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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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11/283,913

11/22/2005

Ron Lewis

2343-199

6521

7590

04/16/2008

Patent Group
DLA PIPER RUDNICK GRAY CARY US LLP
1200 Nineteenth Street, N.W.
Washington, DC 20036-2412

EXAMINER

NGUYEN, CHUONG P

ART UNIT

PAPER NUMBER

3663

MAIL DATE

DELIVERY MODE

04/16/2008

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.

Notice of Abandonment	Application No.	Applicant(s)	
	11/283,913	LEWIS ET AL.	
	Examiner	Art Unit	
	Chuong P. Nguyen	3663	

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

This application is abandoned in view of:

1. ☒ Applicant's failure to timely file a proper reply to the Office letter mailed on 20 August 2007.
 - (a) ☐ A reply was received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the period for reply (including a total extension of time of _____ month(s)) which expired on _____.
 - (b) ☐ A proposed reply was received on _____, but it does not constitute a proper reply under 37 CFR 1.113 (a) to the final rejection.
(A proper reply under 37 CFR 1.113 to a final rejection consists only of: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114).
 - (c) ☐ A reply was received on _____ but it does not constitute a proper reply, or a bona fide attempt at a proper reply, to the non-final rejection. See 37 CFR 1.85(a) and 1.111. (See explanation in box 7 below).
 - (d) ☒ No reply has been received.

2. ☐ Applicant's failure to timely pay the required issue fee and publication fee, if applicable, within the statutory period of three months from the mailing date of the Notice of Allowance (PTOL-85).
 - (a) ☐ The issue fee and publication fee, if applicable, was received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the statutory period for payment of the issue fee (and publication fee) set in the Notice of Allowance (PTOL-85).
 - (b) ☐ The submitted fee of \$_____ is insufficient. A balance of \$_____ is due.
The issue fee required by 37 CFR 1.18 is \$_____. The publication fee, if required by 37 CFR 1.18(d), is \$_____.
 - (c) ☐ The issue fee and publication fee, if applicable, has not been received.

3. ☐ Applicant's failure to timely file corrected drawings as required by, and within the three-month period set in, the Notice of Allowability (PTO-37).
 - (a) ☐ Proposed corrected drawings were received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the period for reply.
 - (b) ☐ No corrected drawings have been received.

4. ☐ The letter of express abandonment which is signed by the attorney or agent of record, the assignee of the entire interest, or all of the applicants.

5. ☐ The letter of express abandonment which is signed by an attorney or agent (acting in a representative capacity under 37 CFR 1.34(a)) upon the filing of a continuing application.

6. ☐ The decision by the Board of Patent Appeals and Interference rendered on _____ and because the period for seeking court review of the decision has expired and there are no allowed claims.

7. ☐ The reason(s) below:

/Jack W. Keith/
Supervisory Patent Examiner, Art Unit 3663

Petitions to revive under 37 CFR 1.137(a) or (b), or requests to withdraw the holding of abandonment under 37 CFR 1.181, should be promptly filed to minimize any negative effects on patent term.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/283,913	11/22/2005	Ron Lewis	2343-199	6521

7590 08/20/2007
Patent Group
DLA PIPER RUDNICK GRAY CARY US LLP
1200 Nineteenth Street, N.W.
Washington, DC 20036-2412

EXAMINER

NGUYEN, CHUONG P

ART UNIT	PAPER NUMBER
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3663

MAIL DATE	DELIVERY MODE
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08/20/2007

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.

Office Action Summary	Application No. 11/283,913	Applicant(s) LEWIS ET AL.	
	Examiner Chuong Nguyen	Art Unit 3663	

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

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance 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.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-11 and 13-23 is/are pending in the application.
 4a) Of the above claim(s) 19 and 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-11,13-18 and 21-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 June 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) ☒ Notice of References Cited (PTO-892) | 4) ☐ Interview Summary (PTO-413) |
| 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) ☐ Information Disclosure Statement(s) (PTO/SB/08) | 5) ☐ Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) ☐ Other: _____ |

DETAILED ACTION

1. Applicants' 06/04/2007 Amendment, which directly amended specification; amended drawings; amended claims 1, 3, 6, 7, 11, 13, 17, 18, 21; canceled claims 2, 4, 12; and traversed the rejection of the claims of the 02/02/2007 Office Action are acknowledged.

Claim Objections

2. Claim 18 is objected to because of the following informalities:

In line 1 of the claim, "**wherein said wherein**" needs to be changed to "**wherein**".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claim 1, "an offboard web-based data visualization system" is a new matter. Throughout the disclosure, it disclosed an web-based data visualization system. However, the disclosure did not specifically describe that the web-based data visualization system is not on the

vehicle (i.e. offboard). Applicant is requested to provide the support from the disclosure for the offboard web-based data visualization system.

Other claims are also rejected based on their dependency of the defected parent claim.

Claim Rejections - 35 USC § 103

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

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1, 3, 5-11, 13-18, 21-23, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Tzamaloukas (20040230345) in view of Schuyler (6,429,773) and Wilson et al (5,295,188).

Regarding claim 1, Tzamaloukas discloses a real time vehicle communications system, comprising: an interface unit configured to communicate with an onboard vehicle performance system and an onboard vehicle positioning system (Fig 3, Fig 8 "136"; [0041]+); a processor unit

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(i.e. processor/microprocessor) connected to the interface unit (Fig 3 “40”; Fig 8 “138”; [0041]; [0042]); a memory unit (i.e. memory) connected to the processor unit (Fig 3 “42”; [0041]; [0042]); a communications unit (i.e. communication module, radio module, wireless communication, communication protocols) connected to the processor unit, the communications unit being configured for wireless communication (Fig 3 “66”; Fig 8 “140”; [0045]+); and an offboard web-based data visualization system (i.e. central server, egress points) in communication with the communications unit (Fig 4, 6; [0028]; [0029]; [0033]; [0034]; [0039]; [0049]+); wherein the processor unit is configured to: store data from the vehicle positioning system and the vehicle performance system in the memory unit (Fig 3 “44”; [0041]+); transmit at least some information from the memory unit, via the communications unit, to: one or more peer vehicles outside the vehicle under the direction of a user (Fig 1 “12”; [0028]+); and one or more base stations outside the vehicle (Fig 1 “14, 16”; [0028]+); and transmit the information to the web-based data visualization system via the communications unit ([0056]+).

Still regarding claim 1, Tzamaloukas does not explicitly disclose an offboard web-based data visualization system comprising a display unit wherein the web-based data visualization system is configured to generate, on the display unit, a graphical representation of a dashboard of a vehicle on which the vehicle communication system is installed, wherein the dashboard reflects information from the onboard vehicle performance system. Schuyler teaches in the same field of endeavor in an offboard web-based data visualization system (i.e. desktop computer) comprising a display unit (i.e. computer monitor) (Fig 2 “43”, col 1, lines 5-10; col 5, lines 43-50) wherein the web-based data visualization system is configured to generate, on the display unit, a graphical representation of a dashboard of a vehicle on which the vehicle communication system

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is installed, wherein the dashboard reflects information from the onboard vehicle performance system (Fig 3-6; col 4, line 51 – col 5, line 9; at least col 7, line 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include such offboard web-based data visualization system and display unit as taught by Schuyler in the system Tzamaloukas for effectively diagnose and determine a vehicle status remotely and provide proper maintenance information of a vehicle to a user.

Also regarding claim 1, Tzamaloukas does not explicitly disclose the communication with the one or more peer vehicles is conducted using public key cryptography. Wilson et al teach in the same field of endeavor the public key cryptography (Abstract; col 3+). In addition, public key cryptography is well known in the communication art for encryption, decryption, and authentication and security access. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the public key cryptography as taught by Wilson in the system of Tzamaloukas since it is well known in the art and to provide better communication between the host vehicle and the peer vehicles by preventing unauthorized access to the vehicle thus improve the security of shared information of the vehicle.

Regarding claims 3 and 16, Tzamaloukas discloses the web based data visualization system comprises a map database (i.e. geographic database) stored thereon (Fig 6 “96, 98, 100, 102”; [0063]+; [0102]+). Tzamaloukas does not explicitly discloses a display unit of the web based data visualization system; thus Tzamaloukas does not discloses the web-based data visualization system is configured to generate a visual map on the display unit, wherein the map indicates a location of the vehicle. Schuyler teaches in the same field of endeavor of retrieving a vehicle position on the web based data visualization system remote computer (col 1, lines 5-10;

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col 1, line 64 – col 2, line 10; at least col 3, line 52). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the display unit to display a location of the vehicle as taught by Schuyler with the map database of Tzamaloukas to generate a visual map indicating a location of the vehicle.

Regarding claim 5, Tzamaloukas discloses the communications unit is configured to act as an access point for at least one user device, wherein the access point connects the user device with a wireless network outside the vehicle ([0043]; [0045]).

Regarding claim 6, Tzamaloukas discloses the access point communicates with the user device via a wireless or wired connection (Fig 4 “66”; [0049]).

Regarding claims 7 and 21, Tzamaloukas and Schuyler disclose the user device is selected from the combination of at least two selected from the group consisting of laptop computer, PDA, cell phone, networking device (Tzamaloukas - [0043]; [0045]+; Schuyler – col 5, line 43-45; col 8, line 65, col 11, lines 6-8).

Regarding claim 8, Tzamaloukas discloses the interface unit is configured to communicate with at least one onboard sensor not in communication with the onboard vehicle performance system (Fig 3 “56”; [0041]-[0048]).

Regarding claim 9, Tzamaloukas discloses the user is onboard the vehicle [Fig 1; [0028]].

Regarding claim 10, Tzamaloukas discloses the processor unit is configured to receive information from the one or more peer vehicles (Fig 1; [0028]-[0044]).

Regarding claim 11, Tzamaloukas discloses the processor unit is configured to transmit, to the web-based data visualization system, the information received from the one or more peer vehicles via the communications unit (Fig 1; [0028]-[0044]).

Regarding claim 13, Tzamaloukas discloses a real-time vehicle position and performance monitoring system, comprising: at least one vehicle communications system (Fig 1 “10, 12, 16”; a central server in communication with the vehicle communications system (Fig 1 “18”; Fig 2 “20”; [0039]+); the central server comprising: at least one central vehicle position database ([0031]; [0039]+) wherein the web-based data visualization system (i.e. egress points) in communication with the central server (Fig 1 “16”; Fig 4, 6; [0028]; [0029]; [0033]; [0034]; [0039]; [0049]+). However, Tzamaloukas does not explicitly disclose at least one central vehicle performance database. Schuyler teaches in the same field of endeavor the central server (i.e. home computer) comprising at least one central vehicle performance database (at least col 6, line 23; at least col 11, line 8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the central server comprising at least one central vehicle performance database as taught by Schuyler in the system of Tzamaloukas for remotely checking vehicle performance and providing proper maintenance information of a vehicle to a user.

Regarding claims 14 and 22, Tzamaloukas discloses the central server communicating with the vehicle communications system via a combination of wireless network and wired network ([0036]; [0049]; [0063]; [0087]).

Regarding claims 15 and 23, Tzamaloukas discloses the central vehicle position database is outside a vehicle (i.e. at central server) ([0031]; [0039]+). However, Tzamaloukas lacks the central vehicle performance database is outside a vehicle. Schuyler teaches in the same field of endeavor the central vehicle performance database is outside a vehicle (i.e. in home computer) (at least col 6, line 23; at least col 11, line 8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the central vehicle performance database

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is outside a vehicle as taught by Schuyler in the system of Tzamaloukas to allow checking vehicle performance remotely and providing proper maintenance information of a vehicle to a user.

Regarding claim 17, Tzamaloukas does not explicitly disclose a display unit of the offboard web-based data visualization system; thus Tzamaloukas does not disclose the web-based data visualization system is configured to display information from the central vehicle performance database or the vehicle central vehicle position database or both. Schuyler teaches in the same field of endeavor in the web-based data visualization system (i.e. desktop computer) is configured to display information from the central vehicle performance database or the vehicle central vehicle position database or both (Fig 2 “43”, Fig 3-6; col 1, lines 5-10; col 4, line 52 – col 5, line 9; at least col 7, line 1; at least col 11, line 8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include such web-based data visualization system as taught by Schuyler in the system Tzamaloukas for effectively diagnose and determine a vehicle status remotely and provide proper maintenance information of a vehicle to a user.

Regarding claim 18, Tzamaloukas does not explicitly disclose the dashboard reflects information from the central vehicle performance database. Schuyler teaches in the same field of endeavor the dashboard reflects information from the central vehicle performance database (Fig 3; col 4, line 52 – col 5, line 9; at least col 7, line 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include such dashboard as taught by Schuyler in the system Tzamaloukas for remotely monitoring and checking vehicle performance and providing proper maintenance information of a vehicle to a user.

8. While patent drawings are not drawn to scale, relationships clearly shown in the drawings of a reference patent cannot be disregarded in determining the patentability of claims. See In re Mraz, 59 CCPA 866, 455 F.2d 1069, 173 USPQ 25 (1972).

Response to Arguments

9. Applicant's arguments with respect to claims 1, 3, 5-11, 13-18, and 21-23 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. The cited prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

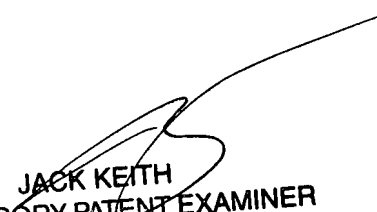
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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuong Nguyen whose telephone number is 571-272-3445. The examiner can normally be reached on 8:00 - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CN


JACK KEITH
SUPERVISORY PATENT EXAMINER

Notice of References Cited	Application/Control No. 11/283,913		Applicant(s)/Patent Under Reexamination LEWIS ET AL.	
	Examiner Chuong Nguyen		Art Unit 3663	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,429,773 B1	08-2002	Schuyler, Marc P.	340/425.5
*	B	US-6,842,695 B1	01-2005	Tu, Edgar Allan	701/213
*	C	US-7,174,243 B1	02-2007	Lightner et al.	701/33
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Index of Claims 	Application/Control No. 11283913	Applicant(s)/Patent Under Reexamination LEWIS ET AL.
	Examiner Nguyen, Chuong	Art Unit 3663

✓	Rejected
=	Allowed

-	Cancelled
÷	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

☐ Claims renumbered in the same order as presented by applicant			☐ CPA			☐ T.D.			☐ R.1.47		
CLAIM		DATE									
Final	Original	08/13/2007									
	1	✓									
	2	-									
	3	✓									
	4	-									
	5	✓									
	6	✓									
	7	✓									
	8	✓									
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	12	-									
	13	✓									
	14	✓									
	15	✓									
	16	✓									
	17	✓									
	18	✓									
	19	N									
	20	N									
	21	✓									
	22	✓									
	23	✓									

Search Notes 	Application/Control No. 11283913	Applicant(s)/Patent Under Reexamination LEWIS ET AL.
	Examiner Nguyen, Chuong	Art Unit 3663

SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES		
Search Notes	Date	Examiner
Previous Search Updated (see print out)	8/13/2007	CN

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	2	"20060161315"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/24 19:02
S2	47131	lewis.in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/24 17:46
S3	1	S2 near ron	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/24 17:47
S4	157	picone.in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/24 17:47
S5	1	S4 near joe	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/24 17:47
S6	4685	rowland.in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/24 17:47
S7	2	S6 near zach	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/24 17:48
S8	8613	jenkins.in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/24 17:48
S9	5	S8 near will	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/24 17:48

EAST Search History

S10	17	lazarou.in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/24 17:48
S11	15769	((701/1,29,30,33,207-215,300) or (340/988-993,995.1-995.18) or (342/357.06,357.08-357.1)).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2007/01/24 19:05
S12	2334	S11 and (automobile or vehicle) and processor and memory and communicat\$3 and (store or storing) and transmit\$3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:14
S13	265	S12 and (position or location) and (maintenance or performance) and display\$3 and map and server and station	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/13 18:55
S14	6	S13 and cryptography	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:17
S15	147	S13 and wireless and (wire or wired) and database	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:16
S16	6	S14 and S15	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/24 19:44
S17	67	S13 and dashboard	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:17
S18	16	S13 and (obd and gps and (gsm or gprs))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:17
S20	24899	(automobile or vehicle) and processor and memory and communicat\$3 and (store or storing) and transmit\$3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:14

EAST Search History

S21	2175	S20 and (position or location) and (maintenance or performance) and display\$3 and map and server and station	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:15
S22	1261	S21 and wireless and (wire or wired) and database	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:16
S23	248	S21 and cryptography	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:17
S24	384	S21 and dashboard	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:35
S25	26	S21 and (obd and gps and (gsm or gprs))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:18
S26	1	S22 and S23 and S24 and S25	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:35
S27	46	S22 and S23 and S24	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:36
S28	308	S21 and fleet	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:35
S29	1	S22 and S23 and S24 and S28	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:36
S30	135	S22 and S28	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:36

EAST Search History

S31	34	S22 and S24 and S28	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:36
S32	98	("4068175" "4207511" "4258421" "4365280" "4477764" "4481512" "4497038" "4602127" "4787040" "4811240" "4827520" "4868715" "4895326" "4911386" "5047614" "5054569" "5060229" "5104071" "5143343" "5157610" "5198696" "5227768" "5250789" "5303348" "5303393" "5316868" "5351187" "5400018" "5424524" "5424709" "5424727" "5442553" "5450321" "5455823" "5463567" "5479479" "5488283" "5555502" "5569997" "5574427" "5610376" "5640511" "5641953" "5664231" "5689245" "5732074" "5732368" "5737215" "5751956" "5754965" "5758300" "5767795" "5794164" "5794207" "5797134" "5797164" "5805442" "5808197" "5815071" "5837982" "5844473" "5857201" "5859628" "5859779" "5917405" "5918183" "5922040" "5948040" "5949345" "5952941" "5955970" "5956487" "5959577" "5970469" "5970474" "5974368" "5977908" "5979757" "5995898" "6009355" "6009363" "6028537" "6032084" "6032089" "6064970" "6101483" "6104315" "6111521" "6111539" "6131067" "6148212" "6154152" "6154658" "6163270" "6199045" "6233506" "6295492" "6338152").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2007/01/25 13:49
S33	163	("2001/0001319" "2001/0010541" "2002/0057340" "6175789" "6202008" "6253122" "6362730" "6526335" "6611740").URPN.	USPAT	OR	ON	2007/01/25 13:49

EAST Search History

S35	89	("20020103622" "3748894" "4128005" "4258421" "4418388" "4511886" "4524384" "4591823" "4602127" "4817418" "4926330" "4956777" "4965574" "4989146" "4994971" "5041976" "5050080" "5056023" "5123017" "5157610" "5164901" "5223844" "5289378" "5313407" "5325082" "5333240" "5343906" "5400018" "5406502" "5420794" "5442553" "5450321" "5463567" "5473540" "5479479" "5481906" "5515285" "5537336" "5539429" "5574427" "5581464" "5594740" "5633946" "5673305" "5680328" "5694322" "5712899" "5726660" "5732074" "5737215" "5754965" "5758300" "5774070" "5797134" "5808907" "5809161" "5809437" "5829782" "5850209" "5884202" "5928292" "5941918" "5955942" "5970481" "6018697" "6028537" "6055426" "6064970" "6104988" "6122573" "6128571" "6141611" "6144859" "6154693" "6167426" "6175787" "6263268" "6295492" "6338152" "6339736" "6356205" "6356822" "6459988" "6529159" "6552682" "6594579" "6604033" "6611740" "6636790").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2007/01/25 13:50
S36	55	("2004/0010358" "2004/0230345" "2004/0230370" "2004/0230373" "2005/0065678" "2005/0131585" "2005/0203673" "6697103" "6732031" "6738697").URPN.	USPAT	OR	ON	2007/01/25 13:50
S37	4166	"public key cryptography"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/26 10:46
S38	23	S37 and "701"/\$.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/26 10:55

EAST Search History

S39	82	S37 and ("340"/\$.ccls. or "342"/\$.ccls.)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/26 10:56
S40	10	(automobile or car or vehicle) and "OBD" and applet and servlet	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/15 16:34
S41	9	S40 and dashboard	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/13 18:59
S42	33	("4258421" "4787040" "4811240" "4827520" "5227768" "5303348" "5400018" "5442553" "5555502" "5640511" "5732074" "5732368" "5751956" "5781550" "5805442" "5808197" "5815071" "5844473" "5845077" "5917405" "5956487" "5961593" "5974368" "6009355" "6009363" "6028537" "6032089" "6130892" "6154152" "6161008" "6195366" "6266701" "6347085").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2007/08/13 19:52
S43	87	("2001/0033225" "2001/0051863" "2006/0161315" "6253122" "6362730" "6370449" "6507810" "6754183" "6975612").URPN.	USPAT	OR	ON	2007/08/13 19:52
S44	31	((web near2 (track\$3 or monitor\$3 or access\$4)) with (vehicle or car or automobile)) and (vehicle near dashboard)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/15 17:17
S45	108	(web near2 (track\$3 or monitor\$3 or access\$4)) and ((vehicle or car or automobile) near dashboard)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/15 18:04

EAST Search History

S46	53	("4723212" "4910672" "5173851" "5214582" "5491418" "5492986" "5612868" "5642284" "5757645" "5781871" "5787367" "5832457" "5844473" "5917405" "5931878" "6009355" "6073062" "6150925" "6169943" "6246935" "6259362").PN. OR ("6429773"). URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2007/08/15 18:03
S47	14	S46 and dashboard	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/08/15 18:04

DOCKET NO. 2343-199

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: Ron LEWIS, et al. ART UNIT: 3663
SERIAL NO.: 11/283,913 EXAMINER: Chuong P. Nguyen
CONFIRMATION NO.: 6521
FILING DATE: November 22, 2005
FOR: VEHICLE POSITION AND PERFORMANCE TRACKING SYSTEM
USING WIRELESS COMMUNICATION

AMENDMENT

COMMISSIONER FOR PATENTS
PO BOX 1450
ALEXANDRIA, VA 22313-1450

SIR:

Responsive to the outstanding Office Action dated February 2, 2007, entry of the
following amendments is respectfully requested.

The Director of the USPTO is hereby authorized to charge any additional fees under
37 C.F.R. Sections 1.16 and 1.7 and credit any overpayment to Deposit Account 50-1442.

IN THE SPECIFICATION

Please replace the 2nd full paragraph on page 5 with the following:

FIG. 1 shows an overview of one embodiment of the VPPTS 100. Vehicles 10, 20, 30 may wirelessly communicate with each other using P2P, or wirelessly communicate with one or more base servers 40, 50. The base servers 40, 50 may communicate physically or wirelessly to another base server or physically or wirelessly to the Internet or any other network, such as a circuit switched or packet switched network. The base servers 40, 50 may communicate through the Internet or other network with one or more central server 70. In one embodiment, the communication with one or more peer vehicles is conducted using public key cryptography.

Please replace the 6th paragraph on page 9 with the following:

The processor subsystem 240 (including a memory 240a in which a map database is stored) must have an operating system and a communication protocol stack and may have one or more of the following specifications:

Please replace the last paragraph on page 10 with the following:

In FIG. 2, one embodiment of the vehicle communicator system is shown. In the figure, circles are described on the outer perimeter of the drawing (the outer perimeter figuratively symbolizing a box or case that contains the blocks and the circles figuratively

symbolize the various interfaces by which data, electrical signals, power, grounding, and the like are passed). The circles 211-214 on the left side of the drawing connected to the "I/O Block" 210 represent various inputs and outputs. These may include, for example, on or more of OBD-II data, video and/or camera data, audio data, vehicle data, position data, operator voice data, and the like, or any combination thereof. The circles ~~231-235~~ 231-233 on the right side of the drawing represent various communication signals such as, for example, to and from one or more other vehicles, to and from one or more database servers, to and from one or more central servers 70. The circles 221-223 at the bottom of the figure may represent various power and switching sources and/or controls.

IN THE CLAIMS

1. (Currently Amended) A real time vehicle communications system, comprising:
an interface unit configured to communicate with an onboard vehicle performance system
and an onboard vehicle positioning system;
a processor unit connected to the interface unit;
a memory unit connected to the processor unit;
a communications unit connected to the processor unit, the communications unit being
configured for wireless communication; and

an offboard web-based data visualization system, comprising a display unit, in
communication with the communications unit,

wherein the processor unit is configured to:

store data from the vehicle positioning system and the vehicle performance
system in the memory unit, [[and]]

transmit at least some information from the memory unit, via the communications
unit, to:

one or more peer vehicles outside the vehicle under the direction of
a user; and one or more base stations outside the vehicle, and

transmit said information to the web-based data visualization system via the
communications unit;

wherein the web-based data visualization system is configured to generate, on the display
unit, a graphical representation of a dashboard of a vehicle on which the vehicle communication
system is installed, wherein the dashboard reflects information from the onboard vehicle
performance system; and

wherein communication with the one or more peer vehicles is conducted using public key cryptography.

2. (Canceled).
3. (Currently Amended) The system of ~~claim 2~~, claim 1, wherein the ~~memory unit~~ web based data visualization system further comprises a map database stored thereon, and wherein the ~~processor unit~~ web-based data visualization system is further configured to generate a visual map on said display unit, wherein the map indicates a location of the vehicle.
4. (Canceled).
5. (Original) The system of claim 1, wherein the communications unit is further configured to act as an access point for at least one user device, wherein the access point connects the user device with a wireless network outside the vehicle.
6. (Currently Amended) The system of ~~claim 1~~, claim 5, wherein the access point communicates with the user device via a wireless or wired connection.
7. (Currently Amended) The system of ~~claim 1~~, claim 5, wherein the user device is selected from the group consisting of laptop computer, PDA, cell phone, networking device, or a combination thereof.
8. (Original) The system of claim 1, wherein the interface unit is further configured to communicate with at least one onboard sensor not in communication with the onboard vehicle performance system.
9. (Original) The system of claim 1, wherein the user is onboard the vehicle.
10. (Original) The system of claim 1, wherein the processor unit is further configured to receive information from the one or more peer vehicles.

11. (Currently Amended) The system of claim 10, ~~further comprising a display unit connected to the communications unit, and~~ wherein the processor unit is further configured to transmit, to the ~~display unit~~ web-based data visualization system, the information received from the one or more peer vehicles via the communications unit.

12. (Canceled).

13. (Currently Amended) A real-time vehicle position and performance monitoring system, comprising:

at least one vehicle communications system of claim 1;

a central server in communication with said vehicle communications system, said central server comprising:

at least one central vehicle position database, and

at least one central vehicle performance database; ~~and~~

~~at least one~~ wherein the web-based data visualization system in communication with the central server.

14. (Original) The system of claim 13, wherein the central server communicates with said vehicle communications system via at least network selected from the group consisting of wireless network, wired network, or a combination thereof.

15. (Original) The system of claim 13, wherein one or both of the central vehicle position database and the central vehicle performance database are outside a vehicle on which the vehicle communications system is installed.

16. (Original) The system of claim 13, wherein said web-based data visualization system comprises a map database and is configured to generate a visual map on a display,

wherein the map indicates a location of a vehicle on which the at least one vehicle communications system is installed.

17. (Currently Amended) The system of claim 13, wherein said web-based data visualization system is further configured to display information from the central vehicle performance database or the vehicle central vehicle position database or both.

18. (Currently Amended) The system of claim 13, wherein said ~~web-based data visualization system is configured to generate, on a display, a graphical representation of a dashboard of a vehicle on which the at least one vehicle communications system is installed,~~ wherein the dashboard reflects information from the central vehicle performance database.

19. (Withdrawn, Currently Amended) A method for real time vehicle communications comprising the steps of:

receiving vehicle performance data from an onboard vehicle performance system and vehicle position data from an onboard vehicle positioning system;

storing at least a portion of vehicle performance data and/or at least a portion of the vehicle position data in a memory unit;

transmitting a first portion of information from the memory unit to one or more base stations outside the vehicle; and

transmitting a second portion of information from the memory unit to one or more peer vehicles outside the vehicle under the direction of a user.

20. (Withdrawn) The method of claim 19, wherein the first and second portion are not the same.

21. (Currently Amended) The system of ~~claim 1~~, claim 5, wherein the user device is a combination of at least two selected from the group consisting of laptop computer, PDA, cell phone, and networking device.

22. (Previously Presented) The system of claim 13, wherein the central server communicates with said vehicle communications system via at least a combination of wireless network and wired network.

23. (Previously Presented) The system of claim 13, wherein both of the central vehicle position database and the central vehicle performance database are outside a vehicle on which the vehicle communications system is installed.

IN THE DRAWINGS

Submitted herewith are revised Figs. 1 and 2. Approval of the drawing changes is respectfully requested.

REMARKS

Claims 2, 4 and 12 have been canceled and their subject matter has been incorporated into claim 1. Claims 1, 3, 5-11 and 13-23 remain pending in the application. Claims 19 and 20 are withdrawn.

Objections to Drawings

The drawings were objected to because not every feature of the claims is shown in the drawings. Fig. 1 has been amended to show a map database 75a as part of the web based visualization system 75. Support for this change can be found at page 7, lines 17-21. Fig. 2 has been amended to include a memory 240a attached to the processor block 240, an onboard sensor 214 not in communication with the onboard vehicle performance system connected to the I/O block 220, and a display 231 (which forms a part of the web based visualization system of Fig. 1) in wireless communication with the communication block 230. Support for these changes can be found in the specification at, e.g., page 18 in original claim 1 (memory attached to processor), at page 6, lines 20-22 (onboard sensor), and a page 7, lines 17-21 (web based visualization including display of dashboard). Applicants respectfully submit that the other features of the claims identified by the examiner are already shown in the drawings. In particular, the processor unit is shown in Fig. 2 as the processor block 240; the access point is shown as the communication block 230 of Fig. 2. The “user device” is not an element of claim 5; rather, claim 5 requires the communications block to act as an access point for a user device. Accordingly, applicants respectfully submit that it is not necessary to show a user device in the Figures.

Rejections Under 35 U.S.C. § 112

Claim 12 stands rejected under 35 U.S.C. § 112 due to failure to include a description of public key cryptography in the specification. The specification has been amended herein to include this description. No new matter has been added as this feature can be found in the originally filed claims. Withdrawal of the rejection is respectfully requested.

Rejections Under 35 U.S.C. § 102

Claims 1-3, 5 and 11 stand rejected under 35 U.S.C. § 102 as being anticipated by Tzamaloukas. This rejection is respectfully traversed. Claim 1 has been amended to include the elements of claims 4 and 12, which are acknowledged in the office action as not being found in Tzamaloukas. Accordingly, withdrawal of the rejection of claims 1-3, 5 and 11 is respectfully requested with respect to the claims as amended.

Rejections Under 35 U.S.C. § 103

Claims 4 and 12 were rejected in the office action as being obvious over the combination of Tzamaloukas and Razavi. This rejection as applied to amended claim 1 is respectfully traversed. Claim 1 requires “an offboard web based data visualization system, comprising a display unit” that is “configured to generate, on the display unit, a graphical representation of a dashboard of a vehicle.” In contrast, Razavi’s “virtual dashboard 54” is generated onboard the vehicle for use by the driver. See, e.g., col. 10, lines 46-65. Nothing in Razavi discloses an offboard dashboard display as required by claim 1. Accordingly, claim 1 defines patentable subject matter for at least this reason.

Claim 12, which has also been incorporated into claim 1, was rejected as obvious over the combination of Tzamaloukas and Wilson. This rejection is also respectfully traversed. The office action states that incorporating public key cryptography would have been obvious “to

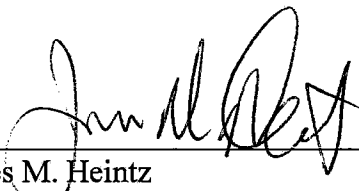
provide better communication.” However, the office action does not explain how such communication would be better. In the absence of any reasoning as to why such communications are better, there is no prima facie case of obviousness. Applicants note that the recent Supreme Court decision in *KSR Int’l Co. v. Teleflex Inc.*, No. 04-1350 (April 30, 2007), explicitly requires articulation of the basis on which a case of obviousness is based, and the articulation must be more than mere conclusory statements. *Id.* at 14.

Claims 13-17 and 21-23 were also rejected as being obvious over Tzamaloukas and Lowrey. This rejection is respectfully traversed. Claim 13, from which claims 14-17 and 22-23 depend, incorporates the limitations of claim 1. Claim 21 depends from claim 5, which in turn depends from claim 1. Thus, each of these claims includes the requirement for an off-board graphical dashboard display. This feature is not found in Tzamaloukas, and Lowrey does not cure this deficiency as nothing in Lowrey discloses or suggests such a display. Rather, Lowrey simply discloses the display of maintenance information. Accordingly, withdrawal of the rejections of claims 13-17 and 21-23 is also respectfully requested.

In light of the above, Applicants submit that this application is now in condition for allowance and therefore request favorable consideration. If any issues remain which the Examiner feels may be best resolved through a personal or telephonic interview, the Examiner is respectfully requested to contact Applicants counsel at the telephone number below.

Respectfully submitted,

DLA PIPER US LLP



James M. Heintz
Registration No. 41,828

1200 Nineteenth Street, N.W.
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Telephone No. 202.861.3900
Facsimile No. 202.223.2085

Figure 1

100

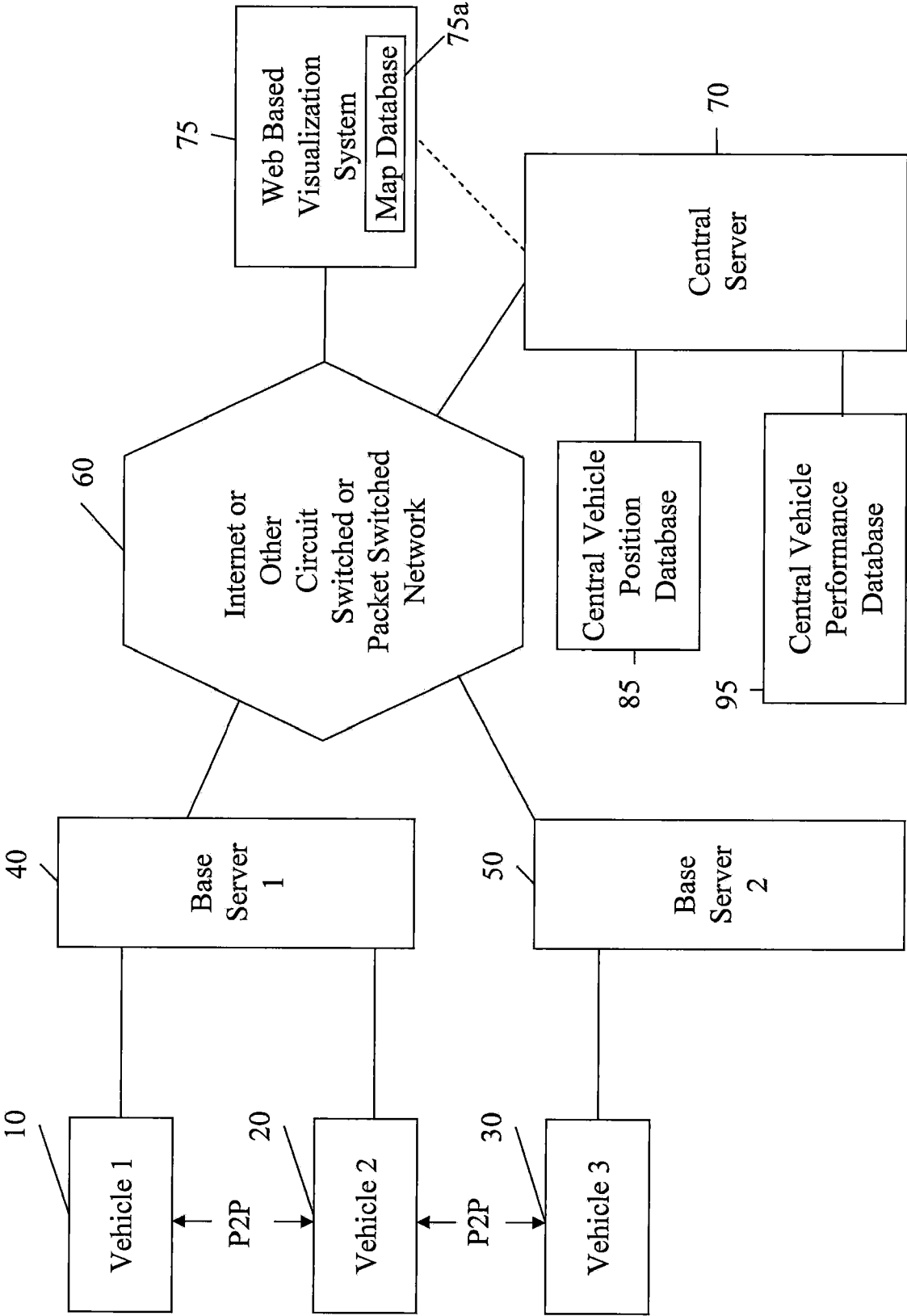
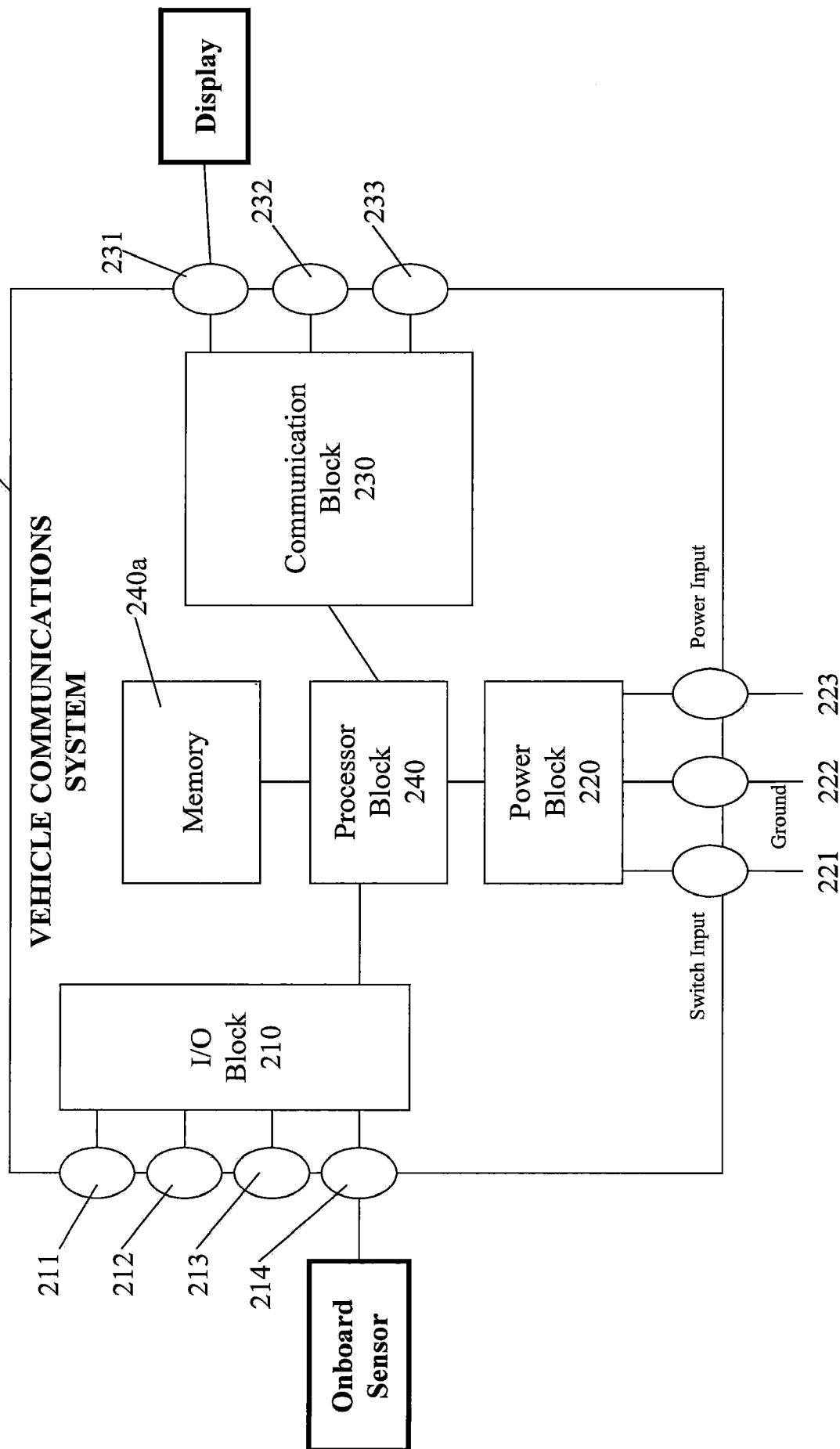


Figure 2

200



Electronic Patent Application Fee Transmittal

Application Number:	11283913			
Filing Date:	22-Nov-2005			
Title of Invention:	Vehicle position and performance tracking system using wireless communication			
First Named Inventor/Applicant Name:	Ron Lewis			
Filer:	James Heintz/Allison Ruifrok			
Attorney Docket Number:	2343-199			
Filed as Small Entity				
Utility Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Extension - 1 month with \$0 paid	2251	1	60	60

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				60

Electronic Acknowledgement Receipt

EFS ID:	1837227
Application Number:	11283913
International Application Number:	
Confirmation Number:	6521
Title of Invention:	Vehicle position and performance tracking system using wireless communication
First Named Inventor/Applicant Name:	Ron Lewis
Correspondence Address:	Patent Group DLA PIPER RUDNICK GRAY CARY US LLP 1200 Nineteenth Street, N.W. - Washington DC 20036-2412 US 2028613900 -
Filer:	James Heintz/Allison Ruifrok
Filer Authorized By:	James Heintz
Attorney Docket Number:	2343-199
Receipt Date:	04-JUN-2007
Filing Date:	22-NOV-2005
Time Stamp:	17:51:10
Application Type:	Utility

Payment information:

Submitted with Payment	yes
Payment was successfully received in RAM	\$ 60
RAM confirmation Number	2513

Deposit Account	501442
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.16 and 1.17	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)	Multi Part /.zip	Pages (if appl.)
1	Extension of Time	2343199OneMonthExtension ofTime.pdf	41948	no	1
Warnings:					
Information:					
2		2343199Amendmentinrespo nseto020207OA.pdf	431154	yes	15
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Amendment - After Non-Final Rejection		1	1	
	Specification		2	3	
	Claims		4	8	
	Drawings		9	9	
	Applicant Arguments/Remarks Made in an Amendment		10	13	
	Drawings		14	15	
Warnings:					
Information:					
3	Fee Worksheet (PTO-06)	fee-info.pdf	8170	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			481272		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

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.

National Stage of an International Application under 35 U.S.C. 371

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.

New International Application Filed with the USPTO as a Receiving Office

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.

DOCKET NO.: 2343-199

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: Ron LEWIS, et al.

ART UNIT: 3663

SERIAL NO.: 11/283,913

EXAMINER: Chuong P. Nguyen

FILING DATE: November 22, 2005

FOR: VEHICLE POSITION AND PERFORMANCE TRACKING SYSTEM USING WIRELESS
COMMUNICATION

REQUEST FOR EXTENSION OF TIME UNDER 37 C.F.R. 1.136

COMMISSIONER FOR PATENTS
PO BOX 1450
ALEXANDRIA, VA 22313-1450

SIR:

It is hereby requested that a ☒ one ☐ two ☐ three ☐ four ☐ five

☐ second ☐ third ☐ fourth ☐ fifth (a ____-month extension and fee having been filed on _____)

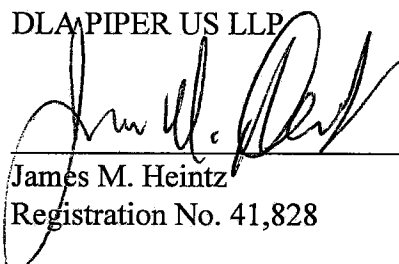
month extension of time be granted to June 2, 2007 (Saturday) for:

- ☒ filing a response to the Official Action dated: February 2, 2007
- ☐ responding to the requirements in the Notice of Allowability dated:
- ☐ filing the Formal Drawings. The Issue Fee due has been timely filed.
- ☐ responding to the Notice to File Missing Parts of Application dated:
- ☐ filing a Notice of Appeal. A timely response to the final rejection, due has been filed.
- ☐ filing an Appeal Brief. A Notice of Appeal was filed on:
- ☐

The required fee of \$60.00 may be made against the Attorney of Record's Deposit Account No. 50-1442.

Respectfully submitted,

DLA PIPER US LLP



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/283,913	11/22/2005	Ron Lewis	2343-199	6521

7590 02/02/2007
Patent Group
DLA PIPER RUDNICK GRAY CARY US LLP
1200 Nineteenth Street, N.W.
Washington, DC 20036-2412

EXAMINER

NGUYEN, CHUONG P

ART UNIT	PAPER NUMBER
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3663

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/02/2007	PAPER

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

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

11/283,913

Applicant(s)

LEWIS ET AL.

Examiner

Chuong Nguyen

Art Unit

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

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance 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.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 19 and 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 21-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 November 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 3/30/06

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of invention I, species A5, B3, and C3 in the reply filed on 12/08/2006 is acknowledged. The traversal is on the ground(s) that the search and examination of an entire application can be made without serious burden on the Examiner. This is not found persuasive because as stated in section I of the previous Office Action on 11/08/2006, each invention has separate classification; therefore, requires different field of search. See MPEP § 808.02. Clearly, a burden exists when more than one invention and requires numerous class / subclass searches. In addition, as stated in section 5 of the previous Office Action, if applicant traverses on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

Since applicant fails to provide this information, the requirement is still deemed proper and is therefore made FINAL.

2. Claims 19 and 20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 12/08/2006.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the features below must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

- a. a processor unit connected to the interface unit
- b. a memory unit connected to the processor unit
- c. a display unit connected to the communication unit
- d. a map database stored in the memory unit
- e. access point connects the user device with a wireless network outside the vehicle
- f. the user device
- g. onboard sensor not in communication with the onboard vehicle performance system

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet"

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pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Fig 1, numeral 60, 85, 95. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. The disclosure is objected to because of the following informalities:

On page 11, line 1 – "231-235" needs to be changed to "231-233".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claim 12 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claim 12, “public key cryptography” fails to comply with the written description requirement because it was not described in the specification.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1-3, 5-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Tzamaloukas (20040230345).

Regarding claim 1, Tzamaloukas discloses a real time vehicle communications system, comprising: an interface unit configured to communicate with an onboard vehicle performance system and an onboard vehicle positioning system (Fig 3, 4, 6, 8; [0041]+); a processor unit (i.e. processor/microprocessor) connected to the interface unit (Fig 3 “40”; Fig 4 “58”; Fig 6 “108”; Fig 8 “138”; [0041]; [0042]); a memory unit (i.e. memory) connected to the processor unit (Fig 3

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“42”; Fig 4 “60”; [0041]; [0042]); a communications unit (i.e. communication module, radio module, wireless communication, communication protocols) connected to the processor unit, the communications unit being configured for wireless communication (Fig 3 “66”; Fig 4 “50”; Fig 6 “110”; Fig 8 “140”; [0045]+); wherein the processor unit is configured to: store data from the vehicle positioning system and the vehicle performance system in the memory unit (Fig 3 “44”; Fig 4 “62”; [0041]+), and transmit at least some information from the memory unit, via the communications unit, to: one or more peer vehicles outside the vehicle under the direction of a user (Fig 1 “12”; [0028]+); and one or more base stations outside the vehicle (Fig 1 “10”; [0029]+).

Regarding claim 2, Tzamaloukas discloses a display unit (i.e. input/output module) connected to the communications unit, and wherein the processor unit is further configured to transmit said information to the display unit via the communications unit (Fig 3 “46”; [0043]; [0102]).

Regarding claim 3, Tzamaloukas discloses the memory unit further comprises a map database stored thereon, and wherein the processor unit is further configured to generate a visual map on said display unit, wherein the map indicates a location of the vehicle ([0005]; [0047]-[0061]; [0099]).

Regarding claim 5 and as best understood, Tzamaloukas discloses the communications unit is further configured to act as an access point for at least one user device, wherein the access point connects the user device with a wireless network outside the vehicle ([0043]; [0045]).

Regarding claim 6, Tzamaloukas discloses the access point communicates with the user device via a wireless or wired connection (Fig 4 “66”; [0049]).

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Regarding claim 7 and as best understood, Tzamaloukas discloses the user device is selected from the combination of laptop computer, PDA, cell phone, networking device ([0043]; [0045]).

Regarding claim 8 and as best understood, Tzamaloukas discloses the interface unit is further configured to communicate with at least one onboard sensor not in communication with the onboard vehicle performance system (Fig 3 "56"; [0041]-[0048]).

Regarding claim 9, Tzamaloukas discloses the user is onboard the vehicle [Fig 1; [0028]].

Regarding claim 10, Tzamaloukas discloses the processor unit is further configured to receive information from the one or more peer vehicles (Fig 1; [0028]-[0044]).

Regarding claim 11, Tzamaloukas discloses a display unit (i.e. input/output module) connected to the communications unit, and wherein the processor unit is further configured to transmit, to the display unit, the information received from the one or more peer vehicles via the communications unit ([0028]-[0044]).

Claim Rejections - 35 USC § 103

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

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

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evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tzamaloukas as applied to claim 2 above, and further in view of Razavi et al (6,253,122).

Regarding claim 4, Tzamaloukas disclose the processor unit. However, Tzamaloukas lacks the processor unit configuring to generate a graphical representation of the vehicle dashboard on said display unit, wherein the dashboard reflects information from the onboard vehicle performance system. Razavi et al teach in the same field of endeavor the processor unit configuring to generate a graphical representation of the vehicle dashboard on said display unit, wherein the dashboard reflects information from the onboard vehicle performance system (Abstract; Fig 2-6; col 6+). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the processor unit configuring to generate a graphical representation of the vehicle dashboard on said display unit, wherein the dashboard reflects information from the onboard vehicle performance system as taught by Razavi et al in the system of Tzamaloukas for efficiently tracking / diagnosing the performance of the vehicle.

13. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tzamaloukas as applied to claim 1 above, and further in view of Wilson et al (5,295,188).

Regarding claim 12 and as best understood, Tzamaloukas lack the public key cryptography. Wilson et al teach in the same field of endeavor the public key cryptography (Abstract; col 3+). In addition, public key cryptography is well known in the art for encryption,

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decryption, and authentication. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the public key cryptography as taught by Wilson in the system of Tzamaloukas since it is well known in the art and to provide better communication between the host vehicle and the peer vehicles.

14. Claims 13-17, 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tzamaloukas in view of Lowrey et al (6,611,740).

Regarding claim 13, Tzamaloukas discloses a real-time vehicle position and performance monitoring system, comprising: at least one vehicle communications system (Fig 1 “10, 12, 16”; a central server in communication with said vehicle communications system (Fig 1 “18”; Fig 2 “20”; [0039]+); the central server comprising: at least one central vehicle position database ([0039]+). However, Tzamaloukas lacks the web-based data visualization system in communication with the central server; the central server comprising at least one central vehicle performance database. Lowrey et al teach in the same field of endeavor the web-based data visualization system (i.e. website and internet) in communication with the central server (i.e. host computer) (Fig 1, 3 “5, 6, 7”; col 6, line 25 – col 11, line 4); the central server comprising at least one central vehicle performance database (Fig 5-7; col 8, line 31 – col 11, line 4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the central server comprising at least one central vehicle performance database as taught by Lowrey et al in the system of Tzamaloukas for better tracking and recording the vehicle performance and providing the information to the vehicle.

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Regarding claims 14 and 22, Tzamaloukas discloses the central server communicating with the vehicle communications system via wireless network and wired network ([0036]; [0049]; [0063]; [0087]).

Regarding claims 15 and 23, Tzamaloukas the central vehicle position database is outside a vehicle (i.e. at central server) ([0039]+). However, Tzamaloukas lacks the central vehicle performance database is outside a vehicle. It would be obvious that Lowrey et al also disclose the central vehicle position database is outside a vehicle (col 3, line 64 – col 4, line 2; col 10, line 56 – col 11, line 4). In addition, Lowrey et al teach in the same field of endeavor the central vehicle performance database is outside a vehicle (Fig 5-7; col 2, lines 43-44; col 8, line 31 – col 11, line 4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the central vehicle performance database as taught by Lowrey et al in the system of Tzamaloukas for better monitoring and tracking a vehicle performance by maintaining a central database.

Regarding claim 16, Tzamaloukas lacks the web-based data visualization system. Lowrey et al teach in the same field of endeavor the web-based data visualization system comprising a map database and is configured to generate a visual map on a display, wherein the map indicates a location of a vehicle on which the at least one vehicle communications system is installed (Fig 1, 3 “5, 6, 7”; col 3, line 64 – col 4, line 2; col 6, line 25 – col 11, line 4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the web-based data visualization system comprising a map database and is configured to generate a visual map on a display, wherein the map indicates a location of a vehicle as taught by

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Lowrey et al in the system of Tzamaloukas for better monitoring and tracking a vehicle performance by maintaining a central database.

Regarding claim 17, Tzamaloukas lacks the web-based data visualization system.

Lowrey et al teach in the same field of endeavor the web-based data visualization system that is configured to display information from the central vehicle performance database and the vehicle central vehicle position database (Fig 1, 3 “5, 6, 7”; Fig 5-7; col 3, line 64 – col 4, line 2; col 6, line 25 – col 11, line 4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the web-based data visualization system that is configured to display information from the central vehicle performance database and the vehicle central vehicle position database as taught by Lowrey et al in the system of Tzamaloukas for better monitoring and tracking a vehicle performance by maintaining a central database.

Regarding claim 21 and as best understood, Tzamaloukas discloses the user device is a combination of at least two selected from the group consisting of laptop computer, PDA, cell phone, and networking device ([0043]; [0045]).

15. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tzamaloukas in view of Razavi et al and Lowrey et al.

Regarding claim 18, Tzamaloukas lacks web-based data visualization system is configured to generate, on a display, a graphical representation of a dashboard of a vehicle on which the at least one vehicle communications system is installed. Lowrey et al teach in the same field of endeavor the web-based data visualization system (Fig 1, 3 “5, 6, 7”; col 6, line 25 – col 11, line 4) and Razavi et al teach a display that generates a graphical representation of a dashboard of a vehicle on which the at least one vehicle communications system is installed

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(Abstract; Fig 2-6; col 6+). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the web-based data visualization system as taught by Lowrey et al that is configured to generate, on a display, a graphical representation of a dashboard of a vehicle as taught by Razavi et al in the system of Tzamaloukas for efficiently tracking / diagnosing the performance of the vehicle.

16. While patent drawings are not drawn to scale, relationships clearly shown in the drawings of a reference patent cannot be disregarded in determining the patentability of claims. See In re Mraz, 59 CCPA 866, 455 F.2d 1069, 173 USPQ 25 (1972).

Conclusion

17. The cited prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuong Nguyen whose telephone number is 571-272-3445. The examiner can normally be reached on 8:00 - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CN


JACK KEITH
SUPERVISORY PATENT EXAMINER

Form PTO 1449 (Modified)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		DOCKET NO. 2343-199		SERIAL NO. 11/283,913	
LIST OF REFERENCES CITED BY APPLICANT (Use Several Sheets if Necessary)		APPLICANT Ron LEWIS, et al.		FILING DATE November 22, 2005		GROUP ART UNIT 3662	
OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)							
CN	AA	Figueiredo, L., et al., "Towards the Development of Intelligent Transportation Systems," <i>IEEE Intelligent Transportation Systems Conference Proceedings</i> , Oakland, CA, pp. 1206-1211 (2001).					
	AB	Cai, J., et al., "General Packet Radio Service in GSM," <i>IEEE Communications Magazine</i> , pp. 122-131 (October 1997).					
	AC	Godavarty, S., et al., "Interfacing to the On-Board Diagnostic System," <i>IEEE</i> , pp. 2000-2004 (2000).					
	AD	Yunck, T., et al., "The Role of GPS in Precise Earth Observation," <i>IEEE</i> , pp. 251-258 (1988).					
	AE	Brittain, J., et al., <i>Tomcat: The Definitive Guide</i> , O'Reilly & Associates, Inc., Sebastopol, CA (2003).					
	AF	OnStar, Retrieved February 2, 2006, < http://www.onstar.com/us_english/jsp/index.jsp > (2006).					
	AG	First Responders, Retrieved February 2, 2006, < http://www.northcom.mil/index.cfm?fuseaction=s.firstresponders >.					
	AH	Wahab, A., et al., "A Low-Cost Yet Accurate Approach to a Vehicle Location Tracking System," <i>IEEE ICICS</i> , Singapore, pp. 461-465 (September 1997).					
	AI	Garmin, "What is GPS?," Retrieved February 2, 2006, < http://www.garmin.com/aboutGPS/index.html > (2006).					
	AJ	gsmworl.com, Retrieved February 2, 2006, < http://www.searchportal.information.com/index.mas?epl=UVsPWVALX >.					
	AK	Ni, Shaoji, "GPRS Network Planning on the Existing GSM System," <i>IEEE</i> , pp. 1432-1438 (2000).					
	AL	SAE J 1850 May 2001, "Class B Data Communications Network Interface," <i>Society of Automotive Engineers, Inc.</i> , 2004 SAE Handbook, SAE International (2004).					
	AM	SAE J 1962 April 2002, "Diagnostic Connector Equivalent to ISO/DIS 15031-3:December 14, 2001," <i>Society of Automotive Engineers, Inc.</i> , 2004 SAE Handbook, SAE International (2004).					
	AN	SAE J 1979 April 2002, "E/E Diagnostic Test Modes - Equivalent to ISO/DIS 15031-5:April 30, 2002," <i>Society of Automotive Engineers, Inc.</i> , 2004 SAE Handbook, SAE International (2004).					
	AO	SAE J 1708 October 1993, "Serial Data Communications Between Microcomputer Systems in Heavy-Duty Vehicle Applications," <i>Society of Automotive Engineers, Inc.</i> , 2004 SAE Handbook, SAE International (2004).					
	AP	Boyce, C.R., "A Four Station Controller Area Network," <i>IEEE Colloquium on Vehicle Networks for Multiplexing and Data Communication</i> , pp. 9/1-9/7 (December 1988).					
✓	AQ	English, K., et al., <i>Community Geography: GIS in Action</i> , ESRI Press, Redlands, California (2003).					
CN	AR	Welcome to MARIS, Retrieved February 2, 2006, < http://www.maris.state.ms.us/index.html > (2003).					
EXAMINER				DATE CONSIDERED 1/25/07			
*EXAMINER: Initial if reference is 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.							

Notice of References Cited	Application/Control No. 11/283,913	Applicant(s)/Patent Under Reexamination LEWIS ET AL.	
	Examiner Chuong Nguyen	Art Unit 3663	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-5,295,188 A	03-1994	Wilson et al.	380/30
*	B	US-6,253,122 B1	06-2001	Razavi et al.	701/1
*	C	US-6,362,730 B1	03-2002	Razavi et al.	340/438
*	D	US-6,611,740 B2	08-2003	Lowrey et al.	701/29
*	E	US-6,732,031 B1	05-2004	Lightner et al.	701/33
*	F	US-2004/0230370 A1	11-2004	Tzamaloukas, Assimakis	701/200
*	G	US-2004/0230345 A1	11-2004	Tzamaloukas, Assimakis	701/001
*	H	US-2005/0131585 A1	06-2005	Luskin et al.	701/001
*	I	US-2005/0203673 A1	09-2005	El-Hajj et al.	701/001
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

<i>Index of Claims</i> 	Application/Control No. 11283913	Applicant(s)/Patent Under Reexamination LEWIS ET AL.
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✓	Rejected
=	Allowed

-	Cancelled
÷	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

☐ Claims renumbered in the same order as presented by applicant			☐ CPA			☐ T.D.			☐ R.1.47		
CLAIM		DATE									
Final	Original	01/25/2007									
	1	✓									
	2	✓									
	3	✓									
	4	✓									
	5	✓									
	6	✓									
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	19	N									
	20	N									
	21	✓									
	22	✓									
	23	✓									

Search Notes 	Application/Control No. 11283913	Applicant(s)/Patent Under Reexamination LEWIS ET AL.
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SEARCHED			
Class	Subclass	Date	Examiner
701	1, 29, 30, 33, 207-215, 300	1/24/2007	CN
340	988-993, 995.1-995.18	1/24/2007	CN
342	357.06, 357.08-357.1	1/24/2007	CN

SEARCH NOTES		
Search Notes	Date	Examiner
Inventor Name Search (see print out)	1/24/2007	CN

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner



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Bib Data Sheet

CONFIRMATION NO. 6521

SERIAL NUMBER 11/283,913	FILING OR 371(c) DATE 11/22/2005 RULE	CLASS 701	GROUP ART UNIT 3663	ATTORNEY DOCKET NO. 2343-199
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APPLICANTS
 Ron Lewis, Mississippi State, MS;
 Joe Picone, Starkville, MS;
 Zach Rowland, Starkville, MS;
 Will Jenkins, Starkville, MS;
 Georgios Lazarou, Starkville, MS;

**** CONTINUING DATA *******
 This appln claims benefit of 60/629,552 11/22/2004

**** FOREIGN APPLICATIONS ******* NONE CN

IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** 12/29/2005 **** SMALL ENTITY ****

Foreign Priority claimed 35 USC 119 (a-d) conditions met Verified and Acknowledged	☐ yes ☒ no ☐ yes ☐ no ☐ Met after Allowance Examiner's Signature <i>Cheng</i> Initials CN	STATE OR COUNTRY MS	SHEETS DRAWING 7	TOTAL CLAIMS 20	INDEPENDENT CLAIMS 2
--	---	-------------------------------	----------------------------	---------------------------	--------------------------------

ADDRESS
 Patent Group
 DLA PIPER RUDNICK GRAY CARY US LLP
 1200 Nineteenth Street, N.W.
 Washington, DC20036-2412

TITLE
 Vehicle position and performance tracking system using wireless communication

FILING FEE RECEIVED 640	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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EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	2	"20060161315"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/24 19:02
S2	47131	lewis.in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/24 17:46
S3	1	S2 near ron	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/24 17:47
S4	157	picone.in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/24 17:47
S5	1	S4 near joe	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/24 17:47
S6	4685	rowland.in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/24 17:47
S7	2	S6 near zach	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/24 17:48
S8	8613	jenkins.in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/24 17:48
S9	5	S8 near will	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/24 17:48

EAST Search History

S10	17	lazarou.in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/24 17:48
S11	15769	((701/1,29,30,33,207-215,300) or (340/988-993,995.1-995.18) or (342/357.06,357.08-357.1)).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2007/01/24 19:05
S12	2334	S11 and (automobile or vehicle) and processor and memory and communicat\$3 and (store or storing) and transmit\$3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:14
S13	265	S12 and (position or location) and (maintenance or performance) and display\$3 and map and server and station	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:15
S14	6	S13 and cryptography	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:17
S15	147	S13 and wireless and (wire or wired) and database	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:16
S16	6	S14 and S15	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/24 19:44
S17	67	S13 and dashboard	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:17
S18	16	S13 and (obd and gps and (gsm or gprs))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:17
S20	24899	(automobile or vehicle) and processor and memory and communicat\$3 and (store or storing) and transmit\$3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:14

EAST Search History

S21	2175	S20 and (position or location) and (maintenance or performance) and display\$3 and map and server and station	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:15
S22	1261	S21 and wireless and (wire or wired) and database	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:16
S23	248	S21 and cryptography	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:17
S24	384	S21 and dashboard	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:35
S25	26	S21 and (obd and gps and (gsm or gprs))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:18
S26	1	S22 and S23 and S24 and S25	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:35
S27	46	S22 and S23 and S24	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:36
S28	308	S21 and fleet	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:35
S29	1	S22 and S23 and S24 and S28	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:36
S30	135	S22 and S28	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:36

EAST Search History

S31	34	S22 and S24 and S28	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/25 11:36
S32	98	("4068175" "4207511" "4258421" "4365280" "4477764" "4481512" "4497038" "4602127" "4787040" "4811240" "4827520" "4868715" "4895326" "4911386" "5047614" "5054569" "5060229" "5104071" "5143343" "5157610" "5198696" "5227768" "5250789" "5303348" "5303393" "5316868" "5351187" "5400018" "5424524" "5424709" "5424727" "5442553" "5450321" "5455823" "5463567" "5479479" "5488283" "5555502" "5569997" "5574427" "5610376" "5640511" "5641953" "5664231" "5689245" "5732074" "5732368" "5737215" "5751956" "5754965" "5758300" "5767795" "5794164" "5794207" "5797134" "5797164" "5805442" "5808197" "5815071" "5837982" "5844473" "5857201" "5859628" "5859779" "5917405" "5918183" "5922040" "5948040" "5949345" "5952941" "5955970" "5956487" "5959577" "5970469" "5970474" "5974368" "5977908" "5979757" "5995898" "6009355" "6009363" "6028537" "6032084" "6032089" "6064970" "6101483" "6104315" "6111521" "6111539" "6131067" "6148212" "6154152" "6154658" "6163270" "6199045" "6233506" "6295492" "6338152").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2007/01/25 13:49
S33	163	("2001/0001319" "2001/0010541" "2002/0057340" "6175789" "6202008" "6253122" "6362730" "6526335" "6611740").URPN.	USPAT	OR	ON	2007/01/25 13:49

EAST Search History

S35	89	("20020103622" "3748894" "4128005" "4258421" "4418388" "4511886" "4524384" "4591823" "4602127" "4817418" "4926330" "4956777" "4965574" "4989146" "4994971" "5041976" "5050080" "5056023" "5123017" "5157610" "5164901" "5223844" "5289378" "5313407" "5325082" "5333240" "5343906" "5400018" "5406502" "5420794" "5442553" "5450321" "5463567" "5473540" "5479479" "5481906" "5515285" "5537336" "5539429" "5574427" "5581464" "5594740" "5633946" "5673305" "5680328" "5694322" "5712899" "5726660" "5732074" "5737215" "5754965" "5758300" "5774070" "5797134" "5808907" "5809161" "5809437" "5829782" "5850209" "5884202" "5928292" "5941918" "5955942" "5970481" "6018697" "6028537" "6055426" "6064970" "6104988" "6122573" "6128571" "6141611" "6144859" "6154693" "6167426" "6175787" "6263268" "6295492" "6338152" "6339736" "6356205" "6356822" "6459988" "6529159" "6552682" "6594579" "6604033" "6611740" "6636790").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2007/01/25 13:50
S36	55	("2004/0010358" "2004/0230345" "2004/0230370" "2004/0230373" "2005/0065678" "2005/0131585" "2005/0203673" "6697103" "6732031" "6738697").URPN.	USPAT	OR	ON	2007/01/25 13:50
S37	4166	"public key cryptography"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/26 10:46
S38	23	S37 and "701"/\$.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/26 10:55

EAST Search History

S39	82	S37 and ("340"/\$.ccls. or "342"/\$.ccls.)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/26 10:56
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DOCKET NO.: 2343-199

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: Ron LEWIS, et al. ART UNIT: 3663
SERIAL NO.: 11/283,913 EXAMINER: Chuong P. Nguyen
CONFIRMATION NO.: 6521
FILING DATE: November 22, 2005
FOR: VEHICLE POSITION AND PERFORMANCE TRACKING
SYSTEM USING WIRELESS COMMUNICATION

RESPONSE TO RESTRICTION REQUIREMENT

COMMISSIONER FOR PATENTS
PO BOX 1450
ALEXANDRIA, VA 22313-1450

SIR:

In response to the Restriction Requirement dated November 8, 2006, the Applicants elect Group I, Claims 1-18. This election is made with traverse.

In response to the Election of Species Requirement, the Applicants elect species A5 from Group A, B3 from Group B, and C3 from Group C. Claims 1-23, as amended, read on the elected species. This election is made with traverse.

IN THE CLAIMS

1. (Original) A real time vehicle communications system, comprising:

an interface unit configured to communicate with an onboard vehicle performance system
and an onboard vehicle positioning system;

a processor unit connected to the interface unit;

a memory unit connected to the processor unit;

a communications unit connected to the processor unit, the communications unit being
configured for wireless communication;

wherein the processor unit is configured to:

store data from the vehicle positioning system and the vehicle performance
system in the memory unit, and

transmit at least some information from the memory unit, via the communications
unit, to:

one or more peer vehicles outside the vehicle under the direction of a user;

and

one or more base stations outside the vehicle.
2. (Original) The system of claim 1, further comprising a display unit connected to
the communications unit, and wherein the processor unit is further configured to transmit said
information to the display unit via the communications unit.
3. (Original) The system of claim 2, wherein the memory unit further comprises a
map database stored thereon, and wherein the processor unit is further configured to generate a
visual map on said display unit, wherein the map indicates a location of the vehicle.

4. (Original) The system of claim 2, wherein the processor unit is further configured to generate a graphical representation of the vehicle dashboard on said display unit, wherein the dashboard reflects information from the onboard vehicle performance system.

5. (Original) The system of claim 1, wherein the communications unit is further configured to act as an access point for at least one user device, wherein the access point connects the user device with a wireless network outside the vehicle.

6. (Original) The system of claim 1, wherein the access point communicates with the user device via a wireless or wired connection.

7. (Original) The system of claim 1, wherein the user device is selected from the group consisting of laptop computer, PDA, cell phone, networking device, or a combination thereof.

8. (Original) The system of claim 1, wherein the interface unit is further configured to communicate with at least one onboard sensor not in communication with the onboard vehicle performance system.

9. (Original) The system of claim 1, wherein the user is onboard the vehicle.

10. (Original) The system of claim 1, wherein the processor unit is further configured to receive information from the one or more peer vehicles.

11. (Original) The system of claim 10, further comprising a display unit connected to the communications unit, and wherein the processor unit is further configured to transmit, to the display unit, the information received from the one or more peer vehicles via the communications unit.

12. (Original) The system of claim 1, wherein communication with the one or more peer vehicles is conducted using public key cryptography.

13. (Original) A real-time vehicle position and performance monitoring system, comprising:
- at least one vehicle communications system of claim 1;
 - a central server in communication with said vehicle communications system, said central server comprising:
 - at least one central vehicle position database, and
 - at least one central vehicle performance database; and
 - at least one web-based data visualization system in communication with the central server.
14. (Original) The system of claim 13, wherein the central server communicates with said vehicle communications system via at least network selected from the group consisting of wireless network, wired network, or a combination thereof.
15. (Original) The system of claim 13, wherein one or both of the central vehicle position database and the central vehicle performance database are outside a vehicle on which the vehicle communications system is installed.
16. (Original) The system of claim 13, wherein said web-based data visualization system comprises a map database and is configured to generate a visual map on a display, wherein the map indicates a location of a vehicle on which the at least one vehicle communications system is installed.
17. (Original) The system of claim 13, wherein said web-based data visualization system is configured to display information from the central vehicle performance database or the vehicle central vehicle position database or both.

18. (Original) The system of claim 13, wherein said web-based data visualization system is configured to generate, on a display, a graphical representation of a dashboard of a vehicle on which the at least one vehicle communications system is installed, wherein the dashboard reflects information from the central vehicle performance database.

19. (Original) A method real time vehicle communications comprising the steps of:
receiving vehicle performance data from an onboard vehicle performance system and vehicle position data from an onboard vehicle positioning system;
storing at least a portion of vehicle performance data and/or at least a portion of the vehicle position data in a memory unit;
transmitting a first portion of information from the memory unit to one or more base stations outside the vehicle; and
transmitting a second portion of information from the memory unit to one or more peer vehicles outside the vehicle under the direction of a user.

20. (Currently Amended) The method of ~~claim 20~~, claim 19, wherein the first and second portion are not the same.

21. (New) The system of claim 1, wherein the user device is a combination of at least two selected from the group consisting of laptop computer, PDA, cell phone, and networking device.

22. (New) The system of claim 13, wherein the central server communicates with said vehicle communications system via at least a combination of wireless network and wired network.

23. (New) The system of claim 13, wherein both of the central vehicle position database and the central vehicle performance database are outside a vehicle on which the vehicle communications system is installed.

REMARKS

New Claims 21-23 have been added, which find support in the claims as originally filed. No new matter is believed to be added. Entry and favorable consideration are kindly requested.

The Applicants elect Group I, Claims 1-18. This election is made with traverse.

The Applicants elect species A5 from Group A, B3 from Group B, and C3 from Group C. Claims 1-23, as amended, read on the elected species. This election is made with traverse.

The Applicants kindly submit that a search of all the claims would not place an undue burden on the Office. M.P.E.P. §803 states that “[i]f the search and examination of an entire application can be made without serious burden, the examiner must examine it on the merits, even though it includes claims to independent or distinct inventions.” The Applicants kindly submit that many thousands of U.S. patents have issued in which more than the present number of claims have been searched. The Office cannot reasonably posit that a search of all the claims in this application would be burdensome.

Similarly, there is no prohibition against a claiming a reasonable number of species. 37 C.F.R. §1.141(a). The Office has not shown how the number of species, such as designated by the Office, is unreasonable.

For the reasons given above, the requirements of restriction and election are traversed, and their withdrawal is kindly requested.

The Applicants submit that the application is now in condition for examination on the merits. Early notification of such action is earnestly solicited. Should any question arise, the Examiner is invited to contact the undersigned representative by telephone at the number below.

Respectfully submitted,

DLA PIPER US LLP

A handwritten signature in black ink, appearing to read 'J. M. Heintz', is written over a horizontal line.

James M. Heintz
Registration No. 41,828

John K. Pike, Ph.D.
Registration No. 41,253

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Washington, D.C. 20036-2412
Telephone No. 202.861.3900
Facsimile No. 202.223.2085

WASHI\4855293v1

Electronic Patent Application Fee Transmittal

Application Number:	11283913			
Filing Date:	22-Nov-2005			
Title of Invention:	Vehicle position and performance tracking system using wireless communication			
First Named Inventor/Applicant Name:	Ron Lewis			
Filer:	John Kenton Pike/Wanda Ward			
Attorney Docket Number:	2343-199			
Filed as Small Entity				
Utility Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Claims in excess of 20	2202	3	25	75
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				75

Electronic Acknowledgement Receipt

EFS ID:	1361549
Application Number:	11283913
International Application Number:	
Confirmation Number:	6521
Title of Invention:	Vehicle position and performance tracking system using wireless communication
First Named Inventor/Applicant Name:	Ron Lewis
Correspondence Address:	Patent Group DLA PIPER RUDNICK GRAY CARY US LLP 1200 Nineteenth Street, N.W. - Washington DC 20036-2412 US 2028613900 -
Filer:	John Kenton Pike/Wanda Ward
Filer Authorized By:	John Kenton Pike
Attorney Docket Number:	2343-199
Receipt Date:	08-DEC-2006
Filing Date:	22-NOV-2005
Time Stamp:	13:45:44
Application Type:	Utility

Payment information:

Submitted with Payment	yes
Payment was successfully received in RAM	\$ 75
RAM confirmation Number	1510

Deposit Account	501442
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)	Multi Part /.zip	Pages (if appl.)
1	Response to Election / Restriction Filed	RespRR.pdf	211510	no	8

Warnings:

Information:

2	Fee Worksheet (PTO-875)	fee-info.pdf	8167	no	2
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Warnings:

Information:

Total Files Size (in bytes):	219677
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This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

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.

National Stage of an International Application under 35 U.S.C. 371

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.

11 19

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.

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-975 Effective December 8, 2004

Application or Docket Number

11283913

APPLICATION AS FILED - PART I

(Column 1)

(Column 2)

SMALL ENTITY

OR

OTHER THAN SMALL ENTITY

FOR	NUMBER FILED	NUMBER EXTRA
BASIC FEE (37 CFR 1.18(a), (b), or (c))	N/A	N/A
SEARCH FEE (37 CFR 1.18(d), (i), or (m))	N/A	N/A
EXAMINATION FEE (37 CFR 1.18(e), (p), or (u))	N/A	N/A
TOTAL CLAIMS (37 CFR 1.18(f))	20 minus 20 =	0
INDEPENDENT CLAIMS (37 CFR 1.18(h))	2 minus 3 =	0
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).	
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(i))		

RATE (\$)	FEE (\$)
N/A	150.00
N/A	\$250
N/A	\$100
X\$ 25	
X100	
+180=	
TOTAL	500

RATE (\$)	FEE (\$)
N/A	300.00
N/A	\$500
N/A	\$200
X\$50	
X200	
+360=	
TOTAL	

* If the difference in column 1 is less than zero, enter "0" in column 2.

APPLICATION AS AMENDED - PART II

(Column 1)

(Column 2)

(Column 3)

SMALL ENTITY

OR

OTHER THAN SMALL ENTITY

AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
12/8/6			
Total (37 CFR 1.16(f))	23 Minus	20	3
Independent (37 CFR 1.16(h))	2 Minus	3	0
Application Size Fee (37 CFR 1.16(s))			
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(i))			

RATE (\$)	ADDITIONAL FEE (\$)
X\$ 25	75
X100	
+180=	
TOTAL ADD'L FEE	75.00

RATE (\$)	ADDITIONAL FEE (\$)
X\$50	
X200	
+360=	
TOTAL ADD'L FEE	

19 23

AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total (37 CFR 1.16(f))	Minus		
Independent (37 CFR 1.16(h))	Minus		
Application Size Fee (37 CFR 1.16(s))			
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(i))			

RATE (\$)	ADDITIONAL FEE (\$)
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X100	
+180=	
TOTAL ADD'L FEE	

RATE (\$)	ADDITIONAL FEE (\$)
X\$50	
X200	
+360=	
TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

This collection of information is required by 37 CFR 1.16. 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 12 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: Commissioner for Patents, P.O. Box 1460, Alexandria, VA 22313-1460.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/283,913	11/22/2005	Ron Lewis	2343-199	6521

7590 11/08/2006

Patent Group
DLA PIPER RUDNICK GRAY CARY US LLP
1200 Nineteenth Street, N.W.
Washington, DC 20036-2412

EXAMINER

NGUYEN, CHUONG P

ART UNIT	PAPER NUMBER
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3663

DATE MAILED: 11/08/2006

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

Office Action Summary

Application No.

11/283,913

Applicant(s)

LEWIS ET AL.

Examiner

Chuong Nguyen

Art Unit

3663

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

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance 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.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-20 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) ☐ Notice of References Cited (PTO-892) | 4) ☐ Interview Summary (PTO-413) |
| 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) ☐ Information Disclosure Statement(s) (PTO/SB/08) | 5) ☐ Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) ☐ Other: _____ |

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-18, are drawn to a real-time vehicle position and performance tracking system, classified in class 701, subclass 1.
 - II. Claims 19-20, are drawn to a method of real time vehicle communications, classified in class 701, subclass 213.

The inventions are independent or distinct, each from the other because:

Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the process (invention II) as claimed can be practiced by another and materially different apparatus such as for a cellular / wireless communication tracking system.

2. Upon election of invention I, the applicant is further required to elect **one species from each group of the disclosed species**:

Group A

- A1. Embodiment of a laptop computer
- A2. Embodiment of a PDA
- A3. Embodiment of a cell phone
- A4. Embodiment of a networking device
- A5. A combination of any of A1, A2, A3, and A4

Group B

Art Unit: 3663

B1. Embodiment of a wireless network

B2. Embodiment of wired network

B3. Embodiment of both B1 and B2

Group C

C1. Embodiment of a central vehicle position database is outside a vehicle

C2. Embodiment of a central vehicle performance database is outside a vehicle

C3. Embodiment of both C1 and C2

The species are independent or distinct because they have mutually exclusive characteristics.

3. Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuong Nguyen whose telephone number is 571-272-3445. The examiner can normally be reached on 8:00 - 5:00 PM EST.

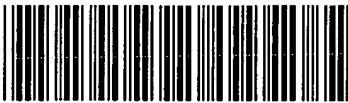
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CN


JACK KEITH
SUPERVISORY PATENT EXAMINER

Index of Claims



Application/Control No.

11/283,913

Examiner

Chuong Nguyen

Applicant(s)/Patent under Reexamination

LEWIS ET AL.

Art Unit

3663

✓	Rejected
=	Allowed

—	(Through numeral) Cancelled
÷	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

Claim		Date											
Final	Original												
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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. 6521

SERIAL NUMBER 11/283,913	FILING OR 371(c) DATE 11/22/2005 RULE	CLASS 701	GROUP ART UNIT 3663	ATTORNEY DOCKET NO. 2343-199
APPLICANTS Ron Lewis, Mississippi State, MS; Joe Picone, Starkville, MS; Zach Rowland, Starkville, MS; Will Jenkins, Starkville, MS; Georgios Lazarou, Starkville, MS;				
** CONTINUING DATA ***** This appln claims benefit of 60/629,552 11/22/2004				
** FOREIGN APPLICATIONS *****				
IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** ** SMALL ENTITY ** 12/29/2005				
Foreign Priority claimed ☐ yes ☐ no 35 USC 119 (a-d) conditions met ☐ yes ☐ no ☐ Met after Allowance Verified and Acknowledged Examiner's Signature Initials	STATE OR COUNTRY MS	SHEETS DRAWING 7	TOTAL CLAIMS 20	INDEPENDENT CLAIMS 2
ADDRESS Patent Group DLA PIPER RUDNICK GRAY CARY US LLP 1200 Nineteenth Street, N.W. Washington, DC20036-2412				
TITLE Vehicle position and performance tracking system using wireless communication				
FILING FEE RECEIVED 565	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		


UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
WASHINGTON, D.C. 20231
www.uspto.gov

APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
11/283,913	11/22/2005	Ron Lewis	2343-199

CONFIRMATION NO. 6521
NOTICE OF INFORMAL APPLICATION
04-11-06

This application is considered to be informal since it does not comply with the regulations for the reason(s) indicated below. The period within to correct the informalities noted below and avoid abandonment is set in the accompanying Office action.

Items Required To Avoid Processing Delays:

The item(s) indicated below are also required and should be submitted with any reply to this notice to avoid further processing delays.

A new oath or declaration, identifying this application number is required. The oath or declaration does not comply with 37 CFR 1.63 in that it:

- does not identify the citizenship of each inventor.

OFFICE COPY



ZFW

DLA PIPER RUDNICK GRAY CARY US LLP
1200 NINETEENTH STREET, N.W.
WASHINGTON, D.C. 20036-2412
TELEPHONE: 202-861-3900
FACSIMILE: 202-223-2085

DOCKET NO.: 2343-199

ATTENTION: APPLICATION BRANCH

**THIS IS A RESPONSE TO A
NOTICE TO FILE MISSING PARTS OF APPLICATION**

ASSISTANT COMMISSIONER FOR PATENTS
PO BOX 1450
ALEXANDRIA, VA 22313-1450

Re: Inventors: Ron LEWIS, et al.
Serial No: 11/283,913
Filed: November 22, 2005
For: VEHICLE POSITION AND PERFORMANCE TRACKING SYSTEM USING
WIRELESS COMMUNICATION
Art Unit: 3662

SIR:

Attached hereto for filing are the following papers:

Fee Transmittal
Request for Extension of Time Under 37 C.F.R. § 1.136 (one month)
Notice to File Missing Parts of Nonprovisional Application (Return Copy)
Filing of Declaration Under 37 C.F.R. § 1.53(f)
Declaration (8 pages, executed)
Information Disclosure Statement
Form PTO-1449
Cited References (18)

Our check in the amount of \$ 60.00 is attached covering any required fees. In the event any variance exists between the amount enclosed and the Patent Office charges for filing the above-noted documents, including any fees required under 37 C.F.R.1.136 for any necessary extension of time to make the filing of the attached documents timely, please charge or credit the difference to Deposit Account No. 50-1442. Further, if these papers are not considered timely filed, then a request is hereby made under 37 C.F.R.1.136 for the necessary extension of time. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

DLA PIPER RUDNICK GRAY CARY US LLP


James M. Heintz
Registration No. 41,828

John K. Pike, Ph.D.
Registration No. 41,253



TOTAL AMOUNT OF PAYMENT	\$60.00
--------------------------------	----------------

1. ☒ Applicant claims small entity status.

☒ Charge any **UNDERPAYMENT** or credit any **OVERPAYMENT** in the indicated fees to Deposit Account No. 50-1442.

☐ Charge the indicated fees to Deposit Account No. 50-1442.

2. ☒ Check enclosed.

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity		Small Entity		Fee Description	
Fee	Fee	Fee	Fee		Fee Paid

FEE CALCULATION

1. BASIC FILING FEE

Large Entity		Small Entity		Fee Description		1251	120	2251	60	1-mo. ext. of time	60
Code	Fee \$	Code	Fee \$		Fee Paid	1252	450	2252	225	2-mo. ext. of time	
1011	300	2011	150	Utility Filing Fee		1253	1020	2253	510	3-mo. ext. of time	
1012	200	2012	100	Design Filing Fee		1254	1590	2254	795	4-mo. ext. of time	
1013	200	2013	100	Plant Filing Fee		1255	2160	2255	1080	5-mo. ext. of time	
1014	300	2014	150	Reissue Filing Fee		1401	500	2401	250	Notice of Appeal	
1005	200	2005	100	Provisional Filing Fee		1402	500	2402	250	Appeal Brief	
1111	500	2111	250	Utility Search Fees		1403	1000	2403	500	Request for Oral Hearing	
1311	200	2311	100	Utility Examination Fees		1501	1400	2501	700	Utility/Reissue Issue Fee	
SUBTOTAL					\$0.00	1504	300	1504	300	Publication Fee	

2. EXTRA CLAIM FEES

tot. claims		-	20*	=	0	x	\$25	=	0	1806	180	1806	180	IDS Submission	
ind. claims		-	3*	=	0	x	\$100	=	0	8021	40	8021	40	Assignment Recordation	
☐	Multiple Dependent Claims						\$180	=		1801	790	2801	395	For Filing RCE	
SUBTOTAL									0	1814	130	2814	65	Terminal Disclaimer	

3. APPLICATION SIZE FEES

Total # of Sheets				# of Extra Sheets					
	-	100	=	0					
# of each additional 50 sheets or fraction thereof (round up)	Fee			Total Fee Due	SUBTOTAL				60
	x	\$125	=	0					

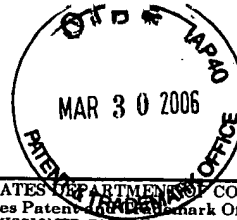
Registration No.	41,828
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Date	March 30, 2006	Telephone	202-861-3900
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Registration No. 41,253



UNITED STATES PATENT AND TRADEMARK OFFICE



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APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
11/283,913	11/22/2005	Ron Lewis	2343-199

Patent Group
DLA PIPER RUDNICK GRAY CARY US LLP
1200 Nineteenth Street, N.W.
Washington, DC 20036-2412

CONFIRMATION NO. 6521
FORMALITIES
LETTER

Date Mailed: 12/30/2005

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

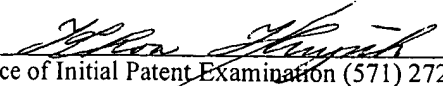
Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The oath or declaration is missing. *A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.*
Note: If a petition under 37 CFR 1.47 is being filed, an oath or declaration in compliance with 37 CFR 1.63 signed by all available joint inventors, or if no inventor is available by a party with sufficient proprietary interest, is required.

Replies should be mailed to: Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

*A copy of this notice **MUST** be returned with the reply.*


Office of Initial Patent Examination (571) 272-4000, or 1-800-PTO-9199, or 1-800-972-6382
PART 2 - COPY TO BE RETURNED WITH RESPONSE



DOCKET NO. 2343-199

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: Ron LEWIS et al.

ART UNIT: 3662

SERIAL NO.: 11/283,913

EXAMINER:

FILING DATE: November 22, 2005

FOR: VEHICLE POSITION AND PERFORMANCE TRACKING SYSTEM USING
WIRELESS COMMUNICATION

FILING OF DECLARATION UNDER 37 C.F.R. 1.53(f)

ASSISTANT COMMISSIONER FOR PATENTS
PO BOX 1450
ALEXANDRIA, VA 22313-1450

SIR:

Responsive to the notification dated December 30, 2005, and in accordance with the provisions of 37 C.F.R. 1.53(f), Applicants submit herewith a Rule 63 Declaration. The required fee was paid at the time of filing the application.

In light of the foregoing, this application is deemed to be in proper condition for examination and such favorable action is earnestly solicited.

Respectfully submitted,

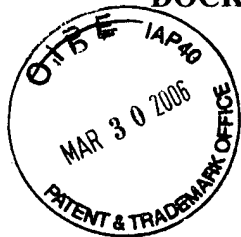
DLA PIPER RUDNICK GRAY CARY US LLP

James M. Heintz
Registration No. 41,828

John K. Pike, Ph.D.
Registration No. 41,253

1200 Nineteenth Street, N.W.
Washington, D.C. 20036-2412
Telephone No. (202) 861-3900
Facsimile No. (202) 223-2085

DOCKET NO.: 2343-199

**Declaration, Power of Attorney and Petition**

WE (I) the undersigned inventor(s), hereby declare(s) that:

My residence, post office address and citizenship are as stated below next to my name,

We (I) believe that we are (I am) the original, first, and joint (sole) inventor(s) of the subject matter which is claimed and for which a patent is sought on the invention entitled

**VEHICLE POSITION AND PERFORMANCE TRACKING SYSTEM USING WIRELESS
COMMUNICATION**

the specification of which

☐ is attached hereto.

☒ was filed on November 22, 2005

as Application Serial No. 11/283,913

and amended on _____

☐ was filed as PCT international application

Number _____

on _____

and was amended under PCT Article 19

on _____ (if applicable).

We (I) hereby state that we (I) have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

We (I) acknowledge the duty to disclose information known to be material to the patentability of this application as defined in Section 1.56 of Title 37 Code of Federal Regulations.

We (I) hereby claim foreign priority benefits under 35 U.S.C. § 119(a)-(d) or §365(b) of any foreign application(s) for patent or inventor's certificate, or §365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed. Prior Foreign Application(s)

Application No.	Country	Day/Month/Year	Priority Claimed	
_____	_____	_____	☐ Yes	☐ No
_____	_____	_____	☐ Yes	☐ No
_____	_____	_____	☐ Yes	☐ No
_____	_____	_____	☐ Yes	☐ No

We (I) hereby claim the benefit under Title 35, United States Code, §119(e) of any United States provisional application(s) listed below.

<u>60/629,552</u>	<u>November 22, 2004</u>
(Application Number)	(Filing Date)
 _____	 _____
(Application Number)	(Filing Date)

We (I) hereby claim the benefit under 35 U.S.C. §120 of any United States application(s), or §365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. §112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR §1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application.

Application Serial No.	Filing Date	Status (pending, patented, abandoned)
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

And we (I) hereby appoint all practitioners associated with **Customer Number 24510** as our (my) attorneys, with full powers of substitution and revocation, to prosecute this application and to transact all business in the Patent Office connected therewith; and we (I) hereby request that all correspondence regarding this application be sent to Patent Group, DLA Piper Rudnick Gray Cary US LLP, 1200 Nineteenth Street, N.W., Washington, D.C. 20036-2412.

We (I) declare that all statements made herein of our (my) own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Ron LEWIS

NAME OF FIRST JOINT INVENTOR



Signature of Inventor

3-15-2006

Date

Residence: P.O. Box 1052Mississippi State, MS 39762Citizen of: United States of AmericaPost Office Address: Same As AboveJoe PICONE

NAME OF SECOND JOINT INVENTOR

Joe Picone (GL)

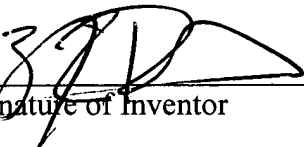
Signature of Inventor

3/13/2006

Date

Residence: 2123 Crawford RoadStarkville, MS 39759Citizen of: United States of AmericaPost Office Address: Same As AboveZach ROWLAND

NAME OF THIRD JOINT INVENTOR



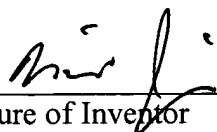
Signature of Inventor

13 MARCH 2006

Date

Residence: 208 Brook AvenueStarkville, MS 39759Citizen of: United States of AmericaPost Office Address: Same As Above

Will JENKINS
NAME OF FOURTH JOINT INVENTOR


Signature of Inventor

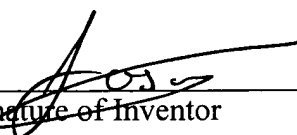
3/13/2006
Date

Residence: 30K Lundy Drive
Starkville, MS 39759

Citizen of: United States of America

Post Office Address: Same As Above

Georgios LAZAROU
NAME OF FIFTH JOINT INVENTOR


Signature of Inventor

3/13/2006
Date

Residence: 708 S. Montgomery
Starkville, MS 39759

Citizen of: _____

Post Office Address: Same As Above



DOCKET NO.: 2343-199

Declaration, Power of Attorney and Petition

WE (I) the undersigned inventor(s), hereby declare(s) that:

My residence, post office address and citizenship are as stated below next to my name,

We (I) believe that we are (I am) the original, first, and joint (sole) inventor(s) of the subject matter which is claimed and for which a patent is sought on the invention entitled

**VEHICLE POSITION AND PERFORMANCE TRACKING SYSTEM USING WIRELESS
COMMUNICATION**

the specification of which

☐ is attached hereto.

☒ was filed on November 22, 2005

as Application Serial No. 11/283,913

and amended on _____

☐ was filed as PCT international application

Number _____

on _____

and was amended under PCT Article 19

on _____ (if applicable).

We (I) hereby state that we (I) have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

We (I) acknowledge the duty to disclose information known to be material to the patentability of this application as defined in Section 1.56 of Title 37 Code of Federal Regulations.

We (I) hereby claim foreign priority benefits under 35 U.S.C. § 119(a)-(d) or §365(b) of any foreign application(s) for patent or inventor's certificate, or §365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed. Prior Foreign Application(s)

Application No.	Country	Day/Month/Year	Priority Claimed	
_____	_____	_____	☐ Yes	☐ No
_____	_____	_____	☐ Yes	☐ No
_____	_____	_____	☐ Yes	☐ No
_____	_____	_____	☐ Yes	☐ No

We (I) hereby claim the benefit under Title 35, United States Code, §119(e) of any United States provisional application(s) listed below.

<u>60/629,552</u>	<u>November 22, 2004</u>
(Application Number)	(Filing Date)
 _____	 _____
(Application Number)	(Filing Date)

We (I) hereby claim the benefit under 35 U.S.C. §120 of any United States application(s), or §365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. §112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR §1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application.

Application Serial No.	Filing Date	Status (pending, patented, abandoned)
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

And we (I) hereby appoint all practitioners associated with **Customer Number 24510** as our (my) attorneys, with full powers of substitution and revocation, to prosecute this application and to transact all business in the Patent Office connected therewith; and we (I) hereby request that all correspondence regarding this application be sent to Patent Group, DLA Piper Rudnick Gray Cary US LLP, 1200 Nineteenth Street, N.W., Washington, D.C. 20036-2412.

We (I) declare that all statements made herein of our (my) own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Ron LEWIS

NAME OF FIRST JOINT INVENTOR



Signature of Inventor

02/06/2006

Date

Residence: P.O. Box 1052

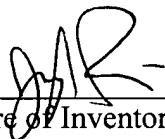
Mississippi State, MS 39762

Citizen of: United States of America

Post Office Address: Same As Above

Joe PICONE

NAME OF SECOND JOINT INVENTOR



Signature of Inventor

2/15/2006

Date

Residence: 2123 Crawford Road

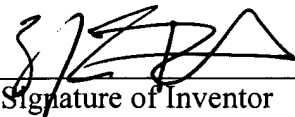
Starkville, MS 39759

Citizen of: United States of America

Post Office Address: Same As Above

Zach ROWLAND

NAME OF THIRD JOINT INVENTOR



Signature of Inventor

06 FEB 2006

06 FEB 2006

Date

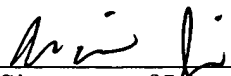
Residence: 208 Brook Avenue

Starkville, MS 39759

Citizen of: United States of America

Post Office Address: Same As Above

Will JENKINS
NAME OF FOURTH JOINT INVENTOR


Signature of Inventor

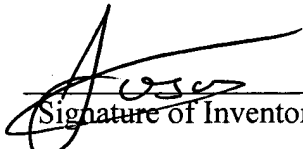
2-8-2006
Date

Residence: 30K Lundy Drive
Starkville, MS 39759

Citizen of: United States of America

Post Office Address: Same As Above

Georgios LAZAROU
NAME OF FIFTH JOINT INVENTOR


Signature of Inventor

2/06/06
Date

Residence: 708 S. Montgomery
Starkville, MS 39759

Citizen of: _____

Post Office Address: Same As Above

NAME OF SIXTH JOINT INVENTOR


Signature of Inventor

2/15/06
Date

Residence: _____

Citizen of: _____

Post Office Address: Same As Above

DOCKET NO.: 2343-199



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: Ron LEWIS, et al.

ART UNIT: 3662

SERIAL NO.: 11/283,913

EXAMINER:

FILING DATE: November 22, 2005

FOR: VEHICLE POSITION AND PERFORMANCE TRACKING SYSTEM USING WIRELESS COMMUNICATION

REQUEST FOR EXTENSION OF TIME UNDER 37 C.F.R. 1.136

ASSISTANT COMMISSIONER FOR PATENTS

PO BOX 1450

ALEXANDRIA, VA 22313-1450

SIR:

It is hereby requested that a ☒ one ☐ two ☐ three ☐ four ☐ five

☐ second ☐ third ☐ fourth ☐ fifth (a ____-month extension and fee having been filed on _____)

month extension of time be granted to March 30, 2006 for:

☐ filing a response to the Official Action dated:

☐ responding to the requirements in the Notice of Allowability dated:

☐ filing the Formal Drawings. The Issue Fee due

has been timely filed.

☒ responding to the Notice to File Missing Parts of Application dated: December 30, 2005

☐ filing a Notice of Appeal. A timely response to the final rejection, due

has been filed.

☐ filing an Appeal Brief. A Notice of Appeal was filed on:

☐

The required fee of \$60.00 is enclosed herewith by check and any further charges may be made against the Attorney of Record's Deposit Account No. 50-1442. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

DLA PIPER RUDNICK GRAY CARY US LLP

03/31/2006 JAD001 00000038 11283913

01 FC:2251

60.00 OP

James M. Heintz

Registration No. 41,828

1200 Nineteenth Street, N.W.
Washington, D.C. 20036-2412
Telephone No. (202) 861-3900
Facsimile No. (202) 223-2085

John K. Pike, Ph.D.

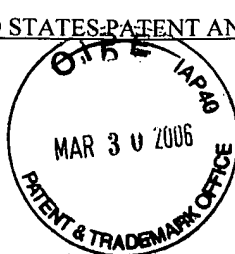
Registration No. 41,253

IN RE APPLICATION: Ron LEWIS, et al.

GROUP ART UNIT: 3662

SERIAL NUMBER: 11/283,913

FILED: November 22, 2005



EXAMINER:

FOR: VEHICLE POSITION AND PERFORMANCE TRACKING SYSTEM USING WIRELESS COMMUNICATION INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. 1.97

Assistant Commissioner for Patents
PO BOX 1450
ALEXANDRIA, VA 22313-1450

Sir:

Applicant(s) wish(es) to disclose the following information.

REFERENCES

- Applicant(s) wish(es) to make of record the documents listed on the attached Form PTO-1449. Copies of the listed documents are attached, where required, as are either statements of relevancy or any readily available full or partial English translations of any non-English-language documents.

RELATED CASES

- Attached is a list of Applicant's(s') pending applications and issued patents which may be related to the present application. Copies of the documents, where required, are attached along with Form PTO-1449.

CERTIFICATION

The undersigned certifies that

- each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign or international patent office in a counterpart foreign or international application for the first time (to the knowledge of the undersigned, having made reasonable inquiry) not more than three months prior to the filing of this statement.
- no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign or international patent office in a counterpart foreign or international application or, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 C.F.R. 1.56(c) more than three months prior to the filing of this statement.

BASIS FOR CONSIDERATION

This Information Disclosure Statement is filed:

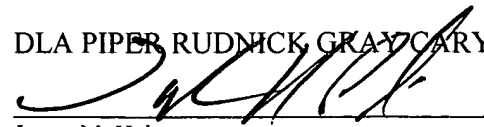
- without fee and within three months of the filing date of the application.
- without fee and within three months of the date of entry of the U.S. national stage.
- without fee and before the mailing date of a first Office Action on the merits (to the knowledge of the undersigned).
- without fee and with the appropriate certification above.
- without fee and with a new CPA application.
- without fee and with a Request for Continued Examination.
- with fee and before the mailing date of any Final Office Action, Notice of Allowance or an action that otherwise closes prosecution (to the knowledge of the undersigned).
- with fee, appropriate certification above, and before payment of the Issue Fee.

DEPOSIT ACCOUNT

- Please charge any additional fees for the papers being filed herewith and for which no check is enclosed herewith, or credit any overpayment to Deposit Account No. 50-1442.

Respectfully submitted,

DLA PIPER RUDNICK GRAY CARY US LLP


James M. Heintz
Registration No. 41,828

1200 Nineteenth Street, N.W.
Washington, DC 20036-2412
Telephone No. (202) 861-3900
Facsimile No. (202) 223-2085

John K. Pike, Ph.D.
Registration No. 41,253

Form PTO 1449 (Modified) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	DOCKET NO. 2343-199	SERIAL NO. 11/283,913
	APPLICANT Ron LEWIS, et al.	
LIST OF REFERENCES CITED BY APPLICANT (Use Several Sheets if Necessary)	FILING DATE November 22, 2005	GROUP ART UNIT 3662
OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)		
AA	Figueiredo, L., et al., "Towards the Development of Intelligent Transportation Systems," <i>IEEE Intelligent Transportation Systems Conference Proceedings</i> , Oakland, CA, pp. 1206-1211 (2001).	
AB	Cai, J., et al., "General Packet Radio Service in GSM," <i>IEEE Communications Magazine</i> , pp. 122-131 (October 1997).	
AC	Godavarty, S., et al., "Interfacing to the On-Board Diagnostic System," <i>IEEE</i> , pp. 2000-2004 (2000).	
AD	Yunck, T., et al., "The Role of GPS in Precise Earth Observation," <i>IEEE</i> , pp. 251-258 (1988).	
AE	Brittain, J., et al., <u>Tomcat: The Definitive Guide</u> , O'Reilly & Associates, Inc., Sebastopol, CA (2003).	
AF	OnStar, Retrieved February 2, 2006, < http://www.onstar.com/us_english/jsp/index.jsp > (2006).	
AG	First Responders, Retrieved February 2, 2006, < http://www.northcom.mil/index.cfm?fuseaction=s.firstresponders >.	
AH	Wahab, A., et al., "A Low-Cost Yet Accurate Approach to a Vehicle Location Tracking System," <i>IEEE ICICS</i> , Singapore, pp. 461-465 (September 1997).	
AI	Garmin, "What is GPS?," Retrieved February 2, 2006, < http://www.garmin.com/aboutGPS/index.html > (2006).	
AJ	<u>gsmworl.com</u> , Retrieved February 2, 2006, < http://www.searchportal.information.com/index.mas?epl=UVsPWVALX >.	
AK	Ni, Shaoji, "GPRS Network Planning on the Existing GSM System," <i>IEEE</i> , pp. 1432-1438 (2000).	
AL	SAE J 1850 May 2001, "Class B Data Communications Network Interface," <i>Society of Automotive Engineers, Inc.</i> , 2004 SAE Handbook, SAE International (2004).	
AM	SAE J 1962 April 2002, "Diagnostic Connector Equivalent to ISO/DIS 15031-3:December 14, 2001," <i>Society of Automotive Engineers, Inc.</i> , 2004 SAE Handbook, SAE International (2004).	
AN	SAE J 1979 April 2002, "E/E Diagnostic Test Modes – Equivalent to ISO/DIS 15031-5:April 30, 2002," <i>Society of Automotive Engineers, Inc.</i> , 2004 SAE Handbook, SAE International (2004).	
AO	SAE J 1708 October 1993, "Serial Data Communications Between Microcomputer Systems in Heavy-Duty Vehicle Applications," <i>Society of Automotive Engineers, Inc.</i> , 2004 SAE Handbook, SAE International (2004).	
AP	Boyce, C.R., "A Four Station Controller Area Network," <i>IEEE Colloquium on Vehicle Networks for Multiplexing and Data Communication</i> , pp. 9/1-9/7 (December 1988).	
AQ	English, K., et al., <u>Community Geography: GIS in Action</u> , <i>ESRI Press</i> , Redlands, California (2003).	
AR	<u>Welcome to MARIS</u> , Retrieved February 2, 2006, < http://www.maris.state.ms.us/index.html > (2003).	
EXAMINER		DATE CONSIDERED
*EXAMINER: Initial if reference is 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.		



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 NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
11/283,913	11/22/2005	Ron Lewis	2343-199

Patent Group
DLA PIPER RUDNICK GRAY CARY US LLP
1200 Nineteenth Street, N.W.
Washington, DC 20036-2412

CONFIRMATION NO. 6521
FORMALITIES
LETTER

Date Mailed: 12/30/2005

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

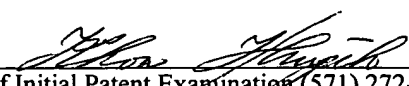
Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The oath or declaration is missing. *A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.*
Note: If a petition under 37 CFR 1.47 is being filed, an oath or declaration in compliance with 37 CFR 1.63 signed by all available joint inventors, or if no inventor is available by a party with sufficient proprietary interest, is required.

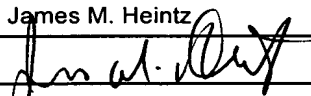
Replies should be mailed to: Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

*A copy of this notice **MUST** be returned with the reply.*


Office of Initial Patent Examination (571) 272-4000, or 1-800-PTO-9199, or 1-800-972-6382
PART 3 - OFFICE COPY

UTILITY PATENT APPLICATION TRANSMITTAL (Only for new nonprovisional applications under 37 CFR 1.53(b))	Attorney Docket No.	2343-199		
	First Inventor or Application Identifier	Ron LEWIS		
	Title	VEHICLE POSITION AND PERFORMANCE TRACKING SYSTEM USING WIRELESS COMMUNICATION		

APPLICATION ELEMENTS See MPEP chapter 600 concerning utility patent application contents	ADDRESS TO: Assistant Commissioner for Patents Box Patent Application PO Box 1450 Alexandria, VA 22313-1450
1. ☒ Fee Transmittal Form (e.g. PTO/SB/17) (Submit an original and a duplicate for fee processing) ☒ Applicant claims small entity status.	ACCOMPANYING DOCUMENTS 6. ☐ Assignment Papers (cover sheet & document(s)) 7. ☐ 37 C.F.R. §3.73(b) Statement ☐ Power of Attorney (when there is an assignee) 8. ☐ English Translation Document <i>(if applicable)</i> 9. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations 10. ☐ Preliminary Amendment 11. ☒ White Advance Serial No. Postcard 12. ☐ Certified Copy of Priority Document(s) (if foreign priority is claimed) 13. ☐ Request for Priority 14. ☒ List of Inventors' Names and Addresses 15. ☐ Other:
2. ☒ Specification Total Pages 22	
3. ☒ Drawing(s) (35 U.S.C. 113) Total Sheets 7	
4. ☐ Oath or Declaration Total Pages a. ☐ Newly executed (original or copy) b. ☐ Copy from a prior application (37 C.F.R. §1.63(d)) (for continuation/divisional with box 16 completed)	
5. ☐ Incorporation By Reference <i>(usable if box 4B is checked)</i> The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4B, is considered to be part of the disclosure of the accompanying application and is hereby incorporated by reference therein.	
16. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below: ☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application no.: Prior application information: Examiner: Group Art Unit:	
17. Amend the specification by inserting before the first line the sentence: ☐ This application is a ☐ Continuation ☐ Division ☐ Continuation-in-part (CIP) of application Serial No. Filed on ☒ This application claims priority of provisional application Serial No. 60/629,552 Filed: November 22, 2004	
18. CORRESPONDENCE ADDRESS Patent Group DLA PIPER RUDNICK GRAY CARY US LLP 1200 Nineteenth Street, N.W. Washington, D.C. 20036-2412 Telephone No. (202) 861-3900 Facsimile No. (202) 223-2085	

Name	James M. Heintz	Registration No.	41,828		
Signature		Date	November 22, 2005	Telephone	202-861-3900
Name	John K. Pike, Ph.D.	Registration No.	41,253		

15915 U.S. PTO
112205

FEE TRANSMITTAL
FY 2005

Docket No.	2343-199
Serial No.	New Application
Filing Date	Herewith
Inventor(s)	Ron LEWIS, et al.
Group Art Unit	
Examiner	

TOTAL AMOUNT OF PAYMENT										\$565.00				Examiner									
1. ☒ Applicant claims small entity status. ☒ Charge any <u>UNDERPAYMENT</u> or credit any <u>OVERPAYMENT</u> in the indicated fees to Deposit Account No. 50-1442. ☐ Charge the indicated fees to Deposit Account No. 50-1442.														FEE CALCULATION (continued)									
2. ☒ Check enclosed.														3. ADDITIONAL FEES									
														Large Entity		Small Entity		Fee Description				Fee Paid	
FEE CALCULATION														1051	130	2051	65	Surcharge-late filing fee or oath				65.00	
1. BASIC FILING FEE														1053	130	1053	130	Non-English Specification					
Large Entity		Small Entity		Fee Description				1251	120	2251	60	1-mo. ext. of time											
Code	Fee \$	Code	Fee \$					Fee Paid		1252	450	2252	225	2-mo. ext. of time									
1011	300	2011	150	Utility Filing Fee				150		1253	1020	2253	510	3-mo. ext. of time									
1012	200	2012	100	Design Filing Fee						1254	1590	2254	795	4-mo. ext. of time									
1013	200	2013	100	Plant Filing Fee						1255	2160	2255	1080	5-mo. ext. of time									
1014	300	2014	150	Reissue Filing Fee						1401	500	2401	250	Notice of Appeal									
1005	200	2005	100	Provisional Filing Fee						1402	500	2402	250	Appeal Brief									
1111	500	2111	250	Utility Search Fees				250		1403	1000	2403	500	Request for Oral									
1311	200	2311	100	Utility Examination Fees				100		1501	1400	2501	700	Utility/Reissue Issue									
SUBTOTAL								\$500.00		1504	300	1504	300	Publication Fee									
2. EXTRA CLAIM FEES														8001	3	8001	3	Advance Copy of Patent					
tot. claims		20	-	20*	=	0	x	\$25	=	0	1806	180	1806	180	IDS Submission								
ind. claims		3	-	3*	=	0	x	\$100	=	0	8021	40	8021	40	Assignment Recordation								
☐	Multiple Dependent Claims							\$180	=		1801	790	2801	395	For Filing RCE								
SUBTOTAL								0		1814	130	2814	65	Terminal Disclaimer									
3. APPLICATION SIZE FEES														Other:									
Total # of Sheets						# of Extra Sheets																	
22		-	100	=	0																		
# of each additional 50 sheets or fraction thereof (round up)						Fee				Total Fee Due				SUBTOTAL				65					
		x	\$125	=	0																		

Name	James M. Heintz	Registration No.		41,828	
Signature		Date	November 22, 2005	Telephone	202-861-3900
Name	John K. Pike, Ph.D.	Registration No.		41,253	

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: Ron LEWIS, et al.

ART UNIT:

SERIAL NO.: New Application

EXAMINER:

FILING DATE: Herewith

FOR: VEHICLE POSITION AND PERFORMANCE TRACKING SYSTEM
USING WIRELESS COMMUNICATION

LIST OF INVENTORS' NAMES AND ADDRESSES

ASSISTANT COMMISSIONER FOR PATENTS
PO BOX 1450
ALEXANDRIA, VA 22313-1450

SIR:

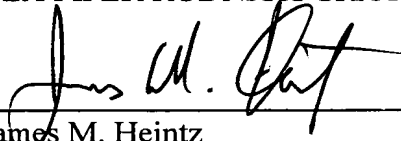
Listed below are the names and addresses of the inventors for the above-identified patent application.

- | | | | |
|----|---|----|---|
| 1. | Ron LEWIS
P.O. Box 1052
Mississippi State, MS 39762 | 4. | Will JENKINS
30K Lundy Drive
Starkville, MS 39759 |
| 2. | Joe PICONE
2123 Crawford Road
Starkville, MS 39759 | 5. | Georgios LAZAROU
708 S. Montgomery
Starkville, MS 39759 |
| 3. | Zach ROWLAND
208 Brook Avenue
Starkville, MS 39759 | | |

A declaration containing all the necessary information will be submitted at a later date.

Respectfully submitted,

DLA PIPER RUDNICK GRAY CARY US LLP



James M. Heintz
Registration No. 41,828

John K. Pike, Ph.D.
Registration No. 41,253

1200 Nineteenth Street, N.W.
Washington, D.C. 20036-2412
Telephone No. (202) 861-3900
Facsimile No. (202) 223-2085

05/05

OMEGA EXHIBIT 2018

TITLE

**VEHICLE POSITION AND PERFORMANCE TRACKING SYSTEM USING
WIRELESS COMMUNICATION**

BACKGROUND

Related Applications

This application is based on U.S. Provisional Application Serial No. 60/629,552, filed November 22, 2004, the entire contents of which are hereby incorporated by reference.

Field

One embodiment of the present invention relates to a transportation system that integrates vehicle position and performance tracking and wireless networking to monitor vehicle position and performance over the Internet.

DESCRIPTION OF THE FIGURES

FIG. 1 is a block diagram of one embodiment of the VPPTS 100.

FIG. 2 is a block diagram one embodiment of a vehicle communicator system.

FIG. 3 is a schematic diagram of one embodiment of a BR-3 interface used to communicate with a vehicle's on-board diagnostic system.

FIG. 4 is a block diagram of one embodiment a data collector, which polls a vehicle for performance information and receives new GPS coordinates simultaneously.

FIG. 5 is a data flow to the users applet interface after being processed by the server.

FIG. 6 shows one embodiment of an analog gauge applet that displays real-time performance parameters.

FIG. 7 shows one embodiment of communication architecture that allows a web-enabled application to monitor various sensors in a vehicle across the GSM/GPRS network.

DETAILED DESCRIPTION OF SEVERAL EMBODIMENTS

Real-time vehicle tracking and monitoring is evolving from simple systems such as OnStar™ to more sophisticated systems that provide emergency response capabilities. The present inventors have found that providing access to vehicle data via the Internet can lead to intelligent mass transportation and secure fleet management. Some embodiments of the vehicle position and performance tracking system (VPPTS 100) described herein include three underlying technologies: GPS, GSM/GPRS, and OBD-II.

This system is based in-part on a popular standard for wireless communications - GSM/GPRS (2). An in-vehicle standard for diagnostic information, OBD-II (3), is used to gather performance data. GPS technology (4) is also used to provide vehicle location data. Data is integrated and transmitted to a web server using Apache's Tomcat extension (5) to provide Internet access via a vehicle tracking web site.

One embodiment of the present intelligent transportation system (ITS) includes several vehicle communication systems including peer-to-peer (P2P) and peer-to-base station communications. Seamless integration of in-vehicle networking with existing wireless telephony infrastructure is possible. Drivers may roam between their cellular phone network and their in-vehicle network. Data access and synchronization happen automatically and transparently. Peer-to-peer communications provides an ability for information to be relayed down a highway so that a transportation system can adapt and respond to events autonomously in real-time.

The present system is extensible to large metropolitan areas in which millions of vehicles will need to be simultaneously tracked and monitored. Though many systems currently integrate position tracking and wireless networking to allow for remote position

tracking, few systems prove the capability to monitor vehicle performance over the web in real-time as the present system allows.

One embodiment of the present system is suitable for dealing with roadside emergencies, providing homeland security solutions, fleet operators accounting for the location and contents of their vehicles, first responders in emergencies such as hazardous material spills or natural disasters, rapidly delivering information about vehicle content and location, as well as real-time mapping information, exploiting next generation wireless technology, delivering bidirectional high-speed data connections to moving vehicles, data warehousing, monitoring transportation infrastructure, commercial and personal applications, and vehicle location tracking.

Some embodiments of the VPPTS 100 described herein utilizes three underlying technologies: GPS, GSM/GPRS, and OBD-II. GPS provides highly accurate position information and can be used for a variety of land, sea, and air applications. GPS was developed by the U.S. Department of Defense (DoD). The system includes a constellation of 24 geostationary satellites orbiting around 11,000 miles above the Earth's surface (9). GPS was dedicated solely for military use and has recently been declassified for civilian use. To acquire GPS information, a wireless receiver capable of the civilian L1 frequency (1575.42 MHz) is included. The GPS receiver measures distances to four or more satellites simultaneously. Using triangulation (9) the receiver can determine its latitude, longitude, and altitude.

GSM has become the world's fastest growing mobile communication standard. It allows for seamless and secure connectivity between networks on a global scale. Digital encoding is used for voice communication, and time division multiple access (TDMA) transmission methods provide a very efficient data rate/information content ratio (10). GSM, a circuit-switched network, is becoming the standard for person-to-person communication.

In view of improved data transmission, General Packet Radio Service (GPRS), may also be used.

GPRS is a data communication layer built over the GSM wireless transmission link (2). GPRS uses the remaining capacity leftover from GSM voice communication (11) and has a theoretical max speed of 171.2 Kbps making it a viable choice for wireless data transfer (10). Using a packet format for data transmission allows for full compatibility with existing Internet services such as HTTP, FTP, email, instant messaging, and more.

Since 1996, on-board diagnostic (OBD) systems have been incorporated into vehicles to help manufactures meet emission standards set forth by the Clean Air Act in 1990 and the Environmental Protection Agency (EPA). The Society of Automotive Engineers (SAE) developed a set of standards and practices that regulated the development of these diagnostic systems. The SAE expanded on that set to create the OBD-II standards. The EPA and the California Air Resources Board (CARB) adopted these standards in 1996 and mandated their installation in all light-duty vehicles.

The OBD-II system allows for monitoring of most electrical systems on the vehicle. Nonlimiting examples of monitored items include speed, RPM, ignition voltage, oil temperature, oil pressure, tire pressure, vehicle integrity, and coolant temperature. This system can also inform an engineer when an individual cylinder has a misfire.

The SAE recognizes three communication patterns, or protocols, in the J1850 standard, which define how electrical signals will propagate through a vehicles communication bus. These are described in Table 1 below.

Table 1

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

The SAE J1850 VPW standard uses a variable pulse width modulation signal (12). It operates at 10.4k Baud with one signal wire and a ground wire. The SAE J1850 PWM standard uses a pulse width modulation signal (12). This operates at 41.7k Baud by using a differential transmission scheme. The ISO 9141-2 standard uses two signals (K and L) (12). One signal travels on a full-duplex wire, and the other operates on a half-duplex wire. Most communications with the OBD-II bus occur on the K signal while the L signal is required for initialization of the bus.

FIG. 1 shows an overview of one embodiment of the VPPTS 100. Vehicles 10, 20, 30 may wirelessly communicate with each other using P2P, or wirelessly communicate with one or more base servers 40, 50. The base servers 40, 50 may communicate physically or wirelessly to another base server or physically or wirelessly to the Internet or any other network, such as a circuit switched or packet switched network. The base servers 40, 50 may communicate through the Internet or other network with one or more central server 70.

In one embodiment, a real time vehicle performance and position monitoring system is provided that comprises at least one wireless networking module including:

a GPS receiver to collect position data of a vehicle;

a graphical user interface which communicates with a microchip onboard the vehicle and one or more off site computers/servers located at one or more data collection sites;

data collector software, which collects position data from the GPS receiver and onboard diagnostic data from a microcontroller; and

a wireless computer card in communication with the microchip, which accesses a wireless network and relays position data and diagnostic data to the off site computers/servers.

In one embodiment, the off site computers/servers include cell phone, PDAs and other networking devices.

One embodiment of a real-time vehicle tracking and performance monitoring system includes:

- at least one vehicle communicator system unit;
- at least one vehicle location and performance database; and
- at least one web-based data visualization system 75.

In one embodiment, the vehicle communications system 200 may be comprised of the following:

- an input/output (I/O) subsystem or unit 210;
- a power management subsystem or unit 220;
- a communication subsystem or unit 230;
- communicator software; and
- a processor subsystem or unit 240.

In one embodiment, the input/output (I/O) subsystem 210 collects vehicle GPS and performance data as well as external, “non-networked” sensor data (sensors installed on the vehicle but not connected to vehicle network).

In one embodiment, the power management subsystem 220 includes integrated circuitry that monitors vehicle power and controls active/sleep/shutdown modes.

In one embodiment, the communication subsystem 230 establishes and maintains physical connections to the vehicle location and performance database for transmission of the data via various wireless communication networks.

In one embodiment, the communication subsystem 230 is capable of vehicle-to-vehicle (peer-to-peer) communication for relaying any data including vehicle location and performance data or Intelligent Transportation System (ITS) data; and/or exchanging personal (driver or vehicle), ITS, or Internet (restaurant location) data.

In one embodiment, the communicator software collects and formats data for transmission into single or multiple data streams.

In one embodiment, the processor subsystem 240 runs real-time operating system that manages data collection and communications.

In one embodiment, the vehicle location and performance database is comprised of at least one communication server and at least one database server. The communication server may provide secure connectivity to the vehicle communicator system. The communication server formats the received data and relays it to one or more database servers. The database server may store received data into one or more databases.

One embodiment of a web-based data visualization system may include a graphical user interface (GUI) and at least one database server. The graphical user interface may display vehicle location on a highly interactive GIS-based map and/or process and display data in various forms including playback functionality and real-time dashboard gauges. The database server may retrieve data from one or more databases and forward it to the GUI.

One embodiment of a vehicle communicator system is illustrated in FIG. 2. It may include an input/output (I/O) system 210; power management subsystem 220; communication subsystem 230; communicator software; processor subsystem 240.

The input/output (I/O) subsystem 210 may include one or more of the following components:

- an SAE J1850 transceiver and controller including support for GM Class 2, Ford SCP, and ISO 9141-2;
- a CAN/FlexRay transceiver and controller with SAE J1939 capabilities;
- an SAE J1708 compatible transceiver and controller;
- one or more programmable digital/analog inputs and outputs for “non-networked” sensors;
- NMEA-0183 compatible GPS transceiver with external antenna interface;
- a PC interface (USB/RS232) for on-site debugging; and/or
- one or more visual indicators for operating modes and programmable fault conditions.

The power management subsystem 220 may include one or more of the following components:

- an internally-fused power supply that can accept 12, 24, and/or 42 VDC inputs and other forms such as backup battery, solar power, etc; and/or
- a controllable power monitoring circuitry.

The communication subsystem 230 may include one or more of the following components:

- an integrated WiFi chipset and 3G or 4G cellular networking modem;
- one or more universal sockets that supports the following:
 - Mobile WiMax (IEEE 802.16e);
 - any additional 3G or 4G modem; and/or
 - software radio.
- an interface for external satellite modem; and/or
- an interface to external SISO, SIMO, and/or MIMO antennae.

The communicator software in the communication subsystem 230 may have one or more of the following specifications:

- multi-threaded;
- gather specified data into “circular buffer”;
- format available data into “frames” for transmission; and/or
- forwards “frames” to communication subsystem 230.

The processor subsystem 240 must have an operating system and a communication protocol stack and may have one or more of the following specifications:

- supports a variety of real-time operating systems (RTOS) such as embedded Linux, Windows CE, and VxWorks;
- communication protocol stack that includes mobile IPv6 and custom-built, robust, and network-aware transport protocol; and/or
- data reduction and intelligent signal processing for collaborative decision-making network.

In embodiments employing a mobile IPv6 communications standard, each vehicle is assigned its own IP address. This facilitates direct P2P communications. In such embodiments, a first vehicle may periodically broadcast a message (when a user in such vehicle so desires) announcing its presence. When a second vehicle in communications range receives such a message, the user in the second vehicle can decide whether or not to establish P2P communications with the first vehicle. If the user indicates to the vehicle communications system in the second vehicle that P2P communications are desired, the vehicle communications system in the second vehicle responds to the message from the first vehicle to initiate the P2P communications process. Those of skill in the art will recognize that alternative techniques for establishing P2P communications may also be employed.

One embodiment of a vehicle location and performance database includes at least one communication server and at least one database server. The server may be a central server or a base server. One embodiment of a communication server includes any server that accepts client/server paradigm; and decodes received data, format to database specifications, and forwards to database server. Any database server may be used.

One embodiment of a web-based data visualization system includes a graphical user interface and a database server.

One embodiment of a graphical user interface includes one or more of the following functions and components:

- capability to generate a map based on GIS data based on user input using the client/server paradigm (e.g., maps are generated by the server and sent to the client);

- capability to translate vehicle GPS coordinates to pixel locations and display on the map;

- an integrated software component configured to prepare data for external uses such as spreadsheets and other data analyzing software;

- an integrated software component to allow a user to “playback” historical data; and/or

- an integrated software component to allow a user to view real-time performance data with dashboard gauges.

In FIG. 2, one embodiment of the vehicle communicator system is shown. In the figure, circles are described on the outer perimeter of the drawing (the outer perimeter figuratively symbolizing a box or case that contains the blocks and the circles figuratively symbolize the various interfaces by which data, electrical signals, power, grounding, and the like are passed). The circles 211-214 on the left side of the drawing connected to the “I/O Block” 210 represent various inputs and outputs. These may include, for example, one or more of OBD-II data, video and/or camera data, audio data, vehicle data, position data,

operator voice data, and the like, or any combination thereof. The circles 231-235 on the right side of the drawing represent various communication signals such as, for example, to and from one or more other vehicles, to and from one or more database servers, to and from one or more central servers 70. The circles 221-223 at the bottom of the figure may represent various power and switching sources and/or controls.

One embodiment includes a single-board that integrates modular chipset solutions for the automotive bus interface, a GPS receiver, and a GSM/GPRS modem into a less than 16 in 2 board located inside the dashboard or in the trunk of a vehicle. The system may be powered directly off the on-board diagnostic connector that includes 12V power. External antennae may be added to increase the reliability of GSM and GPS reception. Tracking more parameters and adding feedback features such as peer-to-peer communications may further increase the system effectiveness. Integration of Bluetooth and IEEE 802.11b wireless (WiFi) technology may be utilized in view of eliminating the cost and labor of point-to-point wiring within the vehicle.

FIG. 7 shows one embodiment of the system communication architecture. This communication architecture allows a web-enabled application to monitor various sensors in a vehicle across the GSM/GPRS network. The present design incorporates both light-duty and heavy duty communication protocols. The SAE standards J1708 (16) and J1939 (17) describe examples of heavy-duty protocols and parameters. J1939 describes the next generation of heavy duty vehicle network based on controller area network (CAN) (18). Heavy-duty vehicles include, but are not limited to, semi-trucks and buses.

The database can be extended to include cargo contents, driver identification, and named-based location data such as cities, street names, and businesses. One embodiment of the present system incorporates Geographic Information System (GIS) (19) data, which allows for faster response times in map drawing for applications involving emergency

response to hazardous material spills, vehicular accident, etc. GIS is a standard digital mapping format that uses GPS coordinates. GIS allows the final design to be scalable to wider areas such as citywide, statewide, and even nationwide.

Many systems offer vehicle security and tracking. Systems such as Trackn, OnStar, and TrimTrac offer remote lock mechanisms and roadside assistance. Subscription services are required for these systems. The present system offers vehicle tracking using a well-established GSM/GPRS network and also offers performance tracking for the host vehicle, which can be monitored over the web.

Timing is one important consideration in the system. A system timer may be used to trigger an event to send the GPS and current OBD-II data. The intervals conceived were between $\frac{1}{4}$ and 5 seconds. This small resolution could not be achieved because polling at least 6 PIDs took longer than $\frac{1}{4}$ seconds. To keep an accurate resolution, the GPS signal may be used as an event trigger, in view of keeping the resolution at multiples of one second.

In one embodiment, a GIS relational database of a geographic region is integrated into the system using technology based on ESRI's ArcGIS (19). This will reduce the amount of data that must be downloaded to the client, and vastly increase the ability to interact with maps. The present system can integrate with or utilize digital maps, such as a statewide map (20). One embodiment may interact with digital map information and produce value-added features such as information queries (e.g., "What is the closest fast-food restaurant to the bus stop?). In one embodiment, the system can work on low bandwidth devices with small displays, such as cell phones and PDAs.

In one embodiment, the system includes seamless in-vehicle communications with existing wireless devices, as well as an ability for vehicles, such as buses, for example, to interact in a peer-to-peer manner. This will support other vehicle communication protocols

such as the SAE J1708 and J1939 communication standards for heavy-duty vehicles (e.g., passenger buses and semi-trucks).

As to priority of broadcast, the “camera” or transmitting vehicle may either manually intervene to determine a particular destination for the message packet (such as to other vehicles in the vicinity of an accident or road condition), or this may be determined automatically, wherein the video data from the camera vehicle is broadcast to all linked vehicles, and the receiving vehicles may determine what is displayed. Alternatively, the priority of broadcast is determined remotely, such as from the base station or central server 70. Combinations of these are possible.

The message packet may have one or more headers with one or more fields. If no destination is inputted, then a broadcast is effected, wherein the entire fleet may receive the message. Alternatively, if a destination appears in the field, the message will be received only by that destination. Alternatively, a broad I/O is contemplated which will accept a broad range of throughputs.

EXAMPLES

A VPPTS 100 prototype was assembled and successfully operated as follows. A Garmin GPS 35-PC receiver is used to collect the recommended minimum data sentence (GPRMC) from the NMEA standard protocol (15). OBD-II data is gathered by a BR-3 interface. The interface incorporates a Microchip BR16F84-1.07 microcontroller, which operates on all SAE J1850 protocols. A Sony Ericsson GC-82 EDGE PC card is used to access the Cingular Wireless GSM/GPRS network. A laptop, equipped with two serial ports (DB9) and a PCMCIA port, acts as a hub through which data is routed.

The data collection software was developed with Microsoft C# using a Visual Basic 6 serial port API. Tomcat web server together with MySQL database server act as the gateway

for users to view the location and performance data of each vehicle. The user interface was developed with JAVA SDK 1.4.2_05.

The data collection software combines GPS coordinates and OBD-II data into a single data stream that is sent to the server via the GSM/GPRS network. The data is retrieved from the OBD-II system by continuous polling. Transmission of data to the server is triggered by a received event from the GPS device, which is connected to a serial port. This allows for a one second minimum resolution.

The BR-3 OBD-II interface is connected to the vehicle via the SAE J1962 (13) connector located within three feet of the steering column. A serial RS232 port on the laptop allows the data collector software to communicate with the BR-3 OBD-II interface. FIG. 3 shows the BR-3 connection diagram.

The baud rate between the BR-3 and the laptop is 19,200 Baud with no handshaking. A CRC byte, specified by SAE J1850 (12), is checked to confirm a successful transmission. All three protocols specified by SAE J1850 standard can be accessed with the BR-3. The VPPTS 100 prototype uses generic parameter identifications or PIDs defined in SAE J1979 (14). These PIDs include vehicle speed, engine RPM, calculated throttle position sensor (TPS), engine load, engine coolant temperature, and air intake pressure. Car manufacturers such as GM and Ford have enhanced PIDs that are specialized for their vehicles.

FIG. 4 illustrates a state diagram for the data collector. The BR-3 must be initialized and, depending on the make of the vehicle, a proper protocol must be set. Once these are established polling for data will commence on a continuous basis. The GPS data is transmitted as character arrays known as sentences. These sentences correspond to the NMEA standard (15) for GPS data. The GPRMC sentence, which contains UTC time, UTC date, longitude, and latitude, is decoded. The software parses the sentence and prepares the

GPS data along with the current OBD-II data. The data is then sent to the server via GSM/GPRS.

The server was built using a dual processor PC, which is used to run the necessary software for the prototype system. Tomcat, MySQL, and Apache constitute the software needed to run the data and the applet. Five Tomcat httpservlets are used to maintain the data flow. MySQL was chosen to be the database management service, and Apache handles all HTTP page and image requests.

The httpservlets handle all the connections made to the database server (MySQL). There are two servlets that receive data from the collector through an http post. The data is then updated to the database. The other servlets make queries to the database package the data into specialized classes and send the classes to the applet when the data is requested. FIG. 5 shows the data flow to and from the server.

Several tables are used to maintain separation of data within the database. The *stops* table contains a label and GPS coordinates for each bus stop on all routes. The *routes* table contains a list of the routes and the order at which the stops are traversed. The *buses* table contains the current location and route information for each bus. The gauges database contains the telemetry data from each bus. There is also a table for each bus that contains all the past telemetry readings for that specific bus. This data can be stored indefinitely so it can serve as a tool for analysis and simulation of vehicle performance.

The Java applet was developed to display the tracking and performance information to the public via the Internet. The applet displays vehicle location on a digital map. Route information about the vehicles, in this case the campus bus system, is also available. When a bus is selected the user can view the current vehicle gauge data via graphical gauges such as in FIG. 6. This implementation allows the public to track a bus of interest, and fleet managers to monitor bus performance.

In the present system, by exploiting GPS technology, vehicle location can be pinpointed to within a couple of meters. An in-vehicle standard for diagnostic information, OBD-II, is used to gather performance data. Using a GSM/GPRS modem, the location and diagnostic information can be made available to a remote site via the Internet. Data is integrated and transmitted to a web server using Apache's Tomcat extensions to provide Internet access via a vehicle tracking web site. The present system design has an open architecture that can be easily expanded to other applications.

The relevant contents of each of the following references are hereby incorporated by reference, the same as if set forth at length.

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CLAIMS

1. A real time vehicle communications system, comprising:
an interface unit configured to communicate with an onboard vehicle performance system and an onboard vehicle positioning system;
a processor unit connected to the interface unit;
a memory unit connected to the processor unit;
a communications unit connected to the processor unit, the communications unit being configured for wireless communication;
wherein the processor unit is configured to:
store data from the vehicle positioning system and the vehicle performance system in the memory unit, and
transmit at least some information from the memory unit, via the communications unit, to:
one or more peer vehicles outside the vehicle under the direction of a user; and
one or more base stations outside the vehicle.
2. The system of claim 1, further comprising a display unit connected to the communications unit, and wherein the processor unit is further configured to transmit said information to the display unit via the communications unit.
3. The system of claim 2, wherein the memory unit further comprises a map database stored thereon, and wherein the processor unit is further configured to generate a visual map on said display unit, wherein the map indicates a location of the vehicle.
4. The system of claim 2, wherein the processor unit is further configured to generate a graphical representation of the vehicle dashboard on said display unit, wherein the dashboard reflects information from the onboard vehicle performance system.

5. The system of claim 1, wherein the communications unit is further configured to act as an access point for at least one user device, wherein the access point connects the user device with a wireless network outside the vehicle.

6. The system of claim 1, wherein the access point communicates with the user device via a wireless or wired connection.

7. The system of claim 1, wherein the user device is selected from the group consisting of laptop computer, PDA, cell phone, networking device, or a combination thereof.

8. The system of claim 1, wherein the interface unit is further configured to communicate with at least one onboard sensor not in communication with the onboard vehicle performance system.

9. The system of claim 1, wherein the user is onboard the vehicle.

10. The system of claim 1, wherein the processor unit is further configured to receive information from the one or more peer vehicles.

11. The system of claim 10, further comprising a display unit connected to the communications unit, and wherein the processor unit is further configured to transmit, to the display unit, the information received from the one or more peer vehicles via the communications unit.

12. The system of claim 1, wherein communication with the one or more peer vehicles is conducted using public key cryptography.

13. A real-time vehicle position and performance monitoring system, comprising:
at least one vehicle communications system of claim 1;
a central server in communication with said vehicle communications system, said central server comprising:

at least one central vehicle position database, and

at least one central vehicle performance database; and

at least one web-based data visualization system in communication with the central server.

14. The system of claim 13, wherein the central server communicates with said vehicle communications system via at least network selected from the group consisting of wireless network, wired network, or a combination thereof.

15. The system of claim 13, wherein one or both of the central vehicle position database and the central vehicle performance database are outside a vehicle on which the vehicle communications system is installed.

16. The system of claim 13, wherein said web-based data visualization system comprises a map database and is configured to generate a visual map on a display, wherein the map indicates a location of a vehicle on which the at least one vehicle communications system is installed.

17. The system of claim 13, wherein said web-based data visualization system is configured to display information from the central vehicle performance database or the vehicle central vehicle position database or both.

18. The system of claim 13, wherein said web-based data visualization system is configured to generate, on a display, a graphical representation of a dashboard of a vehicle on which the at least one vehicle communications system is installed, wherein the dashboard reflects information from the central vehicle performance database.

19. A method real time vehicle communications comprising the steps of:
receiving vehicle performance data from an onboard vehicle performance system and vehicle position data from an onboard vehicle positioning system;
storing at least a portion of vehicle performance data and/or at least a portion of the vehicle position data in a memory unit;

transmitting a first portion of information from the memory unit to one or more base stations outside the vehicle; and

transmitting a second portion of information from the memory unit to one or more peer vehicles outside the vehicle under the direction of a user.

20. The method of claim 20, wherein the first and second portion are not the same.

ABSTRACT

A real time vehicle communications system comprises an interface unit configured to communicate with an onboard vehicle performance system and an onboard vehicle positioning system; a processor unit connected to the interface unit; a memory unit connected to the processor unit; a communications unit connected to the processor unit, the communications unit being configured for wireless communication. The processor unit is configured to store data from the vehicle positioning system and the vehicle performance system in the memory unit, and transmit at least some information from the memory unit, via the communications unit, to one or more peer vehicles outside the vehicle under the direction of a user; and one or more base stations outside the vehicle.

FIGURE
1

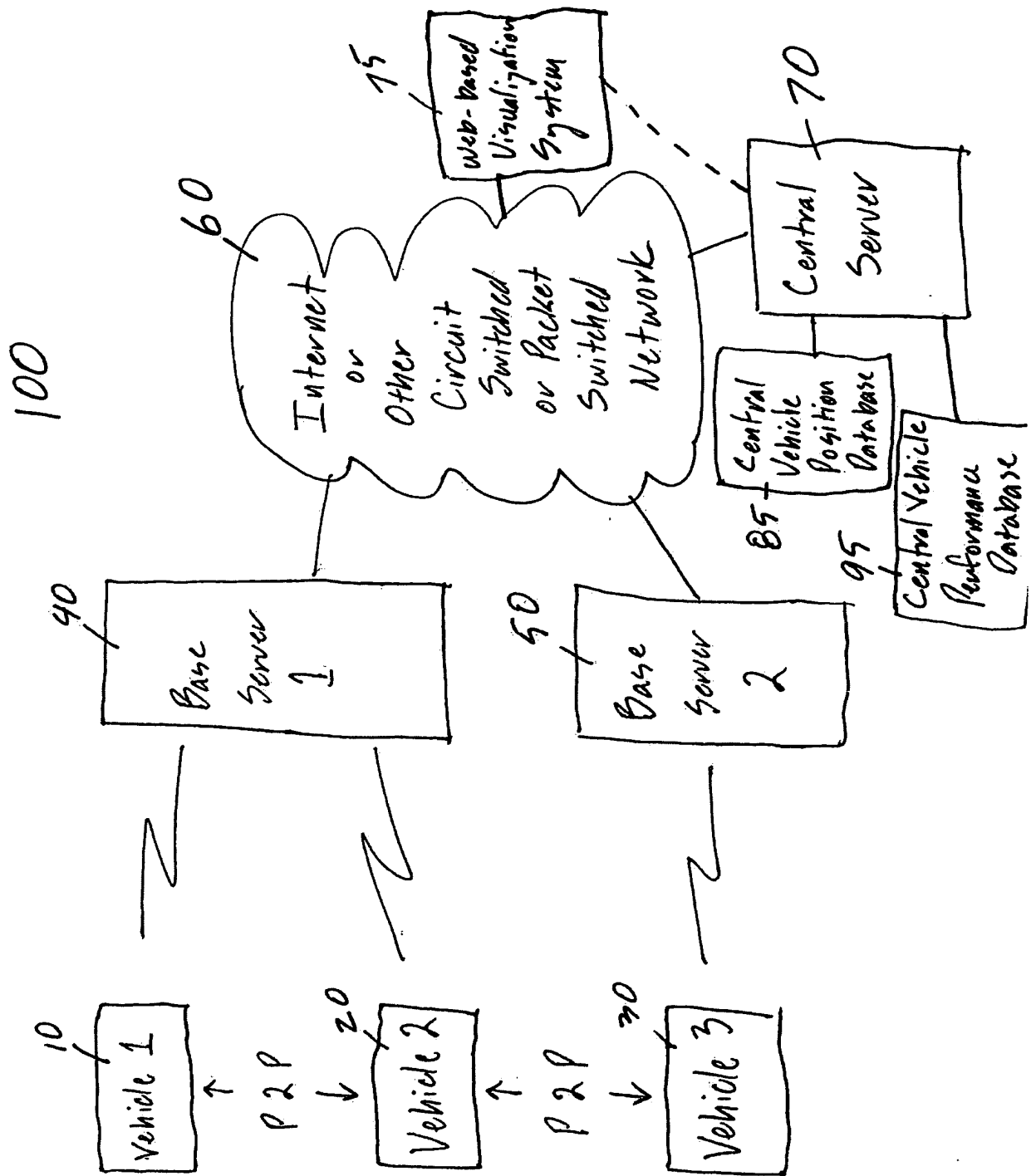


FIGURE 2

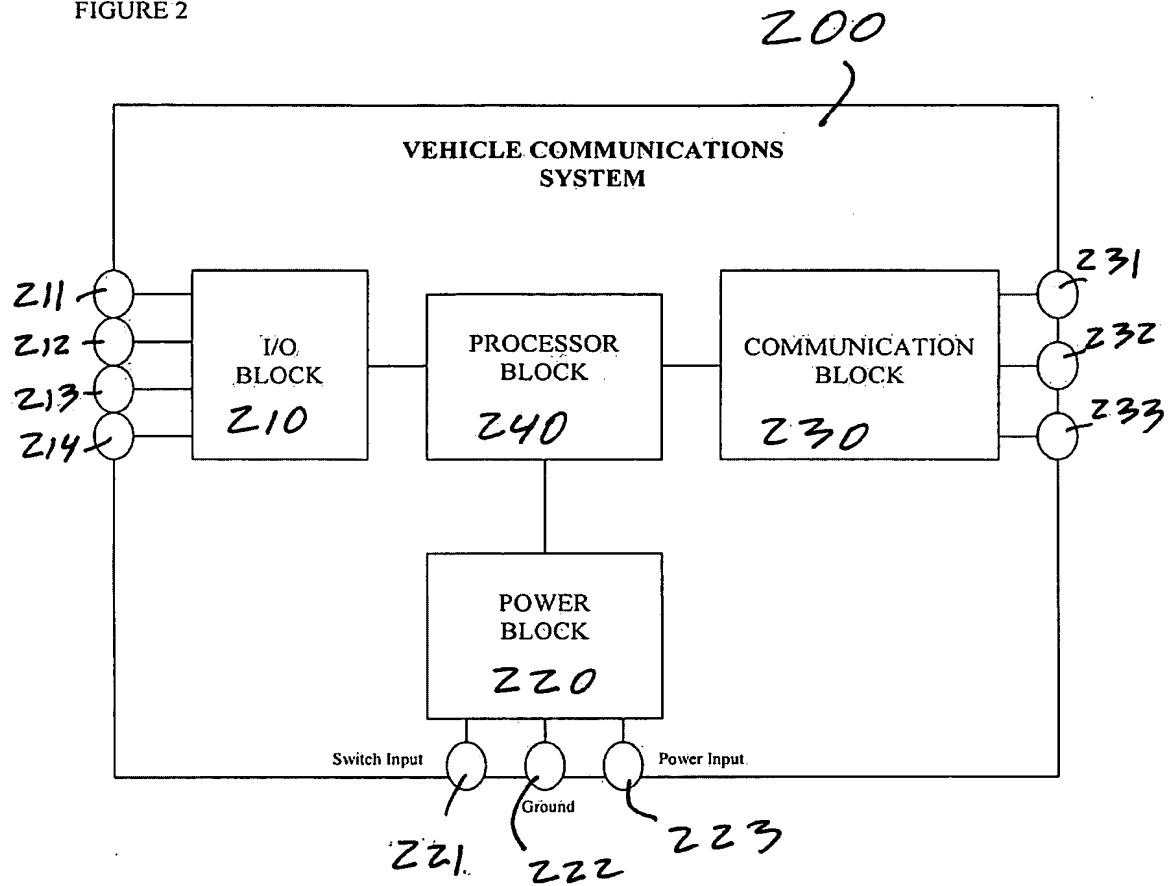
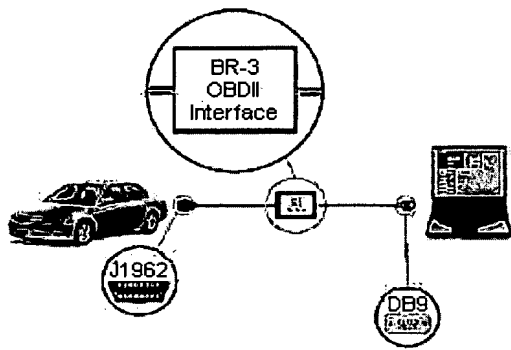


FIGURE 3



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FIGURE 4

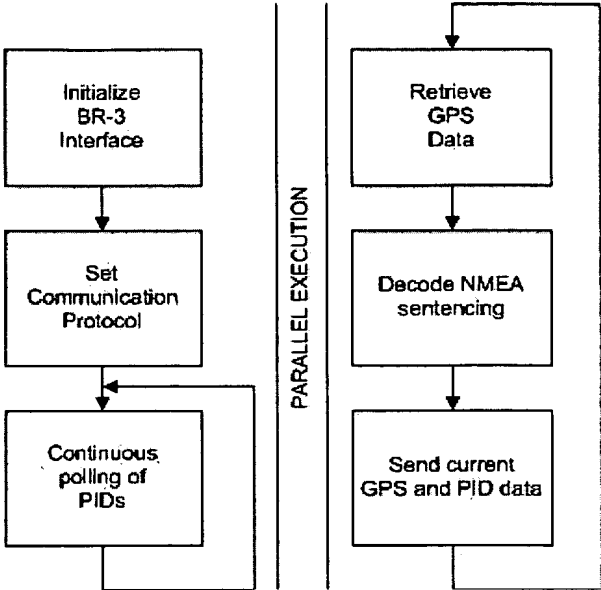
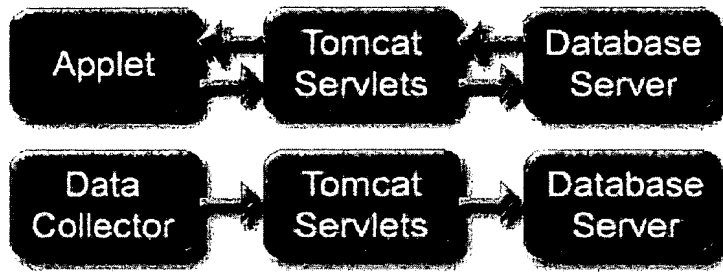
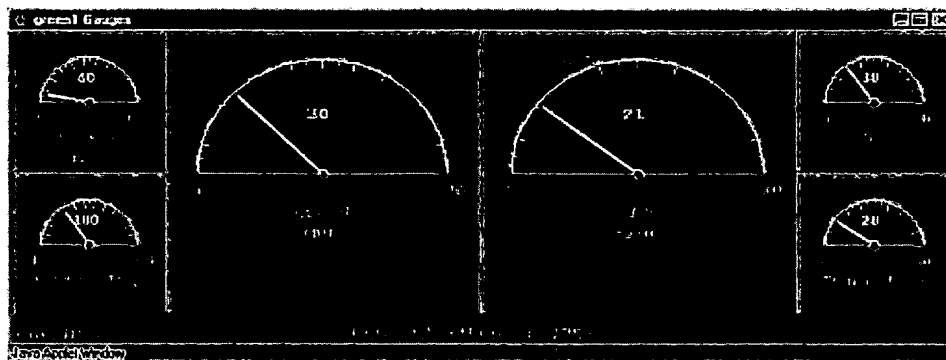


FIGURE 5



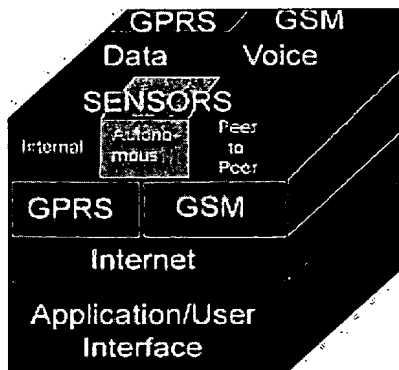
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FIGURE 6



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FIGURE 7



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04 FC:2051	65.00 OP

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APPLICATION AS FILED - PART I

(Column 1)

(Column 2)

SMALL ENTITY

OR

OTHER THAN SMALL ENTITY

FOR	NUMBER FILED	NUMBER EXTRA
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A
TOTAL CLAIMS (37 CFR 1.16(i))	20 minus 20 =	0
INDEPENDENT CLAIMS (37 CFR 1.16(h))	2 minus 3 =	0
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).	
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))		

RATE (\$)	FEE (\$)
N/A	150.00
N/A	\$250
N/A	\$100
X\$ 25	
X100	
+180=	
TOTAL	500

RATE (\$)	FEE (\$)
N/A	300.00
N/A	\$500
N/A	\$200
X\$50	
X200	
+360=	
TOTAL	

* If the difference in column 1 is less than zero, enter "0" in column 2.

APPLICATION AS AMENDED - PART II

(Column 1)

(Column 2)

(Column 3)

SMALL ENTITY

OR

OTHER THAN SMALL ENTITY

AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total (37 CFR 1.16(i))	*	Minus	**	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=
	Application Size Fee (37 CFR 1.16(s))				
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					

RATE (\$)	ADDITIONAL FEE (\$)
X\$ 25	
X100	
+180=	
TOTAL ADD'L FEE	

RATE (\$)	ADDITIONAL FEE (\$)
X\$50	
X200	
+360=	
TOTAL ADD'L FEE	

AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total (37 CFR 1.16(i))	*	Minus	**	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=
	Application Size Fee (37 CFR 1.16(s))				
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					

RATE (\$)	ADDITIONAL FEE (\$)
X\$ 25	
X100	
+180=	
TOTAL ADD'L FEE	

RATE (\$)	ADDITIONAL FEE (\$)
X\$50	
X200	
+360=	
TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

This collection of information is required by 37 CFR 1.16. 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 12 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: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.