figs. 10-13.

Using **Harter's** teaching of using a smart phone to assist in identifying and monitoring drivers would have been the simple substitution of one known technique (i.e., **Harter's** use of a wireless smart phone device together with software to identify and log data related to a specific driver of a vehicle) for another (**Cherouny's** technique of using a key fob together with software to identify and log data related to a driver of a vehicle) to obtain predictable results - i.e., a system (**Cherouny's**) using a wireless mobile device (in view of **Harter's** teachings) to assist with wirelessly identifying a driver and logging data related to their trip within the vehicle. See **Cherouny**, ¶¶ [0018]-[0020], [0031], [0035], [0081]; see also **Harter**, ¶¶ [0007]-[0008], [0032]-[0033], [0042], [0045]-[0046], [0053].

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Implementing **Harter's** teaching of using a wireless mobile device (i.e., smart phone) would have been an improvement over **Cherouny's** existing system using a key fob and various software modules, and a POSITA would have recognized at the time of the '470 patent that a smart phone, like **Harter's**, would increase the vehicle control system's ability to identify and log data associated with a trip, given the known capabilities of a smart phone at the time (which would have included various additional technologies, such as Bluetooth or GPS) as compared to the key fob used in **Cherouny**.

For example, **Cherouny's** disclosure is based on applications dating back to June 2001, a time when many drivers would not have regularly carried a smartphone or used it as an identification device. But before the time of the '470 patent, techniques using smartphones together with vehicles were known and common (as evidenced by **Harter**), and would have been well known to a POSITA at the time reading **Cherouny**. Accordingly, this provides further motivation for a POSITA to modify **Cherouny** with the teachings of **Harter** to bring it up to date with modern techniques and knowledge at the time. *Id*.

Additionally, combining **Harter's** teachings for implementing a wireless mobile device in a system that identifies and logs data related to drivers of vehicles would have merely combined prior art elements (**Harter's** disclosure of a smart phone for identifying and logging data related to a driver of a vehicle and **Cherouny's** system for

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a similar purpose of monitoring drivers) according to known methods (i.e., that it was known to use various wired and/or wireless devices, such as **Harter's** "cable or wireless link" (¶ [0033]), to assist with monitoring and identifying drivers of vehicles) to yield predictable results—i.e., a system that is able to use a wireless mobile device to identify and log data related to a driver's trip within the vehicle. See **Cherouny**, ¶¶ [0018]-[0020], [0031], [0035], [0081]; see also **Harter**, ¶¶ [0007]- [0008], [0032]-[0033], [0042], [0045]-[0046], [0053].

Cherouny does not explicitly teach a vehicle control system wherein the data logging device records location information.

Harter, however, discloses a vehicle control system wherein **the data logging device records location information** (see disclosure that the system logs performance of a driver operating a vehicle, Abstract and ¶ [0007]; see also disclosure that the system logs operating parameters, including speed, ¶ [0032]; see also disclosure that the logged information also includes locations that the driver has traveled during the trip, ¶ [0054] and illustrated in Fig. 18).

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It would have been obvious to one of ordinary skill in the art at the time of the invention to include a data logging module that logs location information, because a POSITA would have recognized that **Harter's** explicit disclosure of a data logging device as shown above would have added desirable functionality to **Cherouny** and once again furthered its goal of improving the safety of at-risk drivers, e.g., by allowing a moderator to review driving records of the monitored and at-risk driver. As discussed above, a POSITA would have had a reasonable expectation of success in implementing these teachings from **Harter** into **Cherouny** given **Cherouny** already discloses the use of speed and location information and the recording of said speed data over a period of time.

Claim 4

With respect to claim 4, **Cherouny** and **Harter** teach the vehicle control system of claim 1 wherein said wireless identification and data logging module comprises at least one of: **a WIFI enabled device**; an RFID enabled device; **a Bluetooth enabled device**; **a cellular telephone**; and **a smartphone** (see disclosure that the portable device comprises at least one of a computer, a personal-digital-assistant ("PDA"), and a smart phone, claim 2; see also disclosure that the portable device is wirelessly coupled to the

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base unit via at least one of a personal area network connection and a cellular connection, claim 3 and ¶ [0033]; see also disclosure that base unit **116** and portable device **120** communicate through wireless link **122**, which can include Bluetooth, ¶[0033] and Fig. 1; see also disclosure of portable devices **120** in the form of a smart phone **400** that connects wirelessly via Bluetooth or other wireless connections, ¶ [0042]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize a specific type of wireless communication types such as claimed, for the same reasons discussed above with respect claim 1 regarding motivation for the incorporation of wireless communications generally.

Ground 2: Cherouny and Shuman

Claim 1 is obvious under 35 U.S.C. § 103 over **Cherouny** in view of **Shuman**.

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Claim 1

With respect to claim 1, **Cherouny** teaches **a vehicle control system** (see disclosure of an improved electronic programmable speed limiter for drivers of vehicles, Abstract), comprising:

a) **an identification** (see disclosure of a key fob that identifies to the mobile computer who was or is about to operate the vehicle, ¶ [0018]) **and data logging module** (see disclosure of car monitor **170**, which measures car speed, and provides data logs of time and severity of infraction, ¶ [0081]);

b) **a master control unit in a vehicle for authenticating at least one occupant via said driver identification and logging module and associating an operating profile with said at least one occupant** (see microprocessor **101** which connects to key fob reader **109** to check the identity of the user of the automobile to ensure the instant user's data table is used, ¶ [0073]; see also disclosure that a moderator can preprogram operational parameters [i.e., an operating profile] for an individual driver in its system, ¶¶ [0018] and [0020]);

c) **a module for receiving at least location and speed information in association with a movement of said vehicle** (see disclosure of speed sensor **108**, ¶ [0073]; see also disclosure of a global positioning receiver linked to the CPU

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that receives the location of the vehicle from the GPS satellite system, ¶ [0020]; see also disclosure of a wireless transmitting means associated with the moderator to send signals representing location and speed data of the vehicle at any given time to a central server, claim 1);

d) **a data logging device that records vehicle operation data associated with a use of said vehicle, the vehicle operation data comprising at least said speed information received from said module*** (see disclosure that the system records the driving speed over a given period of time, ¶ [0036]; see also disclosure that the system shows a daily driving record, and measures car speed and provides data logs of time and severity of infraction [i.e., car speed that is over the defined speed limits], ¶¶ [0080]-[0081]);

e) **a slave control unit in said vehicle and which communicates with said master control unit, wherein said slave control unit receives commands from said master control unit and generate an alarm signal** (see disclosure of engine slow down module **120** and audible noise generator **121**, ¶¶ [0077]-[0078] and Figs. 20A & 20B; see also disclosure that functions of the driver monitor include engine slowdown **181** and audible noise alarms **182**, ¶[0082] and Figs. 21A & 21B; see also disclosure of the possible audio alarms, ¶¶ [0021]-[0024] and [0031]); and

f) **wherein said master control unit provides operation governance of said vehicle within said operating profile** (see disclosure of a system for regulating the driving performance of a given individual whereby operation of the engine of a vehicle is automatically curtailed when received exceeds preset or personalized limits of the individual driver, claim 1; see also disclosure that a moderator can regulate operation of the engine in response to the car going faster than the speed limit, ¶¶ [0020], [0025]-[0027], [0031], [0038], and [0077]).

Cherouny does not explicitly teach a vehicle control system wherein the various system modules, including the identification and data logging module, communicate via wireless means.

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the claimed identification and data logging module as a module that communicates wirelessly, since wireless short-range communications were common at the time of the invention, including the use of wireless fobs for use in authentication of a driver of a vehicle. Implementing wireless communication would have involved a modification that was well within the skill of an ordinary artisan at the

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time of the invention, and would have had the benefit of enabling communication between vehicle components without the need for a physical connection, thus increasing ease of use.

To the extent that one could argue that **Cherouny** lacks implementation details with respect to the logging of data regarding the operation of the vehicle, **Shuman** teaches such details.

For instance, **Shuman** discloses a drive recorder **225** that obtains and logs information relating to all aspects of the vehicle and vehicle environment, including current information streams from all sensors, all subsystem software, all vehicle hardware, the communications manager, the vehicle-user device manager, and the driver and user interface devices. The driver recorder **225** continuously stores a history of the vehicle and vehicle environment in a non-volatile secure data storage device, col. 30, line 59 through col. 31, line 12.

A POSITA would have found it obvious to use the teachings from **Shuman** (i.e., the use of driver profiles and recording vehicle location and speed in the vehicle units' memory) because this would have represented a simple modification to **Cherouny's** system, which already describes "record[ing] the driver speed over a given period of time." **Cherouny**, ¶ [0035]. Accordingly, to the extent **Cherouny** was lacking any

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implementation details on how or where to record information about operation of the vehicle, **Shuman** provides explicit details of the same (e.g., that its "driver recorder **225** continuously stores a history of the vehicle and vehicle environment in a non-volatile secure data storage device," and that this "data storage device may be in the vehicle or may be located remotely," **Shuman**, col. 30, line 59 through col. 31, line 12), and a POSITA would have been aware of these techniques in view of **Shuman's** explicit disclosure of them. A POSITA would have had a reasonable expectation of success in implementing **Shuman's** teachings, particularly given **Cherouny's** disclosure that with its invention "the memory capability of the speed governor allows for a permanent record of the drivers possible violations." **Cherouny**, ¶ [0009].

Cherouny does not explicitly teach a vehicle control system wherein the data logging device records location information.

Shuman, however, discloses a vehicle control system wherein **the data logging device records location information** (see disclosure that a vehicle positioning program uses data from the vehicle sensors **202** and **204** and the geographic database **220** to determine the position, speed, and heading of the vehicle, col. 9, lines 52-57; see also

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disclosure that the drive recorder maintains records of the statuses of all vehicle systems, Abstract).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include a data logging module that logs location information, because a POSITA would have seen it as beneficial and obvious to include capabilities of monitoring and receiving speed and location information into **Cherouny's** system based on these explicit teachings in **Shuman**. **Cherouny's** system already includes the components necessary to obtain this information (e.g., through its automobile speed sensor **108** and GPS **114**), and to the extent it is not explicit, **Shuman** provides the implementation details as to how this information would be received by the processor of the system. See **Cherouny**, claim 1, ¶¶ [0020], [0035], [0040]; **Shuman**, Abstract, col. 9, lines 52-57. A POSITA would have recognized that monitoring speed and location (e.g., in view of **Shuman's** explicit teachings) would further **Cherouny's** stated goal of improving safety of at-risk drivers. A POSITA would have had a reasonable expectation of success of implementing **Shuman's** teachings in view of **Cherouny** disclosing transmission of "location and speed data" and that **Cherouny's** system already includes the components for doing so. *Id*.

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Ground 3: Cherouny and Petrik

Claim 1 is obvious under 35 U.S.C. § 103 over **Cherouny** in view of **Petrik**.

Claim 1

With respect to claim 1, **Cherouny** teaches **a vehicle control system** (see disclosure of an improved electronic programmable speed limiter for drivers of vehicles, Abstract), comprising:

a) **an identification** (see disclosure of a key fob that identifies to the mobile computer who was or is about to operate the vehicle, ¶ [0018]) **and data logging module** (see disclosure of car monitor **170**, which measures car speed, and provides data logs of time and severity of infraction, ¶ [0081]);

b) **a master control unit in a vehicle for authenticating at least one occupant via said driver identification and logging module and associating an operating profile with said at least one occupant** (see microprocessor **101** which connects to key fob reader **109** to check the identity of the user of the automobile to ensure the instant user's data table is used, ¶ [0073]; see also disclosure that a moderator can preprogram operational parameters [i.e., an operating profile] for an individual driver in its system, ¶¶ [0018] and [0020]);

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c) **a module for receiving at least location and speed information in association with a movement of said vehicle** (see disclosure of speed sensor **108**, ¶ [0073]; see also disclosure of a global positioning receiver linked to the CPU that receives the location of the vehicle from the GPS satellite system, ¶ [0020]; see also disclosure of a wireless transmitting means associated with the moderator to send signals representing location and speed data of the vehicle at any given time to a central server, claim 1);

d) **a data logging device that records vehicle operation data associated with a use of said vehicle, the vehicle operation data comprising at least said speed information received from said module*** (see disclosure that the system records the driving speed over a given period of time, ¶ [0036]; see also disclosure that the system shows a daily driving record, and measures car speed and provides data logs of time and severity of infraction [i.e., car speed that is over the defined speed limits], ¶¶ [0080]-[0081]);

e) **a slave control unit in said vehicle and which communicates with said master control unit, wherein said slave control unit receives commands from said master control unit and generate an alarm signal** (see disclosure of engine slow down module **120** and audible noise generator **121**, ¶¶ [0077]-[0078] and Figs. 20A & 20B; see also disclosure that functions of the

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driver monitor include engine slowdown **181** and audible noise alarms **182**, ¶[0082] and Figs. 21A & 21B; see also disclosure of the possible audio alarms, ¶¶ [0021]-[0024] and [0031]); and

f) **wherein said master control unit provides operation governance of said vehicle within said operating profile** (see disclosure of a system for regulating the driving performance of a given individual whereby operation of the engine of a vehicle is automatically curtailed when received exceeds preset or personalized limits of the individual driver, claim 1; see also disclosure that a moderator can regulate operation of the engine in response to the car going faster than the speed limit, ¶¶ [0020], [0025]-[0027], [0031], [0038], and [0077]).

Cherouny does not explicitly teach a vehicle control system wherein the various system modules, including the identification and data logging module, communicate via wireless means.

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the claimed identification and data logging module as a module that communicates wirelessly, since wireless short-range communications were

common at the time of the invention, including the use of wireless fobs for use in authentication of a driver of a vehicle. Implementing wireless communication would have involved a modification that was well within the skill of an ordinary artisan at the time of the invention, and would have had the benefit of enabling communication between vehicle components without the need for a physical connection, thus increasing ease of use.

To the extent that one could argue that **Cherouny** lacks implementation details with respect to the logging of data regarding the operation of the vehicle, **Petrik** teaches such details.

For instance, **Petrik** discloses a system for automatically logging operational parameters such as vehicle location and vehicle speeds, and recording these on a secure smart card as well as in the vehicle units' memory, ¶¶ [0009] and [0025].

A POSITA would have found it obvious to use the teachings from **Petrik** (i.e., recording vehicle location and speed in the vehicle units' memory) because this would have represented a simple modification to **Cherouny's** system, which already describes "record[ing] the driver speed over a given period of time." ¶ [0035]. Accordingly, to the extent **Cherouny** was lacking any implementation details on how or where to record information about operation of the vehicle, **Petrik** provides explicit details of the same

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(e.g., "automatically and irrefutably logging … operational parameters … and recording these on a secure smart card as well as in the vehicle units' memory," ¶ [0009]) and a POSITA would have been aware of these techniques in view of **Petrik's** explicit disclosure of them. A POSITA would have had a reasonable expectation of success in implementing **Petrik's** teachings, particularly given **Cherouny's** disclosure that with its invention "the memory capability of the speed governor allows for a permanent record of the drivers possible violations." ¶ [0009].

Cherouny does not explicitly teach a vehicle control system wherein the data logging device records location information.

Petrik, however, discloses a vehicle control system wherein **the data logging device records location information** (see disclosure of a system for automatically logging operational parameters such as vehicle location and vehicle speeds, and recording these on a secure smart card as well as in the vehicle units' memory, ¶¶ [0009] and [0025]).

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It would have been obvious to one of ordinary skill in the art at the time of the invention to include a data logging module that logs location information, because a POSITA would have seen it as beneficial and obvious to include capabilities of monitoring and receiving speed and location information into **Cherouny's** system based on these explicit teachings in **Petrik**. **Cherouny's** system already includes the components necessary to obtain this information (e.g., through its automobile speed sensor **108** and GPS **114**), and to the extent it is not explicit, **Petrik** provides the implementation details as to how this information would be received by the processor of the system. See **Cherouny**, claim 1, ¶¶ [0020], [0035], [0040]; **Petrik**, ¶¶ [0009], [0025]. A POSITA would have recognized that monitoring speed and location (e.g., in view of **Petrik's** explicit teachings) would further **Cherouny's** stated goal of improving safety of at-risk drivers. A POSITA would have had a reasonable expectation of success of implementing **Petrik's** teachings in view of **Cherouny** disclosing transmission of "location and speed data" and that **Cherouny's** system already includes the components for doing so. *Id*.

Ground 4: Cherouny and Bouchard

Claim 1 is obvious under 35 U.S.C. § 103 over **Cherouny** in view of **Bouchard**.

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Claim 1

With respect to claim 1, **Cherouny** teaches **a vehicle control system** (see disclosure of an improved electronic programmable speed limiter for drivers of vehicles, Abstract), comprising:

a) **an identification** (see disclosure of a key fob that identifies to the mobile computer who was or is about to operate the vehicle, ¶ [0018]) **and data logging module** (see disclosure of car monitor **170**, which measures car speed, and provides data logs of time and severity of infraction, ¶ [0081]);

b) **a master control unit in a vehicle for authenticating at least one occupant via said driver identification and logging module and associating an operating profile with said at least one occupant** (see microprocessor **101** which connects to key fob reader **109** to check the identity of the user of the automobile to ensure the instant user's data table is used, ¶ [0073]; see also disclosure that a moderator can preprogram operational parameters [i.e., an operating profile] for an individual driver in its system, ¶¶ [0018] and [0020]);

c) **a module for receiving at least location and speed information in association with a movement of said vehicle** (see disclosure of speed sensor **108**, ¶

[0073]; see also disclosure of a global positioning receiver linked to the CPU that receives the location of the vehicle from the GPS satellite system, ¶ [0020]; see also disclosure of a wireless transmitting means associated with the moderator to send signals representing location and speed data of the vehicle at any given time to a central server, claim 1);

d) **a data logging device that records vehicle operation data associated with a use of said vehicle, the vehicle operation data comprising at least said speed information received from said module*** (see disclosure that the system records the driving speed over a given period of time, ¶ [0036]; see also disclosure that the system shows a daily driving record, and measures car speed and provides data logs of time and severity of infraction [i.e., car speed that is over the defined speed limits], ¶¶ [0080]-[0081]);

e) **a slave control unit in said vehicle and which communicates with said master control unit, wherein said slave control unit receives commands from said master control unit and generate an alarm signal** (see disclosure of engine slow down module **120** and audible noise generator **121**, ¶¶ [0077]-[0078] and Figs. 20A & 20B; see also disclosure that functions of the driver monitor include engine slowdown **181** and audible noise alarms **182**,

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¶[0082] and Figs. 21A & 21B; see also disclosure of the possible audio alarms, ¶¶ [0021]-[0024] and [0031]); and

f) **wherein said master control unit provides operation governance of said vehicle within said operating profile** (see disclosure of a system for regulating the driving performance of a given individual whereby operation of the engine of a vehicle is automatically curtailed when received exceeds preset or personalized limits of the individual driver, claim 1; see also disclosure that a moderator can regulate operation of the engine in response to the car going faster than the speed limit, ¶¶ [0020], [0025]-[0027], [0031], [0038], and [0077]).

Cherouny does not explicitly teach a vehicle control system wherein the various system modules, including the identification and data logging module, communicate via wireless means.

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the claimed identification and data logging module as a module that communicates wirelessly, since wireless short-range communications were common at the time of the invention, including the use of wireless fobs for use in

authentication of a driver of a vehicle. Implementing wireless communication would have involved a modification that was well within the skill of an ordinary artisan at the time of the invention, and would have had the benefit of enabling communication between vehicle components without the need for a physical connection, thus increasing ease of use.

To the extent that one could argue that **Cherouny** lacks implementation details with respect to the logging of data regarding the operation of the vehicle, **Bouchard** teaches such details.

For instance, **Bouchard** discloses an event recording apparatus coupled to a collision warning apparatus for recording the collected relevant data and recording a driver profile, claim 1. The driver's performance is evaluated in real-time by utilizing information gathered by a radar system and other sensors, and the information that has been recorded during past trips and a present trip, col. 4, line 60 through col. 5, line 1, and col. 26, lines 48-58.

Each driver maintains a removable event recording apparatus (ERA) that is personalized to that particular driver. Each ERA stores information that identifies the driver, and a record of that driver's driving history and performance, col. 6, lines 4-8.

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Data gathered from vehicle sensors ***4a*** include vehicle speed (momentary and average), and geographical positioning information, col. 9, lines 21-50.

A POSITA would have found it obvious to use the teachings from **Bouchard** (i.e., recording operational event information, a record of driving history) because this would have represented a simple modification to **Cherouny's** system, which already describes "record[ing] the driver speed over a given period of time." ¶ [0035]. Accordingly, to the extent **Cherouny** was lacking any implementation details on how or where to record information about operation of the vehicle, **Bouchard** provides explicit details of the same (e.g., "recording the collected relevant data and recording a driver profile" claim 1), and a POSITA would have been aware of these techniques in view of **Bouchard's** explicit disclosure of them. A POSITA would have had a reasonable expectation of success in implementing **Bouchard's** teachings, particularly given **Cherouny's** disclosure that with its invention "the memory capability of the speed governor allows for a permanent record of the drivers possible violations." ¶ [0009].

Cherouny does not explicitly teach a vehicle control system wherein the data logging device records location information.

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Bouchard, however, discloses a vehicle control system wherein **the data logging device records location information** (see disclosure of a removable event recording apparatus (ERA) that is personalized to that particular driver. Each ERA stores information that identifies the driver, and a record of that driver's driving history and performance, col. 6, lines 4-8. Data gathered from vehicle sensors **4*a*** include vehicle speed (momentary and average), and geographical positioning information, col. 9, lines 21-50).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include a data logging module that logs location information, because a POSITA would have seen it as beneficial and obvious to include capabilities of monitoring and receiving speed and location information into **Cherouny's** system based on these explicit teachings in **Bouchard**. **Cherouny's** system already includes the components necessary to obtain this information (e.g., through its automobile speed sensor **108** and GPS **114**), and to the extent it is not explicit, **Bouchard** provides the implementation details as to how this information would be received by the processor of the system. See **Cherouny**, claim 1, ¶¶ [0020], [0035], [0040]; **Bouchard**, col. 9, lines 21-50. A POSITA would have recognized that monitoring speed and location (e.g., in view of **Bouchard's** explicit teachings) would further **Cherouny's** stated goal of

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improving safety of at-risk drivers. A POSITA would have had a reasonable expectation of success of implementing **Bouchard's** teachings in view of **Cherouny** disclosing transmission of "location and speed data" and that **Cherouny's** system already includes the components for doing so. *Id.*

Conclusion

Extensions of time under 37 CFR 1.136(a) do not apply in reexamination proceedings. The provisions of 37 CFR 1.136 apply only to "an applicant" and not to parties in a reexamination proceeding. Further, in 35 U.S.C. 305 and in 37 CFR 1.550(a), it is required that reexamination proceedings "will be conducted with special dispatch within the Office."

Extensions of time in reexamination proceedings are provided for in 37 CFR 1.550(c). A request for extension of time must specify the requested period of extension and it must be accompanied by the petition fee set forth in 37 CFR 1.17(g). Any request for an extension in a third party requested ex parte reexamination must be filed on or before the day on which action by the patent owner is due, and the mere filing of a request will not effect any extension of time. A request for an extension of time in a third party requested ex parte reexamination will be granted only for sufficient cause, and for a reasonable time specified. Any request for extension in a patent owner requested ex parte reexamination (including reexamination ordered under 35 U.S.C.

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257) for up to two months from the time period set in the Office action must be filed no later than two months from the expiration of the time period set in the Office action. A request for an extension in a patent owner requested ex parte reexamination for more than two months from the time period set in the Office action must be filed on or before the day on which action by the patent owner is due, and the mere filing of a request for an extension for more than two months will not effect the extension. The time for taking action in a patent owner requested ex parte reexamination will not be extended for more than two months from the time period set in the Office action in the absence of sufficient cause or for more than a reasonable time.

The Patent Owner is reminded of the continuing responsibility under 37 CFR 1.565(a), to apprise the Office of any litigation activity, or other prior or concurrent proceeding, involving U.S. Patent No. 10,259,470 throughout the course of this reexamination proceeding. The third party requester is also reminded of the ability to similarly apprise the Office of any such activity or proceeding throughout the course of this reexamination proceeding. See MPEP §§ 2207, 2282 and 2286.

The Patent Owner is reminded that any proposed amendment to the specification and/or claims in the reexamination proceeding must comply with the

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provisions of 37 C.F.R. § 1.530(d)-(j), must be formally presented pursuant to 37 C.F.R. § 1.52(a) and (b), and must include any fees required by 37 C.F.R. § 1.20(c). See MPEP § 2250(IV) for examples to assist in the preparation of proper amendments in reexamination proceedings.

In order to ensure full consideration of any amendments, affidavits or declarations, or other documents as evidence of patentability, such documents must be submitted in response to this Office action. Submissions after the next Office action, which is intended to be a final action, will be governed by the requirements of 37 CFR 1.116, after final rejection and 37 CFR 41.33 after appeal, which will be strictly enforced.

Any document filed by the Patent Owner must be served on the third party requester (or requesters in a merged proceeding) in the reexamination proceeding in the manner provided by 37 C.F.R. § 1.248. See 37 C.F.R. § 1.550(f) and MPEP § 2266.03.

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All correspondence relating to this *ex parte* reexamination proceeding should be directed:

By Patent Center:	Patent Center (patentcenter.uspto.gov) has 100% of the functionality of EFS-Web, Public and Private PAIR, and is available to all users for electronic filing and management of patent applications. For more information, please visit the Patent Center information page at uspto.gov/patents/apply/patent-center.
By Mail to:	Mail Stop *Ex Parte* Reexam Central Reexamination Unit Commissioner for Patents United States Patent & Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450
By FAX to:	(571) 273-9900 Central Reexamination Unit
By hand:	Customer Service Window Randolph Building 401 Dulany Street Alexandria, VA 22314

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Any inquiry concerning this communication should be directed to the Central Reexamination Unit at telephone number 571-272-7705.

/LUKE S WASSUM/
Primary Examiner, Art Unit 3992

Conferees:

/ANGELA M LIE/
Primary Examiner, Art Unit 3992

/Michael Fuelling/
Supervisory Patent Examiner, AU 3992

lsw
7 February 2024

Reexamination	Application/Control No.	Applicant(s)/Patent Under Reexamination
	90/015,287	10259470
	Certificate Date	Certificate Number

Requester Correspondence Address: ☐ Patent Owner ☑ Third Party
UNIFIED PATENTS 4445 WILLARD AVENUE SUITE 600 CHEVY CHASE, MD 20815

LITIGATION REVIEW ☑	lsw (examiner initials)	01 September 2023 (date)
Case Name		Director Initials
The Phelan Group LLC v. Kia Corporation et al. 2:23cv94 (open)		
Phelan Group LLC v. Toyota Motor Corporation et al. 2:23cv93 (open)		

COPENDING OFFICE PROCEEDINGS	
TYPE OF PROCEEDING	NUMBER

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	90/015,287	10259470
	Examiner	Art Unit
	Luke S Wassum	3992

CPC - Searched*		
Symbol	Date	Examiner

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
Litigation Search	09/01/2023	lsw
P-TACTS for AIA Proceedings (none)	10/04/2023	lsw
Patent Data Portal (PDP) for continuity data	10/04/2023	lsw
Reviewed prosecution history of appn 15/336,110	10/05/2023	lsw

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/015,287	08/31/2023	10259470	PHE101	7777

64064 7590 10/17/2023
Ortiz & Lopez, PLLC
P.O. BOX 4484
ALBUQUERQUE, NM 87196-4484

EXAMINER
WASSUM, LUKE S

ART UNIT	PAPER NUMBER
3992	

MAIL DATE	DELIVERY MODE
10/17/2023	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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CHEVY CHASE, MD 20815

EX PARTE REEXAMINATION COMMUNICATION TRANSMITTAL FORM

REEXAMINATION CONTROL NO. *90/015,287* .

PATENT UNDER REEXAMINATION *10259470* .

ART UNIT *3992* .

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified *ex parte* reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a reply has passed, no submission on behalf of the *ex parte* reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).

Order Granting Request For Ex Parte Reexamination	Control No. 90/015,287	Patent Under Reexamination 10259470	
	Examiner Luke S Wassum	Art Unit 3992	AIA (FITF) Status Yes

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

The request for *ex parte* reexamination filed 08/31/2023 has been considered and a determination has been made. An identification of the claims, the references relied upon, and the rationale supporting the determination are attached.

Attachments: a)☐ PTO-892, b)☑ PTO/SB/08, c)☐ Other: ____

1. ☑ The request for *ex parte* reexamination is GRANTED.

RESPONSE TIMES ARE SET AS FOLLOWS:

For Patent Owner's Statement (Optional): TWO MONTHS from the mailing date of this communication (37 CFR 1.530 (b)). **EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.550(c).**

For Requester's Reply (optional): TWO MONTHS from the **date of service** of any timely filed Patent Owner's Statement (37 CFR 1.535). **NO EXTENSION OF THIS TIME PERIOD IS PERMITTED.** If Patent Owner does not file a timely statement under 37 CFR 1.530(b), then no reply by requester is permitted.

/LUKE S WASSUM/ Primary Examiner, Art Unit 3992		

cc:Requester (if third party requester)

Decision Granting *Ex Parte* Reexamination

A substantial new question of patentability affecting claims 1 and 4 of U.S. Patent Number 10,259,470 ("the '470 patent") is raised by the request for *Ex Parte* Reexamination filed 31 August 2023 ("the Request"). The request for Reexamination is therefore granted. Claims 1 and 4 are subject to reexamination.

The application which issued as the '470 patent was application no. 15/336,110 ("the '110 application"), filed 27 October 2016.

Priority

The '470 patent is a continuation of application number 14/464,188, filed 20 August 2014, now U.S. Patent 9,493,149 ("the parent patent"), which is a continuation-in-part of application number 13/858,930, filed 8 April 2013, now U.S. Patent 9,045,101 ("the grandparent patent"), which is a continuation of application number 12/496,509, filed 1 July 2009, now U.S. Patent 8,417,415. The '470 patent also claims priority under 35 U.S.C. 119(e) to U.S. Provisional Application 61/077,568, filed 2 July 2008.

With respect to the priority date to which the '470 patent is entitled, the Office notes that claim 1 includes the limitation of 'a wireless identification and data logging module'. After review of the disclosure of the grandparent patent, the Office concludes that this limitation of claim 1 is not supported.

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For instance, the grandparent patent includes only a disclosure of a driver identification and data logging device, while the '470 patent claims a *wireless* driver identification and data logging *module*. Implementation of this feature as wireless or as a module is not supported by the grandparent patent, which can be seen (for example) by comparing analogous portions of the specifications of the respective disclosures:

> The data logging device **425** can be connected to the remote computer **465** and the operating profile **435** can be stored. Once the required information is copied into the data logging device **425**, the device **425** can be disconnected from the remote computer **465** and can be placed on a driver key ring (not shown). The master control unit **430** can authenticate the driver **410** utilizing a unique identification code **415** provided by the driver identification and data logging device **425**.

Grandparent patent, col. 6, lines 52-60.

The Office notes that the above disclosure regarding disconnecting the data logging device from the remote computer and placing it on the driver's key ring (i.e., a *device* embodiment) was omitted from the specification of the '470 patent, as can be seen below.

> The driver authentication and data logging module or device **425** can be connected to the remote computer **465** wirelessly or otherwise, and the operating profile **435** can be stored. The master control unit **430** can authenticate the driver **410** utilizing a unique identification code **415** provided by the driver identification and data logging module **425**.

'470 patent, col. 7, lines 26-32.

As highlighted above, disclosure of an embodiment of the data logging device as a *module*, present in the specification of the '470 patent, was absent in the specification of the grandparent patent, as was the *wireless* embodiment.

In summary, the Office has reviewed the disclosure of the grandparent patent and found no support for a data logging *module*, nor a *wireless* data logging module, therein.

Since the above identified features of claim 1 are not supported by the grandparent patent, the earliest priority date of the '470 patent is 20 August 2014, the application date of the parent patent.

Because the effective filing date of the '110 application is presumed to be on or after March 16, 2013, the AIA First Inventor to File ("AIA-FITF") provisions will apply.

In the event the determination of the status of the '110 application as subject to AIA 35 U.S.C. §§ 102 and 103 (or as subject to pre-AIA 35 U.S.C. §§ 102 and 103) is

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incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

Claim Interpretation

During reexamination, claims are given the broadest reasonable interpretation consistent with the specification and limitations in the specification are not read into the claims (*In re Yamamoto*, 740 F.2d 1569, 222 USPQ 934 (Fed. Cir. 1984)).

The examiner has reviewed of the original specification and prosecution history and found no instance of lexicographic definitions, either express or implied, that are inconsistent with the ordinary and customary meaning of the respective terms. Therefore, for the purposes of claim interpretation, the examiner concludes that there are no claim terms for which Patent Owner is acting as their own lexicographer. See MPEP § 2111.01(IV).

The Claimed Invention

The '470 patent is titled "Driver Authentication System and Method for Monitoring and Controlling Vehicle Usage." The '470 patent discloses a "driver

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authentication and safety system and method for monitoring and controlling vehicle usage by high-risk drivers.", Abstract. The '470 patent does so through the use of "operating profiles" that "can be loaded to a driver identification and data logging module in conjunction with a remote computer.", *Id*. Furthermore, the system includes components such as a "master control unit" that receives an identification code to authenticate the high-risk driver to "operate the vehicle within the desired operating profile.", *Id*. Finally, a "slave control unit" is disclosed that "receives commands from the master control unit" and can "generate[] a real time alarm signal if the driver violates the preprogrammed operating profile unique to the driver.", *Id*.

The '470 patent acknowledges that "[w]ith more young drivers getting licenses each year, there has been an unfortunate increase in accidents along with the ensuing damage, debilitating injuries and sometimes death" attributable to "generally poor driving habits.", col. 1, lines 39-48. The '470 patent further acknowledges other categories of "high-risk driver[s]," including "teen driver, fleet or rental drivers, habitual reckless drivers, aged drivers, drunk drivers, drowsily (sic) drivers, distracted drivers etc." that could benefit from the '470 patent's invention, col. 2, lines 31-50. As mentioned, the '470 patent is designed to improve driver safety through the use of an alarm signal generated by a slave control unit when the driver violates a preprogrammed operating profile unique to the driver. This alarm could continue until

the driver corrects the operating condition (e.g., speed, location) and brings the vehicle within the desired operating profile (e.g., if the driver is going too fast, slowing the vehicle to be within the operating profile range), col. 2, line 51 through col. 3, line 3. The system further "can include a GPS (Global Positioning System) module to determine and measure parameters such as, time of day, speed and location data associated with the vehicle.", *Id*.

The '470 patent describes a software system and general process through which an authorized user (e.g., a parent) can establish an operating profile for the at-risk driver, col. 4, lines 3-67 and col. 2, lines 54-55. The profile may include, for example, "maximum allowable vehicle speed, user infraction limits … vehicle locations," and so on, col. 6, line 46 through col. 7, line 2. Relevant to challenged claim 1, the system further discloses a "data logging device" that "can be used to record vehicle operation data associated with operation of the vehicle," which may include the vehicle's speed and location, col. 7, lines 46-57. Finally, a "master control unit" and "slave control unit" are in communication with one another, and, may generate an alarm signal or take control of the vehicle (e.g., to "lower/limit speed") when the driver operates outside of the established operating profile, col. 7, line 58 through col. 9, line 37.

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Prior Art Cited in the Request

The following references were cited by the third party Requester in the Request for *Ex Parte* Reexamination:

U.S. Patent Application Publication 2006/0052909 to Peter H. Cherouny ("**Cherouny**")

U.S. Patent Application Publication 2008/0188217 to Thomas C. Harter et al. ("**Harter**")

U.S. Patent 6,577,937 to Valerie Shuman et al. ("**Shuman**")

U.S. Patent Application Publication 2007/0168125 to Stephen Petrik ("**Petrik**")

U.S. Patent 5,465,079 to Paul J. Bouchard et al. ("**Bouchard**")

None of these references were cited or discussed on the record during the original prosecution of the '110 application.

Relevant Prosecution History

On 27 October 2016, the '110 application was filed with original claims 1-19.

On 27 August 2018, the Office mailed a non-final Office action, rejecting all 19 claims on the ground of nonstatutory double patenting, as unpatentable over several related issued patents and one co-pending application.

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In a response filed 15 November 2018, applicant filed a terminal disclaimer addressing all double patenting rejections. Minor amendments to the claims were made, as well as adding new claim 20.

On 17 December 2018, the Office allowed all claims. Claim 1 was amended by Examiner's Amendment to correct a minor typographical error. The examiner cited as reasons for allowance:

> Independent claim 1 is allowed. None of the prior art cited could anticipate, or be combined to render obvious a slave control unit in said vehicle and which communicates with said master control unit, wherein said slave control unit receives commands from said master control unit and generate an alarm signal; wherein said master control unit provides operation governance of said vehicle within said operating profile.

With respect to independent claim 1, the apparent reason for allowance was the claimed generation of an alarm signal in a vehicle, as well as providing operational governance of said vehicle within an operational profile.

Information Disclosure Statement

Applicants' Information Disclosure Statement (IDS), filed 31 August 2023, has been received and entered into the record. Since the IDS complies with the provisions of MPEP § 2280, the references cited therein have been considered by the examiner.

See attached form PTO-1449.

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With respect to the Information Disclosure Statement considered with this action, the information cited has been considered as described in the MPEP. Note that MPEP §§ 2256 and 2656 indicate that the degree of consideration to be given to such information will be normally limited by the degree to which the party filing the information citation has explained the content and relevance of the information. Information that does not appear to be "patents or printed publications" as identified in 35 U.S.C. 301 have been considered to the same extent.

The Substantial New Question of Patentability

The standard for establishing a Substantial New Question of Patentability is defined in the following sections of the MPEP:

MPEP § 2242(I) provides, in pertinent part:

> A prior art patent or printed publication raises a substantial question of patentability where there is a substantial likelihood that a reasonable examiner would consider the prior art patent or printed publication important in deciding whether or not the claim is patentable.

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Over the course of the original prosecution of the '110 application, the limitation that was not found in the prior art was the claimed vehicle control system comprising a master control unit in a vehicle; a slave control unit in communication with said master control unit, wherein the slave control unit receives commands from said master control unit and generate an alarm signal; and wherein said master control unit provides operational governance of said vehicle within an operating profile.

Thus, prior art which teaches or suggests any of the above-cited claim features would raise a Substantial New Question of Patentability with respect to the respective claims of the '470 patent.

Proposed Substantial New Question of Patentability

Ex Parte Reexamination of claims 1 and 4 of the '470 patent has been requested, based upon the following issues presented in the form of proposed claim rejections:

Issue 1: Whether claim 1 is obvious under 35 U.S.C. § 103 over **Cherouny**.

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Issue 2: Whether claims 1 and 4 are obvious under 35 U.S.C. § 103 over **Cherouny** in view of **Harter**.

Issue 3: Whether claim 1 is obvious under 35 U.S.C. § 103 over **Cherouny** in view of **Shuman**.

Issue 4: Whether claim 1 is obvious under 35 U.S.C. § 103 over **Cherouny** in view of **Petrik**.

Issue 5: Whether claim 1 is obvious under 35 U.S.C. § 103 over **Cherouny** in view of **Bouchard**.

Analysis

The examiner agrees that based upon the following analysis, the teachings of the cited prior art raises a substantial new question of patentability with regard to claims 1 and 4 of the '470 patent.

Issue 1: **Cherouny**

Cherouny raises a substantial new question of patentability with respect to claims 1 and 4 of the '470 patent, for the reasons discussed below.

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Cherouny discloses "[a]n improved electronic programmable speed limiter for drivers of vehicles which can be preprogrammed and controlled from a remote location via a radio link to update the driver performance and adjust the controls on the speed limiter.", Abstract. **Cherouny** discusses that it is "an object of this invention to provide an electronic programmable speed limiting device for motor vehicles" and "another object of this invention to provide a programmable electronic device for motor vehicles which also records the driving speed over a given period of time.", *Id.*, ¶ [0035]. Similar to the '470 patent, which discloses "systems and methods for monitoring and controlling vehicle usage by high-risk drivers" (Abstract), **Cherouny** discloses an "object of this invention is to provide a safety device for the 'at risk' segment of the driving public by limiting the speed of the motor vehicle they are driving by programming in a speed limit, by adjusting for driving history, by reassessing allowable speed during rain or darkness.", ¶ [0038]. **Cherouny** further describes the functions performed by the claimed slave control unit (e.g., communicating with the master control unit and generating an alarm) by disclosing various hardware and/or software (e.g., **Cherouny's** engine slow down module **120**, and audible noise generator **121**), which is in connection with and communicating with **Cherouny's** microprocessor (i.e., the claimed master control unit).

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Cherouny explicitly describes "audible noise alarms" that can be triggered when the driver operates outside of the pre-established operating profile, ¶ [0077]-[0078] and [0082]. **Cherouny** describes a process by which the moderator (e.g., parent of a teen driver) can program audible noises and vehicle operation governance (e.g., slowing down the vehicle) when the car is operating "faster than the speed limit as registered," as described in ¶ [0020] of its disclosure: "The Moderator is able to make the following responses to the car going faster than the speed limit as registered in the database programmed by the software.

1. Audible chirp

2. Voice warning explaining the set speed limit on that section of road and the consequences to the driving record.

3. Voice warning that the parameters were set to not allow speeding in that speed zone (i.e., in a school zone there will be no allowance for passing speeds).

4. Audible noise alarm at approximately 60 dB noise level (in order to annoy the driver.)

5. Shutdown of the first half of the fuel injectors of the engine.

6. Square wave enable to the second half of the fuel injectors to almost kill the engine.

7. Shutoff of the ignition.", ¶ [0020].

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This paragraph also discloses the other stated reason for allowance e.g., that the master control unit provides operation governance of the vehicle. Here, **Cherouny** explicitly discloses that when the car is going faster than the speed limit "as registered in the database programmed by the software," it can limit the speed or even turn off the vehicle ignition, *Id*. Additionally, as shown in Fig. 20, it is **Cherouny's** microprocessor (corresponding to the claimed master control unit) that provides the governance via communication with the engine slow down module and audible noise generator. **Cherouny**, similar to the '470 patent's step of providing operation governance within said operating profile, does the same when the driver in **Cherouny's** system operates outside of a preset profile by a moderator. For example, **Cherouny** discloses in detail how a moderator (e.g., parent) may set up a profile for an at-risk driver, e.g., as illustrated in Figures 7, 8, and 9:

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FIG. 7

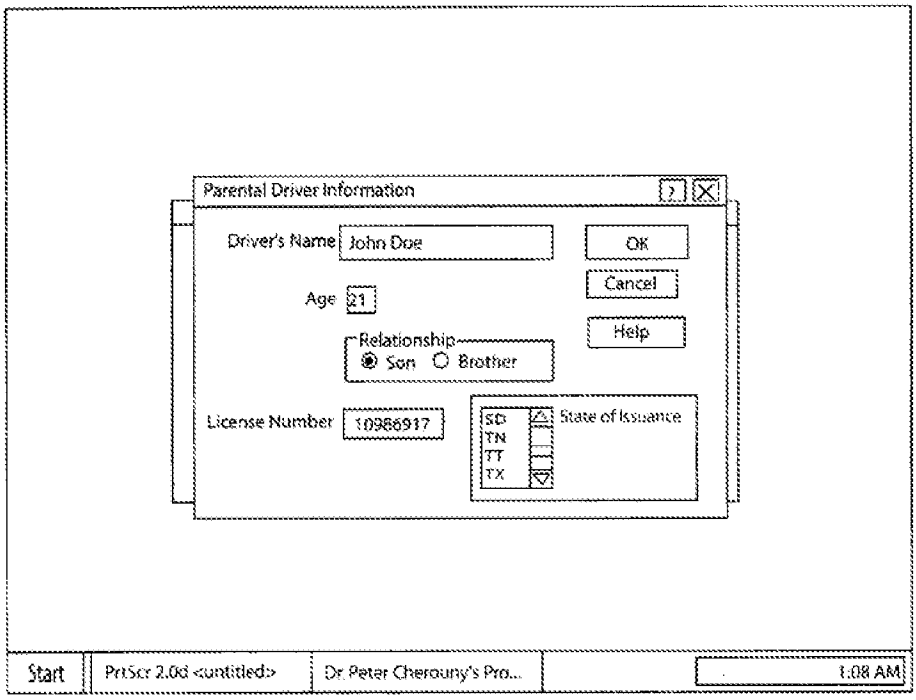

Parental Driver Information
Driver's Name
John Doe
OK
Cancel
Age
21
Help
Relationship
Son
Brother
License Number
10986917
SD
TN
TT
TX
State of Issuance
Start
PrtScr 2.0d <untitled>
Dr. Peter Cherouny's Pro...
1:08 AM

FIG. 8

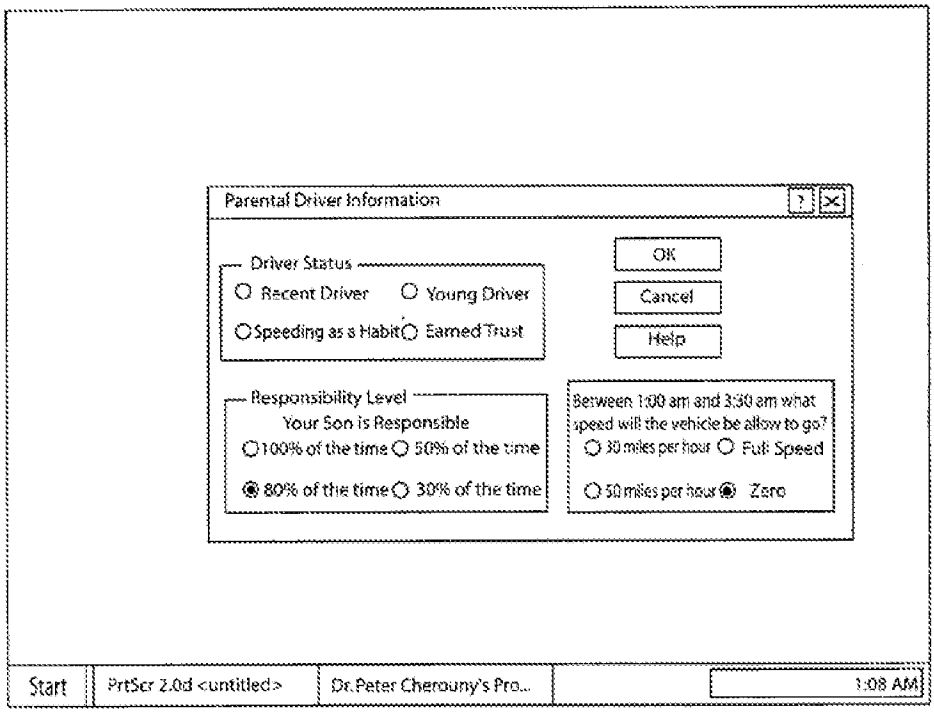
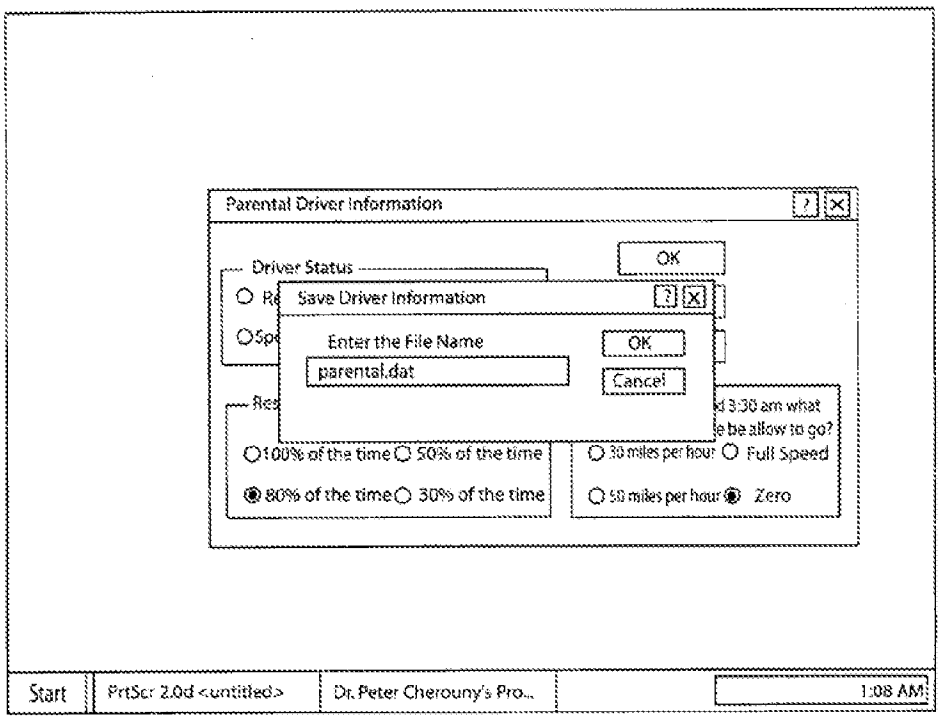

Parental Driver Information
Driver Status
Recent Driver
Young Driver
Speeding as a Habit
Earned Trust
OK
Cancel
Help
Responsibility Level
Your Son is Responsible
100% of the time
50% of the time
80% of the time
30% of the time
Between 1:00 am and 3:30 am what speed will the vehicle be allow to go?
30 miles per hour
Full Speed
50 miles per hour
Zero
Start
PrtScr 2.0d <untitled>
Dr.Peter Cherouny's Pro...
1:08 AM

FIG. 9



As shown above, a driver profile can be created, said profile defining speed limit restrictions, analogous to the claimed operating profile.

Cherouny is analogous art to the '470 patent because it is in the same field of endeavor—e.g., "ensuring motor vehicle operation safety" and "monitoring and controlling vehicle usage by high-risk drivers.", '470 patent, col. 1, lines 31-35; **Cherouny**, ¶ [0038] ("object of this invention is to provide a safety device for the 'at risk' segment of the driving public by limiting the speed of the motor vehicle they are driving by programming in a speed limit").

In view of the disclosures of the above reference, **the Office agrees** that **Cherouny** discloses the claimed vehicle control system comprising a master control unit in a vehicle; a slave control unit in communication with said master control unit, wherein the slave control unit receives commands from said master control unit and generate an alarm signal; and wherein said master control unit provides operational governance of said vehicle within an operating profile.

In light of these teachings, there is a substantial likelihood that a reasonable examiner would consider **Cherouny** important in deciding whether or not claims 1 and 4 of the '470 patent are patentable.

The teachings of **Cherouny** are new and non-cumulative with respect to the teachings of the prior art applied during the prosecution of the '110 application. Furthermore, the teachings of **Cherouny** have not been considered in a final holding of invalidity by a federal court. Accordingly, **Cherouny** raises a substantial new question of patentability with regard to claims 1 and 4 that has not been decided in a previous examination, reexamination, or other proceeding before the Office.

Issue 2: **Cherouny** and **Harter**

The combination of **Cherouny** and **Harter** raises a substantial new question of patentability with respect to claims 1 and 4 of the '470 patent, by virtue of the inclusion of **Cherouny**, which by itself raises an SNQ for the reasons discussed above with respect to Issue 1.

Issue 3: **Cherouny** and **Shuman**

The combination of **Cherouny** and **Shuman** raises a substantial new question of patentability with respect to claims 1 and 4 of the '470 patent, by virtue of the inclusion of **Cherouny**, which by itself raises an SNQ for the reasons discussed above with respect to Issue 1.

Issue 4: **Cherouny** and **Petrik**

The combination of **Cherouny** and **Petrik** raises a substantial new question of patentability with respect to claims 1 and 4 of the '470 patent, by virtue of the inclusion of **Cherouny**, which by itself raises an SNQ for the reasons discussed above with respect to Issue 1.

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Issue 5: **Cherouny** and **Bouchard**

The combination of **Cherouny** and **Bouchard** raises a substantial new question of patentability with respect to claims 1 and 4 of the '470 patent, by virtue of the inclusion of **Cherouny**, which by itself raises an SNQ for the reasons discussed above with respect to Issue 1.

Conclusion

As discussed above, the prior art cited in the request raises an SNQ as to claims 1 and 4 of the '470 patent. Specifically, there is a substantial likelihood that a reasonable examiner would consider the new non-cumulative teachings of the cited prior art, as discussed above, regarding the claimed vehicle control system comprising a master control unit in a vehicle; a slave control unit in communication with said master control unit, wherein the slave control unit receives commands from said master control unit and generate an alarm signal; and wherein said master control unit provides operational governance of said vehicle within an operating profile, important in deciding whether or not claims 1 and 4 of the '470 patent are patentable.

35 U.S.C. § 325(d)

A review of the post grant history of the '470 patent indicates that the patent was never the subject of a prior post grant proceeding.

Accordingly, the threshold for a discretionary denial pursuant to 35 U.S.C. § 325(d) is not met.

Extension of Time

Extensions of time under 37 CFR 1.136(a) will not be permitted in these proceedings because the provisions of 37 CFR 1.136 apply only to "an applicant" and not to parties in a reexamination proceeding. Additionally, 35 U.S.C. 305 requires that *ex parte* reexamination proceedings "will be conducted with special dispatch" (37 CFR 1.550(a)). Extensions of time in *ex parte* reexamination proceedings are provided for in 37 CFR 1.550(c).

The Patent Owner is reminded of the continuing responsibility under 37 CFR 1.565(a), to apprise the Office of any litigation activity, or other prior or concurrent proceeding, involving U.S. Patent No. 10,259,470 throughout the course of this reexamination proceeding. See MPEP §§ 2207, 2282 and 2286.

The Patent Owner is reminded that any proposed amendment to the specification and/or claims in the reexamination proceeding must comply with the provisions of 37 C.F.R. § 1.530(d)-(j), must be formally presented pursuant to 37 C.F.R. § 1.52(a) and (b), and must include any fees required by 37 C.F.R. § 1.20(c). See MPEP § 2250(IV) for examples to assist in the preparation of proper amendments in reexamination proceedings.

All correspondence relating to this *ex parte* reexamination proceeding should be directed:

By Patent Center:	Patent Center (patentcenter.uspto.gov) has 100% of the functionality of EFS-Web, Public and Private PAIR, and is available to all users for electronic filing and management of patent applications. For more information, please visit the Patent Center information page at uspto.gov/patents/apply/patent-center.
By Mail to:	Mail Stop *Ex Parte* Reexam Central Reexamination Unit Commissioner for Patents United States Patent & Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450
By FAX to:	(571) 273-9900 Central Reexamination Unit
By hand:	Customer Service Window Randolph Building 401 Dulany Street Alexandria, VA 22314

Any inquiry concerning this communication should be directed to the Central Reexamination Unit at telephone number 571-272-7705.

/LUKE S WASSUM/
Primary Examiner, Art Unit 3992

Conferees:

/ANGELA M LIE/
Primary Examiner, Art Unit 3992

/Michael Fuelling/
Supervisory Patent Examiner, AU 3992

5 lsw
6 October 2023

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	90/015,287	10259470
	Examiner	Art Unit
	Luke S Wassum	3992

CPC - Searched*		
Symbol	Date	Examiner

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
Litigation Search	09/01/2023	lsw
P-TACTS for AIA Proceedings (none)	10/04/2023	lsw
Patent Data Portal (PDP) for continuity data	10/04/2023	lsw
Reviewed prosecution history of appn 15/336,110	10/05/2023	lsw

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

Reexamination	Application/Control No.	Applicant(s)/Patent Under Reexamination
	90/015,287	10259470
	Certificate Date	Certificate Number

Requester Correspondence Address: ☐ Patent Owner ☑ Third Party
UNIFIED PATENTS 4445 WILLARD AVENUE SUITE 600 CHEVY CHASE, MD 20815

LITIGATION REVIEW ☑	lsw (examiner initials)	01 September 2023 (date)
Case Name		Director Initials
The Phelan Group LLC v. Kia Corporation et al. 2:23cv94 (open)		
Phelan Group LLC v. Toyota Motor Corporation et al. 2:23cv93 (open)		

COPENDING OFFICE PROCEEDINGS	
TYPE OF PROCEEDING	NUMBER

Bibliographic Data

Application No: 90/015,287

Foreign Priority claimed: ○ Yes ◉ No

35 USC 119 (a-d) conditions met: ☐ Yes ☑ No ☐ Met After Allowance

Verified and Acknowledged: /LUKE S WASSUM/ Examiner's Signature | Initials

Title: Driver Authentication System and Method For Monitoring And Controlling Vehicle Usage

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
08/31/2023	701	3992	PHE101
RULE			

APPLICANTS

INVENTORS

10259470,

CONTINUING DATA

This application is a REX of 15336110 10/27/2016 PAT 10259470

15336110 is a CON of 14464188 08/20/2014 PAT 9493149

14464188 is a CIP of 13858930 04/08/2013 PAT 9045101

13858930 is a CON of 12496509 07/01/2009 PAT 8417415

12496509 has PRO of 61077568 07/02/2008

FOREIGN APPLICATIONS

IF REQUIRED, FOREIGN LICENSE GRANTED**

STATE OR COUNTRY

ADDRESS

Ortiz & Lopez, PLLC
P.O. BOX 4484
ALBUQUERQUE, NM 87196-4484
UNITED STATES

FILING FEE RECEIVED

$275

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Substitute for form 1449/PTO				*Complete if Known*	
				Application Number	In Ex Parte Reexamination of U.S. Patent 10,259,470
INFORMATION DISCLOSURE STATEMENT *(Use as many sheets as necessary)*				Filing Date	Herewith
				First Named Inventor	Michael Phelan
				Art Unit	TBD
				Examiner Name	TBD
Sheet	1	of	2	Attorney Docket Number	PHE101

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No.1	Document Number Number-Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	Ex. 1004		03-09-2006	U.S. Patent Publication 2006/0052909 ("Cherouny")	
	Ex. 1005		08-07-2008	U.S. Patent Publication 2008/0188217 ("Harter")	
	Ex. 1006		06-10-2003	U.S. Patent 6,577,937 ("Shuman")	
	Ex. 1007		07-19-2007	U.S. Patent Publication 2007/0168125 ("Petrik")	
	Ex. 1008		11-07-1995	U.S. Patent 5,465,079 ("Bouchard")	
	Ex. 1009		12-11-2008	U.S. Patent Publication 2008/0303629	
	Ex. 1010		04-06-2007	U.S. Patent Publication 2007/0093200	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.1	Foreign Patent Document Country Code3 –Number 4 –Kind Code5 (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T6
	Ex. 1011		09-13-2007	Japanese Patent JP2007235530		Y

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /L.S.W/

PTO/SB/08a (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO				***Complete if Known***	
				Application Number	In Ex Parte Reexamination of U.S. Patent 10,259,470
INFORMATION DISCLOSURE STATEMENT *(Use as many sheets as necessary)*				Filing Date	Herewith
				First Named Inventor	Michael Phelan
				Art Unit	TBD
				Examiner Name	TBD
Sheet	2	of	2	Attorney Docket Number	PHE101

NON-PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	Ex. 1002	Prosecution History of U.S. Patent Application 15/336,110	
	Ex. 1003	Declaration of Christopher Wilson	
	Ex. 1012	Translation of Japanese Patent JP2007235530 (EX1011)	
	Ex. AA	Claim Chart Comparing Claims 1 and 4 of U.S. Patent 10,259,470 to Cherouny, Harter, Shuman, Petrik, and Bouchard	

Examiner Signature	/LUKE S WASSUM/	Date Considered	10/05/2023

*EXAMINER: Initial if reference considered whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.
1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.
This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.** *If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.*

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /L.S.W/

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/015,287	08/31/2023	10259470	PHE101	7777

64064 7590 09/18/2023

Ortiz & Lopez, PLLC
P.O. BOX 4484
ALBUQUERQUE, NM 87196-4484

EXAMINER
WASSUM, LUKE S

ART UNIT	PAPER NUMBER
3992	

MAIL DATE	DELIVERY MODE
09/18/2023	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

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United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

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(THIRD PARTY REQUESTER'S CORRESPONDENCE ADDRESS)

UNIFIED PATENTS, LLC
4445 WILLARD AVE.
SUITE 600
CHEVY CHASE, MD 20815

EX PARTE REEXAMINATION COMMUNICATION TRANSMITTAL FORM

REEXAMINATION CONTROL NO. *90/015,287* .

PATENT UNDER REEXAMINATION *10259470* .

ART UNIT *3992* .

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified *ex parte* reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a reply has passed, no submission on behalf of the *ex parte* reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).

Ex Parte Reexamination Interview Summary – Pilot Program for Waiver of Patent Owner's Statement	Control No. 90/015,287	Patent Under Reexamination is Requested 10259470	
	Examiner WASSUM	Art Unit 3992	AIA (FITF) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address. --

All participants (USPTO official and patent owner):

(1) MANUEL SALDANA, CRU (3) _____

(2) LUIZ ORTIZ, REG. 36230 (4) _____

Date of Telephonic Interview: 12 September 2023.

A. The USPTO official requested waiver of the patent owner's statement pursuant to the pilot program for waiver of patent owner's statement in *ex parte* reexamination proceedings.*

☐ The patent owner **agreed** to waive its right to file a patent owner's statement under 35 U.S.C. 304 in the event reexamination is ordered for the above-identified patent.

☐ The patent owner **did not agree** to waive its right to file a patent owner's statement under 35 U.S.C. 304 at this time.

☑ USPTO personnel were unable to reach the patent owner.**

B. The Patent Owner of record telephoned the Office and indicated they would like to participate in the pilot program for waiver of patent owner's statement in *ex parte* reexamination proceedings.*

☐ The Patent owner of record telephoned the Office and **agreed** to waive its right to file a patent owner's statement under 35 U.S.C. 304 in the event reexamination is ordered for the above-identified patent.

The patent owner is not required to file a written statement of this telephone communication under 37 CFR 1.560(b) or otherwise. However, any disagreement as to this interview summary must be brought to the immediate attention of the USPTO, and no later than one month from the mailing date of this interview summary. Extensions of time are governed by 37 CFR 1.550(c).

*For more information regarding this pilot program, see *Pilot Program for Waiver of Patent Owner's Statement in Ex Parte Reexamination Proceedings, 75 Fed. Reg.* 47269 (August 5, 2010), available on the USPTO Web site at http://www.uspto.gov/patents/law/notices/2010.jsp.

**The patent owner may contact the USPTO personnel at (571) 272-7705 or at the telephone number provided below if the patent owner decides to waive the right to file a patent owner's statement under 35 U.S.C. 304.

/MANUEL SALDANA/ (571)272-7740
Signature and telephone number of the USPTO official, who contacted, was contacted by, or attempted to contact the patent owner.

cc: Requester (if third party requester)

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

BIB DATA SHEET

CONFIRMATION NO. 7777

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
90/015,287	08/31/2023 RULE	701	3992	PHE101

APPLICANTS

THE PHELAN GROUP LLC(OWNER), Residence Not Provided;
UNIFIED PATENTS LLC, CHEVY CHASE, MD;

INVENTORS

10259470, Residence Not Provided;
Unified Patents, LLC, Residence Not Provided;

**** CONTINUING DATA ***************************

This application is a REX of 15/336,110 10/27/2016 PAT 10259470
which is a CON of 14/464,188 08/20/2014 PAT 9493149
which is a CIP of 13/858,930 04/08/2013 PAT 9045101
which is a CON of 12/496,509 07/01/2009 PAT 8417415
which claims benefit of 61/077,568 07/02/2008

**** FOREIGN APPLICATIONS ***************************

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ****

Foreign Priority claimed ☐ Yes ☐ No 35 USC 119(a-d) conditions met ☐ Yes ☐ No Verified and Acknowledged _____ Examiner's Signature	☐ Met after Allowance _____ Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
				20	2

ADDRESS

Ortiz & Lopez, PLLC
P.O. BOX 4484
ALBUQUERQUE, NM 87196-4484
UNITED STATES

TITLE

Driver Authentication System and Method For Monitoring And Controlling Vehicle Usage

FILING FEE RECEIVED		
0.00	FEES: Authority has been given in Paper No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

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Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

REEXAM CONTROL NUMBER	FILING OR 371 (c) DATE	PATENT NUMBER
90/015,287	08/31/2023	

CONFIRMATION NO. 7777

REEXAM ASSIGNMENT NOTICE

Date Mailed: 09/18/2023

64064
Ortiz & Lopez, PLLC
P.O. BOX 4484
ALBUQUERQUE, NM 87196-4484

NOTICE OF ASSIGNMENT OF REEXAMINATION REQUEST

The above-identified request for reexamination has been assigned to Art Unit 3993. All future correspondence to the proceeding should be identified by the control number listed above and directed to the assigned Art Unit.

A copy of this Notice is being sent to the latest attorney or agent of record in the patent file or to all owners of record. (See 37 CFR 1.33(c)). If the addressee is not, or does not represent, the current owner, he or she is required to forward all communications regarding this proceeding to the current owner(s). An attorney or agent receiving this communication who does not represent the current owner(s) may wish to seek to withdraw pursuant to 37 CFR 1.36 in order to avoid receiving future communications. If the address of the current owner(s) is unknown, this communication should be returned within the request to withdraw pursuant to Section 1.36.

NOTICE OF USPTO EX PARTE REEXAMINATION PATENT OWNER STATEMENT WAIVER PROGRAM

The USPTO has implemented a pilot program where, after a reexamination proceeding has been granted a filing date and before the examiner begins his or her review, the patent owner may orally waive the right to file a patent owner's statement. See *"Pilot Program for Waiver of Patent Owner's Statement in Ex Parte Reexamination Proceedings,"* 75 FR 47269 (August 5, 2010). One goal of the pilot program is to reduce the pendency of reexamination proceedings and improve the efficiency of the reexamination process.

Ordinarily when ex parte reexamination is ordered, the USPTO must wait until after the receipt of the patent owner's statement and the third party requester's reply, or after the expiration of the time period for filing the statement and reply (a period that can be as long as 5 to 6 months), before mailing a first determination of patentability. The USPTO's first determination of patentability is usually a first Office action on the merits or a Notice of Intent to Issue Reexamination Certificate (NIRC).

Under the pilot program, the patent owner's oral waiver allows the USPTO to act on the first determination of patentability immediately after determining that reexamination will be ordered, and in a suitable case issue the reexamination order and the first determination of patentability (which could be a NIRC if the claims under reexamination are confirmed) at the same time.

Benefits to the Patent Owner for participating in this pilot program include reduction in pendency.

To participate in this pilot program, Patent Owners may contact the USPTO's Central Reexamination Unit (CRU) at 571-272-7705. The USPTO will make the oral waiver of record in the reexamination file in an interview summary and a copy will be mailed to the patent owner and any third party requester.

cc: Third Party Requester(if any)
Unified Patents, LLC
4445 Willard Ave.
Suite 600
Chevy Chase, MARYLAND 20815

/rbell/

Legal Instruments Examiner
Central Reexamination Unit 571-272-7705; FAX No. 571-273-9900

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

REEXAM CONTROL NUMBER	FILING OR 371 (c) DATE	PATENT NUMBER
90/015,287	08/31/2023	

CONFIRMATION NO. 7777
REEXAMINATION REQUEST
NOTICE

Unified Patents, LLC
4445 Willard Ave.
Suite 600
Chevy Chase, MARYLAND 20815

OC000000061814302

NOTICE OF REEXAMINATION REQUEST FILING DATE

(Third Party Requester)

Requester is hereby notified that the filing date of the request for reexamination is 08/31/2023, the date that the filing requirements of 37 CFR § 1.510 were received.

A decision on the request for reexamination will be mailed within three months from the filing date of the request for reexamination. (See 37 CFR 1.515(a)).

A copy of the Notice is being sent to the person identified by the requester as the patent owner. Further patent owner correspondence will be the latest attorney or agent of record in the patent file. (See 37 CFR 1.33). Any paper filed should include a reference to the present request for reexamination (by Reexamination Control Number).

cc: Patent Owner
64064
Ortiz & Lopez, PLLC
P.O. BOX 4484
ALBUQUERQUE, NM 87196-4484

/rbell/

Legal Instruments Examiner
Central Reexamination Unit 571-272-7705; FAX No. 571-273-9900

United States Patent and Trademark Office
Office of the Chief Financial Officer

Document Code:WFEE

User :Manuel Saldana

Sale Accounting Date:09/12/2023

Sale Item Reference Number	Effective Date
90015287	08/31/2023

Document Number	Fee Code	Fee Code Description	Amount Paid	Payment Method
I20239BB16079800	1812	EX PARTE REEXAMINATION (1.510(A)) NON-STREAMLINED	$12,600.00	Deposit Account

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
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BIB DATA SHEET

CONFIRMATION NO. 7777

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
90/015,287	08/31/2023 RULE	701	3993	PHE101

APPLICANTS

MICHAEL D. PHELAN, Residence Not Provided;
UNIFIED PATENTS LLC, CHEVY CHASE, MD;

INVENTORS

10259470, Residence Not Provided;
Unified Patents, LLC, Residence Not Provided;

**** CONTINUING DATA ***************************

This application is a REX of 15/336,110 10/27/2016 PAT 10259470
which is a CON of 14/464,188 08/20/2014 PAT 9493149
which is a CIP of 13/858,930 04/08/2013 PAT 9045101
which is a CON of 12/496,509 07/01/2009 PAT 8417415
which claims benefit of 61/077,568 07/02/2008

**** FOREIGN APPLICATIONS ***************************

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ****

Foreign Priority claimed ❑ Yes ❑ No 35 USC 119(a-d) conditions met ❑ Yes ❑ No Verified and Acknowledged _____ Examiner's Signature	❑ Met after Allowance _____ Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
				20	2

ADDRESS

Ortiz & Lopez, PLLC
P.O. BOX 4484
ALBUQUERQUE, NM 87196-4484
UNITED STATES

TITLE

Driver Authentication System and Method For Monitoring And Controlling Vehicle Usage

FILING FEE RECEIVED		
0.00	FEES: Authority has been given in Paper No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	❑ All Fees ❑ 1.16 Fees (Filing) ❑ 1.17 Fees (Processing Ext. of time) ❑ 1.18 Fees (Issue) ❑ Other _____ ❑ Credit

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Patent Assignment Abstract of Title

Total Assignments: 1

Application #: 15336110 **Filing Dt:** 10/27/2016 **Patent #:** 10259470 **Issue Dt:** 04/16/2019
PCT #: NONE **Intl Reg #:** **Publication #:** US20170106877 **Pub Dt:** 04/20/2017
Inventor: Michael Phelan
Title: DRIVER AUTHENTICATION SYSTEM AND METHOD FOR MONITORING AND CONTROLLING VEHICLE USAGE

Assignment: 1

Reel/Frame: 046651 / 0608 **Received:** 09/12/2018 **Recorded:** 09/12/2018 **Mailed:** 09/13/2018 **Pages:** 3
Conveyance: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).
Assignor: PHELAN, MICHAEL D **Exec Dt:** 05/27/2016
Assignee: THE PHELAN GROUP, LLC
851 CAMINO FRANCISCA
SANTA FE, NEW MEXICO 87506
Correspondent: LUIS M. ORTIZ
117 BRYN MAWR DRIVE SE
ALBUQUERQUE, NM 87106

Search Results as of: 09/05/2023 08:19 AM

If you have any comments or questions concerning the data displayed, contact PRD / Assignments at 571-272-3350. v.2.6
Web interface last modified: Jun 26, 2017 v.2.6

Litigation Search Report CRU 3999

Reexamination Control No. 90/015,287

To:	EXAMINER	**From:**	MANUEL SALDANA
Location:	REM04C7	**Location:**	REM04C71
Art Unit:	3999	**Phone:**	571-272-7740
Date:	01 September 2023	**E-mail:**	MANUEL.SALDANA@USPTO.GOV

Search Notes

(OPEN) 2:23cv94, The Phelan Group, Llc V. Kia Corporation Et Al

(OPEN) 2:23cv93, Phelan Group, Llc V. Toyota Motor Corporation Et Al

1. Performed a KeyCite Search in Westlaw, which retrieves all history on the patent including any litigation.
2. Performed a search on the patent in Lexis CourtLink for any open dockets or closed cases.
3. Performed a search in Lexis in the Federal Courts and Administrative Materials databases for any cases found.
4. Performed a search in Lexis in the IP Journal and Periodicals database for any articles on the patent.
5. Performed a search in Lexis in the news databases for any articles about the patent or any articles about litigation on this patent.

LexisNexis

User Name: Manuel Saldana
Date and Time: Friday, September 1, 2023 10:09:00AM EDT
Job Number: 204877507

Documents (2)

1. *US Patent Issued on April 16 for "Driver authentication system and method for monitoring and controlling vehicle usage" (New Mexico Inventor)*

Client/Matter: -None-
Search Terms: 10,259,470
Search Type: Natural Language
Narrowed by:

Content Type	Narrowed by
News	-None-

2. *Head Line: US Patent granted to THE PHELAN GROUP, LLC (New Mexico) on April 16, 2019 titled as "Driver authentication system and method for monitoring and controlling vehicle usage"*

Client/Matter: -None-
Search Terms: 10,259,470
Search Type: Natural Language
Narrowed by:

Content Type	Narrowed by
News	-None-

US Patent Issued on April 16 for "Driver authentication system and method for monitoring and controlling vehicle usage" (New Mexico Inventor)

US Fed News

April 17, 2019 Wednesday 12:40 AM EST

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Length: 281 words

Dateline: ALEXANDRIA, Va.

Body

ALEXANDRIA, Va., April 17 -- United States Patent no. ***10,259,470***, issued on April 16.

"Driver authentication system and method for monitoring and controlling vehicle usage" was invented by THE PHELAN GROUP, LLC (Santa Fe, N.M.). According to the abstract* released by the U.S. Patent & Trademark Office: "A driver authentication and safety system and method for monitoring and controlling vehicle usage by high-risk drivers. A centralized database comprising a software application can be accessed by an authorized user via a data communications network utilizing a remote computer in order to configure a desired operating profile that matches requirements of the high-risk driver. The operating profile can be loaded to a driver identification and data logging module in conjunction with the remote computer. A master control unit receives a unique identification code from the data logging device to authenticate the high-risk driver and to operate the vehicle within the desired operating profile. A slave control unit receives commands from the master control unit and generates a real time alarm signal if the driver violates the preprogrammed operating profile unique to the driver." The patent was filed on Oct. 27, 2016, under Application No. 15/336,110. *For further information, including images, charts and tables, please visit:

http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&Sect2=HITOFF&p=1&u=%2Fnetahtml%2FPTO%2Fsearch-bool.html&r=1&f=G&l=50&co1=AND&d=PTXT&s1=10259470&OS=10259470&RS=10259470 For any query with respect to this article or any other content requirement, please contact Editor at contentservices@htlive.com

Load-Date: April 17, 2019

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Head Line: US Patent granted to THE PHELAN GROUP, LLC (New Mexico) on April 16, 2019 titled as "Driver authentication system and method for monitoring and controlling vehicle usage"

Plus Patent News

April 17, 2019 Wednesday

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Length: 229 words

Dateline: New York

Body

ALEXANDRIA, Va: United States Patent and Trademark Office has granted patent no. ***10,259,470*** on April 16, 2019, to THE PHELAN GROUP, LLC (New Mexico) titled as "Driver authentication system and method for monitoring and controlling vehicle usage"Inventors: Phelan; Michael (Santa Fe, NM)Assignee: THE PHELAN GROUP, LLC Santa Fe NM US (New Mexico)According to the abstract released by the U.S. Patent & Trademark Office: "A driver authentication and safety system and method for monitoring and controlling vehicle usage by high-risk drivers. A centralized database comprising a software application can be accessed by an authorized user via a data communications network utilizing a remote computer in order to configure a desired operating profile that matches requirements of the high-risk driver. The operating profile can be loaded to a driver identification and data logging module in conjunction with the remote computer. A master control unit receives a unique identification code from the data logging device to authenticate the high-risk driver and to operate the vehicle within the desired operating profile. A slave control unit receives commands from the master control unit and generates a real time alarm signal if the driver violates the preprogrammed operating profile unique to the driver."The patent was filed on October 27, 2016 Application No. 15/336,110

Load-Date: May 1, 2019

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IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

THE PHELAN GROUP, LLC, *Plaintiff*, v. TOYOTA MOTOR CORPORATION, TOYOTA MOTOR NORTH AMERICA, INC., TOYOTA MOTOR ENGINEERING & MANUFACTURING NORTH AMERICA, INC., and TOYOTA MOTOR SALES, U.S.A., INC. *Defendants.*	§	CIVIL ACTION NO. 2:23-cv-93 **JURY TRIAL DEMANDED**

ORIGINAL COMPLAINT

Plaintiff The Phelan Group, LLC ("Plaintiff" or "Phelan Group"), by and through its attorneys, for its Original Complaint against Toyota Motor Corporation, Toyota Motor North America, Inc., Toyota Motor Engineering & Manufacturing North America, Inc., and Toyota Motor Sales, U.S.A., Inc. (collectively, "Toyota" or "Defendants"), and demanding trial by jury, hereby alleges as follows:

I. NATURE OF THE ACTION

1. This is a civil action for patent infringement, arising under the patent laws of the United States, 35 U.S.C. § 1, *et seq*.

2. Defendants design, manufacture, provide, use, sell, offer for sale, import, and/or distribute vehicles and components thereof in the State of Texas and this District that infringe the Patents-in-Suit (as defined below), induce others to commit acts of patent infringement in the State of Texas and this District, and/or contribute to infringement by others in the State of Texas and this District.

3. Phelan Group seeks past and future damages and prejudgment and post-judgment interest for Defendants' infringement of the Patents-in-Suit.

II. PARTIES

4. Phelan Group is a limited liability company organized and existing under the laws of the State of New Mexico.

5. On information and belief, Defendant Toyota Motor Corporation ("TMC") is a Japanese corporation headquartered at 1 Toyota-Cho, Toyota City, Aichi Prefecture 471-8571, Japan. Toyota Motor Corporation does business itself, or through its subsidiaries, affiliates, and agents, in the State of Texas and this District.

6. Defendant Toyota Motor Corporation may be served with process by serving the Texas Secretary of State, James E. Rudder Building, 1019 Brazos Street, Austin, Texas 78701, as its agent for service because it engages in business in Texas but has not designated or maintained a resident agent for service of process in Texas as required by statute. This action arises out of that business.

7. On information and belief, Defendant Toyota Motor North America, Inc. ("TMNA") is a corporation organized and existing under the laws of the State of California with its principal place of business in this District at 6565 Headquarters Dr., W1-3C, Plano, TX 75024. TMNA may be served through its registered agent C T Corporation System, 1999 Bryan Street, Ste. 900, Dallas, TX 75201. On information and belief, TMNA is registered to do business in the State of Texas and has been since at least June 5, 2014.

8. On information and belief, TMNA is a wholly owned subsidiary of TMC and is responsible for, *inter alia*, all operations of TMC, including research and development, importing, making, manufacturing, marketing, distributing, offering for sale, and selling automotive vehicles and components from Toyota-managed brands in the United States. On information and belief,

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TMNA works in conjunction with Toyota Financial Services, which is also headquartered in Plano, Texas.

9. On information and belief, Defendant Toyota Motor Engineering & Manufacturing North America, Inc. ("TMEM") is a corporation organized under the laws of the State of Kentucky with its principal place of business in this District at 6565 Headquarters Drive W1-3C, Plano, Texas 75024. TMEM may be served through its registered agent C T Corporation System, 1999 Bryan Street, Ste. 900, Dallas, TX 75201. On information and belief, TMNA is registered to do business in the State of Texas and has been since at least April 11, 2005.

10. On information and belief, TMEM is a wholly owned subsidiary of TMC and is responsible for, *inter alia*, research and development and manufacturing of automotive vehicles and components from Toyota-managed brands in the United States.

11. On information and belief, Defendant Toyota Motor Sales, U.S.A., Inc. ("TMS") is a corporation organized and existing under the laws of the State of California with is principal place of business in this District at 6565 Headquarters Drive W1-3C, Plano, Texas 75024. TMS may be served through its registered agent C T Corporation System, 1999 Bryan Street, Ste. 900, Dallas, TX 75201. On information and belief, TMS is registered to do business in the State of Texas and has been since at least April 5, 1974.

12. On information and belief, TMS is a wholly owned subsidiary of TMC and is responsible for, *inter alia*, sales, marketing, and distribution of automotive vehicles and components from Toyota-managed brands in the United States.

13. On information and belief, Toyota maintains dealerships throughout this District as its regular and established places of business, at which Toyota has committed acts of infringement and placed the Accused Products and Methods into the stream of commerce, including, at least:

Shapen Toyota, Robbins Toyota, Toyota of Mt. Pleasant, Toyota of Paris, Toyota of Longview, Palestine Toyota, Loving Toyota, Silsbee Toyota, Kinsel Toyota, and Toyota of Plano.

III. JURISDICTION AND VENUE

14. Because this action arises under the Patent Laws of the United States, in particular 35 U.S.C. §271 *et seq.*, this Court has jurisdiction over the subject matter of this action under 28 U.S.C. §1331 and 1338(a).

15. TMC is subject to jurisdiction in the United States, and specifically in this District, under Fed. R. Civ. P. 4(k)(2). TMC has contacts with the United States that include, *inter alia*, advertising, offering to sell, selling, and/or importing its vehicles and components thereof throughout the United States, including in this District and the patent infringement claims asserted herein arise directly from TMC's conduct and continuous and systematic activity in the State of Texas and this District.

16. This Court also has personal jurisdiction over TMNA, TMEM, and TMS because, among other things, (i) TMNA, TMEM, and TMS each maintain a regular and established place of business in the State of Texas and in this District; (ii) TMNA, TMEM, and TMS each employ employees and sells products and services to customers in the State of Texas and in this District; and (iii) the patent infringement claims arise directly from TMNA's, TMEM's, and TMS's conduct and continuous and systematic activity in the State of Texas and this District.

17. This Court has general and/or specific personal jurisdiction over all of the Defendants in that they have, directly or through agents and/or intermediaries, committed acts within the State of Texas and this District giving rise to this action and/or have established minimum contacts with the State of Texas and this District such that the exercise of jurisdiction would not offend traditional notions of fair play and substantial justice.

18. Upon information and belief, Defendants directly and/or through their agents and/or intermediaries make, use, design, manufacture, distribute, import, offer for sale, sell, and/or advertise their vehicles and components and affiliated services thereof in the State of Texas and this District.

19. Further, on information and belief, Defendants have placed, and continue to place, infringing vehicles and components thereof into the stream of commerce, through an established distribution channel, with the knowledge and/or understanding that such vehicles and components thereof are sold in this United States, including in the State of Texas and specifically in this District.

20. Defendants transact substantial business with entities and individuals in the State of Texas and in this District.

21. Defendants have committed acts of patent infringement within the State of Texas and this District.

22. On information and belief, Defendants derive, and have derived, substantial revenue from their infringing activity occurring in the State of Texas and within this District and/or should reasonably expect their actions to have consequences in this State of Texas and this District.

23. Venue is proper in this District pursuant to 28 U.S.C. §§ 1331, 1338(a), 1391(b), (c), & (d), and 1400(b) because Defendants either maintain a place of business in the District or are foreign corporations who may be sued in any judicial district. Moreover, a substantial part of the events and omissions giving rise to the claims at issue occurred in this District, including sale of the infringing vehicles and components thereof.

IV. BACKGROUND

PATENTS-IN-SUIT

24. Over the past ten years, the United States Patent and Trademark Office has awarded at least seven patents to Michael Phelan that have been assigned to Phelan Group, including the six Patents-in-Suit, thereby recognizing the many discoveries made by Michael Phelan relating to systems and methods for authenticating a driver and controlling and/or monitoring the usage of a vehicle.

25. Phelan Group is an operating company that has been actively developing and commercializing products under the brand name RideBeside. Phelan Group's products are based on the inventions disclosed in Phelan Group's patents and, among other things, are aimed toward driver safety and training. Initial product configurations are in road testing and are configured to help drivers form safer driving habits by providing real time feedback regarding driving decisions.

26. Phelan Group is the owner of all right, title, and interest in and to U.S. Patent No. 9,045,101 (the "'101 Patent," attached as **Exhibit 1**), entitled "Driver Authentication System and Method for Monitoring and Controlling Vehicle Usage," issued on June 2, 2015.

27. Phelan Group is the owner of all right, title, and interest in and to U.S. Patent No. 9,493,149 (the "'149 Patent," attached as **Exhibit 2**), entitled "Driver Authentication System and Method for Monitoring and Controlling Vehicle Usage," issued November 15, 2016.

28. Phelan Group is the owner of all right, title, and interest in and to U.S. Patent No. 9,908,508 (the "'508 Patent," attached as **Exhibit 3**), entitled "Driver Authentication System and Method for Monitoring and Controlling Vehicle Usage," issued on March 6, 2018.

29. Phelan Group is the owner of all right, title, and interest in and to U.S. Patent No. 10,259,465 (the "'465 Patent," attached as **Exhibit 4**), entitled "Driver Authentication System and Method for Monitoring and Controlling Vehicle Usage," issued on April 16, 2019.

30. Phelan Group is the owner of all right, title, and interest in and to U.S. Patent No. 10,259,470 (the "'470 Patent," attached as **Exhibit 5**), entitled "Driver Authentication System and Method for Monitoring and Controlling Vehicle Usage," issued on April 16, 2019.

31. Phelan Group is the owner of all right, title, and interest in and to U.S. Patent No. 11,352,020 (the "'020 Patent," attached as **Exhibit 6**), entitled "Driver Authentication System and Method for Monitoring and Controlling Vehicle Usage," issued on June 7, 2022.

32. Together, the foregoing patents are referred to herein as the "Patents-in-Suit." Phelan Group is the assignee of the Patents-in-Suit and has all rights to sue for infringement and collect past and future damages for the infringement thereof.

DEFENDANTS' ACTS

33. Defendants make, use, sell, offer for sale, distribute, and/or import vehicles and components of vehicles that have systems and methods for driver authentication and monitoring and controlling vehicle usage as either a standard and/or optional feature, including (but not limited to) Toyota Safety Sense and Toyota Connected Services. These vehicles include (but are not limited to) the 2021 Toyota Camry LE Upgrade, SE Upgrade, XLE, XSE. The Toyota vehicles that come equipped with, for example, Toyota Safety Sense and Toyota Connected Services utilize, without authorization or license, the inventions disclosed in the Patents-in-Suit. The Accused Products and Methods in this case encompass all Toyota vehicles (model year 2015-present) with Toyota Safety Sense and Toyota Connected Services, as well as all other advanced driver assistance systems ("ADAS") and driver authentication systems that operate in a materially similar manner.

34. By way of illustration only, the 2021 Toyota Camry (LE Upgrade, SE Upgrade, XLE, XSE) equipped with Toyota Safety Sense and Toyota Connected Services meets each and

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every element of one or more claims of the Patents-in-Suit, including at least claim 1 of each of the Patents-in-Suit.

35. The 2021 Toyota Camry equipped with Toyota Safety Sense and Toyota Connected Services includes a suite of systems, features, and/or technology for driver authentication, active safety technologies and ADAS designed to help address accident protection, including, *inter alia*, preventing or mitigating collisions and enhancing safe driving, data recordation including time and speed, alarm generation, specified operational parameters, and operational control of the vehicle including when operational parameters are violated.

36. On information and belief, Toyota Safety Sense and Toyota Connected Services available in other Toyota models (and vehicles of other model years) function in materially the same manner, and so those vehicles also infringe each of the Patents-in-Suit.

37. Toyota Connected Services, including by way of example the Toyota App and Remote Connect, provides driver authentication and monitoring and controlling of usage of Toyota vehicles, including as shown below.

38. Toyota employs Toyota Remote Connect as an authorization method. Remote Connect authorizes one or more vehicle users and lets an authorized user(s) control select features of a Toyota vehicle, including the 2021 Toyota Camery (LE Upgrade, SE Upgrade, XLE, XSE), using a key fob or smartphone with the Toyota App.[1] Remote Connect also works with certain smartwatches, Google Assistant, and/or Amazon Alexa.[2]

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[1] *See, e.g.*, https://toyotaaudioandconnectedservicessupport.com/toyota/feature/Remote%20Connect/a50de880-bf4a-11ec-ad43-55524ad29131?model=Camry&year=2021.

[2] *See, e.g.*, https://www.toyota.com/content/dam/toyota/brochures/pdf/connectedservices/Remote_Connect_CFA.pdf; https://evto.ca/what-is-toyota-remote-connect/;

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39. Digital Key technology allows a user to access (e.g., unlock, lock, start) a Toyota vehicle through the Toyota App, which authenticates an encryption key before performing a vehicle function (e.g., unlock, lock, start).[3] The Toyota App permits use of facial recognition or fingerprint identification to log into the app.[4]

40. With Remote Connect, authorized users (including a primary driver and/or [an] authorized remote driver(s)) can control select features of a Toyota vehicle, including locking and unlocking doors, starting the vehicle, finding the parked vehicle, monitoring guest drivers, and viewing vehicle status notification.[5]

41. Remote Connect includes, *inter alia*, a Guest Driver Setting, which allows a user to define driving limits for guest drivers (such as valets, kids, etc.), including at least speed limit, curfew, maximum miles limit, area limit or distance limit from set location, maximum time elapsed or total time limit, and ignition/vehicle-on.[6] The Guest Driver Setting of Remote Connect provides Guest Driver Alerts, which notifies the primary driver with push notification alerts if a defined driving limit for the guest driver has been violated.[7]

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https://toyotaaudioandconnectedservicessupport.com/toyota/feature/Remote%20Connect/a4f41ef0-bf4a-11ec-ad43-55524ad29131?model=Camry&year=2021.

[3] *See* https://www.toyota.com/privacyvts/.

[4] *See* https://support.toyota.com/s/article/Can-I-use-Facial-Reco-10521?language=en_US.

[5] *See, e.g.*, https://toyotaaudioandconnectedservicessupport.com/toyota/feature/Remote%20Connect/a65f47b0-bf4a-11ec-ad43-55524ad29131?model=Camry&year=2021.

[6] *See, e.g.*, https://support.toyota.com/s/article/What-is-the-Guest-Dri-10222?language=en_US; https://toyotaaudioandconnectedservicessupport.com/toyota/feature/Remote%20Connect/a8e444e0-bf4a-11ec-ad43-55524ad29131?model=Camry&year=2021.

[7] *See, e.g.*, https://toyotaaudioandconnectedservicessupport.com/toyota/feature/Remote%20Connect/a8fa8c00-bf4a-11ec-ad43-55524ad29131?model=Camry&year=2021.

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What is the Guest Driver Settings in the Toyota app?

Guest Driver Settings allows you to pre-set the following conditions and notify the primary driver with push notification alerts if something has been violated.

- **Speed Limit**: Set maximum speed limit in miles per hour for each ignition cycle.
- **Curfew**: Set start and end times for days of the week. Notifications are sent after the curfew has passed and any time the ignition is turned on between the start and end time.
- **Maximum Miles** Driven Limit: Set maximum miles to be driven per day.
- **Distance Limit from Set Location**: Set distance the vehicle is allowed to be driven from a specific location.
- **Maximum Time Elapsed Limit**: Set an amount of time the vehicle is allowed to be driven.
- **Vehicle-On**: Receive a notification every time the vehicle is turned on

42. Toyota Safety Sense provides monitoring and operational control of Toyota vehicles, including as shown below.

43. For example, Toyota Safety Sense™ 2.5+ includes various advanced driver assistance systems (ADAS), components, and features, including (but not limited to) Pre-Collison System with Pedestrian Detection, Dynamic Radar Cruise Control or Full-Speed Range Dynamic Radar Cruise Control, Lane Departure Alert with Steering Assist, Road Sign Assist, and/or Lane Tracing Assist.[8]

[8] https://www.youtube.com/watch?v=tdOJ8wa4YdI.

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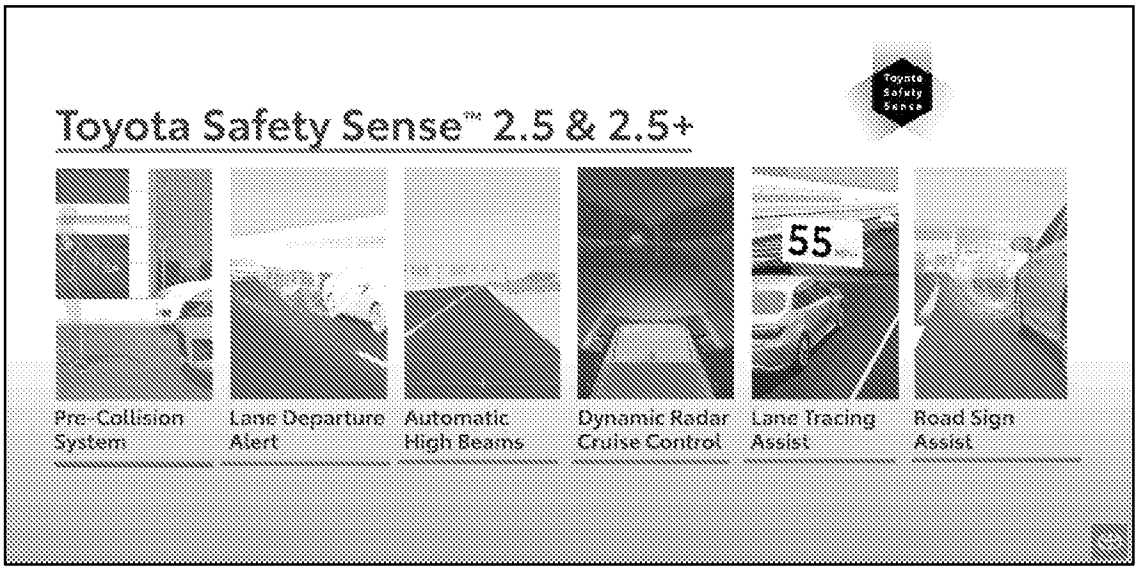

44. Pre-Collison System with Pedestrian Detection "is designed to help detect a vehicle or a pedestrian" and "provide an audio/visual alert . . . of a possible collision under certain circumstances" and, if the driver does not react, "the system is designed to automatically brake."[9] The Dynamic Radar Cruise Control or Full-Speed Range Dynamic Radar Cruise Control uses "vehicle-to-vehicle distance control [to help] maintain a preset distance from the vehicle ahead."[10] Lane Tracing Assist "uses the lines on the road and/or preceding vehicles to help keep the vehicle centered in its lane."[11] Lane Departure Alert with Steering Assist "is designed to issue an audio/visual lane departure warning if an inadvertent lane departure is detected" and refine the steering of a driver.[12] Road Sign Assist "is designed to detect speed limit signs, stop signs, Do Not Enter signs and yield signs, and display them on the Multi-Information Display (MID)."[13]

[9] *See* https://www.buyatoyota.com/home/vehicles/camry/2021/index.page.
[10] *See id.*
[11] *See id.*
[12] *See* https://www.toyota.com/safety-sense/.
[13] *See* https://www.buyatoyota.com/home/vehicles/camry/2021/index.page.

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45. On information and belief, Toyota vehicles equipped with Toyota Safety Sense and Toyota Connected Services, including the 2021 Camry, use, store, record, and secure vehicle data, including (but not limited to) speed and location information.[14]

46. On information and belief, Toyota (and its customers) deploy the Accused Products and Methods on networks in combination with other products. The specific code portions and modules directed to the infringing functionality will be identified from those systems as they are made available for inspection and review by Phelan Group.

47. On information of belief, Toyota also implements contractual protections in the form of license and use restrictions with its customers to preclude the unauthorized reproduction, distribution, and modification of its software.

48. Moreover, on information and belief, Toyota implements technical precautions to attempt to thwart customers who would circumvent the intended operation of Toyota's products.

49. Phelan Group has not obtained discovery about Toyota's infringement and the Court has not construed the meaning of any claims or terms in the Patents-in-Suit. The factual allegations provided in this Complaint are illustrative and without prejudice to Phelan Group's final infringement contentions. Further, in providing these allegations, Phelan Group is not implying any particular claim construction or claim scope.

I. NOTICE RECEIVED BY TOYOTA

50. Toyota has received actual and/or constructive knowledge of the Patents-in-Suit and the infringing conduct by way of Toyota's own prosecution activities.

[14] *See, e.g.*, https://www.toyota.com/privacyvts/images/doc/privacy-portal.pdf; https://www.m-sedan.com/event_data_recorder-5771.html; https://www.toyota.com/owners/resources/warranty-owners-manuals.camry.2021.

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51. Specifically, Toyota's Patent Nos. 8,958,929 and 9,440,660 cite to Phelan Group's U.S. Patent No. 8,417,415.

52. Toyota's file history for Patent Application No. 15/196,757, and Patent Nos. 10,493,957, 10,414,275, and 10,860,025 cite to Phelan Group's U.S. Patent No. 9,493,149 and/or the application that issued as the '149 Patent (Pub. No. 2014/0358376).

53. In several of the foregoing instances, Toyota identified Phelan Group's patent or application as material prior art to Toyota's subsequent claimed inventions.

54. In other instances, the Examiner identified Phelan Group's patent or application as material prior art to Toyota's subsequent claimed inventions.

55. As part of its own patent applications, Toyota learned of the '149 Patent no later than August 2018. On information and belief, while investigating Phelan Group's patents and/or applications, for purpose of its own patent application, Toyota also learned of the '101 Patent no later than June 2015, the '508 Patent no later than March 2018, the '465 Patent no later than April 2019, the '470 Patent no later than April 2019, and the '020 Patent no later than June 2022.

56. In the alternative, Toyota learned of each of the Patents-in-Suit no later than the date Phelan Group filed this Complaint.

V. COUNTS OF PATENT INFRINGEMENT

COUNT ONE
INFRINGEMENT OF U.S. PATENT NO. 9,045,101

57. Phelan Group incorporates by reference its allegations in all the preceding paragraphs of this Complaint as if fully restated in this paragraph.

58. Phelan Group is the assignee and owner of all right, title, and interest to the '101 Patent. Phelan Group has the legal right to enforce the patent, sue for infringement, and seek equitable relief and damages.

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59. On information and belief, Toyota, without authorization or license, has been and is presently directly infringing one or more claims of the '101 Patent, including at least claim 1, under 35 U.S.C. § 271(a), either literally or under the doctrine of equivalents, by making, using (including for testing purposes), offering for sale, selling in the United States, or importing into the United States the Accused Products and Methods.

60. Toyota has been aware of the '101 Patent since June 2015, and thereafter aware of its infringement of the '101 Patent, or, alternatively, no later than the date this Complaint was served has been aware of the '101 Patent and its infringement of the '101 Patent.

61. On information and belief, at least since the date upon which Toyota learned of the '101 Patent and the Accused Products and Methods were first made, used, offered for sale, or sold in the United States or imported into the United States, Toyota, without authorization or license, has been and is presently indirectly infringing one or more claims of the '101 Patent, including at least claim 1 of the '101 Patent, under 35 U.S.C. § 271(b), (c), and/or (f).

62. On information and belief, Toyota has been and is presently actively inducing infringement of the '101 Patent, including at least claim 1, under 35 U.S.C. § 271(b). Such inducement includes, without limitation, with specific intent to encourage infringement, knowingly and actively inducing, directing, causing, and encouraging others, including but not limited to, its partners, resellers, distributors, customers, and/or other end users, to make, use, sell, and/or offer to sell in the United States and/or import into the United States the Accused Products and Methods. Toyota induces these third parties to directly infringe the '101 Patent because Toyota's affirmative acts of making, selling, and offering to sell its vehicles and services, or components thereof, cause the Accused Products and Methods to be used in a manner that infringes the '101 Patent. Toyota further induces these third parties to directly infringe the '101 Patent by

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providing guidance, instruction, manuals, advertisements, marketing materials, and technical assistance relating to installation, set up, maintenance, and use and/or operation of the Accused Products and Methods in their normal and customary way to infringe the '101 Patent.

63. On information and belief, Toyota has been and is presently indirectly infringing the '101 Patent, including at least claim 1, under 35 U.S.C. § 271(c) and/or (f), by contributing to infringement of the '101 Patent by others, such as partners, resellers, distributors, customers, and/or other end users, under 35 U.S.C. § 271(c) and/or (f). Toyota has made, offered to sell, and/or sells in the United States and/or imported into the United States, the Accused Products and Methods, which are a material part of the claimed invention of the '101 Patent. Toyota knows that the Accused Products and Methods and/or components thereof (alone or in combination), which when installed in a vehicle according to their natural and intended purpose, are especially made or especially adapted for use in an infringement of the '101 Patent, and are not staple articles or commodities of commerce suitable for substantial noninfringing use.

64. At least since the date upon which Toyota learned of the '101 Patent and its infringement of the '101 Patent, Toyota has willfully infringed the '101 Patent by deliberately or intentionally engaging in acts of infringement on an ongoing basis with knowledge of the '101 Patent.

65. As a result of Toyota's infringement of the '101 Patent, Phelan Group has suffered monetary damages, and is entitled to an award of damages adequate to compensate it for such infringement under 35 U.S.C. § 284, but in no event, less than a reasonable royalty.

COUNT TWO
INFRINGEMENT OF U.S. PATENT NO. 9,493,149

66. Phelan Group incorporates by reference its allegations in all the preceding paragraphs of this Complaint as if fully restated in this paragraph.

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67. Phelan Group is the assignee and owner of all right, title, and interest to the '149 Patent. Phelan Group has the legal right to enforce the patent, sue for infringement, and seek equitable relief and damages.

68. On information and belief, Toyota, without authorization or license, has been and is presently directly infringing one or more claims of the '149 Patent, including at least claim 1, under 35 U.S.C. § 271(a), either literally or under the doctrine of equivalents, by making, using (including for testing purposes), offering for sale, selling in the United States, or importing into the United States the Accused Products and Methods.

69. Toyota has been aware of the '149 Patent since August 2018, and thereafter aware of its infringement of the '149 Patent, or, alternatively, no later than the date this Complaint was served has been aware of the '149 Patent and its infringement of the '149 Patent.

70. On information and belief, at least since the date upon which Toyota learned of the '149 Patent and the Accused Products and Methods were first made, used, offered for sale, or sold in the United States or imported into the United States, Toyota, without authorization or license, has been and is presently indirectly infringing one or more claims of the '149 Patent, including at least claim 1 of the '149 Patent, under 35 U.S.C. § 271(b), (c), and/or (f).

71. On information and belief, Toyota has been and is presently actively inducing infringement of the '149 Patent, including at least claim 1, under 35 U.S.C. § 271(b). Such inducement includes, without limitation, with specific intent to encourage infringement, knowingly and actively inducing, directing, causing, and encouraging others, including but not limited to, its partners, resellers, distributors, customers, and/or other end users, to make, use, sell, and/or offer to sell in the United States and/or import into the United States the Accused Products and Methods. Toyota induces these third parties to directly infringe the '149 Patent because

Toyota's affirmative acts of making, selling, and offering to sell its vehicles and services, or components thereof, cause the Accused Products and Methods to be used in a manner that infringes the '149 Patent. Toyota further induces these third parties to directly infringe the '149 Patent by providing guidance, instruction, manuals, advertisements, marketing materials, and technical assistance relating to installation, set up, maintenance, and use and/or operation of the Accused Products and Methods in their normal and customary way to infringe the '149 Patent.

72. On information and belief, Toyota has been and is presently indirectly infringing the '149 Patent, including at least claim 1, under 35 U.S.C. § 271(c) and/or (f), by contributing to infringement of the '149 Patent by others, such as partners, resellers, distributors, customers, and/or other end users, under 35 U.S.C. § 271(c) and/or (f). Toyota has made, offered to sell, and/or sells in the United States and/or imported into the United States, the Accused Products and Methods, which are a material part of the claimed invention of the '149 Patent. Toyota knows that the Accused Products and Methods and/or components thereof (alone or in combination), which when installed in a vehicle according to their natural and intended purpose, are especially made or especially adapted for use in an infringement of the '149 Patent, and are not staple articles or commodities of commerce suitable for substantial noninfringing use.

73. At least since the date upon which Toyota learned of the '149 Patent and its infringement of the '149 Patent, Toyota has willfully infringed the '149 Patent by deliberately or intentionally engaging in acts of infringement on an ongoing basis with knowledge of the '149 Patent.

74. As a result of Toyota's infringement of the '149 Patent, Phelan Group has suffered monetary damages, and is entitled to an award of damages adequate to compensate it for such infringement under 35 U.S.C. § 284, but in no event, less than a reasonable royalty.

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COUNT THREE
INFRINGEMENT OF U.S. PATENT NO. 9,908,508

75. Phelan Group incorporates by reference its allegations in all the preceding paragraphs of this Complaint as if fully restated in this paragraph.

76. Phelan Group is the assignee and owner of all right, title, and interest to the '508 Patent. Phelan Group has the legal right to enforce the patent, sue for infringement, and seek equitable relief and damages.

77. On information and belief, Toyota, without authorization or license, has been and is presently directly infringing one or more claims of the '508 Patent, including at least claim 1, under 35 U.S.C. § 271(a), either literally or under the doctrine of equivalents, by making, using (including for testing purposes), offering for sale, selling in the United States, or importing into the United States the Accused Products and Methods.

78. Toyota has been aware of the '508 Patent since March 2018, and thereafter aware of its infringement of the '508 Patent, or, alternatively, no later than the date this Complaint was served has been aware of the '508 Patent and its infringement of the '508 Patent.

79. On information and belief, at least since the date upon which Toyota learned of the '508 Patent and the Accused Products and Methods were first made, used, offered for sale, or sold in the United States or imported into the United States, Toyota, without authorization or license, has been and is presently indirectly infringing one or more claims of the '508 Patent, including at least claim 1 of the '508 Patent, under 35 U.S.C. § 271(b), (c), and/or (f).

80. On information and belief, Toyota has been and is presently actively inducing infringement of the '508 Patent, including at least claim 1, under 35 U.S.C. § 271(b). Such inducement includes, without limitation, with specific intent to encourage infringement, knowingly and actively inducing, directing, causing, and encouraging others, including but not

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limited to, its partners, resellers, distributors, customers, and/or other end users, to make, use, sell, and/or offer to sell in the United States and/or import into the United States the Accused Products and Methods. Toyota induces these third parties to directly infringe the '508 Patent because Toyota's affirmative acts of making, selling, and offering to sell its vehicles and services, or components thereof, cause the Accused Products and Methods to be used in a manner that infringes the '508 Patent. Toyota further induces these third parties to directly infringe the '508 Patent by providing guidance, instruction, manuals, advertisements, marketing materials, and technical assistance relating to installation, set up, maintenance, and use and/or operation of the Accused Products and Methods in their normal and customary way to infringe the '508 Patent.

81. On information and belief, Toyota has been and is presently indirectly infringing the '508 Patent, including at least claim 1, under 35 U.S.C. § 271(c) and/or (f), by contributing to infringement of the '508 Patent by others, such as partners, resellers, distributors, customers, and/or other end users, under 35 U.S.C. § 271(c) and/or (f). Toyota has made, offered to sell, and/or sells in the United States and/or imported into the United States, the Accused Products and Methods, which are a material part of the claimed invention of the '508 Patent. Toyota knows that the Accused Products and Methods and/or components thereof (alone or in combination), which when installed in a vehicle according to their natural and intended purpose, are especially made or especially adapted for use in an infringement of the '508 Patent, and are not staple articles or commodities of commerce suitable for substantial noninfringing use.

82. At least since the date upon which Toyota learned of the '508 Patent and its infringement of the '508 Patent, Toyota has willfully infringed the '508 Patent by deliberately or intentionally engaging in acts of infringement on an ongoing basis with knowledge of the '508 Patent.

83. As a result of Toyota's infringement of the '508 Patent, Phelan Group has suffered monetary damages, and is entitled to an award of damages adequate to compensate it for such infringement under 35 U.S.C. § 284, but in no event, less than a reasonable royalty.

COUNT FOUR
INFRINGEMENT OF U.S. PATENT NO. 10,259,465

84. Phelan Group incorporates by reference its allegations in all the preceding paragraphs of this Complaint as if fully restated in this paragraph.

85. Phelan Group is the assignee and owner of all right, title, and interest to the '465 Patent. Phelan Group has the legal right to enforce the patent, sue for infringement, and seek equitable relief and damages.

86. On information and belief, Toyota, without authorization or license, has been and is presently directly infringing one or more claims of the '465 Patent, including at least claim 1, under 35 U.S.C. § 271(a), either literally or under the doctrine of equivalents, by making, using (including for testing purposes), offering for sale, selling in the United States, or importing into the United States the Accused Products and Methods.

87. Toyota has been aware of the '465 Patent since April 2019, and thereafter aware of its infringement of the '465 Patent, or, alternatively, no later than the date this Complaint was served has been aware of the '465 Patent and its infringement of the '465 Patent.

88. On information and belief, at least since the date upon which Toyota learned of the '465 Patent and the Accused Products and Methods were first made, used, offered for sale, or sold in the United States or imported into the United States, Toyota, without authorization or license, has been and is presently indirectly infringing one or more claims of the '465 Patent, including at least claim 1 of the '465 Patent, under 35 U.S.C. § 271(b), (c), and/or (f).

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89. On information and belief, Toyota has been and is presently actively inducing infringement of the '465 Patent, including at least claim 1, under 35 U.S.C. § 271(b). Such inducement includes, without limitation, with specific intent to encourage infringement, knowingly and actively inducing, directing, causing, and encouraging others, including but not limited to, its partners, resellers, distributors, customers, and/or other end users, to make, use, sell, and/or offer to sell in the United States and/or import into the United States the Accused Products and Methods. Toyota induces these third parties to directly infringe the '465 Patent because Toyota's affirmative acts of making, selling, and offering to sell its vehicles and services, or components thereof, cause the Accused Products and Methods to be used in a manner that infringes the '465 Patent. Toyota further induces these third parties to directly infringe the '465 Patent by providing guidance, instruction, manuals, advertisements, marketing materials, and technical assistance relating to installation, set up, maintenance, and use and/or operation of the Accused Products and Methods in their normal and customary way to infringe the '465 Patent.

90. On information and belief, Toyota has been and is presently indirectly infringing the '465 Patent, including at least claim 1, under 35 U.S.C. § 271(c) and/or (f), by contributing to infringement of the '465 Patent by others, such as partners, resellers, distributors, customers, and/or other end users, under 35 U.S.C. § 271(c) and/or (f). Toyota has made, offered to sell, and/or sells in the United States and/or imported into the United States, the Accused Products and Methods, which are a material part of the claimed invention of the '465 Patent. Toyota knows that the Accused Products and Methods and/or components thereof (alone or in combination), which when installed in a vehicle according to their natural and intended purpose, are especially made or especially adapted for use in an infringement of the '465 Patent, and are not staple articles or commodities of commerce suitable for substantial noninfringing use.

91. At least since the date upon which Toyota learned of the '465 Patent and its infringement of the '465 Patent, Toyota has willfully infringed the '465 Patent by deliberately or intentionally engaging in acts of infringement on an ongoing basis with knowledge of the '465 Patent.

92. As a result of Toyota's infringement of the '465 Patent, Phelan Group has suffered monetary damages, and is entitled to an award of damages adequate to compensate it for such infringement under 35 U.S.C. § 284, but in no event, less than a reasonable royalty.

COUNT FIVE
INFRINGEMENT OF U.S. PATENT NO. 10,259,470

93. Phelan Group incorporates by reference its allegations in all the preceding paragraphs of this Complaint as if fully restated in this paragraph.

94. Phelan Group is the assignee and owner of all right, title, and interest to the '470 Patent. Phelan Group has the legal right to enforce the patent, sue for infringement, and seek equitable relief and damages.

95. On information and belief, Toyota, without authorization or license, has been and is presently directly infringing one or more claims of the '470 Patent, including at least claim 1, under 35 U.S.C. § 271(a), either literally or under the doctrine of equivalents, by making, using (including for testing purposes), offering for sale, selling in the United States, or importing into the United States the Accused Products and Methods.

96. Toyota has been aware of the '470 Patent since April 2019, and thereafter aware of its infringement of the '470 Patent, or, alternatively, no later than the date this Complaint was served has been aware of the '470 Patent and its infringement of the '470 Patent.

97. On information and belief, at least since the date upon which Toyota learned of the '470 Patent and the Accused Products and Methods were first made, used, offered for sale, or sold

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in the United States or imported into the United States, Toyota, without authorization or license, has been and is presently indirectly infringing one or more claims of the '470 Patent, including at least claim 1 of the '470 Patent, under 35 U.S.C. § 271(b), (c), and/or (f).

98. On information and belief, Toyota has been and is presently actively inducing infringement of the '470 Patent, including at least claim 1, under 35 U.S.C. § 271(b). Such inducement includes, without limitation, with specific intent to encourage infringement, knowingly and actively inducing, directing, causing, and encouraging others, including but not limited to, its partners, resellers, distributors, customers, and/or other end users, to make, use, sell, and/or offer to sell in the United States and/or import into the United States the Accused Products and Methods. Toyota induces these third parties to directly infringe the '470 Patent because Toyota's affirmative acts of making, selling, and offering to sell its vehicles and services, or components thereof, cause the Accused Products and Methods to be used in a manner that infringes the '470 Patent. Toyota further induces these third parties to directly infringe the '470 Patent by providing guidance, instruction, manuals, advertisements, marketing materials, and technical assistance relating to installation, set up, maintenance, and use and/or operation of the Accused Products and Methods in their normal and customary way to infringe the '470 Patent.

99. On information and belief, Toyota has been and is presently indirectly infringing the '470 Patent, including at least claim 1, under 35 U.S.C. § 271(c) and/or (f), by contributing to infringement of the '470 Patent by others, such as partners, resellers, distributors, customers, and/or other end users, under 35 U.S.C. § 271(c) and/or (f). Toyota has made, offered to sell, and/or sells in the United States and/or imported into the United States, the Accused Products and Methods, which are a material part of the claimed invention of the '470 Patent. Toyota knows that the Accused Products and Methods and/or components thereof (alone or in combination), which

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when installed in a vehicle according to their natural and intended purpose, are especially made or especially adapted for use in an infringement of the '470 Patent, and are not staple articles or commodities of commerce suitable for substantial noninfringing use.

100. At least since the date upon which Toyota learned of the '470 Patent and its infringement of the '470 Patent, Toyota has willfully infringed the '470 Patent by deliberately or intentionally engaging in acts of infringement on an ongoing basis with knowledge of the '470 Patent.

101. As a result of Toyota's infringement of the '470 Patent, Phelan Group has suffered monetary damages, and is entitled to an award of damages adequate to compensate it for such infringement under 35 U.S.C. § 284, but in no event, less than a reasonable royalty.

COUNT SIX
INFRINGEMENT OF U.S. PATENT NO. 11,352,020

102. Phelan Group incorporates by reference its allegations in all the preceding paragraphs of this Complaint as if fully restated in this paragraph.

103. Phelan Group is the assignee and owner of all right, title, and interest to the '020 Patent. Phelan Group has the legal right to enforce the patent, sue for infringement, and seek equitable relief and damages.

104. On information and belief, Toyota, without authorization or license, has been and is presently directly infringing one or more claims of the '020 Patent, including at least claim 1, under 35 U.S.C. § 271(a), either literally or under the doctrine of equivalents, by making, using (including for testing purposes), offering for sale, selling in the United States, or importing into the United States the Accused Products and Methods.

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105. Toyota has been aware of the '020 Patent since June 2022, and thereafter aware of its infringement of the '020 Patent, or, alternatively, no later than the date this Complaint was served has been aware of the '020 Patent and its infringement of the '020 Patent.

106. On information and belief, at least since the date upon which Toyota learned of the '020 Patent and the Accused Products and Methods were first made, used, offered for sale, or sold in the United States or imported into the United States, Toyota, without authorization or license, has been and is presently indirectly infringing one or more claims of the '020 Patent, including at least claim 1 of the '020 Patent, under 35 U.S.C. § 271(b), (c), and/or (f).

107. On information and belief, Toyota has been and is presently actively inducing infringement of the '020 Patent, including at least claim 1, under 35 U.S.C. § 271(b). Such inducement includes, without limitation, with specific intent to encourage infringement, knowingly and actively inducing, directing, causing, and encouraging others, including but not limited to, its partners, resellers, distributors, customers, and/or other end users, to make, use, sell, and/or offer to sell in the United States and/or import into the United States the Accused Products and Methods. Toyota induces these third parties to directly infringe the '020 Patent because Toyota's affirmative acts of making, selling, and offering to sell its vehicles and services, or components thereof, cause the Accused Products and Methods to be used in a manner that infringes the '020 Patent. Toyota further induces these third parties to directly infringe the '020 Patent by providing guidance, instruction, manuals, advertisements, marketing materials, and technical assistance relating to installation, set up, maintenance, and use and/or operation of the Accused Products and Methods in their normal and customary way to infringe the '020 Patent.

108. On information and belief, Toyota has been and is presently indirectly infringing the '020 Patent, including at least claim 1, under 35 U.S.C. § 271(c) and/or (f), by contributing to

infringement of the '020 Patent by others, such as partners, resellers, distributors, customers, and/or other end users, under 35 U.S.C. § 271(c) and/or (f). Toyota has made, offered to sell, and/or sells in the United States and/or imported into the United States, the Accused Products and Methods, which are a material part of the claimed invention of the '020 Patent. Toyota knows that the Accused Products and Methods and/or components thereof (alone or in combination), which when installed in a vehicle according to their natural and intended purpose, are especially made or especially adapted for use in an infringement of the '020 Patent, and are not staple articles or commodities of commerce suitable for substantial noninfringing use.

109. At least since the date upon which Toyota learned of the '020 Patent and its infringement of the '020 Patent, Toyota has willfully infringed the '020 Patent by deliberately or intentionally engaging in acts of infringement on an ongoing basis with knowledge of the '020 Patent.

110. As a result of Toyota's infringement of the '020 Patent, Phelan Group has suffered monetary damages, and is entitled to an award of damages adequate to compensate it for such infringement under 35 U.S.C. § 284, but in no event, less than a reasonable royalty.

VI. JURY DEMAND

111. Phelan Group respectfully demands a trial by jury of all matters to which it is entitled to trial by jury, pursuant to FED. R. CIV. P. 38.

VII. PRAYER FOR RELIEF

WHEREFORE, Phelan Group respectfully requests that this Court enter judgment in its favor and grant the following relief against Defendants:

A. Judgment that Toyota infringed and continues to infringe one or more claims of each of the Patents-in-Suit;

B. Judgment that Toyota's infringement was and is willful;

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C. Award Phelan Group damages in an amount adequate to compensate Phelan Group for Toyota's infringement of the Patents-in-Suit, and in no event less than a reasonable royalty, together with prejudgment and post-judgment interest, and an ongoing royalty for continued infringement;

D. Award Phelan Group treble damages in light of Toyota's willful infringement;

E. Enter an order finding this to be an exceptional case and award Phelan Group its reasonable attorneys' fees under 35 U.S.C. § 285;

F. Award Phelan Group its costs of suit; and

G. Award Phelan Group such other relief as the Court deems just and proper under the circumstances.

DATED: March 7, 2023

Respectfully submitted,

/s/ Andrew DiNovo
Andrew G. DiNovo
Texas State Bar No. 00790594
adinovo@dinovoprice.com
Nicole E. Glauser
Texas State Bar No. 24050694
nglauser@dinovoprice.com
Adam G. Price
Texas State Bar No. 24027750
aprice@dinovoprice.com
DINOVO PRICE LLP
7000 N. MoPac Expressway, Suite 350
Austin, Texas 78731
Telephone: (512) 539-2626
Facsimile: (512) 539-2627

COUNSEL FOR PLAINTIFF
THE PHELAN GROUP, LLC

LexisNexis

User Name: Manuel Saldana
Date and Time: Friday, September 1, 2023 10:11:00AM EDT
Job Number: 204877659

Document (1)

1. *2:23cv94, The Phelan Group, Llc. V. Kia Corporation Et Al*

Client/Matter: -None-
Search Terms: number(2:23CV94)
Search Type: Natural Language
Narrowed by:

Content Type	Narrowed by
Dockets	Case Status: Open,Unknown,Closed

2:23cv94, The Phelan Group, Llc V. Kia Corporation Et Al

US District Court Docket

United States District Court, Texas Eastern

(Marshall)

This case was retrieved on 08/29/2023

Header

Case Number: 2:23cv94

Date Filed: 03/07/2023
Assigned To: District Judge Rodney Gilstrap
Referred To: Magistrate Judge Roy S. Payne
Nature of Suit: Patent (830)
Cause: Patent Infringement
Lead Docket: 2:23cv00092
Other Docket: None
Jurisdiction: Federal Question

Class Code: Open
Statute: 35:271
Jury Demand: Plaintiff
Demand Amount: $0
NOS Description: Patent

Participants

Litigants

The Phelan Group, LLC
Plaintiff

Kia Corporation
Defendant

Attorneys

Adam G Price
ATTORNEY TO BE NOTICED
DiNovo Price Ellwanger & Hardy LLP
7000 North Mopac Expressway Suite 350
Austin, TX 78731
USA
512/539-2626 Fax: 15125392627
Email:Aprice@dinovoprice.Com

Nicole E Glauser
ATTORNEY TO BE NOTICED
DiNovo Price Ellwanger & Hardy LLP
7000 North Mopac Expressway Suite 350
Austin, TX 78731
USA
512-539-2626 Fax: 512-539-2627
Email:Nglauser@dinovoprice.Com

Andrew Gerald DiNovo
ATTORNEY TO BE NOTICED
DiNovo Price Ellwanger & Hardy LLP
7000 North Mopac Expressway Suite 350
Austin, TX 78731
USA
512/539-2626 Fax: 15125392627
Email:Adinovo@dinovoprice.Com

Cason Garrett Cole
ATTORNEY TO BE NOTICED

Litigants	Attorneys
	O'Melveny & Myers LLP Tx 2501 N. Harwood St. 17th Floor Dallas, TX 75201 USA 972-360-1916 Email:Ccole@omm.Com Clarence Rowland ATTORNEY TO BE NOTICED O'Melveny & Myers LLP - LA 400 South Hope Street 18th Floor Los Angeles, CA 90071 USA 213.430.6000 Fax: 213.430.6407 Email:Crowland@omm.Com Nicholas J Whilt ATTORNEY TO BE NOTICED O'Melveny & Myers LLP - LA 400 South Hope Street 18th Floor Los Angeles, CA 90071 USA 213-430-6000 Fax: 213-430-6407 Email:Nwhilt@omm.Com Paige Hardy , I ATTORNEY TO BE NOTICED O'Melveny & Myers LLP 400 South Hope Street 18th Floor Los Angeles, CA 90071 USA 213-430-6000 Email:Phardy@omm.Com Ryan K Yagura ATTORNEY TO BE NOTICED O'Melveny & Myers LLP - LA 400 South Hope Street 18th Floor Los Angeles, CA 90071 USA 213/430-6189 Fax: 213-430-6407 Email:Ryagura@omm.Com
Kia America, Inc. **Defendant**	Cason Garrett Cole ATTORNEY TO BE NOTICED O'Melveny & Myers LLP Tx 2501 N. Harwood St. 17th Floor Dallas, TX 75201 USA 972-360-1916 Email:Ccole@omm.Com Clarence Rowland ATTORNEY TO BE NOTICED O'Melveny & Myers LLP - LA 400 South Hope Street 18th Floor Los Angeles, CA 90071 USA 213.430.6000 Fax: 213.430.6407 Email:Crowland@omm.Com Nicholas J Whilt ATTORNEY TO BE NOTICED O'Melveny & Myers LLP - LA

Mercedes EX1012
Page 562 of 1244

Litigants

Attorneys

400 South Hope Street 18th Floor
Los Angeles, CA 90071
USA
213-430-6000 Fax: 213-430-6407 Email:Nwhilt@omm.Com

Paige Hardy , I
ATTORNEY TO BE NOTICED
O'Melveny & Myers LLP
400 South Hope Street 18th Floor
Los Angeles, CA 90071
USA
213-430-6000 Email:Phardy@omm.Com

Ryan K Yagura
ATTORNEY TO BE NOTICED
O'Melveny & Myers LLP - LA
400 South Hope Street 18th Floor
Los Angeles, CA 90071
USA
213/430-6189 Fax: 213-430-6407
Email:Ryagura@omm.Com

Proceedings

#	Date	Proceeding Text	Source
1	03/07/2023	COMPLAINT against All Defendants (Filing fee $ 402 receipt number ATXEDC-9388902.), filed by Phelan Group, LLC. (Attachments: # 1 Civil Cover Sheet, # 2 Exhibit 1, # 3 Exhibit 2, # 4 Exhibit 3, # 5 Exhibit 4, # 6 Exhibit 5, # 7 Exhibit 6)(DiNovo, Andrew) (Entered: 03/07/2023)	
2	03/07/2023	DEMAND for Trial by Jury by Phelan Group, LLC. (DiNovo, Andrew) (Entered: 03/07/2023)	
3	03/07/2023	Notice of Filing of Patent/Trademark Form (AO 120). AO 120 mailed to the Director of the U.S. Patent and Trademark Office. (DiNovo, Andrew) (Entered: 03/07/2023)	
4	03/07/2023	NOTICE of Attorney Appearance by Nicole E Glauser on behalf of Phelan Group, LLC (Glauser, Nicole) (Entered: 03/07/2023)	
5	03/07/2023	NOTICE of Attorney Appearance by Adam G Price on behalf of Phelan Group, LLC (Price, Adam) (Entered: 03/07/2023)	
6	03/07/2023	CORPORATE DISCLOSURE STATEMENT filed by Phelan Group, LLC (DiNovo, Andrew) (Entered: 03/07/2023)	
	03/07/2023	Case Assigned to District Judge Rodney Gilstrap and Magistrate Judge Roy S. Payne. (nkl,) (Entered: 03/07/2023)	
	03/07/2023	In accordance with the provisions of 28 USC Section 636(c), you are hereby notified that a U.S. Magistrate Judge of this district court is available to conduct any or all proceedings in this case including a jury or non-jury trial and to order the entry of a final judgment. The form Consent to Proceed Before Magistrate Judge is available on our website. All signed consent forms, excluding pro se parties, should be filed electronically using the event Notice Regarding Consent to Proceed Before Magistrate Judge. (nkl,) (Entered: 03/07/2023)	
7	03/07/2023	SUMMONS Issued as to Kia America, Inc. c/o CT Corporation System, Kia Corporation c/o Texas Secretary of State. (Attachments: # 1 Summons(es))(nkl,) (Entered: 03/07/2023)	
8	03/13/2023	SUMMONS Returned Executed by The Phelan Group, LLC. Kia	

#	Date	Proceeding Text	Source
		Corporation served on 3/10/2023, answer due 3/31/2023. (DiNovo, Andrew) (Entered: 03/13/2023)	
9	03/13/2023	SUMMONS Returned Executed by The Phelan Group, LLC. Kia America, Inc. served on 3/9/2023, answer due 3/30/2023. (DiNovo, Andrew) (Entered: 03/13/2023)	
10	03/30/2023	NOTICE of Attorney Appearance by Ryan K Yagura on behalf of Kia America, Inc., Kia Corporation (Yagura, Ryan) (Entered: 03/30/2023)	
11	03/30/2023	Defendant's Unopposed First Application for Extension of Time to Answer Complaint re Kia Corporation.(Yagura, Ryan) (Entered: 03/30/2023)	
12	03/30/2023	Defendant's Unopposed First Application for Extension of Time to Answer Complaint re Kia America, Inc..(Yagura, Ryan) (Entered: 03/30/2023)	
	03/30/2023	Defendant's Unopposed FIRST Application for Extension of Time to Answer Complaint is granted pursuant to Local Rule CV-12 for Kia Corporation to 5/15/2023. 45 Days Granted for Deadline Extension.(ch,) (Entered: 03/30/2023)	
	03/30/2023	Defendant's Unopposed FIRST Application for Extension of Time to Answer Complaint is granted pursuant to Local Rule CV-12 for Kia America, Inc. to 5/14/2023. 45 Days Granted for Deadline Extension.(ch,) (Entered: 03/30/2023)	
13	04/10/2023	NOTICE of Attorney Appearance - Pro Hac Vice by Clarence Rowland on behalf of Kia America, Inc., Kia Corporation. Filing fee $ 100, receipt number ATXEDC-9444625. (Rowland, Clarence) (Entered: 04/10/2023)	
14	04/10/2023	NOTICE of Attorney Appearance - Pro Hac Vice by Nicholas J Whilt on behalf of Kia America, Inc., Kia Corporation. Filing fee $ 100, receipt number ATXEDC-9444641. (Whilt, Nicholas) (Entered: 04/10/2023)	
15	04/17/2023	CONSOLIDATION ORDER - The above-captioned cases are hereby ORDERED to be CONSOLIDATED for all pretrial issues with the LEAD CASE, Case No. 2:23-cv-00093. All parties are instructed to file any future filings in the LEAD CASE. Signed by District Judge Rodney Gilstrap on 4/17/2023. (ch,) (Entered: 04/18/2023)	
16	04/26/2023	***FILED IN ERROR***NOTICE of Attorney Appearance by Cason Garrett Cole on behalf of Kia America, Inc., Kia Corporation (Cole, Cason) Modified on 4/26/2023 (ch,). (Entered: 04/26/2023)	
	04/26/2023	***FILED IN ERROR. NEED TO FILE IN THE LEAD CASE. Document # 16, Notice of Appearance. PLEASE IGNORE.*** (ch,) (Entered: 04/26/2023)	

Patents

Number	Title	Issued	Class	Subclass
9,045,101	Driver authentication system and method for monitoring and controlling vehicle usage	06/02/2015	1	1
9,493,149	Driver authentication system and method for monitoring and controlling vehicle usage	11/15/2016	1	1
9,908,508	Driver authentication system and method for monitoring and controlling vehicle usage	03/06/2018	1	1
10,259,465	Driver authentication system and method for monitoring and controlling vehicle usage	04/16/2019	1	1
10,259,470	Driver authentication system and method for monitoring and controlling vehicle usage	04/16/2019	1	1
11,352,020	Driver authentication system and method for	06/07/2022	1	1

Number	Title	Issued	Class	Subclass
	monitoring and controlling vehicle usage			

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End of Document

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User Name: Manuel Saldana
Date and Time: Friday, September 1, 2023 10:13:00AM EDT
Job Number: 204877817

Document (1)

1. *2:23cv93 Phelan Group, Llc V. Toyota Motor Corporation Et Al*

Client/Matter: -None-
Search Terms: number(2:23CV93)
Search Type: Natural Language
Narrowed by:

Content Type	Narrowed by
Dockets	Case Status: Open,Unknown,Closed

2:23cv93, Phelan Group, Llc V. Toyota Motor Corporation Et Al

US District Court Docket

United States District Court, Texas Eastern

(Marshall)

This case was retrieved on 08/29/2023

Header

Case Number: 2:23cv93
Date Filed: 03/07/2023
Assigned To: District Judge Rodney Gilstrap
Referred To: Magistrate Judge Roy S. Payne
Nature of Suit: Patent (830)
Cause: Patent Infringement
Lead Docket: None
Other Docket: None
Jurisdiction: Federal Question

Class Code: Open
Statute: 35:271
Jury Demand: Both
Demand Amount: $0
NOS Description: Patent

Participants

Litigants

The Phelan Group, LLC
Plaintiff

Attorneys

Adam G Price
ATTORNEY TO BE NOTICED
DiNovo Price Ellwanger & Hardy LLP
7000 North Mopac Expressway Suite 350
Austin, TX 78731
USA
512/539-2626 Fax: 15125392627
Email:Aprice@dinovoprice.Com

Michael D. French
ATTORNEY TO BE NOTICED
DiNovo Price LLP
7000 N. Mopac Expressway Suite 350
Austin, TX 78731
USA
512-539-2618 Email:Mfrench@dinovoprice.Com

Nicole E Glauser
ATTORNEY TO BE NOTICED
DiNovo Price Ellwanger & Hardy LLP
7000 North Mopac Expressway Suite 350
Austin, TX 78731
USA
512-539-2626 Fax: 512-539-2627
Email:Nglauser@dinovoprice.Com

Andrew Gerald DiNovo
ATTORNEY TO BE NOTICED
DiNovo Price Ellwanger & Hardy LLP

Manuel Saldana

Litigants	Attorneys
	7000 North Mopac Expressway Suite 350 Austin, TX 78731 USA 512/539-2626 Fax: 15125392627 Email:Adinovo@dinovoprice.Com
Toyota Motor Corporation **Defendant**	Fadi N Kiblawi ATTORNEY TO BE NOTICED Sughrue Mion, PLLC - DC 2000 Pennsylvania Avenue Nw Washington, DC 20006 USA 202.293.7060 Fax: 202.293.7860 Email:Fkiblawi@sughrue.Com John Frank Rabena ATTORNEY TO BE NOTICED Sughrue Mion PLLC - DC 2100 Pennsylvania Ave Nw Suite 800 Washington, DC 20037 USA 202-293-7060 Fax: 202-293-7860 Email:Jrabena@sughrue.Com Michael Charles Smith ATTORNEY TO BE NOTICED Scheef & Stone, LLP - Marshall P O Box 1556 Marshall, TX 75671-1556 USA 903-938-8900 Email:Michael.Smith@solidcounsel.Com Tyler Del Rosario ATTORNEY TO BE NOTICED Sughrue Mion, PLLC - DC 2000 Pennsylvania Avenue Nw Washington, DC 20006 USA 202-293-7060 Fax: 202-293-7860 Email:Tdelrosario@sughrue.Com William H Mandir ATTORNEY TO BE NOTICED Sughrue Mion, PLLC - DC 2000 Pennsylvania Avenue Nw Washington, DC 20006 USA 202-293-7060 Fax: 202-293-7860 Email:Wmandir@sughrue.Com Yoshinari Kishimoto ATTORNEY TO BE NOTICED Sughrue Mion, PLLC - DC 2000 Pennsylvania Avenue Nw Washington, DC 20006 USA 202/293-7060 Fax: 202/293-7860 Email:Ykishimoto@sughrue.Com
Toyota Motor North America, Inc. **Defendant**	Fadi N Kiblawi ATTORNEY TO BE NOTICED

Litigants	Attorneys
	Sughrue Mion, PLLC - DC 2000 Pennsylvania Avenue Nw Washington, DC 20006 USA 202.293.7060 Fax: 202.293.7860 Email:Fkiblawi@sughrue.Com John Frank Rabena ATTORNEY TO BE NOTICED Sughrue Mion PLLC - DC 2100 Pennsylvania Ave Nw Suite 800 Washington, DC 20037 USA 202-293-7060 Fax: 202-293-7860 Email:Jrabena@sughrue.Com Michael Charles Smith ATTORNEY TO BE NOTICED Scheef & Stone, LLP - Marshall P O Box 1556 Marshall, TX 75671-1556 USA 903-938-8900 Email:Michael.Smith@solidcounsel.Com Tyler Del Rosario ATTORNEY TO BE NOTICED Sughrue Mion, PLLC - DC 2000 Pennsylvania Avenue Nw Washington, DC 20006 USA 202-293-7060 Fax: 202-293-7860 Email:Tdelrosario@sughrue.Com William H Mandir ATTORNEY TO BE NOTICED Sughrue Mion, PLLC - DC 2000 Pennsylvania Avenue Nw Washington, DC 20006 USA 202-293-7060 Fax: 202-293-7860 Email:Wmandir@sughrue.Com Yoshinari Kishimoto ATTORNEY TO BE NOTICED Sughrue Mion, PLLC - DC 2000 Pennsylvania Avenue Nw Washington, DC 20006 USA 202/293-7060 Fax: 202/293-7860 Email:Ykishimoto@sughrue.Com
Toyota Motor Engineering & Manufacturing North America, Inc. **Defendant**	Fadi N Kiblawi ATTORNEY TO BE NOTICED Sughrue Mion, PLLC - DC 2000 Pennsylvania Avenue Nw Washington, DC 20006 USA 202.293.7060 Fax: 202.293.7860 Email:Fkiblawi@sughrue.Com

Litigants	Attorneys
	John Frank Rabena ATTORNEY TO BE NOTICED Sughrue Mion PLLC - DC 2100 Pennsylvania Ave Nw Suite 800 Washington, DC 20037 USA 202-293-7060 Fax: 202-293-7860 Email:Jrabena@sughrue.Com Michael Charles Smith ATTORNEY TO BE NOTICED Scheef & Stone, LLP - Marshall P O Box 1556 Marshall, TX 75671-1556 USA 903-938-8900 Email:Michael.Smith@solidcounsel.Com Tyler Del Rosario ATTORNEY TO BE NOTICED Sughrue Mion, PLLC - DC 2000 Pennsylvania Avenue Nw Washington, DC 20006 USA 202-293-7060 Fax: 202-293-7860 Email:Tdelrosario@sughrue.Com William H Mandir ATTORNEY TO BE NOTICED Sughrue Mion, PLLC - DC 2000 Pennsylvania Avenue Nw Washington, DC 20006 USA 202-293-7060 Fax: 202-293-7860 Email:Wmandir@sughrue.Com Yoshinari Kishimoto ATTORNEY TO BE NOTICED Sughrue Mion, PLLC - DC 2000 Pennsylvania Avenue Nw Washington, DC 20006 USA 202/293-7060 Fax: 202/293-7860 Email:Ykishimoto@sughrue.Com
Toyota Motor Sales, U.S.A., Inc. **Defendant**	Fadi N Kiblawi ATTORNEY TO BE NOTICED Sughrue Mion, PLLC - DC 2000 Pennsylvania Avenue Nw Washington, DC 20006 USA 202.293.7060 Fax: 202.293.7860 Email:Fkiblawi@sughrue.Com John Frank Rabena ATTORNEY TO BE NOTICED Sughrue Mion PLLC - DC 2100 Pennsylvania Ave Nw Suite 800 Washington, DC 20037 USA 202-293-7060 Fax: 202-293-7860

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Litigants	Attorneys
	Email:Jrabena@sughrue.Com Michael Charles Smith ATTORNEY TO BE NOTICED Scheef & Stone, LLP - Marshall P O Box 1556 Marshall, TX 75671-1556 USA 903-938-8900 Email:Michael.Smith@solidcounsel.Com Tyler Del Rosario ATTORNEY TO BE NOTICED Sughrue Mion, PLLC - DC 2000 Pennsylvania Avenue Nw Washington, DC 20006 USA 202-293-7060 Fax: 202-293-7860 Email:Tdelrosario@sughrue.Com William H Mandir ATTORNEY TO BE NOTICED Sughrue Mion, PLLC - DC 2000 Pennsylvania Avenue Nw Washington, DC 20006 USA 202-293-7060 Fax: 202-293-7860 Email:Wmandir@sughrue.Com Yoshinari Kishimoto ATTORNEY TO BE NOTICED Sughrue Mion, PLLC - DC 2000 Pennsylvania Avenue Nw Washington, DC 20006 USA 202/293-7060 Fax: 202/293-7860 Email:Ykishimoto@sughrue.Com
Kia Corporation Consolidated from 2:23-cv-94 | **Consol Defendant**	Cason Garrett Cole ATTORNEY TO BE NOTICED O'Melveny & Myers LLP Tx 2501 N. Harwood St. 17th Floor Dallas, TX 75201 USA 972-360-1916 Email:Ccole@omm.Com Clarence Rowland PRO HAC VICE;ATTORNEY TO BE NOTICED O'Melveny & Myers LLP - LA 400 South Hope Street 18th Floor Los Angeles, CA 90071 USA 213.430.6000 Fax: 213.430.6407 Email:Crowland@omm.Com Nicholas J Whilt PRO HAC VICE;ATTORNEY TO BE NOTICED O'Melveny & Myers LLP - LA 400 South Hope Street 18th Floor Los Angeles, CA 90071 USA
Manuel Saldana	

Litigants	Attorneys
	213-430-6000 Fax: 213-430-6407 Email:Nwhilt@omm.Com Paige Hardy , I ATTORNEY TO BE NOTICED O'Melveny & Myers LLP 400 South Hope Street 18th Floor Los Angeles, CA 90071 USA 213-430-6000 Email:Phardy@omm.Com Ryan K Yagura PRO HAC VICE;ATTORNEY TO BE NOTICED O'Melveny & Myers LLP - LA 400 South Hope Street 18th Floor Los Angeles, CA 90071 USA 213/430-6189 Fax: 213-430-6407 Email:Ryagura@omm.Com
Kia America, Inc. Consolidated from 2:23-cv-94 | **Consol Defendant**	Cason Garrett Cole ATTORNEY TO BE NOTICED O'Melveny & Myers LLP Tx 2501 N. Harwood St. 17th Floor Dallas, TX 75201 USA 972-360-1916 Email:Ccole@omm.Com Clarence Rowland PRO HAC VICE;ATTORNEY TO BE NOTICED O'Melveny & Myers LLP - LA 400 South Hope Street 18th Floor Los Angeles, CA 90071 USA 213.430.6000 Fax: 213.430.6407 Email:Crowland@omm.Com Nicholas J Whilt PRO HAC VICE;ATTORNEY TO BE NOTICED O'Melveny & Myers LLP - LA 400 South Hope Street 18th Floor Los Angeles, CA 90071 USA 213-430-6000 Fax: 213-430-6407 Email:Nwhilt@omm.Com Paige Hardy , I ATTORNEY TO BE NOTICED O'Melveny & Myers LLP 400 South Hope Street 18th Floor Los Angeles, CA 90071 USA 213-430-6000 Email:Phardy@omm.Com Ryan K Yagura PRO HAC VICE;ATTORNEY TO BE NOTICED O'Melveny & Myers LLP - LA 400 South Hope Street 18th Floor Los Angeles, CA 90071 USA 213/430-6189 Fax: 213-430-6407 Email:Ryagura@omm.Com

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Litigants	Attorneys
Kia Corporation Consolidated from 2:23-cv-94 | **Counter Claimant**	Cason Garrett Cole ATTORNEY TO BE NOTICED O'Melveny & Myers LLP Tx 2501 N. Harwood St. 17th Floor Dallas, TX 75201 USA 972-360-1916 Email:Ccole@omm.Com Clarence Rowland ATTORNEY TO BE NOTICED O'Melveny & Myers LLP - LA 400 South Hope Street 18th Floor Los Angeles, CA 90071 USA 213.430.6000 Fax: 213.430.6407 Email:Crowland@omm.Com Nicholas J Whilt ATTORNEY TO BE NOTICED O'Melveny & Myers LLP - LA 400 South Hope Street 18th Floor Los Angeles, CA 90071 USA 213-430-6000 Fax: 213-430-6407 Email:Nwhilt@omm.Com Paige Hardy , I ATTORNEY TO BE NOTICED O'Melveny & Myers LLP 400 South Hope Street 18th Floor Los Angeles, CA 90071 USA 213-430-6000 Email:Phardy@omm.Com Ryan K Yagura ATTORNEY TO BE NOTICED O'Melveny & Myers LLP - LA 400 South Hope Street 18th Floor Los Angeles, CA 90071 USA 213/430-6189 Fax: 213-430-6407 Email:Ryagura@omm.Com
Kia America, Inc. Consolidated from 2:23-cv-94 | **Counter Claimant**	Cason Garrett Cole ATTORNEY TO BE NOTICED O'Melveny & Myers LLP Tx 2501 N. Harwood St. 17th Floor Dallas, TX 75201 USA 972-360-1916 Email:Ccole@omm.Com Clarence Rowland ATTORNEY TO BE NOTICED O'Melveny & Myers LLP - LA 400 South Hope Street 18th Floor Los Angeles, CA 90071 USA 213.430.6000 Fax: 213.430.6407 Email:Crowland@omm.Com Nicholas J Whilt

Mercedes EX1012
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Litigants	Attorneys
	ATTORNEY TO BE NOTICED O'Melveny & Myers LLP - LA 400 South Hope Street 18th Floor Los Angeles, CA 90071 USA 213-430-6000 Fax: 213-430-6407 Email:Nwhilt@omm.Com Paige Hardy , I ATTORNEY TO BE NOTICED O'Melveny & Myers LLP 400 South Hope Street 18th Floor Los Angeles, CA 90071 USA 213-430-6000 Email:Phardy@omm.Com Ryan K Yagura ATTORNEY TO BE NOTICED O'Melveny & Myers LLP - LA 400 South Hope Street 18th Floor Los Angeles, CA 90071 USA 213/430-6189 Fax: 213-430-6407 Email:Ryagura@omm.Com
The Phelan Group, LLC **Counter Defendant**	Adam G Price ATTORNEY TO BE NOTICED DiNovo Price Ellwanger & Hardy LLP 7000 North Mopac Expressway Suite 350 Austin, TX 78731 USA 512/539-2626 Fax: 15125392627 Email:Aprice@dinovoprice.Com Michael D. French ATTORNEY TO BE NOTICED DiNovo Price LLP 7000 N. Mopac Expressway Suite 350 Austin, TX 78731 USA 512-539-2618 Email:Mfrench@dinovoprice.Com Nicole E Glauser ATTORNEY TO BE NOTICED DiNovo Price Ellwanger & Hardy LLP 7000 North Mopac Expressway Suite 350 Austin, TX 78731 USA 512-539-2626 Fax: 512-539-2627 Email:Nglauser@dinovoprice.Com Andrew Gerald DiNovo ATTORNEY TO BE NOTICED DiNovo Price Ellwanger & Hardy LLP 7000 North Mopac Expressway Suite 350 Austin, TX 78731 USA 512/539-2626 Fax: 15125392627 Email:Adinovo@dinovoprice.Com

Proceedings

#	Date	Proceeding Text	Source
1	03/07/2023	COMPLAINT against All Defendants (Filing fee $ 402 receipt number ATXEDC-9388646.), filed by Phelan Group, LLC. (Attachments: # 1 Civil Cover Sheet, # 2 Exhibit 1, # 3 Exhibit 2, # 4 Exhibit 3, # 5 Exhibit 4, # 6 Exhibit 5, # 7 Exhibit 6)(DiNovo, Andrew) (Entered: 03/07/2023)	
2	03/07/2023	DEMAND for Trial by Jury by Phelan Group, LLC. (DiNovo, Andrew) (Entered: 03/07/2023)	
3	03/07/2023	Notice of Filing of Patent/Trademark Form (AO 120). AO 120 mailed to the Director of the U.S. Patent and Trademark Office. (DiNovo, Andrew) (Entered: 03/07/2023)	
4	03/07/2023	NOTICE of Attorney Appearance by Nicole E Glauser on behalf of Phelan Group, LLC (Glauser, Nicole) (Entered: 03/07/2023)	
5	03/07/2023	NOTICE of Attorney Appearance by Adam G Price on behalf of Phelan Group, LLC (Price, Adam) (Entered: 03/07/2023)	
	03/07/2023	Case assigned to District Judge Rodney Gilstrap and Magistrate Judge Roy S. Payne. (ch,) (Entered: 03/07/2023)	
	03/07/2023	In accordance with the provisions of 28 USC Section 636(c), you are hereby notified that a U.S. Magistrate Judge of this district court is available to conduct any or all proceedings in this case including a jury or non-jury trial and to order the entry of a final judgment. The form Consent to Proceed Before Magistrate Judge is available on our website. All signed consent forms, excluding pro se parties, should be filed electronically using the event Notice Regarding Consent to Proceed Before Magistrate Judge. (ch,) (Entered: 03/07/2023)	
6	03/07/2023	CORPORATE DISCLOSURE STATEMENT filed by Phelan Group, LLC (DiNovo, Andrew) (Entered: 03/07/2023)	
7	03/07/2023	SUMMONS Issued as to Toyota Motor Corporation, Toyota Motor Engineering & Manufacturing North America, Inc., Toyota Motor North America, Inc., Toyota Motor Sales, U.S.A., Inc.. (Attachments: # 1 Summons(es), # 2 Summons(es), # 3 Summons(es))(ch,) (Entered: 03/07/2023)	
8	03/09/2023	SUMMONS Returned Executed by The Phelan Group, LLC. Toyota Motor Sales, U.S.A., Inc. served on 3/9/2023, answer due 3/30/2023. (DiNovo, Andrew) (Entered: 03/09/2023)	
9	03/10/2023	SUMMONS Returned Executed by The Phelan Group, LLC. Toyota Motor Engineering & Manufacturing North America, Inc. served on 3/10/2023, answer due 3/31/2023. (DiNovo, Andrew) (Entered: 03/10/2023)	
10	03/10/2023	SUMMONS Returned Executed by The Phelan Group, LLC. Toyota Motor North America, Inc. served on 3/10/2023, answer due 3/31/2023. (DiNovo, Andrew) (Entered: 03/10/2023)	
11	03/15/2023	SUMMONS Returned Executed by The Phelan Group, LLC. Toyota Motor Corporation served on 3/10/2023, answer due 3/31/2023. (DiNovo, Andrew) (Entered: 03/15/2023)	
12	03/30/2023	MOTION for Extension of Time to File Answer re 1 Complaint, by Toyota Motor Corporation, Toyota Motor Engineering & Manufacturing North America, Inc., Toyota Motor North America, Inc., Toyota Motor Sales, U.S.A., Inc.. (Attachments: # 1 Text of Proposed Order)(Smith, Michael) (Entered: 03/30/2023)	
13	03/31/2023	ORDER granting 12 MOTION for Extension of Time to File Answer re 1 Complaint, . Signed by Magistrate Judge Roy S. Payne on 3/31/2023. (nkl,) (Entered: 03/31/2023)	
14	04/17/2023	CONSOLIDATION ORDER - The above-captioned cases are hereby ORDERED to be CONSOLIDATED for all pretrial issues	

#	Date	Proceeding Text	Source
		with the LEAD CASE, Case No. 2:23-cv-00093. All parties are instructed to file any future filings in the LEAD CASE. Signed by District Judge Rodney Gilstrap on 4/17/2023. (ch.) (Entered: 04/18/2023)	
15	04/19/2023	ORDER - Scheduling/Case Management Conference set for 5/30/2023 01:30 PM before District Judge Rodney Gilstrap. Signed by Magistrate Judge Roy S. Payne on 4/19/2023. (ch,) (Entered: 04/19/2023)	
16	04/26/2023	NOTICE of Attorney Appearance by Cason Garrett Cole on behalf of Kia America, Inc., Kia Corporation (Cole, Cason) (Entered: 04/26/2023)	
17	04/27/2023	NOTICE of Attorney Appearance - Pro Hac Vice by Paige Hardy, I on behalf of Kia America, Inc., Kia Corporation. Filing fee $ 100, receipt number ATXEDC-9471658. (Hardy, Paige) (Entered: 04/27/2023)	
18	05/02/2023	Unopposed MOTION for Extension of Time to File Answer re 1 Complaint, and Waiver of Foreign Service Requirement by Kia America, Inc., Kia Corporation. (Attachments: # 1 Text of Proposed Order)(Yagura, Ryan) (Entered: 05/02/2023)	
19	05/04/2023	NOTICE of Attorney Appearance by John Frank Rabena on behalf of Toyota Motor Corporation, Toyota Motor Engineering & Manufacturing North America, Inc., Toyota Motor North America, Inc., Toyota Motor Sales, U.S.A., Inc. (Rabena, John) (Entered: 05/04/2023)	
20	05/04/2023	ORDER granting 18 Motion for Extension of Time to Answer re 18 Unopposed MOTION for Extension of Time to File Answer re 1 Complaint, and Waiver of Foreign Service Requirement. Signed by Magistrate Judge Roy S. Payne on 5/4/2023. (ch,) (Entered: 05/04/2023)	
	05/04/2023	Answer Due Deadline Updated for Kia America, Inc. to 6/14/2023; Kia Corporation to 6/14/2023. (ch,) (Entered: 05/04/2023)	
21	05/10/2023	NOTICE of Attorney Appearance - Pro Hac Vice by Yoshinari Kishimoto on behalf of Toyota Motor Corporation, Toyota Motor Engineering & Manufacturing North America, Inc., Toyota Motor North America, Inc., Toyota Motor Sales, U.S.A., Inc.. Filing fee $ 100, receipt number ATXEDC-9492507. (Kishimoto, Yoshinari) (Entered: 05/10/2023)	
22	05/10/2023	NOTICE of Attorney Appearance - Pro Hac Vice by Tyler Del Rosario on behalf of Toyota Motor Corporation, Toyota Motor Engineering & Manufacturing North America, Inc., Toyota Motor North America, Inc., Toyota Motor Sales, U.S.A., Inc.. Filing fee $ 100, receipt number ATXEDC-9492561. (Del Rosario, Tyler) (Additional attachment(s) added on 5/10/2023: # 1 Sealed Attachment) (nkl,). (Entered: 05/10/2023)	
23	05/11/2023	NOTICE of Attorney Appearance - Pro Hac Vice by William H Mandir on behalf of Toyota Motor Corporation, Toyota Motor Engineering & Manufacturing North America, Inc., Toyota Motor North America, Inc., Toyota Motor Sales, U.S.A., Inc.. Filing fee $ 100, receipt number ATXEDC-9495106. (Mandir, William) (Entered: 05/11/2023)	
24	05/12/2023	Joint MOTION for Extension of Time for Plaintiff to Comply with P. R. 3-1 & 3-2 (Infringement Contentions) and for Defendants to Comply with P. R. 3-3 & 3-4 (Invalidity Contentions) by The Phelan Group, LLC. (Attachments: # 1 Text of Proposed Order)(DiNovo, Andrew) (Entered: 05/12/2023)	
25	05/15/2023	NOTICE of Attorney Appearance by Michael D. French on behalf of The Phelan Group, LLC (French, Michael) (Entered: 05/15/2023)	

#	Date	Proceeding Text	Source
26	05/15/2023	ORDER granting 24 Joint MOTION for Extension of Time for Plaintiff to Comply with P. R. 3-1 & 3-2 (Infringement Contentions) and for Defendants to Comply with P. R. 3-3 & 3-4 (Invalidity Contentions). Signed by Magistrate Judge Roy S. Payne on 5/15/2023. (ch,) (Entered: 05/16/2023)	
27	05/16/2023	AMENDED ORDER re 24 Joint MOTION for Extension of Time for Plaintiff to Comply with P. R. 3-1 & 3-2 (Infringement Contentions) and for Defendants to Comply with P. R. 3-3 & 3-4 (Invalidity Contentions). Signed by Magistrate Judge Roy S. Payne on 5/16/2023. (ch,) (Entered: 05/16/2023)	
28	05/25/2023	NOTICE of Attorney Appearance - Pro Hac Vice by Fadi N Kiblawi on behalf of Toyota Motor Corporation, Toyota Motor Engineering & Manufacturing North America, Inc., Toyota Motor North America, Inc., Toyota Motor Sales, U.S.A., Inc.. Filing fee $ 100, receipt number ATXEDC-9517691. (Kiblawi, Fadi) (Entered: 05/25/2023)	
	05/30/2023	Minute Entry for proceedings held before District Judge Rodney Gilstrap: Scheduling Conference/Case Management Conference held on 5/30/2023. Counsel for the parties appeared. Court asked whether they consented to trial before the U.S. Magistrate Judge. Court then gave counsel Claim Construction and Jury Selection/Trial dates. (Court Reporter Shawn McRoberts) (aeb) (Entered: 06/01/2023)	
29	06/05/2023	Fed. R. Civ. P. 7.1(a)(1) Disclosure Statement filed by Kia America, Inc., Kia Corporation (Yagura, Ryan) (Entered: 06/05/2023)	
30	06/13/2023	Joint MOTION for Entry of Agreed Proposed DCO by The Phelan Group, LLC. (Attachments: # 1 Exhibit A - Agreed Proposed DCO)(DiNovo, Andrew) (Entered: 06/13/2023)	
31	06/13/2023	Joint MOTION for Entry of Agreed Proposed Discovery Order by The Phelan Group, LLC. (Attachments: # 1 Exhibit A - Agreed Proposed DO)(DiNovo, Andrew) (Entered: 06/13/2023)	
32	06/14/2023	Fed. R. Civ. P. 7.1(a)(1) Disclosure Statement filed by Toyota Motor Engineering & Manufacturing North America, Inc. (Smith, Michael) (Entered: 06/14/2023)	
33	06/14/2023	Fed. R. Civ. P. 7.1(a)(1) Disclosure Statement filed by Toyota Motor Corporation (Smith, Michael) (Entered: 06/14/2023)	
34	06/14/2023	Fed. R. Civ. P. 7.1(a)(1) Disclosure Statement filed by Toyota Motor Sales, U.S.A., Inc. (Smith, Michael) (Entered: 06/14/2023)	
35	06/14/2023	Fed. R. Civ. P. 7.1(a)(1) Disclosure Statement filed by Toyota Motor North America, Inc. (Smith, Michael) (Entered: 06/14/2023)	
36	06/14/2023	DOCKET CONTROL ORDER- Markman Hearing set for 6/27/2024 09:00 AM before Magistrate Judge Roy S. Payne., Jury Selection set for 12/9/2024 09:00AM before District Judge Rodney Gilstrap., Pretrial Conference set for 11/5/2024 01:30 PM before Magistrate Judge Roy S. Payne.). Signed by Magistrate Judge Roy S. Payne on 06/14/2023. (klc,) (Entered: 06/14/2023)	
37	06/14/2023	DISCOVERY ORDER re 31 Motion for Entry of Agreed Proposed Discovery Order. Signed by Magistrate Judge Roy S. Payne on 6/14/2023. (nki,) (Entered: 06/14/2023)	
38	06/14/2023	Kia Corporation and Kia America, Inc.'s ANSWER to 1 Complaint, Affirmative Defense, and, COUNTERCLAIM against The Phelan Group, LLC by Kia Corporation, Kia America, Inc..(Yagura, Ryan) (Entered: 06/14/2023)	
39	06/14/2023	ANSWER to 1 Complaint, by Toyota Motor Corporation, Toyota Motor Engineering & Manufacturing North America, Inc., Toyota Motor North America, Inc., Toyota Motor Sales, U.S.A., Inc..(Smith, Michael) (Entered: 06/14/2023)	

#	Date	Proceeding Text	Source
	06/15/2023	In accordance with the provisions of 28 USC Section 636(c), you are hereby notified that a U.S. Magistrate Judge of this district court is available to conduct any or all proceedings in this case including a jury or non-jury trial and to order the entry of a final judgment. The form Consent to Proceed Before Magistrate Judge is available on our website. All signed consent forms, excluding pro se parties, should be filed electronically using the event Notice Regarding Consent to Proceed Before Magistrate Judge. (nkl,) (Entered: 06/15/2023)	
	06/15/2023	In accordance with the provisions of 28 USC Section 636(c), you are hereby notified that a U.S. Magistrate Judge of this district court is available to conduct any or all proceedings in this case including a jury or non-jury trial and to order the entry of a final judgment. The form Consent to Proceed Before Magistrate Judge is available on our website. All signed consent forms, excluding pro se parties, should be filed electronically using the event Notice Regarding Consent to Proceed Before Magistrate Judge. (nkl,) (Entered: 06/15/2023)	
40	06/16/2023	Joint MOTION to Amend/Correct - Joint Motion to Amend the Docket Control Order to Provide Additional Time to File the Protective Order and to Serve Initial Disclosures by Kia America, Inc., Kia Corporation. (Attachments: # 1 Proposed Order)(Yagura, Ryan) (Entered: 06/16/2023)	
41	06/19/2023	NOTICE by The Phelan Group, LLC Plaintiff's Notice of Compliance (DiNovo, Andrew) (Entered: 06/19/2023)	
42	06/20/2023	ORDER granting 40 Joint MOTION to Amend/Correct - Joint Motion to Amend the Docket Control Order to Provide Additional Time to File the Protective Order and to Serve Initial Disclosures. Signed by Magistrate Judge Roy S. Payne on 6/20/2023. (ch,) (Entered: 06/20/2023)	
43	06/26/2023	Joint MOTION for Protective Order by Toyota Motor Corporation, Toyota Motor Engineering & Manufacturing North America, Inc., Toyota Motor North America, Inc., Toyota Motor Sales, U.S.A., Inc.. (Attachments: # 1 Proposed Order)(Smith, Michael) (Entered: 06/26/2023)	
44	06/26/2023	NOTICE of Discovery Disclosure by Toyota Motor Corporation, Toyota Motor Engineering & Manufacturing North America, Inc., Toyota Motor North America, Inc., Toyota Motor Sales, U.S.A., Inc. (Initial and Additional Disclosures) (Smith, Michael) (Entered: 06/26/2023)	
45	06/26/2023	Joint MOTION to Amend/Correct 36 Order,, Set Deadlines/Hearings, by Toyota Motor Corporation, Toyota Motor Engineering & Manufacturing North America, Inc., Toyota Motor North America, Inc., Toyota Motor Sales, U.S.A., Inc.. (Attachments: # 1 Proposed Order)(Smith, Michael) (Entered: 06/26/2023)	
46	06/26/2023	Joint MOTION Focusing Patent Claims and Prior Art to Reduce Costs by Kia America, Inc., Kia Corporation, Toyota Motor Engineering & Manufacturing North America, Inc., Toyota Motor North America, Inc., Toyota Motor Sales, U.S.A., Inc.. (Attachments: # 1 Proposed Order)(Smith, Michael) (Entered: 06/26/2023)	
47	06/26/2023	NOTICE by Kia America, Inc., Kia Corporation - Notice of Compliance Regarding Initial Disclosures (Yagura, Ryan) (Entered: 06/26/2023)	
48	06/28/2023	PROTECTIVE ORDER granting 43 Joint Motion for Protective Order. Signed by Magistrate Judge Roy S. Payne on 6/28/2023. (ch,) (Entered: 06/29/2023)	
49	06/28/2023	SECOND AMENDED DOCKET CONTROL ORDER granting 45	

#	Date	Proceeding Text	Source
		Joint MOTION to Amend/Correct 36 Order., Set Deadlines/Hearings. Signed by Magistrate Judge Roy S. Payne on 6/28/2023. (ch,) (Entered: 06/29/2023)	
50	06/28/2023	ORDER FOCUSING PATENT CLAIMS AND PRIOR ART TO REDUCE COSTS granting 46 Joint MOTION Focusing Patent Claims and Prior Art to Reduce Costs. Signed by Magistrate Judge Roy S. Payne on 6/28/2023. (ch,) (Entered: 06/29/2023)	
51	07/05/2023	ANSWER to 38 Answer to Complaint, Counterclaim by The Phelan Group, LLC.(DiNovo, Andrew) (Entered: 07/05/2023)	
52	07/27/2023	Joint MOTION to Amend/Correct Joint Motion for Entry of Agreed Proposed Amended Docket Control Order by Kia America, Inc., Kia Corporation. (Attachments: # 1 Proposed Order)(Yagura, Ryan) (Entered: 07/27/2023)	
53	07/28/2023	THIRD AMENDED DOCKET CONTROL ORDER granting 52 Joint MOTION to Amend/Correct Joint Motion for Entry of Agreed Proposed Amended Docket Control Order. Signed by Magistrate Judge Roy S. Payne on 7/28/2023. (ch,) (Entered: 07/28/2023)	
54	08/18/2023	Joint MOTION to Stay All Deadlines and Notice of Settlement in Principle by The Phelan Group, LLC. (Attachments: # 1 Proposed Order Staying Case Deadlines)(DiNovo, Andrew) (Entered: 08/18/2023)	
55	08/23/2023	ORDER granting 54 Motion to Stay All Deadlines and Notice of Settlement in Principle. Signed by Magistrate Judge Roy S. Payne on 8/22/2023. (nkl,) (Entered: 08/23/2023)	
56	08/31/2023	Agreed MOTION for Entry of Fourth Amended Scheduling Order by Toyota Motor Corporation, Toyota Motor Engineering & Manufacturing North America, Inc., Toyota Motor North America, Inc., Toyota Motor Sales, U.S.A., Inc.. (Attachments: # 1 Proposed Order)(Smith, Michael) (Entered: 08/31/2023)	Events since last full update

Patents

Number	Title	Issued	Class	Subclass
8,417,415	Driver authentication system and method for monitoring and controlling vehicle usage	04/09/2013	701	29.2
8,958,929	Vehicle control apparatus	02/17/2015	701	2
9,045,101	Driver authentication system and method for monitoring and controlling vehicle usage	06/02/2015	1	1
9,440,660	Method for remote communication with and through a vehicle	09/13/2016	1	1
9,493,149	Driver authentication system and method for monitoring and controlling vehicle usage	11/15/2016	1	1
9,908,508	Driver authentication system and method for monitoring and controlling vehicle usage	03/06/2018	1	1
10,259,465	Driver authentication system and method for monitoring and controlling vehicle usage	04/16/2019	1	1
10,259,470	Driver authentication system and method for monitoring and controlling vehicle usage	04/16/2019	1	1
10,414,275	Instrument cluster arrangements for vehicles	09/17/2019	1	1
10,493,957	Operational mode change based on vehicle occupancy for an autonomous vehicle	12/03/2019	1	1
10,860,025	Modeling graph of interactions between agents	12/08/2020	1	1
11,352,020	Driver authentication system and method for monitoring and controlling vehicle usage	06/07/2022	1	1

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End of Document

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent of Phelan	§	REQUEST FOR *EX PARTE* REEXAMINATION
U.S. Patent 10,259,470	§	Attorney Docket No.: PHE101
Issue Date: April 16, 2019	§	Customer No.: 165774
Filing Date: October 27, 2016	§	
Title: DRIVER AUTHENTICATION SYSTEM AND METHOD FOR MONITORING AND CONTROLLING VEHICLE USAGE	§	Real Party in Interest: Unified Patents, LLC

REQUESTER'S POWER OF ATTORNEY
PURSUANT TO 37 C.F.R. 1.510(f)

Pursuant to 37 C.F.R. 1.510(f) Requester, **Unified Patents, LLC**, hereby appoints the Practitioner(s) association with **Customer Number 165774**, as its attorney(s) to prosecute and transact all business in the United States Patent and Trademark Office in connection with the above-identified request for *Ex Parte* Reexamination. Please recognize the correspondence address (including any electronic mail address) associated with **Customer Number 165774** for the above-identified *Ex Parte* Reexamination proceeding number to be the address associated with the appointed counsel(s).

The undersigned is authorized to sign this Power of Attorney on behalf of the Requester.

Executed on 8/23/2023.

Unified Patents, LLC

By: Jonathan Stroud

Printed Name: Jonathan Stroud

Title: General Counsel

PTO/SB/57 (01-18)
Approved for use through 09/30/2018. OMB 0651-0064
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

(Also referred to as FORM PTO-1465)

REQUEST FOR *EX PARTE* REEXAMINATION TRANSMITTAL FORM

Address to:
Mail Stop *Ex Parte* Reexam
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Attorney Docket No.: PHE101

Date: August 31, 2023

1. ☒ This is a request for *ex parte* reexamination pursuant to 37 CFR 1.510 of patent number 10,259,470 issued _____. The request is made by:
   ☐ patent owner. ☒ third party requester.

2. ☒ The name and address of the person requesting reexamination is:
   Unified Patents, LLC
   4445 Willard Ave., Suite 600
   Chevy Chase, MD 20815

3. Requester ☐ asserts small entity status (37 CFR 1.27) or ☐ certifies micro entity status (37 CFR 1.29). Only a patent owner requester can certify micro entity status. Form PTO/SB/15A or B must be attached to certify micro entity status.

4. This request is accompanied by payment of the reexamination fee as set forth in:
   ☒ 37 CFR 1.20(c)(2); **or**
   ☐ 37 CFR 1.20(c)(1). **In checking this box for payment of the fee set forth in 37 CFR 1.20(c)(1), requester asserts that this request has forty (40) or fewer pages and complies with all other requirements of 37 CFR 1.20(c)(1).**

   Payment of the reexamination fee is made by the method set forth below.
   a. ☐ A check in the amount of $_____ is enclosed to cover the reexamination fee;
   b. ☐ The Director is hereby authorized to charge the reexamination fee to Deposit Account No. _____;
   c. ☐ Payment by credit card. Form PTO-2038 is attached; **or**
   d. ☒ Payment made via EFS-Web.

   ☒ In addition, the Director is hereby authorized to charge any fee deficiencies to Deposit Account No. 50-6990.

5. ☒ Any refund should be made by ☐ check or ☒ credit to Deposit Account No. 50-6990. 37 CFR 1.26(c). If payment is made by credit card, refund must be to credit card account.

6. ☒ A copy of the patent to be reexamined having a double column format on one side of a separate paper is enclosed. 37 CFR 1.510(b)(4).

7. ☐ CD-ROM or CD-R in duplicate, Computer Program (Appendix) or large table
   ☐ Landscape Table on CD

This collection of information is required by 37 CFR 1.510. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) a request for reexamination. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 18 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Mail Stop *Ex Parte* Reexam, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**
If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

8. ☐ Nucleotide and/or Amino Acid Sequence Submission
If applicable, items a. – c. are required.
   a. ☐ Computer Readable Form (CRF)
   b. Specification Sequence Listing on:
      i. ☐ CD-ROM (2 copies) or CD-R (2 copies) **or**
      ii. ☐ paper
   c. ☐ Statements verifying identity of above copies.

9. ■ A copy of any disclaimer, certificate of correction or reexamination certificate issued in the patent is included.

10. ■ Reexamination of claim(s) 1 and 4 is requested.

11. ■ A copy of every patent or printed publication relied upon is submitted herewith including a listing thereof on Form PTO/SB/08, PTO-1449, or equivalent.

12. ■ An English language translation of all necessary and pertinent non-English language patents and/or printed publications is attached.

13. ■ The attached detailed request includes at least the following items:
   a. A statement identifying each substantial new question of patentability based on prior patents and printed publications. 37 CFR 1.510(b)(1).
   b. An identification of every claim for which reexamination is requested, and a detailed explanation of the pertinency and manner of applying the cited art to every claim for which reexamination is requested. 37 CFR1.510(b)(2).

14. ☐ A proposed amendment is included (only where the patent owner is the requester). 37 CFR 1.510(e).

15. ■ It is certified that the statutory estoppel provisions of 35 U.S.C. 315(e)(1) or 35 U.S.C. 325(e)(1) do not prohibit requester from filing this *ex parte* reexamination request. 37 CFR 1.510(b)(6).

16. Service
   a. ■ It is certified that a copy of this request (if filed by other than the patent owner) has been served in its entirety on the patent owner as provided in 37 CFR 1.33(c).

      The name and address of the party served are:

      64064 - Ortiz & Lopez, PLLC

      P.O. Box 4484

      Albuquerque, NM 87196-4484

      Date of Service: August 31, 2023

   OR

   b. ☐ A duplicate copy is enclosed since service on patent owner was not possible. An explanation of the efforts made to serve patent owner **is attached**. See MPEP 2220.

17. Correspondence Address: Direct all communication about the reexamination to:

☒ The address associated with Customer Number: 165774

OR

☐ Firm or Individual Name _____
(at the address identified below)

Address

Unified Patents, LLC, 4445 Willard Avenue, Suite 600

City	State	Zip
Chevy Chase	MD	20815

Country

USA

Telephone	Email
919-538-8602	david@unifiedpatents.com

18. ☒ The patent is currently the subject of the following concurrent proceeding(s):

a. ☐ Copending reissue Application No. _____

b. ☐ Copending reexamination Control No. _____

c. ☐ Copending Interference No. _____

d. ☒ Copending litigation styled:

See Section III of Reexamination Request

WARNING : Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

/David C. Seastrunk/
Authorized Signature

August 31, 2023
Date

David C. Seastrunk
Typed/Printed Name

73,723
Registration No.

☐ For Patent Owner Requester ☒ For Third Party Requester

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

EXHIBIT 1003

Declaration of Christopher K. Wilson

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent of Phelan	§	REQUEST FOR *EX PARTE* REEXAMINATION
	§	
U.S. Patent 10,259,470	§	
	§	
Filed: October 27, 2016	§	
	§	Customer No.: 165774
Issued: April 16, 2019	§	
	§	
Title: DRIVER AUTHENTICATION SYSTEM AND METHOD FOR MONITORING AND CONTROLLING VEHICLE USAGE	§	

DECLARATION OF CHRISTOPHER K. WILSON

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XII. CONCLUSION 21

I, Christopher K. Wilson, hereby declare under penalty of perjury:

I. INTRODUCTION

1. I have been retained as a technical expert witness by counsel for Unified Patents, LLC, ("Unified" or "Requester") and asked to review and provide my opinion on the patentability of claims 1 and 4 ("Challenged Claims") of U.S. Patent 10,259,470 (EX1001, "the '470 Patent"). This declaration accompanies the Request for Reexamination of the '470 Patent ("Request") and the exhibits, including the Claim Chart in Exhibit AA.

2. I am being compensated at my standard rate of $500 per hour. My compensation is not contingent on the outcome of this proceeding or the content of my opinions.

3. I have reviewed, had input into, and endorse the discussions in the Requester's Claim Chart and arguments in Exhibit AA against the patentability of the '470 Patent, including the statements in the Claim Chart regarding the '470 Patent and its prosecution history, the scope of the claims, the prior art's disclosure of the claims, and the statements throughout the Claim Chart regarding a person of ordinary skill in the art ("POSITA")'s knowledge and understanding.

4. In addition to endorsing the Claim Chart, this declaration is a statement of my opinions on issues related to the patentability of the Challenged Claims.

5. My complete qualifications and professional experiences are described in my *curriculum vitae*, a copy of which has been submitted as an Appendix to this report. The following is a summary of my relevant qualifications and professional experience.

II. QUALIFICATIONS

A. Overview

6. I have a bachelor's degree in Physics from Princeton University and one year of graduate school in Physics at the University of California, San Diego. My academic work included analyzing and developing wireless telemetry systems for various platforms.

7. I am currently an independent consultant to the transportation industry focused on the use of vehicle data and analytics to provide cloud services in support of safety systems in automated and semi-automated vehicles. I also perform expert witness work in the areas of my expertise.

Mercedes EX1012
UNIFIED PATENTS EXHIBIT 1003

8. I am an expert in wireless location tracking and monitoring systems. I have been developing location tracking and monitoring systems since at least 1984, including systems to track satellites, aircraft, ground vehicles, personal navigation devices and fitness devices. I have emphasized monitoring the location of devices and analyzing movement patterns to identify the user's activities and capabilities (including risk profiles), as well as determining appropriate movements and activities, such as recommended or legal speeds.

9. From 1983 to 1986, I was a Systems Engineer at GTE Government Systems, Inc. There I developed various wireless communications systems and radar-based tracking systems, as well as providing capabilities analysis for the GPS (Global Positioning System) and GLONASS (Global Navigation Satellite System) systems and for "TERCOM" systems that used digital maps and elevation data to determine location.

10. From 1986 to 1995, I was a Senior Systems Engineer followed by program manager at TRW Inc. While at TRW I developed a wireless tracking and monitoring system for installation in vehicles that utilized the paging network. These systems provided navigation services for the users and enabled emergency response services, as well as providing traffic information on a regional level.

11. From 1995 to 1996, I was Director of Product Development at Information Access Inc. In this role I developed tracking systems for handheld devices (tablets) and provided traffic monitoring services based on the data from many users.

12. From 1996 to 2008, I was Senior Research Scientist, Group Manager for Telematics & Safety, and then Vice President for Intelligent Transportation Systems (ITS) Strategy & Programs at DaimlerChrysler Research and Technology North America, Inc. In this role I was responsible for the development of various location-based services for vehicles, as well as various vehicle positioning technologies. In particular I specified and tested various map attributes, such as speed limits, for use in vehicle safety applications. I also developed systems to automatically recommend or control a vehicle's speed based on an assessment of the safe speed for a particular road section. I developed short range vehicle communications systems for tracking vehicles as well as pedestrians and cyclists. These systems were demonstrated with pedestrians using GPS based location tracking and wireless communications devices which were communicating with vehicles.

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13. From 2008 to 2011, I was Director of R&D followed by Director of Program & Product Management for Advanced Driver Assistance Systems at TomTom BV. My work there involved developing mapping systems to support various applications for TomTom and customer's devices. I was the Product Manager for TomTom's speed limit database, among other items.

14. From 2012 to the present, I have been a consultant in the field of connected and automated vehicles. I have also been retained as an expert witness in several intellectual property matters related to various technologies used for connected and automated vehicles. During this time I have served as the CEO of a startup company developing maps for automated vehicles which include vehicle safe speed information (VDS), served as a Vice President of ATG Risk Solutions which provided risk assessment for insurance on commercial vehicle fleets, and a strategic advisor to Mapper.ai, among other tasks. Each of these roles required the collection and analysis of GPS and other location data (such as the use of camera data to build 3D maps) in order to build models for individual's activity and to understand the infrastructure the individuals were moving within, and the appropriate speed for vehicles at particular locations.

15. I am the named inventor on ten U.S. and several international patents related to various aspects of navigation including methods for utilizing wirelessly collected vehicle data (including speed data) to produce and provide information to various parties. I have also served on the editorial board of Inside GNSS magazine.

16. In summary, I have extensive familiarity with fields involving vehicle control and monitoring systems. I am familiar with what the state of these fields were at the relevant time up to the time the '470 patent was filed.

17. In summary of the above and my curriculum vitae, I had a bachelor's degree and over two decades of work experience on technologies including vehicle control and monitoring systems prior to the earliest priority date of the '470 Patent. Thus, as of the earliest possible priority date of the '470 Patent (i.e., July 1, 2009), I was at least a person of ordinary skill in the art of the '470 Patent (Section IV.B, *infra*), and I had direct personal knowledge of the technologies involved in the '470 Patent.

18. As part of my work in forming my opinions in connection with this proceeding, I have reviewed the materials shown below, which I believe those in the field would reasonably rely upon in forming opinions regarding the subject matter of this proceeding.

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LIST OF CONSIDERED EXHIBITS

Exhibit	Description
EX1001	U.S. Patent 10,259,470 (the "'470 Patent")
EX1002	Prosecution History of U.S. Patent Application 15/336,110
EX1004	U.S. Patent Publication 2006/0052909 ("Cherouny")
EX1005	U.S. Patent Publication 2008/0188217 ("Harter")
EX1006	U.S. Patent 6,577,937 ("Shuman")
EX1007	U.S. Patent Publication 2007/0168125 ("Petrik")
EX1008	U.S. Patent 5,465,079 ("Bouchard")
EX1009	U.S. Patent Publication 2008/0303629
EX1010	U.S. Patent Publication 2007/0093200
EX1011	Japanese Patent JP2007235530
EX1012	Translation of Japanese Patent JP2007235530 (EX1011)
EX AA	Claim Chart Comparing Claims 1 and 4 of U.S Patent 10,259,470 to Cherouny, Harter, Shuman, Petrik, and Bouchard

III. SUMMARY OF MY OPINION

19. In my opinion, claims 1 and 4 of the '470 Patent are obvious in view of the cited prior art below, including the knowledge of one skilled in the art. My opinions are based on my expertise in the technology of the '470 Patent at the time the application was filed, as well as my review of the '470 Patent and the prior art discussed in the Request.

20. I reviewed and contributed to the Requester's Claim Chart as to why these claims are anticipated and/or obvious. The Claim Chart's explanation as to why these claims are unpatentable reflects my understanding, and I adopt it herein.

A. Instructions and Legal Framework

21. I am not an attorney. My analysis and opinions are based on my expertise in this technical field, as well as the instructions I have been given by counsel for the legal standards relating to patentability.

22. The materials I have reviewed in connection with my analysis include the '470 Patent, its file history, the exhibits identified in the Request, and any other exhibits identified here.

23. I understand that unpatentability in this proceeding must be proven by a preponderance of the evidence, and this is the standard I have used throughout my declaration. Further, I understand that each patent claim is considered separately for purposes of unpatentability.

24. I believe that a POSITA at the time of the alleged invention would have had at least a bachelor's degree in electrical or mechanical engineering, physics (or a related field) and at least two years of relevant industry experience in vehicle monitoring and control systems, or the equivalent thereof, and my analysis relies on that understanding. I am qualified as a person of ordinary skill in the art of the '470 Patent as of its earliest possible priority date (July 1, 2009) because I had a bachelor's degree with over two decades of experience with vehicle monitoring and control systems, especially, my work experience as I described above in paragraphs 10-12, which occurred prior to the earliest possible priority date of the '470 Patent.

25. I understand that a patent claim is unpatentable as "anticipated" if each and every feature of the claim is found in a single prior art reference.

26. I understand that a patent claim is unpatentable as "obvious" if, in view of a prior art reference or a combination of prior art references, it would have been obvious to a POSITA at the time of the invention, taking into account:

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a. the scope and content of the prior art;

b. the differences between the prior art and the claim under construction; and

c. the level of ordinary skill in the art.

27. I am informed that legal principles regarding unpatentability of a claim due to obviousness have been addressed by the U.S. Supreme Court. I am informed that, while not absolute, the principles relating to a "motivation," "suggestion," or "teaching" in the prior art to combine references are useful in analyzing whether an invention is obvious. I am informed that the suggestion or motivation may be either explicit or implicit in the art and may come from knowledge generally available to a POSITA, from the nature of the problem to be solved, or from a combination of these factors. The test for an implicit motivation, suggestion, or teaching is what the combined teachings, knowledge of a POSITA, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art. The problem examined is not the specific problem solved by the invention, but the general problem that confronted the inventor before the invention was made.

28. I am further informed that the U.S. Supreme Court has clarified that additional principles may also be applied in such an analysis. Some of those principles are set forth below.

29. As I understand it, it is no longer always required to present evidence of an explicit teaching, suggestion, or motivation to combine prior art references for purposes of determining whether an invention is obvious. Prior art can be combined based on an express teaching, suggestion, or motivation from the prior art itself, or from a reasoned explanation of an expert or other witness.

30. A patent claim composed of several elements, however, is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. In order to prove obviousness, it must be shown that the improvement is not more than the predictable use of prior-art elements according to their established functions. To determine whether there was an apparent reason to combine the known elements in the way a patent claims, it will often be necessary to look to interrelated teachings of multiple pieces of prior art, to the effects of demands known to the design community or present in the marketplace, and to the background knowledge possessed by a POSITA. Also, in determining obviousness, one must be aware of the distortion caused by hindsight bias and be cautious of arguments relying upon hindsight reasoning. An obviousness argument cannot be sustained by mere conclusory statements. Instead, it must be some

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articulated reasoning with some rational underpinnings to support the legal conclusion of obviousness.

31. In an obviousness analysis, it is my understanding that there are "secondary considerations" that should be analyzed if they apply. I am told that these considerations include (a) whether the prior art teaches away from the claimed invention, (b) whether there was a long felt but unresolved need for the claimed invention, (c) whether others tried but failed to make the claimed invention, (d) skepticism of experts, (e) whether the claimed invention was commercially successful, (f) whether the claimed invention was praised by others, and (g) whether the claimed invention was copied by others.

32. I am informed that in performing an obviousness analysis, it is necessary to understand the scope of the claims. I have also been informed the first step in an unpatentability analysis, therefore, involves construing the claims. Second, the construed claim language is then compared to the disclosures of the prior art. For purposes of this proceeding, I have applied the claim constructions set forth in the claim construction section of the Request that this declaration accompanies when analyzing the prior art and the claims.

B. Effective Filing Dates and Prior Art Patents and Printed Publications

33. I am informed that I am to consider July 1, 2009 to be the priority date for the '470 Patent for Substantial New Questions of Patentability 1-5, the date of filing for the '470 Patent's application, and the earliest possible priority date for the '470 Patent. I express no opinion on whether the claims of the '470 Patent warrant the priority date listed here.

34. As part of my analysis, I have considered the scope and content of the prior art and any potential differences between the claimed subject matter and the prior art. For Substantial New Questions of Patentability 1-5, I conducted my analysis as of the earliest claimed priority date and the knowledge a POSITA would possess at that time.

35. I rely upon the following references, all of which I understand are prior art to all claims of the '470 Patent:

a. U.S. Patent Publication 2006/0052909 to Cherouny ("Cherouny");

b. U.S. Patent Publication 2008/0188217 to Harter et al. ("Harter");

c. U.S. Patent 6,577,937 to Shuman et al. ("Shuman");

d. U.S. Patent Publication 2007/0168125 to Petrik ("Petrik"); and

e. U.S. Patent 5,465,079 to Bouchard et al. ("Bouchard").

36. The chart below summarizes my conclusions of unpatentability regarding the '470 Patent.

SNQ	Conclusions	Challenged Claim(s)
1	Rendered obvious by **Cherouny**	1
2	Rendered obvious by **Cherouny** and **Harter**	1, 4
3	Rendered obvious by **Cherouny** and **Shuman**	1
4	Rendered obvious by **Cherouny** and **Petrik**	1
5	Rendered obvious by **Cherouny** and **Bouchard**	1

IV. THE '470 PATENT[1]

A. Summary of the '470 Patent

37. As noted above, I have reviewed and had input into the Claim Chart, including, for example, statements related to my understanding of the '470 Patent, and the characterizations of the grounds and the prior art used. I agree with the statements made therein, and adopt herein by reference.

38. I have considered claims 1 and 4 of the '470 Patent, which read as follows (bracketed paragraph breaks and numberings added):

Claim 1

[1P] A vehicle control system, comprising:

[1.1] a wireless identification and data logging module;

[1.2] a master control unit in a vehicle for wirelessly authenticating at least one occupant via said wireless driver identification and data logging module and associating an operating profile with said at least one occupant;

[1.3] a module for receiving at least location and speed information in association with a movement of said vehicle;

[1] Unless otherwise specified, all **bold** and underline emphases and color annotations below have been added. Text in *italics* is used to signify claim language and/or add emphasis.

[1.4] a data logging device that records vehicle operation data associated with a use of said vehicle, the vehicle operation data comprising at least said location and speed information received from said module; and

[1.5] a slave control unit in said vehicle and which communicates with said master control unit, wherein said slave control unit receives commands from said master control unit and generate an alarm signal;

[1.6] wherein said master control unit provides operation governance of said vehicle within said operating profile.

Claim 4

[4P] The vehicle control system of claim 1

[4.1] wherein said wireless identification and data logging module comprises at least one of: a WIFI enabled device; an RFID enabled device; a Bluetooth enabled device; a cellular telephone; and a smartphone.

B. The Level of Ordinary Skill in the Art

39. I understand that the factors considered in determining the ordinary level of skill in a field of art include the level of education and experience of persons working in the field; the types of problems encountered in the field; and the sophistication of the technology at the time of the purported invention, which I understand is July 1, 2009. I understand that a POSITA is not a specific real individual, but is rather a hypothetical individual having the qualities reflected by the factors above. I understand that a POSITA would also have knowledge of the teachings of the prior art, including the art cited below.

40. It is my opinion that a POSITA for the '470 Patent would have had at least a bachelor's degree in electrical or mechanical engineering, physics (or a related field) and at least two years of relevant industry experience in vehicle monitoring and control systems, or the equivalent thereof in the 2009. This description is approximate, and a higher level of education or specific skill might make up for less experience, and vice-versa. A POSITA is presumed to have knowledge of all relevant prior art, and therefore would have been familiar with each of the references cited in this declaration and the full range of teachings they contain.

41. As I explained above in paragraph 24, my level of skill in the art was at least that of a POSITA before the time of the '470 Patent. I am qualified to provide opinions concerning what a POSITA would have known and understood at that time, and my analysis and conclusions in this declaration are from the perspective of a POSITA prior to July 1, 2009. Furthermore, I have taught, worked with, and supervised persons whom I would consider to be persons of ordinary skill in the art in accordance with the description given above.

V. CLAIM CONSTRUCTION

42. As I noted in paragraph 32, it is my understanding that in order to properly evaluate the '470 Patent, the terms of the claims must first be interpreted. Next, the construed claim language is then compared to the disclosures of the prior art.

43. Based upon my review of the intrinsic record and my experience with vehicle monitoring and control systems in the 2009 timeframe, it is my opinion that express constructions are not necessary. However, I understand and have reviewed the understandings presented in the Claim Chart about certain meanings of the claim terms.

44. For the purposes of this proceeding, I have applied the understandings set forth in the Claim Chart that this declaration accompanies when analyzing the prior art and the claims.

VI. CHALLENGED CLAIMS ARE UNPATENTABLE

45. It is my opinion that claims 1 and 4 of the '470 Patent are unpatentable because they are obvious to a POSITA as of the earliest possible priority date. The Claim Chart sets forth my reasons for this opinion. Below I elaborate on certain points raised in the discussion of the Claim Chart.

VII. SUBSTANTIAL NEW QUESTION OF PATENTABILITY #1 – CHEROUNY

46. It is my opinion that claim 1 of the '470 Patent is disclosed, suggested, or rendered obvious by Cherouny. I have reviewed, had input into, and agree with the arguments made in the Claim Chart (Exhibit AA) for this substantial new question of patentability.

47. Regarding limitation [1.1] in the Claim Chart, it is my opinion that a POSITA would have understood Cherouny's disclosures of hardware and software that (1) identify an individual driver and (2) log speed and data, together disclose the claimed wireless identification

and data logging module. This is at least so because, as the claim chart explains, the '470 Patent describes the term "module" broadly, as a "physical hardware component and/or to a software module" and that the "methodology described herein can be implemented as a series of such modules or as a single software module." (*see* EX1001, 6:11-36). Furthermore, to the extent it is argued that Cherouny does not disclose that its key fob is wireless (for example, Cherouny describes the use of "optoelectronic components" in paragraph [0017] to read from the key fob, which may or may not be wireless), it is my opinion that such would have been obvious to a POSITA. I note that Cherouny does not discredit or limit the use of a wireless technology in a vehicle—rather, it supports the use of wireless technology, for example, by disclosing wireless connections between the vehicle, central database, and GPS. EX1004, ¶ [0020]. At the time of Cherouny's earliest disclosure (June 2001), wireless identification devices were not as widely used with vehicles as they were by the time of the '470 Patent (July 2009). Indeed, by July 2009, the use of wireless key fobs was exceedingly well known and in use for vehicles, as evidenced by several contemporaneous references. For example, EX1009 describes an RFID vehicle-use key as early as 2007, and the translation of EX1011 in EX1012 describes an RFID tag in a mobile phone for use in authenticating a user of a vehicle as early as 2006. EX1009, Abstract, ¶ [0011] ; EX1012, ¶ [0011]-[0015]. For these reasons, even if Cherouny's key fob is not explicitly wireless, such a simple modification would have been well known to a POSITA by the time of the '470 Patent, and would have rendered the claimed wireless identification module obvious, because Cherouny's key fob would perform identification of a driver in the same way as originally disclosed, but now would be performed wirelessly. Such a modification would have been beneficial and obvious, given the widespread use of wireless key fob devices in vehicles by July 2009.

48. Regarding limitation [1.2], it is my opinion that a POSITA reading the '470 Patent would have understood that the claimed master control unit in a vehicle would at least have encompassed a processor (sometimes, when built into the vehicle, referred to as an electronics control unit, or ECU) within the vehicle, capable of performing the various functions described by the '470 Patent, such as monitoring and logging vehicle performance and communicating with the slave control unit, given the '470 Patent's various disclosures of the same. *See, e.g.*, EX1001, 7:58-59, 7:26-32, 8:61-66, 9:6-10, 10:30-33, 11:52-58. And, as I note above in paragraph 47, to the extent Cherouny alone does not perform this authentication with the master control unit wirelessly, such would have been obvious to a POSITA for the same reasons as I discuss there.

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49. Regarding limitations [1.3] and [1.4], I agree with the arguments and disclosures set forth in those sections of the Claim Chart demonstrating that Cherouny discloses, suggests, and renders obvious those limitations. Particular to limitation [1.4], it is my opinion that a POSITA reading Cherouny would have understood that, given its disclosure of a "device" recording driving speed, as well as its disclosure of a GPS system (EX1004, ¶¶ [0035], [0040]), a POSITA would have understood Cherouny to disclose, suggest, or render obvious limitation [1.4] because recording location information (that it already receives from its GPS) would have been a simple step that improved Cherouny's goal of monitoring and improving the driving behavior of at-risk drivers. The recorded location data would, among other things, allow for correlation of speed with particular roads and locations after the fact to rectify possible errors or disputes related to the associated appropriate speed.

50. Regarding limitation [1.5] related to the slave control unit, it is my opinion that a POSITA reading the '470 Patent would have understood that the claimed slave control unit in said vehicle would at least have encompassed hardware and/or software within the vehicle, capable of performing the functions described by the claim language, i.e., receiving commands from said master control unit and generating an alarm signal (either slowing the vehicle or audible sounds/voice).

51. As to the disclosures in Cherouny components corresponding to the claimed slave control unit (e.g., engine slow down module 120 – which a POSITA would have understood controls at least the fuel injectors and ignition starter relay module, and audible noise generator 121 – which a POSITA would have understood controls at least an alarm synthesizer and speaker), a POSITA would have recognized that these components necessarily communicate with the master control unit (microprocessor 101), as depicted and described in connection with Figures 20 and 21. For example, a POSITA reading paragraphs 77-78 and 81-82 of Cherouny would have understood that Cherouny's microprocessor 101 sends commands to the engine slowdown module and audible noise generator whenever needed to achieve its goals of regulating the operation of the vehicle within the preprogrammed operational parameters set by the moderator (e.g., parent) of Cherouny's system.

52. Additionally, a POSITA reading Cherouny would have at least understood that: (1) its engine slow down module 120 would require several physical components in the form of relays to control the fuel injectors and ignition in the way described by Cherouny; (2) its audible

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noise generator 121 would require a voice synthesizer and other hardware components to perform the steps outlined in paragraph 20 of Cherouny; and (3) these relays and alarm generating hardware components would necessarily be in communication with the microprocessor in order for Cherouny to proceed through the seven step process described in paragraph 20 of its disclosure.

53. For example, for Cherouny to proceed through the seven listed steps of paragraph 20 (e.g., the progressively more serious audible alarms, followed by control and limiting the speed of the engine, and the eventual shutting off of the engine entirely), these engine slow down and audible noise generating components would communicate with the master control unit to confirm within the system that certain measures had been executed according to the preprogrammed and individualized plan for governing operation of the vehicle.

VIII. SUBSTANTIAL NEW QUESTION OF PATENTABILITY #2 – CHEROUNY IN VIEW OF HARTER

54. It is my opinion that claims 1 and 4 of the '470 Patent are disclosed, suggested, or rendered obvious by Cherouny in view of Harter. I have reviewed, had input into, and agree with the arguments made in the Claim Chart (Exhibit AA) for this substantial new question of patentability.

55. Regarding the motivation to combine Cherouny and Harter with respect to the wireless identification and data logging module (limitation [1.1]), it is my opinion that a POSITA would have found it obvious to use the system and techniques disclosed in Harter of using a mobile device (such as a smart phone) to identify and log data about a specific driver's operation of a vehicle to further Cherouny's goal of increasing safety for at-risk drivers. This is true particularly because both references describe their use in the context of commercial motor vehicles. Harter focused its discussion within the context of monitoring and logging data for drivers of commercial motor vehicles (CMVs), and similarly, Cherouny explicitly recognized that its disclosures would be applicable in the same context of commercial driver monitoring. *See* EX1004, ¶ [0009] ("Yet another market exists for the instant invention among companies who hire drivers for commercial purposes."); *see also id.*, FIGs. 11-13 (depicting and describing information that can be monitored for commercial drivers in Cherouny's system); EX1005, ¶ [0003] ("Operators of commercial motor vehicles ('CMV's') are required to meet certain specific performance standards and regulations . . .").

56. Furthermore, using Harter's teaching of using a smart phone to assist in identifying and monitoring drivers would have been the simple substitution of one known technique (i.e., Harter's use of a wireless smart phone device together with software to identify and log data related to a specific driver of a vehicle) for another (Cherouny's technique of using a wireless key fob together with software to identify and log data related to a driver of a vehicle) to obtain predictable results—i.e., a system (Cherouny's) using a wireless mobile device (in view of Harter's teachings) to assist with wirelessly identifying a driver and logging data related to their trip within the vehicle. EX1004, ¶¶ [0018]-[0020], [0031], [0035], [0081]; EX1005, ¶¶ [0007]-[0008], [0032]-[0033], [0042], [0045]-[0046], [0053]. Implementing Harter's teaching of using a wireless mobile device (i.e., smart phone) would have been an improvement over Cherouny's existing system using a key fob and various software modules, and a POSITA would have recognized at the time of the '470 Patent that a smart phone, like Harter's, would increase the vehicle control system's ability to identify and log data associated with a trip, given the known capabilities of a smart phone at the time (which would have included various additional technologies, such as Bluetooth or GPS, all of which are on a device known to be associated with a particular individual) as compared to the key fob used in Cherouny. For example, I note that while Cherouny's disclosure is based on applications dating back to June 2001, which is a time when many drivers would not have regularly carried a smartphone or used it as an identification device. But before the time of the '470 Patent, techniques using smartphones together with vehicles were known and common (as evidenced by Harter), and would have been well known to a POSITA at the time reading Cherouny. Accordingly, this provides further motivation for a POSITA to modify Cherouny with the teachings of Harter to bring it up to date with modern techniques and knowledge at the time.

57. Furthermore, it is my opinion that combining Harter's teachings for implementing a wireless mobile device in a system that identifies and logs data related to drivers of vehicles would have merely combined prior art elements (Harter's disclosure of a smart phone for identifying and logging data related to a driver of a vehicle and Cherouny's system for a similar purpose of monitoring drivers) according to known methods (i.e., that it was known to use various wired and/or wireless devices, such as Harter's "cable or wireless link" (EX1005, ¶ [0033]), to assist with monitoring and identifying drivers of vehicles) to yield predictable results—i.e., a system that is able to use a wireless mobile device to identify and log data related to a driver's trip within the vehicle. EX1004, ¶¶ [0018]-[0020], [0031], [0035], [0081]; EX1005, ¶¶ [0007]-[0008],

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[0032]-[0033], [0042], [0045]-[0046], [0053]. A POSITA would have had a reasonable expectation of success in achieving the combination and the resulting improved driver identification and monitoring system because the techniques were discussed in detail in the references, and built off of known, predictable technologies that had been implemented into vehicles for several years.

58. Regarding the combination of Cherouny and Harter for limitation [1.2] related to the master control unit, it is my opinion that a POSITA would have found it obvious in the combined Cherouny-Harter system that the master control unit (i.e., Cherouny's existing microprocessor 101) wirelessly authenticates at least one occupant via said wireless driver identification and data logging module (i.e., Harter's smartphone 400) in view of Harter's explicit teaching of the same. These teachings from Harter would have been combinable with Cherouny's system for the same reasons I discussed immediately above in paragraphs 55-57.

59. Regarding the combination of Cherouny and Harter for limitation [1.3] related to receiving speed and location information, a POSITA would have seen it as beneficial and obvious to include capabilities of monitoring and receiving speed and location information into Cherouny's system based on these explicit teachings in Harter. Cherouny's system already includes the components necessary to obtain this information (e.g., through its automobile speed sensor 108 and GPS 114), and to the extent it is not explicit, Harter provides the implementation details as to how this information would be received by the processor of the system. *See* EX1004, claim 1, ¶¶ [0020], [0035], [0040]; EX1005, ¶¶ [0032]-[0033], [0045], [0054]. A POSITA would have recognized that monitoring speed and location (e.g., in view of Harter's explicit teachings) would further Cherouny's stated goal of improving safety of at-risk drivers. Furthermore, it is my opinion that a POSITA would have had a reasonable expectation of success of implementing Harter's teachings in view of Cherouny disclosing transmission of "location and speed data" and that Cherouny's system already includes the components for doing so.

60. Regarding the combination of Cherouny and Harter for limitation [1.4] related to a data logging device that records vehicle operation data, a POSITA would have combined the teachings of Harter related to a data logging device into the base system of Cherouny for the same reasons I discuss immediately above in paragraphs 55-59. For example, a POSITA would have recognized that Harter's explicit disclosure (identified in the Claim Chart) would have added desirable functionality to Cherouny and once again furthered its goal of improving the safety of

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at-risk drivers, e.g., by allowing a moderator to review driving records of the monitored and at-risk driver. A POSITA would have had a reasonable expectation of success in making the combination for the same reasons discussed herein, and particularly, given Cherouny already discloses the general idea of recording speed over a period of time.

61. Regarding claim 4 (and limitation [4.1]), to the extent that it needs to be shown that the wireless identification and data logging module also comprises an RFID enabled device, it is my opinion that this would have been obvious to a POSITA because it was known to use RFID together with a smart phone (like the one that would be used in the Cherouny-Harter combination) in the context of vehicle management and operations, and RFID was already a well-known technology for use with vehicles generally (e.g., for use in key fobs and the like).

62. For example, I note that U.S. Patent Publication 2008/0303629 to Yamagiwa describes the use of an RFID vehicle-use key "for starting a vehicle and includes a radio communication means for performing communication with an external communication means other than the vehicle." *See* EX1009, Abstract, ¶ [0011]. Similarly, U.S. Patent Publication 2007/0093200 to Dobosz describes a depicts an "RFID tag or transponder 90 associated with each cellular phone 22," where such a tag could be used as part of an "acquisition device" related to a vehicle "for acquiring information from at least one cellular phone located in the vehicle, having an input coupled to the control circuit . . ." for the vehicle. *See* EX1010, ¶ [0019], claim 1. Finally, a translation of Japanese Patent JP2007235530 describes a "vehicle communication system" that uses an "RFID tag build into the mobile phone" to perform functions around the vehicle such as unlocking the door, authenticating a user, and starting the engine. *See* EX1012 (machine translation of EX1011 provided by Espacenet), ¶¶ [0011]-[0015]. Accordingly, in my review of this contemporaneous disclosure from multiple sources demonstrating that RFID enabled devices were commonly used with vehicles (and were already present in smartphones), together with my own personal knowledge of such devices at the time of the '470 Patent, it is my opinion that it would have been obvious to a POSITA that the smartphone in the Cherouny-Harter combination would have also rendered obvious the claimed RFID enabled device.

IX. SUBSTANTIAL NEW QUESTION OF PATENTABILITY #3 – CHEROUNY IN VIEW OF SHUMAN

63. It is my opinion that claim 1 of the '470 Patent is disclosed, suggested, or rendered obvious by Cherouny in view of Shuman. I have reviewed, had input into, and agree with the arguments made in the Claim Chart (Exhibit AA) for this substantial new question of patentability.

64. Regarding the motivation to combine Cherouny and Shuman with respect to the wireless identification and data logging module (limitation [1.1]), it is my opinion that a POSITA would have found it obvious to use the teachings from Shuman (i.e., the use of driver profiles and recording vehicle location and speed in the vehicle units' memory) because this would have represented a simple modification to Cherouny's system, which already describes "record[ing] the driver speed over a given period of time." EX1004, ¶ [0035]. Accordingly, to the extent Cherouny was lacking any implementation details on how or where to record information about operation of the vehicle, Shuman provides explicit details of the same (e.g., that its "driver recorder 225 continuously stores a history of the vehicle and vehicle environment in a non-volatile secure data storage device," and that this "data storage device may be in the vehicle or may be located remotely," EX1006, 30:60-31:12), and a POSITA would have been aware of these techniques in view of Shuman's explicit disclosure of them. A POSITA would have had a reasonable expectation of success in implementing Shuman's teachings, particularly given Cherouny's disclosure that with its invention "the memory capability of the speed governor allows for a permanent record of the drivers possible violations." EX1004, ¶ [0009]. It is my opinion that Shuman, accordingly, offers explicit implementation details for a data logging module that would have been implemented into Cherouny's vehicle control system.

65. Regarding the combination of Cherouny and Shuman for limitation [1.3] related to receiving speed and location information, it is my opinion that a POSITA would have seen it as beneficial and obvious to include capabilities of monitoring and receiving speed and location information into Cherouny's system based on these explicit teachings in Shuman. Cherouny's system already includes the components necessary to obtain this information (e.g., through its automobile speed sensor 108 and GPS 114), and to the extent it is not explicit, Shuman provides the implementation details as to how this information would be received by the processor of the system. *See* EX1004, claim 1, ¶¶ [0020], [0035], [0040]; EX1006, Abstract, 9:52-57. A POSITA would have recognized that monitoring speed and location (e.g., in view of Shuman's explicit

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teachings) would further Cherouny's stated goal of improving safety of at-risk drivers. A POSITA would have had a reasonable expectation of success of implementing Shuman's teachings in view of Cherouny disclosing transmission of "location and speed data" and that Cherouny's system already includes the components for doing so.

66. Regarding the combination of Cherouny and Shuman for limitation [1.4] related to a data logging device that records vehicle operation data, a POSITA would have combined the teachings of Shuman related to a data logging device into the base system of Cherouny for the same reasons I discuss immediately above in paragraphs 64-65. For example, a POSITA would have recognized that Shuman's explicit disclosure (identified in the Claim Chart) would have added desirable functionality to Cherouny and once again furthered its goal of improving the safety of at-risk drivers, e.g., by allowing a moderator to review driving records of the monitored and at-risk driver. A POSITA would have had a reasonable expectation of success in making the combination for the same reasons discussed herein, and particularly, given Cherouny already discloses the general idea of recording speed over a period of time.

X. SUBSTANTIAL NEW QUESTION OF PATENTABILITY #4 – CHEROUNY IN VIEW OF PETRIK

67. It is my opinion that claim 1 of the '470 Patent is disclosed, suggested, or rendered obvious by Cherouny in view of Petrik. I have reviewed, had input into, and agree with the arguments made in the Claim Chart (Exhibit AA) for this substantial new question of patentability.

68. Regarding the motivation to combine Cherouny and Petrik with respect to the wireless identification and data logging module (limitation [1.1]), it is my opinion that a POSITA would have found it obvious to use the teachings from Petrik (i.e., recording vehicle location and speed in the vehicle units' memory) because this would have represented a simple modification to Cherouny's system, which already describes "record[ing] the driver speed over a given period of time." EX1004, ¶ [0035]. Accordingly, to the extent Cherouny was lacking any implementation details on how or where to record information about operation of the vehicle, Petrik provides explicit details of the same (e.g., "automatically and irrefutably logging . . . operational parameters . . . and recording these on a secure smart card as well as in the vehicle units' memory," EX1006, ¶ [0009]) and a POSITA would have been aware of these techniques in view of Petrik's explicit disclosure of them. A POSITA would have had a reasonable expectation of success in

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implementing Petrik's teachings, particularly given Cherouny's disclosure that with its invention "the memory capability of the speed governor allows for a permanent record of the drivers possible violations." EX1004, ¶ [0009]. Thus, Petrik offers explicit implementation details for a data logging module that would have been implemented into Cherouny's vehicle control system.

69. Regarding the combination of Cherouny and Petrik for limitation [1.3] related to receiving speed and location information, it is my opinion that a POSITA would have seen it as beneficial and obvious to include capabilities of monitoring and receiving speed and location information into Cherouny's system based on these explicit teachings in Petrik. Cherouny's system already includes the components necessary to obtain this information (e.g., through its automobile speed sensor 108 and GPS 114), and to the extent it is not explicit, Petrik provides the implementation details as to how this information would be received by the processor of the system. *See* EX1004, claim 1, ¶¶ [0020], [0035], [0040]; EX1007, ¶¶ [0009], [0025]. A POSITA would have recognized that monitoring speed and location (e.g., in view of Petrik's explicit teachings) would further Cherouny's stated goal of improving safety of at-risk drivers. A POSITA would have had a reasonable expectation of success of implementing Petrik's teachings in view of Cherouny disclosing transmission of "location and speed data" and that Cherouny's system already includes the components for doing so.

70. Regarding the combination of Cherouny and Petrik for limitation [1.4] related to a data logging device that records vehicle operation data, a POSITA would have combined the teachings of Petrik related to a data logging device into the base system of Cherouny for the same reasons I discuss immediately above in paragraphs 68-69. For example, a POSITA would have recognized that Petrik's explicit disclosure (identified in the Claim Chart) would have added desirable functionality to Cherouny and once again furthered its goal of improving the safety of at-risk drivers, e.g., by allowing a moderator to review driving records of the monitored and at-risk driver. A POSITA would have had a reasonable expectation of success in making the combination for the same reasons discussed herein, and particularly, given Cherouny already discloses the general idea of recording speed over a period of time.

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XI. SUBSTANTIAL NEW QUESTION OF PATENTABILITY #5 – CHEROUNY IN VIEW OF BOUCHARD

71. It is my opinion that claim 1 of the '470 Patent is disclosed, suggested, or rendered obvious by Cherouny in view of Bouchard. I have reviewed, had input into, and agree with the arguments made in the Claim Chart (Exhibit AA) for this substantial new question of patentability.

72. Regarding the motivation to combine Cherouny and Bouchard with respect to the wireless identification and data logging module (limitation [1.1]), it is my opinion that a POSITA would have found it obvious to use the teachings from Bouchard (i.e., recording operational event information, a record of driving history) because this would have represented a simple modification to Cherouny's system, which already describes "record[ing] the driver speed over a given period of time." EX1004, ¶ [0035]. Accordingly, to the extent Cherouny was lacking any implementation details on how or where to record information about operation of the vehicle, Bouchard provides explicit details of the same (e.g., "recording the collected relevant data and recording a driver profile" EX1008, claim 1), and a POSITA would have been aware of these techniques in view of Bouchard's explicit disclosure of them. A POSITA would have had a reasonable expectation of success in implementing Bouchard's teachings, particularly given Cherouny's disclosure that with its invention "the memory capability of the speed governor allows for a permanent record of the drivers possible violations." EX1004, ¶ [0009]. Thus, Bouchard offers explicit implementation details for a data logging module that would have been implemented into Cherouny's vehicle control system.

73. Regarding the combination of Cherouny and Bouchard for limitation [1.3] related to receiving speed and location information, it is my opinion that a POSITA would have seen it as beneficial and obvious to include capabilities of monitoring and receiving speed and location information into Cherouny's system based on these explicit teachings in Bouchard. Cherouny's system already includes the components necessary to obtain this information (e.g., through its automobile speed sensor 108 and GPS 114), and to the extent it is not explicit, Bouchard provides the implementation details as to how this information would be received by the processor of the system. *See* EX1004, claim 1, ¶¶ [0020], [0035], [0040]; EX1008, 9:21-50, claim 1. A POSITA would have recognized that monitoring speed and location (e.g., in view of Bouchard's explicit teachings) would further Cherouny's stated goal of improving safety of at-risk drivers. A POSITA would have had a reasonable expectation of success of implementing Bouchard's teachings in view

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of Cherouny disclosing transmission of "location and speed data" and that Cherouny's system already includes the components for doing so.

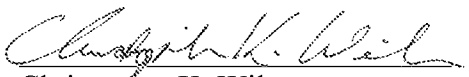
74. Regarding the combination of Cherouny and Bouchard for limitation [1.4] related to a data logging device that records vehicle operation data, a POSITA would have combined the teachings of Bouchard related to a data logging device into the base system of Cherouny for the same reasons I discuss immediately above in paragraphs 72-73. For example, a POSITA would have recognized that Bouchard's explicit disclosure (identified in the Claim Chart) would have added desirable functionality to Cherouny and once again furthered its goal of improving the safety of at-risk drivers, e.g., by allowing a moderator to review driving records of the monitored and at-risk driver. A POSITA would have had a reasonable expectation of success in making the combination for the same reasons discussed herein, and particularly, given Cherouny already discloses the general idea of recording speed over a period of time.

XII. CONCLUSION

75. I hereby declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct, and that all statements made of my own knowledge are true and that all statements made on information and belief are believed to be true. I understand that willful false statements are punishable by fine or imprisonment or both. *See* 18 U.S.C. § 1001.

Dated: August 30, 2023

Respectfully Submitted,



Christopher K. Wilson

Appendix - CV

CHRISTOPHER K. WILSON

Redwood City, CA 650.867.2621 Chris@CWcons.com http://www.linkedin.com/in/cwilson7

Connected Vehicle & Telematics Consultant – Testifying Expert

I have been developing vehicle telematics and safety systems since 1991, mostly for safety and Advanced Driver Assistance Applications (ADAS). I participated in the early development of key connected vehicle telematics and safety technologies, including radar, positioning, communications, and mapping, worked with many automakers, suppliers, and government agencies, and was involved in the deployment and assessment of many telematics systems from Automatic Collision Notification to systems for Stability Control and Driver Assistance. I also helped set requirements and requirement testing methodologies for many ADAS systems.

I currently work as a consultant for Connected and Automated Vehicle applications (vehicle and infrastructure), and map databases. I am also an expert witness and have written over 40 reports regarding intellectual property and vehicle injury matters and testified 9 times. I am an industry insider with a gift for explaining complicated ideas in a convincing and easy to understand manner.

Expertise in:

- Vehicle Safety & Safety Systems Assessment
- Navigation, Telematics, Data Science
- Radar, camera, & Lidar sensors
- Vehicle & infrastructure interaction
- Remote diagnostics, Sensor & Software Management (OTA updates)
- Vehicle data collection, analysis & applications
- Positioning, communications & mapping technology
- Vehicle & traffic technology and deployment
- Accident Reconstruction

AREAS OF EXPERTICE

(with representative dates)

Vehicle Telematics and Safety Systems

- Developed one of the first Automatic Collision Notification systems based on airbag deployment and biomechanical studies. Worked with first responders & ER physicians. 1994.
- Developed systems for the collection and processing of vehicle information for traffic assessment. 1995-2011.
- Algorithms for skid protection and dynamic vehicle control, braking & speed systems. 1999.
- Developed predictive safety systems based on map information, speed control. 1998.
- Developed metrics for regulatory evaluation of active safety systems including Forward Collision Warning, Blind Spot Monitoring, Stop Sign Warning, Curve Speed Warning. 2002.
- Litigation support for Various radar-based safety systems. 2016.
- Telemetry analysis (missiles, spacecraft, ground vehicles). 1981-Present.

Sensors

Radar

- Designed and operated Over-The-Horizon radar. 1984.
- Synthetic Aperture Radar assessment and evaluation. 1989.
- Evaluation of radar algorithms for F16 radar systems (MTI). 1987.

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- Automotive radar development for ACC & FCW systems. 1995.
- Assessed various radar-based safety systems. 2002-2017.

Image sensors & algorithms (camera and video)

- Image recognition & processing algorithms for various reconnaissance assets. 1986.
- 3D scene reconstruction from imagery, photogrammetry. 1987, 2017.
- Assessment of image based FCW, AEB and lane following systems. 2002-2016.
- Photogrammetry for HD mapping applications. 2018.

Lidar

- Evaluated and utilized Lidar systems for Forward Collision Warning. 2003.
- Developed Lidar processing applications for mapping. 2008-2018

Communications

- Developed Vehicle-to-vehicle technologies (DSRC). 1999-2016.
- Extensive use and evaluation of cellular communications for vehicles. 1995-2018.
- Use of paging network for emergency services. 1993.
- Developed various vehicle telematics and infotainment systems. 1993-2016
- Evaluation and development of satellite communications systems. 1984-2016.

Positioning

- Evaluation and use of GPS and many high precision enhancements. 1984-2018
- Requirements specification for GPS III and Galileo. 2004.
- Developed precision location techniques for vehicles. 1996-2018.

Maps

- Responsible for 2nd generation map concepts and specifications for industry (HD Maps). 2000.
- Functional safety for map databases. 2016-2018.
- Developed high precision maps for automated vehicles. 1999-2018.
- Developed tools for incremental updates and quality management. 2000-2018.

Vehicle Diagnostics

- Remote diagnostics of powertrains for warranty and repair planning. 2001.
- Monitored infotainment systems to assess driver preferences and system functionality. 2002.
- Diagnostics of driving style for safety and efficiency evaluations. 2012.
- Telemetry diagnostics of air and space vehicles. 1985.

Cooperative Systems

Insurance- Developed methods and tools for peer comparisons to assess driver risk. 2015.

Transportation Operations- Understanding vehicle movements and implications for traffic and signals based on vehicle probes. 1994-2018.

Outreach

- I was the primary instigator and public advocate for vehicle-to-vehicle communications and grew this effort from "can't be done" to deployment based on my advocacy.
- I have raised money for 4 startups selling a technical vision.
- Park docent leading trips on various nature topics.

PROFESSIONAL EXPERIENCE

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Consultant, Intellectual Property and Connected Vehicles. **2012 – Present**

ATG Risk Solutions, Seattle, WA **2016 - 2016**

VP Bus Dev. *(Developing telematics-based risk assessment for Insurance)*

Vehicle Data Science Corporation, Redwood City, CA **2013 - 2016**

CEO *(Start-up building kinematic maps for automated vehicle applications.)*

TomTom BV, Redwood City, CA **2008 - 2011**

Director of Program & Product Mgmt., Advanced Driver Assistance Systems (2009 – 2011)
Director of R&D (2008 – 2009)

DaimlerChrysler Research and Technology North America Inc., Palo Alto, CA **1996 - 2008**

Vice President, ITS Strategy & Programs (2002 – 2007)
Group Manager, Telematics & Safety (1998 – 2002)
Senior Research Scientist (1996-1998)

Information Access Inc., San Francisco, CA **1995 - 1996**

Director of Product Development (1995-1996)

TRW Inc., Sunnyvale, CA **1986 - 1995**

Program Manager (1991 - 1995)
Senior Systems Engineer (1986 - 1991)

GTE Government Systems Inc., Mt. View, CA **1983 - 1986**

Systems Engineer (1983 - 1986)

EDUCATION/TRAINING

PhD Candidate (1982), Astrophysics, University of California, San Diego
BA (1981), Physics, Princeton University, Princeton, NJ
Advanced courses in business, strategy, & technology @ Harvard, Stanford, Berkeley, MIT
Training in **Software Forensics** (copyright infringement, software theft).
Accident Reconstruction. Certificate from Society of Automotive Engineers. ACTAR certified #3846.

PROFESSIONAL ASSOCIATIONS

Member, Institute of Navigation (ION); Society of Automotive Engineers (SAE); Institute of Transportation Engineers (ITE); Institute of Electrical and Electronics Engineers, Senior Member (IEEE); California Association of Accident Reconstruction Specialists (CA2RS); Accreditation Commission for Accident Reconstruction (ACTAR) #3846, National Association of Professional Accident Reconstruction Specialists.

Board Member, *Inside GNSS* magazine (advisory board); Chair of *IEEE Consultants Network of Silicon Valley*; ITS California (former), Vehicle Infrastructure Integration Consortium (Founding Director, previous); Alliance of IEEE Consultants Network Coordinating Committee (AICNCC).

PATENTS AND PUBLICATIONS

10 US patents in vehicle positioning and vehicle data processing and analytics and numerous foreign patents.

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McGraw-Hill *AccessScience* article on "Intelligent Vehicles and Infrastructure", 2017
Chapter on Probe Data in Springer-Verlag's *Handbook of Intelligent Vehicles*, 2012
Widely quoted in publications such as Scientific American and Telematics Update
Many presentations to industry groups, often as a representative of the automotive industry.

LITIGATION EXPERIENCE

15 depositions, 30+ IPRs, 50+ expert reports, majority patent related (partial listing).

- Expert for BMW (Finnegan) against navigation system complaint. Few hours consulting. 2012
- Supported primary expert (for TomTom) in technology understanding for invalidity and non-infringement. 2013.
- Expert against OnStar in remote diagnostics case. Developed infringement arguments. Case settled in 2013.
- Expert for Hyundai (Finnegan) in remote diagnostics case. Prepared technology tutorial and multiple IPR declarations. Case settled, 2014.
- Expert for Honda (Jones Day) in remote diagnostics case. Multiple IPR declarations. 2014.
- Expert for Toyota in Telematics/ navigation case. IPR declaration. 2015.
- Expert for BMW on remote data processing case. 2015.
- Expert for BMW (DLA Piper) in vehicle safety technology case (radar, occupant sensing). Invalidity and non-infringement reports, deposition testimony. 2015.
- Expert for Wavetronix (Workman Nydegger) in traffic radar case. IPR declaration, deposition. 2016.
- Expert against LA METRO in HOV reporting case. IPR declaration, deposition. 2016.
- Expert for BMW (DLA Piper) on remote infotainment systems. 2017.
- Expert for Domino's (DLA Piper, Australia) on fleet monitoring systems. 2017.
- Expert for BMW (DLA Piper) on digital radio systems. 2017.
- Expert for Unified Patents on location-based services. 2017.
- Expert for Velocity v. FCA on vehicle management system. 2018.
- Expert for Unified Patents on map data management and display system. 2018.
- Expert for Blue Dot Systems against Omnitracs on Fleet Management Trade Secrets. 2018
- Expert for MicroMobio on Trademark matter (SuperCruise). 2018.
- Expert on vehicle safety for negligence in personal injury matter. 2019.
- Expert for BMW (DLA Piper) on location-based services patent. 2019.
- Expert for Unified Patents on pairing vehicles with remote devices. 2019.
- Expert for DEI (Cooley) v. ADS in vehicle remote starter patents. 2019.
- Expert for Unified Patents on navigation systems. 2020.
- Expert for BMW (DLA Piper) on connected vehicle systems. 2020.
- Expert for Equipmentshare.com (DLA Piper) on rental equipment remote starter patents. 2021.
- Expert for Unified Patents on pairing vehicles with remote devices. 2021.
- Expert for Tesla on vehicle charging infrastructure. 2022.
- Expert for Unified Patents on infrastructure-based racking systems. 2022.

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Substitute for form 1449/PTO				***Complete if Known***	
				Application Number	In Ex Parte Reexamination of U.S. Patent 10,259,470
INFORMATION DISCLOSURE STATEMENT *(Use as many sheets as necessary)*				Filing Date	Herewith
				First Named Inventor	Michael Phelan
				Art Unit	TBD
				Examiner Name	TBD
Sheet	1	of	2	Attorney Docket Number	PHE101

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No.1	Document Number Number-Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	Ex. 1004		03-09-2006	U.S. Patent Publication 2006/0052909 ("Cherouny")	
	Ex. 1005		08-07-2008	U.S. Patent Publication 2008/0188217 ("Harter")	
	Ex. 1006		06-10-2003	U.S. Patent 6,577,937 ("Shuman")	
	Ex. 1007		07-19-2007	U.S. Patent Publication 2007/0168125 ("Petrik")	
	Ex. 1008		11-07-1995	U.S. Patent 5,465,079 ("Bouchard")	
	Ex. 1009		12-11-2008	U.S. Patent Publication 2008/0303629	
	Ex. 1010		04-06-2007	U.S. Patent Publication 2007/0093200	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.1	Foreign Patent Document Country Code3 –Number 4 –Kind Code5 (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T6
	Ex. 1011		09-13-2007	Japanese Patent JP2007235530		Y

PTO/SB/08a (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO				***Complete if Known***	
				Application Number	In Ex Parte Reexamination of U.S. Patent 10,259,470
INFORMATION DISCLOSURE STATEMENT *(Use as many sheets as necessary)*				Filing Date	Herewith
				First Named Inventor	Michael Phelan
				Art Unit	TBD
				Examiner Name	TBD
Sheet	2	of	2	Attorney Docket Number	PHE101

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	Ex. 1002	Prosecution History of U.S. Patent Application 15/336,110	
	Ex. 1003	Declaration of Christopher Wilson	
	Ex. 1012	Translation of Japanese Patent JP2007235530 (EX1011)	
	Ex. AA	Claim Chart Comparing Claims 1 and 4 of U.S. Patent 10,259,470 to Cherouny, Harter, Shuman, Petrik, and Bouchard	

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.
1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.
This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.** *If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.*

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent of Phelan	§	REQUEST FOR *EX PARTE* REEXAMINATION
U.S. Patent 10,259,470	§	
	§	Attorney Docket No.: PHE101
Filed: October 27, 2016	§	
	§	Customer No.: 165774
Issued: April 16, 2019	§	
	§	Real Party in Interest:
Title: DRIVER AUTHENTICATION SYSTEM AND METHOD FOR MONITORING AND CONTROLLING VEHICLE USAGE	§	Unified Patents, LLC

CERTIFICATE OF SERVICE

The undersigned certifies that copies of the following,

(1) *Request for Ex Parte Reexamination* Transmittal Form for U.S. Patent 10,259,470;

(2) *Request for Ex Parte Reexamination* of U.S. Patent 10,259,470;

(3) Power of Attorney;

(4) Information Disclosure Statement by Requester;

(5) Exhibits 1001 through 1012 and Exhibit AA; and

(6) Certificate of Service,

in their entirety were served on:

Ortiz & Lopez, PLLC
P.O. Box 4484
Albuquerque, NM 87196-4484

the attorney of record for the assignee of U.S. Patent No. 10,259,470, in accordance with 37 C.F.R. § 1.510(b)(5), on August 31, 2023, by the U.S. Postal Service Priority Express mail.

Dated: August 31, 2023

/David C. Seastrunk/
David C. Seastrunk
Unified Patents, LLC
david@unifiedpatents.com
Attorney for Third Party Requester
Registration No.: 73,723

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent of Phelan	§	REQUEST FOR *EX PARTE* REEXAMINATION
U.S. Patent 10,259,470	§	Attorney Docket No.: PHE101
Filed: October 27, 2016	§	Customer No.: 165774
Issued: April 16, 2019	§	Real Party in Interest:
Title: DRIVER AUTHENTICATION SYSTEM AND METHOD FOR MONITORING AND CONTROLLING VEHICLE USAGE	§	Unified Patents, LLC

REQUEST FOR *EX PARTE* REEXAMINATION OF U.S. PATENT 10,259,470

Mail Stop "*Ex Parte* Reexam"
Attn: Central Reexamination Unit
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Commissioner:

Pursuant to the provisions of 35 U.S.C. §§ 301-307, Unified Patents, LLC ("Requester") hereby requests an *ex parte* reexamination of claims 1 and 4 of United States Patent 10,259,470 ("the '470 Patent," EX1001), which issued on April 16, 2019 to Michael Phelan resulting from U.S. Patent Application No. 15/336,110 filed on October 27, 2016. The '470 Patent is currently assigned to The Phelan Group, LLC ("Phelan Group"). The assignment to Phelan Group is recorded in the U.S. Patent and Trademark Office ("USPTO") at reel/frame 046851/0608.

Requester submits that this Request presents prior art references and analysis that are non-cumulative of the prior art that was before the Examiner during the original prosecution of the '470 Patent and that claims 1 and 4 of the '470 Patent are unpatentable over these references. Requester therefore requests that an order for reexamination and an Office Action rejecting claims 1 and 4 be issued.

Ex Parte Patent Reexamination Filing Requirements

Pursuant to 37 C.F.R. § 1.510(b)(l), statements pointing out at least one substantial new question of patentability based on material, non-cumulative reference patents and printed publications for the Challenged Claims of the '470 Patent are provided in Section I of this Request.

Pursuant to 37 C.F.R. § 1.510(b)(2), reexamination of the Challenged Claims of the '470 Patent is requested, and a detailed explanation of the pertinence and manner of applying the cited references to the Challenged Claims is provided in Section II and Exhibit AA attached to this Request.

Pursuant to 37 C.F.R. § 1.510(b)(3), copies of every patent or printed publication relied upon or referred to in the statement pointing out each substantial new question of patentability or in the detailed explanation of the pertinence and manner of applying the cited references are provided as Exhibits 1001-1012 of this Request.

Pursuant to 37 C.F.R. §1.510(b)(4), a copy of the '470 Patent is provided as Exhibit 1001 of this Request, along with a copy of any disclaimer, certificate of correction, and reexamination certificate issued corresponding to the patent.

Pursuant to 37 C.F.R. § 1.510(b)(5), the attached Certificate of Service indicates that a copy of this Request, in its entirety, has been served on Patent Owner at the following address of record for Patent Owner, in accordance with 37 C.F.R. § 1.33(c):

Ortiz & Lopez, PLLC
P.O. Box 4484
Albuquerque, NM 87196-4484

Also submitted herewith is the fee set forth in 37 C.F.R. § 1.20(c)(2).

Pursuant to 37 C.F.R. § 1.510(b)(6), Requester hereby certifies that the statutory estoppel provisions of 35 U.S.C. § 315(e)(l) and 35 U.S.C. § 325(e)(l) do not prohibit Requester from filing this *ex parte* patent reexamination request.

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3. SNQ2: Cherouny in view of Harter Renders Claims 1 and 4 Obvious and Presents a Substantial New Question of Patentability 15

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II. DETAILED APPLICATION OF THE PRIOR ART TO EVERY CLAIM FOR WHICH REEXAMINATION IS REQUESTED **30**

III. DISCLOSURE OF CONCURRENT LITIGATION, REEXAMINATION, AND RELATED PROCEEDINGS **31**

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APPENDIX – EXHIBIT AA

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TABLE OF EXHIBITS

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EX1002	Prosecution History of U.S. Patent Application 15/336,110
EX1003	Declaration of Christopher K. Wilson
EX1004	U.S. Patent Publication 2006/0052909 ("Cherouny")
EX1005	U.S. Patent Publication 2008/0188217 ("Harter")
EX1006	U.S. Patent 6,577,937 ("Shuman")
EX1007	U.S. Patent Publication 2007/0168125 ("Petrik")
EX1008	U.S. Patent 5,465,079 ("Bouchard")
EX1009	U.S. Patent Publication 2008/0303629
EX1010	U.S. Patent Publication 2007/0093200
EX1011	Japanese Patent JP2007235530
EX1012	Translation of Japanese Patent JP2007235530 (EX1011)
EX AA	Claim Chart Comparing Claims 1 and 4 of U.S Patent 10,259,470 to Cherouny, Harter, Shuman, Petrik, and Bouchard

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I. SUBSTANTIAL NEW QUESTIONS OF PATENTABILITY

Prior to describing the substantial new questions of patentability presented in this Request, provided below is an overview of the '470 Patent, a discussion of claim construction, and a summary of the prior art in the present Request.

A. U.S. Patent 10,259,470

1. Summary

The '470 Patent is entitled "Driver Authentication System and Method for Monitoring and Controlling Vehicle Usage." The '470 Patent discloses a "driver authentication and safety system and method for monitoring and controlling vehicle usage by high-risk drivers." EX1001, Abstract. The '470 Patent purports to do so through the use of "operating profiles" that "can be loaded to a driver identification and data logging module in conjunction with a remote computer." *Id.* Furthermore, the system includes components such as a "master control unit" that receives an identification code to authenticate the high-risk driver to "operate the vehicle within the desired operating profile." *Id.* Finally, a "slave control unit" is disclosed that "receives commands from the master control unit" and can "generate[] a real time alarm signal if the driver violates the preprogrammed operating profile unique to the driver." *Id.*

The '470 Patent acknowledged that "[w]ith more young drivers getting licenses each year, there has been an unfortunate increase in accidents along with the ensuing damage, debilitating injuries and sometimes death" attributable to "generally poor driving habits." *Id.*, 1:39-48. The '470 Patent further acknowledges other categories of "high-risk driver[s]," including "teen driver, fleet or rental drivers, habitual reckless drivers, aged drivers, drunk drivers, drowsily drivers, distracted drivers etc" that could benefit from the '470 Patent's alleged invention. *Id.*, 2:31-50.

As mentioned, the '470 Patent purports to improve driver safety through the use of an alarm signal generated by a slave control unit when the driver violates a preprogrammed operating profile unique to the driver. *Id.* This alarm could continue until the driver corrects the operating condition (e.g., speed, location) and brings the vehicle within the desired operating profile (e.g., if the driver is going too fast, slowing the vehicle to be within the operating profile range). *Id.*, 2:51-3:3. The system further "can include a GPS (Global Positioning System) module to determine and measure parameters such as, time of day, speed and location data associated with the vehicle." *Id.*

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An exemplary architecture of the system is shown in connection with Figure 5:

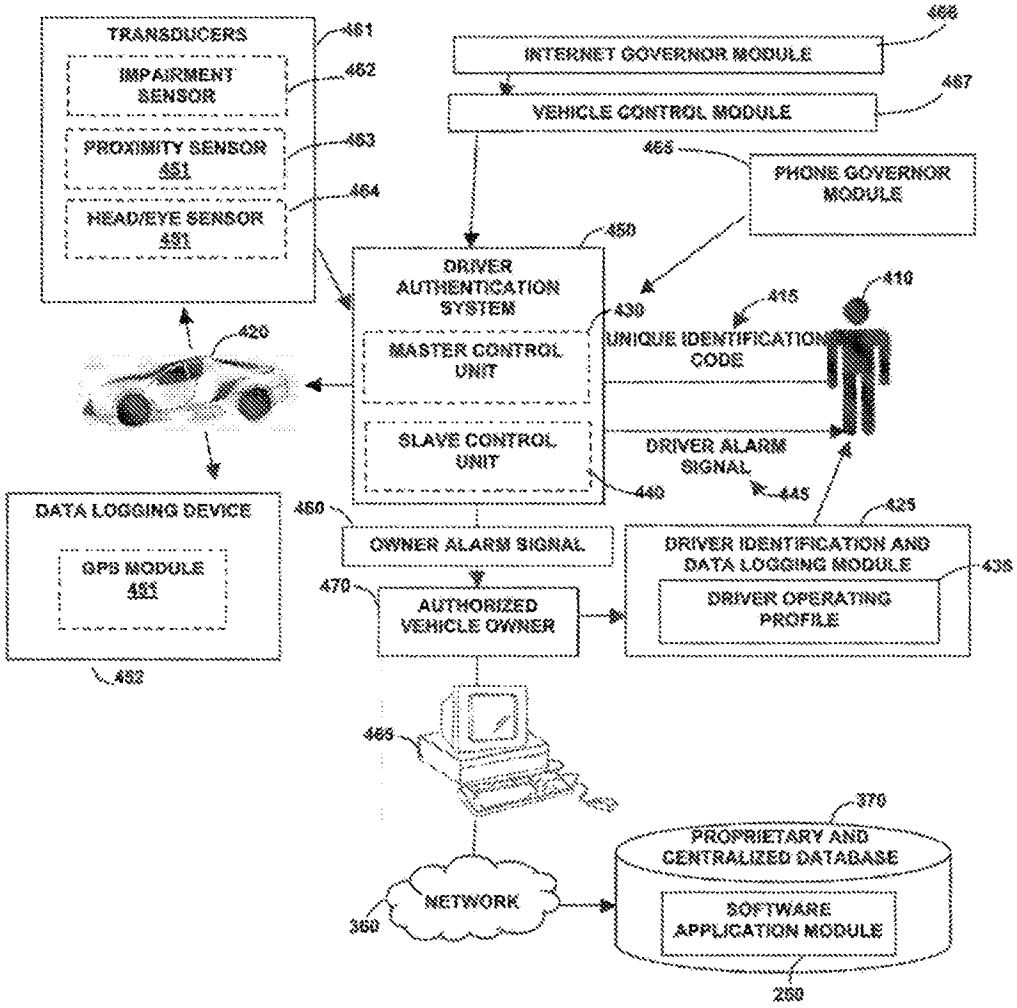

FIG. 5

The '470 Patent describes a software system and general process through which an authorized user (e.g., a parent) can establish an operating profile for the at-risk driver. *Id.*, 4:3-67, 2:54-55. The profile may include, for example, "maximum allowable vehicle speed, user infraction limits . . . vehicle locations," and so on. *Id.*, 6:46-7:2. Relevant to challenged claim 1, the system further discloses a "data logging device" that "can be used to record vehicle operation data associated with operation of the vehicle," which may include the vehicle's speed and location. *Id.*, 7:46-57. Finally, a "master control unit" and "slave control unit" are in communication with one

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another, and, may generate an alarm signal or take control of the vehicle (e.g., to "lower/limit speed") when the driver operates outside of the established operating profile. *Id.*, 7:58-9:37.

These aspects of the '470 Patent (establishing operating profiles for at-risk drivers, identifying drivers, generating alarm signals, logging vehicle operation data, and/or slowing down the vehicle), however, were all well known prior to the time of the '470 Patent, as established and explained in connection with the prior art references in this Request—all of which were never presented during the '470 Patent's prosecution. *See* EX1002.

For reference, the challenged claims are listed below:

Claim 1

[1P] A vehicle control system, comprising:

[1.1] a wireless identification and data logging module;

[1.2] a master control unit in a vehicle for wirelessly authenticating at least one occupant via said wireless driver identification and data logging module and associating an operating profile with said at least one occupant;

[1.3] a module for receiving at least location and speed information in association with a movement of said vehicle;

[1.4] a data logging device that records vehicle operation data associated with a use of said vehicle, the vehicle operation data comprising at least said location and speed information received from said module; and

[1.5] a slave control unit in said vehicle and which communicates with said master control unit, wherein said slave control unit receives commands from said master control unit and generate an alarm signal;

[1.6] wherein said master control unit provides operation governance of said vehicle within said operating profile.

Claim 4

[4P] The vehicle control system of claim 1

[4.1] wherein said wireless identification and data logging module comprises at least one of: a WIFI enabled device; an RFID enabled device; a Bluetooth enabled device; a cellular telephone; and a smartphone.

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2. Prosecution History

Application 15/336,110 was filed on October 27, 2016, and matured into the '470 Patent. *See* EX1001, EX1002. The '470 Patent issued on April 16, 2019. The application received two notices to file missing parts (*see* EX1002, 61-62, 68-69), followed by a non-final Office Action (*see id.*, 79-89) that contained only a double patenting rejection. The Applicant's response to the double patenting rejection included minor claim amendments to those submitted in the original application (*see id.*, 148-152). After this, the application was immediately allowed without any further prosecution (*see id.*, 157-165), including an Examiner's amendment to correct a wording error in independent claim 1. The stated reasons for allowance pointed to what has been identified above as limitations [1.5] and [1.6], related to the "slave control unit" communicating with the "master control unit" and generating an alarm signal, and where the "master control unit provides operation governance of said vehicle within said operating profile." *Id.*, 163.

None of the references used in this Request were cited in any IDS or otherwise used at all during prosecution. *See* EX1002. As explained in greater detail below and in Exhibit AA, the combinations of references cited in this Request disclose the precise limitations the Examiner identified as allowable subject matter—e.g., generating alarm signals when a driver operates outside an established operating profile, and providing operation governance of a vehicle.

B. Level of Skill in the Art

A person of ordinary skill in the art ("POSITA") as of the earliest claimed priority date for the '470 Patent (i.e., July 1, 2009) would have had at least a bachelor's degree in electrical or mechanical engineering, physics (or a related field) and at least two years of relevant industry experience in vehicle monitoring and control systems, or the equivalent thereof in the 2009. More education can supplement practical experience and vice versa. EX1003, ¶¶ 39-41.[1]

[1] Requester submits the declaration of Mr. Christopher K. Wilson (EX1003), an expert in the field of the '470 Patent. EX1003, ¶¶ 24, 41. Mr. Wilson was a POSITA of the '470 Patent as of its earliest claimed priority date. EX1003, ¶¶ 39-41.

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C. Claim Construction

The claims must be given their "broadest reasonable interpretation consistent with the specification." *See* MPEP § 2258; *In re Yamamoto*, 740 F.2d 1569, 222 USPQ 934 (Fed. Cir. 1984). This Request presents its claim analysis in a manner that is consistent with the broadest reasonable interpretation consistent with the specification.

Requester submits that no terms of the '470 Patent warrant construction beyond their ordinary and customary meaning, or alternatively, only require construction to the extent necessary to determine whether the prior art teaches the claims. EX1003, ¶¶ 42-44; *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017). Below, Requester provides comments on certain claim terms to explain how those terms are used in the specification; however, these comments are merely informative as to what the claim terms encompass under the broadest reasonable interpretation, and Requester does not propose any express constructions.

1. "module" / "wireless identification and data logging module"

Claims 1 recites various modules for performing the functions described by the claim (e.g., in limitation [1.1], a *wireless identification and data logging module*, and in limitation [1.3], a *module for receiving at least location and speed information in association with a movement of said vehicle*).

The '470 Patent's specification discusses the term *module*, giving it a broad meaning, e.g.: "Note that as utilized herein, the term **'module'** may refer to a **physical hardware component and/or to a software module**. . . . Therefore, **when referring to a 'module' herein, the inventors are generally referring to such software modules or implementations thereof**. The methodology described herein can be **implemented as a series of such modules or as a single software module**." EX1001, 6:11-36. The '470 Patent also states that "[g]enerally, **program modules** include routines, programs, objects, components, data structures, etc., that perform particular tasks or implement particular abstract data types." *Id.*, 4:59-62. Accordingly, for purposes of claim 1, Requester submits that a *module* at least encompasses software implementations (either as a series or a single module) to perform the particular tasks of claim 1.

As to the *wireless identification and data logging module*, the '470 Patent describes that "[t]he driver **identification and data logging module** 425 can be a **mobile telephone, a Smartphone, a WIFI enabled device, an RFD enabled device, a Bluetooth enabled device**, a

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tablet computer a USB compatible device such as for example, iButton, radio frequency identification device (RFID), **software**, etc . . . ." *Id.*, 7:10-16. Requester further notes that, although the '470 Patent's specification describes "[i]n one embodiment" that the *wireless identification and data logging module* may be "a smart phone with one or more of WIFI, RFID, Bluetooth, and GPS capabilities," claim 1 is not so limited. For example, challenged dependent claim 4 explicitly narrows and limits the *wireless identification and data logging module* of claim 1 to be "at least one of: a WIFI enabled device; an RFID enabled device; a Bluetooth enabled device; a cellular telephone; and a smartphone," indicating that claim 1 was not intended to be limited to any such device (or even a physical/hardware device at all, given the '470 Patent's broad definition of a *module* as comprising software).

Accordingly, for purposes of claim 1, Requester submits that the *wireless identification and data logging module* should at least encompass software modules and/or physical hardware components that work with the various elements and accomplish the functions described in claim 1 for identifying a driver and logging data.

2. "master control unit"

Claim 1 recites a *master control unit* (e.g., in limitation [1.2] *for wirelessly authenticating at least one occupant via said wireless driver identification and data logging module and associating an operating profile with said at least one occupant*, in limitation [1.5] for communicating with the *slave control unit*, and in limitation [1.6] as providing *operation governance of said vehicle within said operating profile*).

Although the '470 Patent does not explicitly define the term *master control unit*, the specification discloses the various functions it is responsible for performing, signals it can send and receive, and instructions it can provide:

- "The master control unit 430 can enable vehicle operation within the programmed operating profile 435." EX1001, 7:58-59.
- "The master control unit 430 can authenticate the driver 410 . . ." *Id.*, 7:26-32.
- "The master control unit 430 may also receive data indicative of the speed of the vehicle 420, the location of the motor vehicle 420, and the time of day from a plurality of sources including a WIFI enabled device, an RF source, a Bluetooth enabled device, and a smart-road network source." *Id.*, 8:61-66.

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- "The master control unit 430 can interpret driver authorization, and ascertain the vehicle speed. The master control unit 430 also interprets the location and time of day parameters versus maximum desired threshold limits." *Id.*, 9:6-10.
- "The master control 430 can be configured to define a number of operating parameters for a given driver such as a maximum speed limit and a geo-fence limit defining an acceptable space in which the vehicle may be operated." *Id.*, 10:30-33.
- "The master control unit 430 monitors and logs vehicle performance via the GPS module 504 associated with master control unit 430 . . ." *Id.*, 11:52-58.
- "The master control unit 430 can communicate and send commands to the slave control unit 440 associated with the driver authentication system 450." *Id.*, 10:48-50.
- "The master control unit 430 can be configured to include driver identification and validation module 502 . . ." *Id.*, 8:57-58.

Accordingly, given the specification's disclosure, Requester submits that the term *master control unit* should at least encompass a processor (sometimes, when built into the vehicle, referred to as an electronics control unit, or ECU) within the vehicle, capable of performing the various functions described by the '470 Patent in claim 1, such as monitoring and logging vehicle performance, communicating with the slave control unit, and providing operation governance of the vehicle.

3. "slave control unit"

Claim 1 recites a *slave control unit* (e.g., in limitation [1.5] for communicating with the *master control unit*, receiving commands from the *master control unit*, and generating an alarm signal).

Although the '470 Patent does not explicitly define the term *slave control unit*, the specification discloses the various functions it is responsible for performing:

- "The slave control unit 440 can receive wireless commands from master control unit 430 and generates the alarm signal 445 and 460." EX1001, 10:54-57.
- "The slave control unit 440 generates the driver alarm signal 445, if the driver 410 violates the programmed operating profile 435, as illustrated at block 670." *Id.*, 11:55-58.

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Requester notes that several dependent claims further limit and narrow the scope of the *slave control unit* of claim 1. Specifically, claims 17, 19, and 20 provide specific narrowing limitations: claim 17 requires "wherein said slave control unit further comprises: a power regulator module; a starter relay module; a definable relay module; a slave microcontroller; and an alarm synthesizer," claim 19 requires "wherein said slave control unit generates an alarm signal for remotely alerting an authorized user when said vehicle violates said operating profile," and claim 20 requires "wherein the slave control unit is mounted under a dash board of the vehicle." *See* EX1001, claims 17, 19, 20. Accordingly, the *slave control unit* of claim 1 should, at minimum, not be limited or narrowed by any of the elements explicitly described in these dependent claims.

Accordingly, given the specification's disclosure and the dependent claims, for purposes of claim 1, Requester submits that the term *slave control unit* should at least encompass hardware and/or software within the vehicle, capable of performing the functions described by the claim language, i.e., *receiv[ing] commands from said master control unit and generat[ing] an alarm signal*.

D. Listing of Prior Art Patents and Printed Publications

The following five references present several substantial new questions of patentability to the '470 Patent (having an earliest claimed priority date of July 1, 2009):

- **U.S. Patent Publication 2006/0052909 ("Cherouny"), EX1004**. Cherouny is prior art under at least pre-AIA 35 U.S.C. § 102(b), as Cherouny has a publication date of March 9, 2006.
- **U.S. Patent Publication 2008/0188217 ("Harter"), EX1005**. Harter is prior art under at least pre-AIA 35 U.S.C. §§ 102(a) and (e), as Hater has a publication date of August 7, 2008, and a filing date of February 6, 2008.
- **U.S. Patent 6,577,937 ("Shuman"), EX1006**. Shuman is prior art under at least pre-AIA 35 U.S.C. § 102(b), as Shuman has a filing date of August 1, 2002, and an issue date of June 10, 2003.
- **U.S. Patent Publication 2007/0168125 ("Petrik"), EX1007**. Petrik is prior art under at least pre-AIA 35 U.S.C. § 102(b), as Petrik was published on July 19, 2007.

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- **U.S. Patent 5,465,079 ("Bouchard"), EX1008**. Bouchard is prior art under at least pre-AIA 35 U.S.C. § 102(b), as Bouchard has a filing date of August 13, 1993, and an issue date of November 7, 1995.

E. The Prior Art References, Arguments, and Evidence Present a Substantial New Question of Patentability

As shown below, Requester submits that the prior art references cited herein raise a new "substantial question of patentability" because "the teaching of the (prior art) patents and printed publications is such that a reasonable examiner would consider the teaching to be important in deciding whether or not the claim is patentable." *See* MPEP 2242.

The references discussed below when considered as an ordered combination, teach each limitation of the Challenged Claims, including the ideas of identifying and monitoring at-risk drivers using operating profiles for a vehicle, generating alarm signals, and governing vehicle operation, as recited in claims 1 and 4. Further, the "same question of patentability as to the claim has not been decided by the Office in an earlier concluded examination or review of the patent" at least because none of the combinations of art referenced in this request was before the Office during prosecution of the '470 Patent or the subject of a final written decision in a prior post-grant proceeding challenging the claims of the '470 Patent, any of which that are known to Requester have been listed below in Section III, *infra*.

1. Overview of the SNQs

This Request presents several substantial new questions of patentability (SNQs) for resolution. These SNQs are referred to using a reference number for convenience herein (e.g., SNQ1, SNQ2, etc.). The SNQs presented in this Request are the following:

- **SNQ1:** Claim 1 would have been obvious under pre-AIA 35 U.S.C. §103 by Cherouny.
- **SNQ2:** Claims 1 and 4 would have been obvious under pre-AIA 35 U.S.C. §103 by Cherouny in view of Harter.
- **SNQ3:** Claim 1 would have been obvious under pre-AIA 35 U.S.C. §103 by Cherouny in view of Shuman.

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- **SNQ4:** Claim 1 would have been obvious under pre-AIA 35 U.S.C. §103 by Cherouny in view of Petrik.
- **SNQ5:** Claim 1 would have been obvious under pre-AIA 35 U.S.C. §103 by Cherouny in view of Bouchard.

The following sections provide a brief description of how each reference and/or combination of references presents a substantial new question of patentability that should be considered, and are explained in full detail in **Exhibit AA**.

2. SNQ1: Cherouny Renders Claim 1 Obvious and Presents a Substantial New Question of Patentability

a) Overview of Cherouny; Cherouny Presents a Substantial New Question of Patentability

Cherouny discloses "[a]n improved **electronic programmable speed limiter for drivers of vehicles which can be preprogrammed and controlled** from a remote location via a radio link to update the driver performance and adjust the controls on the speed limiter." EX1004, Abstract. Cherouny discusses that it is "an object of this invention to provide an **electronic programmable speed limiting device for motor vehicles**" and "another object of this invention to provide a programmable electronic device for motor vehicles which also records the driving speed over a given period of time." *Id.*, ¶ [0035]. Just like the '470 Patent, which discloses "systems and methods for monitoring and **controlling vehicle usage by high-risk drivers**" (EX1001, Abstract), Cherouny discloses an "object of this invention is to provide a safety device **for the 'at risk' segment of the driving public by limiting the speed of the motor vehicle they are driving** by programming in a speed limit, by adjusting for driving history, by reassessing allowable speed during rain or darkness." EX1004, ¶ [0038].

Cherouny further speaks to the precise reasons for allowance noted by the Examiner (EX1002, 163)—for example, as to limitation [1.5], Cherouny describes the functions performed by the claimed *slave control unit* (e.g.,communicating with the master control unit and generating an alarm) by disclosing various hardware and/or software (e.g., Cherouny's engine slow down module 120, and audible noise generator 121), which is in connection with and communicating with Cherouny's microprocessor (i.e., the claimed *master control unit*).

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FIG. 20A

FIG. 20B

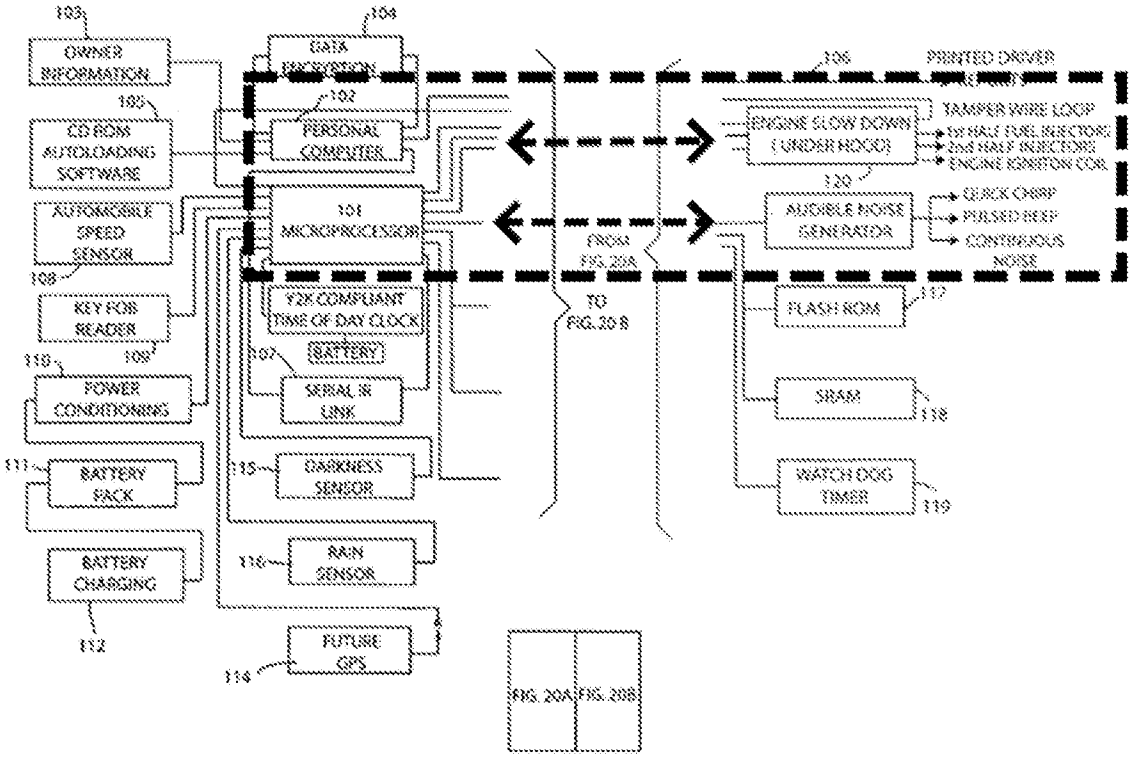

FIG. 20

EX1004, Figs. 20A and 20B (annotated to combine Figures 20A and 20B and show the relationship between the audible noise generator and the microprocessor)

Cherouny explicitly describes "audible noise alarms" that can be triggered when the driver operates outside of the pre-established operating profile, just like the '470 Patent. EX1004, ¶¶ [0077]-[0078], [0082]. Cherouny describes a process by which the moderator (e.g., parent of a teen driver—just like in the '470 Patent) can program audible noises and vehicle operation governance (e.g., slowing down the vehicle) when the car is operating "faster than the speed limit as registered," as described in paragraph 20 of its disclosure:

> "The Moderator is able to make **the following responses to the car going faster than the speed limit as registered** in the database programmed by the software.
>
> 1. **Audible chirp**
>
> 2. **Voice warning** explaining the set speed limit on that section of road and the consequences to the driving record.

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3. **Voice warning** that the parameters were set to not allow speeding in that speed zone (i.e., in a school zone there will be no allowance for passing speeds).

4. **Audible noise alarm at approximately 60 dB noise level** (in order to annoy the driver.)

5. **Shutdown of the first half of the fuel injectors** of the engine.

6. Square wave enable to the second half of the fuel injectors to almost kill the engine.

7. **Shutoff of the ignition**."

EX1004, ¶ [0020]. This paragraph also discloses the other stated reason for allowance in limitation [1.6], e.g., that the *master control unit* provides operation governance of the vehicle. EX1002, 163. Here, Cherouny explicitly discloses that when the car is going faster than the speed limit "as registered in the database programmed by the software," it can limit the speed or even turn off the vehicle ignition. *Id.* And, as shown in Figure 20, it is Cherouny's microprocessor (corresponding to the claimed *master control unit*) that provides the governance via communication with the engine slow down module and audible noise generator. *Id*, Fig. 20. This demonstrates that Cherouny, just like the '470 Patent's step of providing operation governance *within said operating profile*, does the same when the driver in Cherouny's system operates outside of a preset profile by a moderator. *See also* Exhibit AA.

For example, Cherouny describes in detail how a moderator (e.g., parent) may set up a profile for an at-risk driver, e.g., as shown in Figures 7, 8, and 9:

FIG. 7

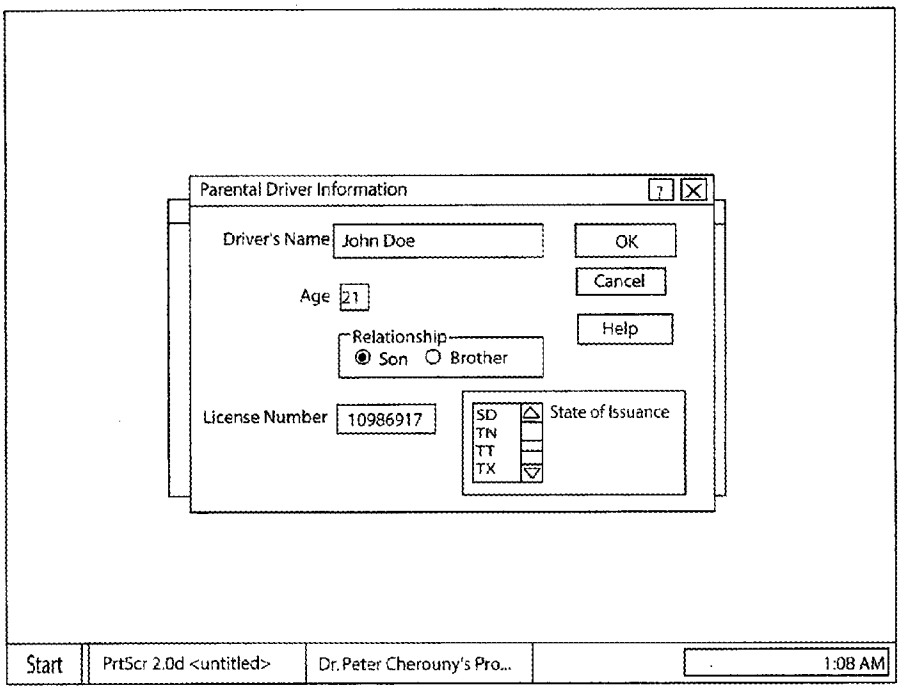

Parental Driver Information
Driver's Name
John Doe
OK
Cancel
Age
21
Help
Relationship
Son
Brother
License Number
10986917
SD
TN
TT
TX
State of Issuance
Start
PrtScr 2.0d <untitled>
Dr. Peter Cherouny's Pro...
1:08 AM

FIG. 8

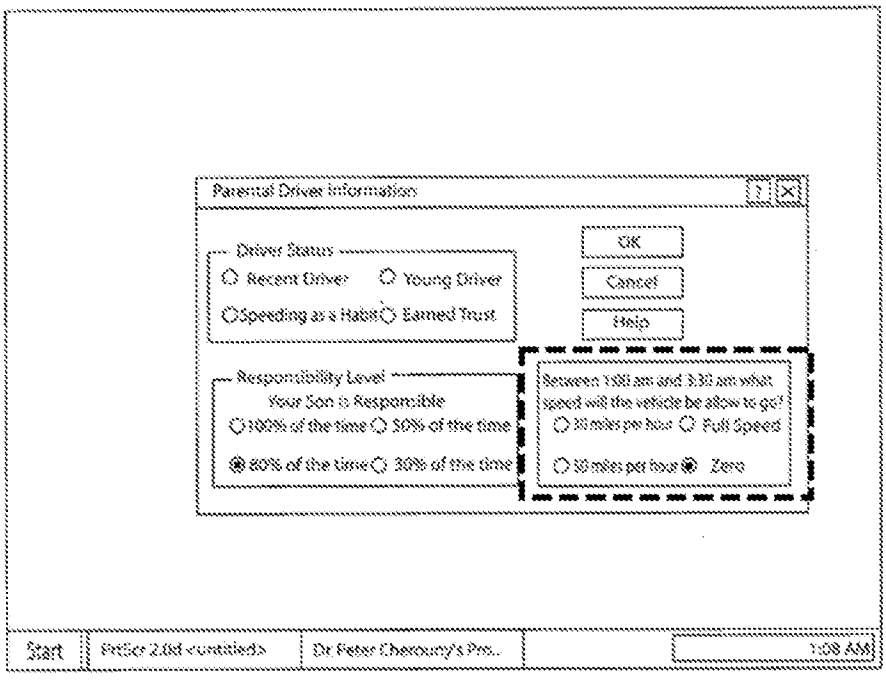
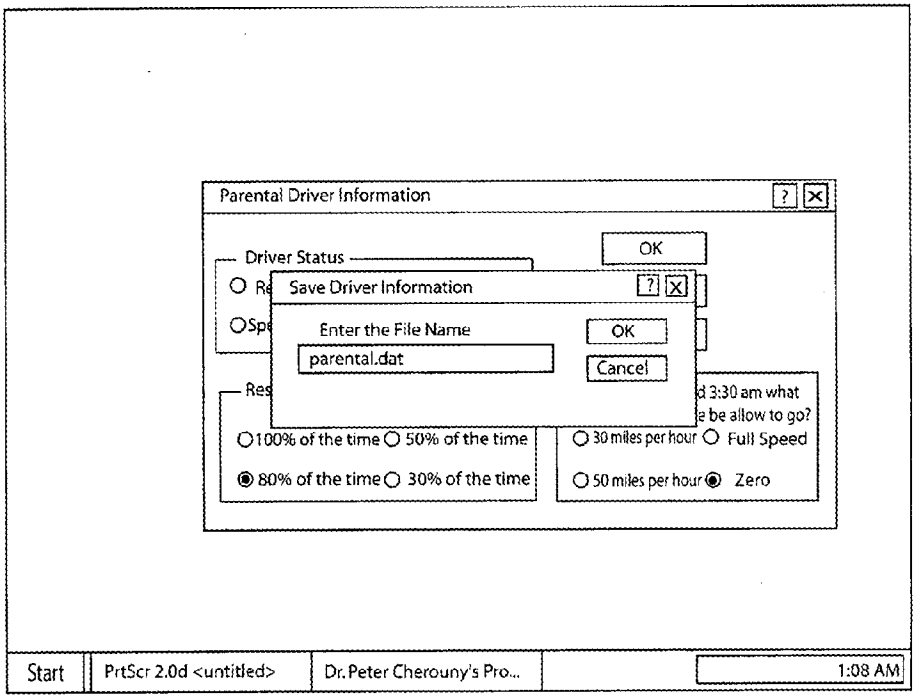

Parental Driver Information
Driver Status
Recent Driver
Young Driver
Speeding as a Habit
Earned Trust
OK
Cancel
Help
Responsibility Level
Your Son is Responsible
100% of the time
50% of the time
80% of the time
30% of the time
Between 1:00 am and 3:30 am what speed will the vehicle be allow to go?
30 miles per hour
Full Speed
10 miles per hour
Zero
Start
PrtScr 2.0d <untitled>
Dr. Peter Cherouny's Pro...
1:08 AM

FIG. 9



EX1004, Figs. 7-9

As shown above, a driver profile may be created, along with a speed limit. EX1004, ¶ [0068].

Cherouny also describes the other limitations of claim 1 (i.e., those that were not identified in the notice of allowance). For example, Cherouny describes a process for identifying a driver of the vehicle ("identif[ying] to the mobile computer who was or is about to operate the vehicle," *id.*, ¶ [0018]; "identifying driver via key fob reader 174," *id.*, ¶ [0081]), logging vehicle operation data ("record[ing] the driving speed over a given period of time," *id.*, ¶ [0035]); associating operating profiles for individual drivers ("whereby the operation of a vehicle by said given individual can be preprogrammed, recorded and closely monitored remotely from a central server location by automatically curtailing operation of the vehicle when the received data exceeds preset or personalized limits of said individual driver," *id.*, claim 1, ". . . setting all the parameters for operation. These parameters allow for multiple drivers . . . ." *id.*, ¶ [0018]); and receiving speed and location data ("send signals representing location and speed data of said vehicle at any given time to said central server," *id.*, claim 1; "a GPS system, allowing for identification of the road and location of the vehicle," *id.*, ¶ [0040]).

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Moreover, even if it could be contended that Cherouny did not disclose all aspects of claim 1, the secondary references cited in this Request (Harter, Shuman, Petrik, and Bouchard) remedy any deficiencies—e.g., as to the *wireless identification and data logging module*, Harter provides explicit disclosure of such a device as described below in SNQ2; as to the data logging aspects of claim 1 (e.g., the *data logging module*, *module for receiving at least location and speed information*, and *data logging device that records vehicle operation data*), each of Harter, Shuman, Petrik, and Bouchard all provide explicit disclosure of those aspects and provide various ways to log vehicle operation data as described below in their respective SNQs.

Cherouny is analogous art to the '470 Patent because it is in the same field as the '470 Patent—e.g., "ensuring motor vehicle operation safety" and "monitoring and controlling vehicle usage by high-risk drivers." EX1001, 1:31-35; EX1004, ¶ [0038] ("object of this invention is to provide a safety device for the 'at risk' segment of the driving public by limiting the speed of the motor vehicle they are driving by programming in a speed limit").

The summary and discussion above, together with **Exhibit AA,** support a finding that Cherouny discloses or renders obvious claim 1, and a reasonable Examiner would consider the teachings of Cherouny in determining whether claim 1 is patentable at least because the reference was never considered during the prosecution of the '470 Patent. Accordingly, Cherouny raises a substantial new question of patentability as to claim 1 of the '470 Patent that should be resolved through reexamination.

3. SNQ2: Cherouny in view of Harter Renders Claims 1 and 4 Obvious and Presents a Substantial New Question of Patentability

a) Overview of Cherouny

An overview of Cherouny's relevant teachings is provided above. *Supra* § I.E.2.a.

b) Overview of Harter; Cherouny in view of Harter Presents and Substantial New Question of Patentability

In addition to all the reasons discussed in Section I.E.2.a as to why Cherouny presents a substantial new question of patentability, *supra*, Harter further teaches additional aspects related to the *wireless identification and data logging module* relevant to claims 1 and 4. For example, Harter discloses in connection with Figures 1, 4, and 10 a "portable device[] 120 in the form of a smart phone 400 displaying a login screen 402. In such cases, the smart phone 400 wirelessly

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connects to the base unit 116 via Bluetooth or other wireless connections," where the base unit 116 is present in a vehicle. EX1005, ¶ [0042].

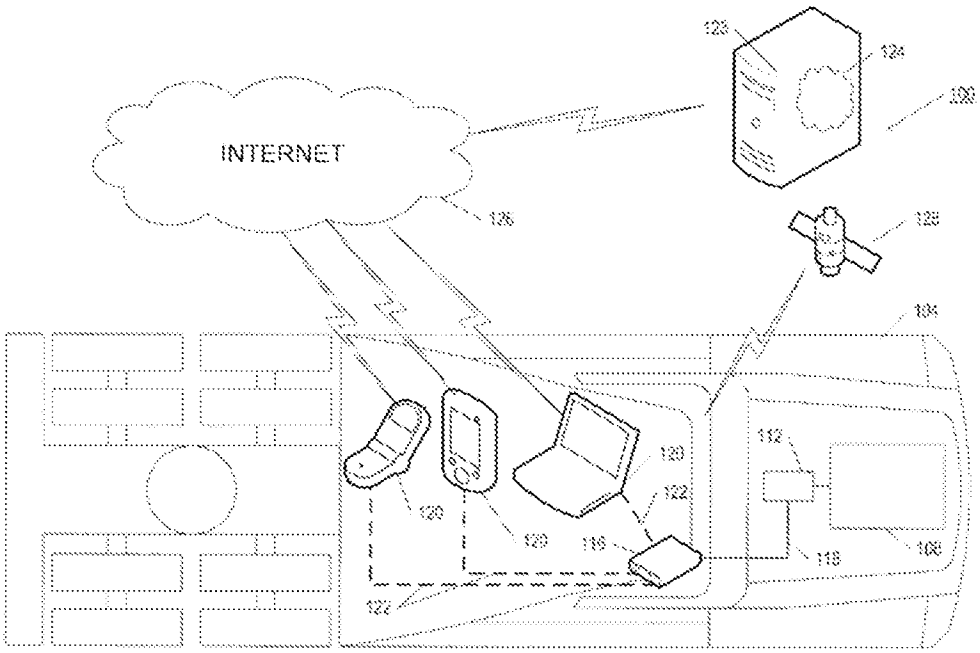

FIG. 1

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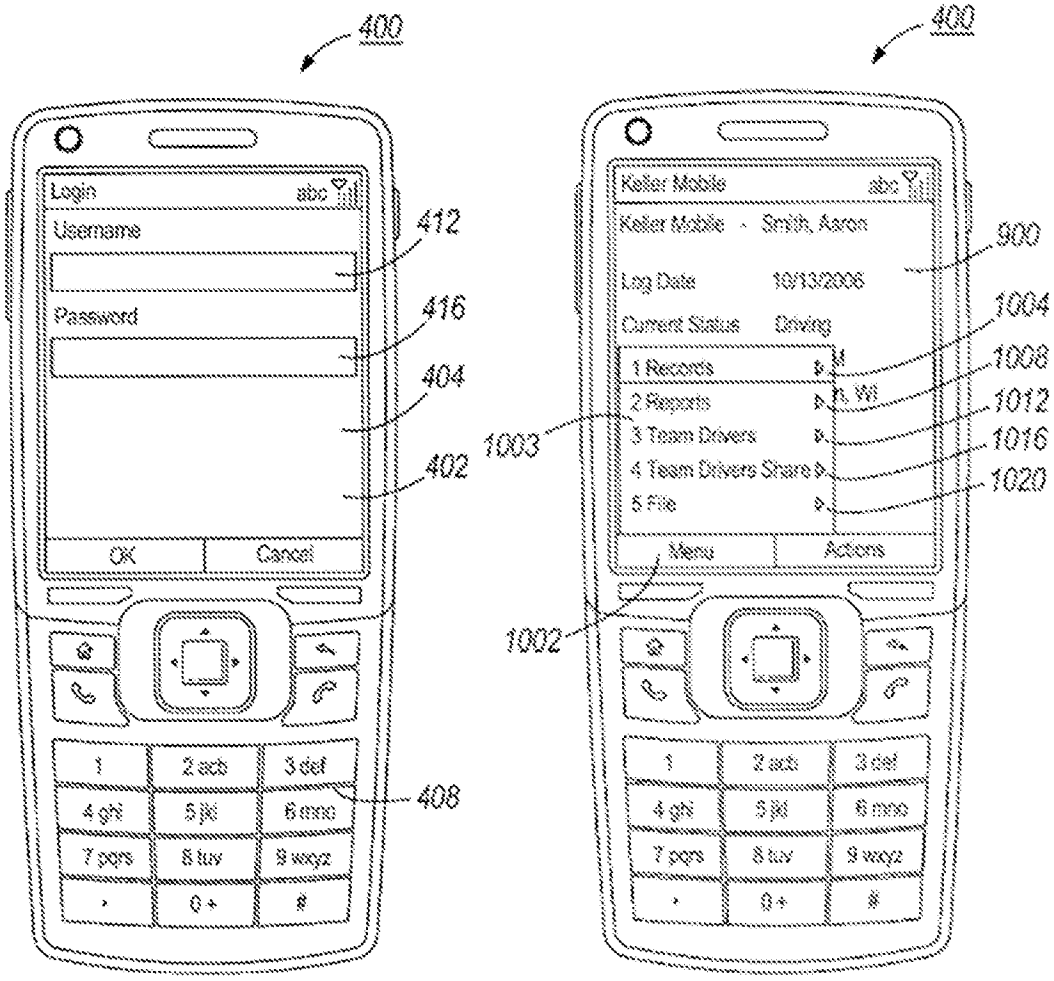

FIG. 4 FIG. 10

EX1005, Figs. 1, 4, 10

This device from Harter, like the '470 Patent's *wireless identification and data logging module*, "**receives identifying information from the driver**, receives the one or more operating parameters from the base unit, determines compliance data based, at least in part, **on the identifying information** and the one or more operating parameters, and **wirelessly transmits** signals based on the compliance data." *Id.*, ¶ [0007]. Harter further discloses *data logging* by providing "a **system for logging performance** of a driver operating a vehicle" and monitoring "operating parameters," which may "include **speed, hours of service, operating status, ignition switch status, trip distance, total vehicle distance, and the like**." *Id.*, ¶¶ [0007]-[0008], [0032]-[0033]. Cherouny's Figure 18 further depicts and describes its logging capabilities:

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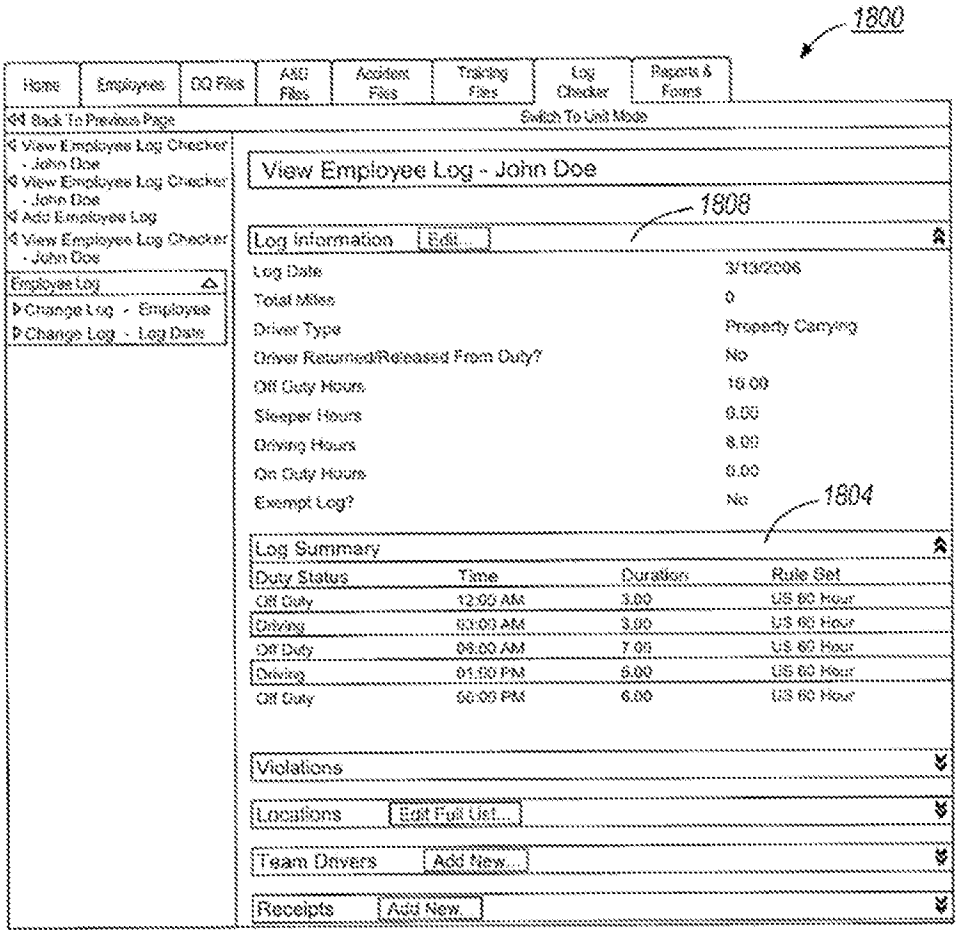

FIG. 18

EX1005, Fig. 18

Harter also describes a *module for receiving at least location and speed information*, Harter explains that one of the operating parameters monitored by its ECU includes "speed." EX1005, ¶ [0032]. As to *location information*, "information from the **GPS system** 128 (such as time and **location**) is available to the [vehicle]." *Id.*, ¶ [0033].

Further relevant to dependent claim 4, Harter discloses: "**wherein the portable device comprises** at least one of a computer, a personal-digital-assistant ("PDA"), and a smart phone"; EX1005, claim 2 (disclosing the claimed *smartphone*); "The system of claim 1, wherein the portable device is wirelessly coupled to the base unit via at least one of a personal area network connection and a cellular connection." EX1005, claim 3 (disclosing the claimed *cellular telephone*); and "FIG. 4 shows an example of the **portable devices 120 in the form of a smart**

phone 400 displaying a login screen 402. In such cases, the **smart phone 400 wirelessly connects to the base unit 116 via Bluetooth or other wireless connections**, or is wired to the base unit 116 via one or more cables." EX1005, ¶ [0042] (disclosing the claimed *WIFI enabled device* and *Bluetooth enabled device*).

Harter is analogous art to the '470 Patent because it is in the same field as the '470 Patent—e.g., "ensuring motor vehicle operation safety" and "monitoring and controlling vehicle usage by high-risk drivers." EX1001, 1:31-35; EX1005, Abstract ("system for logging performance of a driver operating a vehicle that has a vehicle information system from which least one vehicle operating parameter may be obtained"); ¶ [0007] ("The controller is positioned in the vehicle, and monitors one or more operating parameters of the vehicle.").

The summary and discussion above, together with **Exhibit AA,** support a finding that Cherouny in view of Harter discloses or renders obvious claims 1 and 4, and a reasonable Examiner would consider the teachings of Cherouny in determining whether claims 1 and 4 are patentable at least because the references were never considered during the prosecution of the '470 Patent. Accordingly, Cherouny in view of Harter raises a substantial new question of patentability as to claims 1 and 4 of the '470 Patent that should be resolved through reexamination.

c) Motivation to Combine Cherouny and Harter

A POSITA would have found it obvious to use the system and techniques disclosed in Harter of using a mobile device (such as a smart phone) to identify and log data about a specific driver's operation of a vehicle to further Cherouny's goal of increasing safety for at-risk drivers. EX1003 (Wilson), ¶ 55.

Harter focused its discussion within the context of monitoring and logging data for drivers of commercial motor vehicles ("CMV"s), and similarly, Cherouny explicitly recognized that its disclosures would be applicable in the same context of commercial driver monitoring. *See* EX1004, ¶ [0009] ("Yet another market exists for the instant invention among companies who hire drivers for commercial purposes."); *see also id.*, FIGs. 11-13 (depicting and describing information that can be monitored for commercial drivers in Cherouny's system); EX1005, ¶ [0003] ("Operators of commercial motor vehicles ('CMV's') are required to meet certain specific performance standards and regulations . . .").

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Using Harter's teaching of using a smart phone to assist in identifying and monitoring drivers would have been the simple substitution of one known technique (i.e., Harter's use of a wireless smart phone device together with software to identify and log data related to a specific driver of a vehicle) for another (Cherouny's technique of using a key fob together with software to identify and log data related to a driver of a vehicle) to obtain predictable results—i.e., a system (Cherouny's) using a wireless mobile device (in view of Harter's teachings) to assist with wirelessly identifying a driver and logging data related to their trip within the vehicle. EX1004, ¶¶ [0018]-[0020], [0031], [0035], [0081]; EX1005, ¶¶ [0007]-[0008], [0032]-[0033], [0042], [0045]-[0046], [0053]; EX1003 (Wilson), ¶ 56. Implementing Harter's teaching of using a wireless mobile device (i.e., smart phone) would have been an improvement over Cherouny's existing system using a key fob and various software modules, and a POSITA would have recognized at the time of the '470 Patent that a smart phone, like Harter's, would increase the vehicle control system's ability to identify and log data associated with a trip, given the known capabilities of a smart phone at the time (which would have included various additional technologies, such as Bluetooth or GPS) as compared to the key fob used in Cherouny. EX1003 (Wilson), ¶ 56. For example, Cherouny's disclosure is based on applications dating back to June 2001, a time when many drivers would not have regularly carried a smartphone or used it as an identification device. But before the time of the '470 Patent, techniques using smartphones together with vehicles were known and common (as evidenced by Harter), and would have been well known to a POSITA at the time reading Cherouny. Accordingly, this provides further motivation for a POSITA to modify Cherouny with the teachings of Harter to bring it up to date with modern techniques and knowledge at the time. *Id.*

Additionally, combining Harter's teachings for implementing a wireless mobile device in a system that identifies and logs data related to drivers of vehicles would have merely combined prior art elements (Harter's disclosure of a smart phone for identifying and logging data related to a driver of a vehicle and Cherouny's system for a similar purpose of monitoring drivers) according to known methods (i.e., that it was known to use various wired and/or wireless devices, such as Harter's "cable or wireless link" (EX1005, ¶ [0033]), to assist with monitoring and identifying drivers of vehicles) to yield predictable results—i.e., a system that is able to use a wireless mobile device to identify and log data related to a driver's trip within the vehicle. EX1004, ¶¶ [0018]-

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[0020], [0031], [0035], [0081]; EX1005, ¶¶ [0007]-[0008], [0032]-[0033], [0042], [0045]-[0046], [0053]; EX1003 (Wilson), ¶ 57.

A POSITA would have had a reasonable expectation of success in achieving the combination and the resulting improved driver identification and monitoring system because the techniques were discussed in detail in the references, and built off of known, predictable technologies that had been implemented into vehicles for several years. EX1003 (Wilson), ¶ 57.

Furthermore, to the extent Cherouny is not explicit in its disclosure of receiving speed and location information, Harter discloses it as shown above. A POSITA would have seen it as beneficial and obvious to include capabilities of monitoring and receiving speed and location information into Cherouny's system based on these explicit teachings in Harter. EX1003 (Wilson), ¶ 59. Cherouny's system already includes the components necessary to obtain this information (e.g., through its automobile speed sensor 108 and GPS 114), and to the extent it is not explicit, Harter provides the implementation details as to how this information would be received by the processor of the system. *See* EX1004, claim 1, ¶¶ [0020], [0035], [0040]; EX1005, ¶¶ [0032]-[0033], [0045], [0054]. A POSITA would have recognized that monitoring speed and location (e.g., in view of Harter's explicit teachings) would further Cherouny's stated goal of improving safety of at-risk drivers. EX1003 (Wilson), ¶ 59. A POSITA would have had a reasonable expectation of success of implementing Harter's teachings in view of Cherouny disclosing transmission of "location and speed data" and that Cherouny's system already includes the components for doing so. *Id.*

Finally, to the extent Cherouny lacks explicit disclosure of a *data logging device that records vehicle operation data*, a POSITA would have recognized that Harter's explicit disclosure of a data logging device as shown above would have added desirable functionality to Cherouny and once again furthered its goal of improving the safety of at-risk drivers, e.g., by allowing a moderator to review driving records of the monitored and at-risk driver. EX1003 (Wilson), ¶ 60. As discussed immediately above, a POSITA would have had a reasonable expectation of success in implementing these teachings from Harter into Cherouny given Cherouny already discloses the general idea of recording speed over a period of time. EX1003 (Wilson), ¶ 60.

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4. SNQ3: Cherouny in view of Shuman Renders Claim 1 Obvious and Presents a Substantial New Question of Patentability

a) Overview of Cherouny

An overview of Cherouny's relevant teachings is provided above. *Supra* § I.E.2.a.

b) Overview of Shuman; Cherouny in view of Shuman Presents a Substantial New Question of Patentability

In addition to all the reasons discussed in Section I.E.2.a as to why Cherouny presents a substantial new question of patentability, *supra*, Shuman further teaches additional aspects related to the data logging aspects of claim 1 (e.g., the *data logging module*, *module for receiving at least location and speed information*, and *data logging device that records vehicle operation data*). For example, Shuman discloses:

> **The drive recorder 225 obtains and logs information relating to all aspects of the vehicle and vehicle environment, including the driver and passengers.** In FIG. 29, the drive recorder 225 includes a logging process 225(A) that receives current information streams from all the vehicle sensors 202, 204, and 304, all subsystem software 210 and 310, all the vehicle hardware 208 and 308, the communications manager 262, the vehicle-user device manager 270, as well as other managers, and the driver and user interface devices 250 and 350. **The logging process 225(A) also receives event logs from all the applications 224 and 324.**
>
> **The driver recorder 225 continuously stores a history of the vehicle and vehicle environment in a non-volatile secure data storage device**. The drive recorder 225 includes a process 225(B) that provides all the **logged data** into a format and **stores the formatted data onto a physical drive recorder medium 225(C). This data storage device may be in the vehicle or may be located remotely.**

EX1006, 30:60-31:12. This disclosure demonstrates Shuman's disclosure of a *data logging module* that would have been implemented into Cherouny's system for the reasons discussed below (and further described in **Exhibit AA**). Shuman also provides additional disclosure of a *module for receiving at least location and speed information* stating that "[t]he vehicle positioning program 210(1) uses data from the sensors 202 and 204 and the geographic database 220 to determine the position, speed, and heading of the vehicle 10," (*id.*, 9:52-57), and that "[a]lso

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disclosed is a drive recorder that maintains records of the statuses of all vehicle systems and of the driver." *Id.*, Abstract.

Shuman is analogous art to the '470 Patent because it is in the same field as the '470 Patent—e.g., "ensuring motor vehicle operation safety" and "monitoring and controlling vehicle usage by high-risk drivers." EX1001, 1:31-35; EX1006, 2:40-62 ("driver assistance systems include critical mobility-related and safety related systems"); 2:11-39 ("a drive recorder that maintains records of the statuses of all vehicle systems and of the driver").

The summary and discussion above, together with **Exhibit AA,** support a finding that Cherouny in view of Shuman discloses or renders obvious claim 1, and a reasonable Examiner would consider the teachings of Cherouny and Shuman in determining whether claim 1 is patentable at least because the references were never considered during the prosecution of the '470 Patent. Accordingly, Cherouny in view of Shuman raises a substantial new question of patentability as to claim 1 of the '470 Patent that should be resolved through reexamination.

c) Motivation to Combine Cherouny and Shuman

A POSITA would have found it obvious to use the teachings from Shuman (i.e., the use of driver profiles and recording vehicle location and speed in the vehicle units' memory) because this would have represented a simple modification to Cherouny's system, which already describes "record[ing] the driver speed over a given period of time." EX1004, ¶ [0035]. Accordingly, to the extent Cherouny was lacking any implementation details on how or where to record information about operation of the vehicle, Shuman provides explicit details of the same (e.g., that its "driver recorder 225 continuously stores a history of the vehicle and vehicle environment in a non-volatile secure data storage device," and that this "data storage device may be in the vehicle or may be located remotely," EX1006, 30:60-31:12), and a POSITA would have been aware of these techniques in view of Shuman's explicit disclosure of them. A POSITA would have had a reasonable expectation of success in implementing Shuman's teachings, particularly given Cherouny's disclosure that with its invention "the memory capability of the speed governor **allows for a permanent record** of the drivers possible violations." EX1004, ¶ [0009]; EX1003 (Wilson), ¶ 64.

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Thus, Shuman offers explicit implementation details for a *data logging module* that would have been implemented into Cherouny's vehicle control system, and together, the combined system discloses the claimed *data logging module*. EX1003 (Wilson), ¶ 64.

Furthermore, to the extent Cherouny is not explicit in its disclosure of receiving speed and location information, Shuman discloses it as shown above. A POSITA would have seen it as beneficial and obvious to include capabilities of monitoring and receiving speed and location information into Cherouny's system based on these explicit teachings in Shuman. EX1003 (Wilson), ¶ 65. Cherouny's system already includes the components necessary to obtain this information (e.g., through its automobile speed sensor 108 and GPS 114), and to the extent it is not explicit, Shuman provides the implementation details as to how this information would be received by the processor of the system. *See* EX1004, claim 1, ¶¶ [0020], [0035], [0040]; EX1006, Abstract, 9:52-57. A POSITA would have recognized that monitoring speed and location (e.g., in view of Shuman's explicit teachings) would further Cherouny's stated goal of improving safety of at-risk drivers. EX1003 (Wilson), ¶ 65. A POSITA would have had a reasonable expectation of success of implementing Shuman's teachings in view of Cherouny disclosing transmission of "location and speed data" and that Cherouny's system already includes the components for doing so. *Id.*

Finally, to the extent Cherouny lacks explicit disclosure of a *data logging device that records vehicle operation data*, a POSITA would have recognized that Shuman's explicit disclosure of a driver recorder for maintaining records of all vehicle systems as shown above would have added desirable functionality to Cherouny and once again furthered its goal of improving the safety of at-risk drivers, e.g., by allowing a moderator to review driving records of the monitored and at-risk driver. EX1003 (Wilson), ¶ 66. As discussed immediately above, a POSITA would have had a reasonable expectation of success in implementing these teachings from Shuman into Cherouny given Cherouny already discloses the general idea of recording speed over a period of time. EX1003 (Wilson), ¶ 66.

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5. SNQ4: Cherouny in view of Petrik Renders Claim 1 Obvious and Presents a Substantial New Question of Patentability

a) Overview of Cherouny

An overview of Cherouny's relevant teachings is provided above. *Supra* § I.E.2.a.

b) Overview of Petrik; Cherouny in view of Petrik Presents a Substantial New Question of Patentability

In addition to all the reasons discussed in Section I.E.2.a as to why Cherouny presents a substantial new question of patentability, *supra*, Petrik further teaches additional aspects related to the data logging aspects of claim 1 (e.g., the *data logging module*, *module for receiving at least location and speed information*, and *data logging device that records vehicle operation data*). For example, Petrik discloses "a method and system of **automatically and irrefutably logging via GPS**, **operational parameters** such as drivers' work and rest time, **vehicle location**, **vehicle speeds**, speeding offences, distance covered etc. **and recording these** on a secure smart card as well as in the **vehicle units' memory**." EX1007, ¶ [0009]. This disclosure demonstrates Petrik's disclosure of a *data logging module* that would have been implemented into Cherouny's system for the reasons discussed below (and further described in **Exhibit AA**). Petrik also provides additional disclosure of a *module for receiving at least location and speed information* stating that "[d]uring the trip the **GPS keeps a constant log of the date, time, location, distance travelled and speed of the vehicle both in the units' memory** and in the smart card." *Id.*, ¶ [0025].

Petrik is analogous art to the '470 Patent because it is in the same field as the '470 Patent—e.g., "ensuring motor vehicle operation safety" and "monitoring and controlling vehicle usage by high-risk drivers." EX1001, 1:31-35; EX1007, ¶ [0009] ("a method and system of automatically and irrefutably logging via GPS, operational parameters such as drivers' work and rest time, vehicle location, vehicle speeds, speeding offences, distance covered etc. and recording these on a secure smart card as well as in the vehicle units' memory"); ¶ [0001] ("GPS based vehicle monitoring, management and cruise control, incorporating intelligent speed adaptation").

The summary and discussion above, together with **Exhibit AA,** support a finding that Cherouny in view of Petrik discloses or renders obvious claim 1, and a reasonable Examiner would consider the teachings of Cherouny and Petrik in determining whether claim 1 is patentable at least because the references were never considered during the prosecution of the '470 Patent.

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Accordingly, Cherouny in view of Petrik raises a substantial new question of patentability as to claim 1 of the '470 Patent that should be resolved through reexamination.

c) Motivation to Combine Cherouny and Petrik

A POSITA would have found it obvious to use the teachings from Petrik (i.e., recording vehicle location and speed in the vehicle units' memory) because this would have represented a simple modification to Cherouny's system, which already describes "record[ing] the driver speed over a given period of time." EX1004, ¶ [0035]. Accordingly, to the extent Cherouny was lacking any implementation details on how or where to record information about operation of the vehicle, Petrik provides explicit details of the same (e.g., "automatically and irrefutably logging . . . operational parameters . . . and recording these on a secure smart card as well as in the vehicle units' memory," EX1006, ¶ [0009]) and a POSITA would have been aware of these techniques in view of Petrik's explicit disclosure of them. A POSITA would have had a reasonable expectation of success in implementing Petrik's teachings, particularly given Cherouny's disclosure that with its invention "the memory capability of the speed governor **allows for a permanent record** of the drivers possible violations." EX1004, ¶ [0009]; EX1003 (Wilson), ¶ 68.

Thus, Petrik offers explicit implementation details for a *data logging module* that would have been implemented into Cherouny's vehicle control system, and together, the combined system discloses the claimed *data logging module*. EX1003 (Wilson), ¶ 68.

Furthermore, to the extent Cherouny is not explicit in its disclosure of receiving speed and location information, Petrik discloses it as shown above. A POSITA would have seen it as beneficial and obvious to include capabilities of monitoring and receiving speed and location information into Cherouny's system based on these explicit teachings in Petrik. EX1003 (Wilson), ¶ 69. Cherouny's system already includes the components necessary to obtain this information (e.g., through its automobile speed sensor 108 and GPS 114), and to the extent it is not explicit, Petrik provides the implementation details as to how this information would be received by the processor of the system. *See* EX1004, claim 1, ¶¶ [0020], [0035], [0040]; EX1007, ¶¶ [0009], [0025]. A POSITA would have recognized that monitoring speed and location (e.g., in view of Petrik's explicit teachings) would further Cherouny's stated goal of improving safety of at-risk drivers. EX1003 (Wilson), ¶ 69. A POSITA would have had a reasonable expectation of success

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of implementing Petrik's teachings in view of Cherouny disclosing transmission of "location and speed data" and that Cherouny's system already includes the components for doing so. *Id.*

Finally, to the extent Cherouny lacks explicit disclosure of a *data logging device that records vehicle operation data*, a POSITA would have recognized that Petrik's explicit disclosure of "automatically and irrefutably logging . . . operational parameters" as shown above would have added desirable functionality to Cherouny and once again furthered its goal of improving the safety of at-risk drivers, e.g., by allowing a moderator to review driving records of the monitored and at-risk driver. EX1003 (Wilson), ¶ 70. As discussed immediately above, a POSITA would have had a reasonable expectation of success in implementing these teachings from Petrik into Cherouny given Cherouny already discloses the general idea of recording speed over a period of time. EX1003 (Wilson), ¶ 70.

6. SNQ5: Cherouny in view of Bouchard Renders Claim 1 Obvious and Presents a Substantial New Question of Patentability

a) Overview of Cherouny

An overview of Cherouny's relevant teachings is provided above. *Supra* § I.E.2.a.

b) Overview of Bouchard; Cherouny in view of Bouchard Presents a Substantial New Question of Patentability

In addition to all the reasons discussed in Section I.E.2.a as to why Cherouny presents a substantial new question of patentability, *supra*, Bouchard further teaches additional aspects related to the data logging aspects of claim 1 (e.g., the *data logging module*, *module for receiving at least location and speed information*, and *data logging device that records vehicle operation data*). For example, Bouchard discloses "an operational **event recorder apparatus** coupled to the collision warning apparatus **for recording the collected relevant data** and recording a driver profile," (EX1008, claim 1), "a record of that driver's history and performance," (*id.*, 6:4-8), "geographic positioning information," (*id.*, 9:21-50), and that "[r]ecording some or all of this data or similar relevant data would make accident reconstruction more reliable and less expensive." *Id.* This disclosure demonstrates Bouchard's disclosure of a *data logging module* that would have been implemented into Cherouny's system for the reasons discussed below (and further described in **Exhibit AA**). Bouchard also provides additional disclosure of a *module for receiving at least location and speed information* stating that "**[c]ommonly known sensors may be used**, for

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example, to measure distance travelled, **vehicle speed (momentary and average)**," and that "geographic positioning information" may also be recorded. EX1008, 9:21-50.

Bouchard is analogous art to the '470 Patent because it is in the same field as the '470 Patent—e.g., "ensuring motor vehicle operation safety" and "monitoring and controlling vehicle usage by high-risk drivers." EX1001, 1:31-35; EX1008, 1:44-63 ("Whenever a person is responsible for operating a motor vehicle, it is critical that the person be capable of demonstrating basic cognitive and motor skills at a level that will assure the safe operation of the vehicle . . . . Therefore, it is very important to continuously evaluate a driver's ability to identify an appropriate action and react under the conditions encountered while operating a motor vehicle."); *id.*, 4:60-5:1 (". . . it would be desirable to have a method and apparatus which utilizes the information that is gathered by a radar system and other sensors, and the information that has been recorded during past trips and a present trip, to evaluate a driver's performance in real-time and under actual conditions."); *id.*, 5:6-19 ("an event recording device that can personalize a vehicle to the driver associated with that event recording device").

The summary and discussion above, together with **Exhibit AA,** support a finding that Cherouny in view of Bouchard discloses or renders obvious claim 1, and a reasonable Examiner would consider the teachings of Cherouny and Bouchard in determining whether claim 1 is patentable at least because the references were never considered during the prosecution of the '470 Patent. Accordingly, Cherouny in view of Bouchard raises a substantial new question of patentability as to claim 1 of the '470 Patent that should be resolved through reexamination.

c) Motivation to Combine Cherouny and Bouchard

A POSITA would have found it obvious to use the teachings from Bouchard (i.e., recording operational event information, a record of driving history) because this would have represented a simple modification to Cherouny's system, which already describes "record[ing] the driver speed over a given period of time." EX1004, ¶ [0035]. Accordingly, to the extent Cherouny was lacking any implementation details on how or where to record information about operation of the vehicle, Bouchard provides explicit details of the same (e.g., "recording the collected relevant data and recording a driver profile" EX1008, claim 1), and a POSITA would have been aware of these techniques in view of Bouchard's explicit disclosure of them. A POSITA would have had a reasonable expectation of success in implementing Bouchard's teachings, particularly given

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Cherouny's disclosure that with its invention "the memory capability of the speed governor **allows for a permanent record** of the drivers possible violations." EX1004, ¶ [0009]; EX1003 (Wilson), ¶ 72.

Thus, Bouchard offers explicit implementation details for a *data logging module* that would have been implemented into Cherouny's vehicle control system, and together, the combined system discloses the claimed *data logging module*. EX1003 (Wilson), ¶ 72.

Furthermore, to the extent Cherouny is not explicit in its disclosure of receiving speed and location information, Bouchard discloses it as shown above. A POSITA would have seen it as beneficial and obvious to include capabilities of monitoring and receiving speed and location information into Cherouny's system based on these explicit teachings in Bouchard. EX1003 (Wilson), ¶ 73. Cherouny's system already includes the components necessary to obtain this information (e.g., through its automobile speed sensor 108 and GPS 114), and to the extent it is not explicit, Bouchard provides the implementation details as to how this information would be received by the processor of the system. *See* EX1004, claim 1, ¶¶ [0020], [0035], [0040]; EX1008, 9:21-50, claim 1. A POSITA would have recognized that monitoring speed and location (e.g., in view of Bouchard's explicit teachings) would further Cherouny's stated goal of improving safety of at-risk drivers. EX1003 (Wilson), ¶ 73. A POSITA would have had a reasonable expectation of success of implementing Bouchard's teachings in view of Cherouny disclosing transmission of "location and speed data" and that Cherouny's system already includes the components for doing so. *Id.*

Finally, to the extent Cherouny lacks explicit disclosure of a ***data logging device that records vehicle operation data***, a POSITA would have recognized that Bouchard's explicit disclosure of an operational event recorder as shown above would have added desirable functionality to Cherouny and once again furthered its goal of improving the safety of at-risk drivers, e.g., by allowing a moderator to review driving records of the monitored and at-risk driver. EX1003 (Wilson), ¶ 74. As discussed immediately above, a POSITA would have had a reasonable expectation of success in implementing these teachings from Bouchard into Cherouny given Cherouny already discloses the general idea of recording speed over a period of time. EX1003 (Wilson), ¶ 74.

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II. DETAILED APPLICATION OF THE PRIOR ART TO EVERY CLAIM FOR WHICH REEXAMINATION IS REQUESTED

For the reasons set forth in the various grounds below, claims 1 and 4 are disclosed or rendered obvious and should be rejected as unpatentable. Requester presents five grounds of rejection as follows, as outlined in **Exhibit AA**:

SNQ	Reference(s)	Basis	Claims
1	Cherouny	§ 103	1
2	Cherouny and Harter	§ 103	1, 4
3	Cherouny and Shuman	§ 103	1
4	Cherouny and Petrik	§ 103	1
5	Cherouny and Bouchard	§ 103	1

In **Exhibit AA** (appended to this Request, and also filed as Exhibit AA), Requester provides detailed mapping and explanation as to how the references in each of the SNQs alone, or together as a combination, disclose each and every element of the challenged claims. A framework for a POSITA's background knowledge and motivation to combine are also provided in **Exhibit AA** and by Requester's expert, Christopher Wilson (*see* EX1003).

This Request and **Exhibit AA** demonstrate that the Challenged Claims of the '470 Patent are unpatentable as obvious in view of the prior art references. Applicants did not identify any evidence of secondary considerations during prosecution. Further, the clear teachings in the prior art cannot be overcome by any supposed "secondary considerations." *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 36 (1966).

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III. DISCLOSURE OF CONCURRENT LITIGATION, REEXAMINATION, AND RELATED PROCEEDINGS

Based on information available to Requester, the '470 Patent is or has been at issue in the following District Court litigations, as listed below:

- *The Phelan Group, LLC v. Kia Corporation et al.*, Case No. 2:23-cv-00094 (E.D. Tex. March 7, 2023); and
- *Phelan Group, LLC v. Toyota Motor Corporation et al.*, Case No. 2:23-cv-00093 (E.D. Tex. March 7, 2023).

IV. CONCLUSION

Reexamination and cancellation of claims 1 and 4 of the '470 Patent is respectfully requested. The Commissioner is hereby authorized to charge Deposit Account 50-6990 under Order No. PHE101 the *Ex Parte* Reexamination fee of $12,000 under 37 C.F.R. § 1.20(c)(1). Requester believes no other fee is due with this submission, however the Commissioner is hereby authorized to charge any fee deficiency or credit any over-payment to Deposit Account 50-6990.

Please direct all correspondence in this matter to the undersigned.

Dated: August 31, 2023

Respectfully submitted,

By: /David C. Seastrunk/
David C. Seastrunk (Reg. No. 73,723)

Unified Patents, LLC
4705 Willard Ave., Suite 600
Chevy Chase, MD 20815
david@unifiedpatents.com
T: 919.538.8602

Counsel for Requester
Unified Patents, LLC

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APPENDIX TO REQUEST
EXHIBIT AA
Claim Chart Comparing Claims 1 and 4 of U.S. Patent 10,259,470 to Cherouny, Harter, Shuman, Petrik, and Bouchard

Exhibit AA

Claim Chart Comparing Claims 1 and 4 of U.S Patent 10,259,470 to Cherouny, Harter, Shuman, Petrik, and Bouchard

The following claim chart compares claims 1 and 4 of U.S. Patent 10,259,470 to U.S. Patent Publication 2006/0052909 to Cherouny ("Cherouny"), U.S. Patent Publication 2008/0188217 to Harter et al. ("Harter"), U.S. Patent 6,577,937 to Shuman et al. ("Shuman"), U.S. Patent Publication 2007/0168125 to Petrik ("Petrik"), and U.S. Patent 5,465,079 to Bouchard et al. ("Bouchard").

The chart below reflects SNQs 1-5 relied upon in the corresponding Request for Reexamination and, with respect to SNQs 2-5, includes pertinent motivations to combine the relevant art. Further, corroborated evidence reflecting the perspective knowledge of a person having ordinary skill in the art at the time of the invention of the '470 Patent (a "POSITA") is provided through the declaration of Mr. Christopher K. Wilson (EX1003).

Specifically, as shown below, claims 1 and 4 would have been obvious based on the following substantial new questions of patentability:

SNQ1: Claim 1 would have been obvious based on Cherouny.

SNQ2: Claims 1 and 4 would have been obvious over Cherouny in view of Harter.

SNQ3: Claim 1 would have been obvious over Cherouny in view of Shuman.

SNQ4: Claim 1 would have been obvious over Cherouny in view of Petrik.

SNQ5: Claim 1 would have been obvious over Cherouny in view of Bouchard.

References
Cherouny (EX1004)
Harter (EX1005)
Shuman (EX1006)
Petrik (EX1007)
Bouchard (EX1008)

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Claim Language	Relevant Prior Art Disclosures and Argument[1]
[1P] A vehicle control system, comprising:	Even if the preamble is a limitation, Cherouny discloses, suggests, and renders obvious ***a vehicle control system***. For example, Cherouny recites "[a]n improved **electronic programmable speed limiter for drivers of vehicles which can be preprogrammed and controlled** from a remote location via a radio link to update the driver performance and adjust the controls on the speed limiter." EX1004, Abstract. Cherouny discusses that it is "an object of this invention to provide an **electronic programmable speed limiting device for motor vehicles**" and "another object of this invention to provide a programmable electronic device for motor vehicles which also records the driving speed over a given period of time." *Id.*, ¶ [0035]. Additionally, just like the '470 Patent, which discloses "systems and methods for monitoring and **controlling vehicle usage by high-risk drivers**" (EX1001, Abstract), Cherouny discloses an "object of this invention is to provide a safety device **for the 'at risk' segment of the driving public by limiting the speed of the motor vehicle they are driving** by programming in a speed limit, by adjusting for driving history, by reassessing allowable speed during rain or darkness." EX1004, ¶ [0038]. The various components recited for the claimed vehicle control system are discussed in the limitations below. *See also, e.g.*, Cherouny: • " . . . The instant invention, **a programmable speed governor, allows the vehicle owner to prospectively program a limit to the speed of the car in which it is installed**. Additionally, the memory capability and driving database generated by the device allows for a review of compliance with the speed limiting governor. This review may be preferred for various reasons including insurance, liability and legal reasons and allows for an education of the driver in order to decrease speed and, hopefully, accident frequency and severity." EX1004, ¶ [0004]. • "The instant invention also contemplates the ability to employ GPS technology in its **overall control system** by making it remote and location sensitive." EX1004, ¶ [0010]. • "The **car monitor 170** includes the functions of measuring car speed 171, **incrementally slowing the car engine 172**, providing data logs of time and severity of infraction 173, **identifying driver via key fob reader 174**, provisions of a watch dog time reset 175 from CPU activity, to detect

[1] All emphasis added unless otherwise noted.

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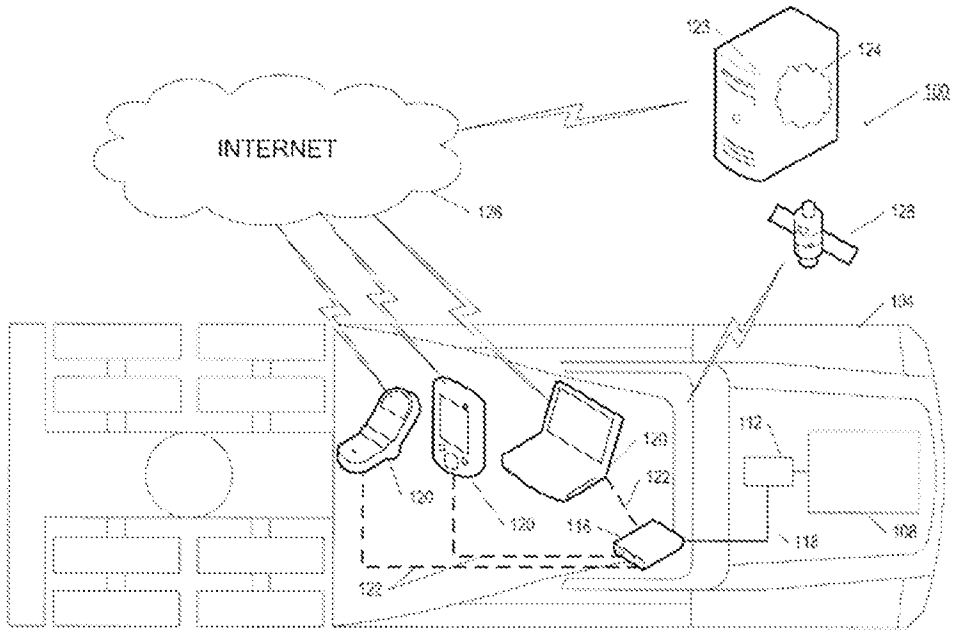
Claim Language	Relevant Prior Art Disclosures and Argument[1]
	extended slow DUI driving 176, to upload and download the module 177, to provide data compression 178, to sense tampering and record times 179 and to maintain clock assembly 180." EX1004, ¶ [0081].
[1.1] a wireless identification and data logging module;	Cherouny discloses, suggests, and renders obvious ***a wireless identification and data logging module***. As described in the Reexamination Request in Section I.C, the '470 Patent generally describes the term ***module*** as follows: • "Note that as utilized herein, the term **'module'** may refer to a **physical hardware component and/or to a software module**. . . . Therefore, **when referring to a 'module' herein, the inventors are generally referring to such software modules or implementations thereof**. The methodology described herein can be **implemented as a series of such modules or as a single software module**." EX1001, 6:11-36. • "Generally, **program modules** include routines, programs, objects, components, data structures, etc., that perform particular tasks or implement particular abstract data types." EX1001, 4:59-62. Next, as to the ***wireless identification and data logging module***, the '470 Patent describes: • "The driver **identification and data logging module** 425 can be a **mobile telephone, a Smartphone, a WIFI enabled device, an RFD enabled device, a Bluetooth enabled device**, a tablet computer a USB compatible device such as for example, iButton, radio frequency identification device (RFID), **software**, etc . . . ." EX1001, 7:10-16. Accordingly, for purposes of claim 1, Requester submits that the ***wireless identification and data logging module*** at least encompasses software modules and/or physical hardware components that work with the various elements and accomplish the functions described in claim 1 for identifying a driver and logging data. *See* Reexamination Request, Section I.C.[2]

[2] Requester further notes that, although the '470 Patent's specification describes "[i]n one embodiment" that the ***wireless identification and data logging module*** may be "a smart phone with one or more of WIFI, RFID, Bluetooth, and GPS capabilities," claim 1 is not so limited. For example, challenged dependent claim 4 explicitly narrows and limits the ***wireless identification and data logging module*** of claim 1 to be "at least one of: a WIFI enabled device; an RFID enabled

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	First, Cherouny renders obvious a ***wireless identification . . . module*** because it discloses a hardware component (e.g., a key fob) and software within its control system which, when working together, "**identifies** to the mobile computer **who was or is about to operate the vehicle**." EX1004, ¶¶ [0018]-[0020], claim 1. Cherouny discloses: • "The **software** has two parts. The first allows for setting all the parameters for operation. **These parameters allow for multiple drivers** in multiple scenarios. The detection of rain and darkness and tampering and are inputted to allow them to affect the operation of the vehicle at different times and to report to the parent or administrator the conditions at the time of an infraction. This information to the parent or administrator is invaluable in making judgment calls in training the young driver in safe driving under these conditions. **The driver does not have to remember codes as that function is now performed by the key fob function which identifies to the mobile computer who was or is about to operate the vehicle**. This semi-automatic **identification of who was driving** eliminated two main problems with codes the first of which was forgetting the code. . . ." EX1004, ¶ [0018]. • "A system for specifically regulating the driving performance of a given individual by use of a computer from a server in a central location, said system comprising a **monitoring moderator means** adapted to be attached to the vehicle the given individual is to drive, **a data processing means** having performance criteria preprogrammed therein and which relates to the driving performance history **of said given individual** associated with said moderator . . . **whereby the operation of a vehicle by said given individual can be preprogrammed, recorded and closely monitored remotely from a central server location by automatically curtailing operation of the vehicle** when the received data exceeds preset or **personalized limits of said individual driver**." EX1004, claim 1. Accordingly, Cherouny describes the use of a key fob, together with software, to disclose a ***wireless identification . . . module*** that identifies a specific driver among potential multiple drivers for its vehicle, and using the preprogrammed personalized limits for the identified driver (e.g., where a moderator has preprogrammed personalized limits for an at-risk driver).

device; a Bluetooth enabled device; a cellular telephone; and a smartphone," indicating that claim 1 was not intended to be limited to any such device (or even a physical/hardware device at all, given the '470 Patent's broad definition of a ***module*** as often comprising software).

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	To the extent it is argued that Cherouny does not disclose that its key fob is ***wireless*** (e.g., Cherouny describes the use of "optoelectronic components" in paragraph [0017] to read from the key fob, which may or may not be wireless), such would have been obvious to a POSITA. EX1003 (Wilson), ¶ 47. In the first instance, Cherouny does not discredit or limit the use of a wireless technology in a vehicle—rather, it supports the use of wireless technology, e.g., by disclosing wireless connections between the vehicle, central database, and GPS. EX1004, ¶ [0020]. At the time of Cherouny's earliest disclosure (June 2001), wireless identification devices were not as widely used with vehicles as they were by the time of the '470 Patent (July 2009). *Id.* Indeed, by July 2009, the use of wireless key fobs was exceedingly well known and in use for vehicles, as evidenced by several contemporaneous references. *Id.* (citing EX1009, describing an RFID vehicle-use key as early as 2007; EX1012, describing an RFID tag in a mobile phone for use in authenticating a user of a vehicle as early as 2006). For these reasons, even if Cherouny's key fob is not explicitly ***wireless***, such a simple modification would have been well known to a POSITA by the time of the '470 Patent, and would have rendered the claimed ***wireless . . . identification module*** obvious, because Cherouny's key fob would perform identification of a driver using a key fob with the well-known implementation of wireless data transmission. EX1003 (Wilson), ¶ 47. Such a modification would have been beneficial and obvious, given the widespread use of wireless key fob devices in vehicles by July 2009. And finally, to the extent this is found to be lacking in Cherouny alone, SNQ2 presented below (providing the combination of Cherouny and Harter) explicitly discloses wireless identification. Second, Cherouny describes a ***data logging module*** by stating that "[i]t is another object of this invention to provide a programmable electronic device for motor vehicles **which also records the driving speed over a given period of time** . . . ." EX1004, ¶ [0035]. Also, Cherouny discloses that "**car monitor 170** includes the functions of measuring car speed 171, incrementally slowing the car engine 172, **providing data logs of time and severity of infraction 173** [e.g., "the **excess speed of the driver is recorded** so that it can be reported to an authority figure," EX1004, ¶ [0031]], identifying driver via key fob reader 174 . . . ." EX1004, ¶ [0081]. Further discussion of data logging functionality in Cherouny is provided below in elements [1.3]-[1.4], *infra*. Because the '470 Patent describes that modules may be, for example, "implemented as a **series** of such modules" (EX1001, 6:11-36), and describes certain embodiments where the data logging functionality is in a separate module from the driver identification (*see* EX1001, Fig. 5 (item 452), 7:46-57), a POSITA would have understood Cherouny's disclosures of hardware and software that

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	(1) identify an individual driver and (2) log speed and data, together disclose the claimed ***wireless identification and data logging module***. EX1003 (Wilson), ¶ 47. **SNQ2 (Obviousness based on Cherouny and Harter):** Even if Cherouny does not disclose all aspects of the ***wireless identification and data logging module***, this limitation would have been obvious over Harter. For example, as to the ***wireless identification and data logging module***, Harter discloses in connection with Figures 1 and 4 a "**portable device[] 120 in the form of a smart phone 400** displaying a login screen 402. In such cases, **the smart phone 400 wirelessly connects to the base unit 116 via Bluetooth or other wireless connections**," where the base unit 116 is present in a vehicle. EX1005, ¶ [0042].  FIG. 1

Claim Language	Relevant Prior Art Disclosures and Argument[1]

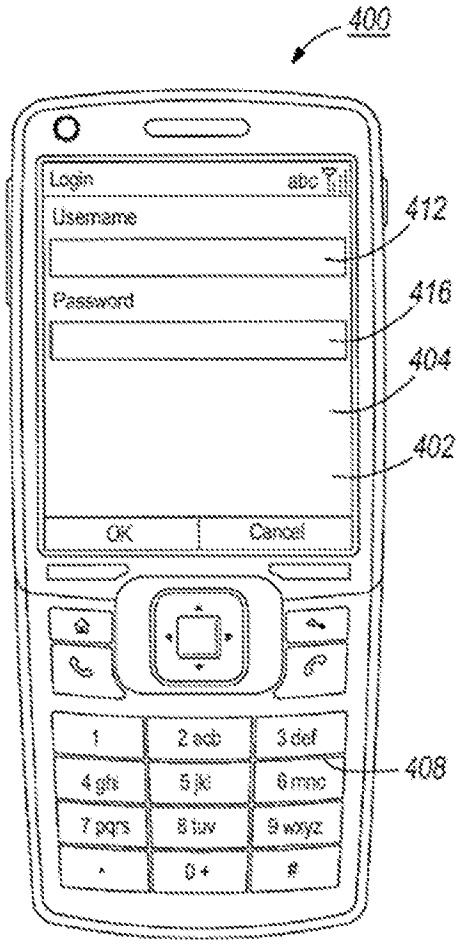
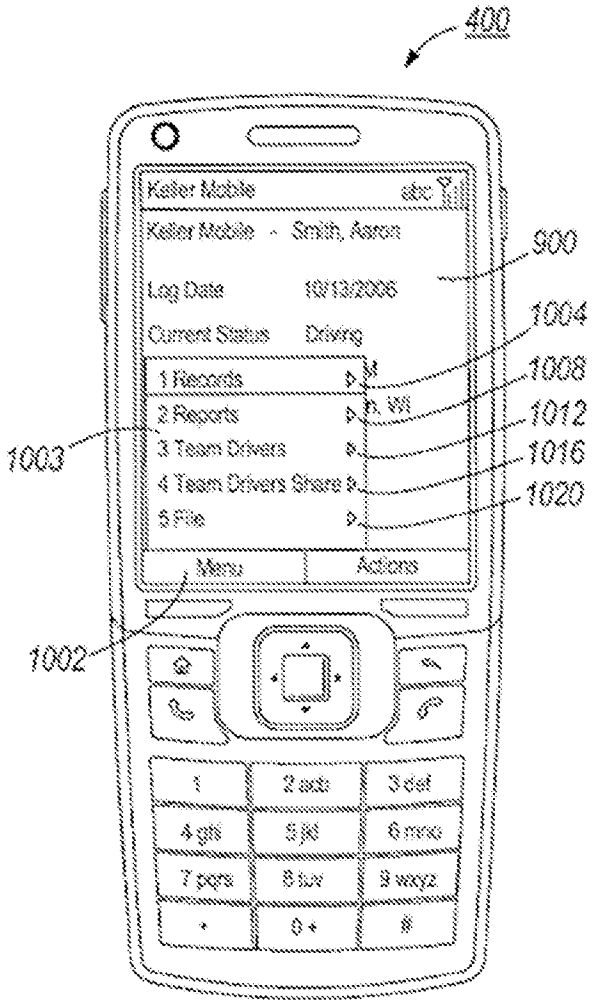


FIG. 4

This device from Harter is a ***wireless identification and data logging module***, because as shown above, the smart phone 400 can communicate wirelessly via Bluetooth with a base unit in the vehicle. EX1005, ¶ [0007]. Specifically, the device performs ***identification*** by disclosing that "the **portable device receives identifying information from the driver**, receives the one or more operating parameters from the base unit, determines compliance data based, at least in part, **on the identifying information** and the one or more operating parameters, and **wirelessly transmits** signals based on the compliance data." *Id.*

Harter discloses a ***data logging module*** in connection with the same disclosed mobile device, for example, in Figures 10 and 18:

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	 FIG. 10

Claim Language	Relevant Prior Art Disclosures and Argument[1]

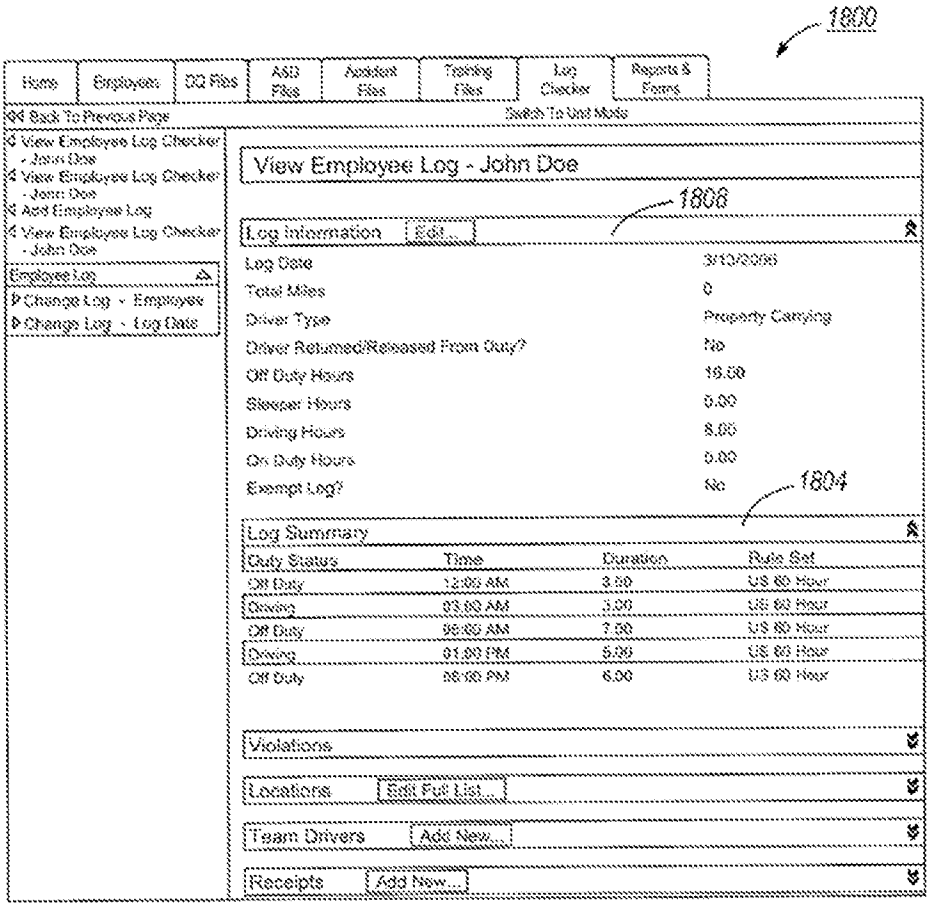


FIG. 18

Harter states that its invention "provides a **system for logging performance** of a driver operating a vehicle" and monitoring "operating parameters," which may "include **speed, hours of service, operating status, ignition switch status, trip distance, total vehicle distance, and the like**." *Id.*, ¶¶ [0007]-[0008], [0032]-[0033].

Accordingly, in view of these disclosures, Harter discloses or renders obvious the ***wireless identification and data logging module*** because it describes a "system for **logging performance of a driver operating a vehicle**." *Id.*, Abstract, ¶¶ [0007]-[0008], [0032]-[0033], [0042], [0045]-[0046], [0053], FIGs. 1, 4, 10, 18.

Regarding the combination of Cherouny and Harter, a POSITA would have found it obvious to use the system and techniques disclosed in Harter of using a mobile device (such as a smart phone) to identify and log data about a specific driver's

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	operation of a vehicle to further Cherouny's goal of increasing safety for at-risk drivers. EX1003 (Wilson), ¶ 55. Harter focused its discussion within the context of monitoring and logging data for drivers of commercial motor vehicles (CMVs), and similarly, Cherouny explicitly recognized that its disclosures would be applicable in the same context of commercial driver monitoring. *See* EX1004, ¶ [0009] ("Yet another market exists for the instant invention among companies who hire drivers for commercial purposes."); *see also id.*, FIGs. 11-13 (depicting and describing information that can be monitored for commercial drivers in Cherouny's system); EX1005, ¶ [0003] ("Operators of commercial motor vehicles ('CMV's') are required to meet certain specific performance standards and regulations . . ."). Using Harter's teaching of using a smart phone to assist in identifying and monitoring drivers would have been the simple substitution of one known technique (i.e., Harter's use of a wireless smart phone device together with software to identify and log data related to a specific driver of a vehicle) for another (Cherouny's technique of using a key fob together with software to identify and log data related to a driver of a vehicle) to obtain predictable results—i.e., a system (Cherouny's) using a wireless mobile device (in view of Harter's teachings) to assist with wirelessly identifying a driver and logging data related to their trip within the vehicle. EX1004, ¶¶ [0018]-[0020], [0031], [0035], [0081]; EX1005, ¶¶ [0007]-[0008], [0032]-[0033], [0042], [0045]-[0046], [0053]; EX1003 (Wilson), ¶ 56. Implementing Harter's teaching of using a wireless mobile device (i.e., smart phone) would have been an improvement over Cherouny's existing system using a key fob and various software modules, and a POSITA would have recognized at the time of the '470 Patent that a smart phone, like Harter's, would increase the vehicle control system's ability to identify and log data associated with a trip, given the known capabilities of a smart phone at the time (which would have included various additional technologies, such as Bluetooth or GPS) as compared to the key fob used in Cherouny. EX1003 (Wilson), ¶ 56. For example, Cherouny's disclosure is based on applications dating back to June 2001, a time when many drivers would not have regularly carried a smartphone or used it as an identification device. But before the time of the '470 Patent, techniques using smartphones together with vehicles were known and common (as evidenced by Harter), and would have been well known to a POSITA at the time reading Cherouny. Accordingly, this provides further motivation for a POSITA to modify Cherouny with the teachings of Harter to bring it up to date with modern techniques and knowledge at the time. *Id.* Additionally, combining Harter's teachings for implementing a wireless mobile device in a system that identifies and logs data related to drivers of vehicles would have merely combined prior art elements (Harter's disclosure of a smart phone for identifying and logging data related to a driver of a vehicle and Cherouny's system for a similar purpose of monitoring drivers) according to known methods (i.e., that

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Claim Language	Relevant Prior Art Disclosures and Argument[1]
	it was known to use various wired and/or wireless devices, such as Harter's "cable or wireless link" (EX1005, ¶ [0033]), to assist with monitoring and identifying drivers of vehicles) to yield predictable results—i.e., a system that is able to use a wireless mobile device to identify and log data related to a driver's trip within the vehicle. EX1004, ¶¶ [0018]-[0020], [0031], [0035], [0081]; EX1005, ¶¶ [0007]-[0008], [0032]-[0033], [0042], [0045]-[0046], [0053]; EX1003 (Wilson), ¶ 57. A POSITA would have had a reasonable expectation of success in achieving the combination and the resulting improved driver identification and monitoring system because the techniques were discussed in detail in the references, and built off of known, predictable technologies that had been implemented into vehicles for several years. EX1003 (Wilson), ¶ 57. *See also, e.g.*, Harter: • "**A system for logging performance of a driver operating a vehicle** that has a vehicle information system from which [at] **least one vehicle operating parameter may be obtained**. The vehicle operating parameter collected through the vehicle information system and **operator information collected from a portable device are wirelessly communicated** to a remote host through a network such as the Internet." EX1005, Abstract. • "In one embodiment, the invention provides a **logging system that includes a vehicle, a portable device**, and a remote host. The vehicle includes a controller and a base unit. **The controller is positioned in the vehicle, and monitors one or more operating parameters of the vehicle**. The base unit is mounted in the vehicle, and is connected to the controller to receive and store the one or more operating parameters from the device. **The portable device, typically carried by the driver, can be coupled to the base unit. Once coupled, the portable device receives identifying information from the driver, receives the one or more operating parameters from the base unit, determines compliance data based, at least in part, on the identifying information and the one or more operating parameters, and wirelessly transmits signals based on the compliance data.** The remote host is configured to **wirelessly receive the signals from the portable device**, and to **wirelessly manage the portable device based, at least in part, on the received signals**." EX1005, ¶ [0007]. • "FIG. 1 shows a performance monitoring system 100 for use with a commercial motor vehicle ("CMV") 104. Although the CMV 104 illustrated is a tractor configured to tow a trailer (not shown), the performance monitoring system 100 can also be implemented in other types of CMV's such as construction vehicles and agricultural equipment.

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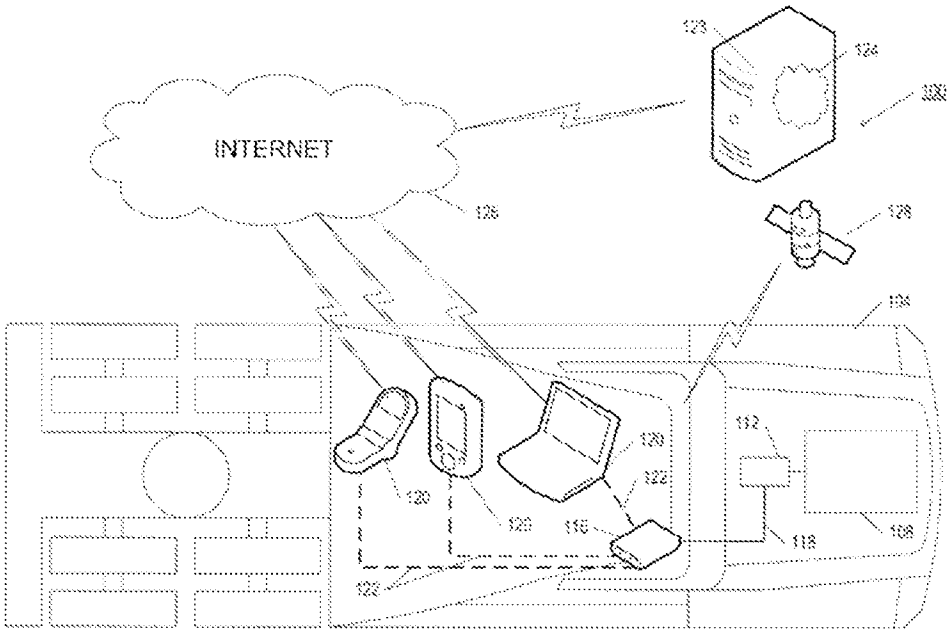
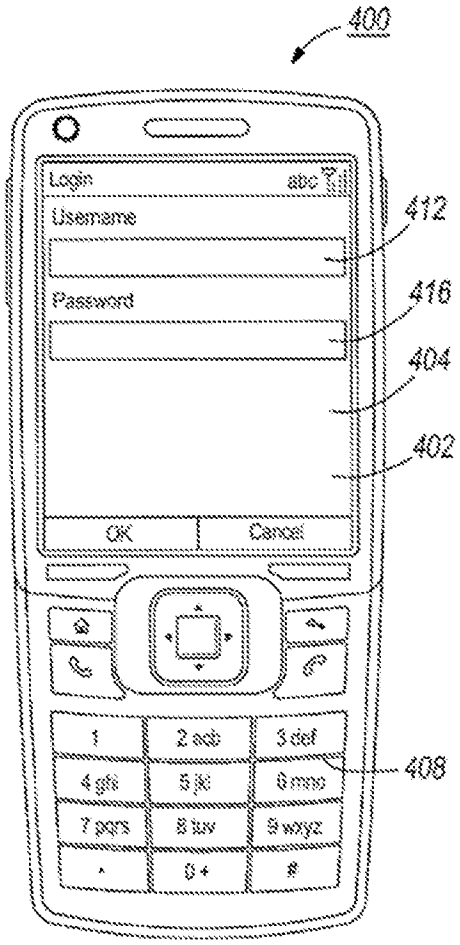
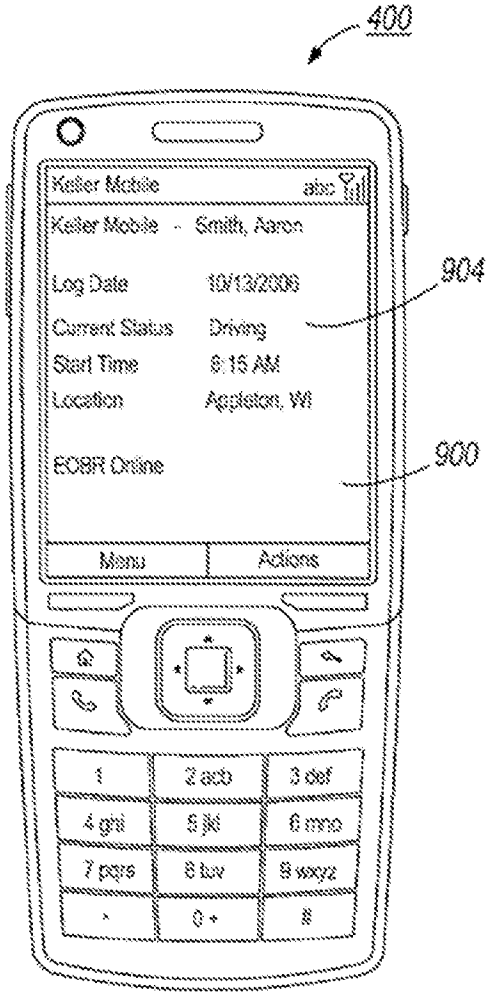
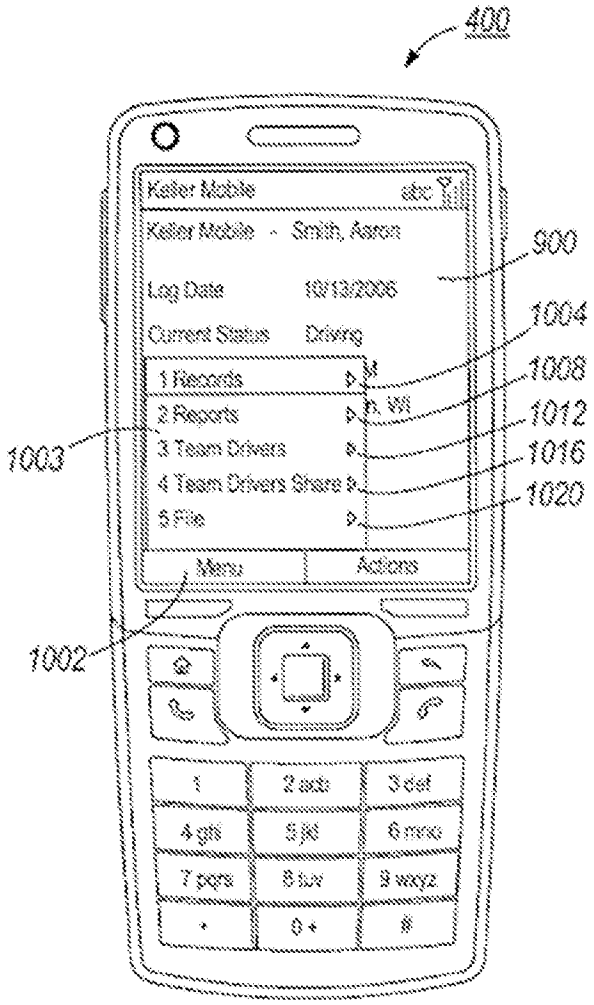
Claim Language	Relevant Prior Art Disclosures and Argument[1]
	The CMV 104 includes an engine 108 that drives the CMV 104, and is controlled by an electronic control unit ("ECU") 112 that determines operating information or parameters from the engine 108, and other parts of the CMV 104. **Operating parameters monitored by the ECU 112 include speed, hours of service, operating status, ignition switch status, trip distance, total vehicle distance, and the like.**" EX1005, ¶ [0032]. • "The performance monitoring system 100 also includes an electronic on-board recorder ("EOBR") base unit 116 that communicates with the ECU 112 through an information bus 118 conforming to standards such as SAE J1939 and SAE J1708 network buses. The base unit 116 has a plurality of functions including, but not limited to, time keeping and data logging. In one implementation, the base unit 116 records and stores CMV information or data necessary to comply with FMSCA regulations such as those mentioned above from the ECU 112. **The performance monitoring system 100 also includes a portable device 120 such as a mobile phone, a personal-digital-assistant ("PDA"), a laptop computer, or the like, that communicates with the base unit 116. The base unit 116 communicates with the portable device 120 through a cable or wireless link 122**. The link 122 may be a serial cable, such as a USB cable. Other exemplary links include a **wireless personal-area-network such as Bluetooth**, and the like. The portable device 120 generally supports multiple platforms such as Windows Mobile 5 cell phones, Pocket PC 2003 (or better) PDA's, and computers such as laptops. The performance monitoring system 100 also includes a remote host server 123 running a remote host application 124 that **wirelessly communicates with the portable device 120 via a network such as the Internet**, detailed hereinafter. In some embodiments, a global position satellite ("GPS") system 128 also communicates with the ECU 112 and/or the base unit 116 so that information from the GPS system 128 (such as time and location) is available to the CMV 104. In some embodiments, at least a portion of the information stored in the base unit 116 or information communicated to and from the base unit 116 is encrypted." EX1005, ¶ [0033]. • "FIG. 4 shows an example of the **portable devices 120 in the form of a smart phone 400** displaying a login screen 402. In such cases, **the smart phone 400 wirelessly connects to the base unit 116 via Bluetooth or other wireless connections**, or is wired to the base unit 116 via one or more cables. The smart phone 400 includes a display 404 and generates a graphical user interface on the display 404. The graphical user interface prompts operators for information and displays information such as an hours-of-service of a particular operator and other information, as detailed hereinafter. The smart phone 400 also includes an input keyboard 408 to allow operators to enter operator or driver, and trip information. The

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	display 404, as shown in FIG. 4, via a software application installed in the smart phone 400 shows the login screen 402, and prompts the operator for login or **identifying credentials** such as identity or username at a username entry 412 and a password at a password entry 416. Once the username and the password have been entered and verified, the CMV driver or operator starts a performance monitoring process. Initially, if there is no log entry attributed to the operator, **the portable device 120 attempts to establish a network connection with the remote host application 124. In turn, the remote host application 124 verifies the identifying credentials**, detailed hereinafter. After the remote host application 124 has verified the identifying credentials, the remote host application 124 passes back via a return parameter a validation signal to the portable device 120." EX1005, ¶ [0042]. • "FIG. 18 shows an exemplary screen 1800 of the remote host application 124. **Once the log is received at the remote host application 124**, the remote host application 124 stores and calculates parameters such as hours-of-service information of the operator and alerts the operator or the carrier of any violations of predetermined FMCSA rules. For example, a **log summary area 1804 lists all duty entries the operator submitted through the portable device 120. A log information area 1808** lists other driver and vehicle parameters collected. The remote host application 124 thus can rearrange the entries collected and generates different reports as needed. Furthermore, if an operator has a non-compliance violation, the remote host application 124 will also transmit a signal back to the portable device 120 to alert the operator of the violation." EX1005, ¶ [0053]. *See also*, Harter (EX1005), FIGs. 1, 4, 9, 10, 18:

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	 FIG. 1

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	 FIG. 4

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	 FIG. 9

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	 FIG. 10

Claim Language	Relevant Prior Art Disclosures and Argument[1]

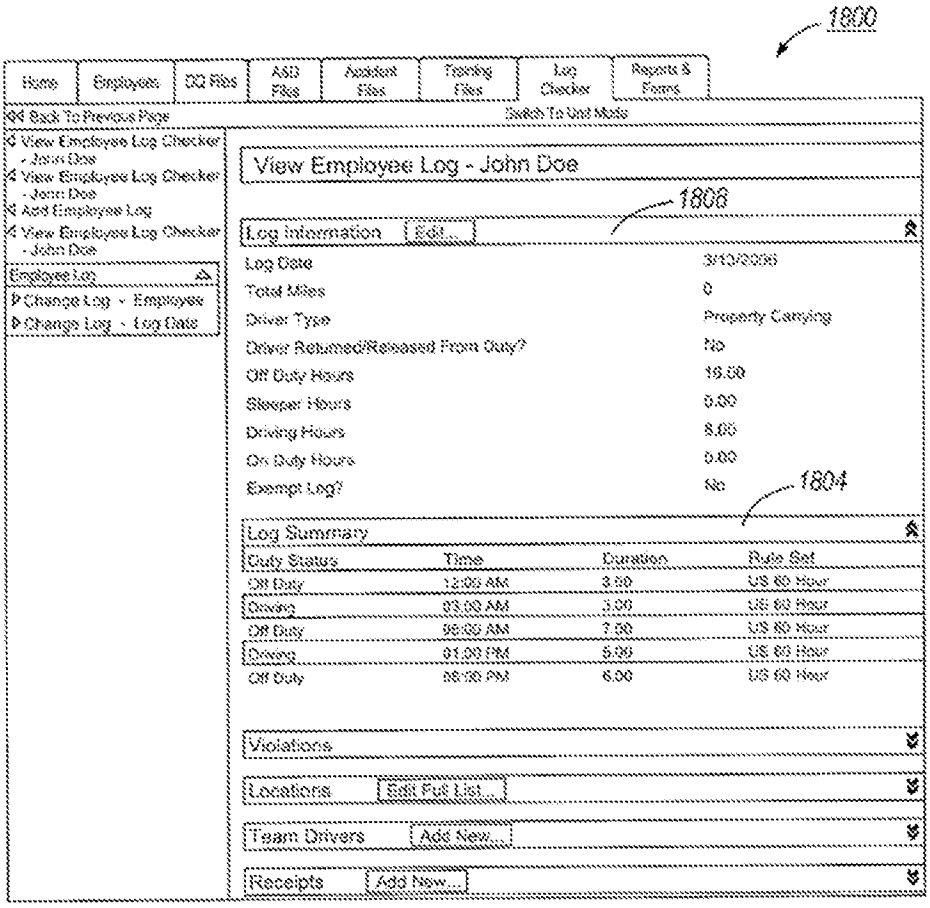


FIG. 18

SNQ3 (Obviousness based on Cherouny and Shuman):
Even if Cherouny does not disclose a ***data logging module***, this limitation would have been obvious over Shuman.

As to a ***data logging module***, Shuman discloses:

- "FIG. 29 shows the component processes that form the drive recorder 225 shown in FIG. 2. **The drive recorder 225 obtains and logs information relating to all aspects of the vehicle and vehicle environment, including the driver and passengers.** In FIG. 29, the drive recorder 225 includes a logging process 225(A) that receives current information streams from all the vehicle sensors 202, 204, and 304, all subsystem software 210 and 310, all the vehicle hardware 208 and 308, the communications manager 262, the vehicle-user device manager 270, as well as other managers, and the driver and user interface devices 250 and

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	350. **The logging process 225(A) also receives event logs from all the applications 224 and 324.** **The driver recorder 225 continuously stores a history of the vehicle and vehicle environment in a non-volatile secure data storage device**. The drive recorder 225 includes a process 225(B) that provides all the **logged data** into a format and **stores the formatted data onto a physical drive recorder medium 225(C). This data storage device may be in the vehicle or may be located remotely.**" EX1006, 30:60-31:12. Regarding the combination of Cherouny and Shuman, a POSITA would have found it obvious to use the teachings from Shuman (i.e., the use of driver profiles and recording vehicle location and speed in the vehicle units' memory) because this would have represented a simple modification to Cherouny's system, which already describes "record[ing] the driver speed over a given period of time." EX1004, ¶ [0035]. Accordingly, to the extent Cherouny was lacking any implementation details on how or where to record information about operation of the vehicle, Shuman provides explicit details of the same (e.g., that its "driver recorder 225 continuously stores a history of the vehicle and vehicle environment in a non-volatile secure data storage device," and that this "data storage device may be in the vehicle or may be located remotely," EX1006, 30:60-31:12), and a POSITA would have been aware of these techniques in view of Shuman's explicit disclosure of them. A POSITA would have had a reasonable expectation of success in implementing Shuman's teachings, particularly given Cherouny's disclosure that with its invention "the memory capability of the speed governor **allows for a permanent record** of the drivers possible violations." EX1004, ¶ [0009]; EX1003 (Wilson), ¶ 64. Thus, Shuman offers explicit implementation details for a ***data logging module*** that would have been implemented into Cherouny's vehicle control system, and together, the combined system discloses the claimed ***data logging module***. EX1003 (Wilson), ¶ 64. **SNQ4 (Obviousness based on Cherouny and Petrik):** Even if Cherouny alone does not disclose a ***data logging module***, this limitation would have been obvious from Cherouny over Petrik. For example, Petrik discloses a ***data logging module***: • "These problems are overcome by the present invention, which provides a method and system of **automatically and irrefutably logging** via GPS, **operational parameters** such as drivers' work and rest time, **vehicle location, vehicle speeds**, speeding offences, distance covered etc. **and recording these on a secure smart card as well as in the vehicle units' memory**." EX1007, ¶ [0009].

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Claim Language	Relevant Prior Art Disclosures and Argument[1]
	Regarding the combination of Cherouny and Petrik, a POSITA would have found it obvious to use the teachings from Petrik (i.e., recording vehicle location and speed in the vehicle units' memory) because this would have represented a simple modification to Cherouny's system, which already describes "record[ing] the driver speed over a given period of time." EX1004, ¶ [0035]. Accordingly, to the extent Cherouny was lacking any implementation details on how or where to record information about operation of the vehicle, Petrik provides explicit details of the same (e.g., "automatically and irrefutably logging . . . operational parameters . . . and recording these on a secure smart card as well as in the vehicle units' memory," EX1007, ¶ [0009]) and a POSITA would have been aware of these techniques in view of Petrik's explicit disclosure of them. A POSITA would have had a reasonable expectation of success in implementing Petrik's teachings, particularly given Cherouny's disclosure that with its invention "the memory capability of the speed governor **allows for a permanent record** of the drivers possible violations." EX1004, ¶ [0009]; EX1003 (Wilson), ¶ 68. Thus, Petrik offers explicit implementation details for a ***data logging module*** that would have been implemented into Cherouny's vehicle control system, and together, the combined system discloses the claimed ***data logging module***. EX1003 (Wilson), ¶ 68. **SNQ5 (Obviousness based on Cherouny and Bouchard):** Even if Cherouny does not disclose a ***data logging module***, this limitation would have been obvious over Bouchard. For example, Bouchard discloses an "event recording apparatus" that is personalized for each driver of a vehicle and discloses a ***data logging module***: • "A system for evaluating fitness of a vehicle driver to operate a vehicle, including: (a) a collision warning apparatus for collecting data relevant to determining the operational state of the vehicle and the driver; (b) **an operational event recorder apparatus coupled to the collision warning apparatus for recording the collected relevant data and recording a driver profile**; (c) a driver fitness evaluation apparatus coupled to the operational event recorder and the collision warning apparatus for generating the driver profile, and providing a real-time evaluation of the driver's fitness to operate the vehicle by comparing the recorded driver profile with the driver's current performance as indicated by the recorded relevant data." EX1008, claim 1. • "Still further, it would be desirable to have a method and apparatus which **utilizes the information that is gathered by a radar system and other sensors, and the information that has been recorded during past trips and a present trip**, to evaluate a driver's performance in real-time and

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	under actual conditions. It would also be desirable for such a system to predict when a driver is near the point of being unfit to safely operate a vehicle and determine when the driver is actually unfit to safely operate a vehicle." EX1008, 4:60-5:1. • "In the preferred embodiment of the present invention, each driver maintains a removable ERA [Event Recording Apparatus] that is personalized to that particular driver. Each ERA has **information that identifies the driver, and a record of that driver's driving history and performance**." EX1008, 6:4-8. • ". . . **Additional information can be obtained by providing other sensors**, such as a brake pedal pressure sensor, brake hydraulic line pressure sensor, tire pressure, **accelerometer sensors** (for example, fore and aft acceleration/deceleration, and/or left and right (yaw) acceleration of the vehicle), turning rate, turn angle, and/or impact sensors (such as the type used to trigger vehicle air bags), windshield wiper status (to determine if it is raining), fog light status, outside temperature, defroster status, and **geographic positioning information**. **Recording some or all of this data or similar relevant data would make accident reconstruction more reliable and less expensive**." EX1008, 9:21-50. Regarding the combination of Cherouny and Bouchard, a POSITA would have found it obvious to use the teachings from Bouchard (i.e., recording operational event information, a record of driving history) because this would have represented a simple modification to Cherouny's system, which already describes "record[ing] the driver speed over a given period of time." EX1004, ¶ [0035]. Accordingly, to the extent Cherouny was lacking any implementation details on how or where to record information about operation of the vehicle, Bouchard provides explicit details of the same (e.g., "recording the collected relevant data and recording a driver profile" EX1008, claim 1), and a POSITA would have been aware of these techniques in view of Bouchard's explicit disclosure of them. A POSITA would have had a reasonable expectation of success in implementing Bouchard's teachings, particularly given Cherouny's disclosure that with its invention "the memory capability of the speed governor **allows for a permanent record** of the drivers possible violations." EX1004, ¶ [0009]; EX1003 (Wilson), ¶ 72. Thus, Bouchard offers explicit implementation details for a ***data logging module*** that would have been implemented into Cherouny's vehicle control system, and together, the combined system discloses the claimed ***data logging module***. EX1003 (Wilson), ¶ 72.

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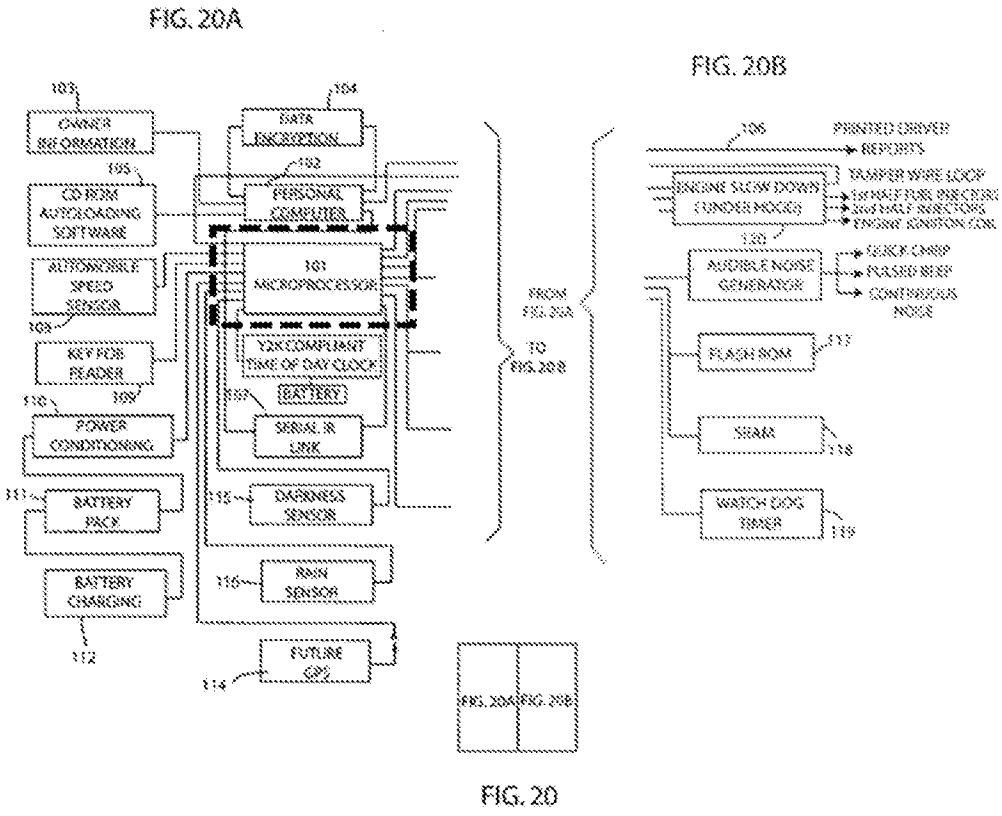
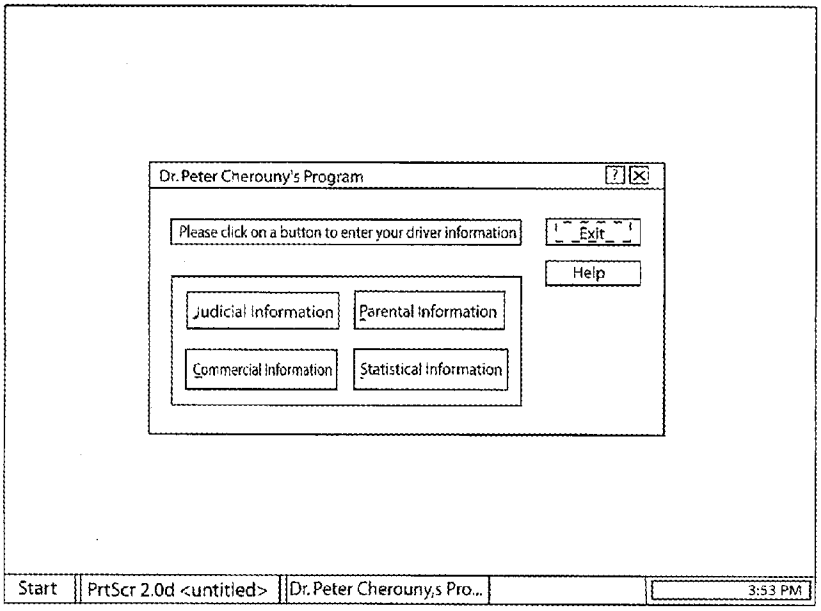
Claim Language	Relevant Prior Art Disclosures and Argument[1]
[1.2] a master control unit in a vehicle for wirelessly authenticating at least one occupant via said wireless driver identification and data logging module and associating an operating profile with said at least one occupant;	Cherouny discloses, suggests, and renders obvious ***a master control unit in a vehicle for wirelessly authenticating at least one occupant via said wireless driver identification and data logging module and associating an operating profile with said at least one occupant***. As described in the Reexam Request in Section I.C, although the '470 Patent does not explicitly define what the ***master control unit*** is, it does provide discussion, e.g., of the various functions it is responsible for performing, signals it can send and receive, and instructions it can provide: • "The master control unit 430 can enable vehicle operation within the programmed operating profile 435." EX1001, 7:58-59. • "The master control unit 430 can authenticate the driver 410 . . ." EX1001, 7:26-32. • "The master control unit 430 may also receive data indicative of the speed of the vehicle 420, the location of the motor vehicle 420, and the time of day from a plurality of sources including a WIFI enabled device, an RF source, a Bluetooth enabled device, and a smart-road network source." EX1001, 8:61-66. • "The master control unit 430 can interpret driver authorization, and ascertain the vehicle speed. The master control unit 430 also interprets the location and time of day parameters versus maximum desired threshold limits." EX1001, 9:6-10. • "The master control 430 can be configured to define a number of operating parameters for a given driver such as a maximum speed limit and a geo-fence limit defining an acceptable space in which the vehicle may be operated." EX1001, 10:30-33. • "The master control unit 430 monitors and logs vehicle performance via the GPS module 504 associated with master control unit 430 . . ." EX1001, 11:52-58. • "The master control unit 430 can communicate and send commands to the slave control unit 440 associated with the driver authentication system 450." EX1001, 10:48-50. • "The master control unit 430 can be configured to include driver identification and validation module 502 . . ." EX1001, 8:57-58. In view of these disclosures, a POSITA reading the '470 Patent would have understood that the claimed ***master control unit in a vehicle*** would at least have encompassed a processor (sometimes, when built into the vehicle, referred to as an electronics control unit, or ECU) within the vehicle, capable of performing the various functions described by the '470 Patent, such as monitoring and logging vehicle performance and communicating with the slave control unit. EX1003 (Wilson), ¶ 48; *see also* Reexamination Request, Section I.C.

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	Cherouny discloses ***a master control unit in a vehicle*** through its microprocessor 101, which is responsible for interfacing with and controlling all components within its vehicle, including the key fob (for driver identification) and various vehicle sensors and GPS systems, as shown in Figures 20A and 20B.  **EX1004, Fig. 20 (annotated to combine Figures 20A and 20B, and to show microprocessor 101)** Cherouny discloses that its ***master control unit*** (i.e., microprocessor 101) performs ***wirelessly authenticating at least one occupant via said wireless driver identification and data logging module*** by interacting with the key fob using key fob reader 109, which, together with the software existing on and executed by microprocessor 101, identifies and authenticates the driver of the vehicle. Cherouny explains: • "**Connected to the microprocessor 101** are automobile speed sensors 108 which sense the actual speed of the automobile when in use. **Also connected to 101 is a key fob reader which checks the identity of the user of the automobile to insure the instant user's data table is used**. Components 110, 111, and 112 are the power conditioning unit, the battery

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	pack and a battery charger. These components can be used to charge up the unit." EX1004, ¶ [0073]. • "The software has two parts. The first allows for setting all the parameters for operation. **These parameters allow for multiple drivers in multiple scenarios**. The detection of rain and darkness and tampering and are inputted to allow them to affect the operation of the vehicle at different times and to report to the parent or administrator the conditions at the time of an infraction. This information to the parent or administrator is invaluable in making judgment calls in training the young driver in safe driving under these conditions. The driver does not have to remember codes **as that function is now performed by the key fob function which identifies to the mobile computer who was or is about to operate the vehicle**. This semi-automatic identification of who was driving eliminated two main problems with codes the first of which was forgetting the code. The second problem eliminated the need for an addition of a keypad and associated electronic hardware requiring a circuit de-bounce. The key fob allows the device to be mounted in an inconspicuous place and it can be inserted by feel alone. The owner of the software to program the mobile unit has the password right to enter the code." EX1004, ¶ [0018]. To the extent it is argued that Cherouny alone does not disclose a ***wireless*** authentication, such would have been obvious for the same reasons discussed above in limitation [1.1], *supra*. EX1003 (Wilson), ¶ 48. And further, to the extent this is found lacking in Cherouny alone, such would have been obvious and explicitly disclosed in SNQ2 (the combination of Cherouny and Harter). Finally, as to the claimed ***associating an operating profile with said at least one occupant***, the '470 Patent generally describes an ***operating profile*** as being used to "place limits on the operation of the vehicle 420. For example, the driver operating profile can define speed limits for each unique driver and can include geo-fencing for each driver. These limits can be dynamically determined according to location provided via the GPS module and time of day. For example, a concerned parent may set a geo-fence of 20 miles from their house for their teenage driver during the day and a 10 mile geo-fence at night. If the teenage driver exceeds this distance an alarm signal can be provided by the master control unit 430." EX1001, 9:11-23. Accordingly, an ***operating profile*** at least encompasses placing limits (e.g., speed, location) on a driver of a vehicle. Similar to the '470 Patent, Cherouny ***associat[es] an operating profile with said at least one occupant*** by disclosing a program through which a moderator (e.g., a parent of a teen driver) can preprogram operation parameters for an individual driver of a vehicle in its system. *See* EX1004, claim 1, ¶¶ [0018], [0020].

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	Specifically, Cherouny describes a process through which a moderator (just like the "concerned parent" in the '470 Patent) can define speed limits based on the time of day, control vehicle parameters (i.e., turn off the ignition), and generate alarms. Cherouny explains: • "**A system for specifically regulating the driving performance of a given individual by use of a computer from a server in a central location**, said system comprising a **monitoring moderator means adapted to be attached to the vehicle the given individual is to drive**, a data processing means **having performance criteria preprogrammed** therein and which relates to the driving performance history **of said given individual associated with said moderator**, said processing means operatively connected to said central server, **wireless transmitting means associated with said moderator to send signals representing location and speed data of said vehicle at any given time** to said central server engine control means associated with said data processing means and adapted to regulate operation of the engine of a vehicle in response to signals received from said central server via a GPS satellite system, **whereby the operation of a vehicle by said given individual can be preprogrammed, recorded and closely monitored remotely from a central server location by automatically curtailing operation of the vehicle when the received data exceeds preset or personalized limits of said individual driver**." EX1004, claim 1. • "The software has two parts. **The first allows for setting all the parameters for operation**. These parameters allow for multiple drivers in multiple scenarios." EX1004, ¶ [0018]. • "However, the new, improved version of the invention, called a **moderator**, has a global positioning receiver linked to the CPU that receives the location of the vehicle from the GPS satellite system. The **Moderator uses a linked mapping capability and database, located within a central server or within the Moderator or both, that allows the location data to identify the roadway section where the vehicle is located and the speed data of that portion of the roadway**. This data is compressed in code to reduce the file size of this database. If a centrally located database is used, the data is sent via a remote wireless connection between the central database and the vehicle and the Moderator. **Use of the speed data uploaded through this GPS wireless connection by the Moderator is prearranged by the administrator of the Moderator software program**." EX1004, ¶ [0020]. • "A further object of this invention is to provide a safety device for the 'at risk' segment of the driving public **by limiting the speed of the motor vehicle they are driving by programming in a speed limit, by adjusting**

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	for driving history, by reassessing allowable speed during rain or darkness." EX1004, ¶ [0038]. • "FIGS. 1-13 show the **operating program on a PC used by the operator of this system to preprogram the operating scenario for the various drivers and conditions**. The system show four data bases, namely Judicial Information, **Parental Information**, Commercial Information and Statistical Information." EX1004, ¶ [0064]. *See also* FIGs. 1, 6-9: FIG. 1 

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Claim Language	Relevant Prior Art Disclosures and Argument[1]

FIG. 6

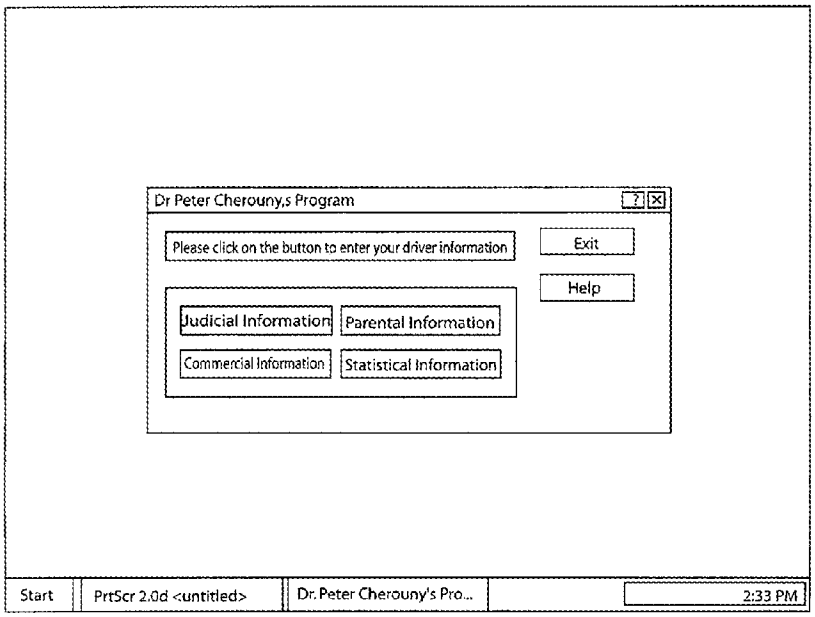
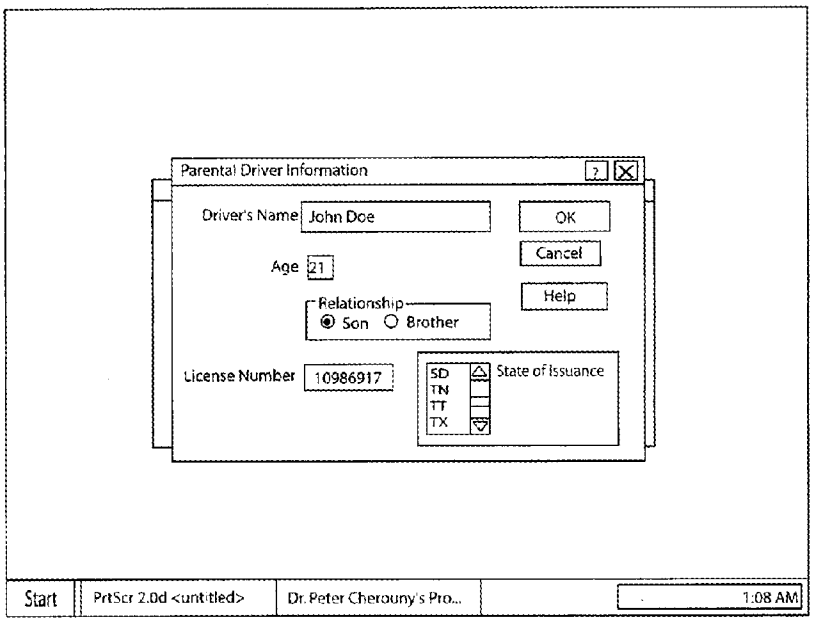


FIG. 7



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Claim Language	Relevant Prior Art Disclosures and Argument[1]

FIG. 8

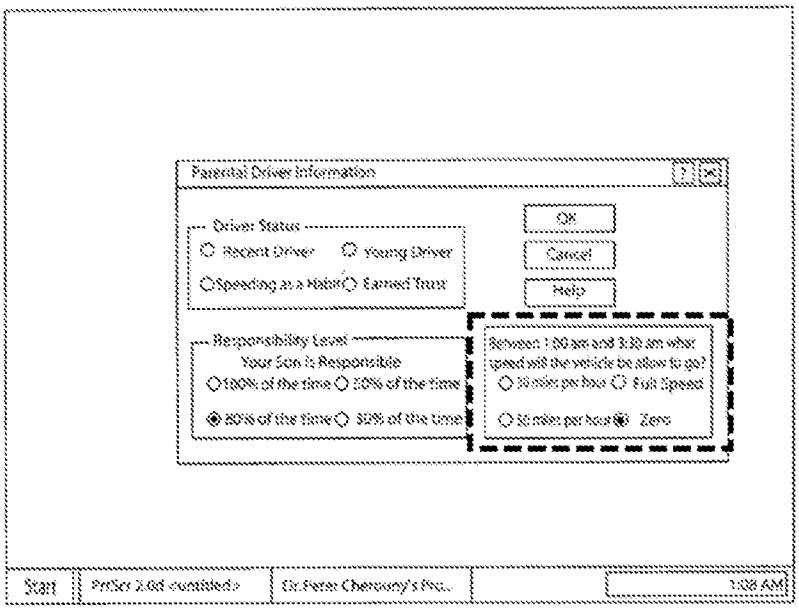
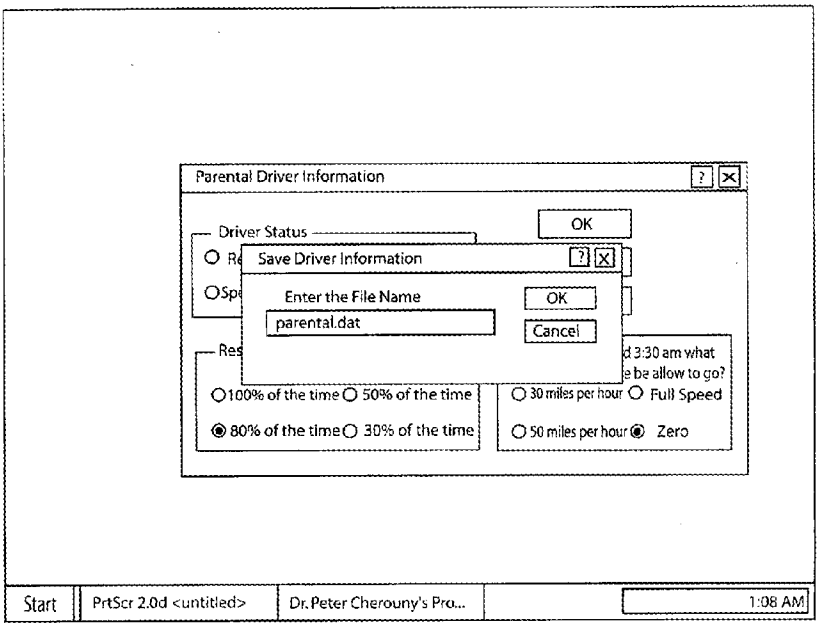
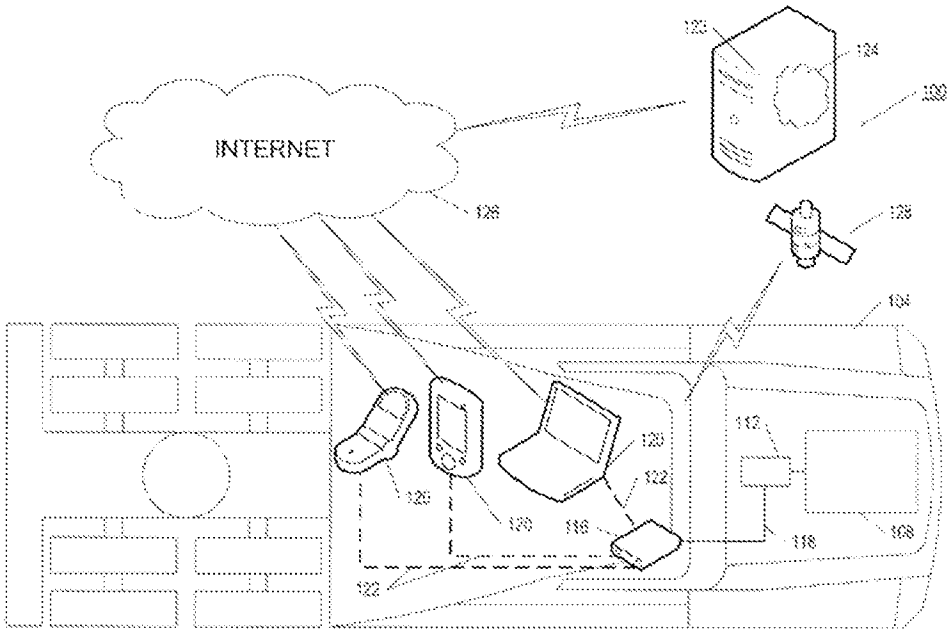


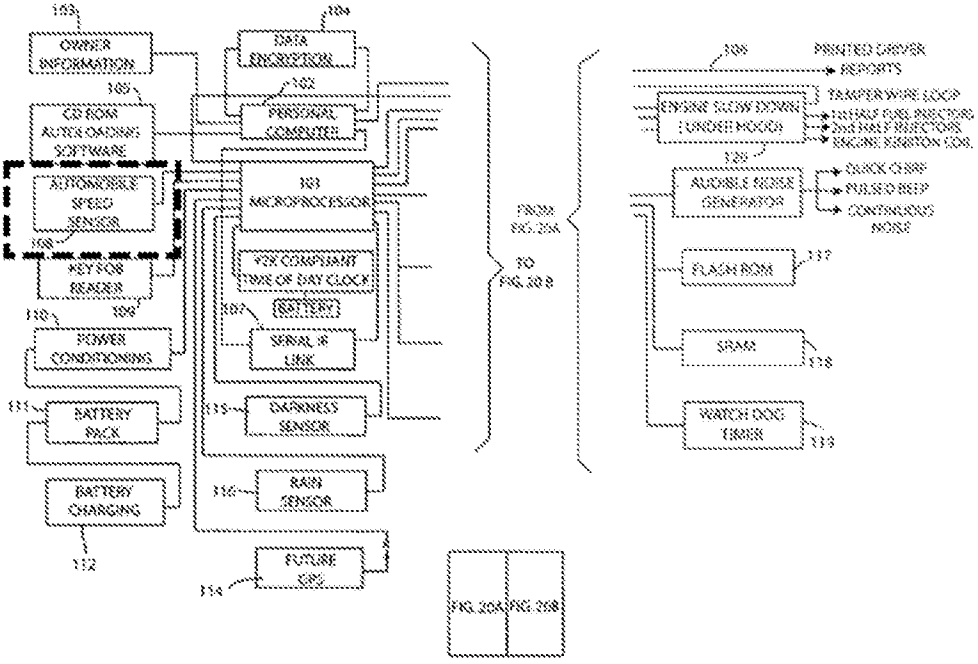
FIG. 9



- "**FIG. 6 shows the screen of FIG. 1 again with the emphasis on 'Parental Information' this time**. FIG. 7 shows the relationship of the driver to the parent as father and son and **FIG. 8 shows an input for the parent to make to help the system arrive at a pre-programmed**

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	operation for the son. Note that a lot of "fine tuning" is available such as speed limiters for certain late hours and accommodation for certain demonstrated responsibility levels. FIG. 9 shows the SAVE function screen for the date entered under Parental Information. FIG. 10 shows the screen of FIG. 1 again with emphasis on Commercial Information. Like in the situation with a Judicial driver information, FIG. 11 shows the input for a commercial driver including status and driving history. It also notes whether the driver is full time or part time." EX1004, ¶ [0068]. Accordingly, in view of the disclosures and argument above, Cherouny discloses, suggests, and renders obvious ***a master control unit in a vehicle for wirelessly authenticating at least one occupant via said wireless driver identification and data logging module and associating an operating profile with said at least one occupant***. **SNQ2 (Obviousness based on Cherouny and Harter):** As explained above in limitation [1.1], *supra*, in the combined Cherouny-Harter system, Harter's smartphone would have been used as the ***wireless identification and data logging module***. Accordingly, relevant to limitation [1.2]'s requirement that the ***master control unit . . . wirelessly authenticat[es] at least one occupant via said wireless driver identification and data logging module***, such would have been disclosed or rendered obvious in the Cherouny-Harter combination. For example, Harter explicitly describes that "the **portable device receives identifying information from the driver**, receives the one or more operating parameters from the base unit, determines compliance data based, at least in part, **on the identifying information** and the one or more operating parameters, and **wirelessly transmits** signals based on the compliance data." EX1005, ¶ [0007]. And, as shown in Figure 1, "the smart phone 400 **wirelessly connects to the base unit 116 via Bluetooth or other wireless connections**," where the base unit 116 is present in a vehicle and is in communication with Harter's ECU 112. EX1005, ¶ [0042], Fig. 1.

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	 FIG. 1 In view of these disclosures, a POSITA would have found it obvious in the combined Cherouny-Harter system that the ***master control unit*** (i.e., Cherouny's existing microprocessor 101)**. . . *wirelessly authenticat[es] at least one occupant via said wireless driver identification and data logging module*** (i.e., Harter's smartphone 400) in view of Harter's explicit teaching of the same. These teachings from Harter would have been combinable with Cherouny's system for the same reasons discussed above in limitation [1.1], *supra*. EX1003 (Wilson), ¶ 58.
[1.3] a module for receiving at least location and speed information in association with a movement of said vehicle;	Cherouny discloses, suggests, and renders obvious ***a module for receiving at least location and speed information in association with a movement of said vehicle***. As explained above in limitation [1.1], the '470 Patent describes the term ***module*** broadly, e.g., as including physical hardware components "**and/or**" software programs capable of performing the function described. EX1001, 6:111-36; *see* limitation [1.1], *supra*. First, Cherouny discloses ***a module for receiving at least . . . <u>speed</u> information in association with a movement of said vehicle*** by disclosing: • "A system for specifically regulating the driving performance of a given individual by use of a computer from a server in a central location, said system comprising . . . **wireless transmitting means associated with said**

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	moderator to send signals representing location and speed data of said vehicle at any given time to said central server . . . ." EX1004, claim 1. • "It is another object of this invention to provide a programmable electronic device for motor vehicles **which also records the driving speed over a given period of time**." EX1004, ¶ [0035]. • "The instant device does not cut off the ignition but has a slow down sequence which has several levels of sophistication. The first level sounds a short burst or chirp but does not record the infraction. The second level of this is that the excess speed of the driver is recorded so that it can be reported to an authority figure. That authority figure is the driving force behind altering the activity of the driver. This allows the authority figure to provide back up to his or her decision making on the drivers performance." EX1004, ¶ [0031]. Cherouny also depicts an "automobile speed sensor 108," as shown in Figure 20: FIG. 20A FIG. 20B  FIG. 20 • "Connected to the microprocessor 101 are **automobile speed sensors 108 which sense the actual speed of the automobile when in use**." EX1004, ¶ [0073].

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	In view of these disclosures, Cherouny's system discloses, suggest, or renders obvious ***a module for receiving at least . . . speed information in association with a movement of said vehicle***. Second, Cherouny also discloses ***a module for receiving at least location . . . information in association with a movement of said vehicle*** by disclosing: • "A system for specifically regulating the driving performance of a given individual by use of a computer from a server in a central location, said system comprising . . . **wireless transmitting means associated with said moderator to send signals representing location and speed data of said vehicle at any given time to said central server** . . . ." EX1004, claim 1. • "However, the new, improved version of the invention, called a moderator, **has a global positioning receiver linked to the CPU that receives the location of the vehicle from the GPS satellite system**. The Moderator uses a linked mapping capability and database, located within a central server or within the Moderator or both, **that allows the location data to identify the roadway section where the vehicle is located and the speed data of that portion of the roadway**. This data is compressed in code to reduce the file size of this database. If a centrally located database is used, the data is sent via a remote wireless connection between the central database and the vehicle and the Moderator. Use of the speed data uploaded through this GPS wireless connection by the Moderator is prearranged by the administrator of the Moderator software program." EX1004, ¶ [0020]. • "Yet another object of this invention is to provide a programmable speed controller which is partially governed by a GPS system, **allowing for identification of the road and location of the vehicle** for adjusting speed limits according to vehicle location in real time." EX1004, ¶ [0040]. Cherouny also depicts a "future **GPS** 114," as shown in Figure 20:

Claim Language	Relevant Prior Art Disclosures and Argument[1]

FIG. 20A

FIG. 20B

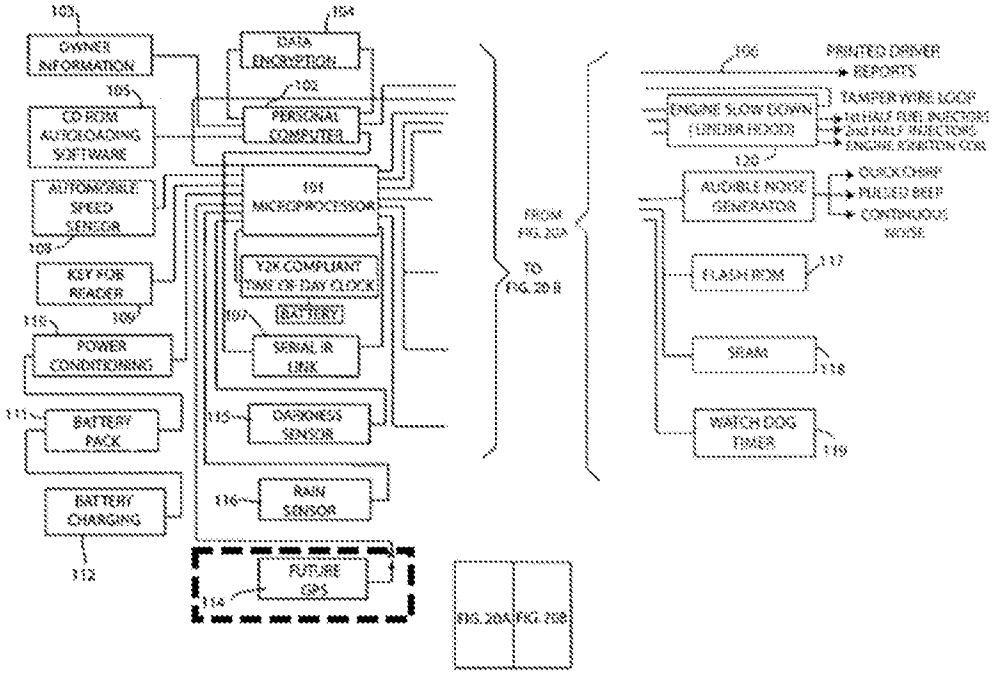


FIG. 20

- "**Connected to the microprocessor 101** are automobile speed sensors 108 which sense the actual speed of the automobile when in use. Also connected to 101 is a key fob reader which checks the identity of the user of the automobile to insure the instant user's data table is used. Components 110, 111, and 112 are the power conditioning unit, the battery pack and a battery charger. These components can be used to charge up the unit.

  A clock unit 113 is also **connected to the microprocessor and provision is also made for a GPS unit 114 for instant location information on the position of the vehicle** on a predetermined grid." EX1004, ¶¶ [0073]-[0074].

Accordingly, in view of the above disclosures, Cherouny discloses, suggests, or renders obvious ***a module for receiving at least location and speed information in association with a movement of said vehicle***.

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	SNQ2 (Obviousness based on Cherouny and Harter): To the extent Cherouny is found not to explicitly disclose ***a module for receiving at least location and speed information in association with a movement of said vehicle***, it would have been obvious over Harter. Harter discloses that, as to ***speed information***, one of the operating parameters monitored by the ECU includes "speed." EX1005, ¶ [0032]. As to ***location information***, "information from the **GPS system** 128 (such as time and **location**) is available to the [vehicle]." EX1005, ¶ [0033]. *See, e.g.*, Harter: • "**The performance monitoring system 100 also includes an electronic on-board recorder ("EOBR") base unit 116 that communicates with the ECU 112 through an information bus 118** . . . . The base unit 116 has a plurality of functions including, but not limited to, time keeping and **data logging**. . . . In some embodiments, a global position satellite ("GPS") system 128 also communicates with the ECU 112 and/or the base unit 116 **so that information from the GPS system 128** (such as time and **location**) is available to the CMV 104. In some embodiments, at least a portion of the information stored in the base unit 116 or information communicated to and from the base unit 116 is encrypted." EX1005, ¶ [0033]. • " . . . After the CMV arrives at a destination and stops, the smart phone 400 prompts the operator for a **new destination location in the location entry 708** (of FIG. 7). **This information is then stored in the memory** module 211." EX1005, ¶ [0045]. • "The screen 1800 is also expandable to display other information such as, violations, **locations (which indicates locations the CMV driver has traveled during the trip)**, team drivers (which indicates a list of operators involved in the trip), and receipts (which indicates a list of receipts collected during the trip)." EX1005, ¶ [0054]. • " . . . Operating parameters **monitored by the ECU 112 include speed**, hours of service, operating status, ignition switch status, trip distance, total vehicle distance, and the like." EX1005, ¶ [0032]. Accordingly, to the extent Cherouny is not explicit in its disclosure of receiving speed and location information, Harter discloses it as shown above. A POSITA would have seen it as beneficial and obvious to include capabilities of monitoring and receiving speed and location information into Cherouny's system based on these explicit teachings in Harter. EX1003 (Wilson), ¶ 59. Cherouny's system

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	already includes the components necessary to obtain this information (e.g., through its automobile speed sensor 108 and GPS 114), and to the extent it is not explicit, Harter provides the implementation details as to how this information would be received by the processor of the system. *See* EX1004, claim 1, ¶¶ [0020], [0035], [0040]; EX1005, ¶¶ [0032]-[0033], [0045], [0054]. A POSITA would have recognized that monitoring speed and location (e.g., in view of Harter's explicit teachings) would further Cherouny's stated goal of improving safety of at-risk drivers. EX1003 (Wilson), ¶ 59. A POSITA would have had a reasonable expectation of success of implementing Harter's teachings in view of Cherouny disclosing transmission of "location and speed data" and that Cherouny's system already includes the components for doing so. *Id.* **SNQ3 (Obviousness based on Cherouny and Shuman):** To the extent Cherouny is found not to disclose ***a module for receiving at least location and speed information in association with a movement of said vehicle***, it would have been obvious over Shuman. Shuman discloses that, as to ***location and speed information***, a "vehicle positioning program . . . uses data from the sensors . . . to determine the **position**, **speed**, and heading **of the vehicle**." EX1006, 9:52-57. *See, e.g.*, Shuman: • "The vehicle positioning program 210(1) uses data from the sensors 202 and 204 and the geographic database 220 to **determine the position, speed, and heading of the vehicle 10**." EX1006, 9:52-57. • " . . . Also disclosed is a **drive recorder** that **maintains records of the statuses of all vehicle systems** and of the driver." EX1006, Abstract. Accordingly, to the extent Cherouny is not explicit in its disclosure of receiving speed and location information, Shuman discloses it as shown above. A POSITA would have seen it as beneficial and obvious to include capabilities of monitoring and receiving speed and location information into Cherouny's system based on these explicit teachings in Shuman. EX1003 (Wilson), ¶ 65. Cherouny's system already includes the components necessary to obtain this information (e.g., through its automobile speed sensor 108 and GPS 114), and to the extent it is not explicit, Shuman provides the implementation details as to how this information would be received by the processor of the system. *See* EX1004, claim 1, ¶¶ [0020], [0035], [0040]; EX1006, Abstract, 9:52-57. A POSITA would have recognized that monitoring speed and location (e.g., in view of Shuman's explicit teachings) would further Cherouny's stated goal of improving safety of at-risk drivers. EX1003 (Wilson), ¶ 65. A POSITA would have had a reasonable expectation of success of implementing Shuman's teachings in view of Cherouny disclosing

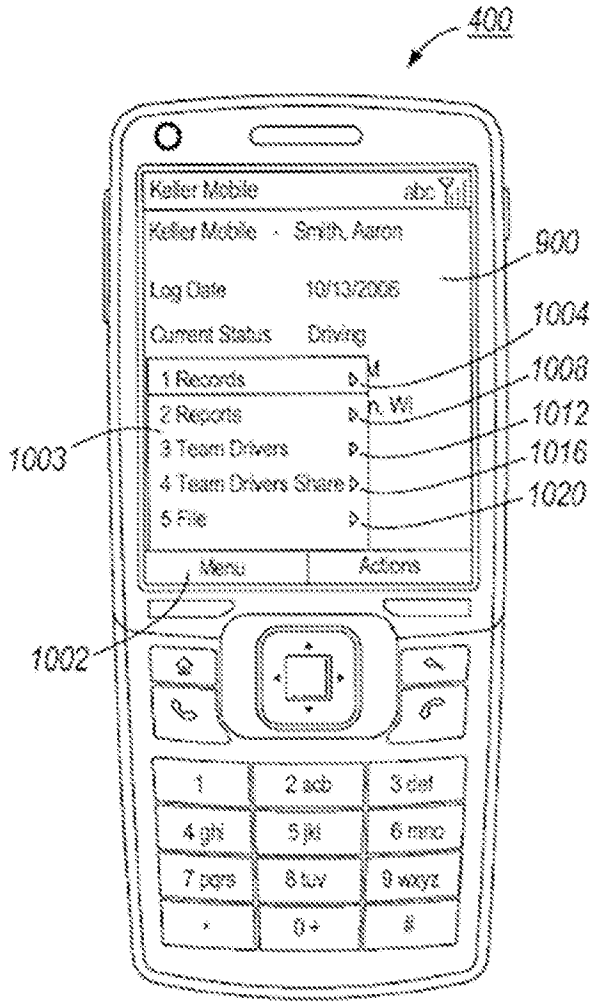
Claim Language	Relevant Prior Art Disclosures and Argument[1]
	transmission of "location and speed data" and that Cherouny's system already includes the components for doing so. *Id.* **SNQ4 (Obviousness based on Cherouny and Petrik):** To the extent Cherouny is found not to disclose ***a module for receiving at least location and speed information in association with a movement of said vehicle***, it would have been obvious over Petrik. Petrik discloses that, as to ***location and speed information***, "operational parameters" are logged, which include "vehicle location" and "vehicle speeds." EX1007, ¶ [0009]. *See, e.g.*, Petrik: • "These problems are overcome by the present invention, which provides a method and system of automatically and **irrefutably logging via GPS**, operational parameters such as drivers' work and rest time, **vehicle location, vehicle speeds**, speeding offences, distance covered etc. and recording these on a secure smart card as well as in the vehicle units' memory." EX1007, ¶ [0009]. • ". . . During the trip the **GPS keeps a constant log of the date, time, location, distance travelled and speed of the vehicle both in the units' memory** and in the smart card." EX1007, ¶ [0025]. Accordingly, to the extent Cherouny is not explicit in its disclosure of receiving speed and location information, Petrik discloses it as shown above. A POSITA would have seen it as beneficial and obvious to include capabilities of monitoring and receiving speed and location information into Cherouny's system based on these explicit teachings in Petrik. EX1003 (Wilson), ¶ 69. Cherouny's system already includes the components necessary to obtain this information (e.g., through its automobile speed sensor 108 and GPS 114), and to the extent it is not explicit, Petrik provides the implementation details as to how this information would be received by the processor of the system. *See* EX1004, claim 1, ¶¶ [0020], [0035], [0040]; EX1007, ¶¶ [0009], [0025]. A POSITA would have recognized that monitoring speed and location (e.g., in view of Petrik's explicit teachings) would further Cherouny's stated goal of improving safety of at-risk drivers. EX1003 (Wilson), ¶ 69. A POSITA would have had a reasonable expectation of success of implementing Petrik's teachings in view of Cherouny disclosing transmission of "location and speed data" and that Cherouny's system already includes the components for doing so. *Id.*

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	SNQ5 (Obviousness based on Cherouny and Bouchard): To the extent Cherouny is found not to disclose ***a module for receiving at least location and speed information in association with a movement of said vehicle***, it would have been obvious over Bouchard. Bouchard discloses that, as to ***location and speed information***, using sensors to monitor "vehicle speed (momentary and average" and "geographic positioning information." EX1008, 9:21-50. *See, e.g.*, Bouchard: • "The display and sensor section 600 which provides information from a variety of vehicle sensors 4a to the microcontroller 510 for use in calculating the hazard level presented by targets indicated from the received radar signal and/or to indicate the operational status and environment of the vehicle. **Commonly known sensors may be used**, for example, to measure distance travelled, **vehicle speed (momentary and average)**, fuel consumption, fuel remaining, direction of travel, engine temperature, oil pressure, engine RPM, oil temperature, transmission fluid temperature, coolant temperature, engine timing and other values relating to the environment or performance of the vehicle. The digital electronics section 500 itself generates information from the transmitted and received radar signal, such as the closing rate (CR) of a target with respect to the vehicle, the distance (D) of various targets, and the direction of movement (towards or away from) of the targets with respect to the vehicle. **Additional information can be obtained by providing other sensors**, such as a brake pedal pressure sensor, brake hydraulic line pressure sensor, tire pressure, accelerometer sensors (for example, fore and aft acceleration/deceleration, and/or left and right (yaw) acceleration of the vehicle), turning rate, turn angle, and/or impact sensors (such as the type used to trigger vehicle air bags), windshield wiper status (to determine if it is raining), fog light status, outside temperature, defroster status, **and geographic positioning information**. **Recording some or all of this data** or similar relevant data would make accident reconstruction more reliable and less expensive." EX1008, 9:21-50. • "A system for evaluating fitness of a vehicle driver to operate a vehicle, including: . . . (b) **an operational event recorder** apparatus coupled to the collision warning apparatus **for recording the collected relevant data** and recording a driver profile . . . ." EX1008, claim 1. Accordingly, to the extent Cherouny is not explicit in its disclosure of receiving speed and location information, Bouchard discloses it as shown above. A POSITA would have seen it as beneficial and obvious to include capabilities of monitoring

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	and receiving speed and location information into Cherouny's system based on these explicit teachings in Bouchard. EX1003 (Wilson), ¶ 73. Cherouny's system already includes the components necessary to obtain this information (e.g., through its automobile speed sensor 108 and GPS 114), and to the extent it is not explicit, Bouchard provides the implementation details as to how this information would be received by the processor of the system. *See* EX1004, claim 1, ¶¶ [0020], [0035], [0040]; EX1008, 9:21-50, claim 1. A POSITA would have recognized that monitoring speed and location (e.g., in view of Bouchard's explicit teachings) would further Cherouny's stated goal of improving safety of at-risk drivers. EX1003 (Wilson), ¶ 73. A POSITA would have had a reasonable expectation of success of implementing Bouchard's teachings in view of Cherouny disclosing transmission of "location and speed data" and that Cherouny's system already includes the components for doing so. *Id.*
[1.4] a data logging device that records vehicle operation data associated with a use of said vehicle, the vehicle operation data comprising at least said location and speed information received from said module; and	Cherouny discloses, suggests, and renders obvious ***a data logging device that records vehicle operation data associated with a use of said vehicle, the vehicle operation data comprising at least said location and speed information received from said module***. As described above in limitation [1.3], Cherouny discloses, suggests, and renders obvious receiving ***at least location and speed information in association with a movement of said vehicle***, which is the ***vehicle operation data associated with a use of said vehicle*** recited by limitation [1.4] (i.e., as claimed by limitation [1.4], ***the vehicle operation data comprising at least said location and speed information received from said module***). Accordingly, the only remaining limitation to be shown for limitation [1.4] is that Cherouny discloses ***a data logging device that records vehicle operation data*** (i.e., recording the ***location and speed information in association with a movement of said vehicle*** from limitation [1.3]). Cherouny does so by disclosing that "[i]t is another object of this invention to provide a **programmable electronic device for motor vehicles which also records the driving speed** over a given period of time . . . ." EX1004, ¶ [0035]. Although Cherouny is not explicit that ***location information*** is recorded over a period of time, the reference describes "location and speed data" within the same disclosures, and that location and speed data is used together within the system, for example: • ". . . wireless transmitting means associated with said moderator to **send signals representing location and speed data of said vehicle at any given time** to said central server . . ." EX1004, claim 1. • "Yet another object of this invention is to provide **a programmable speed controller which is partially governed by a GPS system**, allowing for

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	identification of the road and location of the vehicle for adjusting speed limits according to vehicle location in real time." EX1004, ¶ [0040]. Cherouny further describes logging of data and driver records more generally: • "The personal computer 160 is used to enter Format Data 161, to provide a man-machine interface 162, to show the **daily driving record 163** in game style presentation, to provide data 164 for subsequent speeds set via computer preselections and to provide function 165 upload/download the module. The car monitor 170 includes the functions of **measuring car speed 171,** incrementally slowing the car engine 172, **providing data logs of time** and severity of infraction 173, identifying driver via key fob reader 174, provisions of a watch dog time reset 175 from CPU activity, to detect extended slow DUI driving 176, to upload and download the module 177, to provide data compression 178, to sense tampering and record times 179 and to maintain clock assembly 180." EX1004, ¶¶ [0080]-[0081]. In view of these disclosures, and particularly, Cherouny's explicit disclosure of a "programmable electronic **device** . . . which also **records the driving speed** over a given period of time," a POSITA would have understood Cherouny to disclose, suggest, or render obvious ***a data logging device*** for recording ***location information*** in addition to the explicitly described recording of ***speed information***. EX1003 (Wilson), ¶ 49. For these reasons, Cherouny discloses, suggests, or renders obvious ***a data logging device that records vehicle operation data associated with a use of said vehicle, the vehicle operation data comprising at least said location and speed information received from said module***. **SNQ2 (Obviousness based on Cherouny and Harter):** To the extent it is argued Cherouny does not disclose a ***data logging device that records vehicle operation data***, such would have been obvious in view of Harter. Harter explicitly discloses a "**system for logging performance of a driver operating a vehicle**" and that its "logging system that includes **a vehicle, a portable device**" that wirelessly communicate. EX1005, Abstract, ¶ [0007]. One operating parameter tracked by Harter includes "speed" (EX1005, ¶ [0032]), and the logging system is depicted as including a list of "Locations" that the driver visited in FIG. 18 (EX1005, FIG. 18).

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	See, e.g., Harter: • "**A system for logging performance of a driver operating a vehicle** that has a vehicle information system from which [at] **least one vehicle operating parameter may be obtained**. The vehicle operating parameter collected through the vehicle information system and **operator information collected from a portable device are wirelessly communicated** to a remote host through a network such as the Internet." EX1005, Abstract. • "In one embodiment, the invention provides a **logging system that includes a vehicle, a portable device**, and a remote host. The vehicle includes a controller and a base unit. **The controller is positioned in the vehicle, and monitors one or more operating parameters of the vehicle**. The base unit is mounted in the vehicle, and is connected to the controller to receive and store the one or more operating parameters from the device. **The portable device, typically carried by the driver, can be coupled to the base unit. Once coupled, the portable device receives identifying information from the driver, receives the one or more operating parameters from the base unit, determines compliance data based, at least in part, on the identifying information and the one or more operating parameters, and wirelessly transmits signals based on the compliance data.** The remote host is configured to wirelessly receive the signals from the portable device, and to wirelessly manage the portable device based, at least in part, on the received signals." EX1005, ¶ [0007]. • "FIG. 1 shows a performance monitoring system 100 for use with a commercial motor vehicle ("CMV") 104. Although the CMV 104 illustrated is a tractor configured to tow a trailer (not shown), the performance monitoring system 100 can also be implemented in other types of CMV's such as construction vehicles and agricultural equipment. The CMV 104 includes an engine 108 that drives the CMV 104, and is controlled by an electronic control unit ("ECU") 112 that determines operating information or parameters from the engine 108, and other parts of the CMV 104. **Operating parameters monitored by the ECU 112 include speed, hours of service, operating status, ignition switch status, trip distance, total vehicle distance, and the like.**" EX1005, ¶ [0032]. • "FIG. 18 shows an exemplary screen 1800 of the remote host application 124. **Once the log is received at the remote host application 124**, the remote host application 124 stores and calculates parameters such as hours-of-service information of the operator and alerts the operator or the carrier of any violations of predetermined FMCSA rules. For example, a

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	log summary area 1804 lists all duty entries the operator submitted through the portable device 120. A log information area 1808 lists other driver and vehicle parameters collected. The remote host application 124 thus can rearrange the entries collected and generates different reports as needed. Furthermore, if an operator has a non-compliance violation, the remote host application 124 will also transmit a signal back to the portable device 120 to alert the operator of the violation." EX1005, ¶ [0053]. *See also* Harter, FIGs. 10, 18:  FIG. 10

Claim Language	Relevant Prior Art Disclosures and Argument[1]

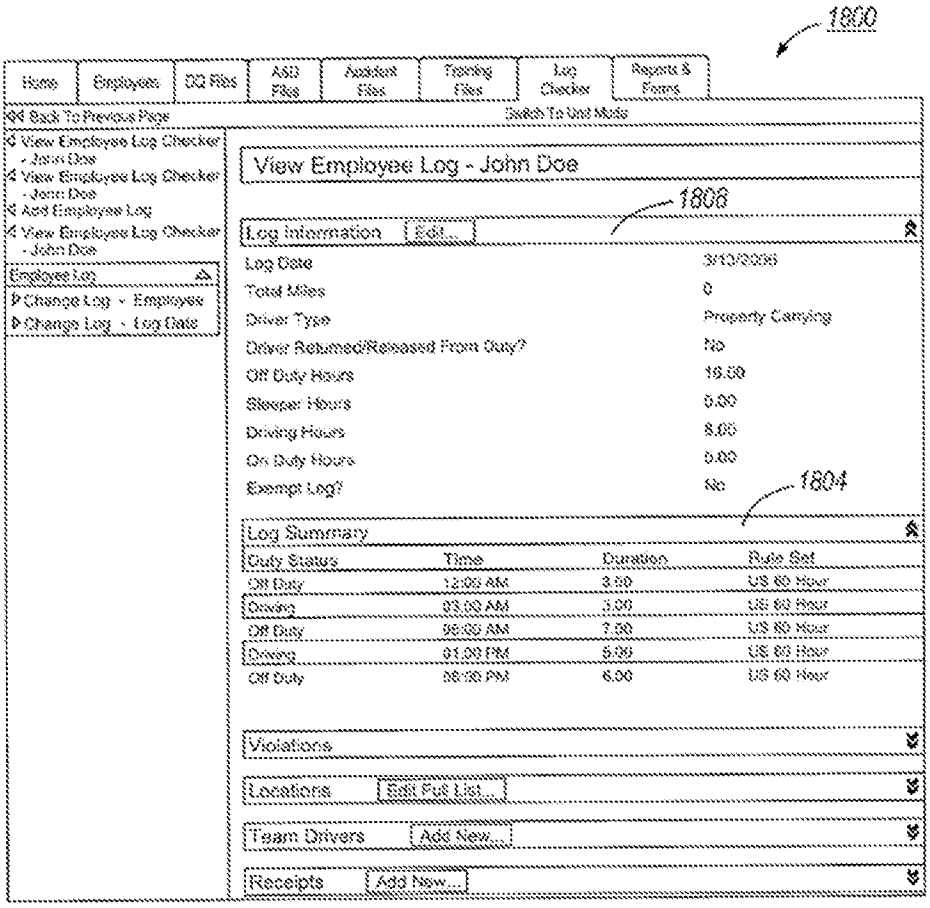


FIG. 18

A POSITA would have combined these teachings from Harter into the base system of Cherouny for the same reasons described for SNQ2 described above in limitations [1.1] and [1.3], *supra*. Specific to this limitation, to the extent Cherouny lacks explicit disclosure of a ***data logging device that records vehicle operation data***, a POSITA would have recognized that Harter's explicit disclosure of a data logging device as shown above would have added desirable functionality to Cherouny and once again furthered its goal of improving the safety of at-risk drivers, e.g., by allowing a moderator to review driving records of the monitored and at-risk driver. EX1003 (Wilson), ¶ 60. As discussed in limitations [1.1] and [1.3], *supra*, a POSITA would have had a reasonable expectation of success in implementing these teachings from Harter into Cherouny given Cherouny already discloses the general idea of recording speed over a period of time. EX1003 (Wilson), ¶ 60.

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	SNQ3 (Obviousness based on Cherouny and Shuman): To the extent it is argued Cherouny does not disclose a ***data logging device that records vehicle operation data***, such would have been obvious in view of Shuman. Shuman discloses: • " . . . Also disclosed is a **drive recorder** that **maintains records of the statuses of all vehicle systems** and of the driver." EX1006, Abstract. • "The vehicle positioning program 210(1) uses data from the sensors 202 and 204 and the geographic database 220 to **determine the position, speed, and heading of the vehicle 10**." EX1006, 9:52-57. A POSITA would have combined these teachings from Shuman into the base system of Cherouny for the same reasons described for SNQ3 described above in limitations [1.1] and [1.3], *supra*. Specific to this limitation, to the extent Cherouny lacks explicit disclosure of a ***data logging device that records vehicle operation data***, a POSITA would have recognized that Shuman's explicit disclosure of a driver recorder for maintaining records of all vehicle systems as shown above would have added desirable functionality to Cherouny and once again furthered its goal of improving the safety of at-risk drivers, e.g., by allowing a moderator to review driving records of the monitored and at-risk driver. EX1003 (Wilson), ¶ 66. As discussed in limitations [1.1] and [1.3], *supra*, a POSITA would have had a reasonable expectation of success in implementing these teachings from Shuman into Cherouny given Cherouny already discloses the general idea of recording speed over a period of time. EX1003 (Wilson), ¶ 66. **SNQ4 (Obviousness based on Cherouny and Petrik):** To the extent it is argued Cherouny does not disclose a ***data logging device that records vehicle operation data***, such would have been obvious in view of Petrik. Petrik discloses: • "These problems are overcome by the present invention, which provides a method and system of **automatically and irrefutably logging via GPS**, **operational parameters** such as drivers' work and rest time, **vehicle location, vehicle speeds**, speeding offences, distance covered etc. **and recording these** on a secure smart card as well as in **the vehicle units' memory**." EX1007, ¶ [0009]. • ". . . During the trip the **GPS keeps a constant log of the date, time, location, distance travelled and speed of the vehicle both in the units' memory** and in the smart card." EX1007, ¶ [0025].

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	A POSITA would have combined these teachings from Petrik into the base system of Cherouny for the same reasons described for SNQ4 described above in limitations [1.1] and [1.3], *supra*. Specific to this limitation, to the extent Cherouny lacks explicit disclosure of a ***data logging device that records vehicle operation data***, a POSITA would have recognized that Petrik's explicit disclosure of "automatically and irrefutably logging . . . operational parameters" as shown above would have added desirable functionality to Cherouny and once again furthered its goal of improving the safety of at-risk drivers, e.g., by allowing a moderator to review driving records of the monitored and at-risk driver. EX1003 (Wilson), ¶ 70. As discussed in limitations [1.1] and [1.3], *supra*, a POSITA would have had a reasonable expectation of success in implementing these teachings from Petrik into Cherouny given Cherouny already discloses the general idea of recording speed over a period of time. EX1003 (Wilson), ¶ 70. **SNQ5 (Obviousness based on Cherouny and Bouchard):** To the extent it is argued Cherouny does not disclose a ***data logging device that records vehicle operation data***, such would have been obvious in view of Bouchard. Bouchard discloses: • "A system for evaluating fitness of a vehicle driver to operate a vehicle, including: . . . (b) **an operational event recorder** apparatus coupled to the collision warning apparatus **for recording the collected relevant data** and recording a driver profile . . . ." EX1008, claim 1. • "The display and sensor section 600 which provides information from a variety of vehicle sensors 4a to the microcontroller 510 for use in calculating the hazard level presented by targets indicated from the received radar signal and/or to indicate the operational status and environment of the vehicle. **Commonly known sensors may be used**, for example, to measure distance travelled, **vehicle speed (momentary and average)**, fuel consumption, fuel remaining, direction of travel, engine temperature, oil pressure, engine RPM, oil temperature, transmission fluid temperature, coolant temperature, engine timing and other values relating to the environment or performance of the vehicle. The digital electronics section 500 itself generates information from the transmitted and received radar signal, such as the closing rate (CR) of a target with respect to the vehicle, the distance (D) of various targets, and the direction of movement (towards or away from) of the targets with respect to the vehicle. **Additional information can be obtained by providing other sensors**, such as a brake pedal pressure sensor, brake hydraulic line pressure sensor, tire pressure, accelerometer sensors (for example, fore and aft acceleration/deceleration, and/or left and right (yaw) acceleration of the

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	vehicle), turning rate, turn angle, and/or impact sensors (such as the type used to trigger vehicle air bags), windshield wiper status (to determine if it is raining), fog light status, outside temperature, defroster status, **and geographic positioning information**. **Recording some or all of this data** or similar relevant data would make accident reconstruction more reliable and less expensive." EX1008, 9:21-50. A POSITA would have combined these teachings from Bouchard into the base system of Cherouny for the same reasons described for SNQ5 described above in limitations [1.1] and [1.3], *supra*. Specific to this limitation, to the extent Cherouny lacks explicit disclosure of a ***data logging device that records vehicle operation data***, a POSITA would have recognized that Bouchard's explicit disclosure of an operational event recorder as shown above would have added desirable functionality to Cherouny and once again furthered its goal of improving the safety of at-risk drivers, e.g., by allowing a moderator to review driving records of the monitored and at-risk driver. EX1003 (Wilson), ¶ 74. As discussed in limitations [1.1] and [1.3], *supra*, a POSITA would have had a reasonable expectation of success in implementing these teachings from Bouchard into Cherouny given Cherouny already discloses the general idea of recording speed over a period of time. EX1003 (Wilson), ¶ 74.
[1.5] a slave control unit in said vehicle and which communicates with said master control unit, wherein said slave control unit receives commands from said master control unit and generate an alarm signal;	Cherouny discloses, suggests, and renders obvious ***a slave control unit in said vehicle and which communicates with said master control unit, wherein said slave control unit receives commands from said master control unit and generate an alarm signal***. As described in the Reexam Request in Section I.C, although the '470 Patent does not explicitly define what the ***slave control unit*** is (or indeed, how a ***unit*** differs from a ***module***, if at all), it does provide discussion, e.g., of the various functions it is responsible for performing: • "The **slave control unit 440 can receive wireless commands from master control unit 430** and generates the alarm signal 445 and 460." EX1001, 10:54-57. • "The **slave control unit 440 generates the driver alarm signal 445**, if the driver 410 violates the programmed operating profile 435, as illustrated at block 670." EX1001, 11:55-58. In view of these disclosures, a POSITA reading the '470 Patent would have understood that the claimed ***slave control unit in said vehicle*** would at least have encompassed hardware and/or software within the vehicle, capable of performing the functions described by the claim language, i.e., ***receiv[ing] commands from***

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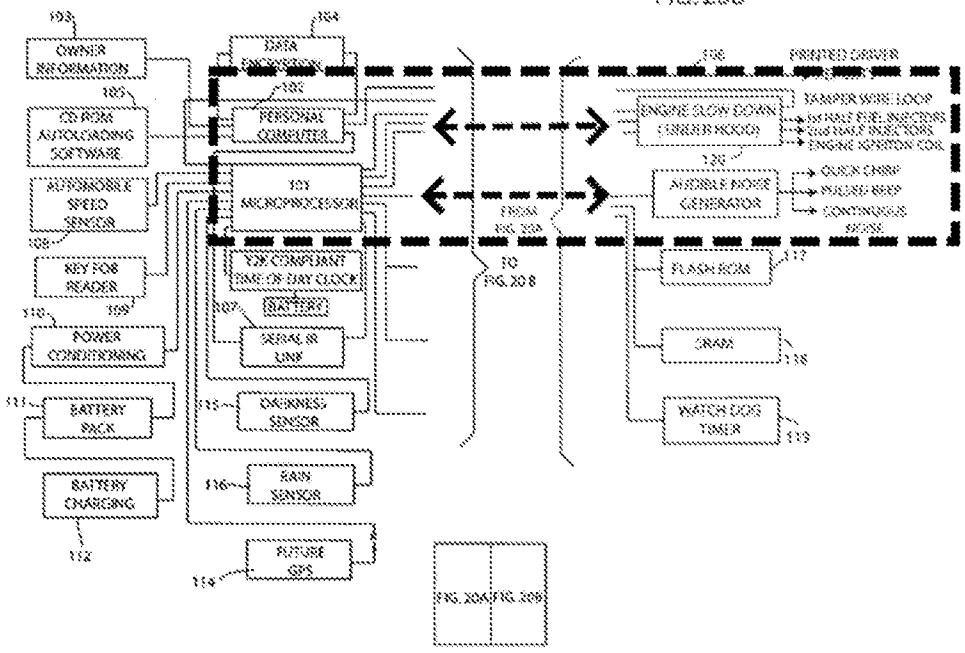
Claim Language	Relevant Prior Art Disclosures and Argument[1]
	said master control unit and generat[ing] an alarm signal. EX1003 (Wilson), ¶ 50; *see* Reexamination Request, Section I.C.[3] Cherouny discloses, suggests, or renders obvious ***a slave control unit in said vehicle and which communicates with said master control unit*** by disclosing various hardware and/or software (e.g., engine slow down module 120, and audible noise generator 121), which is in connection with and communicating with the microprocessor 101 (***which communicates with said master control unit***) as depicted and described in connection with Figures 20 and 21B: FIG. 20A FIG. 20B  FIG. 20 As shown here in Figure 20, the microprocessor 101 (***master control unit***) is directly connected to the engine slow down module and audible noise generator (***slave control unit***). These components of Cherouny (the engine slow down

[3] Requester notes that several dependent claims further limit and narrow the scope of the ***slave control unit*** of claim 1. Specifically, claims 17, 19, and 20 provide specific narrowing limitations: claim 17 requires "wherein said slave control unit further comprises: a power regulator module; a starter relay module; a definable relay module; a slave microcontroller; and an alarm synthesizer," claim 19 requires "wherein said slave control unit generates an alarm signal for remotely alerting an authorized user when said vehicle violates said operating profile," and claim 20 requires "wherein the slave control unit is mounted under a dash board of the vehicle." *See* EX1001, claims 17, 19, 20. Accordingly, the ***slave control unit*** of claim 1 should, at minimum, not be limited or narrowed by any of the elements explicitly described in these dependent claims.

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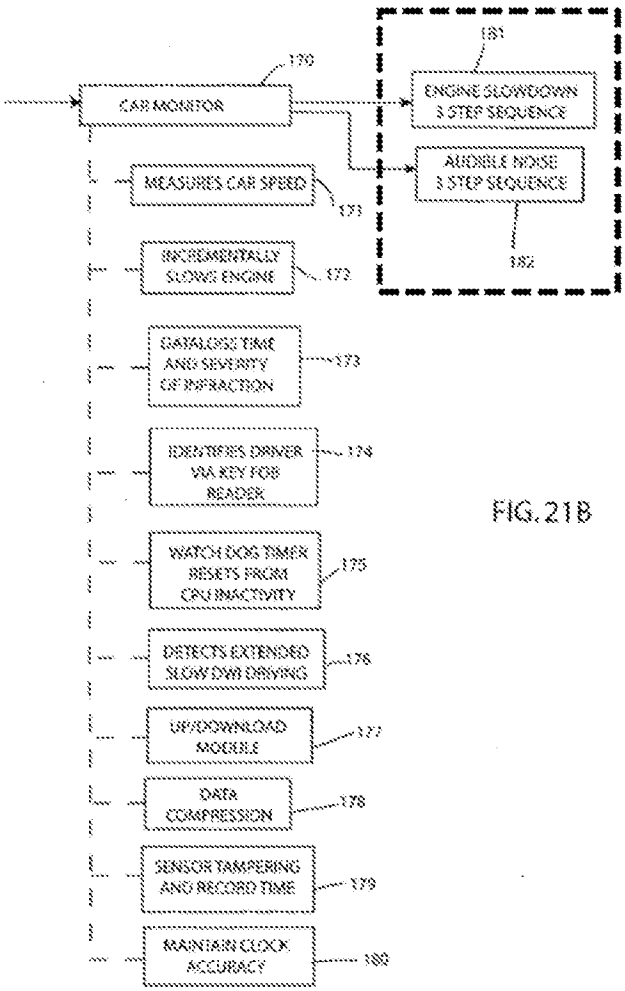
Claim Language	Relevant Prior Art Disclosures and Argument[1]
	module and audible noise generator) comprise a ***slave control unit*** as the '470 Patent uses the term because, as described below, they are in communication with and receive instruction from the microprocessor (***master control unit***) in the same way and perform the same functions described by the ***slave control unit*** in this claim. Next, while Figure 20 of Cherouny depicts and describes the engine slow down module 120 and audible noise generator 121, Figure 21 of Cherouny depicts a "diagrammatic view of **the functions**" of Cherouny's system, and includes a "engine slowdown 3 step sequence 181" and "audible noise 3 step sequence 182," which correspond to the engine slow down module 120 and audible noise generator 121 of Figure 20.  FIG. 21B Cherouny accordingly depicts and describes that these components (e.g., engine slow down module 120 – which a POSITA would have understood controls at least the fuel injectors and ignition starter relay module, and audible noise

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	generator 121 – which a POSITA would have understood controls at least an alarm synthesizer and speaker) ***communicate with the master control unit*** (microprocessor 101), as depicted and described in connection with Figures 20 and 21. EX1003 (Wilson), ¶ 51. Specifically, Cherouny describes: • "To facilitate needed action **based on the actual sensor data** and the preprogrammed driving program and **engine slow down module 120 is provided which can initially cut our one half of the engine fuel injectors**, the remaining half of the injectors and totally cut off the ignition coil **to slow and/or stop the vehicle**. An **audible noise generator 121 is also connected to the microprocessor** for provision of various warning noises such as a quick chirp, a pulsed beep and a continuous noise. These provide warnings of increasing severity to the driver of the vehicle." EX1004, ¶¶ [0077]-[0078]. • "The **car monitor 170** includes the functions of measuring car speed 171, incrementally slowing the car engine 172, providing data logs of time and severity of infraction 173, identifying driver via key fob reader 174, provisions of a watch dog time reset 175 from CPU activity, to detect extended slow DUI driving 176, to upload and download the module 177, to provide data compression 178, to sense tampering and record times 179 and to maintain clock assembly 180. **The output of the system** provides an **engine slowdown 181** in a three step sequence and **corresponding audible noise alarms 182**." EX1004, ¶¶ [0081]-[0082]. Accordingly, Cherouny also discloses, suggests, or renders obvious ***wherein said slave control unit receives commands from said master control unit*** by disclosing that the engine slowdown module and audible noise generator are responsive to the "output of the system" (i.e., the output of the microprocessor). EX1004, ¶¶ [0081]-[0082]. Accordingly, a POSITA reading these disclosures from Cherouny would have understood that Cherouny's microprocessor 101 sends commands to the engine slowdown module and audible noise generator whenever needed to achieve its goals of regulating the operation of the vehicle within the preprogrammed operational parameters set by the moderator (e.g., parent) of Cherouny's system. EX1003 (Wilson), ¶ 51. Next, Cherouny discloses, suggests, or renders obvious ***wherein said slave control unit . . . generate[s] an alarm signal*** by disclosing: • An **audible noise generator 121** is also connected to the microprocessor for provision of **various warning noises such as a quick chirp, a pulsed**

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Claim Language	Relevant Prior Art Disclosures and Argument[1]
	beep and a continuous noise. These provide warnings of increasing severity to the driver of the vehicle." EX1004, ¶¶ [0077]-[0078]. • "The output of the system provides an engine slowdown 181 in a three step sequence and **corresponding audible noise alarms 182**." EX1004, ¶ [0082]. • "The Moderator is able to make **the following responses to the car going faster than the speed limit as registered** in the database programmed by the software. 1. **Audible chirp** 2. **Voice warning** explaining the set speed limit on that section of road and the consequences to the driving record. 3. **Voice warning** that the parameters were set to not allow speeding in that speed zone (i.e., in a school zone there will be no allowance for passing speeds). 4. **Audible noise alarm at approximately 60 dB noise level** (in order to annoy the driver.) 5. Shutdown of the first half of the fuel injectors of the engine. 6. Square wave enable to the second half of the fuel injectors to almost kill the engine. 7. Shutoff of the ignition." EX1004, ¶ [0020]. • "The instant device does not cut off the ignition but has a slow down sequence which has several levels of sophistication. **The first level sounds a short burst or chirp but does not record the infraction. The second level of this is that the excess speed of the driver is recorded so that it can be reported to an authority figure. That authority figure is the driving force behind altering the activity of the driver. This allows the authority figure to provide back up to his or her decision making on the drivers' performance. Another incentive provided the driver is the provision of an annoying sound or noise when the speed desired is exceeded for the pre programmed time. The sound level of this annoyance is 60-65 db so that a real incentive is produced to stop speeding. A quick beep is followed by a buzzing or alarm which goes from intermittent to continuous through the remaining steps to slow the driver down**. The next escalation is to turn off half of the fuel injectors to the engine which will automatically slow the vehicle down while maintaining sufficient power to maneuver and drive the vehicle at slower

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	speeds. The next step involves shutting off the remaining fuel injectors with a prescribed on/off cycle which allows the vehicle to be pulled over to the side of the road and burn the hydrocarbons still in the engine. This step is a last resort after all the prior steps have been employed. The ignition can ultimately be turned off. This renders a completely intoxicated driver harmless to others and the vehicle inoperable. The power of the stored data is the power of the instant device. The information recorded by the device allows the authority figure to alter the future behavior." EX1004, ¶ [0031]. Finally, to the extent it is argued that the claimed ***slave control unit*** requires more than a passive device that simply receives commands from the ***master control unit*** and generates an alarm signal, Cherouny describes precisely that—specifically, a POSITA reading Cherouny would have at least understood that: (1) its engine slow down module 120 would require several physical components in the form of relays to control the fuel injectors and ignition in the way described by Cherouny; (2) its audible noise generator 121 would require a voice synthesizer and other hardware components to perform the steps outlined in paragraph [0020] of Cherouny; and (3) these relays and alarm generating hardware components would necessarily be in communication with the microprocessor (***master control unit***) in order for Cherouny to proceed through the seven step process described in paragraph [0020] of its disclosure. EX1003 (Wilson), ¶¶ 52-53. For all of the reasons discussed above, Cherouny discloses, suggests and renders obvious ***a slave control unit in said vehicle and which communicates with said master control unit, wherein said slave control unit receives commands from said master control unit and generate an alarm signal***.
[1.6] wherein said master control unit provides operation governance of said vehicle within said operating profile.	Cherouny discloses, suggests, or renders obvious ***wherein said master control unit provides operation governance of said vehicle within said operating profile***. The '470 Patent does not explicitly define the claim term ***operation governance*** or use it regularly outside of reference to the claim language. *See generally* EX1001. It does, however, mention that the alarm signal "can be used to control/govern operational aspects of the vehicle," and further that the system may "govern mechanical operations (e.g., **lower/limit speed**)." EX1001, 7:58-8:8. Accordingly, the term ***operation governance*** should at least encompass the process of lowering or limiting the speed of the vehicle ***within said operating profile*** or generating an alarm signal. This understanding is also consistent with the plain language of the claim in the preceding limitations (i.e., related to monitoring vehicle speed and generating an alarm signal). Just like the '470 Patent, Cherouny discloses ***wherein said master control unit provides operation governance of said vehicle within said operating profile*** by generally disclosing "responses to the **car going faster than the speed limit as registered**" as programmed by the moderator, including alarms and "[s]hutoff of

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	the ignition." EX1004, ¶ [0020]. Cherouny describes that its governance occurs "when the received data exceeds **preset or personalized limits of said individual driver**," indicating that the operation governance of the vehicle in Cherouny is based on each identified individual driver (***within said operating profile***). Finally, Cherouny's microprocessor 101 (***master control unit***) provides this governance, given Cherouny's disclosure that "**[c]onnected to the microprocessor 101** are **automobile speed sensors 108** which sense the actual speed of the automobile when in use," and its depiction in Figures 20 of the microprocessor 101 in communication with the "engine slow down module 120." EX1004, ¶¶ [0073], [0077], FIGs. 20, 21. *See, e.g.*, Cherouny: • "**A system for specifically regulating the driving performance of a given individual** by use of a computer from a server in a central location, said system comprising a **monitoring moderator means** adapted to be attached to the vehicle **the given individual is to drive,** a data processing means having performance criteria preprogrammed therein and which relates to the driving performance history **of said given individual** associated with said moderator, said processing means operatively connected to said central server, wireless transmitting means associated with said moderator to send signals representing location and speed data of said vehicle at any given time to said central server engine control means associated **with said data processing means and adapted to regulate operation of the engine of a vehicle in response to signals received from said central server via a GPS satellite system, whereby the operation of a vehicle by said given individual can be preprogrammed, recorded and closely monitored remotely from a central server location by automatically curtailing operation of the vehicle** when the received data exceeds preset or **personalized limits of said individual driver**." EX1004, claim 1. • ". . . Use of the speed data uploaded through this GPS wireless connection by the Moderator is prearranged by the administrator of the Moderator software program. Otherwise, the maximum speeds are prepared and determined by the owner. **The Moderator is able to make the following responses to the car going faster than the speed limit as registered in the database programmed by the software**. 1. Audible chirp 2. Voice warning explaining the set speed limit on that section of road and the consequences to the driving record. 3. Voice warning that the parameters were set to not allow speeding in that speed zone (i.e., in a school zone there will be no allowance for passing speeds).

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	4. Audible noise alarm at approximately 60 dB noise level (in order to annoy the driver.) **5. Shutdown of the first half of the fuel injectors of the engine.** **6. Square wave enable to the second half of the fuel injectors to almost kill the engine.** **7. Shutoff of the ignition.** Each of these responses will be on a preset time schedule based on the driving conditions, the driver's previous experience with the Moderator (the given driver's driving record database with the Moderator), and the administrator's choices within the software program for the Moderator. . . ." EX1004, ¶ [0020]. • "A further object of this invention is to **provide a safety device** for the 'at risk' segment of the driving public **by limiting the speed of the motor vehicle they are driving by programming in a speed limit**, by adjusting for driving history, by reassessing allowable speed during rain or darkness." EX1004, ¶ [0038]. • "**Connected to the microprocessor 101** are automobile speed sensors 108 which sense the actual speed of the automobile when in use. **Also connected to 101 is a key fob reader which checks the identity of the user of the automobile to insure the instant user's data table is used.** Components 110, 111, and 112 are the power conditioning unit, the battery pack and a battery charger. These components can be used to charge up the unit." EX1004, ¶ [0073]. • "To facilitate needed action based on the actual sensor data and the preprogrammed driving program and **engine slow down module 120 is provided which can initially cut our one half of the engine fuel injectors, the remaining half of the injectors and totally cut off the ignition coil to slow and/or stop the vehicle**." EX1004, ¶ [0077]. *See also* Figures 20, 21B:

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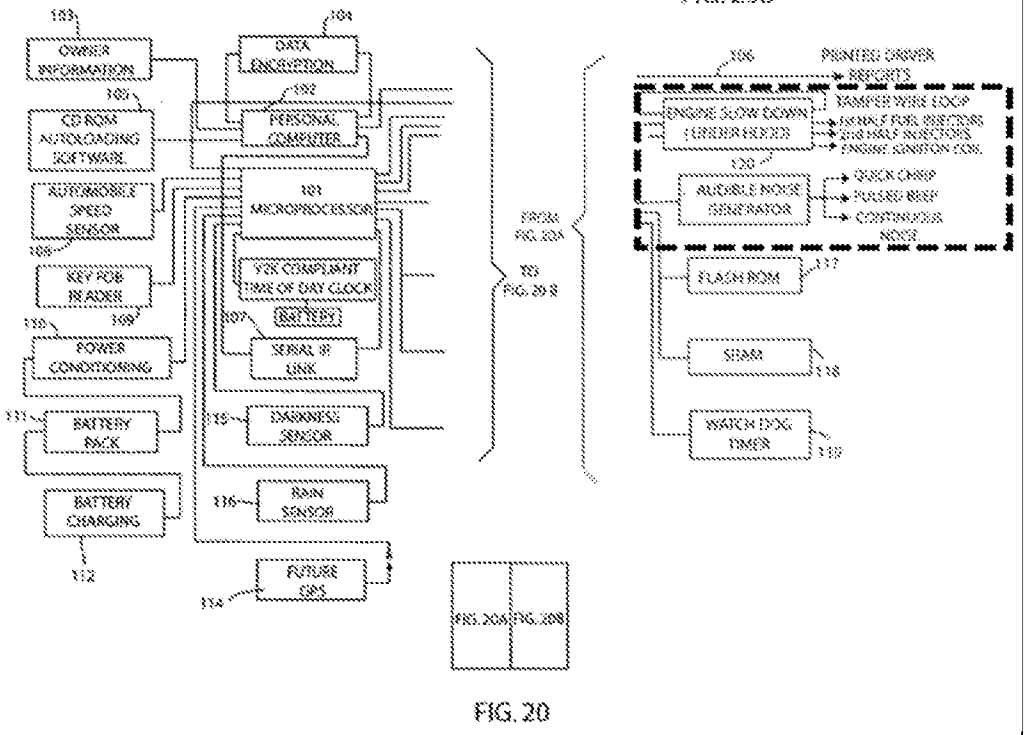
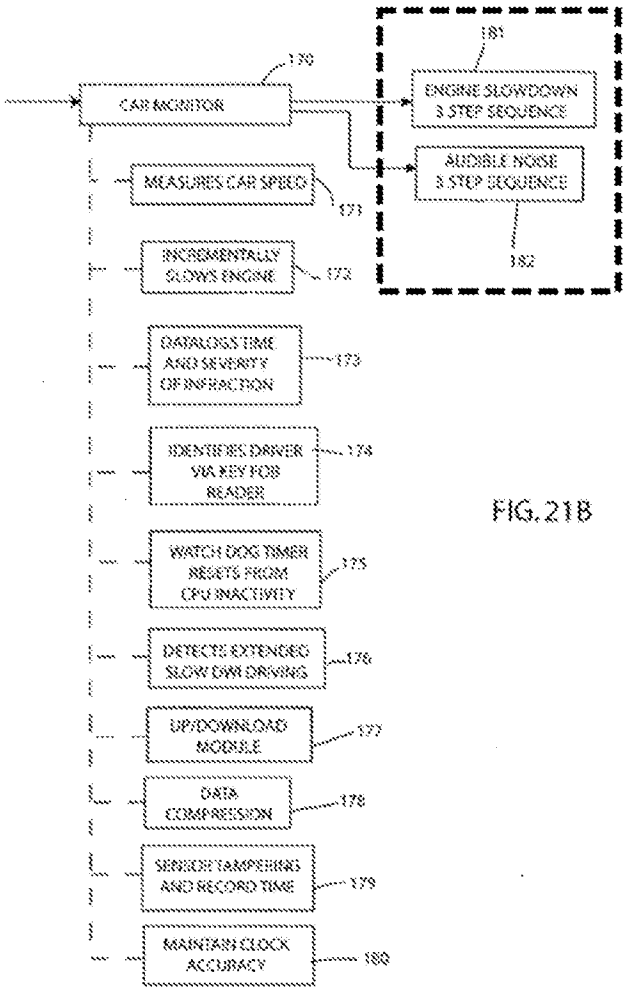
Claim Language	Relevant Prior Art Disclosures and Argument[1]
	FIG. 20A FIG. 20B  FIG. 20

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	 FIG. 21B
Claim 4	
[4P] The vehicle control system of claim 1	**SNQ1:** Cherouny discloses, suggests, and renders obvious the vehicle control system of claim 1 as discussed above. **SNQ2:** Cherouny in view of Harter discloses, suggests, and renders obvious the vehicle control system of claim 1 as discussed above.
[4.1] wherein said wireless identification and data logging module comprises at least one of: a WIFI enabled device; an RFID enabled device; a Bluetooth	Cherouny does not explicitly disclose all elements of ***wherein said wireless identification and data logging module comprises at least one of: a WIFI enabled device; an RFID enabled device; a Bluetooth enabled device; a cellular telephone; and a smartphone***, but Cherouny in view of Harter does.

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Claim Language	Relevant Prior Art Disclosures and Argument[1]
enabled device; a cellular telephone; and a smartphone.	Specifically, as discussed above in limitation [1.1] and as further described below, the combination of Cherouny and Harter discloses, suggests, or renders obvious claim 4. **SNQ2 (Obviousness based on Cherouny and Harter):** First, in the Cherouny-Harter combination, as described above in limitation [1.1], Harter's disclosure of a smartphone would be used as disclosing the ***wireless identification and data logging module***, together in Cherouny's existing system. Furthermore, in the combination, Harter's smartphone, together with the knowledge of a POSITA, discloses ***at least one of: a WIFI enabled device; an RFID enabled device; a Bluetooth enabled device; a cellular telephone; and a smartphone***. First, Harter's device is regularly referred to as a "smart phone" with wireless and Bluetooth capabilities (disclosing the claimed ***WIFI enabled device . . . a Bluetooth enabled device; a cellular telephone; and a smartphone***): • "The system of claim 1, **wherein the portable device comprises** at least one of a computer, a personal-digital-assistant ("PDA"), and **a smart phone**." EX1005, claim 2. (disclosing the claimed ***smartphone***). • "The system of claim 1, wherein **the portable device is wirelessly coupled to the base unit via at least one of a personal area network connection and a cellular connection**." EX1005, claim 3. (disclosing the claimed ***cellular telephone***). • "FIG. 4 shows an example of the **portable devices 120 in the form of a smart phone 400** displaying a login screen 402. In such cases, **the smart phone 400 wirelessly connects to the base unit 116 via Bluetooth or other wireless connections**, or is wired to the base unit 116 via one or more cables." EX1005, ¶ [0042]. (disclosing the claimed ***WIFI enabled device*** and ***Bluetooth enabled device***). To the extent it is argued that this claim limitation also requires disclosure that the ***wireless identification and data logging module*** also comprises ***an RFID enabled device*** (i.e., despite the plain meaning of the claim language of "at least one of" indicating that the device need not comprise **all** possible items in the list), such would have been obvious to a POSITA because it was known to use RFID together with a smart phone (like the one that would be used in the Cherouny-Harter combination) in the context of vehicle management and operations, and RFID was already a well-known technology for use with vehicles generally (e.g., for use in key fobs and the like). EX1003 (Wilson), ¶¶ 61-62 (citing EX1009, EX1010, EX1011, and EX1012).

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	For example, U.S. Patent Publication 2008/0303629 to Yamagiwa describes the use of an RFID vehicle-use key "for starting a vehicle and includes a radio communication means for performing communication with an external communication means other than the vehicle." *See* EX1009, Abstract, ¶ [0011]. Similarly, U.S. Patent Publication 2007/0093200 to Dobosz describes a depicts an "RFID tag or transponder 90 associated with each cellular phone 22," where such a tag could be used as part of an "acquisition device" related to a vehicle "for acquiring information from at least one cellular phone located in the vehicle, having an input coupled to the control circuit . . ." for the vehicle. *See* EX1010, ¶ [0019], claim 1. Finally, Japanese Patent JP2007235530 describes a "vehicle communication system" that uses an "RFID tag build into the mobile phone" to perform functions around the vehicle such as unlocking the door, authenticating a user, and starting the engine. *See* EX1012 (machine translation of EX1011 provided by Espacenet), ¶¶ [0011]-[0015]. Accordingly, in view of this contemporaneous disclosure from multiple sources demonstrating that RFID enabled devices were commonly used with vehicles, and were already present in smartphones, it would have been obvious to a POSITA that the smartphone in the Cherouny-Harter combination would have also rendered obvious the claimed ***RFID enabled device***. EX1003 (Wilson), ¶ 62. Cherouny and Harter would have been combined and a POSITA would have had a reasonable expectation of success in combining them for the same reasons discussed above in limitation [1.1], *supra*. And accordingly, the Cherouny-Harter combination discloses or at least renders obvious ***wherein said wireless identification and data logging module comprises at least one of: a WIFI enabled device; an RFID enabled device; a Bluetooth enabled device; a cellular telephone; and a smartphone***.

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EXHIBIT AA

Claim Chart Comparing Claims 1 and 4 of U.S. Patent 10,259,470 to Cherouny, Harter, Shuman, Petrik, and Bouchard

Exhibit AA

Claim Chart Comparing Claims 1 and 4 of U.S Patent 10,259,470 to Cherouny, Harter, Shuman, Petrik, and Bouchard

The following claim chart compares claims 1 and 4 of U.S. Patent 10,259,470 to U.S. Patent Publication 2006/0052909 to Cherouny ("Cherouny"), U.S. Patent Publication 2008/0188217 to Harter et al. ("Harter"), U.S. Patent 6,577,937 to Shuman et al. ("Shuman"), U.S. Patent Publication 2007/0168125 to Petrik ("Petrik"), and U.S. Patent 5,465,079 to Bouchard et al. ("Bouchard").

The chart below reflects SNQs 1-5 relied upon in the corresponding Request for Reexamination and, with respect to SNQs 2-5, includes pertinent motivations to combine the relevant art. Further, corroborated evidence reflecting the perspective knowledge of a person having ordinary skill in the art at the time of the invention of the '470 Patent (a "POSITA") is provided through the declaration of Mr. Christopher K. Wilson (EX1003).

Specifically, as shown below, claims 1 and 4 would have been obvious based on the following substantial new questions of patentability:

SNQ1: Claim 1 would have been obvious based on Cherouny.

SNQ2: Claims 1 and 4 would have been obvious over Cherouny in view of Harter.

SNQ3: Claim 1 would have been obvious over Cherouny in view of Shuman.

SNQ4: Claim 1 would have been obvious over Cherouny in view of Petrik.

SNQ5: Claim 1 would have been obvious over Cherouny in view of Bouchard.

References
Cherouny (EX1004)
Harter (EX1005)
Shuman (EX1006)
Petrik (EX1007)
Bouchard (EX1008)

Mercedes EX1012
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Claim Language	Relevant Prior Art Disclosures and Argument[1]
[1P] A vehicle control system, comprising:	Even if the preamble is a limitation, Cherouny discloses, suggests, and renders obvious ***a vehicle control system***. For example, Cherouny recites "[a]n improved **electronic programmable speed limiter for drivers of vehicles which can be preprogrammed and controlled** from a remote location via a radio link to update the driver performance and adjust the controls on the speed limiter." EX1004, Abstract. Cherouny discusses that it is "an object of this invention to provide an **electronic programmable speed limiting device for motor vehicles**" and "another object of this invention to provide a programmable electronic device for motor vehicles which also records the driving speed over a given period of time." *Id.*, ¶ [0035]. Additionally, just like the '470 Patent, which discloses "systems and methods for monitoring and **controlling vehicle usage by high-risk drivers**" (EX1001, Abstract), Cherouny discloses an "object of this invention is to provide a safety device **for the 'at risk' segment of the driving public by limiting the speed of the motor vehicle they are driving** by programming in a speed limit, by adjusting for driving history, by reassessing allowable speed during rain or darkness." EX1004, ¶ [0038]. The various components recited for the claimed vehicle control system are discussed in the limitations below. *See also, e.g.*, Cherouny: • " . . . The instant invention, **a programmable speed governor, allows the vehicle owner to prospectively program a limit to the speed of the car in which it is installed**. Additionally, the memory capability and driving database generated by the device allows for a review of compliance with the speed limiting governor. This review may be preferred for various reasons including insurance, liability and legal reasons and allows for an education of the driver in order to decrease speed and, hopefully, accident frequency and severity." EX1004, ¶ [0004]. • "The instant invention also contemplates the ability to employ GPS technology in its **overall control system** by making it remote and location sensitive." EX1004, ¶ [0010]. • "The **car monitor 170** includes the functions of measuring car speed 171, **incrementally slowing the car engine 172**, providing data logs of time and severity of infraction 173, **identifying driver via key fob reader 174**, provisions of a watch dog time reset 175 from CPU activity, to detect

[1] All emphasis added unless otherwise noted.

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Claim Language	Relevant Prior Art Disclosures and Argument[1]
	extended slow DUI driving 176, to upload and download the module 177, to provide data compression 178, to sense tampering and record times 179 and to maintain clock assembly 180." EX1004, ¶ [0081].
[1.1] a wireless identification and data logging module;	Cherouny discloses, suggests, and renders obvious ***a wireless identification and data logging module***. As described in the Reexamination Request in Section I.C, the '470 Patent generally describes the term ***module*** as follows: • "Note that as utilized herein, the term **'module'** may refer to a **physical hardware component and/or to a software module**. . . . Therefore, **when referring to a 'module' herein, the inventors are generally referring to such software modules or implementations thereof**. The methodology described herein can be **implemented as a series of such modules or as a single software module**." EX1001, 6:11-36. • "Generally, **program modules** include routines, programs, objects, components, data structures, etc., that perform particular tasks or implement particular abstract data types." EX1001, 4:59-62. Next, as to the ***wireless identification and data logging module***, the '470 Patent describes: • "The driver **identification and data logging module** 425 can be a **mobile telephone, a Smartphone, a WIFI enabled device, an RFD enabled device, a Bluetooth enabled device**, a tablet computer a USB compatible device such as for example, iButton, radio frequency identification device (RFID), **software**, etc . . . ." EX1001, 7:10-16. Accordingly, for purposes of claim 1, Requester submits that the ***wireless identification and data logging module*** at least encompasses software modules and/or physical hardware components that work with the various elements and accomplish the functions described in claim 1 for identifying a driver and logging data. *See* Reexamination Request, Section I.C.[2]

[2] Requester further notes that, although the '470 Patent's specification describes "[i]n one embodiment" that the ***wireless identification and data logging module*** may be "a smart phone with one or more of WIFI, RFID, Bluetooth, and GPS capabilities," claim 1 is not so limited. For example, challenged dependent claim 4 explicitly narrows and limits the ***wireless identification and data logging module*** of claim 1 to be "at least one of: a WIFI enabled device; an RFID enabled

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Claim Language	Relevant Prior Art Disclosures and Argument[1]
	First, Cherouny renders obvious a ***wireless identification . . . module*** because it discloses a hardware component (e.g., a key fob) and software within its control system which, when working together, "**identifies** to the mobile computer **who was or is about to operate the vehicle**." EX1004, ¶¶ [0018]-[0020], claim 1. Cherouny discloses: • "The **software** has two parts. The first allows for setting all the parameters for operation. **These parameters allow for multiple drivers** in multiple scenarios. The detection of rain and darkness and tampering and are inputted to allow them to affect the operation of the vehicle at different times and to report to the parent or administrator the conditions at the time of an infraction. This information to the parent or administrator is invaluable in making judgment calls in training the young driver in safe driving under these conditions. **The driver does not have to remember codes as that function is now performed by the key fob function which identifies to the mobile computer who was or is about to operate the vehicle**. This semi-automatic **identification of who was driving** eliminated two main problems with codes the first of which was forgetting the code. . . ." EX1004, ¶ [0018]. • "A system for specifically regulating the driving performance of a given individual by use of a computer from a server in a central location, said system comprising a **monitoring moderator means** adapted to be attached to the vehicle the given individual is to drive, **a data processing means** having performance criteria preprogrammed therein and which relates to the driving performance history **of said given individual** associated with said moderator . . . **whereby the operation of a vehicle by said given individual can be preprogrammed, recorded and closely monitored remotely from a central server location by automatically curtailing operation of the vehicle** when the received data exceeds preset or **personalized limits of said individual driver**." EX1004, claim 1. Accordingly, Cherouny describes the use of a key fob, together with software, to disclose a ***wireless identification . . . module*** that identifies a specific driver among potential multiple drivers for its vehicle, and using the preprogrammed personalized limits for the identified driver (e.g., where a moderator has preprogrammed personalized limits for an at-risk driver).

device; a Bluetooth enabled device; a cellular telephone; and a smartphone," indicating that claim 1 was not intended to be limited to any such device (or even a physical/hardware device at all, given the '470 Patent's broad definition of a ***module*** as often comprising software).

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Claim Language	Relevant Prior Art Disclosures and Argument[1]
	To the extent it is argued that Cherouny does not disclose that its key fob is ***wireless*** (e.g., Cherouny describes the use of "optoelectronic components" in paragraph [0017] to read from the key fob, which may or may not be wireless), such would have been obvious to a POSITA. EX1003 (Wilson), ¶ 47. In the first instance, Cherouny does not discredit or limit the use of a wireless technology in a vehicle—rather, it supports the use of wireless technology, e.g., by disclosing wireless connections between the vehicle, central database, and GPS. EX1004, ¶ [0020]. At the time of Cherouny's earliest disclosure (June 2001), wireless identification devices were not as widely used with vehicles as they were by the time of the '470 Patent (July 2009). *Id.* Indeed, by July 2009, the use of wireless key fobs was exceedingly well known and in use for vehicles, as evidenced by several contemporaneous references. *Id.* (citing EX1009, describing an RFID vehicle-use key as early as 2007; EX1012, describing an RFID tag in a mobile phone for use in authenticating a user of a vehicle as early as 2006). For these reasons, even if Cherouny's key fob is not explicitly ***wireless***, such a simple modification would have been well known to a POSITA by the time of the '470 Patent, and would have rendered the claimed ***wireless . . . identification module*** obvious, because Cherouny's key fob would perform identification of a driver using a key fob with the well-known implementation of wireless data transmission. EX1003 (Wilson), ¶ 47. Such a modification would have been beneficial and obvious, given the widespread use of wireless key fob devices in vehicles by July 2009. And finally, to the extent this is found to be lacking in Cherouny alone, SNQ2 presented below (providing the combination of Cherouny and Harter) explicitly discloses wireless identification. Second, Cherouny describes a ***data logging module*** by stating that "[i]t is another object of this invention to provide a programmable electronic device for motor vehicles **which also records the driving speed over a given period of time** . . . ." EX1004, ¶ [0035]. Also, Cherouny discloses that "**car monitor 170** includes the functions of measuring car speed 171, incrementally slowing the car engine 172, **providing data logs of time and severity of infraction 173** [e.g., "the **excess speed of the driver is recorded** so that it can be reported to an authority figure," EX1004, ¶ [0031]], identifying driver via key fob reader 174 . . . ." EX1004, ¶ [0081]. Further discussion of data logging functionality in Cherouny is provided below in elements [1.3]-[1.4], *infra*. Because the '470 Patent describes that modules may be, for example, "implemented as a **series** of such modules" (EX1001, 6:11-36), and describes certain embodiments where the data logging functionality is in a separate module from the driver identification (*see* EX1001, Fig. 5 (item 452), 7:46-57), a POSITA would have understood Cherouny's disclosures of hardware and software that

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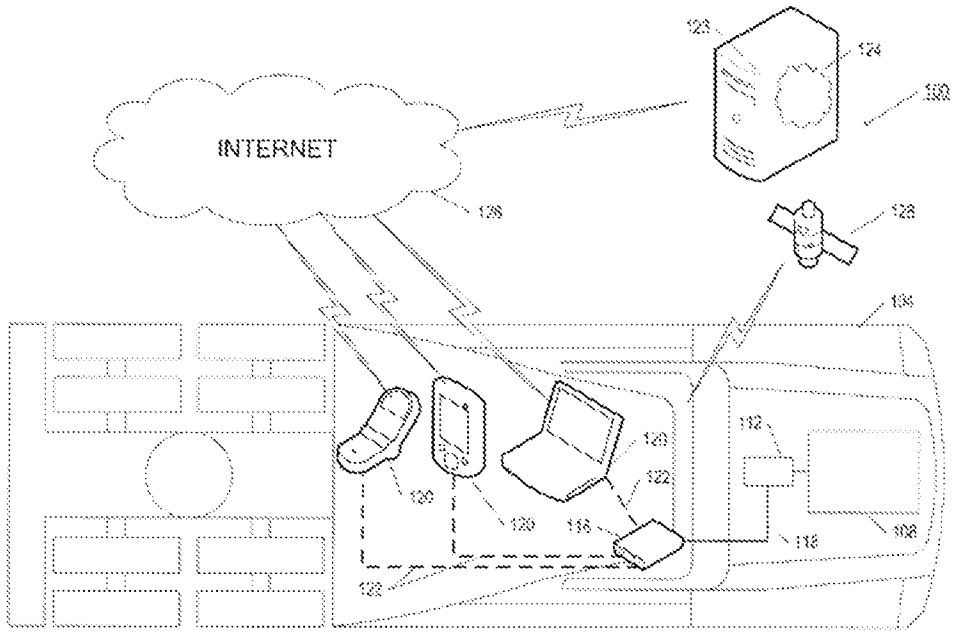
Claim Language	Relevant Prior Art Disclosures and Argument[1]
	(1) identify an individual driver and (2) log speed and data, together disclose the claimed ***wireless identification and data logging module***. EX1003 (Wilson), ¶ 47. **SNQ2 (Obviousness based on Cherouny and Harter):** Even if Cherouny does not disclose all aspects of the ***wireless identification and data logging module***, this limitation would have been obvious over Harter. For example, as to the ***wireless identification and data logging module***, Harter discloses in connection with Figures 1 and 4 a "**portable device[] 120 in the form of a smart phone 400** displaying a login screen 402. In such cases, **the smart phone 400 wirelessly connects to the base unit 116 via Bluetooth or other wireless connections**," where the base unit 116 is present in a vehicle. EX1005, ¶ [0042].  FIG. 1

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Claim Language	Relevant Prior Art Disclosures and Argument[1]

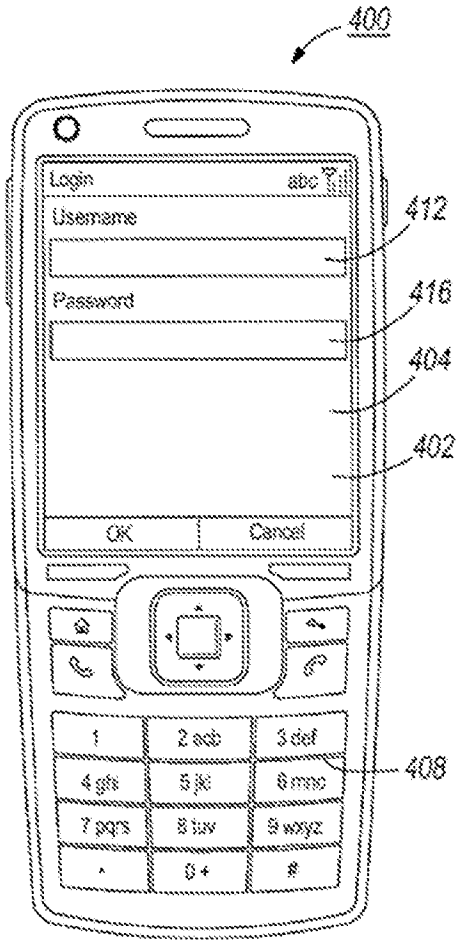
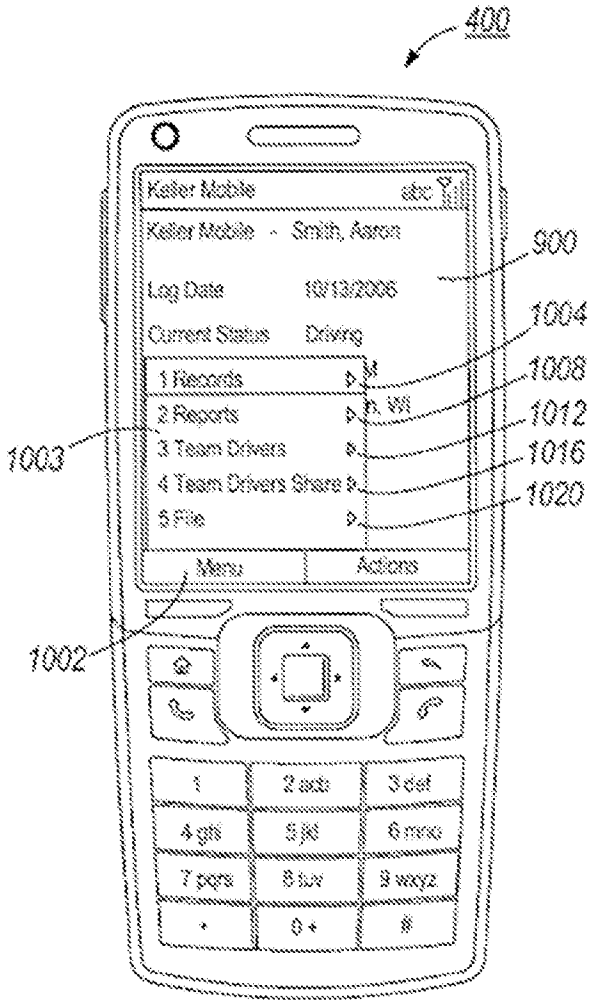


FIG. 4

This device from Harter is a ***wireless identification and data logging module***, because as shown above, the smart phone 400 can communicate wirelessly via Bluetooth with a base unit in the vehicle. EX1005, ¶ [0007]. Specifically, the device performs ***identification*** by disclosing that "the **portable device receives identifying information from the driver**, receives the one or more operating parameters from the base unit, determines compliance data based, at least in part, **on the identifying information** and the one or more operating parameters, and **wirelessly transmits** signals based on the compliance data." *Id.*

Harter discloses a ***data logging module*** in connection with the same disclosed mobile device, for example, in Figures 10 and 18:

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	 FIG. 10

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Claim Language	Relevant Prior Art Disclosures and Argument[1]

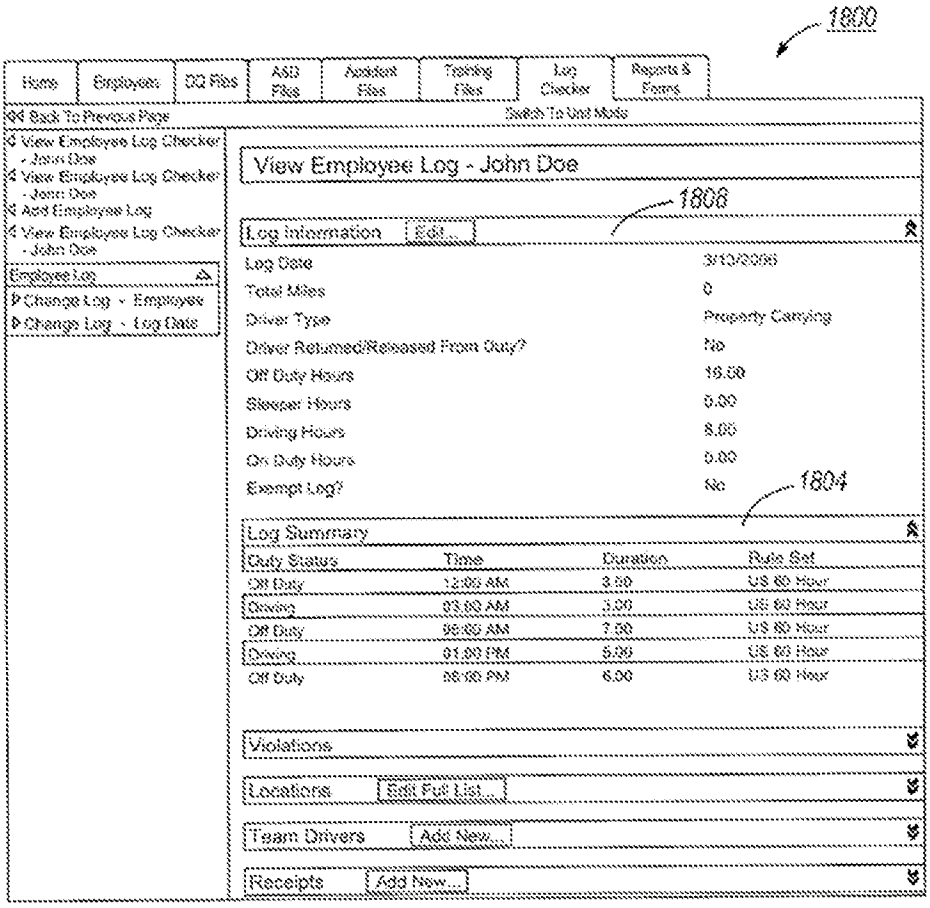

FIG. 18

Harter states that its invention "provides a **system for logging performance** of a driver operating a vehicle" and monitoring "operating parameters," which may "include **speed, hours of service, operating status, ignition switch status, trip distance, total vehicle distance, and the like**." *Id.*, ¶¶ [0007]-[0008], [0032]-[0033].

Accordingly, in view of these disclosures, Harter discloses or renders obvious the ***wireless identification and data logging module*** because it describes a "system for **logging performance of a driver operating a vehicle**." *Id.*, Abstract, ¶¶ [0007]-[0008], [0032]-[0033], [0042], [0045]-[0046], [0053], FIGs. 1, 4, 10, 18.

Regarding the combination of Cherouny and Harter, a POSITA would have found it obvious to use the system and techniques disclosed in Harter of using a mobile device (such as a smart phone) to identify and log data about a specific driver's

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	operation of a vehicle to further Cherouny's goal of increasing safety for at-risk drivers. EX1003 (Wilson), ¶ 55. Harter focused its discussion within the context of monitoring and logging data for drivers of commercial motor vehicles (CMVs), and similarly, Cherouny explicitly recognized that its disclosures would be applicable in the same context of commercial driver monitoring. *See* EX1004, ¶ [0009] ("Yet another market exists for the instant invention among companies who hire drivers for commercial purposes."); *see also id.*, FIGs. 11-13 (depicting and describing information that can be monitored for commercial drivers in Cherouny's system); EX1005, ¶ [0003] ("Operators of commercial motor vehicles ('CMV's') are required to meet certain specific performance standards and regulations . . ."). Using Harter's teaching of using a smart phone to assist in identifying and monitoring drivers would have been the simple substitution of one known technique (i.e., Harter's use of a wireless smart phone device together with software to identify and log data related to a specific driver of a vehicle) for another (Cherouny's technique of using a key fob together with software to identify and log data related to a driver of a vehicle) to obtain predictable results—i.e., a system (Cherouny's) using a wireless mobile device (in view of Harter's teachings) to assist with wirelessly identifying a driver and logging data related to their trip within the vehicle. EX1004, ¶¶ [0018]-[0020], [0031], [0035], [0081]; EX1005, ¶¶ [0007]-[0008], [0032]-[0033], [0042], [0045]-[0046], [0053]; EX1003 (Wilson), ¶ 56. Implementing Harter's teaching of using a wireless mobile device (i.e., smart phone) would have been an improvement over Cherouny's existing system using a key fob and various software modules, and a POSITA would have recognized at the time of the '470 Patent that a smart phone, like Harter's, would increase the vehicle control system's ability to identify and log data associated with a trip, given the known capabilities of a smart phone at the time (which would have included various additional technologies, such as Bluetooth or GPS) as compared to the key fob used in Cherouny. EX1003 (Wilson), ¶ 56. For example, Cherouny's disclosure is based on applications dating back to June 2001, a time when many drivers would not have regularly carried a smartphone or used it as an identification device. But before the time of the '470 Patent, techniques using smartphones together with vehicles were known and common (as evidenced by Harter), and would have been well known to a POSITA at the time reading Cherouny. Accordingly, this provides further motivation for a POSITA to modify Cherouny with the teachings of Harter to bring it up to date with modern techniques and knowledge at the time. *Id.* Additionally, combining Harter's teachings for implementing a wireless mobile device in a system that identifies and logs data related to drivers of vehicles would have merely combined prior art elements (Harter's disclosure of a smart phone for identifying and logging data related to a driver of a vehicle and Cherouny's system for a similar purpose of monitoring drivers) according to known methods (i.e., that

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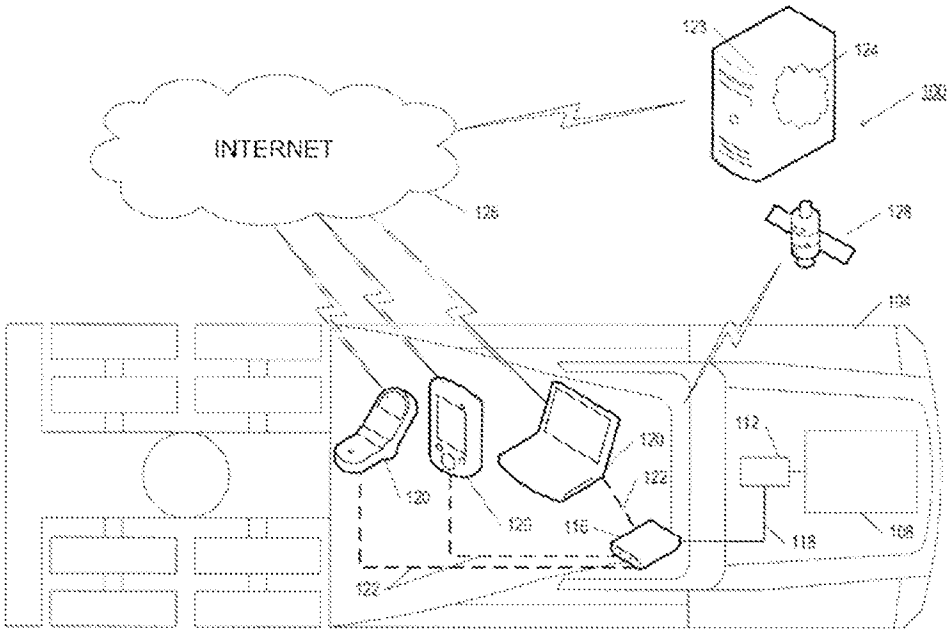
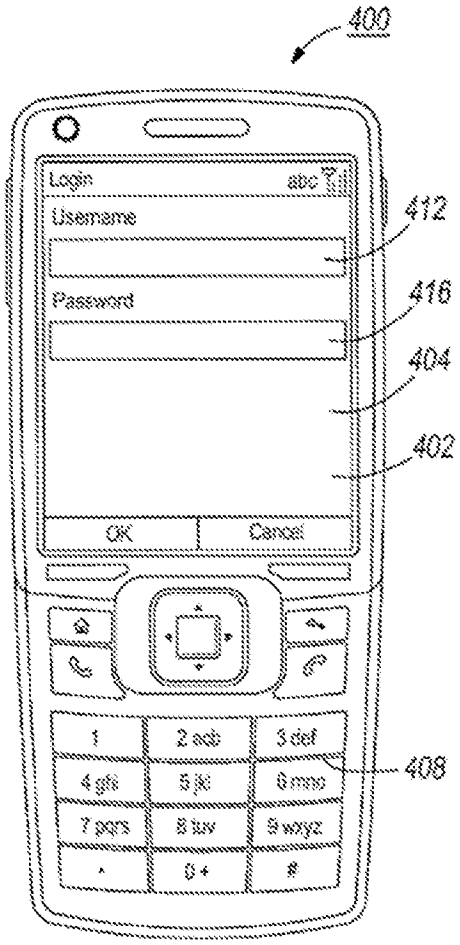
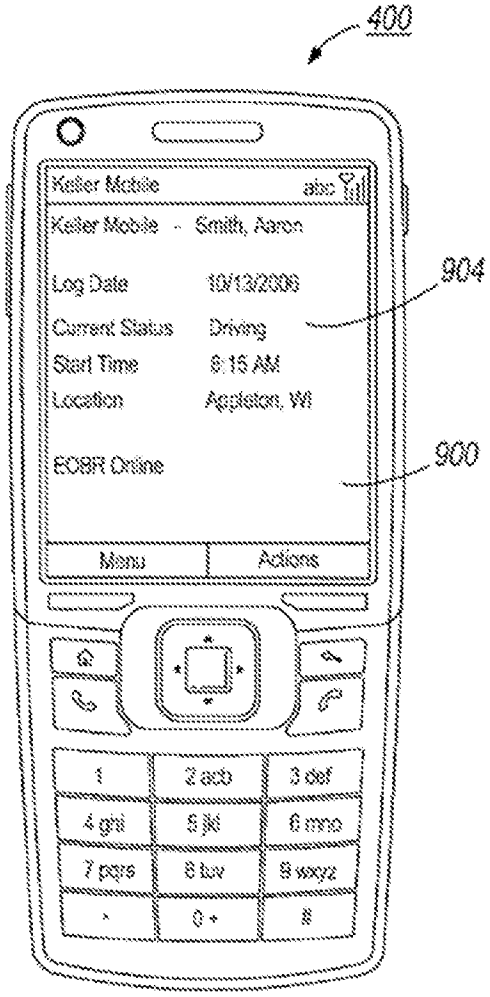
Claim Language	Relevant Prior Art Disclosures and Argument[1]
	it was known to use various wired and/or wireless devices, such as Harter's "cable or wireless link" (EX1005, ¶ [0033]), to assist with monitoring and identifying drivers of vehicles) to yield predictable results—i.e., a system that is able to use a wireless mobile device to identify and log data related to a driver's trip within the vehicle. EX1004, ¶¶ [0018]-[0020], [0031], [0035], [0081]; EX1005, ¶¶ [0007]-[0008], [0032]-[0033], [0042], [0045]-[0046], [0053]; EX1003 (Wilson), ¶ 57. A POSITA would have had a reasonable expectation of success in achieving the combination and the resulting improved driver identification and monitoring system because the techniques were discussed in detail in the references, and built off of known, predictable technologies that had been implemented into vehicles for several years. EX1003 (Wilson), ¶ 57. *See also, e.g.*, Harter: • "**A system for logging performance of a driver operating a vehicle** that has a vehicle information system from which [at] **least one vehicle operating parameter may be obtained**. The vehicle operating parameter collected through the vehicle information system and **operator information collected from a portable device are wirelessly communicated** to a remote host through a network such as the Internet." EX1005, Abstract. • "In one embodiment, the invention provides a **logging system that includes a vehicle, a portable device**, and a remote host. The vehicle includes a controller and a base unit. **The controller is positioned in the vehicle, and monitors one or more operating parameters of the vehicle**. The base unit is mounted in the vehicle, and is connected to the controller to receive and store the one or more operating parameters from the device. **The portable device, typically carried by the driver, can be coupled to the base unit. Once coupled, the portable device receives identifying information from the driver, receives the one or more operating parameters from the base unit, determines compliance data based, at least in part, on the identifying information and the one or more operating parameters, and wirelessly transmits signals based on the compliance data.** The remote host is configured to **wirelessly receive the signals from the portable device**, and to **wirelessly manage the portable device based, at least in part, on the received signals**." EX1005, ¶ [0007]. • "FIG. 1 shows a performance monitoring system 100 for use with a commercial motor vehicle ("CMV") 104. Although the CMV 104 illustrated is a tractor configured to tow a trailer (not shown), the performance monitoring system 100 can also be implemented in other types of CMV's such as construction vehicles and agricultural equipment.

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	The CMV 104 includes an engine 108 that drives the CMV 104, and is controlled by an electronic control unit ("ECU") 112 that determines operating information or parameters from the engine 108, and other parts of the CMV 104. **Operating parameters monitored by the ECU 112 include speed, hours of service, operating status, ignition switch status, trip distance, total vehicle distance, and the like.**" EX1005, ¶ [0032]. • "The performance monitoring system 100 also includes an electronic on-board recorder ("EOBR") base unit 116 that communicates with the ECU 112 through an information bus 118 conforming to standards such as SAE J1939 and SAE J1708 network buses. The base unit 116 has a plurality of functions including, but not limited to, time keeping and data logging. In one implementation, the base unit 116 records and stores CMV information or data necessary to comply with FMSCA regulations such as those mentioned above from the ECU 112. **The performance monitoring system 100 also includes a portable device 120 such as a mobile phone, a personal-digital-assistant ("PDA"), a laptop computer, or the like, that communicates with the base unit 116. The base unit 116 communicates with the portable device 120 through a cable or wireless link 122**. The link 122 may be a serial cable, such as a USB cable. Other exemplary links include a **wireless personal-area-network such as Bluetooth**, and the like. The portable device 120 generally supports multiple platforms such as Windows Mobile 5 cell phones, Pocket PC 2003 (or better) PDA's, and computers such as laptops. The performance monitoring system 100 also includes a remote host server 123 running a remote host application 124 that **wirelessly communicates with the portable device 120 via a network such as the Internet**, detailed hereinafter. In some embodiments, a global position satellite ("GPS") system 128 also communicates with the ECU 112 and/or the base unit 116 so that information from the GPS system 128 (such as time and location) is available to the CMV 104. In some embodiments, at least a portion of the information stored in the base unit 116 or information communicated to and from the base unit 116 is encrypted." EX1005, ¶ [0033]. • "FIG. 4 shows an example of the **portable devices 120 in the form of a smart phone 400** displaying a login screen 402. In such cases, **the smart phone 400 wirelessly connects to the base unit 116 via Bluetooth or other wireless connections**, or is wired to the base unit 116 via one or more cables. The smart phone 400 includes a display 404 and generates a graphical user interface on the display 404. The graphical user interface prompts operators for information and displays information such as an hours-of-service of a particular operator and other information, as detailed hereinafter. The smart phone 400 also includes an input keyboard 408 to allow operators to enter operator or driver, and trip information. The

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	display 404, as shown in FIG. 4, via a software application installed in the smart phone 400 shows the login screen 402, and prompts the operator for login or **identifying credentials** such as identity or username at a username entry 412 and a password at a password entry 416. Once the username and the password have been entered and verified, the CMV driver or operator starts a performance monitoring process. Initially, if there is no log entry attributed to the operator, **the portable device 120 attempts to establish a network connection with the remote host application 124. In turn, the remote host application 124 verifies the identifying credentials**, detailed hereinafter. After the remote host application 124 has verified the identifying credentials, the remote host application 124 passes back via a return parameter a validation signal to the portable device 120." EX1005, ¶ [0042]. • "FIG. 18 shows an exemplary screen 1800 of the remote host application 124. **Once the log is received at the remote host application 124**, the remote host application 124 stores and calculates parameters such as hours-of-service information of the operator and alerts the operator or the carrier of any violations of predetermined FMCSA rules. For example, a **log summary area 1804 lists all duty entries the operator submitted through the portable device 120. A log information area 1808** lists other driver and vehicle parameters collected. The remote host application 124 thus can rearrange the entries collected and generates different reports as needed. Furthermore, if an operator has a non-compliance violation, the remote host application 124 will also transmit a signal back to the portable device 120 to alert the operator of the violation." EX1005, ¶ [0053]. *See also*, Harter (EX1005), FIGs. 1, 4, 9, 10, 18:

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	 FIG. 1

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	 FIG. 4

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	 FIG. 9

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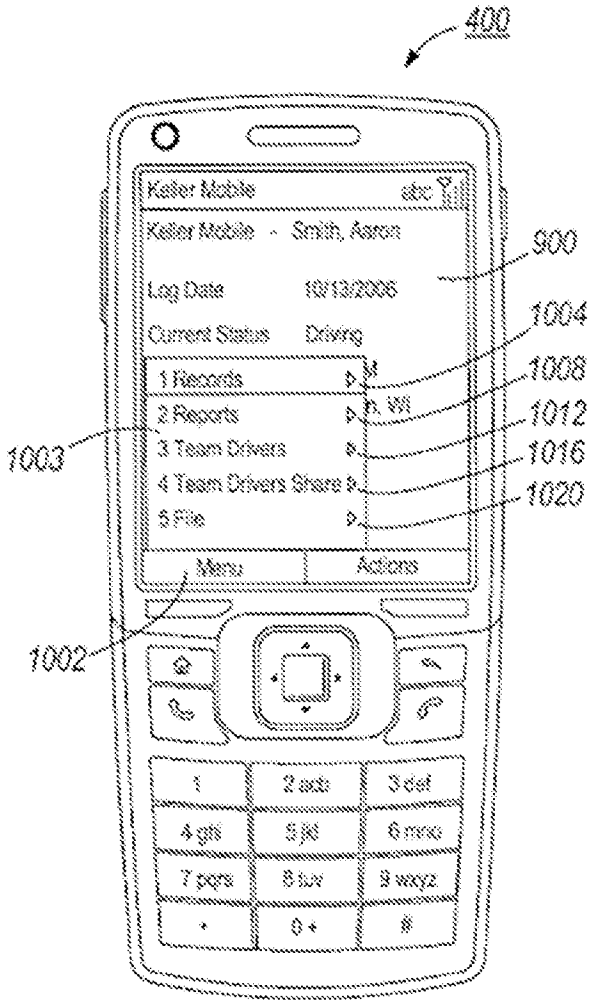
Claim Language	Relevant Prior Art Disclosures and Argument[1]
	 FIG. 10

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Claim Language	Relevant Prior Art Disclosures and Argument[1]

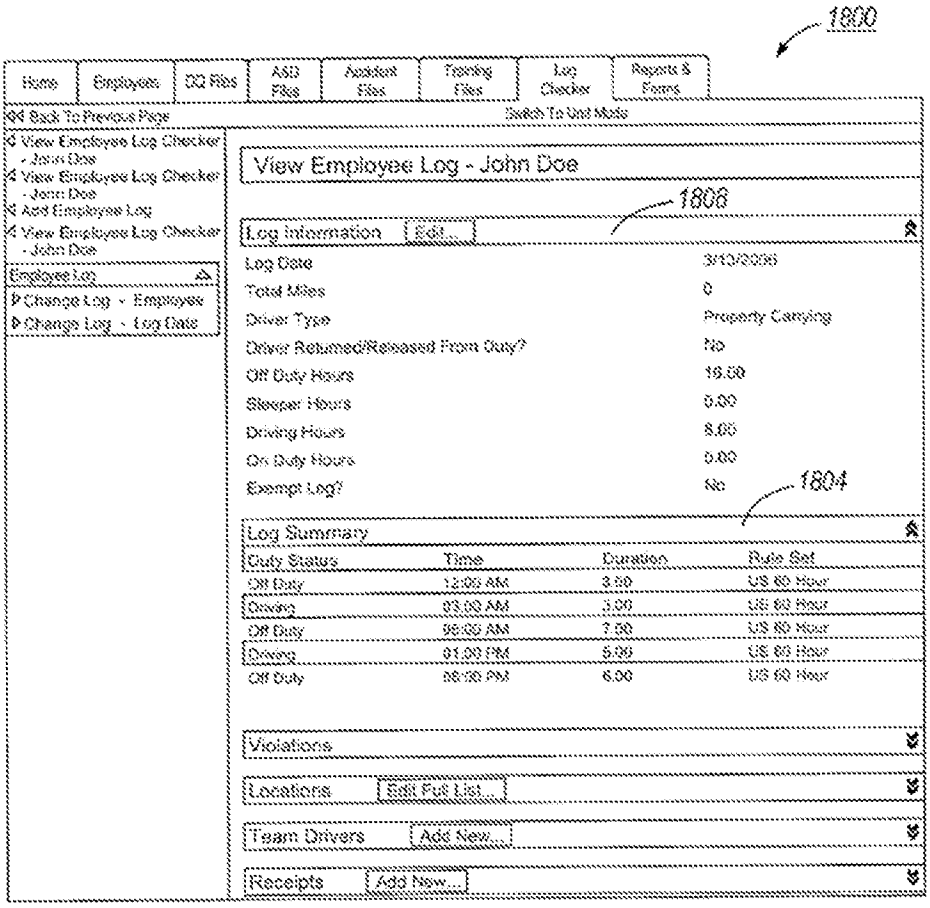

FIG. 18

SNQ3 (Obviousness based on Cherouny and Shuman):
Even if Cherouny does not disclose a ***data logging module***, this limitation would have been obvious over Shuman.

As to a ***data logging module***, Shuman discloses:

- "FIG. 29 shows the component processes that form the drive recorder 225 shown in FIG. 2. **The drive recorder 225 obtains and logs information relating to all aspects of the vehicle and vehicle environment, including the driver and passengers.** In FIG. 29, the drive recorder 225 includes a logging process 225(A) that receives current information streams from all the vehicle sensors 202, 204, and 304, all subsystem software 210 and 310, all the vehicle hardware 208 and 308, the communications manager 262, the vehicle-user device manager 270, as well as other managers, and the driver and user interface devices 250 and

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	350. **The logging process 225(A) also receives event logs from all the applications 224 and 324.** **The driver recorder 225 continuously stores a history of the vehicle and vehicle environment in a non-volatile secure data storage device**. The drive recorder 225 includes a process 225(B) that provides all the **logged data** into a format and **stores the formatted data onto a physical drive recorder medium 225(C). This data storage device may be in the vehicle or may be located remotely.**" EX1006, 30:60-31:12. Regarding the combination of Cherouny and Shuman, a POSITA would have found it obvious to use the teachings from Shuman (i.e., the use of driver profiles and recording vehicle location and speed in the vehicle units' memory) because this would have represented a simple modification to Cherouny's system, which already describes "record[ing] the driver speed over a given period of time." EX1004, ¶ [0035]. Accordingly, to the extent Cherouny was lacking any implementation details on how or where to record information about operation of the vehicle, Shuman provides explicit details of the same (e.g., that its "driver recorder 225 continuously stores a history of the vehicle and vehicle environment in a non-volatile secure data storage device," and that this "data storage device may be in the vehicle or may be located remotely," EX1006, 30:60-31:12), and a POSITA would have been aware of these techniques in view of Shuman's explicit disclosure of them. A POSITA would have had a reasonable expectation of success in implementing Shuman's teachings, particularly given Cherouny's disclosure that with its invention "the memory capability of the speed governor **allows for a permanent record** of the drivers possible violations." EX1004, ¶ [0009]; EX1003 (Wilson), ¶ 64. Thus, Shuman offers explicit implementation details for a ***data logging module*** that would have been implemented into Cherouny's vehicle control system, and together, the combined system discloses the claimed ***data logging module***. EX1003 (Wilson), ¶ 64. **SNQ4 (Obviousness based on Cherouny and Petrik):** Even if Cherouny alone does not disclose a ***data logging module***, this limitation would have been obvious from Cherouny over Petrik. For example, Petrik discloses a ***data logging module***: • "These problems are overcome by the present invention, which provides a method and system of **automatically and irrefutably logging** via GPS, **operational parameters** such as drivers' work and rest time, **vehicle location, vehicle speeds**, speeding offences, distance covered etc. **and recording these on a secure smart card as well as in the vehicle units' memory**." EX1007, ¶ [0009].

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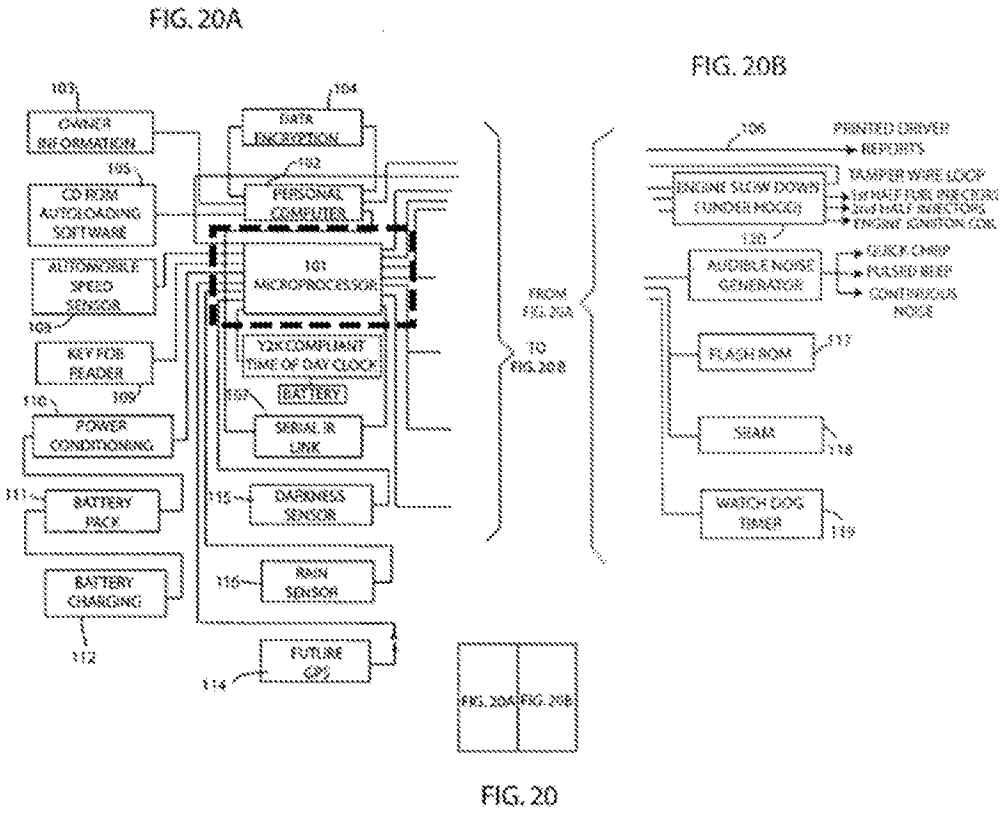
Claim Language	Relevant Prior Art Disclosures and Argument[1]
	Regarding the combination of Cherouny and Petrik, a POSITA would have found it obvious to use the teachings from Petrik (i.e., recording vehicle location and speed in the vehicle units' memory) because this would have represented a simple modification to Cherouny's system, which already describes "record[ing] the driver speed over a given period of time." EX1004, ¶ [0035]. Accordingly, to the extent Cherouny was lacking any implementation details on how or where to record information about operation of the vehicle, Petrik provides explicit details of the same (e.g., "automatically and irrefutably logging . . . operational parameters . . . and recording these on a secure smart card as well as in the vehicle units' memory," EX1007, ¶ [0009]) and a POSITA would have been aware of these techniques in view of Petrik's explicit disclosure of them. A POSITA would have had a reasonable expectation of success in implementing Petrik's teachings, particularly given Cherouny's disclosure that with its invention "the memory capability of the speed governor **allows for a permanent record** of the drivers possible violations." EX1004, ¶ [0009]; EX1003 (Wilson), ¶ 68. Thus, Petrik offers explicit implementation details for a ***data logging module*** that would have been implemented into Cherouny's vehicle control system, and together, the combined system discloses the claimed ***data logging module***. EX1003 (Wilson), ¶ 68. **SNQ5 (Obviousness based on Cherouny and Bouchard):** Even if Cherouny does not disclose a ***data logging module***, this limitation would have been obvious over Bouchard. For example, Bouchard discloses an "event recording apparatus" that is personalized for each driver of a vehicle and discloses a ***data logging module***: • "A system for evaluating fitness of a vehicle driver to operate a vehicle, including: (a) a collision warning apparatus for collecting data relevant to determining the operational state of the vehicle and the driver; (b) **an operational event recorder apparatus coupled to the collision warning apparatus for recording the collected relevant data and recording a driver profile**; (c) a driver fitness evaluation apparatus coupled to the operational event recorder and the collision warning apparatus for generating the driver profile, and providing a real-time evaluation of the driver's fitness to operate the vehicle by comparing the recorded driver profile with the driver's current performance as indicated by the recorded relevant data." EX1008, claim 1. • "Still further, it would be desirable to have a method and apparatus which **utilizes the information that is gathered by a radar system and other sensors, and the information that has been recorded during past trips and a present trip**, to evaluate a driver's performance in real-time and

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	under actual conditions. It would also be desirable for such a system to predict when a driver is near the point of being unfit to safely operate a vehicle and determine when the driver is actually unfit to safely operate a vehicle." EX1008, 4:60-5:1. • "In the preferred embodiment of the present invention, each driver maintains a removable ERA [Event Recording Apparatus] that is personalized to that particular driver. Each ERA has **information that identifies the driver, and a record of that driver's driving history and performance**." EX1008, 6:4-8. • ". . . **Additional information can be obtained by providing other sensors**, such as a brake pedal pressure sensor, brake hydraulic line pressure sensor, tire pressure, **accelerometer sensors** (for example, fore and aft acceleration/deceleration, and/or left and right (yaw) acceleration of the vehicle), turning rate, turn angle, and/or impact sensors (such as the type used to trigger vehicle air bags), windshield wiper status (to determine if it is raining), fog light status, outside temperature, defroster status, and **geographic positioning information**. **Recording some or all of this data or similar relevant data would make accident reconstruction more reliable and less expensive**." EX1008, 9:21-50. Regarding the combination of Cherouny and Bouchard, a POSITA would have found it obvious to use the teachings from Bouchard (i.e., recording operational event information, a record of driving history) because this would have represented a simple modification to Cherouny's system, which already describes "record[ing] the driver speed over a given period of time." EX1004, ¶ [0035]. Accordingly, to the extent Cherouny was lacking any implementation details on how or where to record information about operation of the vehicle, Bouchard provides explicit details of the same (e.g., "recording the collected relevant data and recording a driver profile" EX1008, claim 1), and a POSITA would have been aware of these techniques in view of Bouchard's explicit disclosure of them. A POSITA would have had a reasonable expectation of success in implementing Bouchard's teachings, particularly given Cherouny's disclosure that with its invention "the memory capability of the speed governor **allows for a permanent record** of the drivers possible violations." EX1004, ¶ [0009]; EX1003 (Wilson), ¶ 72. Thus, Bouchard offers explicit implementation details for a ***data logging module*** that would have been implemented into Cherouny's vehicle control system, and together, the combined system discloses the claimed ***data logging module***. EX1003 (Wilson), ¶ 72.

Claim Language	Relevant Prior Art Disclosures and Argument[1]
[1.2] a master control unit in a vehicle for wirelessly authenticating at least one occupant via said wireless driver identification and data logging module and associating an operating profile with said at least one occupant;	Cherouny discloses, suggests, and renders obvious ***a master control unit in a vehicle for wirelessly authenticating at least one occupant via said wireless driver identification and data logging module and associating an operating profile with said at least one occupant***. As described in the Reexam Request in Section I.C, although the '470 Patent does not explicitly define what the ***master control unit*** is, it does provide discussion, e.g., of the various functions it is responsible for performing, signals it can send and receive, and instructions it can provide: • "The master control unit 430 can enable vehicle operation within the programmed operating profile 435." EX1001, 7:58-59. • "The master control unit 430 can authenticate the driver 410 . . ." EX1001, 7:26-32. • "The master control unit 430 may also receive data indicative of the speed of the vehicle 420, the location of the motor vehicle 420, and the time of day from a plurality of sources including a WIFI enabled device, an RF source, a Bluetooth enabled device, and a smart-road network source." EX1001, 8:61-66. • "The master control unit 430 can interpret driver authorization, and ascertain the vehicle speed. The master control unit 430 also interprets the location and time of day parameters versus maximum desired threshold limits." EX1001, 9:6-10. • "The master control 430 can be configured to define a number of operating parameters for a given driver such as a maximum speed limit and a geo-fence limit defining an acceptable space in which the vehicle may be operated." EX1001, 10:30-33. • "The master control unit 430 monitors and logs vehicle performance via the GPS module 504 associated with master control unit 430 . . ." EX1001, 11:52-58. • "The master control unit 430 can communicate and send commands to the slave control unit 440 associated with the driver authentication system 450." EX1001, 10:48-50. • "The master control unit 430 can be configured to include driver identification and validation module 502 . . ." EX1001, 8:57-58. In view of these disclosures, a POSITA reading the '470 Patent would have understood that the claimed ***master control unit in a vehicle*** would at least have encompassed a processor (sometimes, when built into the vehicle, referred to as an electronics control unit, or ECU) within the vehicle, capable of performing the various functions described by the '470 Patent, such as monitoring and logging vehicle performance and communicating with the slave control unit. EX1003 (Wilson), ¶ 48; *see also* Reexamination Request, Section I.C.

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	Cherouny discloses ***a master control unit in a vehicle*** through its microprocessor 101, which is responsible for interfacing with and controlling all components within its vehicle, including the key fob (for driver identification) and various vehicle sensors and GPS systems, as shown in Figures 20A and 20B.  **EX1004, Fig. 20 (annotated to combine Figures 20A and 20B, and to show microprocessor 101)** Cherouny discloses that its ***master control unit*** (i.e., microprocessor 101) performs ***wirelessly authenticating at least one occupant via said wireless driver identification and data logging module*** by interacting with the key fob using key fob reader 109, which, together with the software existing on and executed by microprocessor 101, identifies and authenticates the driver of the vehicle. Cherouny explains: • "**Connected to the microprocessor 101** are automobile speed sensors 108 which sense the actual speed of the automobile when in use. **Also connected to 101 is a key fob reader which checks the identity of the user of the automobile to insure the instant user's data table is used**. Components 110, 111, and 112 are the power conditioning unit, the battery

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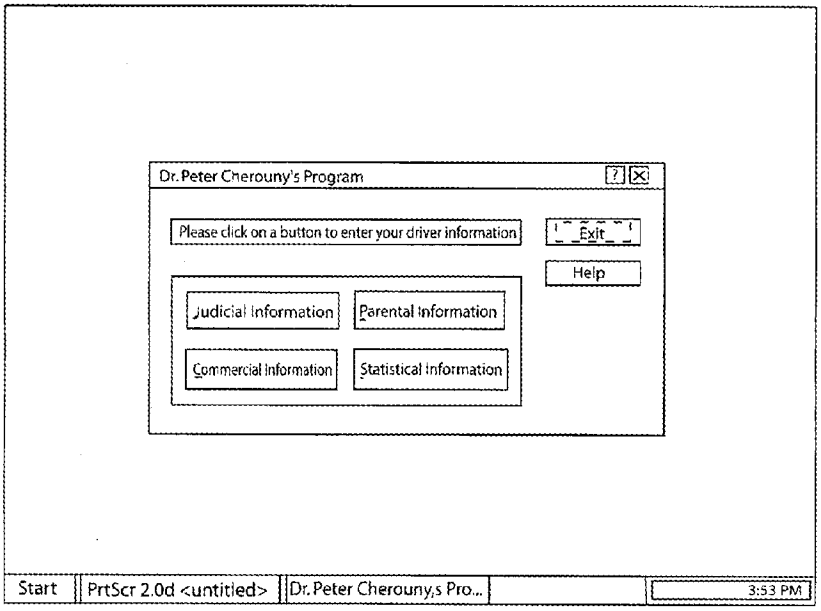
Claim Language	Relevant Prior Art Disclosures and Argument[1]
	pack and a battery charger. These components can be used to charge up the unit." EX1004, ¶ [0073]. • "The software has two parts. The first allows for setting all the parameters for operation. **These parameters allow for multiple drivers in multiple scenarios**. The detection of rain and darkness and tampering and are inputted to allow them to affect the operation of the vehicle at different times and to report to the parent or administrator the conditions at the time of an infraction. This information to the parent or administrator is invaluable in making judgment calls in training the young driver in safe driving under these conditions. The driver does not have to remember codes **as that function is now performed by the key fob function which identifies to the mobile computer who was or is about to operate the vehicle**. This semi-automatic identification of who was driving eliminated two main problems with codes the first of which was forgetting the code. The second problem eliminated the need for an addition of a keypad and associated electronic hardware requiring a circuit de-bounce. The key fob allows the device to be mounted in an inconspicuous place and it can be inserted by feel alone. The owner of the software to program the mobile unit has the password right to enter the code." EX1004, ¶ [0018]. To the extent it is argued that Cherouny alone does not disclose a ***wireless*** authentication, such would have been obvious for the same reasons discussed above in limitation [1.1], *supra*. EX1003 (Wilson), ¶ 48. And further, to the extent this is found lacking in Cherouny alone, such would have been obvious and explicitly disclosed in SNQ2 (the combination of Cherouny and Harter). Finally, as to the claimed ***associating an operating profile with said at least one occupant***, the '470 Patent generally describes an ***operating profile*** as being used to "place limits on the operation of the vehicle 420. For example, the driver operating profile can define speed limits for each unique driver and can include geo-fencing for each driver. These limits can be dynamically determined according to location provided via the GPS module and time of day. For example, a concerned parent may set a geo-fence of 20 miles from their house for their teenage driver during the day and a 10 mile geo-fence at night. If the teenage driver exceeds this distance an alarm signal can be provided by the master control unit 430." EX1001, 9:11-23. Accordingly, an ***operating profile*** at least encompasses placing limits (e.g., speed, location) on a driver of a vehicle. Similar to the '470 Patent, Cherouny ***associat[es] an operating profile with said at least one occupant*** by disclosing a program through which a moderator (e.g., a parent of a teen driver) can preprogram operation parameters for an individual driver of a vehicle in its system. *See* EX1004, claim 1, ¶¶ [0018], [0020].

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	Specifically, Cherouny describes a process through which a moderator (just like the "concerned parent" in the '470 Patent) can define speed limits based on the time of day, control vehicle parameters (i.e., turn off the ignition), and generate alarms. Cherouny explains: • "**A system for specifically regulating the driving performance of a given individual by use of a computer from a server in a central location**, said system comprising a **monitoring moderator means adapted to be attached to the vehicle the given individual is to drive**, a data processing means **having performance criteria preprogrammed** therein and which relates to the driving performance history **of said given individual associated with said moderator**, said processing means operatively connected to said central server, **wireless transmitting means associated with said moderator to send signals representing location and speed data of said vehicle at any given time** to said central server engine control means associated with said data processing means and adapted to regulate operation of the engine of a vehicle in response to signals received from said central server via a GPS satellite system, **whereby the operation of a vehicle by said given individual can be preprogrammed, recorded and closely monitored remotely from a central server location by automatically curtailing operation of the vehicle when the received data exceeds preset or personalized limits of said individual driver**." EX1004, claim 1. • "The software has two parts. **The first allows for setting all the parameters for operation**. These parameters allow for multiple drivers in multiple scenarios." EX1004, ¶ [0018]. • "However, the new, improved version of the invention, called a **moderator**, has a global positioning receiver linked to the CPU that receives the location of the vehicle from the GPS satellite system. The **Moderator uses a linked mapping capability and database, located within a central server or within the Moderator or both, that allows the location data to identify the roadway section where the vehicle is located and the speed data of that portion of the roadway**. This data is compressed in code to reduce the file size of this database. If a centrally located database is used, the data is sent via a remote wireless connection between the central database and the vehicle and the Moderator. **Use of the speed data uploaded through this GPS wireless connection by the Moderator is prearranged by the administrator of the Moderator software program**." EX1004, ¶ [0020]. • "A further object of this invention is to provide a safety device for the 'at risk' segment of the driving public **by limiting the speed of the motor vehicle they are driving by programming in a speed limit, by adjusting**

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	for driving history, by reassessing allowable speed during rain or darkness." EX1004, ¶ [0038]. • "FIGS. 1-13 show the **operating program on a PC used by the operator of this system to preprogram the operating scenario for the various drivers and conditions**. The system show four data bases, namely Judicial Information, **Parental Information**, Commercial Information and Statistical Information." EX1004, ¶ [0064]. *See also* FIGs. 1, 6-9: FIG. 1 

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Claim Language	Relevant Prior Art Disclosures and Argument[1]

FIG. 6

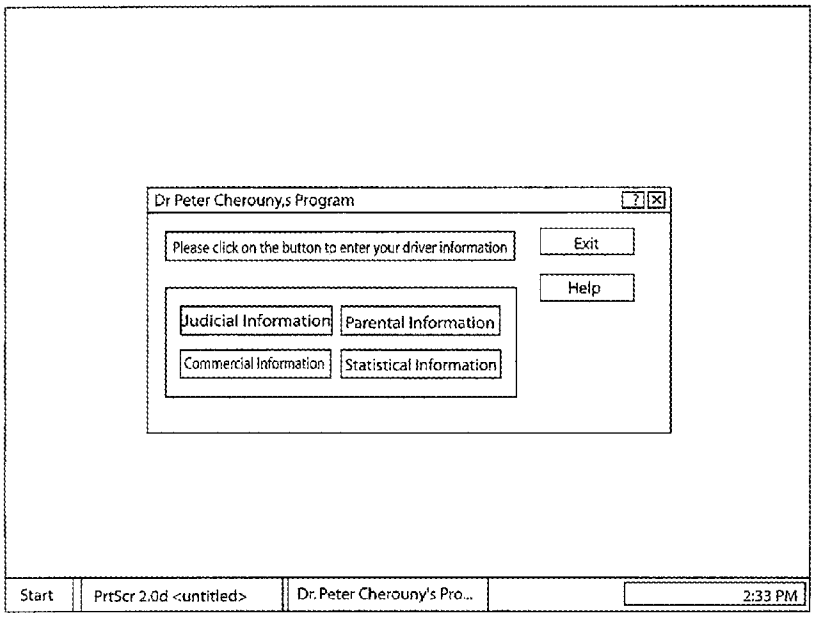
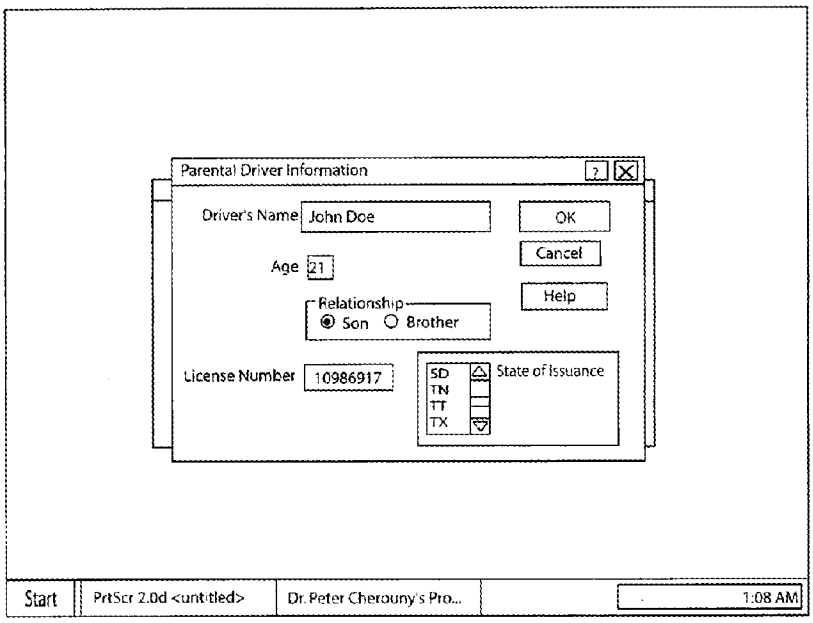


FIG. 7



Claim Language	Relevant Prior Art Disclosures and Argument[1]

FIG. 8

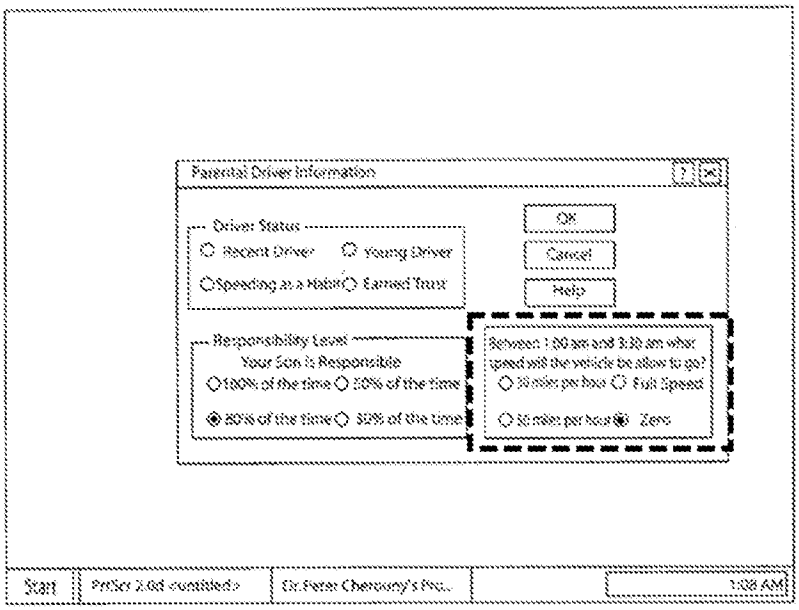
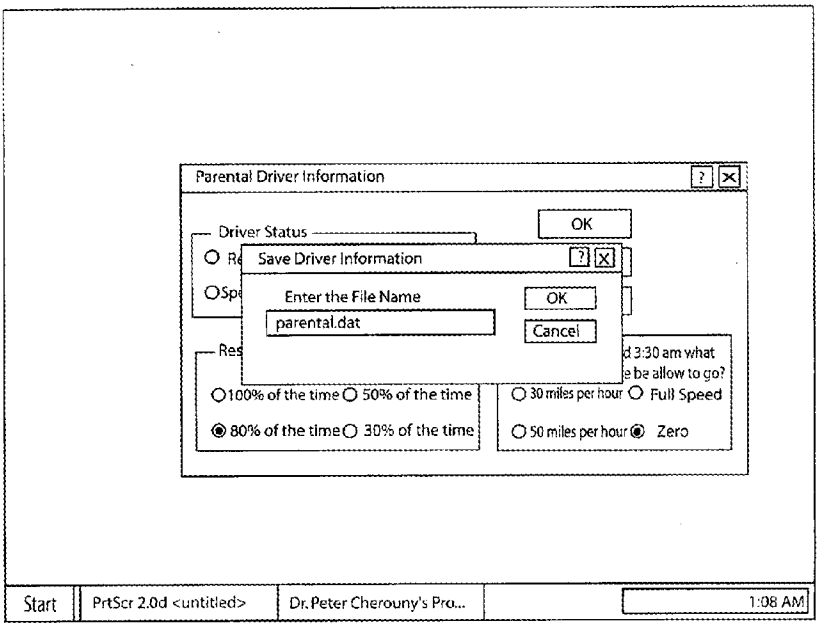


FIG. 9



- "**FIG. 6 shows the screen of FIG. 1 again with the emphasis on 'Parental Information' this time**. FIG. 7 shows the relationship of the driver to the parent as father and son and **FIG. 8 shows an input for the parent to make to help the system arrive at a pre-programmed**

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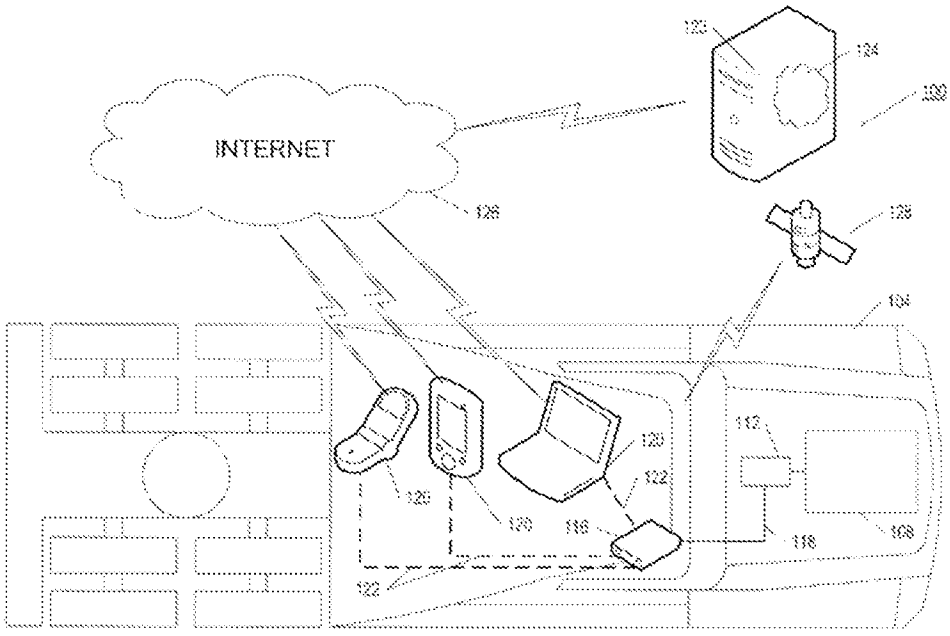
Claim Language	Relevant Prior Art Disclosures and Argument[1]
	operation for the son. Note that a lot of "fine tuning" is available such as speed limiters for certain late hours and accommodation for certain demonstrated responsibility levels. FIG. 9 shows the SAVE function screen for the date entered under Parental Information. FIG. 10 shows the screen of FIG. 1 again with emphasis on Commercial Information. Like in the situation with a Judicial driver information, FIG. 11 shows the input for a commercial driver including status and driving history. It also notes whether the driver is full time or part time." EX1004, ¶ [0068]. Accordingly, in view of the disclosures and argument above, Cherouny discloses, suggests, and renders obvious ***a master control unit in a vehicle for wirelessly authenticating at least one occupant via said wireless driver identification and data logging module and associating an operating profile with said at least one occupant***. **SNQ2 (Obviousness based on Cherouny and Harter):** As explained above in limitation [1.1], *supra*, in the combined Cherouny-Harter system, Harter's smartphone would have been used as the ***wireless identification and data logging module***. Accordingly, relevant to limitation [1.2]'s requirement that the ***master control unit . . . wirelessly authenticat[es] at least one occupant via said wireless driver identification and data logging module***, such would have been disclosed or rendered obvious in the Cherouny-Harter combination. For example, Harter explicitly describes that "the **portable device receives identifying information from the driver**, receives the one or more operating parameters from the base unit, determines compliance data based, at least in part, **on the identifying information** and the one or more operating parameters, and **wirelessly transmits** signals based on the compliance data." EX1005, ¶ [0007]. And, as shown in Figure 1, "the smart phone 400 **wirelessly connects to the base unit 116 via Bluetooth or other wireless connections**," where the base unit 116 is present in a vehicle and is in communication with Harter's ECU 112. EX1005, ¶ [0042], Fig. 1.

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	 FIG. 1 In view of these disclosures, a POSITA would have found it obvious in the combined Cherouny-Harter system that the ***master control unit*** (i.e., Cherouny's existing microprocessor 101)**. . . *wirelessly authenticat[es] at least one occupant via said wireless driver identification and data logging module*** (i.e., Harter's smartphone 400) in view of Harter's explicit teaching of the same. These teachings from Harter would have been combinable with Cherouny's system for the same reasons discussed above in limitation [1.1], *supra*. EX1003 (Wilson), ¶ 58.
[1.3] a module for receiving at least location and speed information in association with a movement of said vehicle;	Cherouny discloses, suggests, and renders obvious ***a module for receiving at least location and speed information in association with a movement of said vehicle***. As explained above in limitation [1.1], the '470 Patent describes the term ***module*** broadly, e.g., as including physical hardware components "**and/or**" software programs capable of performing the function described. EX1001, 6:111-36; *see* limitation [1.1], *supra*. First, Cherouny discloses ***a module for receiving at least . . . <u>speed</u> information in association with a movement of said vehicle*** by disclosing: • "A system for specifically regulating the driving performance of a given individual by use of a computer from a server in a central location, said system comprising . . . **wireless transmitting means associated with said**

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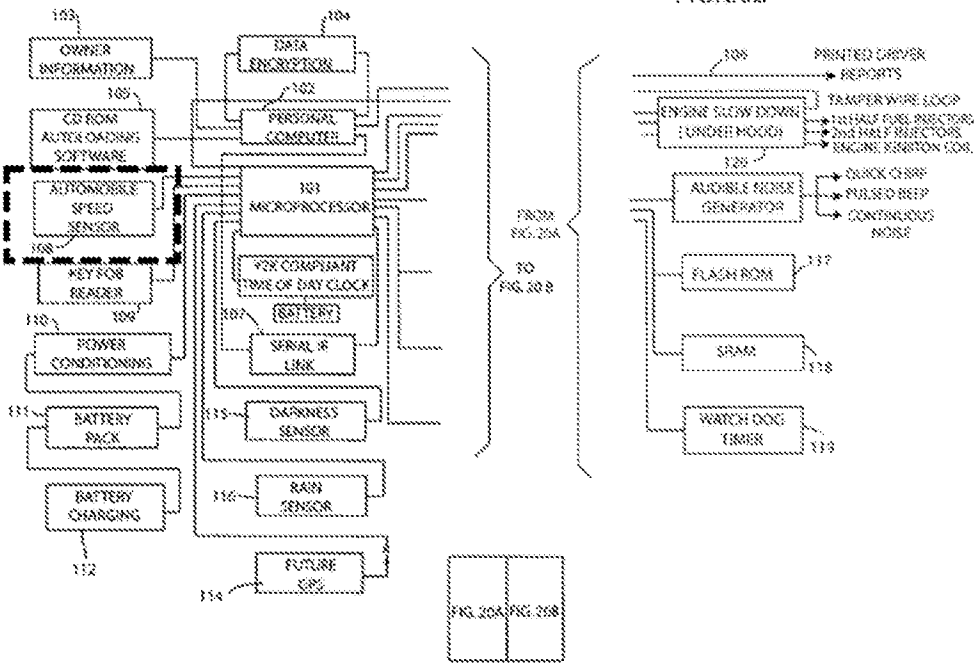
Claim Language	Relevant Prior Art Disclosures and Argument[1]
	moderator to send signals representing location and speed data of said vehicle at any given time to said central server . . . ." EX1004, claim 1. • "It is another object of this invention to provide a programmable electronic device for motor vehicles **which also records the driving speed over a given period of time**." EX1004, ¶ [0035]. • "The instant device does not cut off the ignition but has a slow down sequence which has several levels of sophistication. The first level sounds a short burst or chirp but does not record the infraction. The second level of this is that the excess speed of the driver is recorded so that it can be reported to an authority figure. That authority figure is the driving force behind altering the activity of the driver. This allows the authority figure to provide back up to his or her decision making on the drivers performance." EX1004, ¶ [0031]. Cherouny also depicts an "automobile speed sensor 108," as shown in Figure 20: FIG. 20A FIG. 20B  FIG. 20 • "Connected to the microprocessor 101 are **automobile speed sensors 108 which sense the actual speed of the automobile when in use**." EX1004, ¶ [0073].

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Claim Language	Relevant Prior Art Disclosures and Argument[1]
	In view of these disclosures, Cherouny's system discloses, suggest, or renders obvious ***a module for receiving at least . . . speed information in association with a movement of said vehicle***. Second, Cherouny also discloses ***a module for receiving at least location . . . information in association with a movement of said vehicle*** by disclosing: • "A system for specifically regulating the driving performance of a given individual by use of a computer from a server in a central location, said system comprising . . . **wireless transmitting means associated with said moderator to send signals representing location and speed data of said vehicle at any given time to said central server** . . . ." EX1004, claim 1. • "However, the new, improved version of the invention, called a moderator, **has a global positioning receiver linked to the CPU that receives the location of the vehicle from the GPS satellite system**. The Moderator uses a linked mapping capability and database, located within a central server or within the Moderator or both, **that allows the location data to identify the roadway section where the vehicle is located and the speed data of that portion of the roadway**. This data is compressed in code to reduce the file size of this database. If a centrally located database is used, the data is sent via a remote wireless connection between the central database and the vehicle and the Moderator. Use of the speed data uploaded through this GPS wireless connection by the Moderator is prearranged by the administrator of the Moderator software program." EX1004, ¶ [0020]. • "Yet another object of this invention is to provide a programmable speed controller which is partially governed by a GPS system, **allowing for identification of the road and location of the vehicle** for adjusting speed limits according to vehicle location in real time." EX1004, ¶ [0040]. Cherouny also depicts a "future **GPS** 114," as shown in Figure 20:

Claim Language	Relevant Prior Art Disclosures and Argument[1]

FIG. 20A

FIG. 20B

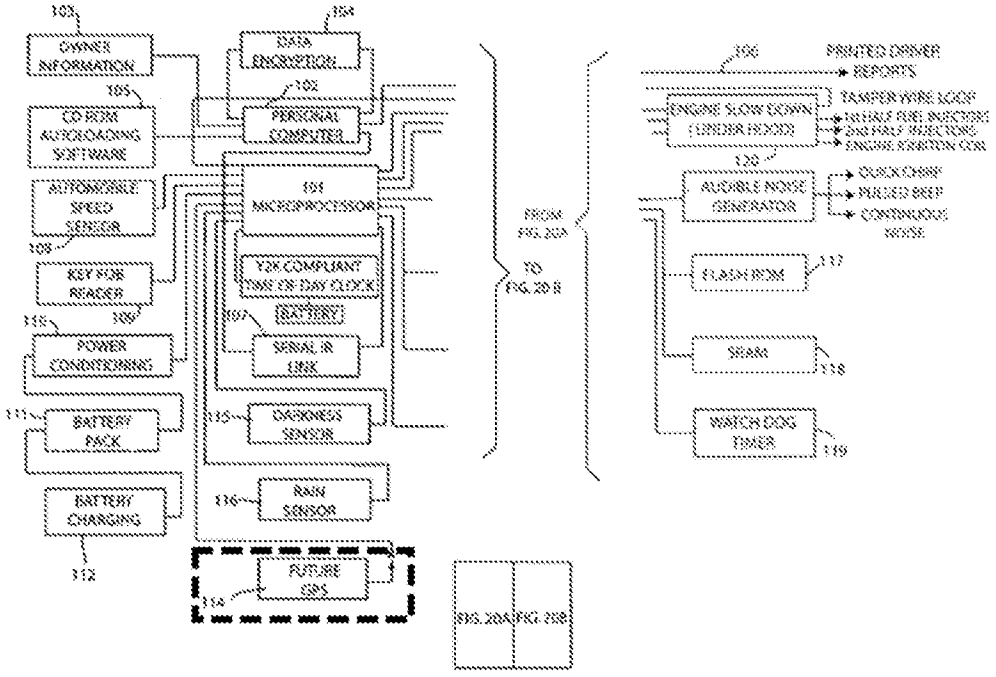

FIG. 20

- "**Connected to the microprocessor 101** are automobile speed sensors 108 which sense the actual speed of the automobile when in use. Also connected to 101 is a key fob reader which checks the identity of the user of the automobile to insure the instant user's data table is used. Components 110, 111, and 112 are the power conditioning unit, the battery pack and a battery charger. These components can be used to charge up the unit.

  A clock unit 113 is also **connected to the microprocessor and provision is also made for a GPS unit 114 for instant location information on the position of the vehicle** on a predetermined grid." EX1004, ¶¶ [0073]-[0074].

Accordingly, in view of the above disclosures, Cherouny discloses, suggests, or renders obvious ***a module for receiving at least location and speed information in association with a movement of said vehicle***.

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	SNQ2 (Obviousness based on Cherouny and Harter): To the extent Cherouny is found not to explicitly disclose ***a module for receiving at least location and speed information in association with a movement of said vehicle***, it would have been obvious over Harter. Harter discloses that, as to ***speed information***, one of the operating parameters monitored by the ECU includes "speed." EX1005, ¶ [0032]. As to ***location information***, "information from the **GPS system** 128 (such as time and **location**) is available to the [vehicle]." EX1005, ¶ [0033]. *See, e.g.*, Harter: • "**The performance monitoring system 100 also includes an electronic on-board recorder ("EOBR") base unit 116 that communicates with the ECU 112 through an information bus 118** . . . . The base unit 116 has a plurality of functions including, but not limited to, time keeping and **data logging**. . . . In some embodiments, a global position satellite ("GPS") system 128 also communicates with the ECU 112 and/or the base unit 116 **so that information from the GPS system 128** (such as time and **location**) is available to the CMV 104. In some embodiments, at least a portion of the information stored in the base unit 116 or information communicated to and from the base unit 116 is encrypted." EX1005, ¶ [0033]. • " . . . After the CMV arrives at a destination and stops, the smart phone 400 prompts the operator for a **new destination location in the location entry 708** (of FIG. 7). **This information is then stored in the memory** module 211." EX1005, ¶ [0045]. • "The screen 1800 is also expandable to display other information such as, violations, **locations (which indicates locations the CMV driver has traveled during the trip)**, team drivers (which indicates a list of operators involved in the trip), and receipts (which indicates a list of receipts collected during the trip)." EX1005, ¶ [0054]. • " . . . Operating parameters **monitored by the ECU 112 include speed**, hours of service, operating status, ignition switch status, trip distance, total vehicle distance, and the like." EX1005, ¶ [0032]. Accordingly, to the extent Cherouny is not explicit in its disclosure of receiving speed and location information, Harter discloses it as shown above. A POSITA would have seen it as beneficial and obvious to include capabilities of monitoring and receiving speed and location information into Cherouny's system based on these explicit teachings in Harter. EX1003 (Wilson), ¶ 59. Cherouny's system

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Claim Language	Relevant Prior Art Disclosures and Argument[1]
	already includes the components necessary to obtain this information (e.g., through its automobile speed sensor 108 and GPS 114), and to the extent it is not explicit, Harter provides the implementation details as to how this information would be received by the processor of the system. *See* EX1004, claim 1, ¶¶ [0020], [0035], [0040]; EX1005, ¶¶ [0032]-[0033], [0045], [0054]. A POSITA would have recognized that monitoring speed and location (e.g., in view of Harter's explicit teachings) would further Cherouny's stated goal of improving safety of at-risk drivers. EX1003 (Wilson), ¶ 59. A POSITA would have had a reasonable expectation of success of implementing Harter's teachings in view of Cherouny disclosing transmission of "location and speed data" and that Cherouny's system already includes the components for doing so. *Id.* **SNQ3 (Obviousness based on Cherouny and Shuman):** To the extent Cherouny is found not to disclose ***a module for receiving at least location and speed information in association with a movement of said vehicle***, it would have been obvious over Shuman. Shuman discloses that, as to ***location and speed information***, a "vehicle positioning program . . . uses data from the sensors . . . to determine the **position**, **speed**, and heading **of the vehicle**." EX1006, 9:52-57. *See, e.g.*, Shuman: • "The vehicle positioning program 210(1) uses data from the sensors 202 and 204 and the geographic database 220 to **determine the position, speed, and heading of the vehicle 10**." EX1006, 9:52-57. • " . . . Also disclosed is a **drive recorder** that **maintains records of the statuses of all vehicle systems** and of the driver." EX1006, Abstract. Accordingly, to the extent Cherouny is not explicit in its disclosure of receiving speed and location information, Shuman discloses it as shown above. A POSITA would have seen it as beneficial and obvious to include capabilities of monitoring and receiving speed and location information into Cherouny's system based on these explicit teachings in Shuman. EX1003 (Wilson), ¶ 65. Cherouny's system already includes the components necessary to obtain this information (e.g., through its automobile speed sensor 108 and GPS 114), and to the extent it is not explicit, Shuman provides the implementation details as to how this information would be received by the processor of the system. *See* EX1004, claim 1, ¶¶ [0020], [0035], [0040]; EX1006, Abstract, 9:52-57. A POSITA would have recognized that monitoring speed and location (e.g., in view of Shuman's explicit teachings) would further Cherouny's stated goal of improving safety of at-risk drivers. EX1003 (Wilson), ¶ 65. A POSITA would have had a reasonable expectation of success of implementing Shuman's teachings in view of Cherouny disclosing

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	transmission of "location and speed data" and that Cherouny's system already includes the components for doing so. *Id.* **SNQ4 (Obviousness based on Cherouny and Petrik):** To the extent Cherouny is found not to disclose ***a module for receiving at least location and speed information in association with a movement of said vehicle***, it would have been obvious over Petrik. Petrik discloses that, as to ***location and speed information***, "operational parameters" are logged, which include "vehicle location" and "vehicle speeds." EX1007, ¶ [0009]. *See, e.g.*, Petrik: • "These problems are overcome by the present invention, which provides a method and system of automatically and **irrefutably logging via GPS**, operational parameters such as drivers' work and rest time, **vehicle location, vehicle speeds**, speeding offences, distance covered etc. and recording these on a secure smart card as well as in the vehicle units' memory." EX1007, ¶ [0009]. • ". . . During the trip the **GPS keeps a constant log of the date, time, location, distance travelled and speed of the vehicle both in the units' memory** and in the smart card." EX1007, ¶ [0025]. Accordingly, to the extent Cherouny is not explicit in its disclosure of receiving speed and location information, Petrik discloses it as shown above. A POSITA would have seen it as beneficial and obvious to include capabilities of monitoring and receiving speed and location information into Cherouny's system based on these explicit teachings in Petrik. EX1003 (Wilson), ¶ 69. Cherouny's system already includes the components necessary to obtain this information (e.g., through its automobile speed sensor 108 and GPS 114), and to the extent it is not explicit, Petrik provides the implementation details as to how this information would be received by the processor of the system. *See* EX1004, claim 1, ¶¶ [0020], [0035], [0040]; EX1007, ¶¶ [0009], [0025]. A POSITA would have recognized that monitoring speed and location (e.g., in view of Petrik's explicit teachings) would further Cherouny's stated goal of improving safety of at-risk drivers. EX1003 (Wilson), ¶ 69. A POSITA would have had a reasonable expectation of success of implementing Petrik's teachings in view of Cherouny disclosing transmission of "location and speed data" and that Cherouny's system already includes the components for doing so. *Id.*

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	SNQ5 (Obviousness based on Cherouny and Bouchard): To the extent Cherouny is found not to disclose ***a module for receiving at least location and speed information in association with a movement of said vehicle***, it would have been obvious over Bouchard. Bouchard discloses that, as to ***location and speed information***, using sensors to monitor "vehicle speed (momentary and average" and "geographic positioning information." EX1008, 9:21-50. *See, e.g.*, Bouchard: • "The display and sensor section 600 which provides information from a variety of vehicle sensors 4a to the microcontroller 510 for use in calculating the hazard level presented by targets indicated from the received radar signal and/or to indicate the operational status and environment of the vehicle. **Commonly known sensors may be used**, for example, to measure distance travelled, **vehicle speed (momentary and average)**, fuel consumption, fuel remaining, direction of travel, engine temperature, oil pressure, engine RPM, oil temperature, transmission fluid temperature, coolant temperature, engine timing and other values relating to the environment or performance of the vehicle. The digital electronics section 500 itself generates information from the transmitted and received radar signal, such as the closing rate (CR) of a target with respect to the vehicle, the distance (D) of various targets, and the direction of movement (towards or away from) of the targets with respect to the vehicle. **Additional information can be obtained by providing other sensors**, such as a brake pedal pressure sensor, brake hydraulic line pressure sensor, tire pressure, accelerometer sensors (for example, fore and aft acceleration/deceleration, and/or left and right (yaw) acceleration of the vehicle), turning rate, turn angle, and/or impact sensors (such as the type used to trigger vehicle air bags), windshield wiper status (to determine if it is raining), fog light status, outside temperature, defroster status, **and geographic positioning information**. **Recording some or all of this data** or similar relevant data would make accident reconstruction more reliable and less expensive." EX1008, 9:21-50. • "A system for evaluating fitness of a vehicle driver to operate a vehicle, including: . . . (b) **an operational event recorder** apparatus coupled to the collision warning apparatus **for recording the collected relevant data** and recording a driver profile . . . ." EX1008, claim 1. Accordingly, to the extent Cherouny is not explicit in its disclosure of receiving speed and location information, Bouchard discloses it as shown above. A POSITA would have seen it as beneficial and obvious to include capabilities of monitoring

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	and receiving speed and location information into Cherouny's system based on these explicit teachings in Bouchard. EX1003 (Wilson), ¶ 73. Cherouny's system already includes the components necessary to obtain this information (e.g., through its automobile speed sensor 108 and GPS 114), and to the extent it is not explicit, Bouchard provides the implementation details as to how this information would be received by the processor of the system. *See* EX1004, claim 1, ¶¶ [0020], [0035], [0040]; EX1008, 9:21-50, claim 1. A POSITA would have recognized that monitoring speed and location (e.g., in view of Bouchard's explicit teachings) would further Cherouny's stated goal of improving safety of at-risk drivers. EX1003 (Wilson), ¶ 73. A POSITA would have had a reasonable expectation of success of implementing Bouchard's teachings in view of Cherouny disclosing transmission of "location and speed data" and that Cherouny's system already includes the components for doing so. *Id.*
[1.4] a data logging device that records vehicle operation data associated with a use of said vehicle, the vehicle operation data comprising at least said location and speed information received from said module; and	Cherouny discloses, suggests, and renders obvious ***a data logging device that records vehicle operation data associated with a use of said vehicle, the vehicle operation data comprising at least said location and speed information received from said module***. As described above in limitation [1.3], Cherouny discloses, suggests, and renders obvious receiving ***at least location and speed information in association with a movement of said vehicle***, which is the ***vehicle operation data associated with a use of said vehicle*** recited by limitation [1.4] (i.e., as claimed by limitation [1.4], ***the vehicle operation data comprising at least said location and speed information received from said module***). Accordingly, the only remaining limitation to be shown for limitation [1.4] is that Cherouny discloses ***a data logging device that records vehicle operation data*** (i.e., recording the ***location and speed information in association with a movement of said vehicle*** from limitation [1.3]). Cherouny does so by disclosing that "[i]t is another object of this invention to provide a **programmable electronic device for motor vehicles which also records the driving speed** over a given period of time . . . ." EX1004, ¶ [0035]. Although Cherouny is not explicit that ***location information*** is recorded over a period of time, the reference describes "location and speed data" within the same disclosures, and that location and speed data is used together within the system, for example: • ". . . wireless transmitting means associated with said moderator to **send signals representing location and speed data of said vehicle at any given time** to said central server . . ." EX1004, claim 1. • "Yet another object of this invention is to provide **a programmable speed controller which is partially governed by a GPS system**, allowing for

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Claim Language	Relevant Prior Art Disclosures and Argument[1]
	identification of the road and location of the vehicle for adjusting speed limits according to vehicle location in real time." EX1004, ¶ [0040]. Cherouny further describes logging of data and driver records more generally: • "The personal computer 160 is used to enter Format Data 161, to provide a man-machine interface 162, to show the **daily driving record 163** in game style presentation, to provide data 164 for subsequent speeds set via computer preselections and to provide function 165 upload/download the module. The car monitor 170 includes the functions of **measuring car speed 171,** incrementally slowing the car engine 172, **providing data logs of time** and severity of infraction 173, identifying driver via key fob reader 174, provisions of a watch dog time reset 175 from CPU activity, to detect extended slow DUI driving 176, to upload and download the module 177, to provide data compression 178, to sense tampering and record times 179 and to maintain clock assembly 180." EX1004, ¶¶ [0080]-[0081]. In view of these disclosures, and particularly, Cherouny's explicit disclosure of a "programmable electronic **device** . . . which also **records the driving speed** over a given period of time," a POSITA would have understood Cherouny to disclose, suggest, or render obvious ***a data logging device*** for recording ***location information*** in addition to the explicitly described recording of ***speed information***. EX1003 (Wilson), ¶ 49. For these reasons, Cherouny discloses, suggests, or renders obvious ***a data logging device that records vehicle operation data associated with a use of said vehicle, the vehicle operation data comprising at least said location and speed information received from said module***. **SNQ2 (Obviousness based on Cherouny and Harter):** To the extent it is argued Cherouny does not disclose a ***data logging device that records vehicle operation data***, such would have been obvious in view of Harter. Harter explicitly discloses a "**system for logging performance of a driver operating a vehicle**" and that its "logging system that includes **a vehicle, a portable device**" that wirelessly communicate. EX1005, Abstract, ¶ [0007]. One operating parameter tracked by Harter includes "speed" (EX1005, ¶ [0032]), and the logging system is depicted as including a list of "Locations" that the driver visited in FIG. 18 (EX1005, FIG. 18).

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	See, e.g., Harter: • "**A system for logging performance of a driver operating a vehicle** that has a vehicle information system from which [at] **least one vehicle operating parameter may be obtained**. The vehicle operating parameter collected through the vehicle information system and **operator information collected from a portable device are wirelessly communicated** to a remote host through a network such as the Internet." EX1005, Abstract. • "In one embodiment, the invention provides a **logging system that includes a vehicle, a portable device**, and a remote host. The vehicle includes a controller and a base unit. **The controller is positioned in the vehicle, and monitors one or more operating parameters of the vehicle**. The base unit is mounted in the vehicle, and is connected to the controller to receive and store the one or more operating parameters from the device. **The portable device, typically carried by the driver, can be coupled to the base unit. Once coupled, the portable device receives identifying information from the driver, receives the one or more operating parameters from the base unit, determines compliance data based, at least in part, on the identifying information and the one or more operating parameters, and wirelessly transmits signals based on the compliance data.** The remote host is configured to wirelessly receive the signals from the portable device, and to wirelessly manage the portable device based, at least in part, on the received signals." EX1005, ¶ [0007]. • "FIG. 1 shows a performance monitoring system 100 for use with a commercial motor vehicle ("CMV") 104. Although the CMV 104 illustrated is a tractor configured to tow a trailer (not shown), the performance monitoring system 100 can also be implemented in other types of CMV's such as construction vehicles and agricultural equipment. The CMV 104 includes an engine 108 that drives the CMV 104, and is controlled by an electronic control unit ("ECU") 112 that determines operating information or parameters from the engine 108, and other parts of the CMV 104. **Operating parameters monitored by the ECU 112 include speed, hours of service, operating status, ignition switch status, trip distance, total vehicle distance, and the like.**" EX1005, ¶ [0032]. • "FIG. 18 shows an exemplary screen 1800 of the remote host application 124. **Once the log is received at the remote host application 124**, the remote host application 124 stores and calculates parameters such as hours-of-service information of the operator and alerts the operator or the carrier of any violations of predetermined FMCSA rules. For example, a

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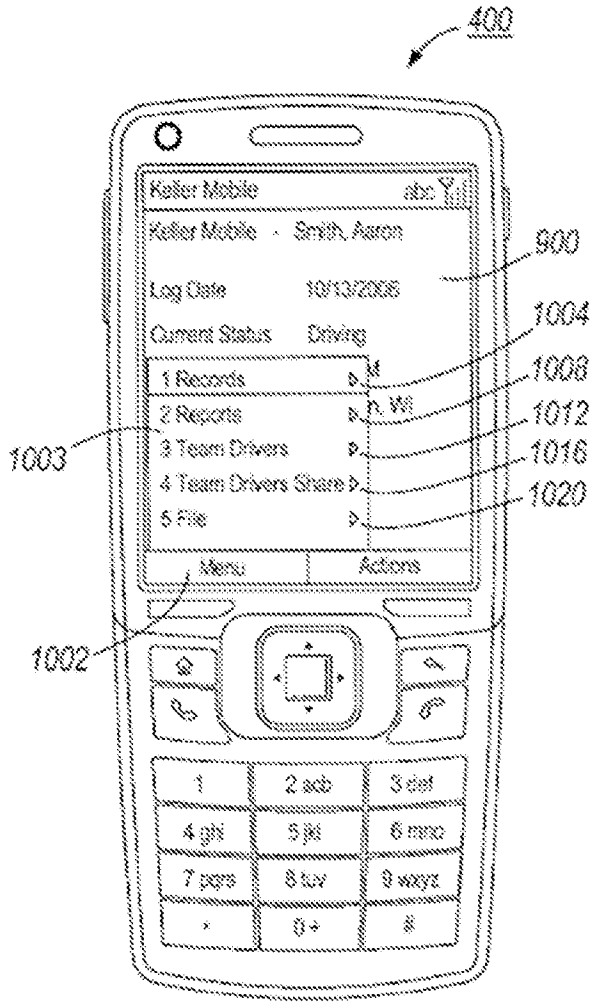
Claim Language	Relevant Prior Art Disclosures and Argument[1]
	log summary area 1804 lists all duty entries the operator submitted through the portable device 120. A log information area 1808 lists other driver and vehicle parameters collected. The remote host application 124 thus can rearrange the entries collected and generates different reports as needed. Furthermore, if an operator has a non-compliance violation, the remote host application 124 will also transmit a signal back to the portable device 120 to alert the operator of the violation." EX1005, ¶ [0053]. *See also* Harter, FIGs. 10, 18:  FIG. 10

Claim Language	Relevant Prior Art Disclosures and Argument[1]

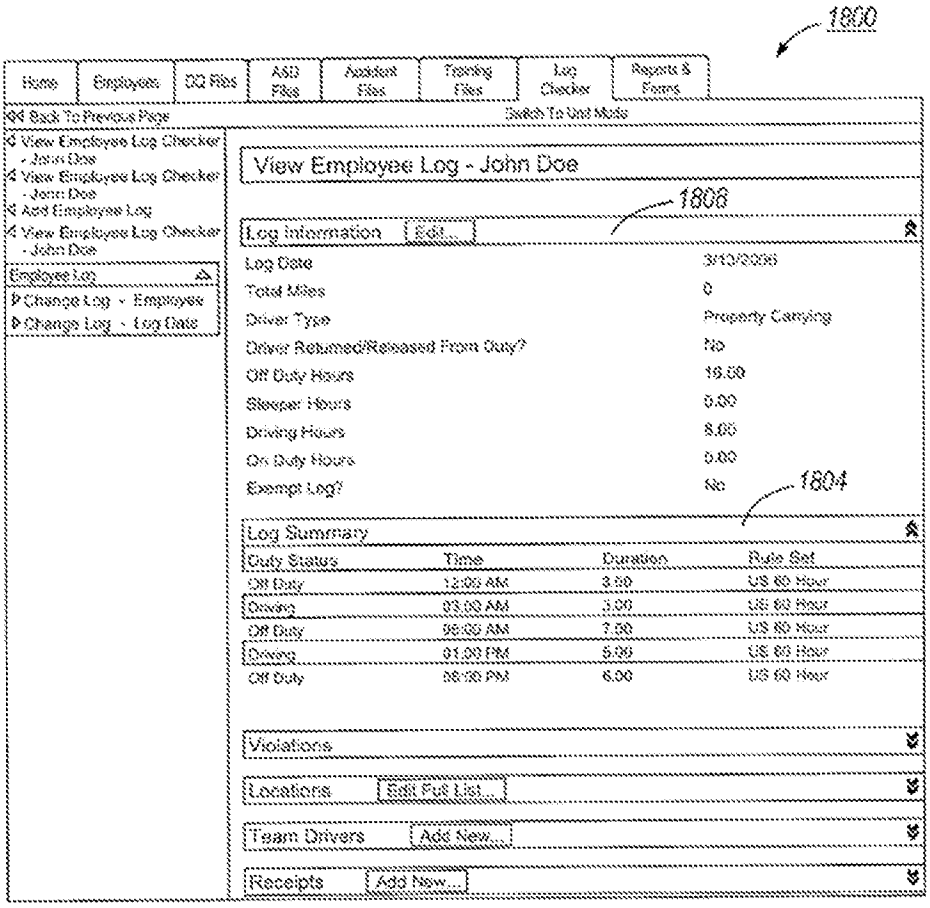


FIG. 18

A POSITA would have combined these teachings from Harter into the base system of Cherouny for the same reasons described for SNQ2 described above in limitations [1.1] and [1.3], *supra*. Specific to this limitation, to the extent Cherouny lacks explicit disclosure of a ***data logging device that records vehicle operation data***, a POSITA would have recognized that Harter's explicit disclosure of a data logging device as shown above would have added desirable functionality to Cherouny and once again furthered its goal of improving the safety of at-risk drivers, e.g., by allowing a moderator to review driving records of the monitored and at-risk driver. EX1003 (Wilson), ¶ 60. As discussed in limitations [1.1] and [1.3], *supra*, a POSITA would have had a reasonable expectation of success in implementing these teachings from Harter into Cherouny given Cherouny already discloses the general idea of recording speed over a period of time. EX1003 (Wilson), ¶ 60.

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	SNQ3 (Obviousness based on Cherouny and Shuman): To the extent it is argued Cherouny does not disclose a ***data logging device that records vehicle operation data***, such would have been obvious in view of Shuman. Shuman discloses: • " . . . Also disclosed is a **drive recorder** that **maintains records of the statuses of all vehicle systems** and of the driver." EX1006, Abstract. • "The vehicle positioning program 210(1) uses data from the sensors 202 and 204 and the geographic database 220 to **determine the position, speed, and heading of the vehicle 10**." EX1006, 9:52-57. A POSITA would have combined these teachings from Shuman into the base system of Cherouny for the same reasons described for SNQ3 described above in limitations [1.1] and [1.3], *supra*. Specific to this limitation, to the extent Cherouny lacks explicit disclosure of a ***data logging device that records vehicle operation data***, a POSITA would have recognized that Shuman's explicit disclosure of a driver recorder for maintaining records of all vehicle systems as shown above would have added desirable functionality to Cherouny and once again furthered its goal of improving the safety of at-risk drivers, e.g., by allowing a moderator to review driving records of the monitored and at-risk driver. EX1003 (Wilson), ¶ 66. As discussed in limitations [1.1] and [1.3], *supra*, a POSITA would have had a reasonable expectation of success in implementing these teachings from Shuman into Cherouny given Cherouny already discloses the general idea of recording speed over a period of time. EX1003 (Wilson), ¶ 66. **SNQ4 (Obviousness based on Cherouny and Petrik):** To the extent it is argued Cherouny does not disclose a ***data logging device that records vehicle operation data***, such would have been obvious in view of Petrik. Petrik discloses: • "These problems are overcome by the present invention, which provides a method and system of **automatically and irrefutably logging via GPS**, **operational parameters** such as drivers' work and rest time, **vehicle location, vehicle speeds**, speeding offences, distance covered etc. **and recording these** on a secure smart card as well as in **the vehicle units' memory**." EX1007, ¶ [0009]. • ". . . During the trip the **GPS keeps a constant log of the date, time, location, distance travelled and speed of the vehicle both in the units' memory** and in the smart card." EX1007, ¶ [0025].

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Claim Language	Relevant Prior Art Disclosures and Argument[1]
	A POSITA would have combined these teachings from Petrik into the base system of Cherouny for the same reasons described for SNQ4 described above in limitations [1.1] and [1.3], *supra*. Specific to this limitation, to the extent Cherouny lacks explicit disclosure of a ***data logging device that records vehicle operation data***, a POSITA would have recognized that Petrik's explicit disclosure of "automatically and irrefutably logging . . . operational parameters" as shown above would have added desirable functionality to Cherouny and once again furthered its goal of improving the safety of at-risk drivers, e.g., by allowing a moderator to review driving records of the monitored and at-risk driver. EX1003 (Wilson), ¶ 70. As discussed in limitations [1.1] and [1.3], *supra*, a POSITA would have had a reasonable expectation of success in implementing these teachings from Petrik into Cherouny given Cherouny already discloses the general idea of recording speed over a period of time. EX1003 (Wilson), ¶ 70. **SNQ5 (Obviousness based on Cherouny and Bouchard):** To the extent it is argued Cherouny does not disclose a ***data logging device that records vehicle operation data***, such would have been obvious in view of Bouchard. Bouchard discloses: • "A system for evaluating fitness of a vehicle driver to operate a vehicle, including: . . . (b) **an operational event recorder** apparatus coupled to the collision warning apparatus **for recording the collected relevant data** and recording a driver profile . . . ." EX1008, claim 1. • "The display and sensor section 600 which provides information from a variety of vehicle sensors 4a to the microcontroller 510 for use in calculating the hazard level presented by targets indicated from the received radar signal and/or to indicate the operational status and environment of the vehicle. **Commonly known sensors may be used**, for example, to measure distance travelled, **vehicle speed (momentary and average)**, fuel consumption, fuel remaining, direction of travel, engine temperature, oil pressure, engine RPM, oil temperature, transmission fluid temperature, coolant temperature, engine timing and other values relating to the environment or performance of the vehicle. The digital electronics section 500 itself generates information from the transmitted and received radar signal, such as the closing rate (CR) of a target with respect to the vehicle, the distance (D) of various targets, and the direction of movement (towards or away from) of the targets with respect to the vehicle. **Additional information can be obtained by providing other sensors**, such as a brake pedal pressure sensor, brake hydraulic line pressure sensor, tire pressure, accelerometer sensors (for example, fore and aft acceleration/deceleration, and/or left and right (yaw) acceleration of the

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	vehicle), turning rate, turn angle, and/or impact sensors (such as the type used to trigger vehicle air bags), windshield wiper status (to determine if it is raining), fog light status, outside temperature, defroster status, **and geographic positioning information**. **Recording some or all of this data** or similar relevant data would make accident reconstruction more reliable and less expensive." EX1008, 9:21-50. A POSITA would have combined these teachings from Bouchard into the base system of Cherouny for the same reasons described for SNQ5 described above in limitations [1.1] and [1.3], *supra*. Specific to this limitation, to the extent Cherouny lacks explicit disclosure of a ***data logging device that records vehicle operation data***, a POSITA would have recognized that Bouchard's explicit disclosure of an operational event recorder as shown above would have added desirable functionality to Cherouny and once again furthered its goal of improving the safety of at-risk drivers, e.g., by allowing a moderator to review driving records of the monitored and at-risk driver. EX1003 (Wilson), ¶ 74. As discussed in limitations [1.1] and [1.3], *supra*, a POSITA would have had a reasonable expectation of success in implementing these teachings from Bouchard into Cherouny given Cherouny already discloses the general idea of recording speed over a period of time. EX1003 (Wilson), ¶ 74.
[1.5] a slave control unit in said vehicle and which communicates with said master control unit, wherein said slave control unit receives commands from said master control unit and generate an alarm signal;	Cherouny discloses, suggests, and renders obvious ***a slave control unit in said vehicle and which communicates with said master control unit, wherein said slave control unit receives commands from said master control unit and generate an alarm signal***. As described in the Reexam Request in Section I.C, although the '470 Patent does not explicitly define what the ***slave control unit*** is (or indeed, how a ***unit*** differs from a ***module***, if at all), it does provide discussion, e.g., of the various functions it is responsible for performing: • "The **slave control unit 440 can receive wireless commands from master control unit 430** and generates the alarm signal 445 and 460." EX1001, 10:54-57. • "The **slave control unit 440 generates the driver alarm signal 445**, if the driver 410 violates the programmed operating profile 435, as illustrated at block 670." EX1001, 11:55-58. In view of these disclosures, a POSITA reading the '470 Patent would have understood that the claimed ***slave control unit in said vehicle*** would at least have encompassed hardware and/or software within the vehicle, capable of performing the functions described by the claim language, i.e., ***receiv[ing] commands from***

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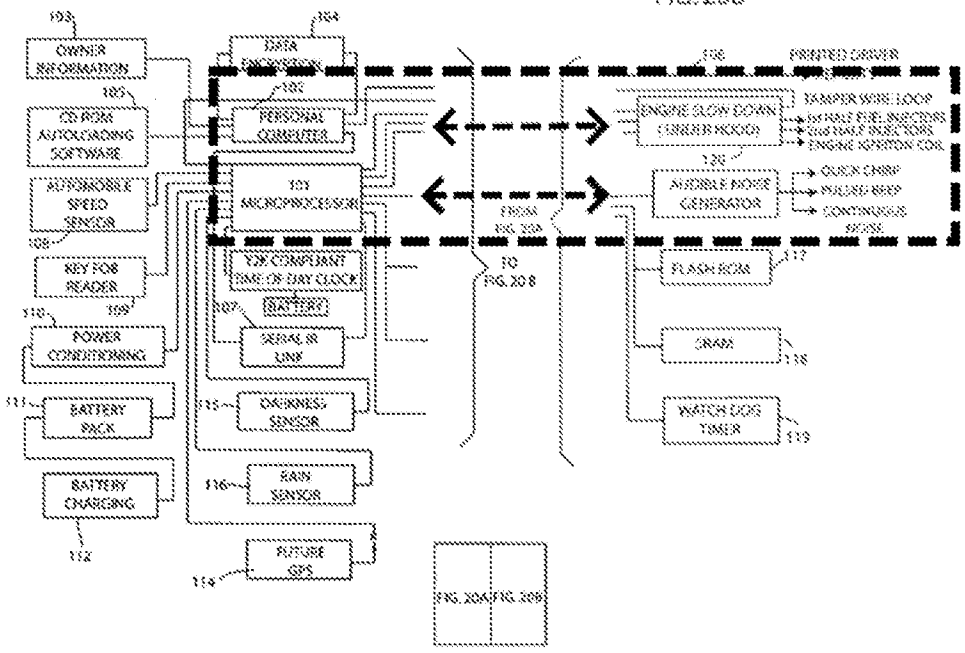
Claim Language	Relevant Prior Art Disclosures and Argument[1]
	said master control unit and generat[ing] an alarm signal. EX1003 (Wilson), ¶ 50; *see* Reexamination Request, Section I.C.[3] Cherouny discloses, suggests, or renders obvious ***a slave control unit in said vehicle and which communicates with said master control unit*** by disclosing various hardware and/or software (e.g., engine slow down module 120, and audible noise generator 121), which is in connection with and communicating with the microprocessor 101 (***which communicates with said master control unit***) as depicted and described in connection with Figures 20 and 21B: FIG. 20A FIG. 20B  FIG. 20 As shown here in Figure 20, the microprocessor 101 (***master control unit***) is directly connected to the engine slow down module and audible noise generator (***slave control unit***). These components of Cherouny (the engine slow down

[3] Requester notes that several dependent claims further limit and narrow the scope of the ***slave control unit*** of claim 1. Specifically, claims 17, 19, and 20 provide specific narrowing limitations: claim 17 requires "wherein said slave control unit further comprises: a power regulator module; a starter relay module; a definable relay module; a slave microcontroller; and an alarm synthesizer," claim 19 requires "wherein said slave control unit generates an alarm signal for remotely alerting an authorized user when said vehicle violates said operating profile," and claim 20 requires "wherein the slave control unit is mounted under a dash board of the vehicle." *See* EX1001, claims 17, 19, 20. Accordingly, the ***slave control unit*** of claim 1 should, at minimum, not be limited or narrowed by any of the elements explicitly described in these dependent claims.

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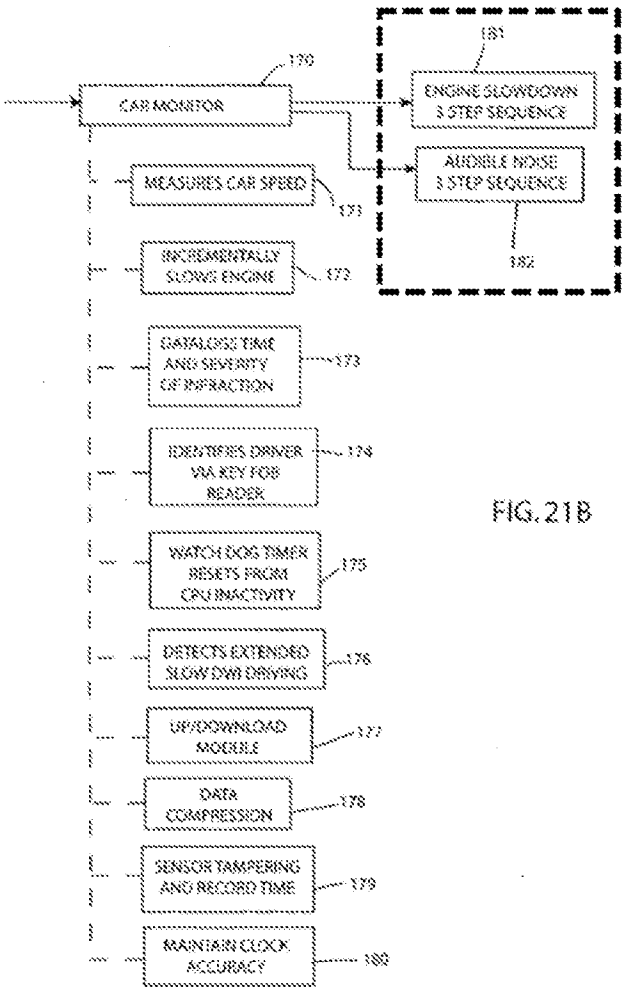
Claim Language	Relevant Prior Art Disclosures and Argument[1]
	module and audible noise generator) comprise a ***slave control unit*** as the '470 Patent uses the term because, as described below, they are in communication with and receive instruction from the microprocessor (***master control unit***) in the same way and perform the same functions described by the ***slave control unit*** in this claim. Next, while Figure 20 of Cherouny depicts and describes the engine slow down module 120 and audible noise generator 121, Figure 21 of Cherouny depicts a "diagrammatic view of **the functions**" of Cherouny's system, and includes a "engine slowdown 3 step sequence 181" and "audible noise 3 step sequence 182," which correspond to the engine slow down module 120 and audible noise generator 121 of Figure 20.  FIG. 21B Cherouny accordingly depicts and describes that these components (e.g., engine slow down module 120 – which a POSITA would have understood controls at least the fuel injectors and ignition starter relay module, and audible noise

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	generator 121 – which a POSITA would have understood controls at least an alarm synthesizer and speaker) ***communicate with the master control unit*** (microprocessor 101), as depicted and described in connection with Figures 20 and 21. EX1003 (Wilson), ¶ 51. Specifically, Cherouny describes: • "To facilitate needed action **based on the actual sensor data** and the preprogrammed driving program and **engine slow down module 120 is provided which can initially cut our one half of the engine fuel injectors**, the remaining half of the injectors and totally cut off the ignition coil **to slow and/or stop the vehicle**. An **audible noise generator 121 is also connected to the microprocessor** for provision of various warning noises such as a quick chirp, a pulsed beep and a continuous noise. These provide warnings of increasing severity to the driver of the vehicle." EX1004, ¶¶ [0077]-[0078]. • "The **car monitor 170** includes the functions of measuring car speed 171, incrementally slowing the car engine 172, providing data logs of time and severity of infraction 173, identifying driver via key fob reader 174, provisions of a watch dog time reset 175 from CPU activity, to detect extended slow DUI driving 176, to upload and download the module 177, to provide data compression 178, to sense tampering and record times 179 and to maintain clock assembly 180. **The output of the system** provides an **engine slowdown 181** in a three step sequence and **corresponding audible noise alarms 182**." EX1004, ¶¶ [0081]-[0082]. Accordingly, Cherouny also discloses, suggests, or renders obvious ***wherein said slave control unit receives commands from said master control unit*** by disclosing that the engine slowdown module and audible noise generator are responsive to the "output of the system" (i.e., the output of the microprocessor). EX1004, ¶¶ [0081]-[0082]. Accordingly, a POSITA reading these disclosures from Cherouny would have understood that Cherouny's microprocessor 101 sends commands to the engine slowdown module and audible noise generator whenever needed to achieve its goals of regulating the operation of the vehicle within the preprogrammed operational parameters set by the moderator (e.g., parent) of Cherouny's system. EX1003 (Wilson), ¶ 51. Next, Cherouny discloses, suggests, or renders obvious ***wherein said slave control unit . . . generate[s] an alarm signal*** by disclosing: • An **audible noise generator 121** is also connected to the microprocessor for provision of **various warning noises such as a quick chirp, a pulsed**

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Claim Language	Relevant Prior Art Disclosures and Argument[1]
	beep and a continuous noise. These provide warnings of increasing severity to the driver of the vehicle." EX1004, ¶¶ [0077]-[0078]. • "The output of the system provides an engine slowdown 181 in a three step sequence and **corresponding audible noise alarms 182**." EX1004, ¶ [0082]. • "The Moderator is able to make **the following responses to the car going faster than the speed limit as registered** in the database programmed by the software. 1. **Audible chirp** 2. **Voice warning** explaining the set speed limit on that section of road and the consequences to the driving record. 3. **Voice warning** that the parameters were set to not allow speeding in that speed zone (i.e., in a school zone there will be no allowance for passing speeds). 4. **Audible noise alarm at approximately 60 dB noise level** (in order to annoy the driver.) 5. Shutdown of the first half of the fuel injectors of the engine. 6. Square wave enable to the second half of the fuel injectors to almost kill the engine. 7. Shutoff of the ignition." EX1004, ¶ [0020]. • "The instant device does not cut off the ignition but has a slow down sequence which has several levels of sophistication. **The first level sounds a short burst or chirp but does not record the infraction. The second level of this is that the excess speed of the driver is recorded so that it can be reported to an authority figure. That authority figure is the driving force behind altering the activity of the driver. This allows the authority figure to provide back up to his or her decision making on the drivers' performance. Another incentive provided the driver is the provision of an annoying sound or noise when the speed desired is exceeded for the pre programmed time. The sound level of this annoyance is 60-65 db so that a real incentive is produced to stop speeding. A quick beep is followed by a buzzing or alarm which goes from intermittent to continuous through the remaining steps to slow the driver down**. The next escalation is to turn off half of the fuel injectors to the engine which will automatically slow the vehicle down while maintaining sufficient power to maneuver and drive the vehicle at slower

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	speeds. The next step involves shutting off the remaining fuel injectors with a prescribed on/off cycle which allows the vehicle to be pulled over to the side of the road and burn the hydrocarbons still in the engine. This step is a last resort after all the prior steps have been employed. The ignition can ultimately be turned off. This renders a completely intoxicated driver harmless to others and the vehicle inoperable. The power of the stored data is the power of the instant device. The information recorded by the device allows the authority figure to alter the future behavior." EX1004, ¶ [0031]. Finally, to the extent it is argued that the claimed ***slave control unit*** requires more than a passive device that simply receives commands from the ***master control unit*** and generates an alarm signal, Cherouny describes precisely that—specifically, a POSITA reading Cherouny would have at least understood that: (1) its engine slow down module 120 would require several physical components in the form of relays to control the fuel injectors and ignition in the way described by Cherouny; (2) its audible noise generator 121 would require a voice synthesizer and other hardware components to perform the steps outlined in paragraph [0020] of Cherouny; and (3) these relays and alarm generating hardware components would necessarily be in communication with the microprocessor (***master control unit***) in order for Cherouny to proceed through the seven step process described in paragraph [0020] of its disclosure. EX1003 (Wilson), ¶¶ 52-53. For all of the reasons discussed above, Cherouny discloses, suggests and renders obvious ***a slave control unit in said vehicle and which communicates with said master control unit, wherein said slave control unit receives commands from said master control unit and generate an alarm signal***.
[1.6] wherein said master control unit provides operation governance of said vehicle within said operating profile.	Cherouny discloses, suggests, or renders obvious ***wherein said master control unit provides operation governance of said vehicle within said operating profile***. The '470 Patent does not explicitly define the claim term ***operation governance*** or use it regularly outside of reference to the claim language. *See generally* EX1001. It does, however, mention that the alarm signal "can be used to control/govern operational aspects of the vehicle," and further that the system may "govern mechanical operations (e.g., **lower/limit speed**)." EX1001, 7:58-8:8. Accordingly, the term ***operation governance*** should at least encompass the process of lowering or limiting the speed of the vehicle ***within said operating profile*** or generating an alarm signal. This understanding is also consistent with the plain language of the claim in the preceding limitations (i.e., related to monitoring vehicle speed and generating an alarm signal). Just like the '470 Patent, Cherouny discloses ***wherein said master control unit provides operation governance of said vehicle within said operating profile*** by generally disclosing "responses to the **car going faster than the speed limit as registered**" as programmed by the moderator, including alarms and "[s]hutoff of

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	the ignition." EX1004, ¶ [0020]. Cherouny describes that its governance occurs "when the received data exceeds **preset or personalized limits of said individual driver**," indicating that the operation governance of the vehicle in Cherouny is based on each identified individual driver (***within said operating profile***). Finally, Cherouny's microprocessor 101 (***master control unit***) provides this governance, given Cherouny's disclosure that "**[c]onnected to the microprocessor 101** are **automobile speed sensors 108** which sense the actual speed of the automobile when in use," and its depiction in Figures 20 of the microprocessor 101 in communication with the "engine slow down module 120." EX1004, ¶¶ [0073], [0077], FIGs. 20, 21. *See, e.g.*, Cherouny: • "**A system for specifically regulating the driving performance of a given individual** by use of a computer from a server in a central location, said system comprising a **monitoring moderator means** adapted to be attached to the vehicle **the given individual is to drive,** a data processing means having performance criteria preprogrammed therein and which relates to the driving performance history **of said given individual** associated with said moderator, said processing means operatively connected to said central server, wireless transmitting means associated with said moderator to send signals representing location and speed data of said vehicle at any given time to said central server engine control means associated **with said data processing means and adapted to regulate operation of the engine of a vehicle in response to signals received from said central server via a GPS satellite system, whereby the operation of a vehicle by said given individual can be preprogrammed, recorded and closely monitored remotely from a central server location by automatically curtailing operation of the vehicle** when the received data exceeds preset or **personalized limits of said individual driver**." EX1004, claim 1. • ". . . Use of the speed data uploaded through this GPS wireless connection by the Moderator is prearranged by the administrator of the Moderator software program. Otherwise, the maximum speeds are prepared and determined by the owner. **The Moderator is able to make the following responses to the car going faster than the speed limit as registered in the database programmed by the software**. 1. Audible chirp 2. Voice warning explaining the set speed limit on that section of road and the consequences to the driving record. 3. Voice warning that the parameters were set to not allow speeding in that speed zone (i.e., in a school zone there will be no allowance for passing speeds).

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	4. Audible noise alarm at approximately 60 dB noise level (in order to annoy the driver.) **5. Shutdown of the first half of the fuel injectors of the engine.** **6. Square wave enable to the second half of the fuel injectors to almost kill the engine.** **7. Shutoff of the ignition.** Each of these responses will be on a preset time schedule based on the driving conditions, the driver's previous experience with the Moderator (the given driver's driving record database with the Moderator), and the administrator's choices within the software program for the Moderator. . . ." EX1004, ¶ [0020]. • "A further object of this invention is to **provide a safety device** for the 'at risk' segment of the driving public **by limiting the speed of the motor vehicle they are driving by programming in a speed limit**, by adjusting for driving history, by reassessing allowable speed during rain or darkness." EX1004, ¶ [0038]. • "**Connected to the microprocessor 101** are automobile speed sensors 108 which sense the actual speed of the automobile when in use. **Also connected to 101 is a key fob reader which checks the identity of the user of the automobile to insure the instant user's data table is used.** Components 110, 111, and 112 are the power conditioning unit, the battery pack and a battery charger. These components can be used to charge up the unit." EX1004, ¶ [0073]. • "To facilitate needed action based on the actual sensor data and the preprogrammed driving program and **engine slow down module 120 is provided which can initially cut our one half of the engine fuel injectors, the remaining half of the injectors and totally cut off the ignition coil to slow and/or stop the vehicle**." EX1004, ¶ [0077]. *See also* Figures 20, 21B:

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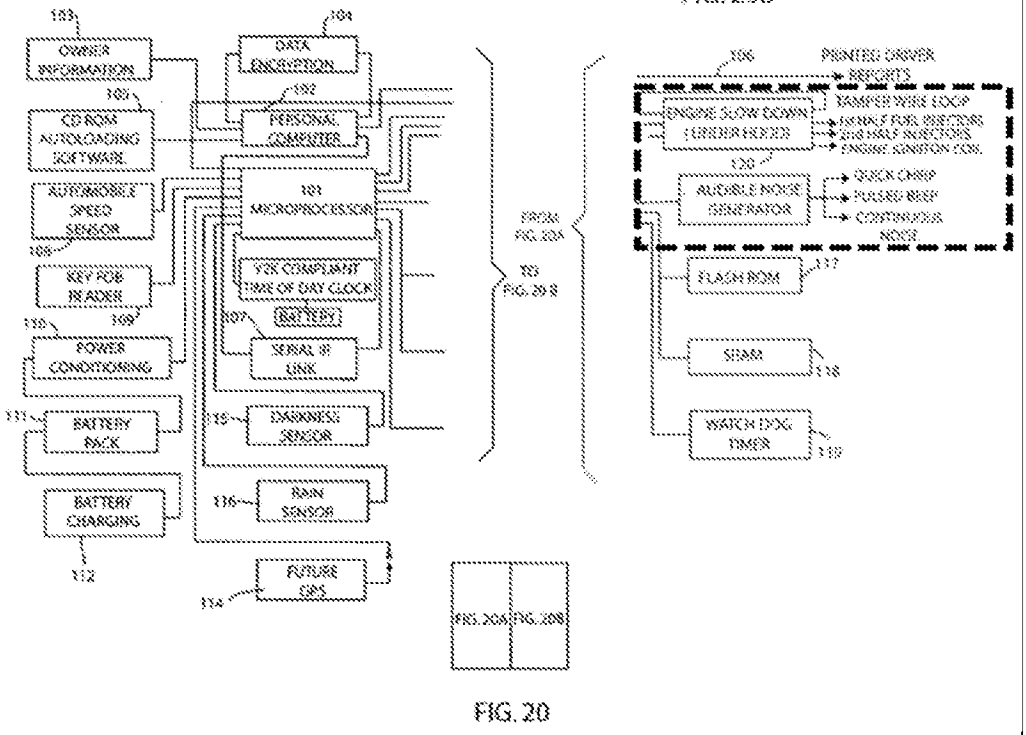
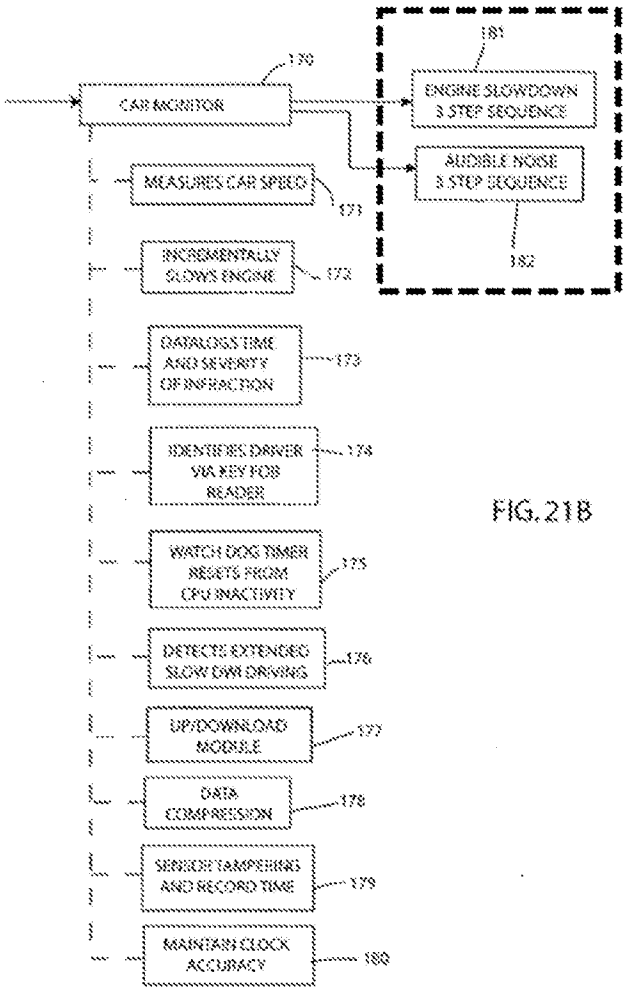
Claim Language	Relevant Prior Art Disclosures and Argument[1]
	FIG. 20A FIG. 20B  FIG. 20

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	 FIG. 21B
Claim 4	
[4P] The vehicle control system of claim 1	**SNQ1:** Cherouny discloses, suggests, and renders obvious the vehicle control system of claim 1 as discussed above. **SNQ2:** Cherouny in view of Harter discloses, suggests, and renders obvious the vehicle control system of claim 1 as discussed above.
[4.1] wherein said wireless identification and data logging module comprises at least one of: a WIFI enabled device; an RFID enabled device; a Bluetooth	Cherouny does not explicitly disclose all elements of ***wherein said wireless identification and data logging module comprises at least one of: a WIFI enabled device; an RFID enabled device; a Bluetooth enabled device; a cellular telephone; and a smartphone***, but Cherouny in view of Harter does.

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Claim Language	Relevant Prior Art Disclosures and Argument[1]
enabled device; a cellular telephone; and a smartphone.	Specifically, as discussed above in limitation [1.1] and as further described below, the combination of Cherouny and Harter discloses, suggests, or renders obvious claim 4. **SNQ2 (Obviousness based on Cherouny and Harter):** First, in the Cherouny-Harter combination, as described above in limitation [1.1], Harter's disclosure of a smartphone would be used as disclosing the ***wireless identification and data logging module***, together in Cherouny's existing system. Furthermore, in the combination, Harter's smartphone, together with the knowledge of a POSITA, discloses ***at least one of: a WIFI enabled device; an RFID enabled device; a Bluetooth enabled device; a cellular telephone; and a smartphone***. First, Harter's device is regularly referred to as a "smart phone" with wireless and Bluetooth capabilities (disclosing the claimed ***WIFI enabled device . . . a Bluetooth enabled device; a cellular telephone; and a smartphone***): • "The system of claim 1, **wherein the portable device comprises** at least one of a computer, a personal-digital-assistant ("PDA"), and **a smart phone**." EX1005, claim 2. (disclosing the claimed ***smartphone***). • "The system of claim 1, wherein **the portable device is wirelessly coupled to the base unit via at least one of a personal area network connection and a cellular connection**." EX1005, claim 3. (disclosing the claimed ***cellular telephone***). • "FIG. 4 shows an example of the **portable devices 120 in the form of a smart phone 400** displaying a login screen 402. In such cases, **the smart phone 400 wirelessly connects to the base unit 116 via Bluetooth or other wireless connections**, or is wired to the base unit 116 via one or more cables." EX1005, ¶ [0042]. (disclosing the claimed ***WIFI enabled device*** and ***Bluetooth enabled device***). To the extent it is argued that this claim limitation also requires disclosure that the ***wireless identification and data logging module*** also comprises ***an RFID enabled device*** (i.e., despite the plain meaning of the claim language of "at least one of" indicating that the device need not comprise **all** possible items in the list), such would have been obvious to a POSITA because it was known to use RFID together with a smart phone (like the one that would be used in the Cherouny-Harter combination) in the context of vehicle management and operations, and RFID was already a well-known technology for use with vehicles generally (e.g., for use in key fobs and the like). EX1003 (Wilson), ¶¶ 61-62 (citing EX1009, EX1010, EX1011, and EX1012).

Claim Language	Relevant Prior Art Disclosures and Argument[1]
	For example, U.S. Patent Publication 2008/0303629 to Yamagiwa describes the use of an RFID vehicle-use key "for starting a vehicle and includes a radio communication means for performing communication with an external communication means other than the vehicle." *See* EX1009, Abstract, ¶ [0011]. Similarly, U.S. Patent Publication 2007/0093200 to Dobosz describes a depicts an "RFID tag or transponder 90 associated with each cellular phone 22," where such a tag could be used as part of an "acquisition device" related to a vehicle "for acquiring information from at least one cellular phone located in the vehicle, having an input coupled to the control circuit . . ." for the vehicle. *See* EX1010, ¶ [0019], claim 1. Finally, Japanese Patent JP2007235530 describes a "vehicle communication system" that uses an "RFID tag build into the mobile phone" to perform functions around the vehicle such as unlocking the door, authenticating a user, and starting the engine. *See* EX1012 (machine translation of EX1011 provided by Espacenet), ¶¶ [0011]-[0015]. Accordingly, in view of this contemporaneous disclosure from multiple sources demonstrating that RFID enabled devices were commonly used with vehicles, and were already present in smartphones, it would have been obvious to a POSITA that the smartphone in the Cherouny-Harter combination would have also rendered obvious the claimed ***RFID enabled device***. EX1003 (Wilson), ¶ 62. Cherouny and Harter would have been combined and a POSITA would have had a reasonable expectation of success in combining them for the same reasons discussed above in limitation [1.1], *supra*. And accordingly, the Cherouny-Harter combination discloses or at least renders obvious ***wherein said wireless identification and data logging module comprises at least one of: a WIFI enabled device; an RFID enabled device; a Bluetooth enabled device; a cellular telephone; and a smartphone***.

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Electronic Patent Application Fee Transmittal

Application Number:	
Filing Date:	
Title of Invention:	Driver Authentication System and Method For Monitoring And Controlling Vehicle Usage
First Named Inventor/Applicant Name:	Michael Phelan
Filer:	David C. Seastrunk/Ashley Cheung
Attorney Docket Number:	PHE101

Filed as Large Entity

Filing Fees for ex parte reexam

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
EX PARTE REEXAMINATION (1.510(A)) NON-STREAMLINED	1812	1	12600	12600
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**12600**

Electronic Acknowledgement Receipt

EFS ID:	48518509
Application Number:	90015287
International Application Number:	
Confirmation Number:	7777
Title of Invention:	Driver Authentication System and Method For Monitoring And Controlling Vehicle Usage
First Named Inventor/Applicant Name:	Michael Phelan
Customer Number:	165774
Filer:	David C. Seastrunk/Ashley Cheung
Filer Authorized By:	David C. Seastrunk
Attorney Docket Number:	PHE101
Receipt Date:	31-AUG-2023
Filing Date:	
Time Stamp:	15:46:27
Application Type:	Reexam (Third Party)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Copy of patent for which reexamination is requested	EX1001_US10259470.pdf	2520334 005078c064aa6d6211765a941fa 74097	no	19

Warnings:

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Page 770 of 1244

Information:					
2	Non Patent Literature	EX1002_FH_USApp15336110.pdf	15951377 4fc83cc5c5f32c69d88333aa1de181db0026d80a	no	200
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Information:					
3	Other reference-Patent/Application/ Search Documents	EX1004_US20060052909_Cherouny.pdf	2918642 17ec994d7796d75baed2c0552b39f63231b86034	no	31
Warnings:					
Information:					
4	Other reference-Patent/Application/ Search Documents	EX1005_US20080188217_Harter.pdf	2410016 b0eb454ad861e47c49224599 2f353bf45b10fdbc	no	18
Warnings:					
Information:					
5	Other reference-Patent/Application/ Search Documents	EX1006_US6577937_Shuman.pdf	3689786 0ba79f9641e501ce2ca84ee759ba28130b7caa44	no	50
Warnings:					
Information:					
6	Other reference-Patent/Application/ Search Documents	EX1007_US20070168125_Petrik.pdf	1916819 d97b85e485f5b99f8691103b620c8dc4c026864c	no	13
Warnings:					
Information:					
7	Other reference-Patent/Application/ Search Documents	EX1008_US5465079_Bouchard.pdf	6394919 dcc2525245964faea5b9b9ea248035136e5de1d3	no	37
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8	Other reference-Patent/Application/ Search Documents	EX1009_US20080303629.pdf	1331347 73019d343e9364a6d419c0247c75f50c6ae6b97a	no	11
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10	Foreign Reference	EX1011_JP2007235530.pdf	936304 0a610408f7876b0d6eae0bfe3dfd0cee8fc4d3dc	no	21
Warnings:					
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11	Non Patent Literature	EX1012_JP2007535530_Translation.pdf	1332845 c787006b9843966caa32ed9d8dde9f397382b90d	no	62
Warnings:					
Information:					
12	Power of Attorney	PHE101_POA.pdf	149589 66c9d7012bfaa75c8348abace982efc72ab2f3e8	no	1
Warnings:					
Information:					
13	Transmittal Letter	Transmittal_PHE101.pdf	159556 2dd725364ba3457a3301c9028838705a5e735f74	no	4
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Information:					
14	Reexam - Affidavit/Declaration/Exhibit Filed by 3rd Party	EX1003_Wilson_Declaration.pdf	889661 65b451cd472dafc342897e2e39525c294a3f0e52	no	29
Warnings:					
Information:					
15	Reexam - Info Disclosure Statement Filed by 3rd Party	PHE101_IDS.pdf	148230 edff952938695b5ea0558416a5479e71dfd50fe3	no	2
Warnings:					
Information:					

16	Reexam Certificate of Service	PHE101_COS.pdf	113213 ff8ee0d6547258fde5b04d2af70d88dce44b7072	no	1
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17	Receipt of Original Ex Parte Reexam Request	PHE101_Request.pdf	8790513 314c0cd34a07d573f3e849fb741b6ebf93f388ac	no	93
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18	Non Patent Literature	ExhibitAA_ClaimChart.pdf	6433371 ad6b78969ac4337bb6f55b9de5b80330f93d9236	no	57
Warnings:					
Information:					
19	Fee Worksheet (SB06)	fee-info.pdf	37691 d82fa1a529d50bfb1bc0bbe31dac61c30c4814f9	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	57516161		

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<u>New Applications Under 35 U.S.C. 111</u>
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.
<u>National Stage of an International Application under 35 U.S.C. 371</u>
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.
<u>New International Application Filed with the USPTO as a Receiving Office</u>
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

EXHIBIT 1001

U.S. Patent 10,259,470 ("'470 Patent)

US010259470B2

(12) **United States Patent**
Phelan

(10) **Patent No.: US 10,259,470 B2**
(45) **Date of Patent: *Apr. 16, 2019**

(54) **DRIVER AUTHENTICATION SYSTEM AND METHOD FOR MONITORING AND CONTROLLING VEHICLE USAGE**

(71) Applicant: **THE PHELAN GROUP, LLC**, Santa Fe, NM (US)

(72) Inventor: **Michael Phelan**, Santa Fe, NM (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 243 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **15/336,110**

(22) Filed: **Oct. 27, 2016**

(65) **Prior Publication Data**

US 2017/0106877 A1 Apr. 20, 2017

Related U.S. Application Data

(63) Continuation of application No. 14/464,188, filed on Aug. 20, 2014, now Pat. No. 9,493,149, which is a (Continued)

(51) **Int. Cl.**

G06F 19/00	(2018.01)
B60W 50/12	(2012.01)
B60W 10/18	(2012.01)
B60W 10/20	(2006.01)
B60R 16/033	(2006.01)
H04W 4/80	(2018.01)

(Continued)

(52) **U.S. Cl.**

CPC ***B60W 50/12*** (2013.01); ***B60R 16/033*** (2013.01); ***B60W 10/04*** (2013.01); ***B60W 10/18*** (2013.01); ***B60W 10/20*** (2013.01); ***B60W 10/30*** (2013.01); ***B60W 40/08*** (2013.01); ***B60W 50/14*** (2013.01); ***H04L 67/12*** (2013.01); ***H04W 4/80*** (2018.02); *B60W 2040/0809* (2013.01); *B60W 2050/143* (2013.01); *G05D 1/0061* (2013.01)

(58) **Field of Classification Search**

None

See application file for complete search history.

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(Continued)

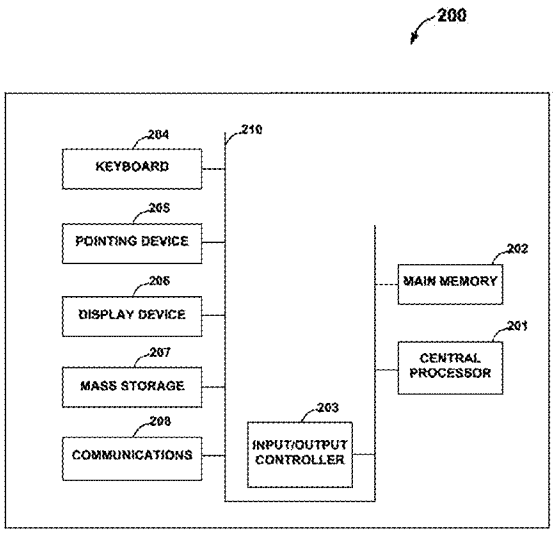
Primary Examiner — Jonathan M Dager

(74) *Attorney, Agent, or Firm* — Kermit D. Lopez; Luis M. Ortiz; Loza & Loza, LLP

(57) **ABSTRACT**

A driver authentication and safety system and method for monitoring and controlling vehicle usage by high-risk drivers. A centralized database comprising a software application can be accessed by an authorized user via a data communications network utilizing a remote computer in order to configure a desired operating profile that matches requirements of the high-risk driver. The operating profile can be loaded to a driver identification and data logging module in conjunction with the remote computer. A master control unit receives a unique identification code from the data logging device to authenticate the high-risk driver and to operate the vehicle within the desired operating profile. A slave control unit receives commands from the master control unit and generates a real time alarm signal if the driver violates the preprogrammed operating profile unique to the driver.

20 Claims, 8 Drawing Sheets



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Page 775 of 1244
UNIFIED PATENTS EXHIBIT 1001

Related U.S. Application Data

continuation-in-part of application No. 13/858,930, filed on Apr. 8, 2013, now Pat. No. 9,045,101, which is a continuation of application No. 12/496,509, filed on Jul. 1, 2009, now Pat. No. 8,417,415.

(60) Provisional application No. 61/077,568, filed on Jul. 2, 2008.

(51) **Int. Cl.**

B60W 10/04	(2006.01)
B60W 10/30	(2006.01)
B60W 40/08	(2012.01)
B60W 50/14	(2012.01)
H04L 29/08	(2006.01)
G05D 1/00	(2006.01)

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2016/0001715	A1 *	1/2016	Laifenfeld	B60R 16/023 701/32.7
2016/0001718	A1 *	1/2016	Laifenfeld	H04W 84/005 701/32.7

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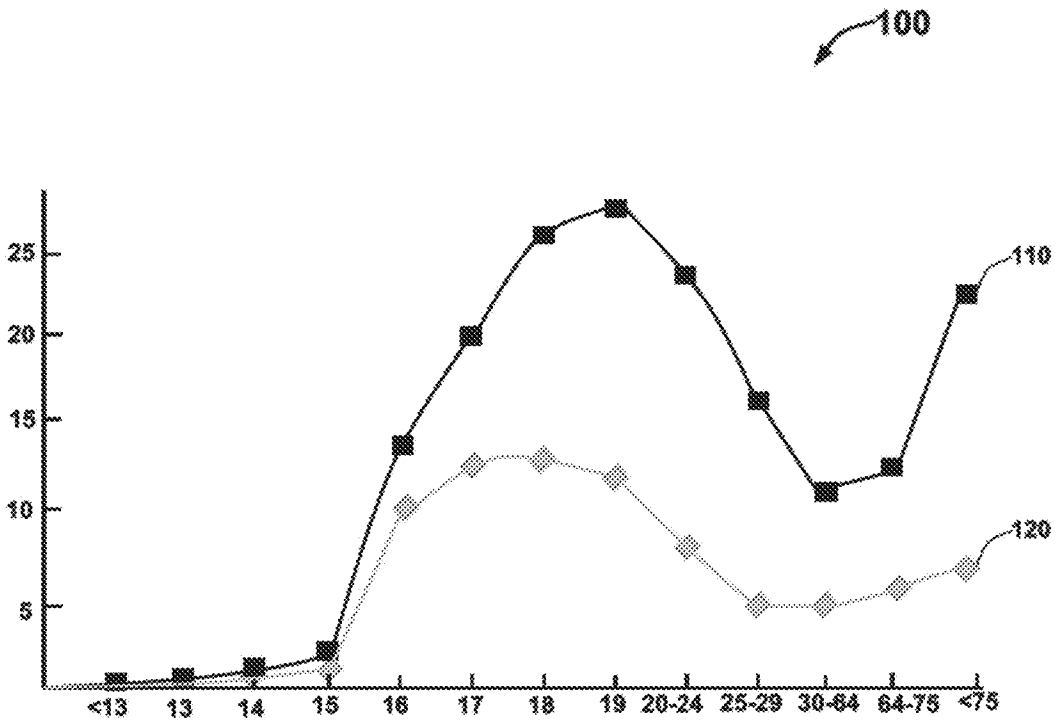
100
25
20
15
10
5
110
120
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14
15
16
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18
19
20-24
25-29
30-64
64-75
<75

FIG. 1

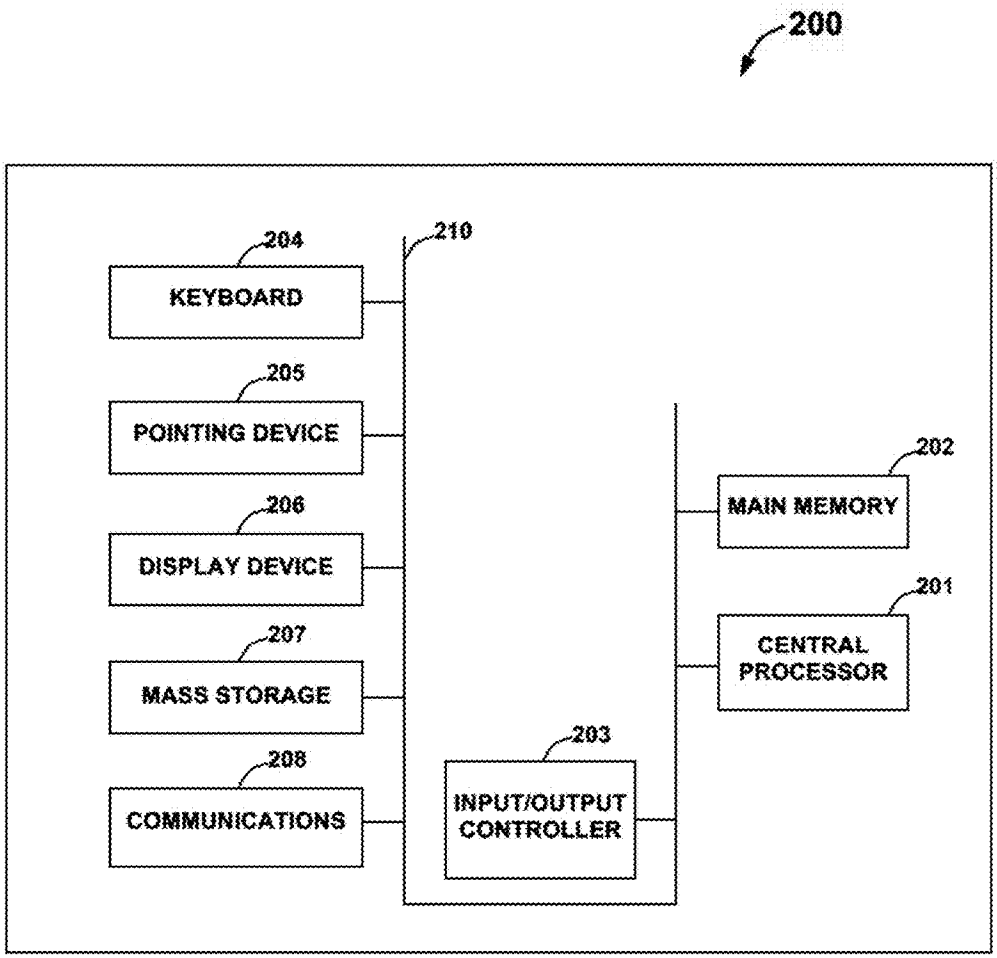
200
204
KEYBOARD
205
POINTING DEVICE
206
DISPLAY DEVICE
207
MASS STORAGE
208
COMMUNICATIONS
210
203
INPUT/OUTPUT CONTROLLER
202
MAIN MEMORY
201
CENTRAL PROCESSOR

FIG. 2

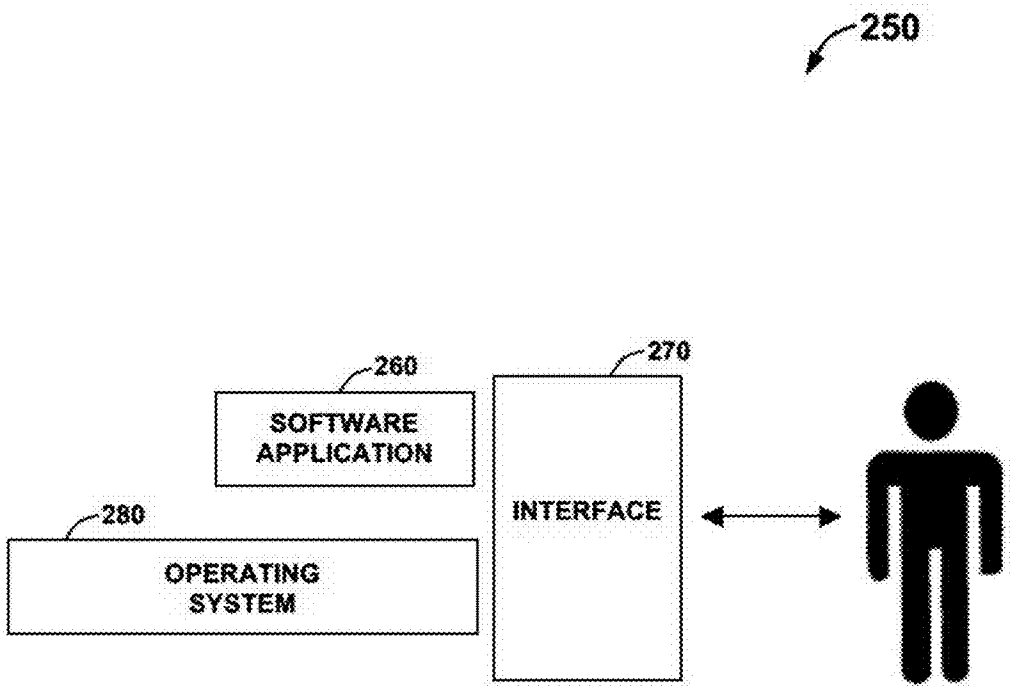
250
260
SOFTWARE APPLICATION
270
INTERFACE
280
OPERATING SYSTEM

FIG. 3

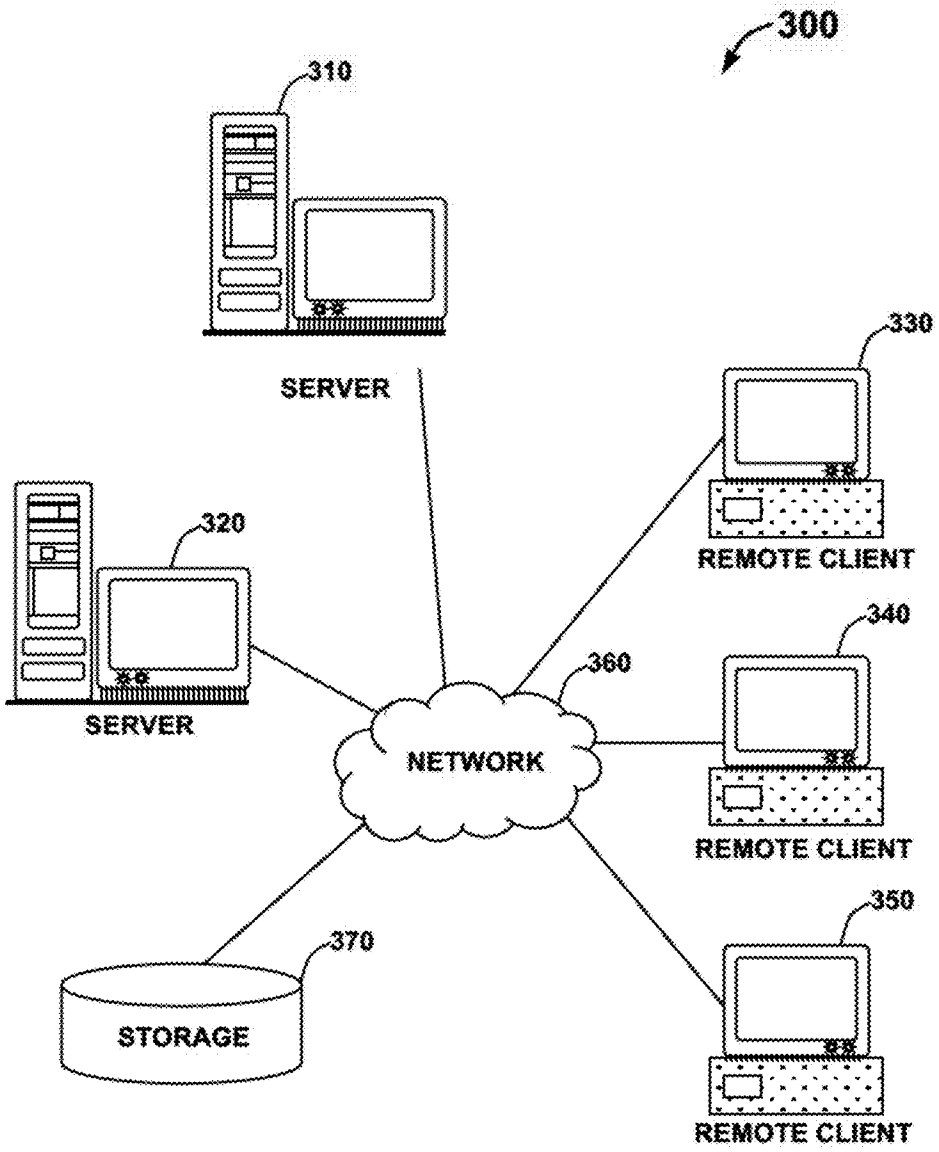
300
310
SERVER
330
REMOTE CLIENT
320
SERVER
340
360
NETWORK
REMOTE CLIENT
350
370
STORAGE
REMOTE CLIENT

FIG. 4

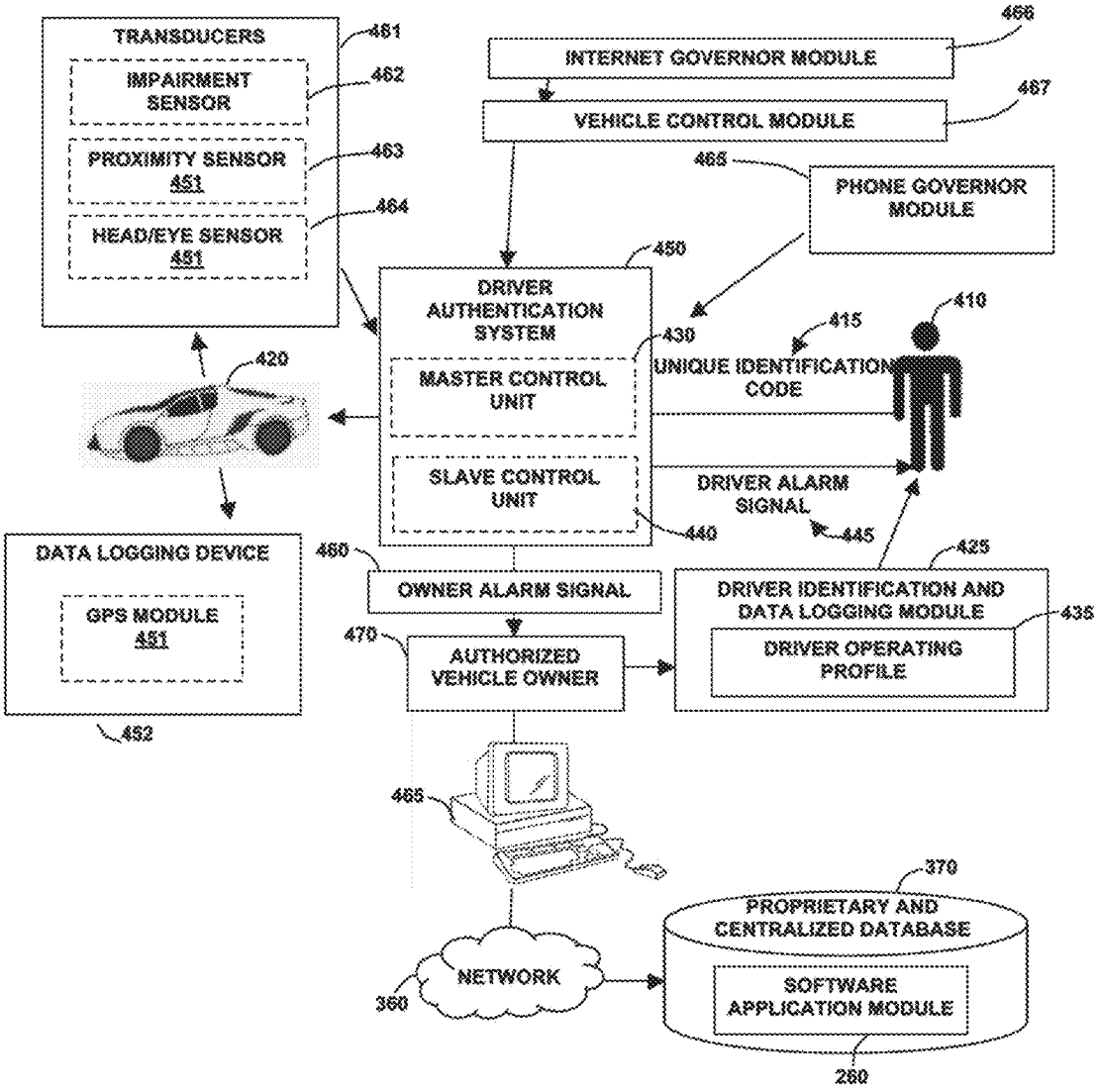
TRANSDUCERS
461
IMPAIRMENT SENSOR
462
PROXIMITY SENSOR 451
463
HEAD/EYE SENSOR 451
464
INTERNET GOVERNOR MODULE
466
VEHICLE CONTROL MODULE
467
PHONE GOVERNOR MODULE
468
DRIVER AUTHENTICATION SYSTEM
450
MASTER CONTROL UNIT
430
SLAVE CONTROL UNIT
440
UNIQUE IDENTIFICATION CODE
415
410
DRIVER ALARM SIGNAL
445
420
DATA LOGGING DEVICE
GPS MODULE 451
452
460
OWNER ALARM SIGNAL
470
AUTHORIZED VEHICLE OWNER
DRIVER IDENTIFICATION AND DATA LOGGING MODULE
425
DRIVER OPERATING PROFILE
435
465
370
PROPRIETARY AND CENTRALIZED DATABASE
SOFTWARE APPLICATION MODULE
260
NETWORK
360

FIG. 5

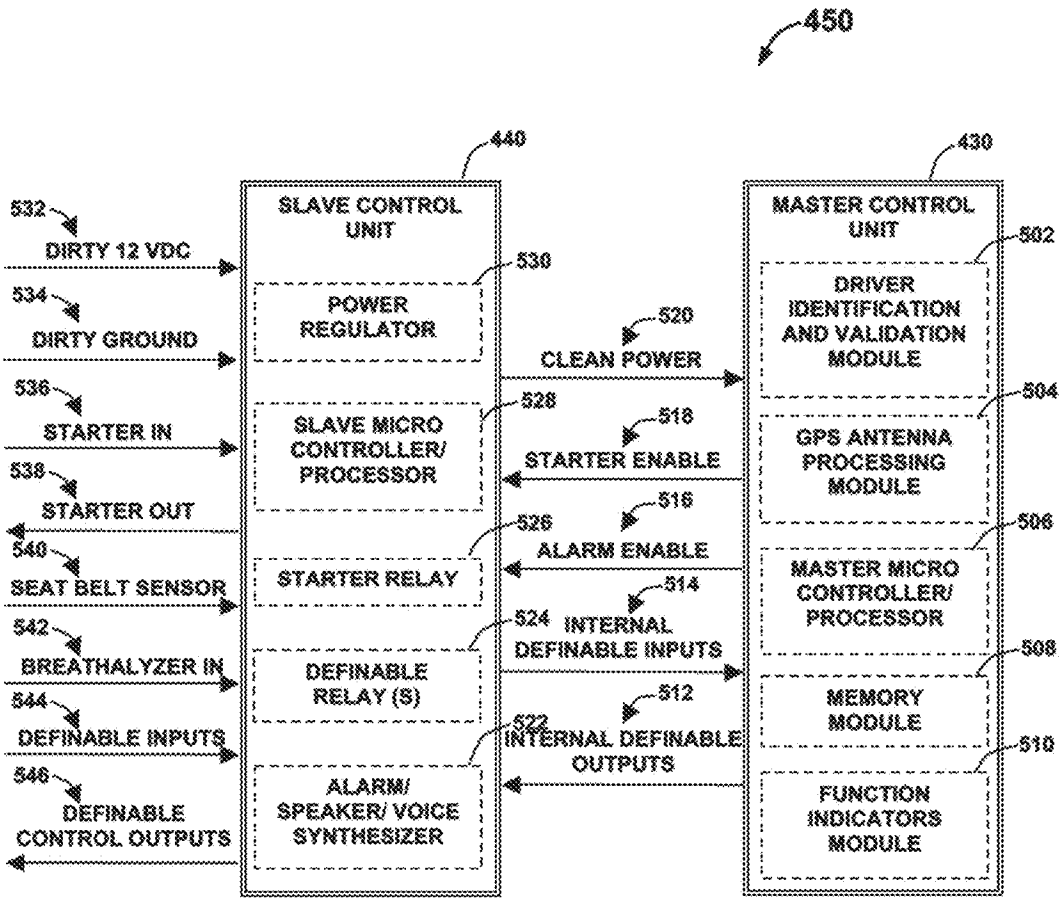
450
440
SLAVE CONTROL UNIT
430
MASTER CONTROL UNIT
532
DIRTY 12 VDC
534
DIRTY GROUND
536
STARTER IN
538
STARTER OUT
540
SEAT BELT SENSOR
542
BREATHALYZER IN
544
DEFINABLE INPUTS
546
DEFINABLE CONTROL OUTPUTS
530
POWER REGULATOR
528
SLAVE MICRO CONTROLLER/ PROCESSOR
526
STARTER RELAY
524
DEFINABLE RELAY (S)
522
ALARM/ SPEAKER/ VOICE SYNTHESIZER
520
CLEAN POWER
518
STARTER ENABLE
516
ALARM ENABLE
514
INTERNAL DEFINABLE INPUTS
512
INTERNAL DEFINABLE OUTPUTS
502
DRIVER IDENTIFICATION AND VALIDATION MODULE
504
GPS ANTENNA PROCESSING MODULE
506
MASTER MICRO CONTROLLER/ PROCESSOR
508
MEMORY MODULE
510
FUNCTION INDICATORS MODULE

FIG. 6

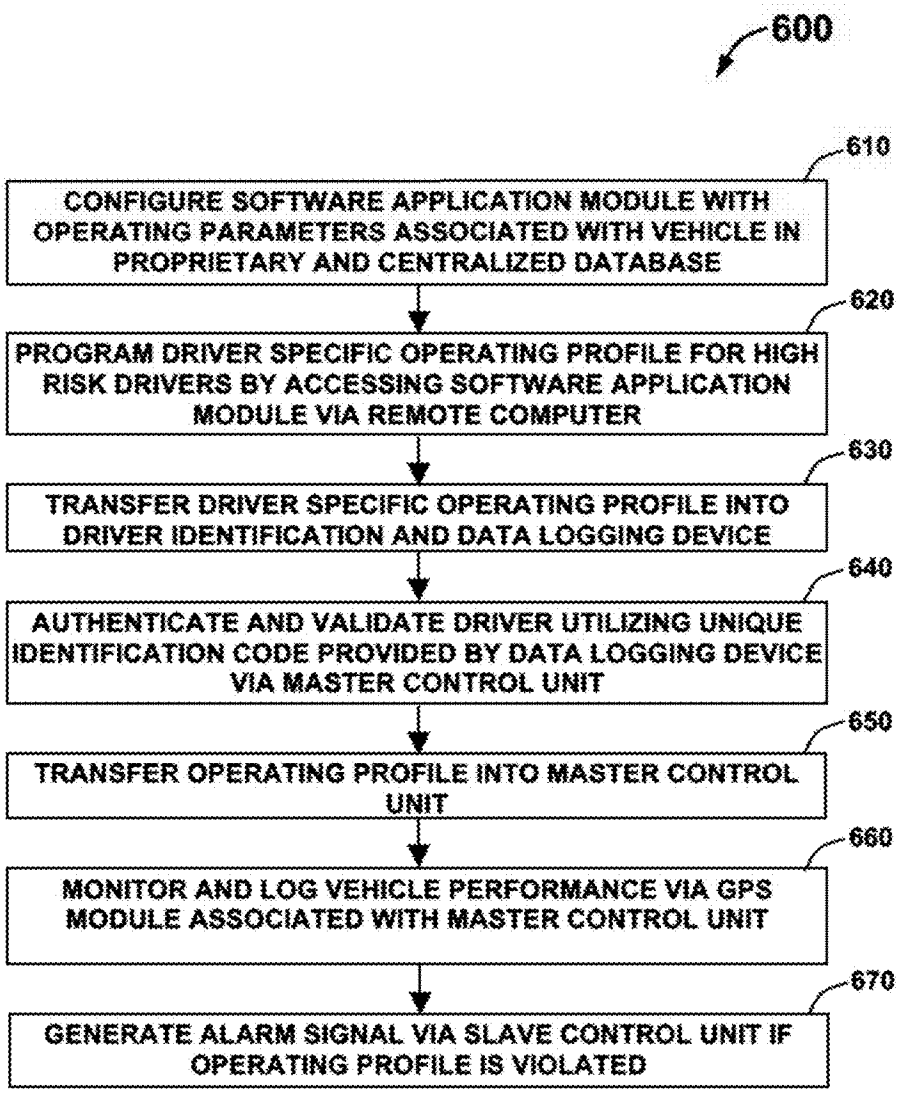
600
610
CONFIGURE SOFTWARE APPLICATION MODULE WITH OPERATING PARAMETERS ASSOCIATED WITH VEHICLE IN PROPRIETARY AND CENTRALIZED DATABASE
620
PROGRAM DRIVER SPECIFIC OPERATING PROFILE FOR HIGH RISK DRIVERS BY ACCESSING SOFTWARE APPLICATION MODULE VIA REMOTE COMPUTER
630
TRANSFER DRIVER SPECIFIC OPERATING PROFILE INTO DRIVER IDENTIFICATION AND DATA LOGGING DEVICE
640
AUTHENTICATE AND VALIDATE DRIVER UTILIZING UNIQUE IDENTIFICATION CODE PROVIDED BY DATA LOGGING DEVICE VIA MASTER CONTROL UNIT
650
TRANSFER OPERATING PROFILE INTO MASTER CONTROL UNIT
660
MONITOR AND LOG VEHICLE PERFORMANCE VIA GPS MODULE ASSOCIATED WITH MASTER CONTROL UNIT
670
GENERATE ALARM SIGNAL VIA SLAVE CONTROL UNIT IF OPERATING PROFILE IS VIOLATED

FIG. 7

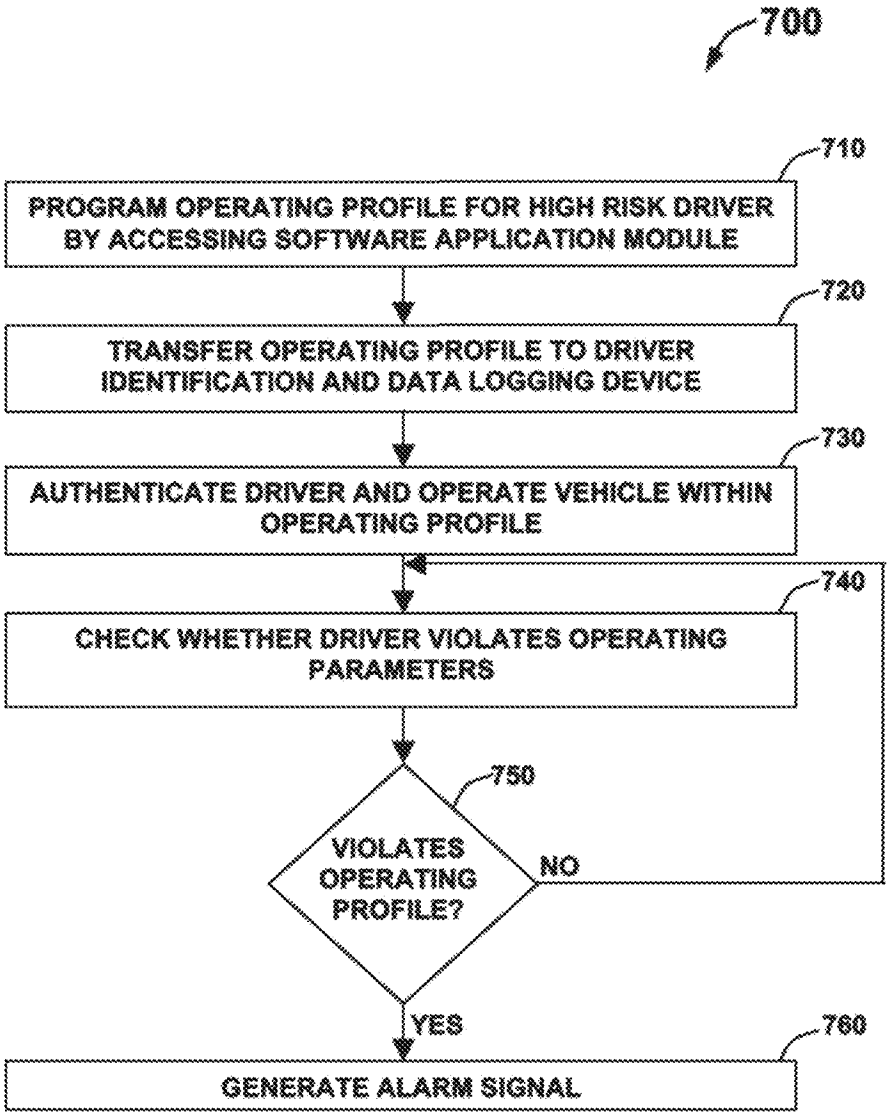
700
710
PROGRAM OPERATING PROFILE FOR HIGH RISK DRIVER BY ACCESSING SOFTWARE APPLICATION MODULE
720
TRANSFER OPERATING PROFILE TO DRIVER IDENTIFICATION AND DATA LOGGING DEVICE
730
AUTHENTICATE DRIVER AND OPERATE VEHICLE WITHIN OPERATING PROFILE
740
CHECK WHETHER DRIVER VIOLATES OPERATING PARAMETERS
750
VIOLATES OPERATING PROFILE?
NO
YES
760
GENERATE ALARM SIGNAL

FIG. 8

DRIVER AUTHENTICATION SYSTEM AND METHOD FOR MONITORING AND CONTROLLING VEHICLE USAGE

INVENTION PRIORITY

The present application is a continuation of nonprovisional patent application Ser. No. 14/464,188, entitled "Driver Authentication System and Method for Monitoring and Controlling Vehicle Usage", filed Aug. 20, 2014, which is a continuation-in-part of nonprovisional patent application Ser. No. 13/858,930, entitled "Driver Authentication System and Method For Monitoring and Controlling Vehicle Usage," filed Apr. 8, 2013, which is a continuation of nonprovisional patent application Ser. No. 12/496,509, entitled "Driver Authentication System and Method For Monitoring and Controlling Vehicle Usage," filed Jul. 1, 2009. Nonprovisional patent application Ser. Nos. 14/464,188, 13/858,930, and 12/496,509 are each herein incorporated by refer in their entirety. Nonprovisional patent application Ser. No. 12/496,509 claims the priority and benefit under 35 U.S.C. § 119(e) of U.S. provisional patent application No. 61/077,568, entitled "Systems and Methods for Monitoring and Controlling Vehicle Usage by Young Drivers", filed Jul. 2, 2008. Provisional patent application 61/077,568 is herein incorporated by reference in its entirety.

TECHNICAL FIELD

Embodiments are generally related to techniques for use in ensuring motor vehicle operation safety. Embodiments are also related to systems and methods for monitoring and controlling vehicle usage by high-risk drivers.

BACKGROUND OF THE INVENTION

The widespread usage of motor vehicles for both personal and work related activities places millions of vehicles on roads each day with their operation being largely unmonitored. Unmonitored vehicle operation can lead to issues including, for example, abusive use of the vehicle and lack of experience. With more young drivers getting licenses each year, there has been an unfortunate increase in accidents along with the ensuing damage, debilitating injuries and sometimes death. Most of these accidents are attributable to speeding and generally poor driving habits.

FIG. **1** illustrates a graphical representation **100** that depicts the actual deaths in passenger vehicles by age provided by National Highway Transportation Safety Administration (NHTSA). The curve **110** represents the death rate associated with male drivers and the curve **120** represents the death rate of female drivers. From the graph **100**, it is clear that the distribution of age related deaths is bi-modal, and clearly depicts the relationship between youth and auto fatality. Current data indicates that the offering of a driver education course results in a great increase in the number of licensed drivers without any decrease in the rate of fatal and serious crash involvement. Although such drivers education programs do teach safety skills, students are not motivated to utilize them and they actually foster overconfidence and do not fully address safety issues.

The factors that have been researched and proven as the leading contributors to accidents, injuries and fatalities among at risk drivers include lack of driving experience, inadequate driving skills, risk-taking behavior, poor judgment and decision making, distraction, lack of focus, fatigue, and impairment. As a result of these factors.

Based on the foregoing it is believed that a need exists for an improved driver authentication system and method for monitoring and controlling vehicle usage by a high-risk driver. A need also exists for an improved method for identifying and authenticating the driver and programming the vehicle operating parameters that trigger control and driver feedback intervention, as described in greater detail herein.

BRIEF SUMMARY

The following summary is provided to facilitate an understanding of some of the innovative features unique to the present invention and is not intended to be a full description. A full appreciation of the various aspects of the embodiments disclosed herein can be gained by taking the entire specification, claims, drawings, and abstract as a whole.

It is, therefore, one aspect of the present invention to provide for an improved driver authentication system and method.

It is another aspect of the present invention to provide for an improved system and method for monitoring and controlling vehicle usage by high-risk drivers.

It is further aspect of the present invention to provide for an improved method for remotely and/or wirelessly identifying and authenticating the driver and remotely and/or wirelessly programming the vehicle operating parameters that trigger vehicle control and driver feedback intervention.

The aforementioned aspects and other objectives and advantages can now be achieved as described herein. A driver authentication system and method for monitoring and controlling vehicle usage by a high-risk driver (e.g., teen driver, fleet or rental drivers, habitual reckless drivers, aged drivers, drunk drivers, drowsily drivers, distracted drivers etc) is disclosed. A proprietary and centralized database comprising a software application can be accessed by an authorized user via a network utilizing a remote computer in order to configure a desired operating profile that matches requirements of the high-risk driver. The operating profile can be loaded to a driver identification and data logging module in conjunction with the remote computer. A master control unit can receive a unique identification code from the data logging device to authenticate the high-risk driver and to operate the vehicle within the desired operating profile. A slave control unit receives commands from the master control unit and generates a real time alarm signal if the driver violates the preprogrammed operating profile unique to the driver.

The alarm signal generated by the slave control unit can remain until the driver corrects the operating condition and brings the vehicle within the desired operating profile. Also, the system can provide an alarm signal to the authorized user (e.g., parent) utilizing an auto dial feature that communicates the authorized user via a telephone or internet when the driver violates preprogrammed operating profile. The operating parameters can be for example, but not limited to, data concerning maximum allowable vehicle speed, vehicle location, vehicle hours of operating and seat belt usage. The slave control unit can generate the alarm signal via a voice synthesized means, sounding a cabin buzzer, toggling the dome light and/or powering the radio off, etc. The driver identification and data logging module can allow identification of various drivers associated with the vehicle, thereby allowing the vehicle to perform in one way for the intended high-risk drivers, yet another way for the authorized user.

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The system can include a GPS (Global Positioning System) module to determine and measure parameters such as, time of day, speed and location data associated with the vehicle.

The driver authentication system can include additional features such as data logging, alarming, operation governance, ease of programmability and can utilize GPS technology to provide high-risk driver safety. The system also provides user awareness that reduce the likelihood of a high-risk driver injury or fatality by helping the high-risk drivers with safe driving habits through immediate and real time feedback and governing. The programmable operating parameters associated with the real time driver feedback can categorize the system as a unique driver safety device. Additionally, the system and method described herein can provide multiple operating profiles for a single vehicle that allows the owners to operate the vehicle without any restrictions yet have restrictions in affect when the vehicle is operated by the high risk driver.

BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying figures, in which like reference numerals refer to identical or functionally-similar elements throughout the separate views and which are incorporated in and form a part of the specification, further illustrate the present invention and, together with the detailed description of the invention, serve to explain the principles of the present invention.

FIG. **1** illustrates a graphical representation depicting actual deaths in passenger vehicles by age;

FIG. **2** illustrates a schematic view of a computer system in which the present invention can be embodied;

FIG. **3** illustrates a schematic view of a software system including an operating system, application software, and a user interface that can be used for carrying out the present invention;

FIG. **4** depicts a graphical representation of a network of data processing systems in which aspects of the present invention can be implemented;

FIG. **5** illustrates a block diagram of a driver authentication system, in accordance with an embodiment;

FIG. **6** illustrates a schematic block diagram of the driver authentication system for monitoring and controlling vehicle usage, in accordance with an embodiment;

FIG. **7** illustrates a flow chart of operation illustrating logical operation steps of a method for monitoring and controlling vehicle usage, in accordance with embodiments; and

FIG. **8** illustrates a high level flow chart of operation illustrating logical operation steps of a method for monitoring and controlling vehicle usage by a high-risk driver, in accordance with embodiments.

DETAILED DESCRIPTION

The particular values and configurations discussed in these non-limiting examples can be varied and are cited merely to illustrate at least one embodiment and are not intended to limit the scope thereof.

FIGS. **2-4** are provided as exemplary diagrams of data processing environments in which embodiments of the present invention may be implemented. It should be appreciated that FIGS. **2-4** are only exemplary and are not intended to assert or imply any limitation with regard to the environments in which aspects or embodiments of the present invention may be implemented. Many modifications to the depicted environments may be made without departing from the spirit and scope of the present invention.

As depicted in FIG. **2**, the present invention may be embodied in the context of a data-processing apparatus **200** comprising a central processor **201**, a non-transitory main memory **202**, an input/output controller **203**, a keyboard **204**, a pointing device **205** (e.g., mouse, track ball, pen device, touch sensitive display, or the like), a display device **206**, and a mass storage **207** (e.g., hard disk). Additional input/output devices, such as wireless communications **208**, may be included in the data-processing apparatus **200** as desired. The wireless communications **208** can include cellular, GPS, satellite, etc. As illustrated, the various components of the data-processing apparatus **200** communicate through a system bus **210** or similar architecture. It should be appreciated that data-processing apparatus **200** can comprise a WIFI enabled device, an RFID enabled device, a Bluetooth enabled device, a cellular telephone, a Smartphone, a tablet computer, a portable computer, or the like.

FIG. **3** illustrates a computer software system **250** for directing the operation of the data-processing apparatus **200** depicted in FIG. **1**. Software system **250**, which is stored in main system memory **202** and on disk memory **207**, can include a kernel or operating system **280** and a shell or interface **270**. One or more application programs, such as software application **260**, may be "loaded" (i.e., transferred from mass storage **207** into the main memory **202**) for execution by the data-processing apparatus **200**. The data-processing apparatus **200** receives user commands and data through user interface **270**; these inputs may then be acted upon by the data-processing apparatus **200** in accordance with instructions from operating module **280** and/or application module **260**.

The interface **270**, which is preferably a graphical user interface (GUI), also serves to display results, whereupon the user may supply additional inputs or terminate the session. In one possible embodiment, operating system **280** and interface **270** can be implemented in the context of menu-driven systems. It can be appreciated, of course, that other types of systems are possible. For example, rather than a traditional menu-driven system, other operation systems can also be employed with respect to operating system **280** and interface **270**. Software Application Module **260** can be adapted for monitoring and controlling vehicle usage by high-risk drivers utilizing an operating profile. Software application module **260** can be adapted for providing a real time, remote and/or wireless alarm signal if the driver violates the operating profile. Software application module **260**, on the other hand, can include instructions, such as the various operations described herein with respect to the various components and modules described herein.

The following discussion is intended to provide a brief, general description of suitable computing environments in which the method and system may be implemented. Although not required, the method and system will be described in the general context of computer-executable instructions, such as program modules, being executed by a single computer, Smartphone, tablet computer, or other similar device. Generally, program modules include routines, programs, objects, components, data structures, etc., that perform particular tasks or implement particular abstract data types. Moreover, those skilled in the art will appreciate that the method and system may be practiced with other computer system configurations, including hand-held devices, multi-processor systems, microprocessor-based or programmable consumer electronics, networked PCs, minicomputers, mainframe computers, and the like.

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FIG. **4** depicts a graphical representation of a network of data processing systems **300** in which aspects of the present invention may be implemented. Network data processing system **300** is a network of computers in which embodiments of the present invention may be implemented. Network data processing system **300** contains network **360**, which is the medium used to provide communications links between various devices and computers connected together within network data processing apparatus **200**. Network **360** may include connections, such as wire, wireless communication links, Bluetooth, or fiber optic cables.

In the depicted example, server **310** and server **320** connect to network **360** along with storage unit **370**. In addition, remote clients **330**, **340**, and **350** connect to network **360**. These remote clients **330**, **340**, and **350** may be, for example, vehicle-based or portable computers, transducers, sensors, GPS devices, etc. Data-processing apparatus **200** depicted in FIG. **2** can be, for example, a client such as client **330**, **340**, and/or **350**. Alternatively, data-processing apparatus **200** can be implemented as a server, such as servers **320** and/or **310**, depending upon design considerations.

In the depicted example, server **320** provides data, such as operating commands, operating system images, and applications to clients **330**, **340**, and **350**. Remote clients **330**, **340**, and **350** are clients to server **320** in this example. Network data processing system **300** may include additional servers, clients, and other devices not shown. Specifically, clients may conned to any member of a network of servers which provide equivalent content.

In the depicted example, network data processing system **300** is the Internet with network **360** representing a worldwide collection of networks and gateways that use the Transmission Control Protocol/Internet Protocol (TCP/IP) suite of protocols to communicate with one another. At the heart of the Internet is a backbone of high-speed data communication lines between major nodes or host computers, consisting of thousands of commercial, government, educational and other computer systems that route data and messages. Of course, network data processing system **300** also may be implemented as a number of different types of networks, such as for example, cellular, satellite, or other wireless communications means such as Bluetooth, or using RFID technology.

The following description is presented with respect to embodiments of the present invention, which can be embodied in the context of a data-processing system such as data-processing apparatus **200**, computer software system **250** and network **360** depicted respectively in FIGS. **2-4**. The present invention, however, is not limited to any particular application or any particular environment. Instead, those skilled in the art will find that the system and methods of the present invention may be advantageously applied to a variety of system and application software, including database management systems, word processors, and the like. Moreover, the present invention may be embodied on a variety of different platforms, including Macintosh, UNIX, LINUX, and the like. Therefore, the description of the exemplary embodiments, which follows, is for purposes of illustration and not considered a limitation.

FIG. **5** illustrates a block diagram of a driver authentication system **450**, in accordance with an embodiment. Note that in FIGS. **1-8**, identical or similar blocks are generally indicated by identical reference numerals. The driver authentication system **450** can be utilized for monitoring and controlling vehicle usage by high-risk drivers such as driver **410**. The high-risk drivers can be, for example, teen drivers, fleet and rental drivers, and habitually reckless drivers, sleepy drivers, impaired drivers etc. The authentication system **450** can provide effective training and safety means for the high-risk driver **410** by setting safe operating parameters. The system **450** monitors a vehicle **420** and provides real time driver corrective feedback to an authorized vehicle owner **470** of the vehicle **420**.

The system **450** generally includes a master control unit **430** and a slave control unit **440** that can be accessed and programmed via the software application module **260** stored in the proprietary and centralized database **370**. Note that as utilized herein, the term "module" may refer to a physical hardware component and/or to a software module. In the computer programming arts, such a software "module" may be implemented as a collection of routines and data structures that performs particular tasks or implements a particular abstract data type. Modules of this type are generally composed of two parts. First, a software module may list the constants, data types, variable, routines, and so forth that can be accessed by other modules or routines. Second, a software module may be configured as an implementation, which can be private (i.e., accessible only to the module), and which contains the source code that actually implements the routines or subroutines upon which the module is based.

Therefore, when referring to a "module" herein, the inventors are generally referring to such software modules or implementations thereof. The methodology described herein can be implemented as a series of such modules or as a single software module. Such modules can be utilized separately or together to form a program product that can be implemented through signal-bearing media, including transmission media and recordable media. The present invention is capable of being distributed as a program product in a variety of forms, which apply equally regardless of the particular type of signal-bearing media utilized to carry out the distribution.

Examples of signal-bearing media can include, for example, recordable-type media, such as floppy disks, hard disk drives, CD ROMs, CD-Rs, etc., and transmission media, such as signals transmitted over digital and/or analog communication links. Examples of transmission media can also include devices such as modems, which permit information to be transmitted over standard cellular communications and/or the more advanced wireless data communications.

The proprietary and centralized database **370** including the software application **260** can be accessed via a remote computer **465** and the network **360**. Note that the remote computer **465** can be a data processing apparatus **200** depicted in FIG. **2** and may alternatively be embodied as a smart phone, tablet computer, or other mobile computing device. The authorized vehicle owner **470** can access the software application **260** over a data network **360**, via the remote computer **465** (remote computer **465** may be embodied as a smart phone, tablet computer, laptop computer, or other mobile computing device), in order to program a desired operating profile **435** representing various operating parameters associated with the vehicle **420**. Note that the operating parameters can be for example, but are not limited to, data concerning maximum allowable vehicle speed, user infraction limits, mobile device operating parameters, impaired driver parameters, vehicle locations, vehicle hours of operation and seat belt usage associated with the vehicle **420**. The system **450** can also track various other features such as for example, data concerning hard braking and fast cornering, etc. Note that these features may or may not be viewed as key risk factors and therefore can be utilized as

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additional features to the basic operating parameters of the driver authentication system **450**.

The authorized vehicle owner **470** can be for example, but is not limited to a parent of a teen, a fleet manager or operator, and a judicial authority, etc. The operating profile **435** programmed by the owner **470** can include a set of driving rules and conditions that best fit the requirements of the intended high-risk driver **410** within the vehicle **420**.

Further, the operating profile **435** can be loaded to a driver identification and data logging module **425**. The driver identification and data logging module **425** can be a mobile telephone, a Smartphone, a WIFI enabled device, an RFD enabled device, a Bluetooth enabled device, a tablet computer a USB compatible device such as for example, iButton, radio frequency identification device (RFID), software, etc that can be utilized in conjunction with the remote computer **465** in order to wirelessly load the operating profile **235** into the master control unit **430**. This requires master control unit **430** to be capable of accepting data via WIFI, RFID, Bluetooth, USB, via cellular data signals, etc. The driver identification and data logging module **225** can allow identification of various drivers **410** associated with the vehicle **420**, thereby allowing the vehicle **420** to perform one way for the intended high-risk driver **410**, yet another way for the authorized vehicle owner **470**.

The driver authentication and data logging module or device **425** can be connected to the remote computer **465** wirelessly or otherwise, and the operating profile **435** can be stored. The master control unit **430** can authenticate the driver **410** utilizing a unique identification code **415** provided by the driver identification and data logging module **425**.

In one embodiment, the driver authentication and data logging module or device **425** can be a smart phone with one or more of WIFI, RFID, Bluetooth, and GPS capabilities. The device **425** or phone is transported with the potential driver. When the driver enters the vehicle, the device **425** can automatically, or at the user's request, connects to the master control unit **465**. The device **425** can wirelessly provide the unique identification code **415** (which may be stored on the devices memory, or may be entered by the driver via the device **425**) to authenticate the driver. The device may further store the driver operating profile **435** for the driver and provide that profile to the master control unit **430**.

A data logging device **452** can be used to record vehicle operation data associated with the operation of the vehicle. Included may be a GPS module **451** which can be used to monitor the vehicles speed, location, and acceleration/deceleration data. The data collected by the data logging device **452** can be provided to the master control unit **430**. In another embodiment, the data logging device **452** and GPS module **451** may be provided as functionalities associated with the driver identification and data logging module when that module is embodied as a mobile device equipped with at least GPS capabilities (i.e. a Smartphone with GPS capability).

The master control unit **430** can enable vehicle operation within the programmed operating profile **435**. If the driver **410** violates the preprogrammed operating profile **435** the master control unit **430** can communicate with the slave control unit **440** and generate a real time driver alarm signal **445**. The alarm signal **445** can result in an actual audible alarm, or it can be used to control/govern operational aspects of the vehicle. For example, the real time driver alarm signal **445** can be used to communicate conditions to the driver, limit/disable radio functionality, limit/disable mobile cellular devices in the vehicle, limit/disable internet applications provided in the vehicle, limit/disable GPS related applications provided by the vehicle, limit/disable the drivers cellular telephone or other such devices in the vehicle, govern mechanical operations (e.g., lower/limit speed), remotely contact vehicle owners/fleet managers, and other electrical or mechanical functions, while maintaining driver and occupant safety.

The driver alarm signal **445** generated by the slave control unit **440** can remain until the driver **410** corrects the operating conditions and brings the vehicle **420** within the programmed operating profile **435**. The slave control unit **440** can generate the driver alarm signal **445** via a voice synthesized means, sounding a cabin buzzer, sounding toggling the dome light and/or cutting the radio off, etc. The slave control unit can in addition, or alternatively, provide the alarm signal **445** to the driver identification and data logging module **425**, and cause that device to sound an alarm etc. Also, the system **450** can provide an owner alarm signal **460** that remotely alerts the authorized vehicle owner **470** regarding violation of the programmed operating profile **435**. The owner alarm signal **460** can be an auto dial feature that communicates the authorized owner **470** via a cellular or data network.

Alternatively, or additionally, the wireless identification and data logging module **425** can be configured to wirelessly receive vehicle specific performance and infraction data from the master control unit. This data may also be formatted to provide feedback to the driver via a display associated with the wireless identification and data logging module **425** to help the driver correct their potentially unsafe driving habits.

A plurality of transducers **461** may further be provided throughout the vehicle **420**. These transducers **461** can be configured as sensors designed to measure various data related to the vehicle and vehicle driver. For example, the sensors **461-464** may provide information regarding the location, speed, acceleration, proximity to other vehicles, proximity to road obstructions, proximity to street lines, driver head movement, driver eye movement, ambient vehicle noise, driver Blood Alcohol Level, etc.

Information from these sensors can be provided to the slave control unit **440**. The slave control unit **440** can process the data collected from the sensors and determine if the data indicates a condition that requires a warning. For example, the sensors may indicate that the vehicle is speeding, veering off the road, approaching an obstruction in the road, too close to another vehicle, that the vehicle driver is distracted, sleepy, or not paying attention, that the vehicle driver is impaired etc. If one of these conditions is identified, the slave control unit **440** signals the master control unit **430** and the master control unit issues a driver alarm signal **445** as described above. In the case where the impairment sensor **462** provides a signal to the slave control unit **440** indicating that the driver's impairment is above a prescribed limit, the slave control unit can prevent the vehicle from starting.

The master control unit **430** can be configured to include driver identification and validation module **502**, a GPS antenna processing module **504**, a master micro controller and processor **506**, a memory module **508** and a function indicator module **510**. The master control unit **430** may also receive data indicative of the speed of the vehicle **420**, the location of the motor vehicle **420**, and the time of day from a plurality of sources including a WIFI enabled device, an RF source, a Bluetooth enabled device, and a cellular network source. This would allow the master control unit **430** to for example, receive real-time data indicative of the

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present road the vehicle **420** is travelling on via any of a WIFI enabled device, an RF source, a Bluetooth device, and a smart-road network source. The driver identification and validation module **502** can be utilized to authenticate the driver **410** utilizing the unique identification code **415** and enable the vehicle operation. The master control unit **430** can interpret driver authorization, and ascertain the vehicle speed. The master control unit **430** also interprets the location and time of day parameters versus maximum desired threshold limits.

The driver operating profile **435** can be programmed by the authorized vehicle owner **470** to place limits on the operation of the vehicle **420** by the driver **410**. For example, the driver operating profile can define speed limits for each unique driver and can include geo-fencing for each driver. These limits can be dynamically determined according to location provided via the GPS module and time of day. For example, a concerned parent may set a geo-fence of 20 miles from their house for their teenage driver during the day and a 10 mile geo-fence at night. If the teenage driver exceeds this distance an alarm signal can be provided by the master control unit **430**. Similarly, the parent can set speed limits that prevent the teenage driver from exceeding the speed limit on any road by more than 3 miles per hour. The speed limit can be identified for each road via wireless. GPS, or smart road network technology. If the teenage driver exceeds that limit an alarm signal can be provided by the master control unit **430** to the parent. Alternatively or additionally, the vehicle control module **467** can be signaled by the master control unit **430** to reduce the speed of the vehicle automatically if it exceeds the prescribed limits. The driver operating profile **435** can, in this way define a maximum vehicle speed, an allowable vehicle location, allowable hours of vehicle operation, require the driver's seat belt be engaged before the vehicle can be started, and define an impairment threshold for the driver.

The master control unit **430** can also provide real-time data regarding vehicle location, speed, and infractions to the authorized vehicle owner. Preferably, this data can be provided via network connection at the computer **465** (embodied as a cellular telephone, smart phone, tablet computer, vehicle integrated wireless communication device, WIFI enabled device, RFID enabled device, Bluetooth enabled device, mobile computer etc.) of the authorized vehicle owner.

The driver authentication system can include a phone governor module **465**. The phone governor module **465** can be software installed on a driver's **410** cellular telephone, smart phone, tablet computer, vehicle integrated wireless communication device, WIFI enabled device, RFID enabled device, Bluetooth enabled device, mobile computer etc. The phone governor device is configured to receive instructions from the master control unit **430**. The master control unit **430** can instruct the phone governor module **465** to restrict calls on the drivers mobile device. This can include preventing any incoming or outgoing calls or restriction on phone numbers that can be dialed out or received. The master control unit **430** can further instruct the phone governor module **465** to power down the mobile device and disable text messaging or other applications involving text entry. Similarly, an Internet governor module **466** may be configured to signal the master control unit **430** to disable all integrated in-vehicle Internet or GPS related applications while the vehicle is in operation. This may include on-board mapping applications, services associated with the vehicle, Internet search services, etc.

A vehicle control module **467** can also be configured to operate with the master control unit **430** to accelerate the vehicle, decelerate the vehicle, or alter the vehicle's direction. For example, if head/eye sensors **464** indicate that driver **410** is asleep while the vehicle is in motion, vehicle control module **467** can prompt the master control unit **430** to in addition to issuing an alarm, operate the vehicle's brakes automatically to reduce the speed of the vehicle until the vehicle is stopped. The vehicle control module **467** can further be instructed by the master control unit to simultaneously direct the vehicle out of traffic and on the shoulder of the road until the driver is awake.

The GPS antenna processing module **504** can be utilized to determine and measure time of day, speed and location data of the vehicle **420**. The GPS antenna processing module **504** provides location information associated with the vehicle **420** to the authorized vehicle owner **470** hence the system **450** is compatible for any vehicle for monitoring and controlling the high-risk driver **410**. The master microcontroller/processor **506** can process and control the operations associated with the master control unit **430**. The memory module **508** associated with the master control unit **430** can be utilized to store the driver authentication **415** and operating profile **435** associated with the driver **410**. The memory module **508** can further provide information for proper operation of the vehicle **420**. The function indicator module **510** can monitor various functions in association with the vehicle **420** such for example, power, fault detection and monitoring, and other functions.

The master control **430** can be configured to define a number of operating parameters for a given driver such as a maximum speed limit and a geo-fence limit defining an acceptable space in which the vehicle may be operated. These parameters may be dependent on the time of day. Likewise, the parameters can be dynamically set according to the present location of the vehicle.

FIG. **6** illustrates a schematic block diagram of the driver authentication system **450**, in accordance with an embodiment. The master control unit **430** can authenticate the driver **410** utilizing the unique identification code **415** provided by the data logging device **425**. The data logging device **425** associated with the master control unit **430** can be collectively called as 'brain' of the driver authentication system **450**. The master control unit **430** can be installed in the vehicle **420** in a suitable place where the master control unit **430** can be directly exposed to the driver from a dash board of the vehicle **420**.

The master control unit **430** can communicate and send commands to the slave control unit **440** associated with the driver authentication system **450**. The slave control unit **440** can include a power generator **530**, a slave micro controller and processor **528**, a starter relay **526**, a definable relay **524**, and an alarm synthesizer **522**. The slave control unit **440** can be mounted under the dash board of the vehicle **420**. The slave control unit **440** can receive wireless commands from master control unit **430** and generates the alarm signal **445** and **460**. The slave control unit **440** can include pins such as a dirty 12 VDC pin **532**, a dirty ground pin **534**, a starter in pin **536**, a starter out pin **538**, seat belt sensor pin **540**, a breathalyzer pin **542**, a definable input pin on dash slave control unit **440**.

The power regulator **530** can be utilized to regulate a power source and operate the system **450** via the dirty 12 VDC pin **532** and the dirty ground pin **534**. The starter relay **526** can be an electromechanical device that is operated by an electrical current that is provided by the starter in pin **536**. The starter relay **526** can be enabled by a starter enable

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signal **518** from the master control unit **430** when the driver **410** is authenticated. The starter relay **426** can generate an output via a starter out pin **538** that can be a mechanical function utilized to operate the vehicle **420**. The seat belt sensor pin **540** can be externally connected to a seat belt sensor associated with the vehicle **420** where it obtains the information regarding usage of seat belt by the driver **410**.

The breathalyzer **542** in pin **524** can provide status regarding alcohol consumption of the driver **410** while driving the vehicle **420**. The slave microcontroller/processor **528** can process and control the operations of the slave control unit **440**. The alarm/speaker/voice synthesizer **522** can receive the alarm enable signal **516** from the master control unit **430** and generate the owner programmed driver alarm signal **445** in the vehicle **420** when the driver **410** violates the programmed parameters. Further, the master control unit **430** and the slave control unit **440** can be communicated via various communication signal lines such as a clean power signal **520**, an alarm enable signal **516**, internal definable input signal **514** and an internal definable output signal **512**.

FIG. **7** illustrates a flow chart of operation illustrating logical operation steps of a method **600** for monitoring and controlling vehicle usage, in accordance with an embodiment. The software application module **260** with operating parameters associated with the vehicle **420** can be configured and stored in the proprietary and centralized database **370**, as depicted at block **610**. The driver specific operating profile **435** for the high-risk driver **410** can be programmed by accessing the software application **260** via the remote computer **465**, as indicated at block **620**. Note that the software application **260** can include programming software that can be utilized to program the features of the driver authentication system **450**. The software application module **260** monitors various parameters such as the 'trigger' levels for speed, and time of operation, etc. The software application module **260** can be accessible by the authorized owners **470** and can also be utilized to download the actual data logged during the operation of the vehicle **420**. Further, the software application **260** can also be intuitive for the customer through the process of selecting parameters, trigger thresholds, etc.

The operating profile **435** for the driver **410** can be loaded to the driver identification and data logging module **425**, as illustrated at block **630**. The master control unit **430** can authenticate and validate the driver **410** utilizing the unique identification code **415** provided by the driver identification and data logging module **425**, as indicated at block **640**. The operating profile **435** for the driver **410** can be transferred to the master control unit **430**, as shown at block **650**. The master control unit **430** monitors and logs vehicle performance via the GPS module **504** associated with master control unit **430**, as depicted at block **660**. The slave control unit **440** generates the driver alarm signal **445**, if the driver **410** violates the programmed operating profile **435**, as illustrated at block **670**.

FIG. **8** illustrates a high level flow chart of operation illustrating a method **700** for monitoring and controlling vehicle usage by the high-risk driver **410**, in accordance with an embodiment. Again as reminder, in FIGS. **1-8**, identical or similar blocks are generally indicated by identical reference numerals. The operating profile **435** for the high-risk driver **410** can be programmed by accessing the software application **260** via the remote computer **465**, as depicted at block **710**. The programmed operating profile **435** for the high-risk driver **410** can be transferred into the driver identification and data logging module **425**, as illustrated at block **720**.

The driver **410** can be authenticated utilizing the unique identification code **415** provided by the driver identification and data logging module **425** and the programmed operating profile **435** for the driver **410** can be copied into the driver authentication system **450**, as depicted at block **730**. A determination can be made whether the driver **410** violates the operating profile **435**, as illustrated at block **740**. If the driver violates the operating profile **435**, as shown at block **750**, the driver alarm **445** signal can be generated by the driver authentication system **450**, as depicted at block **755**. Otherwise, the process can be continued to block **740**.

The driver authentication system includes features such as data logging, alarming, operation governance, ease of programmability and utilizes GPS technology to provide high-risk driver safety. The system provides user awareness that reduce the likelihood of a high-risk driver injury or fatality by helping the high-risk drivers with safe driving habits through immediate and real time feedback and governing. The programmable operating parameters associated with the real time driver feedback can categorize the system as unique driver safety device. Additionally, the system and method described herein can provide multiple operating profiles for a single vehicle that allows the owners to operate the vehicle without any restrictions yet have restrictions in affect when the vehicle is operated by the high risk driver.

It will be appreciated that variations of the above-disclosed and other features and functions, or alternatives thereof, may be desirably combined into many other different systems or applications. Also that various presently unforeseen or unanticipated alternatives, modifications, variations or improvements therein may be subsequently made by those skilled in the art which are also intended to be encompassed by the following claims.

In one embodiment A driver authentication and monitoring system, comprises a wireless identification and data logging module; a master control unit in a motor vehicle for wirelessly authenticating at least one driver via the wireless driver identification and data logging module and associating an operating profile with the at least one driver; a GPS module providing at least location and speed information in association with movement of the motor vehicle; a data logging device recording vehicle operation data associated with a use of the motor vehicle by the at least one driver comprising at least the location and speed information from the GPS module; and a slave control unit in the motor vehicle and in communication with the master control unit, the slave control unit configured to receive commands from the master control unit and to generate an alarm signal if the at least one driver violates the operating profile unique to the at least one driver thereby providing feedback about the vehicle usage; wherein the master control unit permits the at least one driver to operate the vehicle within an operating profile if the master control unit receives at least one of a unique identification code to permit the at least one driver to operate the vehicle within an operating profile and the at least one driver has not violated the operating profile.

The driver authentication and monitoring system of further comprises a plurality of transducers comprising at least one of proximity sensors, head movement sensors, and eye movement sensors wherein the transducers send signals to the slave control unit and the slave control unit determines if the signals are indicative of a driving condition requiring a warning and in turn signals the master control unit to alert the driver. The driver authentication and monitoring system

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also comprises an impairment sensor wherein the slave control unit receives signals from impairment sensor and prevents the motor vehicle from starting when the transducer senses a driver impairment above a prescribed limit.

The driver authentication and monitoring system further comprises configuring the wireless identification and data logging module as at least one of a WIFI enabled device; an RFID enabled device, a Bluetooth enabled device; a cellular telephone; and a smart phone.

In another embodiment of the driver authentication system, the wireless identification and data logging module is further configured to wirelessly load the operating profile for the at least one driver into the master control unit. The wireless identification and data logging module is further configured to wirelessly receive driver specific vehicle performance and infraction data from the master control unit and present the driver specific vehicle performance and infraction data.

In another embodiment of the driver authentication device, the master control unit is further configured for wirelessly receiving data indicative of a speed of the motor vehicle, a location of the motor vehicle, and a time of day from at least one of a WIFI source; an RF source; a Bluetooth source; and a smart-road network source. The master control is configured for wirelessly receiving data indicative of a speed limit associated with a road the motor vehicle is currently traveling on from at least one of a WIFI source; an RF source; a Bluetooth source; and a smart-road network source. The master control is configured to define a maximum speed limit and a geo-fence limit for the at least one driver according to the time of day.

In another embodiment, the driver authentication module further comprises an alarm module configured to wirelessly receive data from at least one of the master controller, the slave controller, and the GPS module wherein the alarm module is further configured to present at least one of location data, speed data, and infraction data in real time. The alarm module comprises at least one of a cellular telephone; a smart phone; a computer; a vehicle integrated wireless communication device; a WIFI enabled device; an RFID enabled device; and a Bluetooth enabled device.

The driver authentication device further comprises a phone governor module configured to receive at least one instruction from the master control unit the instructions comprising at least one of restricting calls on the at least one drivers cellular telephone; powering off the at least one drivers cellular telephone; and disabling text messaging on the at least one drivers cellular telephone.

The driver authentication device further comprises an internet governor module configured to disables all integrated in-vehicle internet related applications when the vehicle is in operation.

The driver authentication device further comprises a vehicle control module configured to receive at least one instruction from the master control unit the instructions comprising at least one of reducing the vehicles speed; increasing the vehicles speed; and altering the vehicles direction.

The driver authentication and monitoring system includes the slave control unit further comprising a power regulator module; a starter relay module; a definable relay module; a slave microcontroller; and an alarm synthesizer. The operating profile comprises at least one operating parameter including at least one of: a maximum allowable vehicle speed; an allowable vehicle location; allowable hours of operation; and a seatbelt usage. The slave control unit generates an alarm signal for remotely alerting the authorized user when the at least one driver violates the operating profile.

What is claimed is:

1. A vehicle control system, comprising:

a wireless identification and data logging module;

a master control unit in a vehicle for wirelessly authenticating at least one occupant via said wireless driver identification and data logging module and associating an operating profile with said at least one occupant;

a module for receiving at least location and speed information in association with a movement of said vehicle;

a data logging device that records vehicle operation data associated with a use of said vehicle, the vehicle operation data comprising at least said location and speed information received from said module; and

a slave control unit in said vehicle and which communicates with said master control unit, wherein said slave control unit receives commands from said master control unit and generate an alarm signal;

wherein said master control unit provides operation governance of said vehicle within said operating profile.

2. The vehicle control system of claim **1** further comprising:

a plurality of transducers comprising at least one of an image capturing sensor and a proximity sensor, wherein said plurality of transducers transmits signals to said slave control unit and wherein said slave control unit determines if said signals are indicative of a driving condition requiring a warning and in turn signals said master control unit.

3. The vehicle control system of claim **1** further comprising: a vehicle control module that controls a speed of the vehicle and an allowable location of the vehicle.

4. The vehicle control system of claim **1** wherein said wireless identification and data logging module comprises at least one of: a WIFI enabled device; an RFID enabled device; a Bluetooth enabled device; a cellular telephone; and a smartphone.

5. The vehicle control system of claim **4** wherein said wireless identification and data logging module is further configured to wirelessly load said operating profile into said master control unit.

6. The vehicle control system of claim **4** wherein said wireless identification and data logging module is further configured to wirelessly receive specific vehicle performance and infraction data of the vehicle from said master control unit.

7. The vehicle control system of claim **3** wherein said wireless identification and data logging module is further configured to present vehicle performance data of the vehicle to said vehicle control module in order to guide the operation governance of said vehicle by said vehicle control module.

8. The vehicle control system of claim **1** wherein said master control unit is further configured for wirelessly receiving data indicative of a speed of said vehicle, a location of said vehicle, and a time of day from at least one of: a WIFI source; an RF source; a Bluetooth source; an image capturing source; a processing device; a proximity sensor; and a smart-road network source.

9. The vehicle control system of claim **8** wherein said master control is configured for wirelessly receiving data indicative of a speed limit associated with a road said vehicle is currently traveling on from at least one of: a WIFI source;

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an RF source; a Bluetooth source; an image capturing source; a processing device; a proximity sensor; and a smart-road network source.

10. The vehicle control system of claim **9** wherein said master control unit is configured to define a speed, a positioning of said vehicle on a road, a distance from another object, a distance from another vehicle, and a geo-fence limit for said vehicle.

11. The vehicle control system of claim **1** further comprising an alarm module configured to wirelessly receive data from at least one of said master control unit, said slave control unit, and said GPS module wherein said alarm module is further configured to present at least one of location data, speed data, and infraction data in real time.

12. The vehicle control system of claim **11** wherein said alarm module comprises at least one of: a cellular telephone; a smartphone; a computer; a vehicle integrated wireless communication device; a WIFI enabled device; an RFID enabled device; and a Bluetooth enabled device.

13. The vehicle control system of claim **1** further comprising a phone governor module configured to receive instructions from said master control unit, said instructions comprising at least one of:

restricting calls on a cellular telephone associated with a driver of said vehicle;

powering off said cellular telephone; and

disabling text messaging for said cellular telephone.

14. The vehicle control system of claim **1** further comprising an Internet governor module configured to disable integrated in-vehicle Internet related applications when said vehicle is in operation.

15. The vehicle control system of claim **2** further comprising a steering control module, a braking control module, and an acceleration control module configured to receive instructions from said master control unit, said instructions comprising at least one of:

reducing a speed of said vehicle;

increasing said speed of said vehicle;

altering a direction of said vehicle on said road;

altering a proximity of said vehicle with respect to other vehicles; and

altering said proximity of said vehicle with respect to other objects.

16. The vehicle control system of claim **15** wherein said vehicle operates autonomously.

17. The vehicle control system of claim **1**, wherein said slave control unit further comprises: a power regulator module; a starter relay module; a definable relay module; a slave microcontroller; and an alarm synthesizer.

18. The vehicle control system of claim **1**, wherein said operating profile comprises at least one operating parameter including at least one of:

a maximum allowable speed of said vehicle;

an allowable location of said vehicle;

allowable hours of operation of said vehicle;

an allowable destination; and

a seatbelt usage.

19. The vehicle control system of claim **1** wherein said slave control unit generates an alarm signal for remotely alerting an authorized user when said vehicle violates said operating profile.

20. The vehicle control system of claim **1** wherein the slave control unit is mounted under a dash board of the vehicle.

* * * * *

EXHIBIT 1002
Prosecution History of
U.S. Patent Application 15/336,110

UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.:	1000-1796-C3	Total Pages:	60
First Named Inventor or Application Identifier			
Michael Phelan			
Express Mail Label No.:	Not Applicable		

APPLICATION ELEMENTS

See MPEP Chapter 600 concerning utility patent application contents.

ADDRESS TO: **Mail Stop Patent Application**
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

1. ☒ Fee Transmittal Form
(Submit an original, and a duplicate for fee processing)

2. ☒ Specification (incl. claims) (Total Pages: 25)

3. ☒ Drawing(s) (35 USC 113) (Total Sheets: 8)
☐ Informal ☒ Formal

4. ☒ Oath or Declaration
a. ☒ Newly executed (original or copy)
b. ☐ Copy from a prior application (37 CFR 1.63(d)) (for continuation/divisional with Box 17 completed) *[Note Box 5 below]*
☐ i. DELETION OF INVENTOR(S)
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).

5. ☐ Incorporation By Reference *(usable if Box 4b is checked)*
The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4b, is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.

6. ☐ Microfiche Computer Program (Appendix)

7. Nucleotide and/or Amino Acid Sequence Submission (If applicable, all necessary)
a. ☐ Computer Readable Copy
b. ☐ Paper Copy (Identical to computer copy)
c. ☐ Statement verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

8. ☐ Assignment Papers (cover sheet & document(s))

9. ☐ 37 CFR 3.73(b) Statement ☐ Power of Attorney (when there is an assignee)

10. ☐ English Translation Document (if applicable)

11. ☒ Information Disclosure Statement (IDS)/PTO-1449

12. ☐ Preliminary Amendment

13. ☐ Return Receipt Postcard (MPEP 503) (Should be specifically itemized)

14. ☐ Small Entity Statement(s) ☐ Statement filed in prior application, Status still proper and desired

15. ☐ Certified Copy of Priority Document(s) (If foreign priority is claimed)

16. ☒ Other: Application Data Sheet

17. ☒ **CROSS-REFERENCE TO PATENT APPLICATION**: The present application is a continuation of nonprovisional patent application no. 14/464,188, entitled "Driver Authentication System and Method for Monitoring and Controlling Vehicle Usage," filed August 20, 2014, which is a continuation-in-part of nonprovisional patent application no. 13/858,930, entitled "Driver Authentication System and Method For Monitoring and Controlling Vehicle Usage," filed April 8, 2013, which is a continuation of nonprovisional patent application no. 12/496,509, entitled "Driver Authentication System and Method For Monitoring and Controlling Vehicle Usage," filed July 1, 2009. Nonprovisional patent applications 14/464,188, 13/858,930, and 12/496,509 are each herein incorporated by refer in their entirety. Nonprovisional patent application no. 12/496,509 claims the priority and benefit under 35 U.S.C. §119(e) of U.S. provisional patent application no. 61/077,568, entitled "Systems and Methods for Monitoring and Controlling Vehicle Usage by Young Drivers", filed July 2, 2008. Provisional patent application 61/077,568 is herein incorporated by reference in its entirety.

18. **CORRESPONDENCE ADDRESS**

☐ *Same as prior application* ☒ *Correspondence address below*

NAME	Ortiz & Lopez, PLLC				
ADDRESS	P.O. Box 4484				
CITY	Albuquerque	STATE	NM	ZIP CODE	87196

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Page 1 of 199

COUNTRY	U.S.A.	TELEPHONE	(505) 314-1310	FAX	(505) 314-1307

19. ☒ The filing fee is calculated below:

CLAIMS AS FILED, LESS ANY CLAIMS CANCELED BY ABOVE-INDICATED AMENDMENT(S)				
(1) FOR	(2) NUMBER FILED	(3) NUMBER EXTRA	(4) RATE	(5) CALCULATIONS
TOTAL CLAIMS (37 CFR 1.16(c))	20 - 19 =	0	x $40	= $0.00
INDEPENDENT CLAIMS (37 CFR 1.16(b))	3 - 1 =	0	x $210	= $0.00
MULTIPLE DEPENDENT CLAIMS (IF APPLICABLE) (37 CFR 1.16(d))		ANY - - 0	$ 390	= $ 0.00
BASIC FILING FEE				$70.00
UTILITY SEARCH FEE				$300.00
UTILITY EXAMINATION FEE				$360.00
TOTAL			=	$730.00

20. ☐ This is an authorization under 37 CFR 1.136(a)(3) to treat any concurrent or future reply, requiring a petition for extension of time, as incorporating a petition for the appropriate extension of time.

21. ☐ Power of Attorney

22. ☐ The assignee of this application to be indicated on its publication is .

Respectfully submitted,

Kevin Soules
Signature per 37 CFR 1.33 & 34
Date: October 27, 2016
Registration No. 66,033
Telephone 505-314-1327
ksoules@olpatentlaw.com

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PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	
First Named Inventor	Michael Phelan
Art Unit	TBD
Examiner Name	TBD
Attorney Docket Number	1000-1796-C3

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	5481253		1996-01-02	Phelan et al.	
	2	6430488	B1	2002-08-05	Goldman et al.	
	3	6741920	B1	2004-05-25	Otto	
	4	7956730	B2	2011-06-07	White et al.	
	5	8131441	B2	2012-03-06	Nallapa et al.	
	6	8258939	B2	2012-09-04	Miller et al.	
	7	8463488	B1	2013-06-11	Hart	
	8	8751105	B2	2014-06-10	Whelan et al.	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	
	Filing Date	
	First Named Inventor	Michael Phelan
	Art Unit	TBD
	Examiner Name	TBD
	Attorney Docket Number	1000-1796-C3

U.S.PATENT APPLICATION PUBLICATIONS						Remove
Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20020049538	A1	2002-04-25	Knapton et al.	
	2	20040225557	A1	2004-11-11	Phelan et al.	
	3	20050137757	A1	2005-06-23	Phelan et al.	
	4	20050182538	A1	2005-08-18	Phelan et al.	
	5	20060047419	A1	2006-03-02	Diendorf et al.	
	6	20060106515	A1	2006-05-18	Phelan et al.	
	7	20060111817	A1	2006-05-25	Phelan et al.	
	8	20060122749	A1	2006-06-08	Phelan et al.	
	9	20060200008	A1	2006-09-07	Moore-Ede	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	
	Filing Date	
	First Named Inventor	Michael Phelan
	Art Unit	TBD
	Examiner Name	TBD
	Attorney Docket Number	1000-1796-C3

	10	20060212195	A1	2006-09-21	Veith et al.	
	11	20070082706	A1	2007-04-12	Campbell et al.	
	12	20070158128	A1	2007-07-12	Gratz et al.	
	13	20080245598	A1	2008-10-09	Gratz et al.	
	14	20080319602	A1	2008-12-25	McClellan et al.	
	15	20090024273	A1	2009-01-22	Follmer et al.	
	16	20090027177	A1	2009-01-29	Hodder	
	17	20090030770	A1	2009-01-29	Hersh et al.	
	18	20090069954	A1	2009-03-12	Aladesuyi	
	19	20090079555	A1	2009-03-26	Aguirre De Carcer et al.	
	20	20090189736	A1	2009-07-30	Hayashi	

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	Filing Date	
	First Named Inventor	Michael Phelan
	Art Unit	TBD
	Examiner Name	TBD
	Attorney Docket Number	1000-1796-C3

	21	20100004818	A1	2010-01-07	Phelan	
	22	20030181822	A1	2003-09-25	Victor	
	23	20030204290	A1	2003-10-30	Sadler et al.	
	24	20030231550	A1	2003-12-18	Macfarlane	
	25	20040064221	A1	2004-04-01	DePrez et al.	
	26	20050237150	A1	2005-10-27	Sun et al.	
	27	20050288837	A1	2005-12-29	Wiegand et al.	
	28	20060066149	A1	2006-03-30	Halloway et al.	
	29	20070200663	A1	2007-08-30	White et al.	
	30	20080039998	A1	2008-02-14	Fein et al.	
	31	20080269979	A1	2008-10-30	Hermann et al.	

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	Application Number	
	Filing Date	
	First Named Inventor	Michael Phelan
	Art Unit	TBD
	Examiner Name	TBD
	Attorney Docket Number	1000-1796-C3

	32	20100045452	A1	2010-02-25	Periwal	
	33	20100161171	A1	2010-06-24	Valentine et al.	
	34	20150350750	A1	2015-12-03	Yun et al.	
	35	20160001715	A1	2016-01-07	Laifenfeld et al.	
	36	20160001718	A1	2016-01-07	Laifenfeld et al.	

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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1		

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	
	Filing Date	
	First Named Inventor	Michael Phelan
	Art Unit	TBD
	Examiner Name	TBD
	Attorney Docket Number	1000-1796-C3

EXAMINER SIGNATURE			
Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	
	Filing Date	
	First Named Inventor	Michael Phelan
	Art Unit	TBD
	Examiner Name	TBD
	Attorney Docket Number	1000-1796-C3

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/KEVIN SOULES/	Date (YYYY-MM-DD)	2016-10-27
Name/Print	Kevin Soules	Registration Number	66033

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	1000-1796-C3
	Application Number	
Title of Invention	DRIVER AUTHENTICATION SYSTEM AND METHOD FOR MONITORING AND CONTROLLING VEHICLE USAGE	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2:

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor 1 — Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Michael		Phelan	

Residence Information (Select One) ● US Residency Non US Residency Active US Military Service

City	State/Province	Country of Residence
Santa Fe	NM	US

Mailing Address of Inventor:

Address 1	851 Camino Francisca
Address 2	

City	State/Province	Postal Code	Country
Santa Fe	NM	87506	US

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. — Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☐ **An Address is being provided for the correspondence Information of this application.**

Customer Number	64064		
Email Address	docketing@olpatentlaw.com	Add Email	Remove Email

Application Information:

Title of the Invention	DRIVER AUTHENTICATION SYSTEM AND METHOD FOR MONITORING AND CONTROLLING VEHICLE USAGE		
Attorney Docket Number	1000-1796-C3	**Small Entity Status Claimed**	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	8	**Suggested Figure for Publication (if any)**	

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	1000-1796-C3
	Application Number	
Title of Invention	DRIVER AUTHENTICATION SYSTEM AND METHOD FOR MONITORING AND CONTROLLING VEHICLE USAGE	

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	● Customer Number	US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)
Customer Number	64064		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.
When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Continuation of	14464188	2014-08-20

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	1000-1796-C3
	Application Number	
Title of Invention	DRIVER AUTHENTICATION SYSTEM AND METHOD FOR MONITORING AND CONTROLLING VEHICLE USAGE	

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14464188	Continuation in part of	13858930	2013-04-08	9045101	2015-06-02
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
13858930	Continuation of	12496509	2009-07-01	8417415	2013-04-09
Prior Application Status	Expired				Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)		
12496509	Claims benefit of provisional	61077568	2008-07-02		
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button.					Add

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)[i] the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

			Remove
Application Number	Country[i]	Filing Date (YYYY-MM-DD)	Access Code[i] (if applicable)
Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.			Add

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.
NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	1000-1796-C3
	Application Number	
Title of Invention	DRIVER AUTHENTICATION SYSTEM AND METHOD FOR MONITORING AND CONTROLLING VEHICLE USAGE	

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☒ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☒ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	1000-1796-C3
	Application Number	
Title of Invention	DRIVER AUTHENTICATION SYSTEM AND METHOD FOR MONITORING AND CONTROLLING VEHICLE USAGE	

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1 Remove

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

Clear

Assignee	Legal Representative under 35 U.S.C. 117	Joint Inventor
Person to whom the inventor is obligated to assign.	Person who shows sufficient proprietary interest	

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor:

If the Applicant is an Organization check here. ☐

Prefix	Given Name	Middle Name	Family Name	Suffix

Mailing Address Information For Applicant:

Address 1			
Address 2			
City		**State/Province**	
Country		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Applicant Data may be generated within this form by selecting the Add button. Add

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	1000-1796-C3
	Application Number	
Title of Invention	DRIVER AUTHENTICATION SYSTEM AND METHOD FOR MONITORING AND CONTROLLING VEHICLE USAGE	

Assignee 1

Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

Remove

If the Assignee or Non-Applicant Assignee is an Organization check here. ☐

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

Mailing Address Information For Assignee including Non-Applicant Assignee:

Address 1			
Address 2			
City		**State/Province**	
Country i		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button. Add

Signature:

Remove

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). **However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).**

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/KEVIN SOULES/			Date (YYYY-MM-DD)	2016-10-27
First Name	Kevin	Last Name	Soules	Registration Number	66033

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	1000-1796-C3
		Application Number	
Title of Invention	DRIVER AUTHENTICATION SYSTEM AND METHOD FOR MONITORING AND CONTROLLING VEHICLE USAGE		

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