

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
---	---

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court _____ for the Western District of Texas, Waco Division _____ on the following

☐ Trademarks or ☒ Patents. (☐ the patent action involves 35 U.S.C. § 292.);

DOCKET NO. 6:22-cv-00474	DATE FILED 5/10/2022	U.S. DISTRICT COURT for the Western District of Texas, Waco Division
PLAINTIFF Auto Telematics Ltd.		DEFENDANT United Services Automobile Association
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 9,311,271	4/12/2016	Auto Telematics Ltd.
2 9,633,487	4/25/2017	Auto Telematics Ltd.
3 10,192,369	1/29/2019	Auto Telematics Ltd.
4 10,198,879	2/5/2019	Auto Telematics Ltd.
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
-------	-------------------	------

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

Print

Save As...

Reset



UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/061,910	04/25/2017	9633487	044228.010201	4319

30734 7590 04/05/2017
 BAKER & HOSTETLER LLP
 WASHINGTON SQUARE, SUITE 1100
 1050 CONNECTICUT AVE. N.W.
 WASHINGTON, DC 20036-5304

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
 (application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Andrew William Wright, Surrey, UNITED KINGDOM;
 Gillian Switalski, Wentworth, UNITED KINGDOM;
 Andrew William Wright, Wentworth, UNITED KINGDOM;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
 or **Fax (571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

30734 7590 02/28/2017
BAKER & HOSTETLER LLP
WASHINGTON SQUARE, SUITE 1100
1050 CONNECTICUT AVE. N.W.
WASHINGTON, DC 20036-5304

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/061,910	03/04/2016	Andrew William Wright	044228.010201	4319

TITLE OF INVENTION: METHOD AND SYSTEM FOR LOGGING VEHICLE BEHAVIOR

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$480	\$0	\$0	\$480	05/30/2017

EXAMINER	ART UNIT	CLASS-SUBCLASS
PAIGE, TYLER D	3661	701-033400

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
- (2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Baker & Hostetler LLP

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

Wright, Andrew William
 Switalski, Gillian

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Surrey, United Kingdom

Please check the appropriate assignee category or categories (will not be printed on the patent): ☒ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☒ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☒ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number 502036 (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ Applicant certifying micro entity status. See 37 CFR 1.29
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Mark H. Krietzman/

Date March 15, 2017

Typed or printed name Mark H. Krietzman

Registration No. 41128

Electronic Patent Application Fee Transmittal				
Application Number:	15061910			
Filing Date:	04-Mar-2016			
Title of Invention:	METHOD AND SYSTEM FOR LOGGING VEHICLE BEHAVIOR			
First Named Inventor/Applicant Name:	Andrew William Wright			
Filer:	Mark Krietzman H/Kate Duttera			
Attorney Docket Number:	044228.010201			
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
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:				
UTILITY APPL ISSUE FEE	2501	1	480	480

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				480

Electronic Acknowledgement Receipt	
EFS ID:	28642534
Application Number:	15061910
International Application Number:	
Confirmation Number:	4319
Title of Invention:	METHOD AND SYSTEM FOR LOGGING VEHICLE BEHAVIOR
First Named Inventor/Applicant Name:	Andrew William Wright
Customer Number:	30734
Filer:	Mark Krietzman H/Kate Duttera
Filer Authorized By:	Mark Krietzman H
Attorney Docket Number:	044228.010201
Receipt Date:	15-MAR-2017
Filing Date:	04-MAR-2016
Time Stamp:	19:25:36
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$480
RAM confirmation Number	031617INTEFSW00005909502036
Deposit Account	502036
Authorized User	Mark Krietzman
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: 37 CFR 1.16 (National application filing, search, and examination fees) 37 CFR 1.17 (Patent application and reexamination processing fees)	

37 CFR 1.19 (Document supply fees)
 37 CFR 1.20 (Post Issuance fees)
 37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	010201_IF_Trans.PDF	91464	no	1
			5c2e2a6d4fb15db1ebcd3f494322a49daa9c4472		

Warnings:**Information:**

2	Fee Worksheet (SB06)	fee-info.pdf	30769	no	2
			0e8c5ad42e5b2641c97db2dac042003e4b346798		

Warnings:**Information:**

Total Files Size (in bytes):	122233
-------------------------------------	--------

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.



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

NOTICE OF ALLOWANCE AND FEE(S) DUE

30734 7590 02/28/2017
 BAKER & HOSTETLER LLP
 WASHINGTON SQUARE, SUITE 1100
 1050 CONNECTICUT AVE. N.W.
 WASHINGTON, DC 20036-5304

EXAMINER

PAIGE, TYLER D

ART UNIT

PAPER NUMBER

3661

DATE MAILED: 02/28/2017

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/061,910	03/04/2016	Andrew William Wright	044228.010201	4319

TITLE OF INVENTION: METHOD AND SYSTEM FOR LOGGING VEHICLE BEHAVIOR

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$480	\$0	\$0	\$480	05/30/2017

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

30734 7590 02/28/2017

BAKER & HOSTETLER LLP
 WASHINGTON SQUARE, SUITE 1100
 1050 CONNECTICUT AVE. N.W.
 WASHINGTON, DC 20036-5304

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/061,910	03/04/2016	Andrew William Wright	044228.010201	4319

TITLE OF INVENTION: METHOD AND SYSTEM FOR LOGGING VEHICLE BEHAVIOR

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$480	\$0	\$0	\$480	05/30/2017

EXAMINER	ART UNIT	CLASS-SUBCLASS
PAIGE, TYLER D	3661	701-033400

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) The names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
- (2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
- 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ Applicant certifying micro entity status. See 37 CFR 1.29
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____



UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/061,910	03/04/2016	Andrew William Wright	044228.010201	4319

30734	7590	02/28/2017
-------	------	------------

BAKER & HOSTETLER LLP
 WASHINGTON SQUARE, SUITE 1100
 1050 CONNECTICUT AVE. N.W.
 WASHINGTON, DC 20036-5304

EXAMINER	
PAIGE, TYLER D	

ART UNIT	PAPER NUMBER
3661	

DATE MAILED: 02/28/2017

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
 (Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. 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, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. 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.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 15/061,910	Applicant(s) WRIGHT, ANDREW WILLIAM	
	Examiner TYLER PAIGE	Art Unit 3661	AIA (First Inventor to File) Status No

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

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/16/2016.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☒ The allowed claim(s) is/are 9-21. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
Certified copies:
a) ☐ All b) ☐ Some *c) ☐ None of the:
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)).
* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)	5. ☐ Examiner's Amendment/Comment
2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date <u>07/13/2016</u>	6. ☒ Examiner's Statement of Reasons for Allowance
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material	7. ☐ Other _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____.	

/TYLER PAIGE/ Examiner, Art Unit 3661	
--	--

Application/Control Number: 15/061,910
Art Unit: 3661

Page 2

DETAILED ACTION

1. The present application is being examined under the pre-AIA first to invent provisions.

Allowable Subject Matter

2. Claims 9 - 21 are allowed.
3. The following is an Examiner's Statement for reasons for allowance. None of the references of record either alone or in combination teaches or suggest the following limitations as claimed in claim 9, a mobile telecommunications device, a user interface, determine, based on the inputs received by the user interface and sensor data from the device's sensor set, a start of a driving period during which the mobile device is removably attached to the vehicle and the vehicle is in use, and wherein the driving information is derived without data from vehicle sensors, and the mobile telecommunications device is controlled by a downloaded application to controlled mobile device to detect occurrence of a predetermined event and in response take at least one predetermined action. This limitation, in combination with the other elements of the claim, is not shown or suggested in the prior art of record.
4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submission should be clearly labeled, "Comments on Statement of Reasons for Allowance."

Application/Control Number: 15/061,910
Art Unit: 3661

Page 3

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TYLER PAIGE whose telephone number is (571)270-5425. The examiner can normally be reached on 7:30am - 5:00pm.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Black can be reached on 571-272-6956. 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.

/TYLER PAIGE/

Application/Control Number: 15/061,910

Page 4

Art Unit: 3661

Examiner, Art Unit 3661

<i>Index of Claims</i> 	Application/Control No. 15061910	Applicant(s)/Patent Under Reexamination WRIGHT, ANDREW WILLIAM
	Examiner TYLER PAIGE	Art Unit 3661

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant		☐ CPA		☐ T.D.		☐ R.1.47			
CLAIM		DATE							
Final	Original	09/20/2016	11/02/2016	02/16/2017					
	1	÷	-						
	2	÷	-						
	3	÷	-						
	4	÷	-						
	5	÷	-						
	6	÷	-						
	7	÷	-						
	8	÷	-						
1	9		✓	=					
2	10		✓	=					
3	11		✓	=					
4	12		✓	=					
5	13		✓	=					
6	14		✓	=					
7	15		✓	=					
8	16		✓	=					
9	17		✓	=					
10	18			=					
11	19			=					
12	20			=					
13	21			=					

Receipt date: 07/13/2016

15061910 - GAU: 3661

Substitute for Form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known	
				Application Number	15/061,910
				Filing Date	March 4, 2016
				First Named Inventor	Wright, Andrew William
				Art Unit	3661
Examiner Name	Paige, Tyler D.				
Attorney Docket Number	044228.010201				
Sheet	1	of	1		

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials	Cite No.	Include name of the author, title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), Volume-issue Number(s), publisher, city and/or country where published.	T	
	29	Barbeau et al.; "TRAC-IT – A Software Architecture Supporting Simultaneous Travel Behavior Data Collection & Real-time Location-Based Services for GPS-Enabled Mobile Phones"; Proceedings of the Nat'l Academy of Sciences Transportation Research Board 88 th Annual Meeting; Paper #09-3175; January 2009; 20 pages		
	30	Barbeau et al.; "Dynamic Management of Real-Time Location Data on GPS-Enabled Mobile Phones"; The 2 nd Int'l Conf. on Mobile Ubiquitous Computing, Systems, Services and Techniques; 2008; p. 343-348		
	31	Meyer, Stefan; "Fahrtenbuch – iPhone Apps Plus"; https://web.archive.org/web/20091210215707/http://www.iphoneappsplus.com/business/fahrtenbuch/index.htm ; retrieved January 19, 2016; 2 pages (XP055242544)		
	32	"iPhone & iPad iOS Entwicklung"; NeuMedienFraktion; http://www.neuemedienfraktion.de/iPhone/iPhone.html ; retrieved January 19, 2016; 2 pages (XP055242566)		
	33	Kanjo et al.; "MobGeoSen: facilitating personal geosensor data collection and visualization using mobile phones"; Personal and Ubiquitous Computing; Vol. 12 No. 8; 2008; p. 599-607		
	34	European Patent Application No. 11813683.7; Office Action Article 94(3); dated January 26, 2016; 6 pages		

Examiner Signature	/TYLER D PAIGE/ (02/16/2017)	Date Considered	02/16/2017
-----------------------	------------------------------	--------------------	------------

609112132.1

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /T.D.P/

Issue Classification 	Application/Control No. 15061910	Applicant(s)/Patent Under Reexamination WRIGHT, ANDREW WILLIAM
	Examiner TYLER PAIGE	Art Unit 3661

CPC					
Symbol				Type	Version
G07C		5	008	F	2013-01-01
G07C		5	0858	I	2013-01-01
G07C		5	0866	A	2013-01-01
H04M		1	72527	A	2013-01-01
G06F		17	00	I	2013-01-01
G09B		19	14	I	2013-01-01
G06Q		40	08	I	2013-01-01
G07C		5	02	I	2013-01-01

CPC Combination Sets						
Symbol			Type	Set	Ranking	Version

/TYLER PAIGE/ Examiner.Art Unit 3661 (Assistant Examiner)		Total Claims Allowed: 13	
/TYLER PAIGE/ Examiner.Art Unit 3661 (Primary Examiner)		02/16/2017 (Date)	O.G. Print Claim(s) 9
			O.G. Print Figure 1

Issue Classification 	Application/Control No. 15061910	Applicant(s)/Patent Under Reexamination WRIGHT, ANDREW WILLIAM
	Examiner TYLER PAIGE	Art Unit 3661

US ORIGINAL CLASSIFICATION						INTERNATIONAL CLASSIFICATION													
CLASS		SUBCLASS				CLAIMED					NON-CLAIMED								
701		33.4				G	0	6	F	7 / 00 (2006.0)									
CROSS REFERENCE(S)						G	0	8	C	19 / 12									
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)																		
340	13.31																		

/TYLER PAIGE/ Examiner.Art Unit 3661 (Assistant Examiner)		Total Claims Allowed: 13	
(Date)			
/TYLER PAIGE/ Examiner.Art Unit 3661 (Primary Examiner)		02/16/2017 (Date)	O.G. Print Claim(s) 9
			O.G. Print Figure 1

Issue Classification 	Application/Control No. 15061910	Applicant(s)/Patent Under Reexamination WRIGHT, ANDREW WILLIAM
	Examiner TYLER PAIGE	Art Unit 3661

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47															
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	9														
2	10														
3	11														
4	12														
5	13														
6	14														
7	15														
8	16														
9	17														
10	18														
11	19														
12	20														
13	21														

/TYLER PAIGE/ Examiner.Art Unit 3661 (Assistant Examiner)		Total Claims Allowed: 13	
(Date)		(Date)	
/TYLER PAIGE/ Examiner.Art Unit 3661 (Primary Examiner)		02/16/2017 (Date)	O.G. Print Claim(s) 9
		O.G. Print Figure 1	

Search Notes 	Application/Control No. 15061910	Applicant(s)/Patent Under Reexamination WRIGHT, ANDREW WILLIAM
	Examiner TYLER PAIGE	Art Unit 3661

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner
G07C5/008 or G07C5/02 or G06Q40/08 or G06F17/00 or G09B19/14 or G07C5/0858 or G07C5/0866 or H04M1/72527	11/03/2016	tdp

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
701	33.4	11/03/2016;02/16/2017	tdp
340	13.31	11/03/2016;02/16/2017	tdp

SEARCH NOTES		
Search Notes	Date	Examiner
Inventor Search	11/06/2016	tdp
East Search	11/06/2016	tdp
NPL Search	11/06/2016	tdp

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
701	33.4	02/16/2017	tdp
340	13.31	02/16/2017	tdp

/TYLER PAIGE/ Examiner.Art Unit 3661	
---	--

EAST Search History**EAST Search History (Prior Art)**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	1409	"701/33.4".OCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/11/02 14:33
S2	3	("Switalski").AANM.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/11/02 14:33
S3	1744	("Wright").AANM.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/11/02 14:33
S4	410	(vehicle or automobile or car) same (blackbox or data adj recorder) same wireless	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/02 14:35
S5	392	(vehicle or automobile or car) same (data adj recorder) same wireless	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/02 14:35
S6	177	(vehicle or automobile or car) same (blackbox or data adj recorder) same wireless and (camera or image adj sensor or image adj recorder)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/02 14:36
S7	84	(vehicle or automobile or car) same (blackbox or data adj recorder) same wireless same event and (camera or image adj sensor or image adj recorder)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/02 14:36
S8	0	(vehicle or automobile or car) same (blackbox or data adj recorder) same wireless same event and (camera or image adj sensor or image adj recorder) and deny same confirm	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/02 14:36
S9	0	(vehicle or automobile or car) same (blackbox or data adj recorder) same wireless and (camera or image adj sensor or image adj recorder) and deny same confirm	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/02 14:37
S10	0	(vehicle or automobile or car) same (blackbox or data adj recorder) same wireless same event and (camera or image adj sensor or image adj recorder) and deny and confirm	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	ON	2016/11/02 14:37

			IBM_TDB			
S11	46	(vehicle or automobile or car) same (blackbox or data adj recorder) same wireless same event and (camera or image adj sensor or image adj recorder) and user same input	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/02 14:37
S12	0	(vehicle or automobile or car) same (blackbox or data adj recorder) same wireless same event and (camera or image adj sensor or image adj recorder) and emergency near3 responder and score same driver	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/03 08:06
S13	0	(vehicle or automobile or car) same (blackbox or data adj recorder) same wireless same event and emergency near3 responder and score same driver	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/03 08:06
S14	0	(vehicle or automobile or car) same (blackbox or data adj recorder) same wireless same event and emergency near3 responder and score	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/03 08:06
S15	2	(vehicle or automobile or car) same (blackbox or data adj recorder) same wireless same event and emergency near3 responder	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/03 08:06
S16	2	(vehicle or automobile or car) same (blackbox or data adj recorder) same wireless same event and emergency same responder	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/03 08:09
S17	73	(vehicle or automobile or car) same (blackbox or data adj recorder) and emergency near3 responder	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/03 08:09
S18	7	(vehicle or automobile or car) same (blackbox or data adj recorder) and emergency near3 responder and score same (driver or operator)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/03 08:10
S19	0	(vehicle or automobile or car) same (blackbox or data adj recorder) and emergency near3 responder and rank same (driver or operator)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/03 08:15
S20	8	(vehicle or automobile or car) same (blackbox or data adj recorder) and emergency near3 responder and score	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	ON	2016/11/03 08:18

EAST Search History

			IBM_TDB			
S21	22	(vehicle or automobile or car) same (blackbox or data adj recorder) and emergency near3 personnel and score	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/03 08:20
S22	439	(vehicle or automobile or car) same (blackbox or data adj recorder) and (user or driver) same (confirm or confirmation)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/03 10:19
S23	6	(vehicle or automobile or car) same (blackbox or data adj recorder) same (user or driver) same (confirm or confirmation)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/03 10:33
S24	11	(vehicle or automobile or car) same (blackbox or data adj recorder) and (user or driver) same (confirm or confirmation) same deny	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/03 10:34
S25	59	(vehicle or automobile or car) same (blackbox or data adj recorder) and (user or driver) same (confirm or confirmation) and deny	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/03 10:34
S26	52120	(G07C5/008 or G07C5/02 or G06Q40/08 or G06F17/00 or G09B19/14 or G07C5/0858 or G07C5/0866 or H04M1/72527).qpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/11/03 10:44

2/ 16/ 2017 3:34:22 PM

C:\ Users\ tpaige\ Documents\ EAST\ Workspaces\ 15061910_vehicle_recorder_blackbox.wsp

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-875					Application or Docket Number 15/061,910		Filing Date 03/04/2016		☐ To be Mailed	
ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO										
APPLICATION AS FILED – PART I										
(Column 1)			(Column 2)							
FOR		NUMBER FILED	NUMBER EXTRA			RATE (\$)	FEE (\$)			
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A	N/A			N/A				
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))		N/A	N/A			N/A				
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A	N/A			N/A				
TOTAL CLAIMS (37 CFR 1.16(j))		minus 20 =	*			X \$ =				
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 =	*			X \$ =				
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 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))										
* If the difference in column 1 is less than zero, enter "0" in column 2.						TOTAL				
APPLICATION AS AMENDED – PART II										
(Column 1)			(Column 2)			(Column 3)				
AMENDMENT	12/16/2016		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE (\$)	ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))		* 13	Minus	** 20	= 0		X \$40 =	0	
	Independent (37 CFR 1.16(h))		* 1	Minus	***3	= 0		X \$210 =	0	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
							TOTAL ADD'L FEE		0	
(Column 1)			(Column 2)			(Column 3)				
AMENDMENT			CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE (\$)	ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))		*	Minus	**	=		X \$ =		
	Independent (37 CFR 1.16(h))		*	Minus	***	=		X \$ =		
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
							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.										

SLIE
DEBORAH PORTER

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.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

DOCKET NO.: 044228.010201
Application No.: 15/061,910
Office Action Dated: November 10, 2016

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Confirmation No.: 4319

Andrew William Wright

Application No.: 15/061,910

Group Art Unit: 3661

Filing Date: March 4, 2016

Examiner: PAIGE, TYLER D

For: Method and System for Logging Vehicle Behavior

Mail Stop Amendment
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, VA 22313-1450

Dear Commissioner:

REPLY PURSUANT TO 37 CFR § 1.111

In response to the Official Action dated **November 10, 2016**, reconsideration is respectfully requested in view of the amendments and/or remarks as indicated below:

- ☐ **Amendments to the Specification** begin on page of this paper.
- ☒ **Amendments to the Claims** are reflected in the listing of the claims which begins on page 2 of this paper.
- ☐ **Amendments to the Drawings** begin on page of this paper and include an attached replacement sheet.
- ☒ **Remarks** begin on page 6 of this paper.
- ☒ The Commissioner is hereby authorized to charge any fee deficiency, charge any additional fees, or credit any overpayment of fees, associated with this application in connection with this filing, or any future filing, submitted to the U.S. Patent and Trademark Office during the pendency of this application, to Deposit Account No. 50-2036.

DOCKET NO.: 044228.010201

PATENT

Application No.: 15/061,910

Office Action Dated: November 10, 2016

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-8. (Canceled)

9. (Currently Amended) A mobile telecommunications device ~~adapted for installation to a vehicle and~~ configured to log driving information associated with ~~at the vehicle when driven,~~ the mobile telecommunications device comprising:

a sensor set comprising ~~at least one of~~ an image sensor, an audio sensor, an accelerometer ~~and or~~ a positioning module, or a combination thereof;

a user interface;

a processor; ~~and for processing sensor data from the sensor set to derive said driving information;~~

a memory ~~for storing said derived driving information;~~

the mobile telecommunications device configured to: ~~a wireless telecommunications module operable to download an application;~~

~~the mobile device being arranged to execute the downloaded application to control the mobile device to register the~~ determine, based on the inputs received by the user interface and sensor data from the device's sensor set, a start of a driving period during which the mobile device is removably attached installed to the vehicle and the vehicle is in use being driven by a driver;

process the sensor data from the sensor set during the driving period to derive driving information associated with how the vehicle is driven;

store a selection of the driving information to the memory; ~~and;~~

wherein the driving information is derived without data from vehicle sensors, and the mobile telecommunications device is controlled by a downloaded application to control the mobile device to detect occurrence of a predetermined event and in response take at least one predetermined action.

DOCKET NO.: 044228.010201**PATENT****Application No.:** 15/061,910**Office Action Dated:** November 10, 2016

10. (Currently Amended) The mobile telecommunication device according to claim 9, wherein the predetermined action is ~~at least one of:~~ storing driving information associated with that event to the memory, ~~storing driving information captured at a higher sampling rate than when an event is not detected, and transmitting driving information via a wireless telecommunication module of the mobile telecommunication device to a remote system.~~

11. (Previously Presented) The mobile telecommunications device according to claim 9, wherein the predetermined action comprises providing feedback to a user to indicate that an event has been detected, the mobile telecommunications device being configured to receive a user interaction to confirm or deny whether the detected event has actually occurred following said feedback.

12. (Previously Presented) The mobile telecommunications device according to claim 11, wherein the feedback comprises notifying a user that a further action has been scheduled, and will be taken within a predetermined period, the mobile telecommunications device being further configured to receive a user interaction to confirm or deny whether the further scheduled action should be taken within a predetermined period.

13. (Previously Presented) A mobile telecommunications device according to claim 9, wherein the predetermined action comprises communicating to a remote system that an event has been detected, the mobile telecommunications device being further configured to receive from the remote system a request to transmit to the remote system selected portions of the driving information associated with the detected event.

14. (Previously Presented) The mobile telecommunications device according to claim 9, wherein the memory comprises:

a long term memory for persistently storing driving information and a short term memory for transiently storing driving information, wherein the short term memory receives driving

DOCKET NO.: 044228.010201

PATENT

Application No.: 15/061,910

Office Action Dated: November 10, 2016

information at a higher update rate than the long term memory, the mobile telecommunications device being further configured to:

write driving information to the short term memory at a predetermined update rate during the driving period in a predetermined sequence; and,

overwrite the driving information previously written to the short term memory in accordance with the predetermined sequence.

15. (Currently Amended) The mobile telecommunications device according to claim 14, wherein the mobile communications device is controlled by the[[a]] downloaded application to control the mobile device to detect an occurrence of a predetermined event and in response ~~take at least one predetermined action including transferring~~ data from the short term memory to the long term memory.

16. (Previously Presented) The mobile telecommunications device according to claim 9, further configured to:

interface with an external device, the external device having access to external driving information associated with a condition of the vehicle; and,

to receive at least a portion of the external driving information from the external device.

17. (Currently Amended) The mobile telecommunications device according to claim 9, wherein the mobile communications device is controlled by the[[a]] downloaded application to control the mobile device to process the driving information to generate a driving score associated with a particular driver.

18. (New) The mobile telecommunication device according to claim 9, wherein the predetermined action is storing driving information captured at a higher sampling rate than when an event is not detected.

DOCKET NO.: 044228.010201**PATENT****Application No.:** 15/061,910**Office Action Dated:** November 10, 2016

19. (New) The mobile telecommunication device according to claim 9, wherein the predetermined action is transmitting driving information via a wireless telecommunication module of the mobile telecommunication device to a remote system.

20. (New) The mobile telecommunication device according to claim 19, wherein the mobile telecommunications device utilizes its own power supply.

21. (New) The mobile telecommunication device according to claim 19, wherein the mobile telecommunications device is a smartphone.

DOCKET NO.: 044228.010201
Application No.: 15/061,910
Office Action Dated: November 10, 2016

PATENT

REMARKS

Upon submission of this response, claims 9-21 will be pending examination. Claims 9, 10, 15, and 17 are amended. Claims 18-21 are new. Support for claim 18 can be found on at least page 12, lines 10-13 of the as-filed specification. Support for new claim 19 can be found on at least page 11, lines 12-17 and page 18, lines 10-13. Support for new claim 20 can be found on page 52, lines 7-8 (reciting “the battery of the mobile device”). Support for claim 21 can be found on page 27, lines 1-2 and lines 12-13 of the as-filed specification. No new matter is intended to have been added by these amendments.

Claim Rejections under 35 U.S.C. § 102

Claims 9-11 and 13-16 are rejected under § 102(b) as allegedly anticipated by U.S. 2007/0135979 (“Plante”). MPEP § 2131 teaches that “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” Applicants respectfully disagree that Plante teaches each and every element of the claims as they appear here.

The claims are now directed to a mobile telecommunications device which is controlled by a downloaded application and the driving information that it derives is from processing the sensor data on the mobile device without obtaining data from vehicle sensors. This is contrary to what is disclosed in Plante. There are also several other features believed by the Examiner to be disclosed in Plante which are, in fact, simply not disclosed.

Plante is directed to a black box recorder (data recorder unit 51) which is fitted to a vehicle and which records data to a two-part memory; one part permanent (the flash memory 57) and the other temporary (the managed loop memory 56). The primary function of the data recorder unit is to capture data relating to the driving of the vehicle and to store this until such time as it can reach a “download space,” which is an area where a high-bandwidth wireless data link (such as a WiFi network) is available such that the data recorded in the memory can automatically be “downloaded” from the data recorder unit in the vehicle to a server (possibly via the internet) for processing and analysis. The example given of a download space is a parking lot or a common parking facility (paras. [0061] and [0064], for example).

DOCKET NO.: 044228.010201

PATENT

Application No.: 15/061,910

Office Action Dated: November 10, 2016

The data recorder unit 51 of Plante is not “removably attached” to the vehicle as recited in amended claim 9. Rather, the data recorder is permanently attached (see para. [0078], for example, stating that the device can be “*permanently affixed*” within a vehicle). In this respect, the data recorder of Plante is not a “*mobile telecommunications device*” as recited in the claims because it cannot be moved around freely without relying on the vehicle’s power source and data connections. Additionally, a feature of a *mobile telecommunications device* is that it has its own power source, for example a mobile phone with a battery.

Furthermore, paragraph [0078] states that: “Electrical couplings such as power supply and data connections with the vehicles electronic systems may be made through standard connectors and interfaces. These devices are thus coupled to the vehicle and its systems.” Paragraphs [0080], [0095], and [0101] further expand on the types of data which are recorded by the connection to the vehicle sensors 49 and the connection to the vehicle’s OBD diagnostics system 48 as shown in Figures 4 and 5. Accordingly, whilst the data recorder records information from its camera(s), it also records information from the vehicle sensors, which can be “useful” in for providing additional data and information which relates to the status of the vehicle (see para. [0095]). In view of the amendments that have been made to clarify that driving information is derived **without** data from the vehicle sensors, this amendment seems to further distinguish the claimed invention from Plante.

Next, there is no disclosure in Plante of the mobile telecommunications device being configured to determine, based on the inputs from the user interface and the sensor data, a start of a driving period when the vehicle is in use. The Examiner refers to paragraph [0051] to support the position that this is disclosed in Plante. However, paragraph [0051] is completely silent on the determination of the start of a driving period. The reason for this is that the data recorder of Plante **only** records data and then transfers it to a server once it is in a download space. It is the server that carries out analysis of that data (see para. [0132], for example). There is absolutely no **processing** carried out as such on the data recorder of Plante, and therefore there can, by definition, be no determination of the start of a driving period by the data recorder.

This also leads onto the next feature of the mobile telecommunications device being configured to process the sensor data during the driving period to derive driving information

DOCKET NO.: 044228.010201

PATENT

Application No.: 15/061,910

Office Action Dated: November 10, 2016

associated with how the vehicle is driven. Again, as there is no processing of data on the data recorder, there can be no determination of this driving information. Once again the Examiner refers to paragraph [0051] to support the stance that this feature is disclosed by Plante. However, there is nothing in this paragraph which describes any form of **processing** carried out in the data recorder. The whole disclosure of Plante is to automate transfer of recorded data to a server for processing (analysis and statistical services) once the vehicle is in a parking lot (download area).

It is also to be appreciated that in Plante whenever the term “downloaded” is being used (see, for example, paras. [0066], [0067], and [0075]) this refers to recorded data being transferred **from the data recorder to the server**. In the present claims, the term “downloadable application” is a reference to an application which is downloaded **to the mobile device**, and so this is completely opposite to that described in Plante. In fact, Plante goes further in that it describes the data recorder to have a microprocessor **not** arranged as a general computing platform but rather as application specific **firmware** directed to the particular functions of the data recorder (see para. [0081]). This is contrary to what is recited in amended claim 9, where the processor is configurable by the downloaded application to operate in a specific manner for data processing, namely be a general computing platform. Accordingly, the Examiner is incorrect to refer to paragraphs [0023], [0026], and [0047] as supporting the view that the downloadable application on the mobile device is described in Claim 9. Rather, what is stated in Plante is: “Accordingly **servers** include applications specific software, ...” (emphasis added) and this is clearly a reference to the application specific software being provided on the **server**. All of the paragraphs mentioned, as well as Figure 10, are consistent with the applications being on the server rather than the mobile device.

The advantages of having a mobile device that is not reliant on the vehicle are clear. Not only does this mean that the data recording can be made personal by recording the driving of a user in different vehicles to be captured and analyzed, but also the retrofitting of older vehicles with mobile devices in accordance with Plante (which is expensive) can be avoided.

Also, a mobile device which does more than simply record the data provides several advantages. Firstly, it enables the volume of data that needs to be uploaded to a server to be drastically reduced such that only driving information needs to be communicated. Secondly, the

DOCKET NO.: 044228.010201**PATENT****Application No.:** 15/061,910**Office Action Dated:** November 10, 2016

driver can be given instantaneous feedback on the manner in which he or she is driving. Further, if an accident occurs, actions such as calling the emergency services can be carried out, which would not be possible with the data recorder of Plante, as the only action it can take if a crash event is detected is to record data to permanent memory rather than to temporary memory.

Therefore, in summary, claim 9 as amended is not only novel over Plante and the cited prior art, but it is also inventive having several advantages. Accordingly, Applicants request reconsideration and withdrawal of the rejection to claim 9.

Claims 10-21 are also shown to be not be anticipated or obvious at least by virtue of depending from claim 9, which is shown to not be anticipated or obvious above.

Additionally, regarding claim 10 and new Claims 18 and 19, Applicants note that there is no driving information derived from sensor data by Plante on the mobile device itself as has been explained earlier. Rather, all that Plante does is to record data from the sensors. This is not processed driving information that is derived from sensor data as is recited in the claim. Therefore, Applicants request withdrawal of rejections to amended claim 10, and further indicate that new claims 18 and 19 are similarly allowable.

Furthermore with respect to claim 18, it is to be appreciated that the claim requires the storing of driving information which is derived from data captured at a higher sampling rate than when an event has not been detected. Paragraph [0096] of Plante only describes switching from the temporary memory location (loop memory) to a permanent memory location (flash memory) when an event trigger is detected (see paras. [0082], [0090], and [0092], for example). There is no description anywhere in Plante of sampling the sensor data at different rates. As such, Applicants submit that new claim 18 is also patentable over Plante.

Regarding the rejections to claim 11, here the predetermined action includes providing feedback to the user about the occurrence of the event and in response thereto to receive a user confirmation that the event has occurred. The purpose of this feature is to confirm that a perhaps automatically detected event has actually occurred (for example a minor accident), and thus to prevent serious actions (emergency services being called) being taken unnecessarily. Plante

DOCKET NO.: 044228.010201

PATENT

Application No.: 15/061,910

Office Action Dated: November 10, 2016

describes a system in which an event can be detected and an action taken (to store sensor data to a permanent memory rather than a temporary memory). However, contrary to the Examiner's assertions, there simply is no feedback provided to the user via the mobile device. The user is not notified of any event in Plante. Rather, the recorder of Plante simply detects a trigger event and carries out its action **without consulting the user at all**. The rejection appears to have confused the panic button of Plante as providing some sort of confirmation of an event (see para. 0091]). However, this is not the case. The event trigger caused by the user pressing the panic button simply causes a trigger event (manually rather than from sensor data), which signals to the microprocessor to start recording the sensor data to the permanent memory. So, no signal is sent to the user via the mobile device informing them of the occurrence of an event and requesting their confirmation of the occurrence of the event.

Regarding claim 14, the discussions above are incorporated here. Similarly, there is no disclosure in Plante of storing processed driving information in the memory and of there being different update rates for the driving information storage as detailed above.

Regarding claim 16, the claim recites an interface with an external device that has access to external driving information associated with a condition of the vehicle, and that a portion of this external driving information is received by the mobile telecommunications device. The purpose of this feature is to supplement the data analysis (processing) carried out on the mobile device with data that is stored on an external device. The Examiner states that this feature is known from paragraphs [0058] and [0060] of Plante and has referred to the server mentioned in those paragraphs. These paragraphs of Plante actually refer to the ability of the remote server to configure the data recorder remotely. The information sent to the data recorder may be to change some of its settings. However, there is no disclosure of the remote server providing driving data to the mobile device. Indeed, it would make no sense for this to be the case in Plante. This is because, as has been explained above, Plante is directed to a simple data recorder that does no processing of the captured data. Accordingly, more data would not be sent to the data recorder when it will only have to be transferred back to the server in due course. As such, this feature is not disclosed in Plante.

DOCKET NO.: 044228.010201
Application No.: 15/061,910
Office Action Dated: November 10, 2016

PATENT

Claim Rejections under 35 U.S.C. § 103

Claim 12 is rejected under § 103(a) as allegedly unpatentable over Plante in view of U.S. 2005/0046584 (“Breed”). Claim 12 further specifies the nature of the feedback of claim 11. The discussions above are incorporated here as well, and claim 11 was shown to not be anticipated by Plante. Applicants note that Plante teaches away from any sort of user confirmation of the occurrence of an event. Paragraph [0066] states:

By way of application specific computer programming code running on the vehicle event recorder, the vehicle event recorder contacts a remote server and exchanges transactions therewith. Thus, it is not necessary for the driver to manually set, trigger, connect or enable any action. Indeed, the driver need not even be aware of the existence of the system and its workings.
(emphasis added).

Accordingly, there is a positive teaching in Plante **not** to require any user confirmation to occur. The combination with Breed is thus impermissible with the benefit of hindsight as a person skilled in the art would not seek to combine these documents following this teaching.

There are further reasons why this combination could only be made with the benefit of hindsight. Paragraph [1781] of Breed describes a system where gesture commands are being detected and interpreted by the system to carry out a control operation of some equipment in the vehicle such as controlling the heating in a vehicle:

The combination of a camera system with a microphone and speaker allows for a wide variety of options for the control of vehicle components. A sophisticated algorithm can interpret a gesture, for example, that may be in response to a question from the computer system. The driver may indicate by a gesture that he or she wants the temperature to change and the system can then interpret a “thumbs up” gesture for higher temperature and a “thumbs down” gesture for a lower temperature. When it is correct, the driver can signal by gesture that it is fine. A very large number of component control options exist that can be entirely executed by the combination of voice, speakers and a camera that can see gestures. When the system does not understand, it can ask to have the gesture repeated, for example, or it can ask for a confirmation. Note, the presence of an occupant in a seat can even be confirmed by a word spoken by the occupant, for example, which can use a technology known as voice print if it is desired to identify the particular occupant.

DOCKET NO.: 044228.010201**PATENT****Application No.:** 15/061,910**Office Action Dated:** November 10, 2016

The very nature of gesture commands is that there is a degree of interpretation involved in understanding the command. This is seen by the use of the word “understand” in the quoted passage above. Because of this, it is reasonable to expect there to be a mechanism for confirming that the gesture sensed by the system is indeed correct. However, this is a confirmation of a user interaction with the system rather than a confirmation of a system-detected event by user confirmation as is recited in the claim. The only user input described in Plante is via a panic button where there is no degree of interpretation required, and so the skilled person looking at Breed would discard this feature as not being required as there does not seem to be any need for a confirmation.

Conclusion

For the foregoing reasons, Applicants submit that the application is in condition for allowance, and a Notice of Allowance to that effect is earnestly solicited. If the Examiner believes that a telephone conference would aid in the prosecution of this case in any way, the Examiner is invited to telephone the Applicant’s undersigned attorney.

The Director is authorized to charge any additional fee(s) or any underpayment of fee(s), or to credit any overpayments to **Deposit Account Number 50-2036**. Please ensure that Attorney Docket Number 044228.010201 is referred to when charging any payments or credits for this case.

Date: December 16, 2016

/Mark H. Krietzman/

Mark H. Krietzman

Registration No. 41,128

Baker & Hostetler LLP
 600 Anton Blvd., Suite 900
 Costa Mesa, CA 92626
 Telephone: (714) 754-6600
 Facsimile: (714) 754-6611

Electronic Acknowledgement Receipt	
EFS ID:	27818514
Application Number:	15061910
International Application Number:	
Confirmation Number:	4319
Title of Invention:	Method and System for Logging Vehicle Behavior
First Named Inventor/Applicant Name:	Andrew William Wright
Customer Number:	30734
Filer:	Mark Krietzman H/Kate Duttera
Filer Authorized By:	Mark Krietzman H
Attorney Docket Number:	044228.010201
Receipt Date:	16-DEC-2016
Filing Date:	04-MAR-2016
Time Stamp:	17:24:58
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
------------------------	----

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		010201_NFOA10Nov16_Respo nse_AsFiled.PDF	126514 66a55edb74230d875817e74b929a5b8925 a00e7b	yes	12

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Claims	2	5
	Applicant Arguments/Remarks Made in an Amendment	6	12
Warnings:			
Information:			
Total Files Size (in bytes):		126514	
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. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.			



UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/061,910	03/04/2016	Andrew William Wright	044228.010201	4319

30734	7590	11/10/2016
BAKER & HOSTETLER LLP		
WASHINGTON SQUARE, SUITE 1100		
1050 CONNECTICUT AVE. N.W.		
WASHINGTON, DC 20036-5304		

EXAMINER	
PAIGE, TYLER D	

ART UNIT	PAPER NUMBER
3661	

NOTIFICATION DATE	DELIVERY MODE
11/10/2016	ELECTRONIC

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 the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

cofficeonitor@bakerlaw.com
 edervis@bakerlaw.com
 patents@bakerlaw.com

Office Action Summary	Application No. 15/061,910	Applicant(s) WRIGHT, ANDREW WILLIAM	
	Examiner TYLER PAIGE	Art Unit 3661	AIA (First Inventor to File) Status No

-- 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 MONTHS 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 10/27/2016.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on ____.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.

4) ☐ 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*

5) ☒ Claim(s) 9-17 is/are pending in the application.
5a) Of the above claim(s) ____ is/are withdrawn from consideration.

6) ☐ Claim(s) ____ is/are allowed.

7) ☒ Claim(s) 9-17 is/are rejected.

8) ☐ Claim(s) ____ is/are objected to.

9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10) ☐ The specification is objected to by the Examiner.

11) ☒ The drawing(s) filed on 03/04/2016 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).

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).

Certified copies:

a) ☒ All b) ☐ Some** c) ☐ None of the:

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)

2) ☒ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)
Paper No(s)/Mail Date 04/07/2016;07/13/2016.

3) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.

4) ☐ Other: ____.

Application/Control Number: 15/061,910
Art Unit: 3661

Page 2

DETAILED ACTION

The present application is being examined under the pre-AIA first to invent provisions. This office action is in response to an application filed on 03/04/2016. The applicant submits two Information Disclosure Statement dated 04/07/2016 and 07/13/2016. The applicant claims Domestic priority to an International application filed on 12/15/2011 and 07/24/2013. The applicant claims priority to several international applications dated from 12/15/2010.

Claim Rejections - 35 USC § 102

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

2. The following is a quotation of the appropriate paragraphs of pre-AIA 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 –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim(s) 9 – 11, 13 - 16 are rejected under pre-AIA 35 U.S.C. 102b as being anticipated by Plante US 2007/0135979.

Application/Control Number: 15/061,910
Art Unit: 3661

Page 3

4. As per claim 9, A mobile telecommunications device adapted for installation to a vehicle and configured to log driving information associated with the vehicle when driven, the mobile device comprising:

a sensor set comprising at least one of an image sensor, an audio sensor, an accelerometer and a positioning module; (paragraph 0012 discloses, "A rewritable, nonvolatile memory is provided for storing those processed operational parameters and video images and audio signals, which are provided by the microprocessor controller. Data is converted to a computer readable form and read by a computer such that an accident can be reconstructed via data collected." And paragraph 0051 discloses, "A vehicle event recorder is fashioned as electronic apparatus which may include video recording equipment, audio recording equipment, vehicles system sensors, environmental sensors, a microprocessor, application-specific programming, and a communications port among others." And paragraph 0082 discloses an accelerometer. And paragraph 0096 discloses gps locator)

a processor for processing sensor data from the sensor set to derive said driving information; (paragraph 0025 discloses a microprocessor which is the functional equivalent to the processor claimed.)

a memory for storing said derived driving information; (paragraph 0025)

a wireless telecommunications module operable to download an application; (paragraph 0025 discloses a wireless transceiver and paragraph 0026 discloses applications specific software)

Application/Control Number: 15/061,910
Art Unit: 3661

Page 4

the mobile device being arranged to execute the downloaded application to control the mobile device to register the start of a driving period during which the mobile device is installed to the vehicle and the vehicle is being driven by a driver; (paragraph 0051)

process sensor data from the sensor set during the driving period to derive driving information associated with how the vehicle is driven; (paragraph 0051)

store a selection of the driving information to the memory;(paragraphs 0025 and 0051) and, wherein the mobile communications device is controlled by a downloaded application to control the mobile device to detect occurrence of a predetermined event and in response take at least one predetermined action.(paragraph 0023, 0047, and 0058)

5. 10. (New) The mobile telecommunication device according to claim 9, wherein predetermined action is at least one of: storing driving information associated with that event to the memory, storing driving information captured at a higher sampling rate than when an event is not detected, and transmitting driving information via a wireless telecommunication module of the mobile telecommunication device to a remote system.(paragraphs 0051, 0055, 0066, 0096, 0098 and 0100)

6. 11. (New) The mobile telecommunications device according to claim 9, wherein the predetermined action comprises providing feedback to a user to indicate that an event has been detected, the mobile telecommunications device being configured to receive a user interaction to confirm or deny whether the detected event has actually occurred following said feedback.(paragraphs 0082 and 0090 and 0091)

Application/Control Number: 15/061,910

Page 5

Art Unit: 3661

7. 13. (New) A mobile telecommunications device according to claim 9, wherein the predetermined action comprises communicating to a remote system that an event has been detected, the mobile telecommunications device being further configured to receive from the remote system a request to transmit to the remote system selected portions of the driving information associated with the detected event. (paragraphs 0082, 0090, and 0096)

8. 14. (New) The mobile telecommunications device according claim 9, wherein the memory comprises:

a long term memory for persistently storing driving information and a short term memory for transiently storing driving information, wherein the short term memory receives driving information at a higher update rate than the long term memory, the mobile telecommunications device being further configured to: (paragraphs 0025 and 0092)

write driving information to the short term memory at a predetermined update rate during the driving period in a predetermined sequence; (paragraphs 0082 0098) and,

overwrite the driving information previously written to the short term memory in accordance with the predetermined sequence.(paragraph 0098)

9. 15. (New) The mobile telecommunications device according to claim 14, wherein the mobile communications device is controlled by a downloaded application to control the mobile device to detect an occurrence of a predetermined event and in response

Application/Control Number: 15/061,910
 Art Unit: 3661

Page 6

take at least one predetermined action including transferring data from the short term memory to the long term memory.(paragraphs 0026 and 00129)

10. 16. (New) The mobile telecommunications device according to claim 9, further configured to: interface with an external device, the external device having access to external driving information associated with a condition of the vehicle; (paragraphs 0058 and 0060 discloses a server) and, to receive at least a portion of the external driving information from the external device.(paragraphs 0058 and 0060 discloses a server)

Claim Rejections - 35 USC § 103

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

12. The following is a quotation of pre-AIA 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, 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.

13. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under pre-AIA 35 U.S.C. 103(a) are summarized as follows:

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

Application/Control Number: 15/061,910
Art Unit: 3661

Page 7

2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
14. Claims 12 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Plante US 2007/0135979 in view of Breed US 2005/0046584.
15. 12. (New) The mobile telecommunications device according to claim 11, wherein the feedback comprises notifying a user that a further action has been scheduled, and will be taken within a predetermined period, the mobile telecommunications device being further configured to receive a user interaction to confirm or deny whether the further scheduled action should be taken within a predetermined period.(Breed paragraph 1781 discloses, "When the system does not understand, it can ask to have the gesture repeated, for example, or it can ask for a confirmation. Note, the presence of an occupant in a seat can even be confirmed by a word spoken by the occupant, for example, which can use a technology known as voice print if it is desired to identify the particular occupant.") and (Plante paragraph 0076, 0091)

Plante discloses a vehicle event recorder system. Plante does not disclose a whether an operator will confirm or deny whether further scheduled action should be taken. Breed teaches of an operator giving confirmation for an operation. Therefore, at the time of filing it would have been obvious to one of ordinary skill in the art to incorporate the teachings of Breed et.al. into the invention of Plante. Such incorporation is motivated by the need to ensure the driver is conscientious.

Application/Control Number: 15/061,910
Art Unit: 3661

Page 8

16. Claims 17 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Plante US 2007/0135979 in view of McClellan US 2008/0255722.

17. 17. (New) The mobile telecommunications device according to claim 9, wherein the mobile communications device is controlled by a downloaded application to control the mobile device to process the driving information to generate a driving score associated with a particular driver.(Plante paragraph 0076, 0091) and (McClellan paragraphs 0017, 0037, 0100, 0102, and 0103)

Plante discloses a vehicle event recorder system. Plante does not disclose whether a driving score is given. McClellan teaches of a score associated with an event and a drivers performance. Therefore, at the time of the invention it would have been obvious to one of ordinary skill in the art to incorporate the teachings of McClellan et.al. into the invention of Plante. Such incorporation is motivated by the need to ensure the vehicle is functioning properly and safely.

Examiner Request

The examiner requests, in response to this office action, support must be shown for language added to any original claims on amendment and any new claims. That is, indicate support for newly added claim language by specifically pointing to page(s) and line number(s) in the specification and/or drawing figure(s). This will assist the examiner in prosecuting the application. When responding to this office action, applicant is advised to clearly point out the patentable novelty which he or she thinks the claims present, in view of the state of art disclosed by the references cited or the objections

Application/Control Number: 15/061,910
Art Unit: 3661

Page 9

made. He or she must also show how the amendments avoid such references or objections. In amending in reply to a rejection of claims in an application or patent under reexamination, the applicant or patent owner must clearly point out the patentable novelty which he or she thinks the claims present in view the state of the art disclosed by the references cited or the objections made. The applicant or patent owner must also show how the amendments avoid such references or objections.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TYLER PAIGE whose telephone number is (571)270-5425. The examiner can normally be reached on 7:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Black can be reached on 571-272-6956. 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.

Application/Control Number: 15/061,910
Art Unit: 3661

Page 10

/TYLER PAIGE/
Examiner, Art Unit 3661

Notice of References Cited	Application/Control No. 15/061,910	Applicant(s)/Patent Under Reexamination WRIGHT, ANDREW WILLIAM	
	Examiner TYLER PAIGE	Art Unit 3661	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-2005/0046584 A1	03-2005	Breed, David S.	B60C11/24	340/13.31
*	B	US-2007/0135979 A1	06-2007	Plante; James	G07C5/008	701/33.4
*	C	US-2007/0135980 A1	06-2007	Plante; James	G06Q50/30	701/33.4
*	D	US-2008/0255722 A1	10-2008	McClellan; Scott	B60R25/102	701/31.4
	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	CPC 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.

Search Notes 	Application/Control No. 15061910	Applicant(s)/Patent Under Reexamination WRIGHT, ANDREW WILLIAM
	Examiner TYLER PAIGE	Art Unit 3661

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner
G07C5/008 or G07C5/02 or G06Q40/08 or G06F17/00 or G09B19/14 or G07C5/0858 or G07C5/0866 or H04M1/72527	11/03/2016	tdp

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
701	33.4	11/03/2016	tdp

SEARCH NOTES		
Search Notes	Date	Examiner
Inventor Search	11/06/2016	tdp
East Search	11/06/2016	tdp
NPL Search	11/06/2016	tdp

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

/TYLER PAIGE/
Examiner.Art Unit 3661



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. 4319

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.		
15/061,910	03/04/2016	701	3661	044228.010201		
APPLICANTS Gillian Switalski, Wentworth, UNITED KINGDOM; Andrew William Wright, Wentworth, UNITED KINGDOM; INVENTORS Andrew William Wright, Surrey, UNITED KINGDOM; ** CONTINUING DATA ***** This application is a CON of 13/994,455 07/24/2013 PAT 9311271 which is a 371 of PCT/GB11/52491 12/15/2011 ** FOREIGN APPLICATIONS ***** UNITED KINGDOM 1118777.0 10/31/2011 UNITED KINGDOM 1109759.9 06/10/2011 UNITED KINGDOM 1101259.8 01/25/2011 UNITED KINGDOM 1021292.6 12/15/2010 ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** ** SMALL ENTITY ** 03/21/2016						
Foreign Priority claimed ☒ Yes ☐ No 35 USC 119(a-d) conditions met ☒ Yes ☐ No Verified and Acknowledged /TYLER D PAIGE/ Examiner's Signature		☐ Met after Allowance tdp Initials	STATE OR COUNTRY UNITED KINGDOM	SHEETS DRAWINGS 25	TOTAL CLAIMS 8	INDEPENDENT CLAIMS 5
ADDRESS BAKER & HOSTETLER LLP WASHINGTON SQUARE, SUITE 1100 1050 CONNECTICUT AVE. N.W. WASHINGTON, DC 20036-5304 UNITED STATES						
TITLE Method and System for Logging Vehicle Behavior						
FILING FEE RECEIVED 1150	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		

EAST Search History**EAST Search History (Prior Art)**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	439	(vehicle or automobile or car) same (blackbox or data adj recorder) and (user or driver) same (confirm or confirmation)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/03 12:19
L2	6	(vehicle or automobile or car) same (blackbox or data adj recorder) same (user or driver) same (confirm or confirmation)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/03 12:33
L3	11	(vehicle or automobile or car) same (blackbox or data adj recorder) and (user or driver) same (confirm or confirmation) same deny	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/03 12:34
L4	59	(vehicle or automobile or car) same (blackbox or data adj recorder) and (user or driver) same (confirm or confirmation) and deny	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/03 12:34
L5	52120	(G07C5/008 or G07C5/02 or G06Q40/08 or G06F17/00 or G09B19/14 or G07C5/0858 or G07C5/0866 or H04M1/72527).cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/11/03 12:44
S1	1409	"701/33.4".CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/11/02 16:33
S2	3	("Switalski").AANM.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/11/02 16:33
S3	1744	("Wright").AANM.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/11/02 16:33
S4	410	(vehicle or automobile or car) same (blackbox or data adj recorder) same wireless	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/02 16:35
S5	392	(vehicle or automobile or car) same (data adj recorder) same wireless	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	ON	2016/11/02 16:35

			IBM_TDB			
S6	177	(vehicle or automobile or car) same (blackbox or data adj recorder) same wireless and (camera or image adj sensor or image adj recorder)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/02 16:36
S7	84	(vehicle or automobile or car) same (blackbox or data adj recorder) same wireless same event and (camera or image adj sensor or image adj recorder)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/02 16:36
S8	0	(vehicle or automobile or car) same (blackbox or data adj recorder) same wireless same event and (camera or image adj sensor or image adj recorder) and deny same confirm	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/02 16:36
S9	0	(vehicle or automobile or car) same (blackbox or data adj recorder) same wireless and (camera or image adj sensor or image adj recorder) and deny same confirm	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/02 16:37
S10	0	(vehicle or automobile or car) same (blackbox or data adj recorder) same wireless same event and (camera or image adj sensor or image adj recorder) and deny and confirm	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/02 16:37
S11	46	(vehicle or automobile or car) same (blackbox or data adj recorder) same wireless same event and (camera or image adj sensor or image adj recorder) and user same input	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/02 16:37
S12	0	(vehicle or automobile or car) same (blackbox or data adj recorder) same wireless same event and (camera or image adj sensor or image adj recorder) and emergency near3 responder and score same driver	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/03 10:06
S13	0	(vehicle or automobile or car) same (blackbox or data adj recorder) same wireless same event and emergency near3 responder and score same driver	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/03 10:06
S14	0	(vehicle or automobile or car) same (blackbox or data adj recorder) same wireless same event and emergency near3 responder and score	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/03 10:06
S15	2	(vehicle or automobile or car) same (blackbox or data adj recorder) same wireless same event and emergency near3 responder	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	ON	2016/11/03 10:06

			IBM_TDB			
S16	2	(vehicle or automobile or car) same (blackbox or data adj recorder) same wireless same event and emergency same responder	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/03 10:09
S17	73	(vehicle or automobile or car) same (blackbox or data adj recorder) and emergency near3 responder	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/03 10:09
S18	7	(vehicle or automobile or car) same (blackbox or data adj recorder) and emergency near3 responder and score same (driver or operator)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/03 10:10
S19	0	(vehicle or automobile or car) same (blackbox or data adj recorder) and emergency near3 responder and rank same (driver or operator)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/03 10:15
S20	8	(vehicle or automobile or car) same (blackbox or data adj recorder) and emergency near3 responder and score	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/03 10:18
S21	22	(vehicle or automobile or car) same (blackbox or data adj recorder) and emergency near3 personnel and score	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/11/03 10:20

11/ 3/ 2016 12:45:47 PM

C:\ Users\ tpaige\ Documents\ EAST\ Workspaces\ 15061910_vehicle_recorder_blackbox.wsp

Substitute for Form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known	
				Application Number	15/061,910
				Filing Date	March 4, 2016
				First Named Inventor	Wright, Andrew William
				Art Unit	3661
Examiner Name	Paige, Tyler D.				
Sheet	1	of	2	Attorney Docket Number	044228.010201

U. S. PUBLICATION AND PATENT DOCUMENTS				
Examiner Initials	Cite No.	Document Number	Publication or Grant Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		Number – Kind Code (if known)		
	1	2005/0030224 A1	02-10-2005	Koch
	2	2006/0103513 A1	05-18-2006	Ihara et al.
	3	2007/0135979 A1	06-14-2007	Plante
	4	2007/0150139 A1	06-28-2007	Hardy
	5	2007/0208503 A1	09-06-2007	Harnsberger
	6	2007/0219685 A1	09-20-2007	Plante
	7	2009/0109037 A1	04-30-2009	Farmer
	8	2010/0039254 A1	02-18-2010	Cooper et al.
	9	2010/0131307 A1	05-27-2010	Collopy et al.
	10	2010/0157061 A1	06-24-2010	Katsman et al.
	11	2011/0112717 A1	05-12-2011	Resner
	12	2011/0117856 A1	05-19-2011	Velupillai et al.
	13	2012/0072244 A1	03-22-2012	Collins
	14	2013/0060583 A1	03-07-2013	Collins et al.
	15	2013/0302758 A1	11-14-2013	Wright
	16	4,992,943 A	02-12-1991	McCracken
	17	5,638,273 A	06-10-1997	Coiner et al.
	18	7,756,617 B1	07-13-2010	Cluff et al.
	19	7,765,058 B2	07-27-2010	Doering
	20	7,908,191 B1	03-15-2011	Dinamani et al.
	21	8,140,358 B1	03-20-2012	Ling et al.

FOREIGN PATENT DOCUMENTS					
Examiner	Cite	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	T
Examiner Signature	/Tyler Paige/			Date Considered	11/02/2016

608584434.1

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /T.P./

15061910 - GAU: 3661

Receipt date: 04/07/2016

Substitute for Form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known	
				Application Number	15/061,910
				Filing Date	March 4, 2016
				First Named Inventor	Wright, Andrew William
				Art Unit	3661
				Examiner Name	Paige, Tyler D.
Sheet	2	of	2	Attorney Docket Number	044228.010201

Initials	No.	Country Code- Number -Kind Code (if known)	MM-DD-YYYY		
	22	EP 1615178 A2	01-11-2006	EAS Surveillance GmbH	
	23	EP 1764749 A2	03-21-2007	Suzuki et al.	
	24	JP 2008-244674 A	10-09-2008	Kyocera Corp.	
	25	WO 2006/075419 A1	07-20-2006	Yugen Kaisha Azu Rinku	
	26	WO 2006/127534 A1	11-30-2006	Siemens VDO Automotive Corp.	
	27	WO 2007/067775 A2	06-14-2007	Smartdrive Systems Inc.	
	28	EP 2177811 A2	04-21-2010	Native Design Ltd.	

Examiner Signature	/Tyler Paige/	Date Considered	11/02/2016
-----------------------	---------------	--------------------	------------

608584434.1

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /T.P./

15061910 - GAU: 3661

Receipt date: 07/13/2016

Substitute for Form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known	
				Application Number	15/061,910
				Filing Date	March 4, 2016
				First Named Inventor	Wright, Andrew William
				Art Unit	3661
Examiner Name	Paige, Tyler D.				
Attorney Docket Number	044228.010201				
Sheet	1	of	1		

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No.	Include name of the author, title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), Volume-issue Number(s), publisher, city and/or country where published.	T
	29	Barbeau et al.; "TRAC-IT – A Software Architecture Supporting Simultaneous Travel Behavior Data Collection & Real-time Location-Based Services for GPS-Enabled Mobile Phones"; Proceedings of the Nat'l Academy of Sciences Transportation Research Board 88 th Annual Meeting; Paper #09-3175; January 2009; 20 pages	
	30	Barbeau et al.; "Dynamic Management of Real-Time Location Data on GPS-Enabled Mobile Phones"; The 2 nd Int'l Conf. on Mobile Ubiquitous Computing, Systems, Services and Techniques; 2008; p. 343-348	
	31	Meyer, Stefan; "Fahrtenbuch – iPhone Apps Plus"; https://web.archive.org/web/20091210215707/http://www.iphoneappsplus.com/business/fahrtenbuch/index.htm ; retrieved January 19, 2016; 2 pages (XP055242544)	
	32	"iPhone & iPad iOS Entwicklung"; NeuMedienFraktion; http://www.neuemedienfraktion.de/iPhone/iPhone.html ; retrieved January 19, 2016; 2 pages (XP055242566)	
	33	Kanjo et al.; "MobGeoSen: facilitating personal geosensor data collection and visualization using mobile phones"; Personal and Ubiquitous Computing; Vol. 12 No. 8; 2008; p. 599-607	
	34	European Patent Application No. 11813683.7; Office Action Article 94(3); dated January 26, 2016; 6 pages	

Examiner Signature	/Tyler Paige/	Date Considered	11/02/2016
--------------------	---------------	-----------------	------------

609112132.1

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /T.P./

<i>Index of Claims</i> 	Application/Control No. 15061910	Applicant(s)/Patent Under Reexamination WRIGHT, ANDREW WILLIAM
	Examiner TYLER PAIGE	Art Unit 3661

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant		☐ CPA		☐ T.D.		☐ R.1.47			
CLAIM		DATE							
Final	Original	09/20/2016	11/02/2016						
	1	÷	-						
	2	÷	-						
	3	÷	-						
	4	÷	-						
	5	÷	-						
	6	÷	-						
	7	÷	-						
	8	÷	-						
	9		✓						
	10		✓						
	11		✓						
	12		✓						
	13		✓						
	14		✓						
	15		✓						
	16		✓						
	17		✓						

PATENTS
044228.010201**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant:	Andrew Wright William	Examiner:	Paige, Tyler D.
Serial No.	15/061,910	Group Art Unit:	3661
Filed:	March 4, 2016	Confirmation No.:	4319
Title:	Method and System for Logging Vehicle Behavior		

Mail Stop: Amendment
Commissioner for Patents
Post Office Box 1450
Alexandria, Virginia 22313-1450

RESPONSE TO RESTRICTION REQUIREMENT

Dear Sir:

Applicant hereby files a response to the Restriction Requirement dated September 27, 2016. Applicant respectfully requests consideration of the amendments and the remarks on the pages that follow, early and favorable consideration being earnestly solicited.

A listing of the claims begins on page 2 of this paper.

Remarks begin on page 5.

LISTING OF THE CLAIMS

1-8. (Cancelled)

9. (New) A mobile telecommunications device adapted for installation to a vehicle and configured to log driving information associated with the vehicle when driven, the mobile device comprising:

- a sensor set comprising at least one of an image sensor, an audio sensor, an accelerometer and a positioning module;

- a processor for processing sensor data from the sensor set to derive said driving information;

- a memory for storing said derived driving information;

- a wireless telecommunications module operable to download an application;

- the mobile device being arranged to execute the downloaded application to control the mobile device to register the start of a driving period during which the mobile device is installed to the vehicle and the vehicle is being driven by a driver;

- process sensor data from the sensor set during the driving period to derive driving information associated with how the vehicle is driven;

- store a selection of the driving information to the memory; and,

- wherein the mobile communications device is controlled by a downloaded application to control the mobile device to detect occurrence of a predetermined event and in response take at least one predetermined action.

10. (New) The mobile telecommunication device according to claim 9, wherein predetermined action is at least one of: storing driving information associated with that event to the memory, storing driving information captured at a higher sampling rate than when an event is not detected, and transmitting driving information via a wireless telecommunication module of the mobile telecommunication device to a remote system.

11. (New) The mobile telecommunications device according to claim 9, wherein the predetermined action comprises providing feedback to a user to indicate that an event has been detected, the mobile telecommunications device being configured to receive a user interaction to confirm or deny whether the detected event has actually occurred following said feedback.

12. (New) The mobile telecommunications device according to claim 11, wherein the feedback comprises notifying a user that a further action has been scheduled, and will be taken within a predetermined period, the mobile telecommunications device being further configured to receive a user interaction to confirm or deny whether the further scheduled action should be taken within a predetermined period.

13. (New) A mobile telecommunications device according to claim 9, wherein the predetermined action comprises communicating to a remote system that an event has been detected, the mobile telecommunications device being further configured to receive from the remote system a request to transmit to the remote system selected portions of the driving information associated with the detected event.

14. (New) The mobile telecommunications device according claim 9, wherein the memory comprises:

a long term memory for persistently storing driving information and a short term memory for transiently storing driving information, wherein the short term memory receives driving information at a higher update rate than the long term memory, the mobile telecommunications device being further configured to:

write driving information to the short term memory at a predetermined update rate during the driving period in a predetermined sequence; and,

overwrite the driving information previously written to the short term memory in accordance with the predetermined sequence.

15. (New) The mobile telecommunications device according to claim 14, wherein the mobile communications device is controlled by a downloaded application to control the mobile device to

PATENTS
044228.010201

detect an occurrence of a predetermined event and in response take at least one predetermined action including transferring data from the short term memory to the long term memory.

16. (New) The mobile telecommunications device according to claim 9, further configured to:

interface with an external device, the external device having access to external driving information associated with a condition of the vehicle; and,
to receive at least a portion of the external driving information from the external device.

17. (New) The mobile telecommunications device according to claim 9, wherein the mobile communications device is controlled by a downloaded application to control the mobile device to process the driving information to generate a driving score associated with a particular driver.

PATENTS
044228.010201**REMARKS**

This is in response to the Restriction Requirement dated September 27, 2016. Applicant thanks Examiner Paige for his guidance on providing a clean set of revised claims which Applicant wishes to pursue. The claims submitted are based on claim 8 of the parent application which was found to be patentable but was not pursued in that prosecution. Applicant believes there is only one group of inventions in this set of claims.

No new matter is intended to have been added by this Amendment.

If the Examiner believes that a telephone conference would aid in the prosecution of this case in any way, the Examiner is invited to telephone the Applicant's undersigned attorney.

The Director is authorized to charge any additional fee(s) or any underpayment of fee(s), or to credit any overpayments to **Deposit Account Number 50-2036**. Please ensure that Attorney Docket Number 044228.010201 is referred to when charging any payments or credits for this case.

Respectfully submitted,

Date: October 27, 2016

/Mark H. Krietzman/
Mark H. Krietzman
Reg. No. 41,128

BAKER & HOSTETLER, LLP
1050 Connecticut Avenue NW,
Suite 1100
Washington, D.C. 20036
Phone: (714) 966-8834
Fax: (714) 754-6611
Email: mrkrietzman@bakerlaw.com

Electronic Acknowledgement Receipt	
EFS ID:	27346487
Application Number:	15061910
International Application Number:	
Confirmation Number:	4319
Title of Invention:	Method and System for Logging Vehicle Behavior
First Named Inventor/Applicant Name:	Andrew William Wright
Customer Number:	30734
Filer:	Mark Krietzman H/Kate Duttera
Filer Authorized By:	Mark Krietzman H
Attorney Docket Number:	044228.010201
Receipt Date:	27-OCT-2016
Filing Date:	04-MAR-2016
Time Stamp:	17:30:08
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
------------------------	----

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		010201_RR27Sept16_Response _AsFiled.PDF	93663 f9af12249b6f327df85b7b2af7c46a992a09d77e	yes	5

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Response to Election / Restriction Filed	1	1
	Claims	2	4
	Applicant Arguments/Remarks Made in an Amendment	5	5
Warnings:			
Information:			
Total Files Size (in bytes):		93663	
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. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.			

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-875				Application or Docket Number 15/061,910		Filing Date 03/04/2016		☐ To be Mailed	
ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO									
APPLICATION AS FILED – PART I									
		(Column 1)		(Column 2)					
FOR		NUMBER FILED		NUMBER EXTRA		RATE (\$)		FEE (\$)	
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A		N/A		N/A			
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))		N/A		N/A		N/A			
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A		N/A		N/A			
TOTAL CLAIMS (37 CFR 1.16(i))		minus 20 =		*		X \$ =			
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 =		*		X \$ =			
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 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))									
* If the difference in column 1 is less than zero, enter "0" in column 2.						TOTAL			
APPLICATION AS AMENDED – PART II									
		(Column 1)		(Column 2)		(Column 3)			
AMENDMENT	10/27/2016		CLAIMS REMAINING AFTER AMENDMENT			HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))		* 9		Minus	** 20	= 0	X \$40 =	0
	Independent (37 CFR 1.16(h))		* 1		Minus	*** 3	= 0	X \$210 =	0
	☐ Application Size Fee (37 CFR 1.16(s))								
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
	TOTAL ADD'L FEE								0
		(Column 1)		(Column 2)		(Column 3)			
AMENDMENT			CLAIMS REMAINING AFTER AMENDMENT			HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))		*		Minus	**	=	X \$ =	
	Independent (37 CFR 1.16(h))		*		Minus	***	=	X \$ =	
	☐ Application Size Fee (37 CFR 1.16(s))								
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
	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. LIE GLORIA ANTHONY									

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.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/061,910	03/04/2016	Andrew William Wright	044228.010201	4319

30734	7590	09/27/2016
BAKER & HOSTETLER LLP		
WASHINGTON SQUARE, SUITE 1100		
1050 CONNECTICUT AVE. N.W.		
WASHINGTON, DC 20036-5304		

EXAMINER	
PAIGE, TYLER D	

ART UNIT	PAPER NUMBER
3661	

NOTIFICATION DATE	DELIVERY MODE
09/27/2016	ELECTRONIC

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 the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

cofficeonitor@bakerlaw.com
 edervis@bakerlaw.com
 patents@bakerlaw.com

Office Action Summary	Application No. 15/061,910	Applicant(s) WRIGHT, ANDREW WILLIAM	
	Examiner TYLER PAIGE	Art Unit 3661	AIA (First Inventor to File) Status No

-- 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 2 MONTHS 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 03/04/2016.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on ____.

2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.

4) ☐ 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*

5) ☒ Claim(s) 1-8 is/are pending in the application.
5a) Of the above claim(s) ____ is/are withdrawn from consideration.

6) ☐ Claim(s) ____ is/are allowed.

7) ☐ Claim(s) ____ is/are rejected.

8) ☐ Claim(s) ____ is/are objected to.

9) ☒ Claim(s) 1-8 are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10) ☐ The specification is objected to by the Examiner.

11) ☒ The drawing(s) filed on 03/04/2016 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).

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).

Certified copies:

a) ☐ All b) ☐ Some** c) ☒ None of the:

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)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)
Paper No(s)/Mail Date ____.

3) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.

4) ☐ Other: ____.

Application/Control Number: 15/061,910
Art Unit: 3661

Page 2

DETAILED ACTION

1. The present application is being examined under the pre-AIA first to invent provisions.

Election/Restrictions

2. This application contains claims directed to the following patentably distinct species methods for logging driving information. The species are independent or distinct because there are five distinct methods with varying steps and features. In addition, these species are not obvious variants of each other based on the current record.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species, or a single grouping of patentably indistinct species, for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, the features of an interface, sensors, and storing the information are generic.

There is a search and/or examination burden for the patentably distinct species as set forth above because at least the following reason(s) apply: Five separate and distinct methods directed towards monitoring and logging information related to operation of vehicle. The first method identifies the start of a driving period through an application. The second method processes the information acquired based upon defined driving periods. The third method associates information from the sensors and the periods and assigns it to various accounts. The fourth method identifies and

Application/Control Number: 15/061,910
Art Unit: 3661

Page 3

determines a driving score. The fifth method determines a risk profile for the driver of the respective vehicle.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species to be examined even though the requirement may be traversed (37 CFR 1.143) **and (ii) identification of the claims encompassing the elected species or grouping of patentably indistinct species**, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

The election may be made with or without traverse. To preserve 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 election of species requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected species or grouping of patentably indistinct species.

Should applicant traverse on the ground that the species, or groupings of patentably indistinct species from which election is required, are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing them 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 species unpatentable over the prior art, the

Application/Control Number: 15/061,910
Art Unit: 3661

Page 4

evidence or admission may be used in a rejection under 35 U.S.C. 103 or pre-AIA 35 U.S.C. 103(a) of the other species.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141.

3. A telephone call was made to Mark Krieztman on 09/20/2016 to request an oral election to the above restriction requirement, but did not result in an election being made.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TYLER PAIGE whose telephone number is (571)270-5425. The examiner can normally be reached on 7:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Black can be reached on 571-272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number: 15/061,910

Page 5

Art Unit: 3661

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.

/TYLER PAIGE/
Examiner, Art Unit 3661

<i>Index of Claims</i> 	Application/Control No. 15061910	Applicant(s)/Patent Under Reexamination WRIGHT, ANDREW WILLIAM
	Examiner TYLER PAIGE	Art Unit 3661

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47										
CLAIM		DATE								
Final	Original	09/20/2016								
	1	÷								
	2	÷								
	3	÷								
	4	÷								
	5	÷								
	6	÷								
	7	÷								
	8	÷								

Substitute for Form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known	
				Application Number	15/061,910
				Filing Date	March 4, 2016
				First Named Inventor	Wright, Andrew William
				Art Unit	3661
				Examiner Name	Paige, Tyler D.
Sheet	1	of	1	Attorney Docket Number	044228.010201

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials	Cite No.	Include name of the author, title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), Volume-issue Number(s), publisher, city and/or country where published.	T	
	29	Barbeau et al.; "TRAC-IT – A Software Architecture Supporting Simultaneous Travel Behavior Data Collection & Real-time Location-Based Services for GPS-Enabled Mobile Phones"; Proceedings of the Nat'l Academy of Sciences Transportation Research Board 88 th Annual Meeting; Paper #09-3175; January 2009; 20 pages		
	30	Barbeau et al.; "Dynamic Management of Real-Time Location Data on GPS-Enabled Mobile Phones"; The 2 nd Int'l Conf. on Mobile Ubiquitous Computing, Systems, Services and Techniques; 2008; p. 343-348		
	31	Meyer, Stefan; "Fahrtenbuch – iPhone Apps Plus"; https://web.archive.org/web/20091210215707/http://www.iphoneappsplus.com/business/fahrtenbuch/index.htm ; retrieved January 19, 2016; 2 pages (XP055242544)		
	32	"iPhone & iPad iOS Entwicklung"; NeuMedienFraktion; http://www.neuemedienfraktion.de/iPhone/iPhone.html ; retrieved January 19, 2016; 2 pages (XP055242566)		
	33	Kanjo et al.; "MobGeoSen: facilitating personal geosensor data collection and visualization using mobile phones"; Personal and Ubiquitous Computing; Vol. 12 No. 8; 2008; p. 599-607		
	34	European Patent Application No. 11813683.7; Office Action Article 94(3); dated January 26, 2016; 6 pages		

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

Electronic Acknowledgement Receipt	
EFS ID:	26336442
Application Number:	15061910
International Application Number:	
Confirmation Number:	4319
Title of Invention:	Method and System for Logging Vehicle Behavior
First Named Inventor/Applicant Name:	Andrew William Wright
Customer Number:	30734
Filer:	Mark Krietzman H/Kelly Quach
Filer Authorized By:	Mark Krietzman H
Attorney Docket Number:	044228.010201
Receipt Date:	13-JUL-2016
Filing Date:	04-MAR-2016
Time Stamp:	13:35:41
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
------------------------	----

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	044228_010201_SIDS_Trans_07-13-16.PDF	105598 e8994572d6312cd87f9a875fd4fd10c9964a2cf2	no	4

Warnings:

Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	044228_010201_SIDS_1449_07-13-16.PDF	126656 be2e7ebcf02ab9591d4bc69427469c47998854ce	no	1
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
3	Non Patent Literature	Barbeau_TRAC-IT_Jan2009.PDF	739217 775dfcd55a146e26081b8b23e7b7c499db3a6ddf	no	20
Warnings:					
The page size in the PDF is too large. The pages should be 8.5 x 11 or A4. If this PDF is submitted, the pages will be resized upon entry into the Image File Wrapper and may affect subsequent processing					
Information:					
4	Non Patent Literature	Barbeau_DynamicManagement.PDF	327801 517a7a3fd8098b3ccc66010051ca1a3e96f9f5f3c	no	6
Warnings:					
The page size in the PDF is too large. The pages should be 8.5 x 11 or A4. If this PDF is submitted, the pages will be resized upon entry into the Image File Wrapper and may affect subsequent processing					
Information:					
5	Non Patent Literature	Meyers_Fahrtenbuch_iPhoneAppsPlus.PDF	79197 e0c4375a7e7690d4418a407c5e0b2407d552e9a0	no	2
Warnings:					
The page size in the PDF is too large. The pages should be 8.5 x 11 or A4. If this PDF is submitted, the pages will be resized upon entry into the Image File Wrapper and may affect subsequent processing					
Information:					
6	Non Patent Literature	NeueMedienFraktion.PDF	140756 1dc63890f980eab841d6f5817eff8a5a4cb7852f	no	2
Warnings:					
The page size in the PDF is too large. The pages should be 8.5 x 11 or A4. If this PDF is submitted, the pages will be resized upon entry into the Image File Wrapper and may affect subsequent processing					
Information:					
7	Non Patent Literature	Kanjo_MobGeoSen_2008.PDF	491003 0fa1458b191ece27b2deac387b95f2340f8bdad2	no	9
Warnings:					

The page size in the PDF is too large. The pages should be 8.5 x 11 or A4. If this PDF is submitted, the pages will be resized upon entry into the Image File Wrapper and may affect subsequent processing

Information:

8	Non Patent Literature	EP11813683_OA_01-26-2016. PDF	111738	no	6
			60803b432d32ef7ab6469eb71b0aeb680f1 95647		

Warnings:

The page size in the PDF is too large. The pages should be 8.5 x 11 or A4. If this PDF is submitted, the pages will be resized upon entry into the Image File Wrapper and may affect subsequent processing

Information:

Total Files Size (in bytes):	2121966
-------------------------------------	---------

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.: 044228.010201

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Wright, Andrew William

Confirmation No.: 4319

Application No.: 15/061,910

Group Art Unit: 3661

Filing Date: March 4, 2016

Examiner: Paige, Tyler D.

For: Method And System For Logging Vehicle Behavior

Filed Via EFS

INFORMATION DISCLOSURE STATEMENT

Pursuant to 37 CFR § 1.56 and in accordance with 37 CFR §§ 1.97-1.98, information relating to the above-identified application is hereby disclosed. Inclusion of information in this statement is not to be construed as an admission that this information is material as that term is defined in 37 CFR § 1.56(b).

☒ **IDS Filed Under 37 CFR 1.97(b)**

In accordance with § 1.97(b), since this Information Disclosure Statement is being filed either within three months of the filing date of the above-identified application, within three months of the date of entry into the national stage of the above identified application as set forth in § 1.491, before the mailing date of a first Office Action on the merits of the above-identified application, or before the mailing date of a first Office Action after the filing of request for continued examination under § 1.114, no additional fee is required.

☐ **IDS filed Under 37 CFR 1.97(c)**

In accordance with § 1.97(c), this Information Disclosure Statement is being filed after the period set forth in § 1.97(b) above but before the mailing date of either a Final Action under § 1.113 or a Notice of Allowance under § 1.311, or before an action that otherwise closes prosecution in the application, therefore:

- ☐ Certification in Accordance with § 1.97(e) is attached; or
- ☐ The fee of ☐ **\$180.00** (Undiscounted)
- ☐ **\$90.00** (Small entity)
- ☐ **\$45.00** (Micro entity) as set forth in § 1.17(p) is attached.

DOCKET NO.: 044228.010201

PATENT

☐ **IDS filed Under 37 CFR 1.97(d)**

In accordance with § 1.97(d), this Information Disclosure Statement is being filed after the mailing date of either a Final Action under § 1.113 or a Notice of Allowance under § 1.311 but before, or simultaneously with, the payment of the Issue Fee, therefore included are: Certification in Accordance with § 1.97(e); and the submission of ☐ **\$180.00** (Undiscounted) ☐ **\$90.00** (Small entity) ☐ **\$45.00** (Micro entity) as set forth in § 1.17(p).

CONTENT OF IDS PURSUANT TO 37 CFR 1.98

- ☐ Copies of reference numbers listed on the attached Form 1449/PTO or Substitute for Form 1449/PTO are not required to be submitted pursuant to 37 CFR § 1.98(a)(2)(iii).
- ☒ Copies of reference numbers **29 - 34** listed on the attached Form 1449/PTO or Substitute for Form 1449/PTO are enclosed herewith.
- ☐ Copies of reference numbers are not being submitted because they were previously cited by or submitted to the U.S. Patent and Trademark Office in patent application number , filed for which a claim for priority under 35 U.S.C. § 120 has been made in the instant application.
- ☐ The month of publication for reference numbers is not available. However, the year of publication for these references is sufficiently earlier than the effective US filing date and any foreign priority date so that the particular month of publication is not in issue pursuant to 37 CFR § 1.98(b).

DOCKET NO.: 044228.010201

PATENT

REFERENCES IN A LANGUAGE OTHER THAN ENGLISH

- ☒ The following documents are not in the English language. Accordingly, a concise explanation of the relevance of the document was incorporated in the specification passages identified below, the document was identified in a foreign communication as identified below or an English language counterpart application has been provided as indicated below.

Foreign Language Document	Cite No.	Pages of Reference in Specification or Relevance of Document
Meyer, Stefan; Fahrtenbuch	31	EP App No. 11813683.7; Office Action Article 94(3); see page 3, cite 34
iPhone & iPad iOS Entwicklung; NeuMedienFraktion	32	EP App No. 11813683.7; Office Action Article 94(3); see page 3, cite 34

☐ **CERTIFICATION IN ACCORDANCE WITH § 1.97(e)**

I hereby certify that:

- ☐ Each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this information disclosure statement.
- ☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in this information disclosure statement was known to any individual designated in § 1.56(c) more than three months prior to the filing of this information disclosure statement.

DOCKET NO.: 044228.010201

PATENT

Please charge any deficiency or credit any overpayment to Deposit Account No. 23-3050.

Date: July 11, 2016

/Mark H. Krietzman/

Mark H. Krietzman

Registration No. 41128

Baker & Hostetler LLP
Cira Centre
2929 Arch Street, 12th Floor
Philadelphia, PA 19104-2891
Telephone: (215) 568-3100
Facsimile: (215) 568-3439



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	ATTY. DOCKET NO./TITLE
15/061,910	03/04/2016	Andrew William Wright	044228.010201

CONFIRMATION NO. 4319

PUBLICATION NOTICE

30734
 BAKER & HOSTETLER LLP
 WASHINGTON SQUARE, SUITE 1100
 1050 CONNECTICUT AVE. N.W.
 WASHINGTON, DC 20036-5304



OC000000084070680

Title:Method and System for Logging Vehicle Behavior

Publication No.US-2016-0189442-A1

Publication Date:06/30/2016

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently <http://www.uspto.gov/patft/>.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently <http://pair.uspto.gov/>. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

Substitute for Form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known	
				Application Number	15/061,910
				Filing Date	March 4, 2016
				First Named Inventor	Wright, Andrew William
				Art Unit	3661
Examiner Name	Paige, Tyler D.				
Sheet	1	of	2	Attorney Docket Number	044228.010201

U. S. PUBLICATION AND PATENT DOCUMENTS				
Examiner Initials	Cite No.	Document Number	Publication or Grant Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		Number – Kind Code (if known)		
	1	2005/0030224 A1	02-10-2005	Koch
	2	2006/0103513 A1	05-18-2006	Ihara et al.
	3	2007/0135979 A1	06-14-2007	Plante
	4	2007/0150139 A1	06-28-2007	Hardy
	5	2007/0208503 A1	09-06-2007	Harnsberger
	6	2007/0219685 A1	09-20-2007	Plante
	7	2009/0109037 A1	04-30-2009	Farmer
	8	2010/0039254 A1	02-18-2010	Cooper et al.
	9	2010/0131307 A1	05-27-2010	Collopy et al.
	10	2010/0157061 A1	06-24-2010	Katsman et al.
	11	2011/0112717 A1	05-12-2011	Resner
	12	2011/0117856 A1	05-19-2011	Velupillai et al.
	13	2012/0072244 A1	03-22-2012	Collins
	14	2013/0060583 A1	03-07-2013	Collins et al.
	15	2013/0302758 A1	11-14-2013	Wright
	16	4,992,943 A	02-12-1991	McCracken
	17	5,638,273 A	06-10-1997	Coiner et al.
	18	7,756,617 B1	07-13-2010	Cluff et al.
	19	7,765,058 B2	07-27-2010	Doering
	20	7,908,191 B1	03-15-2011	Dinamani et al.
	21	8,140,358 B1	03-20-2012	Ling et al.

FOREIGN PATENT DOCUMENTS					
Examiner	Cite	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	T
Examiner Signature			Date Considered		

Substitute for Form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known	
				Application Number	15/061,910
				Filing Date	March 4, 2016
				First Named Inventor	Wright, Andrew William
				Art Unit	3661
Examiner Name	Paige, Tyler D.				
Sheet	2	of	2	Attorney Docket Number	044228.010201

Initials	No.	Country Code- Number -Kind Code (if known)	MM-DD-YYYY		
	22	EP 1615178 A2	01-11-2006	EAS Surveillance GmbH	
	23	EP 1764749 A2	03-21-2007	Suzuki et al.	
	24	JP 2008-244674 A	10-09-2008	Kyocera Corp.	
	25	WO 2006/075419 A1	07-20-2006	Yugen Kaisha Azu Rinku	
	26	WO 2006/127534 A1	11-30-2006	Siemens VDO Automotive Corp.	
	27	WO 2007/067775 A2	06-14-2007	Smartdrive Systems Inc.	
	28	EP 2177811 A2	04-21-2010	Native Design Ltd.	

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--



(11) **EP 2 177 811 A2**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
21.04.2010 Bulletin 2010/16

(51) Int Cl.:
F16M 13/00 (2006.01)

(21) Application number: **09252444.6**

(22) Date of filing: **19.10.2009**

(84) Designated Contracting States:
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL
PT RO SE SI SK SM TR**
Designated Extension States:
AL BA RS

(72) Inventors:
• **Warren, Morten**
London EC2A 3EQ (GB)
• **Harris, Paul**
London EC2A 3EQ (GB)

(30) Priority: **17.10.2008 GB 0819106**
19.11.2008 GB 0821172

(74) Representative: **Haslam, Simon David et al**
Abel & Imray
20, Red Lion Street
London WC1R 4PQ (GB)

(71) Applicant: **Native Design Limited**
5 Garden Walk
London EC2A 3EQ (GB)

(54) **Media player support**

(57) A media player support is provided, the media player support comprising:
a base (3);
a support member (2) rotatably mounted to the base (3), the support member (2) being for receiving a media player; and

a stem (24),
wherein the support member is rotatably mounted to the base via the stem such that the support member can be rotated between a first position and a second position, the stem having a channel extending therethrough for receiving a cable for connecting the media player to the base.

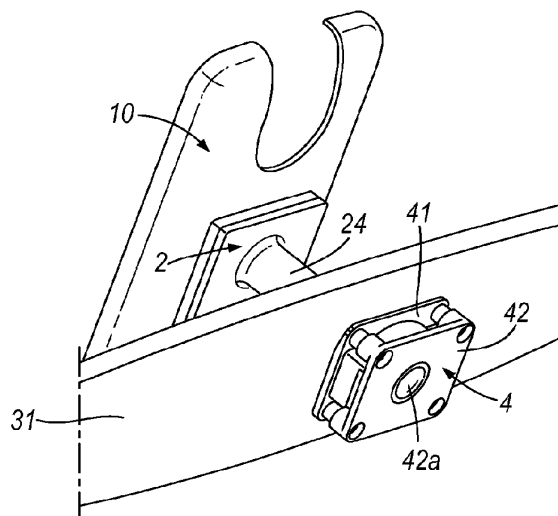


Fig.5

EP 2 177 811 A2

Description

[0001] The present invention relates to media player supports, in particular, although not necessarily exclusively, portable media player supports for 'docking' a media player to an external electrical device.

[0002] A media player is an electronic device capable of storing and playing digital media, e.g. audio, video and image files.

[0003] Although a portable media player usually includes its own playback means, e.g. headphones and/or display screen, and can be handheld, it is common to place a media player in a support, particularly when connecting ('docking') the media player to an external electrical device such as an audio amplifier, stereo system, or large display screen.

[0004] Media players commonly include a casing containing an array of electronics and digital storage devices (e.g. solid-state memory or hard drives). The casing is often substantially cuboid, with opposing front and rear surfaces and side surfaces connecting the front and rear surfaces together. Controls (e.g. buttons) and/or a display screen (e.g. a touch sensitive display screen) are usually provided on the front surface of the casing, enabling a user to operate the media player.

[0005] Some known media player supports include a housing having a recess into which a bottom end of the media player casing is inserted. An electrical connector may be located within the recess for connecting to a corresponding electrical connector disposed at the bottom end of the media player, enabling signals to be sent between the media player and the electrical devices associated with the support, e.g. via a cable.

[0006] Other known media player supports utilise a plurality of arms that grip around the media player casing.

[0007] However, known media player supports are bulky and cumbersome and can interfere with operation of the media player, and may lead to the user experiencing discomfort during operation.

[0008] Many modern media players have a rectangular display screen which can display information in two different orientations: a vertical ('portrait') orientation and a horizontal ('landscape') orientation. The display screen may rotate the displayed information between the two orientations automatically upon rotation of the media player.

[0009] However, known media player supports are not appropriate for both media players with the rotatable screen function and media players without the rotatable screen function.

[0010] According to a first aspect of the present invention, there is provided a media player support comprising:

a holder having a main panel and two or more side panels connected to, and projecting from, edges of the main panel,
the main panel and the side panels defining a space for receiving a media player such that a rear surface

of the media player contacts the main panel, and the side panels contact respective side surfaces of the media player,

5 wherein the side panels are arranged such that, when the media player is received in the space, distal ends of the side panels do not project beyond the side surfaces of the media player.

[0011] According to a second aspect of the present invention, there is provided a media player support comprising:

a holder having a main panel and two or more side panels, connected to, and projecting from, edges of the main panel,
15 the main panel and the side panels defining a space for receiving a media player such that a rear surface of the media player contacts the main panel, and the side panels contact respective side surfaces of the media player,

wherein the main panel and the side panels each have a thickness of less than 3 mm.

[0012] Preferably, the side panels and/or the main panel of the support in the first aspect of the invention also have a thickness of less than 3 mm. Essentially, the side panels and main panel may be thin, plate-like, elements. The holder may take the form of a cradle or tray.

[0013] In the first and second aspects, preferably the media player is a portable media player, which, when not being held by the support, may be operated in a handheld manner. The media player may have one or more operation buttons located on a front surface thereof. A display screen may also be located on the front surface. Preferably, the media player is substantially cuboid, with opposing front and rear surfaces and four side surfaces connecting the front and rear surfaces together. The front and rear surfaces may extend across a substantially larger area than the side surfaces. The side surfaces may be flat or curved. Corners between the side surfaces may be sharp or curved. The media player may be an iPod™, iTouch™ or iPhone™, for example. The media player may in some circumstances function as a satellite navigation device, and the support may be arranged to hold the media player on a car windscreen or dash board via a sucker.

[0014] By providing a support for a media player, which can support both rear and side surfaces of the media player with panels configured as set out above, the support can provide a firm hold to the media player whilst enabling the user of the media player to operate the media player with little or no interference by the support. By employing side panels that do not extend beyond side surfaces of the media player, access to the controls on the front surface of the media from any angle may not be impeded by the holder. By employing panels, e.g. with thicknesses of less than 3 mm, the holder may add little additional bulk to the media player. In effect, the holder may provide a very discreet means to hold the media

player. The user may therefore operate the media player in the same or similar manner as they would if the media player were unsupported other than by the operator's own hand. For example, the user may be able to grip both the holder and the media player in their hand and operate the media player using their thumb. This may allow the user to operate the media player in a more intuitive or comfortable manner, rather than having to poke at the operation buttons with an extended finger, for example.

[0015] The support may be arranged such that, when the media player is received in the space, no part of the support extends over a front surface of the media player.

[0016] The holder may comprise additional retention features, such as snap-fit features, to enable the holder to support the media player with greater security. This may be particularly useful when the support is to hold the media player to a car windscreen or other part of a vehicle, where shock / momentary forces on the support may be common.

[0017] To support sides of the media player, the side panels may follow a curved path. This may be particularly appropriate if the side surfaces of the media player are curved. The side panels may follow a part-circular or part-elliptical path for example, e.g. a quarter-circular path or somewhere between a quarter-circular and semi-circular path. The side panels may follow a curved path that enables snap-fitting of the media player into the holder. As an alternative to curved panels, the side panels may be flat, and may project along a straight path substantially perpendicular to front surface of the main panel. The main panel of the media player may be curved, e.g. to conform to a curved rear surface of the media player. In general, it is considered that holders of the present could be configured for use with variety of different shapes and sizes of media player.

[0018] Preferably two of the side panels, referred to hereinafter as the "first and second side panels" are connected to two respective edges of the main panel, the two edges lying substantially perpendicular to each other. Accordingly, the first and second side panels may provide support along two side surfaces of the media player, the side surfaces extending perpendicular to each other.

[0019] The media player support may comprise a base, e.g. for locating on a surface such as a table top, desktop, window or floor etc. The base may be part of, or consist of, a music system having an amplifier and/or speakers, the holder forming part of a media player 'dock' for the music system. As one alternative, the base may be arranged to connect to a car windscreen, e.g. via a sucker. The holder may be mounted to the base, e.g. by sliding onto a fitting, such as an arm or spindle provided on the base. The holder may be releasably mounted to the base to enable removal of the holder from the base for easier placement of the media player in the holder. The holder may be rotatably mounted to the base. Rotatable mounting is preferable when the support is used with a media player having a display screen on its front

surface that will display information in both vertical ('portrait') and horizontal ('landscape') orientations.

[0020] Normally, when the display screen is in the vertical orientation, the length direction of the front surface of the media player and of the display screen will extend substantially vertically and the width direction will extend substantially horizontally; and when the display screen is in the horizontal orientation, the length direction of the front surface of the media player and the display screen will extend substantially horizontally and the width direction will extend substantially vertically. The display screen may toggle between these two orientations upon a 90 degree rotation of the media player about a horizontal axis. It is conceived that the length and width of the media player may not extend precisely vertically in the respective orientations, as it may be preferable to mount the media player at an angle from vertical to enable easier viewing of the display screen, e.g. from above. Furthermore, by angling the holder to support the media player in such an angled configuration, the main panel of the holder may provide greater support for the media player against the effects of gravity. The media player/main panel may be angled from vertical at between 30 and 60 degrees, for example. An angle of 45 degrees may be appropriate. Ideally, however, the angle from vertical of the media player is not so great that it causes the media player to be unable to sense itself rotating between the vertical and horizontal orientations, which could otherwise prevent the media playing switching the information on the display screen between the two orientations.

[0021] To ensure that the media player is held firmly by the support in both orientations, the media may be rotatably mounted to the base such that the holder can be rotated between a first position in which the first side panel is located at the bottom of the holder and a second position in which the second side panel is located at the bottom of the holder. Since one of the first and second panels remains at the bottom of the holder in both orientations, one of the first and second side panels will provide support underneath the media player in both orientations, preventing the media player from falling from the support under the influence of gravity.

[0022] For greater security, the holder may comprise additional side panels arranged to contact and support additional side surfaces of the media player when the media player is received in the holder. Preferably, the holder comprises three or four side panels to contact and support three or four side surfaces of the media player respectively. By supporting at least three side surfaces, the support may enable rotation of the media player by 180 degrees, e.g. so that a horizontal orientation of the media player can be achieved 90 degrees either side of a vertical orientation. Preferably, the holder is biased to precise positions of rotation at sequential 90 rotation points, in order to make it easier for the user to rotate the media player to a precise horizontal or vertical orientation.

[0023] One or more of the side panels may extend

along the entire length of a respective edge of the main panel. Nevertheless, a plurality of spaced side panels may be provided along a length of one or more edges of the main panel. Preferably at least a portion of one of the edges is left exposed, a side panel is provided with a cut-out, and/or a region of the main panel is provided with a cut-out, to provide access to a side or rear surface of the media player when mounted on the holder. This may facilitate dismounting of the media player from the holder by the user. Similar cut-outs may be employed to enable wires, cables and/or electrical connectors to extend between the media player and the base.

[0024] Preferably, the holder is rotatably mounted to the base via a stem. Preferably, a channel extends through the stem (the stem may be hollow, for example). A cable for connecting the media player to the base (e.g. an audio device) is preferably arranged to travel through the channel. Accordingly, the cable may be less likely to twist during rotation of the holder/media player, since it may effectively travel along the rotational axis of the holder, and the cable may be hidden from view, improving aesthetics.

[0025] Preferably, the media player support comprises a locking mechanism operable between a first state in which it prevents rotation of the holder and a second state in which it allows rotation of the holder.

[0026] According to a third aspect of the present invention, there is provided a media player support comprising:

- a base; and
- a support member rotatably mounted to the base, the support member being for receiving a media player,

wherein the support member is rotatably mounted to the base such that the support member can be rotated between a first position and a second position, the support comprising a locking mechanism, operable between a first state in which it prevents rotation of the support member between the first and second positions and a second state in which it allows rotation of the support member between the first and second positions.

[0027] According to a fourth aspect of the present invention, there is provided a media player support comprising:

- a base; and
- a support member rotatably mounted to the base, the support member being for receiving a media player,

wherein the support member is rotatably mounted to the base such that the support member can be rotated between a first position and a second position, the support further comprising a damping means for reducing shock applied to the support member upon rotation between the first and second positions.

[0028] According to a fifth aspect of the present invention, there is provided a media player support comprising:

- a base;
- a support member rotatably mounted to the base, the support member being for receiving a media player; and
- a stem,

wherein the support member is rotatably mounted to the base via the stem such that the support member can be rotated between a first position and a second position, the stem having a channel extending therethrough for receiving a cable for connecting the media player to the base.

[0029] The support member of the media player support of the third, fourth and fifth aspects of the invention may comprise a holder having a main panel and two or more side panels connected to, and projecting from, edges of the main panel, the main panel and the side panels defining a space for receiving a media player such that a rear surface of the media player, in use, contacts the main panel, and the side panels, in use, contact respective side surfaces of the media player

[0030] The side panels may be arranged such that, when the media player is received in the space, distal ends of the side panels do not project beyond the side surfaces of the media player.

[0031] The main panel and the side panels may each have a thickness of less than 3 mm.

[0032] Essentially, the side panels and main panel may be thin, plate-like, elements. The holder may take the form of a cradle or tray.

[0033] In the third, fourth and fifth aspects of the present invention, the media player may be a portable media player, which, when not being held by the support, may be operated in a handheld manner. The media player may have one or more operation buttons located on a front surface thereof. A display screen may also be located on the front surface. Preferably, the media player is substantially cuboid, with opposing front and rear surfaces and four side surfaces connecting the front and rear surfaces together. The front and rear surfaces may extend across a substantially larger area than the side surfaces. The side surfaces may be flat or curved. Corners between the side surfaces may be sharp or curved. The media player may be an iPod™, iTouch™ or iPhone™, for example.

[0034] By providing a support for a media player, which can support both rear and side surfaces of the media player with panels configured as set out above, the support can provide a firm hold to the media player whilst enabling the user of the media player to operate the media player with little or no interference by the support. By employing side panels that do not extend beyond side surfaces of the media player, access to the controls on the front surface of the media from any angle may not be impeded by the holder. By employing panels, e.g. with

thicknesses of less than 3 mm, the holder may add little additional bulk to the media player. In effect, the holder may provide a very discreet means to hold the media player. The user may therefore operate the media player in the same or similar manner as they would if the media player were unsupported other than by the operator's own hand.

[0035] The support may be arranged such that, when the media player is received in the space, no part of the support extends over a front surface of the media player.

[0036] The support member may comprise additional retention features, such as snap-fit features, to enable the support member to support the media player with greater security.

[0037] To support sides of the media player, the side panels may follow a curved path. This may be particularly appropriate if the side surfaces of the media player are curved. The side panels may follow a part-circular or part-elliptical path for example, e.g. a quarter-circular path or somewhere between a quarter-circular and semi-circular path. The side panels may follow a curved path that enables snap-fitting of the media player into the holder. As an alternative to curved panels, the side panels may be flat, and may project along a straight path substantially perpendicular to front surface of the main panel. The main panel of the media player may be curved, e.g. to conform to a curved rear surface of the media player. In general, it is considered that said holder could be configured for use with variety of different shapes and sizes of media player.

[0038] Preferably two of the side panels, referred to hereinafter as the "first and second side panels" are connected to two respective edges of the main panel, the two edges lying substantially perpendicular to each other. Accordingly, the first and second side panels may provide support along two side surfaces of the media player, the side surfaces extending perpendicular to each other.

[0039] In the third, fourth and fifth aspects of the present invention, the base is typically suitable for location on a surface such as a table top, desktop, window or floor etc.

The base may be part of, or consist of, a music system having an amplifier and/or speakers, the support member forming part of a media player 'dock' for the music system. As one alternative, the base may be arranged to connect to a car windscreen, e.g. via a sucker.

[0040] The support member may be releasably mounted to the base to enable removal of the support member from the base for easier placement of the media player in the support member. The support member may be rotatably mounted to the base.

[0041] In the third, fourth and fifth aspects of the present invention, when the support member moves between the first and second positions, it may place the media player in the vertical and horizontal positions respectively, or in the two horizontal positions 90 degrees either side of vertical respectively, as discussed previously.

[0042] Normally, when the display screen is in the vertical orientation, the length direction of the front surface of the media player and of the display screen will extend substantially vertically and the width direction will extend substantially horizontally; and when the display screen is in the horizontal orientation, the length direction of the front surface of the media player and the display screen will extend substantially horizontally and the width direction will extend substantially vertically. The display screen may toggle between these two orientations upon a 90 degree rotation of the media player about a horizontal axis. It is conceived that the length and width of the media player may not extend precisely vertically in the respective orientations, as it may be preferable to mount the media player at an angle from vertical to enable easier viewing of the display screen, e.g. from above. The media player may be angled from vertical at between 30 and 60 degrees, for example. An angle of 45 degrees may be appropriate. Ideally, however, the angle from vertical of the media player is not so great that it causes the media player to be unable to sense itself rotating between the vertical and horizontal orientations, which could otherwise prevent the media player switching the information on the display screen between the two orientations.

[0043] The media player support of the fifth aspect of the present invention is provided with a stem with a channel extending therethrough for receiving a cable. The media player supports of the third and fourth aspects of the present invention may also be provided with a stem with a channel extending therethrough for receiving a cable.

[0044] A cable for connecting the media player to the base (e.g. an audio device) is preferably arranged to travel through the channel provided in the stem. Accordingly, the cable may be less likely to twist during rotation of the support member/media player, since it may effectively travel along the rotational axis of the support member, and the cable may be hidden from view, improving aesthetics.

[0045] Preferably, the supports of the fourth and fifth aspects of the present invention may comprise a locking mechanism operable between a first state in which it prevents rotation of the support member and a second state in which it allows rotation of the support member. Preferably, the locking mechanism is operable between a first state in which it prevents rotation of the support member between the first and second positions and a second state in which it allows rotation of the support member between the first and second positions.

[0046] The support of the third and fifth aspects of the present invention may comprise a damping means for reducing shock applied to the support member upon rotation between the first and second positions.

[0047] The stem may be rotatable relative to the base.

[0048] The stem may be biased, on rotation of the stem, into one or a plurality of rotational positions. These rotational positions may, for example, be 90 degrees apart, rotationally.

[0049] The support may further comprise a mounting

unit for rotatably mounting the support member to the base. Such a mounting unit permits rotation of the stem relative to the base (and optionally the mounting unit). The mounting unit may include spaced forward and rear plates, each plate having a circular opening for receiving a portion of the stem and permitting rotation of the stem relative to the unit.

[0050] The stem may be provided with at least one cam surface which, in use, is engaged by a biasing member (the biasing member preferably being provided by the support and further preferably by one of the forward and rear plates) so that the support member (and therefore the attached media player) is, on rotation, biased to a particular rotational position. It is preferred that the stem is provided with a plurality of cam surfaces, one or more of which, in use, is engaged by said biasing member at any one time so that the support member (and therefore the media player) is, on rotation, biased into one of a plurality of rotational positions. It is preferred that the stem is provided with a groove having a substantially square periphery. The square periphery provides four cam surfaces.

[0051] The stem may be associated with a projection, wherein rotation of the stem causes rotational movement of the projection. The support may be provided with two stop members, the two stop members defining the limits of angular rotation of the stem, the rotation of the stem being limited by engagement of the projection with one of the two stop members. The two stop members may typically permit 180 degrees of rotation. The two stop members may be provided by the forward plate. When used in combination with the stop member/projection arrangement, the cam surface and biasing member would typically bias the player into three different orientations (e.g. landscape, portrait, inverted landscape).

[0052] The support may be further provided with a retention clip which engages with the stem and inhibits unwanted withdrawal of the stem from the base. The retention clip may be provided with said projection.

[0053] In any of the above aspects set out above, to operate the locking mechanism, the media player support may comprise an adapter. The adapter may be connectable to the support member and/or the media player and when connected may interact with the locking mechanism when the support member and media player are mounted to the base.

[0054] When the adapter is not connected to the support member or media player, the locking mechanism may be in one of the first and second states (e.g. the first "locked" state). However, when the adapter is connected to the support member or media player, the adapter may interact with the locking mechanism and place the locking mechanism in the other of the first state and second states (e.g. the second "unlocked" state).

[0055] As indicated above, the support member may be a holder as set out above with respect to the first and second aspects of the present invention. However, as an alternative, the holder may be employed as the adapter.

In this scenario, the support member may comprise a panel rotatably mounted to the base, wherein, upon mounting the holder (adapter) to the panel, e.g. by sliding the holder onto the panel, the holder places the locking mechanism in the desired state.

[0056] The support of the fourth aspect may further comprise a locking mechanism as set out in the third aspect.

[0057] In the above aspects, the locking mechanism may comprise a pin which is located in a slot. The slot may have a first section and a second section. The first section may provide a path for the pin to travel during rotation of the support member. For example, the first section may be a curved slot section, curving around the rotational axis of the support member. The second section may not provide a path for the pin to travel during rotation of the support member, making rotation of the support member impossible when the pin is located in this section. For example, the second section may have a dimension little larger than the cross-section of the pin. Preferably, the adapter is arranged to force the pin from one of the slot sections to the other, as appropriate for achieving the desired locking state, when the adapter is connected to the media player and/or support member.

[0058] Preferably, in the above aspects, the rotation of the support member is limited so that it cannot be rotated beyond the first and second positions. The limitation may be achieved using stops.

[0059] The damping means of the fourth aspect may prevent the media player from being dislodged from the support upon generation of shock within the support. This may occur e.g. upon the support reaching the desired orientation, whereupon shock may be applied to the support member by the stops and may be transmitted through the support member to the media player. The damping means may be provided by a shock absorbing means such as a spring, e.g. a leaf spring or helical spring, and/or by damping grease.

[0060] Embodiments of the invention will now be described by way of example with reference to the accompanying drawings in which:

Fig. 1 shows a front view of a holder for a support according to a first embodiment of the present invention;

Fig. 2 shows a rear view of the holder of Fig. 1;

Fig. 3 shows a rear view of the holder of Fig. 1 in combination with the front plate of a support panel;

Fig. 4 shows a rear view of the support panel of Fig. 3;

Fig. 5 shows a rear view of the support according to the first embodiment of the present invention mounted to a base;

Fig. 6 shows a rear view of part of a mounting unit

used in the support of Fig. 5;

Fig. 7 shows a rear view of a retention clip and leaf springs used in the mounting unit of Fig. 5;

Figs. 8a and 8b show rear and front exploded views respectively of the support according to the first embodiment of the present invention;

Fig. 9 shows a cross-sectional side view of a media player located in the holder of the first embodiment of the present invention.

[0061] Figs. 10a and 10b show cross-sectional side views of a media player, and a holder for a support according to a second embodiment of the present invention, before and after insertion of the media player into the holder respectively.

[0062] Figs. 11a and 11b show side and front schematic views respectively of a support according to a third embodiment of the invention in which a media player is supported by the support in a non-rotatable manner;

[0063] Figs. 12a and 12b show side and front schematic views respectively of the support of Figs. 11a and 11b in which a media player is supported by the support in a rotatable manner; and

[0064] Figs. 13a and 13b show side and front schematic views respectively of the support of Figs. 11a and 11b in which the media player has been rotated by 90 degrees.

[0065] A holder 10 for a portable media player support according to a first embodiment of the present invention is shown in Figs. 1 and 2. The holder 10 takes the form a cradle or tray, and comprises a main panel 11 and a plurality of side panels 12-15 connected to and projecting from side edges of the main panel 10. The main panel 10 is substantially rectangular in shape, with first and second side panels 12, 13 connected to the two opposing long edges of the main panel 10 and third and fourth side panels 14, 15 connected to the two opposing short edges of the main panel.

[0066] The side panels 12-15 project in a direction substantially perpendicular to the plane of the main panel 11. Nevertheless, curved corners are provided at the transition between the main panel 11 and the side panels 12-15. In this embodiment, the main panel 11 and side panels 12-15 are formed as a one-piece element.

[0067] The side panels and main panel define a space for receiving a portable media player (not shown), e.g. an iPod™, whereupon the front surface of the main panel 11 contacts and supports a rear surface of the media player and inner surfaces of the side panels 12-15 contact and support respective side surfaces of the media player. In this embodiment, the main panel is to be angled in use at approximately 45 degrees from vertical, to provide additional support to the media player, reducing the chances that the media player might fall out of the holder 10. The side panels 12-15 are configured such that they do

not extend beyond the side surfaces of the media player (see Fig. 9, discussed below). Accordingly, the side panels 12-15 do not obstruct access to the front surface of the media player, making operation of the media player by the user easier. Furthermore, the main panel 11 and the side panels 12-15 have a thickness of about 2 mm. Accordingly, even though the holder 10 is arranged to surround substantially the rear and sides of the media player, it is discreet and does not contribute significantly to the bulk of the media player. The user can therefore grip the media player in their hand during operation, with a similar feeling to gripping the media player independently of the holder.

[0068] The holder 10 includes a first opening 16 that is provided in the third side panel 14 and an adjacent part of the main panel 11, and a second opening 17 that is provided in the fourth side panel 15. The first opening 16 provides access to the rear and side of the media player when it is mounted to the holder, allowing a user to push or pull the media player out of the holder using their fingers. The second opening 17 provides access for an electrical connector to connect to the media player.

[0069] With reference to Figs. 3 and 4, the support further comprises a support plate 2 that includes a front panel 21 and a rear panel 22 (not shown in Fig. 3). A retention 18 (square upstand) is provided on the rear surface of the main panel 11 of the holder 10, the retention being arranged to receive a portion of the front panel 21 of the support plate 2. The front panel 21 includes two spring clips 23 arranged to releasably secure the front panel 21 to the retention 18, and thus secure the holder 10 to the support plate 2. The rear panel 22 includes an integral stem 24 (spindle), the integral stem 24 projecting from a rear surface of the rear panel 22 and forming part of a rotation mechanism to rotatably mount the support plate 2, and thus the holder 10, to a base 3.

[0070] In this embodiment, the base is an audio device including an amplifier and speaker (a top facet 31 of the base is shown in Fig. 5). Along a bottom edge of the front panel 21, a ledge 25 is provided that projects forwardly and includes an electrical connector (not shown) for connecting the audio device, through the holder opening 17, to a corresponding electrical connector on the bottom surface of the media player, via a cable (not shown). Like the side panels of the holder 10, the support ledge 25 is designed to extend no further than the side surfaces of the media player so that it does not significantly impede the improved user operation of the media player as set out above. The stem 24 is hollow. Accordingly, the cable for connecting the media player to the audio device can extend through the stem 24. By extending through the stem 24, there is a reduced chance that the cable could become twisted during rotation of the media player/holder 10; furthermore, the cable may be hidden from view, improving the aesthetics of the arrangement.

[0071] The rotation mechanism further comprises a mounting unit 4 for rotatably mounting the support plate to the base, e.g. to the top facet 31 of a base, as shown

in Fig 5. The mounting unit 4 includes spaced forward and rear plates 41, 42, each plate 41, 42 having a circular opening 41a, 42a for receiving a portion of the stem 24 and permitting rotation of the stem 24 relative to the unit. In the space between the forward and rear plates 41, 42, two leaf springs 43 are provided, along with a retention clip 44.

[0072] Although the stem 24 is substantially cylindrical, proximate the rear end of the stem 24, on its surface located between the forward and rear panels 41, 42 of the mounting unit 4, first and second grooves 241, 242 are provided.

[0073] The first groove 241 has a substantially square periphery. The flat surfaces of the groove 241 provide cam surfaces against which the leaf springs 43 act (see Fig. 6). The arrangement is such that, upon rotation of the media player (and thus the holder 10 and support plate 2), the media player is biased to positions spaced at 90 degrees to each other. This is desirable so that the user can rotate the supported media player between precise positions in which a rectangular display screen on the front surface of the media player has a precise 'portrait' or 'landscape' orientation.

[0074] The second groove 242 has an irregular periphery, providing abutment surfaces 243 for the retention clip 44 to engage. Portions of the retention clip 44 locate in the second groove 242, locking the end of the stem within the mounting unit 4. The retention clip 44 is substantially circular and has a projection 442 on a peripheral edge that is arranged, upon rotation of the retention clip 44, to abut stops 411 projecting from the front plate 41, limiting the degree of rotation of the stem, and thus the media player, to 180 degrees in this embodiment. This gives the rotation mechanism a 'tri-stable' action, ensuring that the media player can rotate between three biased positions only: a vertical position, where the display screen may be in the 'portrait' mode; and two horizontal positions 90 degrees either side of the vertical position, where the display screen may be in 'landscape' mode.

[0075] Damping grease (not shown) is provided in the mounting unit to damp the rotation mechanism. With reference to Figs. 7, 8a and 8b, the retention clip 44 comprises a plurality of concentric rib elements 441 that are arranged to slidably mate with conformal circular rib elements 421 (see Fig. 8b) projecting from the inner surface of the rear plate 42. The rib elements 441, 421 have a large surface area. This ensures that, upon rotation of the retention clip 44, more damping grease is displaced, achieving a greater damping effect. Such damping is particularly important to limit the amount of shock on the stem 24 when the media player reaches its 'stop' positions, which shock could be transmitted to the media player.

[0076] A cross-sectional side view of a media player 100, e.g. an iPhone™, located within the holder 10 of the support of the present embodiment is shown in Fig. 9. The side surfaces 101, 102 of the media player 100 are curved and project along substantially semi-circular

paths. The side panels 14, 15 of the holder 10 extend along curved paths conforming to the paths of the side surfaces 101, 102. However, they do not project as far as the side surfaces - they extend along substantially quarter-circular paths only and therefore end approximately half way along the side surfaces 101, 102 of the media player 100. Accordingly, as discussed above, the side panels 12-15 do not obstruct access to the front surface of the media player, making operation of the media player by the user easier. Furthermore the arrangement enables easy insertion of the media player 100 into the holder 10.

[0077] A holder 10' of a support according to a second embodiment of the present invention is shown in Figs. 10a and 10b. The holder 10' is identical to the holder 10 of Fig. 9, except that the side panels 14', 15' project along longer curved paths. In fact, the side panels 14', 15' project almost as far as the side surfaces 101, 102 of the media player. The side panels 14, 15 begin to curve back on themselves and they therefore obstruct slightly the opening via which the media player 100 is inserted into the holder 10'. The opening is therefore slightly smaller than the media player 100 and accordingly the side panels 14, 15 must be displaced during insertion of the media player 100 into the holder 10'. Upon insertion, the side panels are arranged to flex outwardly as indicated by arrows A, and spring or snap back into position, trapping the media player in the holder 10' as shown in Fig. 10b. Essentially, the arrangement provides for snap-fitting of the media player 100 into the holder 10'. The may mean that the holder need not be arranged at an incline as shown in Fig. 9, since gravity need not be relied upon to ensure that the media player remains secure in the holder 10'. This arrangement may make the holder 10' particularly suitable for supporting the media player 100 within a car, e.g. mounted on a car window, where vibrations or bumps could otherwise result in the media player 100 being thrown from the holder 10'.

[0078] A media player support according to a third embodiment of the present invention is shown in Figs. 11a to 13b. The support comprises a support plate 2' rotatably mounted to a base 3' in a similar manner to the first embodiment of the invention. However, in this embodiment, a locking mechanism 5 is provided operable to prevent rotation of the media player 6 (shown by dotted lines) when located on the support. This may be desirable if the display screen 61 of the media player can display information in one orientation only, e.g. a vertical/portrait orientation, and therefore rotation of the media player when supported is undesirable and/or unnecessary.

[0079] Generally, in this embodiment the locking mechanism 5 prevents rotation of the media player when the media player is mounted to the support plate 2' directly, i.e., without being disposed in the holder 10" as shown in Figs. 11a and 11b, and allows rotation when the media player is mounted to the support plate 2' when disposed in the holder 10" (as shown in Figs. 12a to 13b). Essentially, the holder 10" acts as an adapter to move

the locking mechanism 5 between a locked and an unlocked state. Although the holder 10" provides added support to the media player 6, it is understood this additional support may not be necessary when the media player 6 is not to be rotated, and therefore it is reasonable to omit the holder in such circumstances.

[0080] The locking mechanism employs a slot 50 and a pin 53 which is located in the slot 50. The slot 50 has a first section 51 and a second section 52. The first section 51 provides a path for the pin 53 to travel during rotation of the holder 10", since it curves around the rotational axis of the holder 10". The second section 52 does not provide a path for the pin 53 to travel during rotation of the media player, making rotation of the media player impossible when the pin 53 is located in this section 52. This is achieved by the second section 52 having a dimension little larger than the cross-section of the pin 53.

[0081] The pin 53 is biased by a spring 54 into the second section 52 of the slot 50. However, when the housing 10" is mounted to the support plate 2', the housing 10" is arranged to force the pin 53 into the first section 51. Therefore, when the holder 10" is not used, rotation of the support panel and thus the media player is prevented by the pin 53 being positioned in the second section 52. However, when the holder 10" is used, since the pin 53 is forced into the first section 51, rotation of the support panel 2' and media player 6 is possible.

[0082] While the invention has been described in conjunction with the exemplary embodiments described above, many equivalent modifications and variations will be apparent to those skilled in the art when given this disclosure. Accordingly, the exemplary embodiments of the invention set forth above are considered to be illustrative and not limiting. Various changes to the described embodiments may be made without departing from the spirit and scope of the invention.

Claims

1. A media player support comprising:

- a base;
- a support member rotatably mounted to the base, the support member being for receiving a media player; and
- a stem,

wherein the support member is rotatably mounted to the base via the stem such that the support member can be rotated between a first position and a second position, the stem having a channel extending therethrough for receiving a cable for connecting the media player to the base.

2. A media player support according to claim 1, wherein the stem is rotatable relative to the base.

3. A media player support according to claim 1 or claim 2, wherein the support further comprises a mounting unit for rotatably mounting the support member to the base.

4. A media player support according to claim 3 when dependent on claim 2, wherein the mounting unit includes spaced forward and rear plates, each plate having a circular opening for receiving a portion of the stem and permitting rotation of the stem relative to the mounting unit.

5. A media player support according to any one preceding claim, wherein the stem is provided with at least one cam surface which, in use, is engaged by a biasing member so that the support member is, on rotation, biased to a particular rotational position.

6. A media player support according to claim 5 wherein the stem is provided with provided with a plurality of cam surfaces, one or more of which, in use, are engaged by said biasing member at any one time so that the support member is, on rotation, biased into one of a plurality of rotational positions.

7. A media player support according to any one preceding claim, wherein the stem is associated with a projection, wherein rotation of the stem causes rotational movement of the projection.

8. A media player support according to claim 7, wherein the support is provided with two stop members, the two stop members defining the limits of angular rotation of the stem, the rotation of the stem being limited by engagement of the projection with one of the two stop members.

9. A media player support according to any one preceding claim, wherein the support member comprises a holder having a main panel and two or more side panels connected to, and projecting from, edges of the main panel, the main panel and the side panels defining a space for receiving a media player such that a rear surface of the media player contacts the main panel, and the side panels contact respective side surfaces of the media player, the side panels being arranged such that, when the media player is received in the space, distal ends of the side panels do not project beyond the side surfaces of the media player.

10. A media player support according to any one of claims 1 to 8, wherein the support member comprises a holder having a main panel and two or more side panels connected to, and projecting from, edges of the main panel, the main panel and the side panels

defining a space for receiving a media player such that a rear surface of the media player contacts the main panel, and the side panels contact respective side surfaces of the media player, the main panel and the side panels each having a thickness of less than 3 mm. 5

11. A media player support according to any one preceding claim, wherein the base is part of, or consists of, a music system having an amplifier and/or speakers 10

12. A media player support according to any one preceding claim, wherein when the support member moves between the first and second positions, it places the media player in the vertical and horizontal orientations respectively, or in the two horizontal positions 90 degrees either side of the vertical orientation, such that when the display screen is in the vertical orientation, the length direction of the front surface of the media player and of the display screen will extend substantially vertically and the width direction will extend substantially horizontally; and when the display screen is in the horizontal orientation, the length direction of the front surface of the media player and the display screen will extend substantially horizontally and the width direction will extend substantially vertically. 15 20 25

13. A media player support according to any one preceding claim comprising a cable for connecting the media player to the base, the cable being arranged to travel through the channel provided in the stem. 30

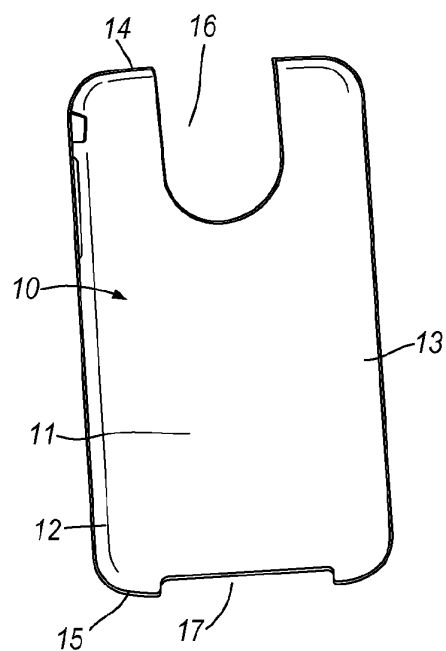
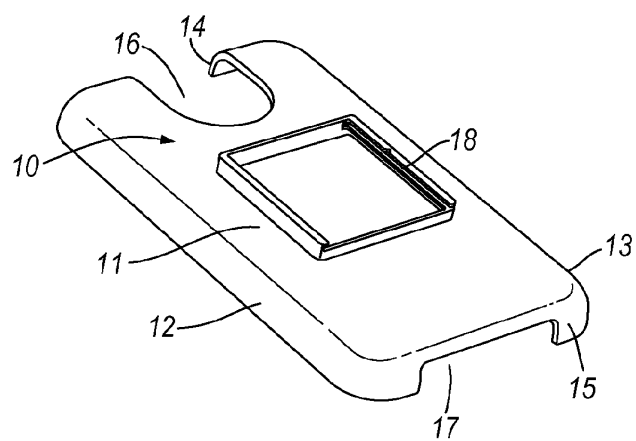
14. A media player support according to any one preceding claim comprising a locking mechanism, the locking mechanism being operable between a first state in which it prevents rotation of the support member between the first and second positions and a second state in which it allows rotation of the support member between the first and second positions. 35 40

15. A media player support according to any one preceding claim comprising a damping means for reducing shock applied to the support member upon rotation between the first and second positions. 45

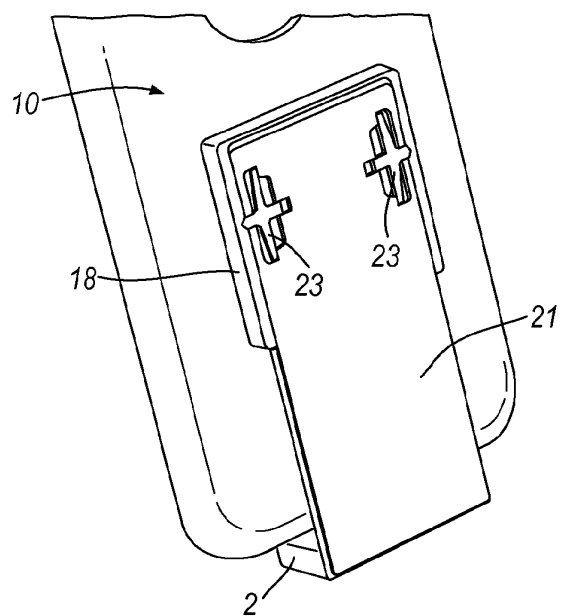
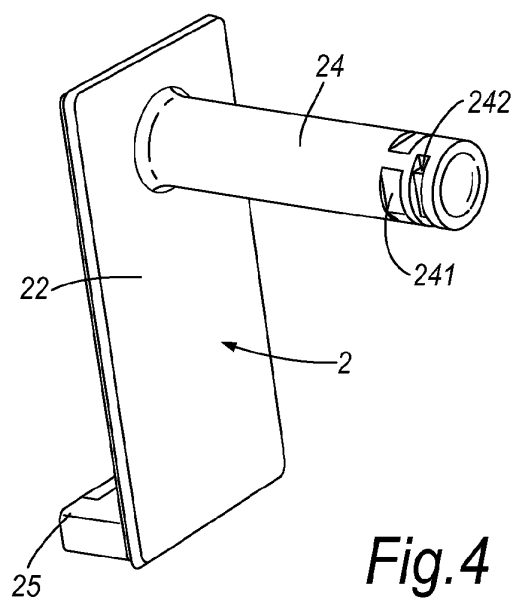
50

55

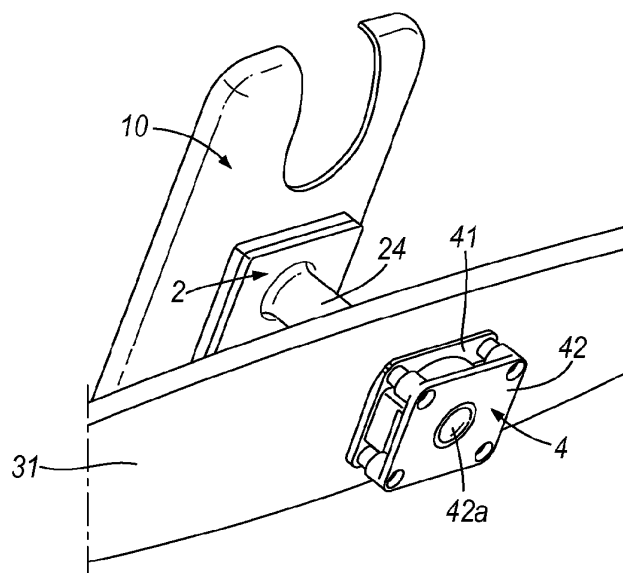
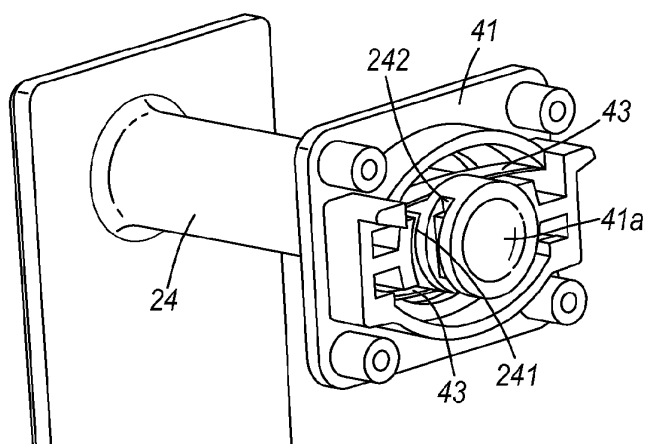
EP 2 177 811 A2

*Fig. 1**Fig. 2*

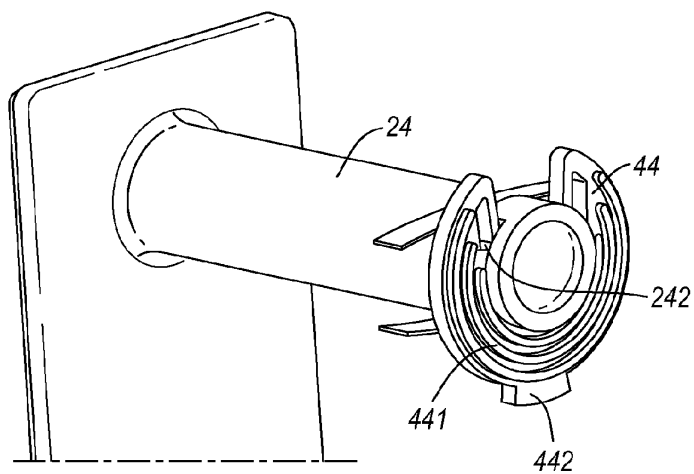
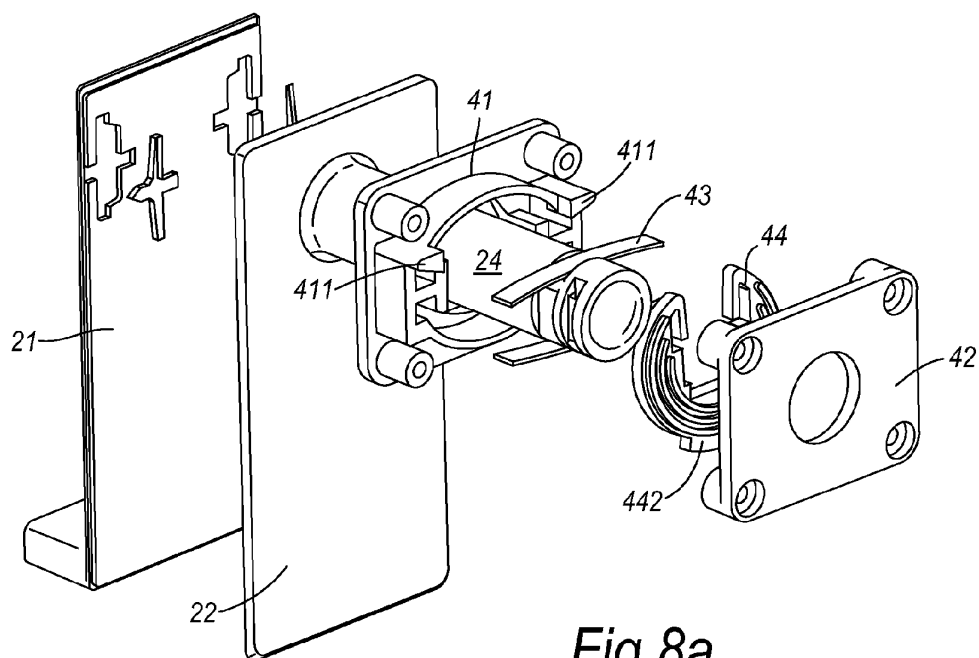
EP 2 177 811 A2

*Fig. 3**Fig. 4*

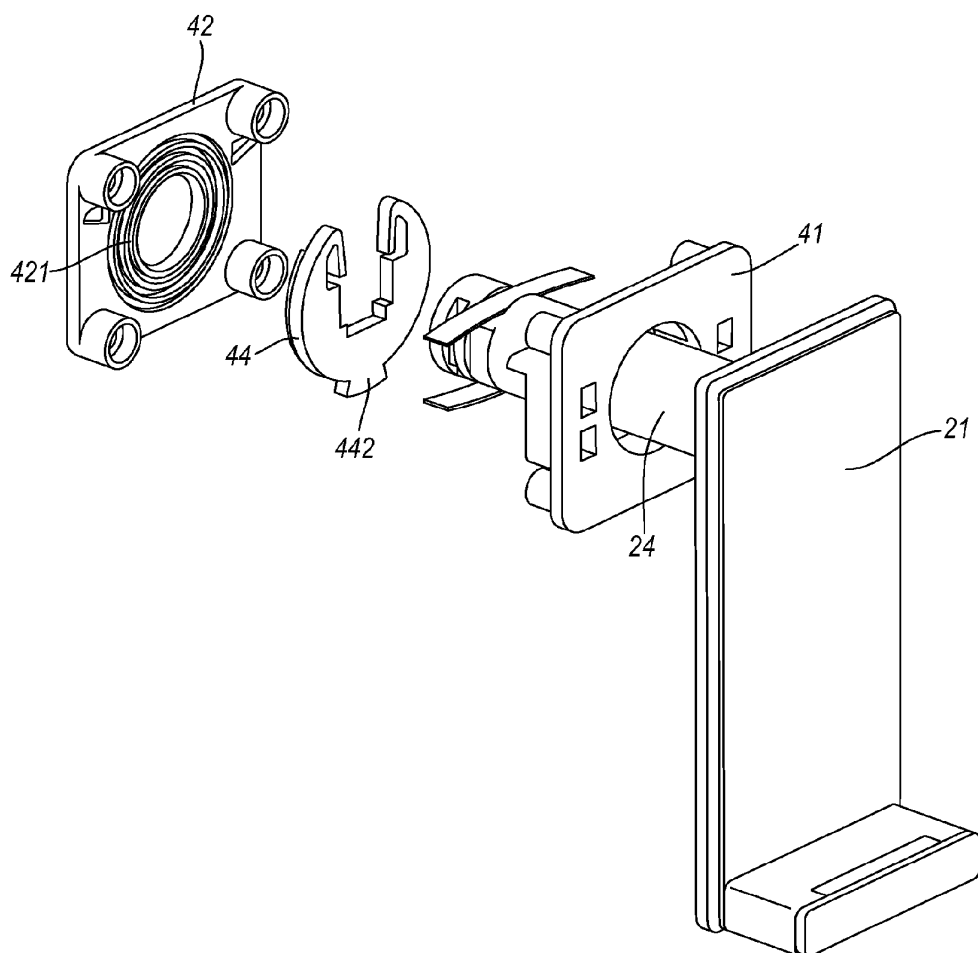
EP 2 177 811 A2

*Fig. 5**Fig. 6*

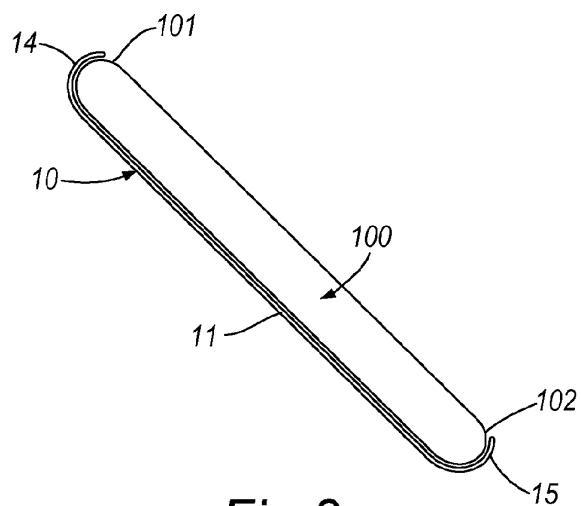
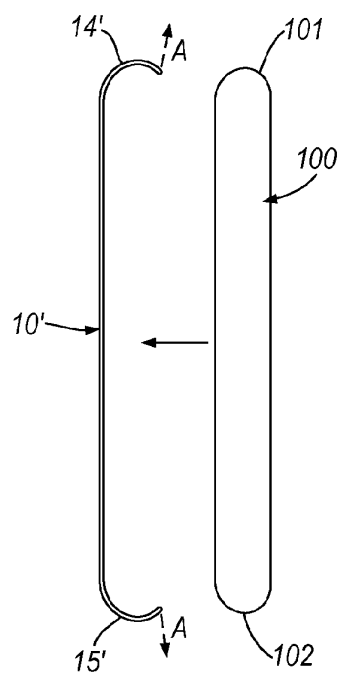
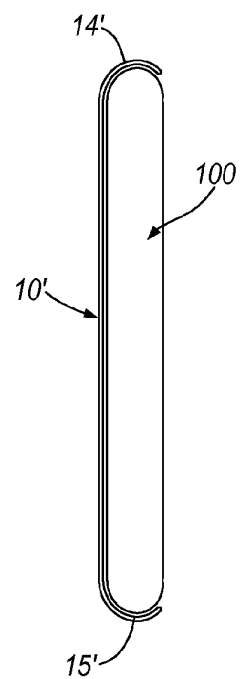
EP 2 177 811 A2

*Fig. 7**Fig. 8a*

EP 2 177 811 A2

*Fig.8b*

EP 2 177 811 A2

*Fig. 9**Fig. 10a**Fig. 10b*

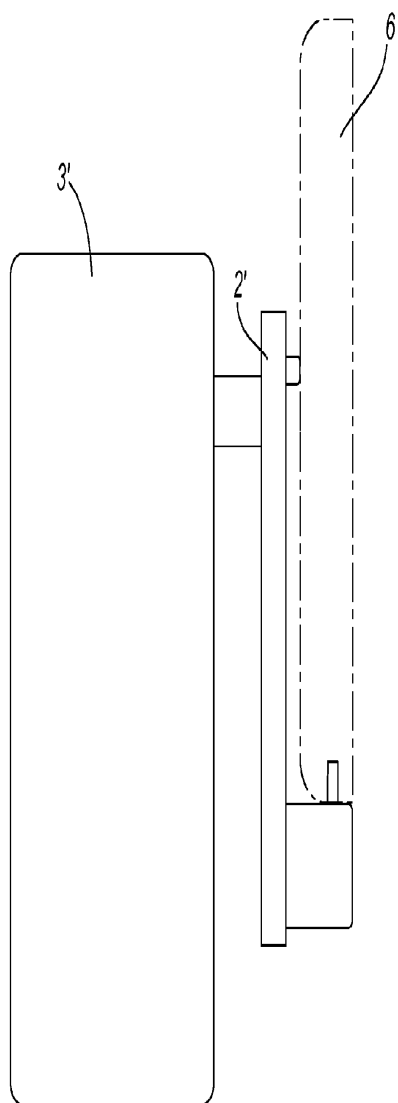


Fig. 11a

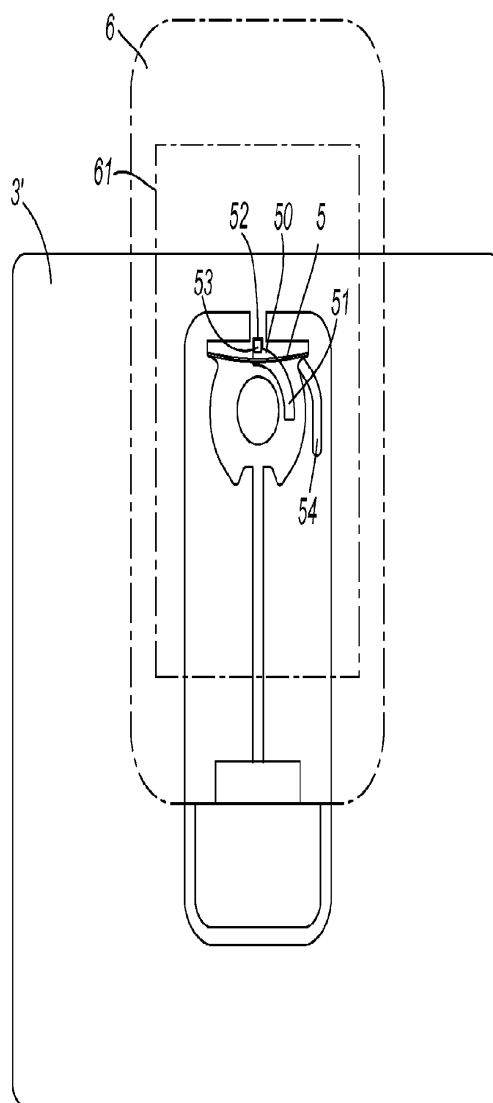
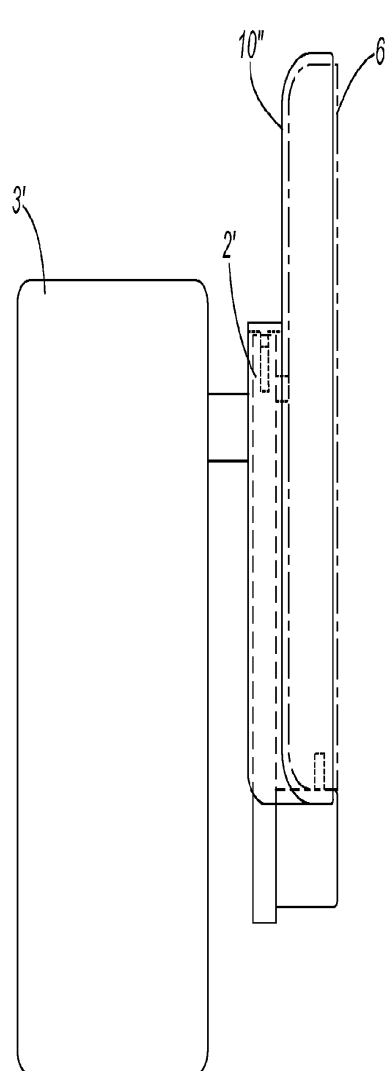
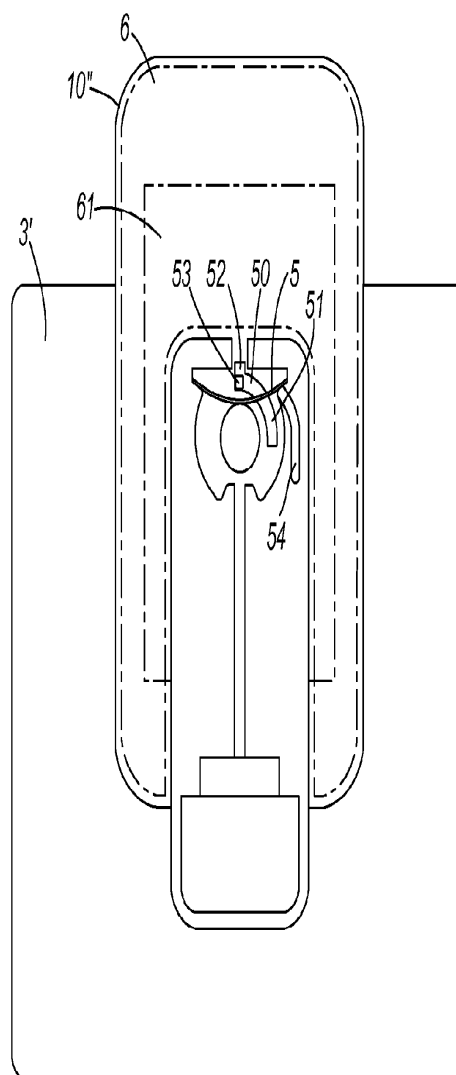


Fig. 11b

*Fig.12a**Fig.12b*

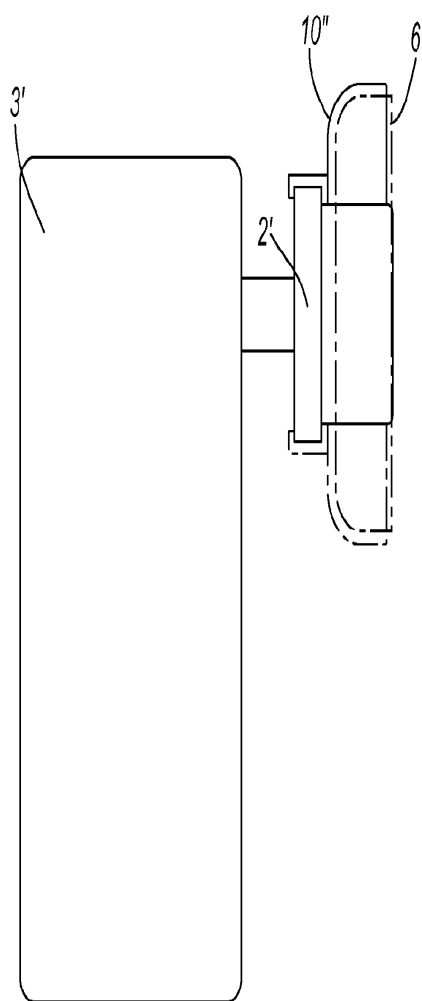


Fig. 13a

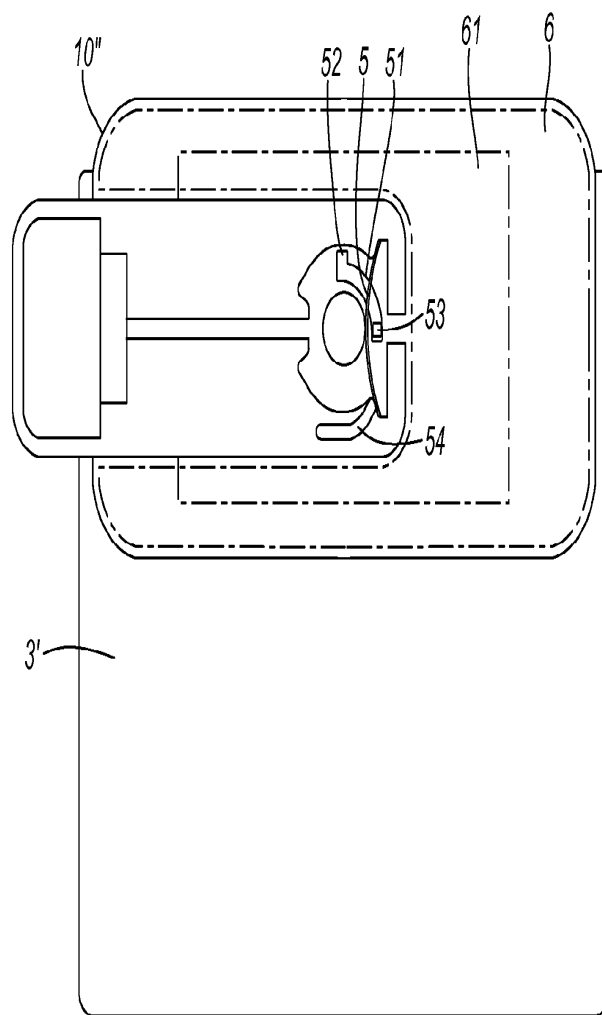


Fig. 13b

EP 2 177 811 A2

Electronic Acknowledgement Receipt	
EFS ID:	25423431
Application Number:	15061910
International Application Number:	
Confirmation Number:	4319
Title of Invention:	Method and System for Logging Vehicle Behavior
First Named Inventor/Applicant Name:	Andrew William Wright
Customer Number:	30734
Filer:	Mark Krietzman H/Kelly Quach
Filer Authorized By:	Mark Krietzman H
Attorney Docket Number:	044228.010201
Receipt Date:	07-APR-2016
Filing Date:	04-MAR-2016
Time Stamp:	11:35:33
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
------------------------	----

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	044228_010201_IDS_Trans_04-07-16.PDF	105864 5cb758cc103fe6c25cd513fb23045c900ede c634	no	4

Warnings:**Information:**

2	Information Disclosure Statement (IDS) Form (SB08)	044228_010201_IDS_1449_04- 07-16.PDF	127378 6e4f3e9d59cc8b3766914d74125890db34e6a273	no	2
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
3	Foreign Reference	EP2177811A2.PDF	948263 faff1057b36e849bfa9d3d10c219bc195dd16f1f	no	19
Warnings:					
Information:					
Total Files Size (in bytes):			1181505		
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. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

DOCKET NO.: 044228.010201

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Wright, Andrew William

Confirmation No.: 4319

Application No.: 15/061,910

Group Art Unit: 3661

Filing Date: March 4, 2016

Examiner: Paige, Tyler D.

For: Method And System For Logging Vehicle Behavior

Filed Via EFS

INFORMATION DISCLOSURE STATEMENT

Pursuant to 37 CFR § 1.56 and in accordance with 37 CFR §§ 1.97-1.98, information relating to the above-identified application is hereby disclosed. Inclusion of information in this statement is not to be construed as an admission that this information is material as that term is defined in 37 CFR § 1.56(b).

☒ **IDS Filed Under 37 CFR 1.97(b)**

In accordance with § 1.97(b), since this Information Disclosure Statement is being filed either within three months of the filing date of the above-identified application, within three months of the date of entry into the national stage of the above identified application as set forth in § 1.491, before the mailing date of a first Office Action on the merits of the above-identified application, or before the mailing date of a first Office Action after the filing of request for continued examination under § 1.114, no additional fee is required.

☐ **IDS filed Under 37 CFR 1.97(c)**

In accordance with § 1.97(c), this Information Disclosure Statement is being filed after the period set forth in § 1.97(b) above but before the mailing date of either a Final Action under § 1.113 or a Notice of Allowance under § 1.311, or before an action that otherwise closes prosecution in the application, therefore:

- ☐ Certification in Accordance with § 1.97(e) is attached; or
- ☐ The fee of ☐ **\$180.00** (Undiscounted)
- ☐ **\$90.00** (Small entity)
- ☐ **\$45.00** (Micro entity) as set forth in § 1.17(p) is attached.

DOCKET NO.: 044228.010201

PATENT

☐ **IDS filed Under 37 CFR 1.97(d)**

In accordance with § 1.97(d), this Information Disclosure Statement is being filed after the mailing date of either a Final Action under § 1.113 or a Notice of Allowance under § 1.311 but before, or simultaneously with, the payment of the Issue Fee, therefore included are: Certification in Accordance with § 1.97(e); and the submission of ☐ **\$180.00** (Undiscounted) ☐ **\$90.00** (Small entity) ☐ **\$45.00** (Micro entity) as set forth in § 1.17(p).

CONTENT OF IDS PURSUANT TO 37 CFR 1.98

- ☐ Copies of reference numbers listed on the attached Form 1449/PTO or Substitute for Form 1449/PTO are not required to be submitted pursuant to 37 CFR § 1.98(a)(2)(iii).
- ☒ Copies of reference numbers **28** listed on the attached Form 1449/PTO or Substitute for Form 1449/PTO are enclosed herewith.
- ☒ Copies of reference numbers **1 - 27** are not being submitted because they were previously cited by or submitted to the U.S. Patent and Trademark Office in patent application number **13/994,455**, filed **July 24, 2013** for which a claim for priority under 35 U.S.C. § 120 has been made in the instant application.
- ☐ The month of publication for reference numbers is not available. However, the year of publication for these references is sufficiently earlier than the effective US filing date and any foreign priority date so that the particular month of publication is not in issue pursuant to 37 CFR § 1.98(b).

DOCKET NO.: 044228.010201

PATENT

REFERENCES IN A LANGUAGE OTHER THAN ENGLISH

- ☐ The following documents are not in the English language. Accordingly, a concise explanation of the relevance of the document was incorporated in the specification passages identified below, the document was identified in a foreign communication as identified below or an English language counterpart application has been provided as indicated below.

Foreign Language Document	Cite No.	Pages of Reference in Specification or Relevance of Document

Foreign Language Document	Cite No.	English Language Counterpart	Cite No.

- ☐ **CERTIFICATION IN ACCORDANCE WITH § 1.97(e)**

I hereby certify that:

- ☐ Each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this information disclosure statement.
- ☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in this information disclosure statement was known to any individual designated in § 1.56(c) more than three months prior to the filing of this information disclosure statement.

DOCKET NO.: 044228.010201

PATENT

Please charge any deficiency or credit any overpayment to Deposit Account No. 23-3050.

Date: April 6, 2016

/Mark H. Krietzman/

Mark H. Krietzman

Registration No. 41128

Baker & Hostetler LLP
Cira Centre
2929 Arch Street, 12th Floor
Philadelphia, PA 19104-2891
Telephone: (215) 568-3100
Facsimile: (215) 568-3439



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	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
15/061,910	03/04/2016	2642	1150	044228.010201	8	5

CONFIRMATION NO. 4319

FILING RECEIPT



000000081584333

30734
 BAKER & HOSTETLER LLP
 WASHINGTON SQUARE, SUITE 1100
 1050 CONNECTICUT AVE. N.W.
 WASHINGTON, DC 20036-5304

Date Mailed: 03/23/2016

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

Andrew William Wright, Surrey, UNITED KINGDOM;

Applicant(s)

Gillian Switalski, Wentworth, UNITED KINGDOM;
 Andrew William Wright, Wentworth, UNITED KINGDOM;

Power of Attorney: The patent practitioners associated with Customer Number 30734

Domestic Priority data as claimed by applicant

This application is a CON of 13/994,455 07/24/2013
 which is a 371 of PCT/GB11/52491 12/15/2011

Foreign Applications (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.)

UNITED KINGDOM 1118777.0 10/31/2011 No Access Code Provided

UNITED KINGDOM 1109759.9 06/10/2011 No Access Code Provided

UNITED KINGDOM 1101259.8 01/25/2011 No Access Code Provided

UNITED KINGDOM 1021292.6 12/15/2010 No Access Code Provided

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 03/21/2016

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 15/061,910**

Projected Publication Date: 06/30/2016

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

Method and System for Logging Vehicle Behavior

Preliminary Class

455

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

SelectUSA

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop technology, manufacture products, deliver services, and grow your business, visit <http://www.SelectUSA.gov> or call +1-202-482-6800.

PATENT APPLICATION FEE DETERMINATION RECORD						Application or Docket Number 15/061,910	
Substitute for Form PTO-875							
APPLICATION AS FILED - PART I							
(Column 1)		(Column 2)		SMALL ENTITY		OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)	RATE(\$)	FEE(\$)	
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	70	N/A		
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A	300	N/A		
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	360	N/A		
TOTAL CLAIMS (37 CFR 1.16(j))	8	minus 20 = *	x 40 =	0.00	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	5	minus 3 = *	x 210 =	420	OR		
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 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).			0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0.00			
			TOTAL	1150		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	
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)	RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus **	=	x =	OR	x =
	Independent (37 CFR 1.16(h))	*	Minus ***	=	x =	OR	x =
	Application Size Fee (37 CFR 1.16(s))					OR	
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					OR	
			TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY	
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)	RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus **	=	x =	OR	x =
	Independent (37 CFR 1.16(h))	*	Minus ***	=	x =	OR	x =
	Application Size Fee (37 CFR 1.16(s))					OR	
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					OR	
			TOTAL ADD'L FEE		OR	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 found in the appropriate box in column 1.							

PTO/AIA/80 (07-12)

Approved for use through 11/30/2014. OMB 0801-0025
U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(c).

I hereby appoint:



Practitioners associated with Customer Number:

30734

OR



Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used).

Name	Registration Number	Name	Registration Number

As attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned (and to the undersigned) according to the USPTO assignment records or assignments documents attached to this form in accordance with 37 CFR 3.73(c).

Please change the correspondence address for this application identified in the attached statement under 37 CFR 3.73(c) to:



The address associated with Customer Number:

30734

OR

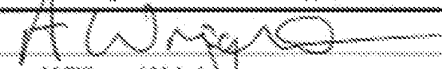
☐ Firm or Individual Name			
Address			
City	State	Zip	
Country			
Telephone	Email		

Assignee Name and Address: Andrew William Wright and Gillian Switalski
16 Monks Road
Wardworth, GL25 4RN
United Kingdom

A copy of this form, together with a statement under 37 CFR 3.73(c) (Form PTO/AIA/86 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(c) may be completed by one of the practitioners appointed in this form, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature		Date	8/12/2015
Name	Andrew William Wright	Telephone	+44 1344 844326
Title	Joint Assignee		

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. This information is required to obtain or retain a benefit by the public which is to be (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 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 FEED OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

STATEMENT UNDER 37 CFR 3.73(c)Applicant/Patent Owner: Andrew William WrightApplication No./Patent No.: 13/994,455 Filed/Issue Date: July 24, 2013Titled: Method and System for Logging Vehicle BehaviorAndrew William Wright and Gillian Switalski, a individuals

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):

1. ☒ The assignee of the entire right, title, and interest.
2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):
- ☐ The extent (by percentage) of its ownership interest is ____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.
- ☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (e.g., bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose **one** of options A or B below):

- A. ☒ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel 037121, Frame 0850, or for which a copy thereof is attached.
- B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

2. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

[Page 1 of 2]

This collection of information is required by 37 CFR 3.73(b). 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 1.11 and 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.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

STATEMENT UNDER 37 CFR 3.73(c)

3. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
 Reel _____, Frame _____, or for which a copy thereof is attached.

4. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
 Reel _____, Frame _____, or for which a copy thereof is attached.

5. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
 Reel _____, Frame _____, or for which a copy thereof is attached.

6. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
 Reel _____, Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☒ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/Mark H. Krietzman/

March 4, 2016

Signature

Date

Mark H. Krietzman

41,128

Printed or Typed Name

Title or Registration Number

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal				
Application Number:				
Filing Date:				
Title of Invention:		Method and System for Logging Vehicle Behavior		
First Named Inventor/Applicant Name:		Andrew William Wright		
Filer:		Mark Krietzman H/Kate Duttera		
Attorney Docket Number:		044228.010201		
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Utility filing Fee (Electronic filing)	4011	1	70	70
Utility Search Fee	2111	1	300	300
Utility Examination Fee	2311	1	360	360
Pages:				
Claims:				
Independent Claims in Excess of 3	2201	2	210	420
Miscellaneous-Filing:				
Petition:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1150

Electronic Acknowledgement Receipt	
EFS ID:	25112872
Application Number:	15061910
International Application Number:	
Confirmation Number:	4319
Title of Invention:	Method and System for Logging Vehicle Behavior
First Named Inventor/Applicant Name:	Andrew William Wright
Customer Number:	30734
Filer:	Mark Krietzman H/Kate Duttera
Filer Authorized By:	Mark Krietzman H
Attorney Docket Number:	044228.010201
Receipt Date:	04-MAR-2016
Filing Date:	
Time Stamp:	19:39:16
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$1150
RAM confirmation Number	6349
Deposit Account	502036
Authorized User	KRIETZMAN, MARK
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 CFR 1.16 (National application filing, search, and examination fees) Charge any Additional Fees required under 37 CFR 1.17 (Patent application and reexamination processing fees)	

Charge any Additional Fees required under 37 CFR 1.19 (Document supply fees)					
Charge any Additional Fees required under 37 CFR 1.20 (Post Issuance fees)					
Charge any Additional Fees required under 37 CFR 1.21 (Miscellaneous fees and charges)					
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Application Data Sheet	044228_010201_ADS.pdf	1823070 0bbb957125ab977020ada07aa8b99c6e3d773f3d	no	8
Warnings:					
Information:					
2		044228_010201_Application.pdf	259606 906cfc73f9d13ee8f33cd09722dfe90f989ec7c	yes	66
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Specification		1	59	
	Claims		60	65	
	Abstract		66	66	
Warnings:					
Information:					
3	Drawings-only black and white line drawings	044228_010201_Drawings.pdf	1145886 cf3e1160579a61c60cd6854243eb6a7d07dd06dc	no	25
Warnings:					
Information:					
4	Oath or Declaration filed	044228_010201_Declaration_Copy.pdf	134073 63625a178fd7a605bdcfc33895a1bb49da8016a1f	no	1
Warnings:					
Information:					
5	Power of Attorney	POA.pdf	244004 4c5a867f2ec807dfe64991efe8e2a98f32dd43f	no	1
Warnings:					
Information:					
6	Assignee showing of ownership per 37 CFR 3.73	373cStatement_AsFiled.PDF	123436 92c005b3bdd90c04487986b2ad6dc61a9581bb38	no	3

Warnings:					
Information:					
7	Fee Worksheet (SB06)	fee-info.pdf	36698	no	2
			fce6ee1aa05d33f40540ae5230042ff1b3599207		
Warnings:					
Information:					
Total Files Size (in bytes):				3766773	
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. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	044228.010201
		Application Number	
Title of Invention	Method and System for Logging Vehicle Behavior		
The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.			

Secrecy Order 37 CFR 5.2:

☐	Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)
--------------------------	---

Inventor Information:

Inventor	1 Remove			
Legal Name				
Prefix	Given Name	Middle Name	Family Name	Suffix
	Andrew	William	Wright	
Residence Information (Select One) US Residency • Non US Residency Active US Military Service				
City	Surrey	Country of Residence ⁱ	GB	
Mailing Address of Inventor:				
Address 1	Cedar Springs, Waverly Drive			
Address 2				
City	Virginia Water	State/Province		
Postal Code	GU25 4 PZ	Country ⁱ	GB	
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button.				Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).			
☐ An Address is being provided for the correspondence information of this application.			
Customer Number	30734		
Email Address	patents@bakerlaw.com	Add Email	Remove Email

Application Information:

Title of the Invention	Method and System for Logging Vehicle Behavior		
Attorney Docket Number	044228.010201	Small Entity Status Claimed	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	25	Suggested Figure for Publication (if any)	1

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	044228.010201
		Application Number	
Title of Invention	Method and System for Logging Vehicle Behavior		

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	☒ Customer Number	☐ US Patent Practitioner	☐ Limited Recognition (37 CFR 11.9)
Customer Number	80734		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending	Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Continuation of	13994455	2013-07-24

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	044228.010201
		Application Number	
Title of Invention	Method and System for Logging Vehicle Behavior		
Prior Application Status	Expired	Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
13994455	a 371 of international	PCT/GB11/52491	2011-12-15
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.			Add

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)ⁱ the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Access Code ^j (if applicable)	Remove
1118777.0	GB	2011-10-31		
Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Access Code ^j (if applicable)	Remove
1109759.9	GB	2011-06-10		
Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Access Code ^j (if applicable)	Remove
1101259.8	GB	2011-01-25		
Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Access Code ^j (if applicable)	Remove
1021292.6	GB	2010-12-15		
Additional Foreign Priority Data may be generated within this form by selecting the Add button.				Add

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013. NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	044228.010201
		Application Number	
Title of Invention	Method and System for Logging Vehicle Behavior		

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	044228.010201
		Application Number	
Title of Invention	Method and System for Logging Vehicle Behavior		

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.				
Applicant	1			Remove
If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.				
Clear				
☒ Assignee		Legal Representative under 35 U.S.C. 117		Joint Inventor
Person to whom the inventor is obligated to assign.		Person who shows sufficient proprietary interest		
If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:				
Name of the Deceased or Legally Incapacitated Inventor:				
If the Applicant is an Organization check here. ☐				
Prefix	Given Name	Middle Name	Family Name	Suffix
Mailing Address Information For Applicant:				
Address 1				
Address 2				
City		State/Province		
Country		Postal Code		
Phone Number		Fax Number		
Email Address				
Additional Applicant Data may be generated within this form by selecting the Add button. Add				

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	044228.010201
		Application Number	
Title of Invention	Method and System for Logging Vehicle Behavior		

Assignee 1				
Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.				
				Remove
If the Assignee or Non-Applicant Assignee is an Organization check here.				☐
Prefix	Given Name	Middle Name	Family Name	Suffix
Mailing Address Information For Assignee including Non-Applicant Assignee:				
Address 1				
Address 2				
City		State/Province		
Country i		Postal Code		
Phone Number		Fax Number		
Email Address				
Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.				Add

Signature:

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). **However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).**

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/Mark H. Krietzman/		Date (YYYY-MM-DD)	2016-03-04
First Name	Mark H.	Last Name	Krietzman	Registration Number
				41128
Additional Signature may be generated within this form by selecting the Add button.				Add

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	044228.010201
		Application Number	
Title of Invention	Method and System for Logging Vehicle Behavior		

This collection of information is required by 37 CFR 1.76. 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 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Method and System for Logging Vehicle Behavior

Cross-reference to Related Applications

This application is a Continuation of United States Utility Application 13/994,455 filed July 24, 2013, which is a United States National Stage entry of PCT/GB2011/052491, which claims the full Paris Convention benefit of and priority to GB 1021292.6 filed
5 December 15, 2010, GB 1101259.8 filed January 25, 2011, GB 1109759.9 filed 10 June 10, 2011, and GB 1118777.0, filed October 31, 2011, the contents of which are incorporated by this reference as if fully set forth herein in their entirety.

Field of the invention

10 The present invention relates to methods and systems for logging driving information associated with vehicle behaviour. Moreover, the present invention relates to a mobile device adapted for installation to a vehicle and configured to log such driving information, for example, video footage associated with how the vehicle is driven. Such driving information may subsequently be utilised to determine the cause of an event such as an accident, to
15 modify driver behaviour and/or to determine insurance premiums.

Background

Data logging devices are commonly installed on aircraft that log data about events associated with the behaviour of the aircraft and also the crew controlling the aircraft. Such

data logging devices are commonly termed "black boxes" and are very useful for determining the cause of problems that have effected the aircraft, especially when no other record of a significant event such as a crash exists.

Similar data logging devices exist for road vehicles, and can be used to realise similar advantages. Vehicle users as well as authorities can use such devices to determine the cause of traffic accidents or other vehicle-related events, whether these stem from a vehicle malfunction or driver negligence. For example, the data logged by these devices can be used as evidence for insurance claims and so potentially to determine insurance premiums.

Some of these data logging devices can be integrated with the car data network, and so may take inputs from sensors integrated with the vehicle, such as those measuring the speed of the vehicle. However, these can be difficult and costly to install. Others having their own internal sensor set are more readily retrofitted to a vehicle. Nonetheless, such data logging devices for road vehicles are less prevalent perhaps due to their unjustifiable expense. Accordingly the uptake of data logging devices that can be retrofitted to road vehicles, as are known in the art, has been minimal.

It is the object of the present invention to alleviate the above-mentioned problems, at least in part.

Summary of the invention

According to a first aspect of the present invention there is provided a mobile telecommunications device adapted for installation to a vehicle and configured to log driving information associated with the vehicle when driven, the mobile device comprising: a sensor set comprising at least one of an image sensor, an audio sensor, an accelerometer and a positioning module; a processor for processing sensor data from the sensor set to derive said

driving information; a memory for storing said derived driving information; and a wireless telecommunications module operable to download an application; the mobile device being arranged to execute the downloaded application to control the mobile device to: register the start of a driving period during which the mobile device is installed to the vehicle and the
 5 vehicle is being driven by a driver; process sensor data from the sensor set during the driving period to derive driving information associated with how the vehicle is driven; and store a selection of the driving information to the memory.

Advantageously, the use of a mobile telecommunication device enables a data logging device to be conveniently and inexpensively retrofitted to a vehicle. Mobile
 10 telecommunication devices such as “smart-phones” are becoming increasingly widespread, and these devices tend to have the requisite sensor sets to capture data concerning vehicle behaviour. Thus, a generic mobile telecommunication device already owned by a driver of the vehicle can be loaded with the application to provide such data logging functionality that would otherwise necessitate a dedicated black-box. Thus, the functionality of a black-box can
 15 be realised without additional expense.

Following on from this, it will be appreciated that the mobile device is ideally a portable mobile telecommunication device. Ideally, the mobile device is a hand-portable mobile device. Advantageously, the portability permits the mobile device to be conveniently fitted to and removed from the vehicle.

20 Furthermore, such a mobile telecommunication device presents additional advantages over known dedicated black-box systems as the data logging functionality of the mobile telecommunication device can be continually refined. This can be achieved without physically upgrading the hardware of the device, and also without significant user intervention. Specifically, the application may be arranged to determine whether a software

update exists and if so, control the mobile device to download at least portions of an improved version of the application. Conveniently, downloading may be via the wireless telecommunication module. Said downloading may be automatic, or may be user-confirmed. For the avoidance of doubt, the application will typically be stored on a portion of the

5 memory of the mobile device and executed therefrom, as is known in the art. Also, it will be appreciated that the application, or portion thereof may be downloaded via the wireless telecommunication module and/or via an intermediary device. For example the application may be side-loaded to the mobile device from an intermediary computing device.

The application may be sourced from an application store and/or content provider.

10 For example, the content provider may comprise the Apple[®] Appstore[®]. The content provider may comprise a cloud computing provider.

It will be appreciated that the use of such a generic mobile device in this context may be counter-intuitive to a person skilled in the art - such generic devices are not designed to withstand events such as catastrophic crashes. Furthermore, such generic devices are usually

15 not necessarily configured to appropriately detect conditions that may need to be recorded. Such devices are usually kept in a user's pocket or bag, and so are not best placed to generate sensor data associated with the behaviour of a vehicle. However, the inventor of the present invention has realised that such a mobile device that is adapted for installation to the vehicle can overcome such drawbacks and fulfil a role similar to a black box. To this end, the mobile

20 telecommunication device may comprise an adapter arranged to hold the device securely to the vehicle.

Advantageously, as well as protecting the device from damage, the adapter improves the suitability and reliability of the sensor data and so the driving information associated with when and/or how the vehicle is being driven. For example, if the sensor set comprises an

accelerometer, the acceleration of the vehicle can be more accurately measured due to the mobile device being firmly attached to the vehicle. Similarly, if the sensor set comprises an image sensor, for example, for capturing video footage of the road ahead, better footage can be obtained as the mobile device can be held in the correct position and orientation relative to the vehicle. In particular, the mobile device may be positioned by the adapter so that its image sensor views the road ahead through a windshield of the vehicle.

As mentioned, the device is arranged to log driving information associated with the vehicle, when that vehicle is being driven. This is realised by registering the start of the driving period during which the mobile device is installed to the vehicle and the vehicle is being driven by the driver. Advantageously, this prevents driving information from being needlessly recorded. As will be appreciated the mobile device has only a finite storage capacity and so registering the start of the driving period is useful for minimising the unnecessary usage of memory. In particular, where the mobile device comprises an image sensor, and the sensor data comprises a sequence of images (e.g. a video) the storage space can be very quickly filled by the memory.

To this end, it is preferred that when the application is executed, it controls the mobile device to register the start of a driving period in response to an initialisation input. The initialisation input may comprise a user input - for example, the user manually executing the application on the mobile device. The initialisation input may also or instead be generated automatically in response to the mobile device being installed to the vehicle and/or the vehicle being driven. The initialisation input may be generated automatically in response to the sensor data having predetermined values. For example, if the sensor data reflects a detected speed above a predetermined threshold – for example, 20 kilometres per hour – then this can be used to trigger the start of the driving period. Similarly, if the sensor data reflects

that the mobile device is held securely to the vehicle in a predetermined position (for example, via the adapter) this can also be used to trigger the start of the driving period. To this end, the adapter and/or the mobile device may comprise a registration module configured to register the installation of the mobile device to the vehicle and/or the adapter. The

5 registration module may comprise a proximity sensor to detect the proximity of the mobile device to the vehicle. The registration module may comprise a NFC (near field communication) device. The registration module may be arranged to determine a match between the location of the mobile device and the location of the vehicle. The match may be performed by receiving and comparing a first positioning input associated with the position

10 of the vehicle and a second positioning input associated with the position of the mobile device. The registration module and/or adapter may be a smart holster.

Preferably, the executed application controls the mobile device to manage voice-calls incoming to the mobile device during a driving period. For example, said voice-call management may comprise temporarily disabling and/or diverting voice-calls incoming to

15 the mobile device during a driving period. Advantageously, this safety feature discourages users from making or receiving phone calls whilst driving. It will be appreciated that a driver is less able to control a vehicle effectively whilst also manipulating a mobile device, and in many countries doing so is illegal. However, the provision of a 'hands-free' mode or accessory – as are well known in the art - may obviate the need for a user to manipulate the

20 mobile device. Accordingly, the executed application may be arranged to control the mobile device to selectively disable and/or divert voice-calls incoming to the mobile device during a driving period, in dependence on the detection of a hands-free accessory or hands-free mode enabled on the mobile device.

Furthermore, the executed application may be arranged to control the mobile device to enable a hands-free mode of operation on detection of a driving period. For example, the enabled hands-free mode of operation may comprise enabling voice-activated commands. In light of this, it is preferred that the adapter is configured to hold the mobile device in a way
 5 that facilitates reception of voice commands from the user. In particular, the mobile device may be held in a position relative to the user to permit clear reception of the users voice. Typically, this position is about the dashboard in a vehicle such as car or van. Furthermore, the adapter is configured with an opening through which an audio sensor of the mobile device is able to receive the user's voice.

10 Also, even though a drivers control of a vehicle may be affected by manipulating the mobile device, under certain circumstances, this may not be objectionable – for example, when the vehicle is stationary. Accordingly, the executed application may be arranged to control the mobile device to selectively disable and/or divert voice-calls incoming to the mobile device during a driving period, in dependence on the driving information – for
 15 example, the speed and location of the vehicle.

Furthermore, it will be appreciated that the driver may not be the only user within the vehicle, and so disabling functions of the mobile device may not be appropriate under all circumstances, as a passenger of the vehicle may want to use the mobile device whilst the driver is driving. Under these circumstances, the executed application is arranged to control
 20 the mobile device to register the presence of a non-driver (for example, via image recognition, or entry of an unlock code) and unlock, or retain the original functionality of the mobile device. Furthermore, the executed application may be arranged to run in the background. Accordingly, the mobile device may be used for other purposes, such as making or receiving a telephone call.

It is advantageous to store only selected driving information for the purpose of logging how a vehicle is being driven during the driving period. Whilst it may be possible to sample and process sensor data at a relatively high rate (i.e. many times a second), continually storing driving information derived from that sensor data at such a high rate can use up a lot of storage space on the mobile device, the majority of which is likely to be redundant. Therefore, by being selective about the driving information that is stored, storage utilisation can be made more efficient.

In particular, the executed application may control the mobile device to store a summary of the driving period. The summary may comprise compressed and/or summarised driving information. For example, the sensor data can be processed at a first sampling rate and then down-sampled to a fraction of the first sampling rate for storage as driving information. Put another way, the mobile device can be controlled by the executed application to down-sample sensor data from a first sampling rate to a second sampling and store the sensor data as driving information at said second sampling rate. Advantageously, this retains a snapshot of when and/or how the vehicle is being driven, but with fewer data points, and so requiring less storage space.

Nonetheless, under certain circumstances, it is more useful to retain information at higher or the highest possible sampling rates. In particular, it is more important to have detailed information associated with the behaviour of a vehicle during a crash than when the vehicle is being driven normally.

Accordingly, the executed application may be arranged to control the mobile device to detect the occurrence of a predetermined event of significance (such as a crash) and in response store driving information associated with that event to the memory. Preferably, said driving information associated with that event comprises driving information in the lead up to

and immediately following the event. In particular, detailed driving information in the lead up to, and immediately following a predetermined event of significance is preferably stored. It will be understood that the driving information associated with the detected event may be transmitted via the wireless telecommunication module in addition to, or instead of storing
5 said data. Said transmitted driving information may be transmitted to a remote data logging system.

To this end the mobile device may comprise an event detector for detecting the occurrence of an event.

Preferably, the event detector is arranged to detect the occurrence of a predetermined
10 event by correlating data, such as sensor data, against an event indication model. The application may comprise the event indication model.

Preferably, the event indication model comprises a set of predetermined data values corresponding to a predetermined event. Accordingly, the event detector is arranged to compare the set of predetermined data values against corresponding sensor data to determine
15 whether the predetermined event has occurred.

For example, the event indication model may indicate that a serious crash has occurred if values returned by an accelerometer sensor exceed predetermined data values of the event indication model, thereby representing a sustained vehicle deceleration beyond a threshold level. Following on from this, it will be appreciated that detection of an event may
20 be dependent on matching a sequence of data values that have occurred over time. Moreover, the event indication model may comprise a sequence of predetermined data values, the sequence being associated by a function of time. Thus, the event detector may be arranged to compare the sequence of predetermined data values against corresponding sensor data that have been generated over a given time period. Put another way, the event detector and event

indication model are arranged to indicate the occurrence of an event in dependence on the correlation between a set of predetermined data values occurring over time. Thus, a set of values returned from sensor data over a period of time are compared against a corresponding sequence of predetermined data values of the event indication model. Typically, this is to

5 determine a rate of change of variables associated with a sensor set.

It will be understood that an event indication model may comprise a plurality of sets of predetermined data values, each set corresponding to different sensor data. For example, an event indication model associated with a serious accident event may contain data values corresponding to both the deceleration of the vehicle, and the orientation of the vehicle. Thus,

10 if a vehicle is involved in a serious impact, and overturns, this is represented by the model, and so can be detected by the event detector.

Preferably, the event indication model comprises a pattern of predetermined data values. Preferably, the event detector is arranged to detect the occurrence of an event by carrying out pattern recognition by matching sensor data values to the pattern of

15 predetermined data values of the event indication model. Preferably, there are a plurality of event indication models. Each event indication model may be associated with a separate predetermined event.

Preferably, the executed application may be arranged to control the mobile device to process sensor data from the sensor set during a plurality of driving periods to derive driving

20 information associated with when and/or how the vehicle is driven for each of the driving periods. Preferably, sensor data processed during a first set of driving periods define a benchmark against which sensor data is compared during subsequent sets of driving periods. In particular, the executed application may be arranged to control the mobile to modify one or more event indication models in response to the benchmark. Advantageously, such a

benchmark ensures that the event indication models may be tailored to the standard behaviour of a particular vehicle. As will be appreciated, different sensor types, mobile devices, mounting positions, vehicles, drivers and road conditions may generate different sets of sensor data for driving behaviour that is considered standard or safe. Accordingly, the

5 benchmark allows the mobile device to account for variable driving conditions.

Preferably, a plurality of benchmarks may be defined. A benchmark may be defined for each driver. A benchmark may be defined for each vehicle to which the mobile device is to be installed. Ideally, a benchmark is defined for each driver-vehicle pair. To this end, the mobile device may be arranged to receive an input to specify a driver, a vehicle or a driver-

10 vehicle pair. Advantageously, this ensures that different drivers and vehicles do not disrupt the accurate event detecting capabilities of the event detector.

Once a predetermined event has been detected by the event detector, it is desirable to take an appropriate action in response to that detected event. Accordingly, the executed application may be arranged to control the mobile device to take at least one predetermined

15 action in response to a detected event. The action taken may comprise transmitting driving information and/or sensor data, via the wireless telecommunication module of the mobile device, to a remote system. Advantageously, this enables a remote system to be notified of the occurrence of a particular event, and the details associated with that event. For example, the remote system may be arranged to deploy emergency services based on a transmitted

20 notification concerning the occurrence of a crash, and also the location of the mobile device (and so the vehicle) are also included in the transmitted information. A further advantage of transmitting driving information and/or sensor data to a remote system is that such data then does not need to be stored on or processed by the mobile device. Thus, this can free the storage space on the mobile device, and also allow the processor of the mobile device to

carry out other tasks. A remote system may comprise or be interfaced with an insurance company database.

A further advantage associated with sending driving information to a remote system is that the driving information can be assessed remotely. This assessment can be performed automatically or manually - either way it advantageously removes the processing burden from the mobile device. Alternatively, if transmission bandwidths are small, the processing can be executed automatically on the processing device. In this case, the use of virtual neural networks can be used to determine whether the driving information represents acceptable or unacceptable driving patterns.

The action taken may comprise storing data captured at a higher (or the highest possible) sampling rate than when an event is not detected. Thus, as described above, this may involve preventing the down-sampling of sensor data. Furthermore, the action taken may comprise protecting said driving information from being overwritten.

The action taken may comprise providing feedback to a user to indicate that an event has been detected. Preferably, the mobile device is configured to receive a user interaction to confirm or deny whether the detected event has actually occurred following said feedback. Advantageously, such user feedback can be used to modify event indication models thereby to refine the effectiveness of the event detector. The mobile device may comprise a speaker. Accordingly, such feedback may be provided via an audio prompt. The mobile device may comprise a display screen. Accordingly, such feedback may be provided via a visual prompt. The feedback may comprise notifying a user that a further action has been scheduled, and will be taken within a predetermined period. For example, the feedback may indicate to a user that an event such as a serious crash has been detected, and so the next action to be taken will be to contact emergency services within 10 seconds. Preferably, the feedback includes a

prompt to receive a user input. For example, the prompt may be arranged to receive a user input to cancel a subsequently scheduled action. Advantageously, this prevents actions being taken needlessly as a result of an incorrect determination of an event.

The feedback may provide reassurance and/or guidance to a user. For example, a user
 5 may be provided with an important checklist of things to do following an accident or incident. For example, the user may be guided to use a camera (image sensor) on the mobile device to take photographs of the vehicles involved in the incident, including the number plates of those vehicles. The user may be guided to use a text input device on the mobile device to note the name, address, insurance details etc of third parties involved in incident.

10 The action taken may comprise communicating to a remote system associated with an insurance company that an incident has been detected (e.g. via a low bandwidth data connection or via text message). If appropriate – or in response to a request from a communication to the mobile device from the remote system – the action taken may comprise transmitting all or selected portions of the driving information associated with the
 15 detected event.

Preferably, the executed application is arranged to control the mobile device to prioritise essential communications, such as calls to the emergency services.

Preferably, the memory comprises a long term memory for persistently storing driving information and/or sensor data. Preferably the memory comprises a buffer. The
 20 buffer may comprise a short term memory for transiently storing driving information and/or sensor data. Preferably, the short term memory is arranged to receive driving information and/or sensor data at a higher update rate than the long term memory. Preferably, the long term memory has a larger capacity than the short term memory.

Preferably, the executed application controls the mobile device to write driving information and/or sensor data to the short term memory at a predetermined update rate during the driving period. Ideally, the driving information and/or sensor data is written to the short term memory in a predetermined sequence, ideally a chronological sequence.

- 5 Preferably, the executed application controls the mobile device to overwrite driving information and/or sensor data previously written to the short term memory. Advantageously, this ensures that recording of sensor data and/or driving information, especially data that is recorded at a relatively high update rate, is not prevented during the driving period due to the short term memory becoming full.

- 10 Preferably, the driving information and/or sensor data is overwritten in accordance with the predetermined sequence. Advantageously, this can ensure that the most relevant, up-to-date data is retained in the short term memory.

- Preferably, the action taken in response to a detected event comprises transferring data from the short term memory to the long term memory. Advantageously, this can ensure
15 that the most recent information associated with an event is persistently stored in the long term memory, and is not overwritten.

- Preferably, the sensor set comprises an accelerometer for detecting the acceleration of the mobile device. Accordingly, the corresponding sensor data may comprise acceleration data generated by the accelerometer. The accelerometer may be a single axis or dual axis
20 accelerometer. However, it is preferable that the accelerometer is a three-axis accelerometer so that movement of the vehicle may be determined in three-dimensional space. Furthermore, as the mobile device may be mounted by a user in one of a number of different orientations relative to the vehicle, a three-axis accelerometer ensures that acceleration along the axis aligned with the general forward movement of the vehicle may be effectively detected. This

is particularly important to determine an event such as heavy braking of the vehicle and/or a crash.

Preferably, the sensor set comprises an image sensor such as a camera. Accordingly, the corresponding sensor data may comprise images and/or a sequence of images generated
 5 from the image sensor. Said sequence of images may be processed and/or stored in the form of a video. Advantageously, this can improve the space utilisation of the sequence of images. Preferably, the mobile device is arranged to receive a user input to store a user-selected image or sequence of images to the memory. The image sensor data may be processed to determine safety information and feedback said safety information to the driver. For
 10 example, the mobile device may be controlled to determine the proximity of the mobile device to other vehicles. Said determination may be via comparing the apparent size of the number plate of other vehicles in an image with a known size of a standard number-plate, and from that the distance to those other vehicles. Thus, the mobile device can make a determination that another vehicle is too close, and issue a warning to the driver to slow
 15 down to avoid a collision. Similarly, images of the road ahead may be processed to determine whether a vehicle is drifting out of lane (e.g. because the driver is falling asleep). In response to such a determination, an alert can be issued. Similarly, images of road signs may be processed to assess driver behaviour.

It will be appreciated that the mobile device may comprise a plurality of image
 20 sensors. For example, the mobile device may have a forward-facing camera and a rear-facing camera. Accordingly, it may be possible to view images of the road ahead, external to the vehicle, and also from inside the vehicle. In particular, the mobile device may be arranged to capture images or a sequence of images of the driver. Images of the driver may be processed to make a safety determination. For example, the images may be processed to

detect whether the driver is falling asleep. In particular, a blink rate of the driver may be detected by processing the image data. Similarly, a determination may be made whether the driver has their eyes closed. In response to such a determination that a driver is falling asleep, the mobile device may be arranged to issue an alert so as to wake the driver.

5 Preferably, the sensor set comprises an audio sensor such as a microphone.

Accordingly, the corresponding sensor data may comprise audio data.

Advantageously, an image sensor and/or an audio sensor can provide an important record of an event such as a crash.

10 Preferably, the sensor set comprises a positioning module arranged to determine the position of the mobile device. The positioning module may comprise a GPS module. The positioning module may be arranged to utilise the wireless telecommunication module to self-localise, for example by determining a position relative to one or more mobile telecommunication cell towers. Advantageously, the positioning module can allow the mobile device to determine its position (and so the position of the vehicle) over time.

15 Accordingly, the positioning module can thus determine the speed of the mobile device and vehicle. Thus, the corresponding sensor data may comprise latitude, longitude, elevation, speed and other data obtainable from positioning modules such as GPS modules as is known in the art.

20 Preferably, the sensor set comprises an orientation sensor for determining the orientation of the mobile device. Said orientation sensor may comprise an electronic compass for determining a bearing, and so the direction in which the mobile device is facing.

Accordingly, the corresponding sensor data may comprise orientation and bearing data.

Advantageously, such data can be used to augment the data of the positioning module.

Furthermore, the executed application may be arranged to use the data from the orientation

sensor to determine whether the mobile device has been fitted to vehicle, and whether the mobile device has been fitted in the correct orientation. Advantageously, the data from the orientation sensor may also be used to determine whether a significant event has occurred, such as the vehicle overturning.

5 Preferably, the sensor set comprises a user-input device arranged to receive an input from a user. The user input device may comprise at least one of buttons and a touch-sensitive display screen. Advantageously, this allows a user to input data to the mobile device.

 Preferably, the mobile device comprises a timer. Preferably, the executed application is arranged to control the mobile device to record sensor data and/or driving information
10 against time as determined by the timer. Accordingly, the timer can be used to time-synchronise sensor data and/or driving information.

 Preferably, the executed application is arranged to encrypt the driving information stored on the memory. Advantageously, this reduces the possibility of said driving information being modified without authorisation. This is an important consideration when
15 such driving data may be used as evidence, for example, when determining the cause of an accident.

 Preferably, the mobile device is arranged to interface with an external device to receive external driving information from said external device. It will be appreciated that the sensor set onboard the mobile device may be supplemented by a sensor set external to the
20 mobile device. For example, the external device may be an engine management system of the vehicle and/or the external device may be arranged to connect to the on-car data network of the vehicle. Thus, the external device may have access to information associated with the behaviour of the vehicle (for example, the speed of the vehicle, how much the brake pedal is being pressed, etc). Such driving information can be processed and/or stored by the mobile

device under control of the executed application in a manner similar to driving information derived from sensor data internal to the mobile device.

Preferably, the mobile device is arranged to interface with an external device wirelessly, for example via a Bluetooth® connection. Advantageously, this removes the need
 5 for the mobile device to be physically connected to the external device. As will be appreciated, following a driving period, a user may want to leave the vehicle and so take a personal mobile telecommunication device with them, and so a wireless interface with such an external device obviates the inconvenience of physically detaching and then subsequently re-attaching the mobile device.

10 Preferably, the mobile device is further controlled by the application to determine a unique identifier associated with the mobile device and retrieve from the memory and transmit via the wireless telecommunication module to a remote system said driving information paired with said unique identifier.

Advantageously, by pairing an identifier uniquely associated with the mobile device
 15 enables the remote system to unambiguously determine the source of the driving information. Accordingly, said driving information can be matched to a particular driver and/or vehicle. This is particularly useful when assessing a risk profile of said driver.

Preferably, the mobile device is controlled by the executed application to process the driving information to generate a driving score. The driving information may comprise the
 20 driving score.

Preferably, the mobile device comprises a display screen. Preferably, the display screen is touch-sensitive. Advantageously, the display screen may thereby be user-interactable. Preferably, the mobile device comprises a graphical user interface (GUI). The graphical user interface comprise user-interactable artefacts such as buttons. Preferably, the

user-interactable artefacts may be displayed on the screen and receive a user input for selection or control of those artefacts. The mobile device may be controlled to selectively hide those artefacts in dependence on the state of the mobile device.

Preferably, the mobile device is controlled by the application to provide feedback
 5 about the driving information and/or values of the sensor data. Ideally, such feedback is via the display screen. For example, a detected speed may be displayed, a time elapsed may be displayed, a bearing/heading may be displayed, a detected position may be displayed and/or a detected image or sequence of images may be displayed (e.g. via a video feed).

According to a second aspect of the present invention there is provided a mobile
 10 telecommunications device adapted for installation to a vehicle and configured to log driving information associated with the vehicle when driven, the mobile device comprising: a sensor set comprising at least one of an image sensor, an audio sensor, an accelerometer and a positioning module; a processor for processing sensor data from at least the sensor set to derive said driving information; a memory for storing said derived driving information; a
 15 wireless telecommunications module operable to download a controlling application; and a registration means for registering the start of a driving period during which the mobile device is installed to the vehicle and the vehicle is being driven by a driver; wherein, the processor is arranged to process sensor data from the sensor set during the driving period to derive driving information associated with when and/or how the vehicle is driven and store a selection of
 20 the driving information to the memory.

According to a third aspect of the present invention there is provided a mobile telecommunications device adapted for installation to a vehicle and configured to log driving information associated with the vehicle when driven, the mobile device comprising: a sensor interface arranged to receive sensor data from a sensor set; a processor for processing the

sensor data to derive said driving information; a memory for storing said derived driving information; a wireless telecommunications module operable to download a controlling application; and a registration means for registering the start of a driving period during which the mobile device is installed to the vehicle and the vehicle is being driven by a driver;

- 5 wherein, the processor is arranged to process sensor data from the sensor set during the driving period to derive driving information associated with when and/or how the vehicle is driven and store a selection of the driving information to the memory.

Preferably, the sensor interface is arranged to receive sensor data from a sensor set external to the mobile device. Preferably, the sensor interface is arranged to interface with an
10 external device as described in relation to the first aspect of the present invention.

Advantageously, this enables a mobile device to utilise a richer or better equipped sensor set than that local to the mobile device.

According to a fourth aspect of the present invention there is provided a mobile device adapted for installation to a vehicle and configured to log driving information
15 associated with the vehicle when driven. Preferably, the mobile device comprises a sensor interface arranged to receive sensor data from an external sensor set. The mobile device may comprise an internal sensor set. Preferably, the mobile device comprises a processor for processing the sensor data to derive said driving information. Preferably, the mobile device comprises a memory for storing said derived driving information. Preferably, the mobile
20 device is a mobile telecommunication device, comprising a wireless telecommunications module. Preferably, the wireless telecommunications module is operable to download an application. Preferably, the mobile device comprises a registration means for registering the start of a driving period during which the mobile device is installed to the vehicle and the vehicle is being driven by a driver. Preferably, the processor is arranged to process sensor

data from the sensor set during the driving period to derive driving information associated with when and/or how the vehicle is driven. Preferably, the mobile device is arranged to store a selection of the driving information to the memory. Preferably, the mobile device is arranged to transmit a selection of the driving information via the wireless

- 5 telecommunication module. The mobile device may be arranged to transmit a selection of the driving information via the wireless telecommunication module to a remote system such as a remote data-logging system. Advantageously, transmitting (rather than storing) selected driving information prevents storage space local to the mobile device being used up.

- According to a fifth aspect of the present invention there is provided a method of
- 10 logging driving information associated with a vehicle when driven, the method comprising: adapting and installing a mobile device to the vehicle, the mobile device comprising a memory; registering the start of a driving period during which the mobile device is installed to the vehicle and the vehicle is being driven by a driver; processing sensor data from a sensor set during the driving period to derive driving information associated with when
- 15 and/or how the vehicle is driven; and storing a selection of the driving information to the memory of the mobile device.

- According to a sixth aspect of the present invention there is provided a data-logging system for logging driving information comprising: a database for storing a plurality of accounts, each account having a unique identifier and the database being arranged to store
- 20 driving information associated with at least one of a vehicle and a driver; a communications interface arranged to communicate with a remote mobile device, and receive therefrom: a unique identifier for association of the mobile device with a corresponding one of the plurality of accounts; and driving information to be logged to that corresponding account.

The remote mobile device may be a mobile device in accordance with one of the first to fourth aspects of the present invention.

Preferably, the driving information comprises a driving score. Preferably, the driving information comprises sensor data captured and processed by the mobile device during a driving period during which the mobile device is installed to a vehicle being driven by a driver.

Preferably, the system is arranged to process the driving information logged to the corresponding account to generate a driving score. The driving score may be used to determine a risk profile for at least one of the vehicle and driver. The driving score may be used to define an insurance premium associated with the account.

Preferably, the system is further arranged to communicate to a mobile device an insurance offer generated in response to the driving information received from the mobile device. The data logging system may be further arranged to receive from the mobile device a user-acceptance of the insurance offer.

The mobile device may be arranged to generate an insurance offer in response to a predetermined set of conditions being met. For example, driving information over a plurality of driving period adhering to predetermined models. Such models may comprise safe driving parameters and/or thresholds.

For brevity, it will be understood that features, functions and advantages of different aspects of the present invention may be combined or substituted where context allows. For example, features, functions or advantages of the mobile device described in relation to the first to fourth aspects of the present invention may be provided as method steps in the method of logging driving information according to the fifth aspect of the present invention.

Brief Description of the Drawings

In order that the invention may be more readily understood, reference will now be
 5 made, by way of example, to the accompanying drawings in which:

Figure 1 is a schematic illustration of a system within which the mobile device of
 various embodiments of the present invention may be used;

Figure 2 is an illustration of the automobile of Figure 1 configured with a mobile
 device in accordance various embodiments of the present invention;

10 Figure 3 is a schematic illustration of the functional components of the mobile device
 of Figure 2;

Figure 4a is a process flow chart, illustrating method steps executable by the mobile
 device of Figures 2 and 3;

Figure 4b is a more detailed process flow chart, providing an example of how a
 15 driving incident or event may be detected in accordance with embodiments of the present
 invention; and

Figures 5 to 24 illustrate a graphical user interface of the mobile device according to
 Figures 1 to 4b.

Detailed Description of the Embodiments

Specific embodiments are now described with reference to the appended figures.

A preferred embodiment of the present invention relates to a mobile
 telecommunications device for recording events associated with a vehicle, such as a car. In
 particular, the mobile telecommunications device is loaded with an application – a ‘mobile

app’ – which is arranged to record and document the events surrounding an incident involving the vehicle (a ‘driving incident’), such as a vehicle collision. The mobile application may be referred to as the ‘Witness’ application in the ensuing description.

Figure 1 illustrates a system 1 within which a vehicle, such as an automobile 3
 5 configured with a mobile telecommunications device executing the Witness application, may communicate with one or more remotely located devices or systems. Such devices may relate to one or more servers, such as an insurance server 5, an emergency services server 7, a content provider server 9, and a personal computer 11. Communication between the automobile 3 and the one or more remotely located devices 5, 7, 9, 11 may be effected via a
 10 shared communication network 13. The shared communication network may relate to a wide area network (WAN) such as the Internet, and may also comprise telecommunications networks. For example, the mobile telecommunications device of the present embodiments may be arranged to communicate with any one of the remotely located devices 5, 7, 9, 11 via a mobile telecommunications base station 15, which is coupled to the shared mobile
 15 telecommunications network 13.

A main purpose of the mobile telecommunications device, when arranged within a vehicle in motion, such as the illustrated automobile 3, is to monitor and process sensor data captured by the mobile device, to derive driving information associated with the moving automobile 3. As mentioned previously, this driving information is subsequently used by the
 20 mobile device to determine if a driving incident or event has occurred. The term “driving incident” as used within the present context may relate to an event such as a collision, a near-miss, dangerous driving, erratic driving or similar. Similarly, the driving information may be used as a means for monitoring a driver’s driving performance, and determining a driving characteristic, or user profile for the subject driver. In other words, the sensor data and/or the

driving information may be used to determine for example, if the driver is a cautious driver, or a reckless driver. This information may be used, for example by an insurance provider, to conduct a risk assessment and to tailor an insurance premium to the subject driver on the basis of a determined driving characteristic. Further details of this alternative embodiment are
5 described below.

The mobile telecommunication device's functionality is provided by the Witness application, which is installed in the device's local non-volatile storage, and which is executed by the device's native processor. The application may be downloaded to the mobile device via the shared communications network 13 and telephone base station 15, from the
10 content provider server 9.

In use (once the application has been configured for execution on the mobile telecommunications device), when a driving incident has been detected by the mobile telecommunications device, data, comprising one or more of mobile device sensor data, derived driving information, and captured image data may be automatically forwarded to one
15 or more of the remotely located devices 5, 7, 9, 11. For example, the mobile device may be configured such that when a driving incident is detected, such as a collision involving an automobile 3, driving information (including image data captured by the mobile device) derived from the sensor data is automatically forwarded to the insurance server 5, via the base station 15 and shared communications network 13. In this way, data relating to the
20 driving incident (a collision in this example), is automatically forwarded to the automobile user's insurance provider, for use in claim settlement, and/or to determine culpability.

Similarly, once a driving incident has been detected, data may also be automatically forwarded to the emergency services server 7. For example, such data may comprise the position information of the automobile 3, along with an automated S.O.S. message requesting

assistance from the emergency services. Forwarded data may also comprise sensor data, and any relevant derived driving information, such as speed of impact, the g-forces the vehicle was subjected to during the collision, or any other information wherefrom the severity of the collision may be determined, and which may be used to assist the emergency services in

5 coordinating the appropriate level of response.

Optionally, an electronic message may be sent to a personal contact preselected by the user. For example, an automated message, such as an e-mail, may be forwarded to the PC 11 of the user nominated personal contact, informing the personal contact that the user of the vehicle 3 has been involved in a driving incident. Similarly, and due to the mobile device's

10 telecommunications functionality, an electronic text message, such as an SMS (Short Message Service) may be forwarded to the telephone of the user selected personal contact, informing the contact of the driving incident. The mobile device may be equally be arranged to communicate with a personal contact via any known electronic messaging service and/or instant messaging service too. For example, via Apple's[®] iMessage, or RIM's[®] BlackBerry

15 Messenger (BBM) service.

This functionality of forwarding a message to a nominated contact, may also be of particular benefit for managing large fleets of vehicles. For example, a car hire service. In this way, if any of the vehicles comprised in the fleet are involved in a driving incident, the car hire service may be automatically notified of the identity of the specific vehicle involved

20 in the driving incident. In such embodiments, the nominated personal contact would be preselected by the vehicle fleet manager. The option of providing a second user selected personal contact is also envisaged. In this way, a message may be forwarded to both the car hire service for example, and to the driver's selected personal contact.

In preferred embodiments the mobile telecommunications device relates to a mobile telephone having native processing functionality, and preferably relates to a smartphone.

Preferably, the mobile telephone comprises a camera arranged to enable image capture, and preferably arranged to enable a sequence of images to be captured taken in temporal

5 succession. In other words, in preferred embodiments the mobile telephone comprises a camera configured to enable video footage of a sequence of events to be captured.

Alternatively, the mobile telecommunications device may relate to a PDA, a notepad such as an iPad[®], or any other mobile device comprising local processing means and means for communicating with a telecommunications network.

10 Figure 2 provides a more detailed view of the automobile 3 of Figure 1, and illustrates a preferred arrangement of the mobile telecommunications device 17 within the automobile 3. In the illustrated embodiment, the mobile telecommunications device 17 relates to a smartphone configured with an image capture device, such as a camera. Preferably, the device 17 is arranged within the vehicle, such that the camera has a clear line of sight of the
15 road in the principle direction of travel of the automobile 3. For example, the device 17 may be attached to the windshield 19 of the automobile 3 in an adapter 21. The adapter 21 may comprise a flexible telescopic arm, configured with a suction cup at one end for affixing the adapter to the windshield 19, and a dock arranged at the opposite end for securely holding the telecommunications device 17 in place. The telescopic arm enables the position of the device
20 17 to be varied, such that a clear line of sight in the direction of travel may be obtained.

The details of the adapter 21 are irrelevant for present purposes, with the exception that it must enable a clear line of sight in the principle direction of travel of the vehicle to be obtained, and it must firmly affix the mobile to the vehicle. Affixing the mobile telecommunications device 17 to the automobile 3, ensures that the mobile device 17 is able

to accurately capture the automobile's state of motion. By principle direction of travel is intended the main direction of travel of the vehicle when operated in a conventional way, indicated by the arrow **A** in Figure 2. In other words, the forward direction of travel. The skilled reader will appreciate that whilst most vehicles, such as an automobile, may have more than one direction of travel (e.g. travelling backwards when in reverse gear), the majority of vehicles have a primary direction of travel, which is the intended direction of travel for any transit of substantial length and/or distance. Arranging the telecommunications device 17 relative to the direction of principal travel, ensures that the camera (not shown) of the telecommunications device 17 is well placed to capture any image data which may be pertinent to a subsequently detected driving incident, such as a collision.

Figure 3 is a schematic of the modular components of the mobile telecommunications device 17 of Figure 2. Preferably the mobile telecommunications device 17 comprises: an image capture module 21, an accelerometer 23, a GPS receiver 25, an audio capture module 27, a communications module 29, a processor module 31 and a storage module 33. The image capture module 21, accelerometer 23, GPS receiver 25, and audio capture module 27 form a sensor set and are generically referred to as data capture modules in the ensuing description, and are differentiated from the communications module 29, processor module 31 and storage module 33, in that they comprise sensors for sampling physical data.

This sampled physical data, which is also referred to as sensor data, is subsequently processed by the processor module 31 and stored in the storage module 33.

The image capture module 21 may relate to any image capture device, such as an integrated camera commonly found in smartphones or similar mobile devices. As mentioned previously, the image capture module 21 is preferably configured to capture a plurality of images taken in temporal succession, such as provided by a video camera.

The accelerometer 23 is arranged to provide information regarding the motion of the automobile 3 along all three dimensional axes. For example, the accelerometer 23 provides information regarding the pitch, yaw and roll of the automobile 3. Sensor data captured from the accelerometer 23 may be used to determine the g-forces the automobile has been

5 subjected to. This is particularly useful in determining the severity of a collision. In general, the greater the g-forces experienced in a collision, the greater the risk of serious injury to the passengers of the vehicle. This information may assist the emergency services in forming an initial assessment of the severity of a collision. Furthermore, this type of data may also assist the emergency services and/or insurance provider to obtain a better understanding of the

10 driving incident. For example, in the event of a collision, this data may assist the emergency services and/or insurance provider to obtain a better understanding of how the collision occurred. This information may subsequently be used for dispute resolution, and/or for determining culpability.

The GPS receiver 25 is arranged to provide location information, such as positional

15 coordinates, and can also provide velocity information. When combined with the accelerometer sensor data, the GPS receiver data can be used to provide a very accurate model of a driving incident, such as a collision. In particular, the GPS sensor data provides velocity data, such as the velocity of impact. The velocity data enables one to determine if a vehicle was being driven at speeds greater than the legally permitted maximum speeds.

20 The audio capture module 27 provides means, such as a microphone, for recording audio data, which might be generated by a driving incident. This includes any sounds generated externally to the vehicle, for example the sound of an impact, or the sound of the crumple zone being crushed. Additionally, sounds generated internally to the vehicle are also

recorded. Such audio data may also help to recreate a driving incident, and understanding the causes of the incident.

The communication module 29 provides the mobile telecommunications device 17 with functionality for communicating with the remotely located devices 5, 7, 9, 11 of Figure 1. The communication module 29 comprises a wireless telecommunications sub-module 31 enabling communication over a telecommunications network. An optional wi-fi communication sub-module is also envisaged. Similarly, the presence of wired communication modules are also envisaged, such as a USB port and/or an IEEE 1394 interface (more commonly known as FireWire™) to support wired communication with a remote device, such as a personal computer or similar. Such a connection may be useful for the purposes of side-loading the application to the mobile device.

As mentioned previously, sensor data captured from any one of the aforementioned data capture modules 21, 23, 25, 27 is processed by the processor module 33, to generate driving information. By driving information is intended any data which may be derived from raw sensor data captured by any one of the aforementioned modules 21, 23, 25, 27. For example, g-force data is driving information which is derived from the sensor data sampled by the accelerometer 23. The skilled reader will be familiar with the plurality of types of driving information that may be derived from sensor data sampled by the aforementioned modules, and accordingly a complete list of the different types of driving information that may be derived from sampled sensor data is omitted for brevity.

The processor module 33 is also configured to analyse sampled sensor data and generated driving information to determine if a driving incident has occurred (described in more detail below).

Sampled sensor data is stored in storage 34, which is operatively coupled to the processor module 33, along with any generated driving information. The storage 34 is preferably configured with a FIFO (First In First Out) storage buffer 34a, and a permanent storage component 34b. In preferred embodiments, the data capture modules are configured to sample data at periodic intervals. Preferably, these intervals are sufficiently small, of the order of milliseconds, such that for practical purposes the data capture modules may be considered to sample data continuously. The sampled data, along with any derived driving information is preferably stored in the storage buffer 34a, unless a driving incident has been identified, in which case the associated sensor data and driving information is stored in the permanent storage component 34b to avoid undesirable overwriting.

In preferred embodiments, the FIFO storage buffer 34a is provided with a finite amount of storage space. Nonetheless, said storage space may be predefined by the user as will be described below. In any case, once this storage space has been exhausted, the oldest recorded data is overwritten by newly sampled data, and this cycle of overwriting older data with newly sampled data is continuously carried out during operation of the telecommunications device 17, unless a driving incident has been detected, in which case, and as mentioned previously, all data related to the driving incident is stored in a long term protected storage 34b to safeguard it from being overwritten by newer data.

In preferred embodiments, the mobile telecommunications device 17 may be configured with a data recording strategy by the user. This might define the frequency with which sensor data is sampled. In other words, how many measurements are made per unit of time. Furthermore, the recording strategy also defines how data is recorded. In preferred embodiments, sampled sensor data is stored in data files in the buffer 34a. Each data file represents a plurality of sequentially sampled sensor data, captured over a defined period of

time, which will be referred to as a 'data file period'. This is best illustrated by considering captured image data, such as video footage. A video period may be defined, which period defines the unit of physical time covered by captured video footage comprised in a single video data file – this is the data file period for image data. The video data file is subsequently
5 stored in the buffer 34a. For example, a five minute video period setting, instructs the processor 33 to store all sequentially captured image data captured by the image capture module 21 over a period of five minutes, in a separate video data file. It is to be understood that whilst the image capture module 21 is continuously sampling image data (in other words, it is continuously capturing image data), this plurality of captured image data is grouped
10 together for storage in video data files, each data file representing a five minute data file period.

Sampled sensor data and derived driving information is also continuously analysed by the processor module 33 for the purposes of detecting a driving incident. As soon as a driving incident is identified, the associated sensor data and derived driving information is stored in a
15 data file in accordance with the data recording strategy. Returning to the example described in the preceding paragraph, this entails combining the video footage captured within a temporal window of five minutes leading up to the detected driving incident, in a single video file, and storing this data file in protected storage 34b. Whilst each different type of sensor data may be recorded in separate data files, in preferred embodiments all the different
20 types of sensor data sampled by the mobile telecommunications device 17 are stored together in a single data file in accordance with the user selected data recording strategy. This means that the five minute data file referred to above, preferably also comprises GPS data, accelerometer data, and audio data sampled over the five minute time period.

Data files are stored in the buffer 34a, unless they are associated with a driving incident, in which case they are then stored in protected storage 34b, which cannot be overwritten. Once the storage space comprised in the buffer 34a has been exhausted, the oldest data file is overwritten by a newer data file.

5 Data compression methods may also be used in conjunction with the present invention to improve the use of storage. For example, data comprised in data files which have not been associated with a driving incident may be compressed using compression techniques, which techniques will be known to the skilled reader. Similarly, within a data file associated with a driving incident, sensor data captured at time coordinates which are distant
10 from the determined driving incident may be compressed. In this way, the resolution of sensor data which is directly pertinent to a driving incident is maintained, whilst sensor data which may be less relevant to the driving incident is maintained at a lower resolution.

 Since the sensors of the mobile telecommunications device 17 are continuously recording sensor data, even when a driving incident is detected, the device 17 may be
15 configured to comprise sensor data and/or driving information recorded/derived shortly after the driving incident in the same data file, since this data may also be relevant for understanding a driving incident. Furthermore, this also enables the mobile telecommunications device to record multiple driving incidents. For example, a multiple collision.

20 The processor module 33 may be configured with encryption means, enabling stored data files to be encrypted to prevent data tampering. Envisaged encryption means may comprise both software solutions and hardware solutions. For example the processor module may comprise a cryptoprocessor, or the processor may be configured with code to carry out a cryptographic process.

Figure 4a is a flow chart outlining the method carried out by the mobile telecommunications device 17, to determine if a driving incident has occurred, in accordance with a preferred embodiment. An application is downloaded from the content provider server 9 of Figure 1, onto the mobile telecommunications device 17, at step 36, as previously

5 described. This may be done over a telecommunications network. The application provides the mobile telecommunications device 17 with the previously described functionality, when executed on the device. The mobile telecommunications device is configured within the vehicle, at step 38. This may comprise affixing the mobile telecommunications device 17 to the vehicle via an adapter, as described previously.

10 The recording strategy is specified at step 40. As mentioned previously, this comprises setting the period of time that each recorded data file represents. Furthermore, it may also comprise defining the size of the buffer 34a and/or the number of data files that are to be stored within the buffer. Preferably, the recording strategy is specified only once, upon first use of the mobile telecommunications device 17. Where the recording strategy has

15 already been defined, method step 40 is skipped, and the method continues with step 42.

The start of a driving period is registered, at step 42. The start of the driving period determines when the recording of sampled sensor data begins. The start of a driving period may be manually entered by the user via the application's graphical user interface (GUI). Alternatively, the start of the driving period may be automated. For example, the mobile

20 device 17 may be configured to initiate the driving period once sensor data above a minimum threshold value is recorded, indicative of the vehicle being in motion. For example, once a velocity greater than 20 kilometres per hour is detected.

Alternatively, the start of the driving period may be initiated once the application determines that the mobile telecommunications device 17 has been affixed to the vehicle. For

example, the adapter 21 may comprise a registration module (not shown) arranged to register the installation and fixation of the mobile device to the vehicle and/or adapter. The registration module may comprise an NFC device. When the mobile device is brought into close proximity with the registration module, a driving period is initiated.

5 Once the driving period has been initiated, sensor data is sampled and recorded in storage 34, at step 44. Additionally, the sampled sensor data is used to generate driving information by the processor module 33. The sampled sensor data and the driving information is continuously analysed by the processor module 33, at step 46.

 The processor module 33 determines if a driving incident has been detected, at step
10 48. This is determined on the basis of the analysis carried out at step 46. If a driving incident has been detected, all the sensor data and driving information associated with the data file period, is stored in a data file in protected storage 34b, at step 50.

 There are several ways in which a driving incident may be detected. Preferably, this is an automated process, wherein the processor module 33 determines a driving incident has
15 occurred on the basis of an observed marked variation in sensor data and/or driving information. The term ‘marked variation’ is to be understood to relate to a significant change in sensor data and/or driving information occurring over a very short time period. In other words, a detected impulse in recorded sensor data and/or driving information, indicative of a significant change in the state of motion of the vehicle occurring over a short time period. For
20 example, a sudden increase in the g-forces the vehicle is subjected to, may be indicative of a collision and if observed, result in a driving incident being determined to have occurred by the processor module 33.

 Predefined threshold values may also be used to automate the detection of a driving incident. For example, each data type and/or derived driving information (e.g. acceleration,

velocity, g-force, pitch, roll, yaw etc.) may be associated with a threshold value. When any one of these threshold values is exceeded, the processor module 33 may be configured to determine that a driving incident has occurred. Similarly, the automated detection of a driving incident may require that a threshold condition associated with a combination of

5 predefined threshold values, each threshold value being associated with a different data type and/or type of driving information, must be exceeded, in order for the processor module 33 to automatically determine that a driving incident has occurred. For example, in the event of a collision, it is reasonable to expect to observe a marked variation in g-force, accompanied by a marked variation in velocity. Accordingly, the threshold condition may require that in order

10 for a collision to be automatically detected, both a marked variation in g-force and a marked variation in speed, in excess of predefined threshold values must be observed.

Similarly, the occurrence of a driving incident may also be recorded manually by the user via the application GUI. This may be beneficial for the purposes of documenting data associated with a low velocity collision - colloquially referred to as a 'fender-bender' - which

15 may not result in any marked variations in sampled sensor data, and therefore may not be automatically detected.

Once a driving incident, such as a collision, has been detected, and the data file comprising the associated sensor data and driving information has been securely stored in protected storage 34b, the data file is transmitted to the insurance server 5 of Figure 1, at step

20 52. The data file informs the insurance provider that a driving incident has occurred and provides the insurance provider with the sensor data and derived driving information. This data assists the insurance provider in better understanding the collision, in addition to assisting with determining culpability, where more than one vehicle are involved.

Similarly, once a driving incident has been detected, an S.O.S. message may be automatically forwarded from the mobile telecommunications device 17 to the emergency services server 7, at step 54. The S.O.S. message may also comprise sensor data and derived driving information, which may assist the emergency services in coordinating their response.

5 As mentioned previously, the mobile telecommunications device 17 will continue to sample and record sensor data even once a driving incident has been detected, unless the mobile telecommunications device 17 detects that the driving period has terminated, at step 56. If the driving period has terminated, the present method is terminated and the device stops recording sensor data. The end of a driving period may be automatically detected by the
10 processor module 33, if certain conditions are met. For example, if the measured velocity of the vehicle remains zero for a predetermined period of time, the processor module 33 may infer that the vehicle is stationary and no longer being driven, and accordingly ceases recording sensor data, and the method is terminated. If instead the processor determines that the driving period has not yet terminated, a new data file period is initiated, at step 58, and
15 steps 44 through 62 are repeated.

Where a driving incident is not detected at step 48, the processor module 33 will determine if the data file period has expired, at step 60. If the data file period has expired, then the sensor data and the derived driving information generated during the data file period is combined and stored in a single data file, for storage in the buffer 34b, at step 62. The
20 processor 3 then determines, at step 56, if the driving period has terminated. If the driving period has not terminated, a new data file period is initiated, at step 58. The mobile telecommunications device 17 continues to sample sensor data, to derive driving information, and steps 44 through 62 are repeated, until the driving period is determined to have terminated.

Figure 4b provides more detail regarding how a driving incident may be automatically detected (i.e. steps 46 and 48 of Figure 4a) in a preferred embodiment, where the mobile telecommunications device 17 is configured to sample audio data, accelerometer data, and GPS data only. Each one of these types of data is analysed in turn, at steps 64, 66
 5 and 68. The analysis may comprise comparing measured sensor data and/or derived driving information with a data model. The model may comprise defined threshold values for different data types. Sampled sensor data and/or driving information may be compared with the data model to determine if a driving incident has occurred.

For example, the analysis of sampled audio data, at step 64, may comprise comparing
 10 the recorded audio data with predetermined audio data models representing specific sounds. Such sounds may relate to the sound of tyre squeals, the sound of deforming metal, the sound of breaking glass, passenger screaming and/or shouting, the sound of airbag deployment, and any other sound which may be associated with a driving incident. Effectively, this may be considered audio fingerprinting, which serves to identify specific sounds associated with a
 15 driving incident by carrying out a signal profile analyses of the audio signal captured by the audio capture module 27. To achieve this, the storage device 34 may comprise a database of prestored audio sound files. The audio sound files represent sounds associated with a driving incident. The captured audio signal is compared with the sound files comprised in the database, to identify matches between the captured audio signal and the database of sound
 20 files. This facilitates the audio fingerprinting of specific sounds, indicative of a driving incident, present within the captured audio data signal captured by the audio capture module 27.

Similarly, the analysis of sampled accelerometer data, at step 66, may comprise comparing the sampled data with predetermined accelerometer data models. The data models

represent specific states of motion of the vehicle. For example, this might comprise defining threshold values for yaw, pitch and roll, which if exceeded, indicate a state of motion of the vehicle indicative of a driving incident. For example, a measured yaw value above a predetermined threshold value may be indicative of the vehicle having lost traction and is

5 fishtailing and/or skidding. Similarly, a roll and/or pitch value above a predetermined threshold value may be indicative of the vehicle having overturned.

Accelerometer sensor data is also used for deriving driving information such as g-forces. Analysis of g-force data is also used to determine if a driving incident has occurred. For example, approximate g-force values for detecting certain driving incidents are as

10 follows:

- Harsh braking – a deceleration of greater than 2.5 m/s^2 or forward G-force of greater than 0.7G for more than 400msec.
- Harsh acceleration – from stationary, an acceleration greater than 2.5 m/s^2 or backward G-force of greater than 0.7G for more than 800msec.
- 15 • Harsh swerving - lateral G-forces greater than 0.7G for more than 400msec.

The data models are preferably preconfigured and are comprised within the application executed on the mobile telecommunications device. Different data models are used depending on the type of vehicle the telecommunications device is being used with. Different vehicle types will experience different states of motion during regular operation,

20 which must be considered in determining if a driving incident has occurred. For example, a motorcycle will display more roll and/or pitch than an automobile during regular operation. Accordingly, different data models and/or threshold values must be used to automate the identification of a driving incident for different vehicle types. The specific data models used

may be selected during an initial configuration of the mobile telecommunications device, by indicating the type of vehicle the device is being used with.

On the basis of the audio data analysis and the accelerometer data analysis, the mobile telecommunications device determines, at step 72, if a driving incident has occurred. If it is
 5 determined that a driving incident has occurred, then the telecommunications device proceeds with step 50 of Figure 4a. If instead a driving incident is not detected, the telecommunications device proceeds with step 60 of Figure 4a.

The GPS data analysis, at step 68, comprises analysing positional data and velocity data for any anomalous readings. For example, a sudden deceleration followed by a zero-
 10 velocity reading lasting a predetermined period of time, may be indicative of a collision. If such a zero-velocity reading is observed at step 70, in conjunction with anomalous audio and/or accelerometer sensor at step 72, then a driving incident is determined and the mobile telecommunications device proceeds with step 50 of Figure 4a. This is a further example of a threshold condition, discussed previously.

15 The previously described mobile telecommunications device and method may also be used to monitor and generate a driver profile. The driver profile may be indicative of the type of driver a user is. For example, this may comprise determining if a user is a calm and patient driver, or an aggressive driver. Also, this may comprise determining whether a user regularly flouts speed limits, and/or ignores safety distances. This type of information may be used by
 20 an insurance provider to conduct a personalised risk assessment for individual users. Insurance premium rates may then be tailored to the specific user on the basis of the personalised risk assessment.

For example, analysis of captured image data, such as video footage, may be used to determine if a user regularly flouts safety distances. In preferred embodiments, the mobile

telecommunications device is arranged within the subject vehicle to have a clear line of sight of the road in the direction of principle motion. Accordingly, the number plate of any vehicle preceding the subject vehicle will be captured by the image capture module. Since the physical dimensions of number plates are standardised and known in each country, they may

5 be used as a metric to scale the captured image. When combined with the known optical characteristics of the image capture module, this enables the distance of the image capture module from the image object (i.e. the preceding vehicle) to be determined at the time of image capture. This information may then be used to see if a user adheres to recommended safety distances. A user that is observed to regularly flout recommended safety distances,

10 may be considered to represent a greater risk, and accordingly may be required to pay a greater insurance premium than a user who regularly respects recommended safety distances.

Image analysis can also be used to determine driving conditions and the driving environments. For example, image processing can detect road signs, such as stop signs or traffic lights. Furthermore, driving conditions, as affected by the weather can be determined.

15 For example, if the windscreen wipers are detected to be in motion, it can be inferred to be raining. Once the driving conditions are so determined, an assessment of the driving performance of a user can be made by determining whether the user reacts or behaves appropriately to the driving conditions. For example, if the driver is seen to be jumping red lights, or driving dangerously in rain or snow, then a higher risk profile may be assigned to

20 that driver.

Similarly, accelerometer and g-force data may be used to determine if a user has an erratic driving style. For example, a user that generates sharp variations in g-force data and accelerometer data during regular operation of a vehicle, may be considered to drive

erratically, and therefore at greater risk of being involved in an accident, and insurance premium rates for the user may be tailored accordingly.

The mobile telecommunications device may also be configured to interface and communicate directly with a vehicles native telemetry systems. For example, the majority of modern cars have inbuilt electronic control systems or engine management systems, arranged to collect data regarding vehicle system performance. This data may be communicated to the mobile telecommunications device either via a wired physical connection, such as USB (Universal Serial Bus), or via a wireless communication protocol such as Bluetooth[®]. This data may subsequently be used by the mobile telecommunications device to complement sensor data captured directly by the telecommunications device. In this way a more accurate model of a driving incident, and/or of a user profile may be generated. For example, native vehicle telemetric systems may comprise electronic tyre pressure sensors, and are able to detect if a tyre is under and/or over-inflated. This information may be communicated to the mobile telecommunications device and may help to explain the causes for a driving incident, such as a sudden loss of traction resulting from a burst tyre.

Further features of the Witness application, are set out below.

Benchmarking

It will be appreciated that different sensor types, phones, mounting positions, vehicles, drivers and road conditions may generate differing outputs for driving behaviour that is 'safe'. To account for this, the Witness application may have the following functionality:

- During a ‘training mode’ (e.g. first week of enabling the Witness application) the input from the sensors are used to build up a ‘benchmark’ for a particular driver’s typical driving conditions.
 - Assuming an accident does not occur during this training mode, the benchmark data can be subsequently used to assess the occurrence of driving incident.
- There is preferably an option to notify the Witness application of a change in parameters (e.g. different driver, driving off-road etc). Thus a number of ‘profiles’ may be set up. Each profile may require an independent training mode period.
- If the Witness application incorrectly detects that a driving incident has occurred, it can receive feedback from the user to modify its sensitivities. E.g. a more aggressive driver is actually driving.

Crash/Collision Management

- On detection of a crash (or other driving incident) the Witness application is arranged to take one or more of the following actions:
 - Announce that it has detected an accident (audio/screen prompt)
 - Call the emergency services (with option to cancel) – e.g:
 Audio/screen prompt: ‘Witness has detected that you have been involved in a (serious) accident and will call the emergency services. If this is not the case, please cancel within 10 seconds.’
 - Provide reassurance
 - Provide the user with a checklist of things to do:

- Take photographs of vehicles involved in the incident
(inc number plates)
 - Take down name, address, insurance details etc of 3rd
parties involved in incident
 - Communicate to the insurance company that an incident has
been detected (e.g. low bandwidth data or text message)
 - Protect the high quality recorded data so it is not overwritten
 - If appropriate – or in response to a request from a
communication to the phone from the insurance company – transmit all or
selected portions of the recorded data associated with the incident.
- N.B. Use of the communication channels is controlled
by the Witness application to prioritise essential communications such
as calls to the emergency services.
 - Note that data transmission from the mobile telephone to the
insurance company may be automatic (for example, triggered by a detected
incident) or manual (for example, in response to a request from the insurance
company). In the latter case, the Witness application may include functionality
to allow the insurance company to browse through the data files available on
the mobile telephone so as to select one or more for transmission to the
insurance company.

Data processing for generating a user profile

Further features of the user profile generation embodiment are summarised:

• If the Witness application incorrectly detects an event or incident of significance, and receives feedback that the vehicle was not involved in an accident (but was in a near miss) – this could alter the risk profile of the driver. For example – if this happens frequently, but no accident occurs over a given period, this could be an indicator
 5 that the driver is good at reacting to potential hazards.

- Erratic driving (e.g. jerky steering or braking detected by G-force sensor).
- Driving faster than the speed limit allocated to a given road (detected by GPS).

10 Further details regarding the features and functionality of the Witness application, in particular the graphical user interface of the Witness application, are now described.

Referring to Figure 5, a first page 80 of the Witness application user manual is shown in which an image of the Main Menu (the top-level menu) 82 is displayed. The Main Menu is
 15 displayed when a user first runs the application on a smart-phone, such as the iPhone[®] 4. The main menu includes the following user-selectable buttons:

- **Recording Screen** 84
- **File Management** 86
- **Settings** 88
- 20 • **Accident Management** 90
- **Information** 92 (displays up a manual, as shown in Figures 5 to 14).

Selecting the Recording Screen button 84 opens the Recording Screen 94 – the second image shown in Figure 5. The Recording Screen 94 contains a video feed 96 from the camera of the smart-phone, which occupies the majority of the visible screen area. Overlaid on to the video feed is the detected speed of the vehicle 98 (e.g. 0 mph), heading 100 (e.g. south by south-west) and the elapsed recorded time 102 (e.g. 00:00). Displayed in a left column of the Recording Screen are additional user selectable buttons:

- **Keep current video** 104 (pressing this button will automatically copy the current video - and the previous video segment - to the protected storage 34b, and prevents that information from being overwritten. The user is advised to press this button in the event of a driving incident that needs to be recorded).
- **Take photo** 106 (captures a still photograph).
- **Exit Recorder** 108 (returns to main screen).
- **Start / Stop Recording** 110 (starts recording video footage - and other data).

Referring to Figure 6, a second page 112 of the Witness application user manual is shown, in which an image of the Recording Screen 114 is shown and described operating in a map-displaying mode rather than a video-feed mode.

During recording, (i.e. when the ‘Start / Stop Recording’ button 110 is pressed) the Exit Recorder button in the Recording Screen is substituted with a Map Display button 116. Pressing it will toggle between the modes showing the video feed and a map of the current location.

Referring to Figure 7, a third page 118 of the Witness application user manual is shown, in which the File Management Screen 120 is shown and described. The File

Management Screen 120 can be accessed by pressing the File Management Button 86 in the Main Menu.

The File Management Screen 120 displays video and associated data (e.g. telemetry data) that has been previously recorded. The stored data is contained in either a protected area of storage or in a “Recording Stack”. Data files in the protected area are saved and so not overwritten as part of a Recording Strategy. In contrast, data files in the Recording Stack may be overwritten as part of the Recording Strategy.

As illustrated in Figure 7, the bottom section of the list represents the “Kept” data files 122, whereas the top section of the list represents the “Recording Stack” 124. “Kept” data files 122 can be edited and deleted from the File Management Screen 120, whereas “Recording Stack” data files cannot. Editing “Kept” data files can involve renaming them.

The recorded data files are listed on screen along with the time and date of the recording and the electronic size of the data file. Accordingly, the user is provided with feedback about how big the data files are, and so if the smart-phone is low in storage, the user can elect to delete certain “Kept” data files. “Recording Stack” data files will be automatically overridden by the Recording Strategy.

The controls on the toolbar at the bottom of the recordings screen allow a user to change the selection mode of the video stack and includes:

- **Video** 126 (when highlighted, if a data file is selected, a video recording playback screen will be displayed).
- **Map** 128 (when highlighted, if a data file is selected, then a map will be displayed showing the area over which the recording was made).
- **Export** 130 (when highlighted, a selected data file will be passed to an Export Screen where export options will be provided).

- **Keep** 132 (when highlighted, if a “Recording Stack” data file is selected, then a user will be prompted to name it, and then it will be stored as a “Kept” data file).

The icons in the File Management Screen change in dependence on the selected mode. For example, Figure 20 shows the icons 134 displayed when the Video selection mode is highlighted; Figure 21 shows the icons 136 displayed when the Map selection mode is highlighted; Figure 22 shows the icons 138 displayed when the Export selection mode is highlighted and Figure 23 shows the icons 140 displayed when the Keep selection mode is highlighted. Advantageously, this provides improved feedback to a user about what selection mode is highlighted and so what action is likely from the selection of a data file.

Referring to Figure 8, a fourth page 142 of the Witness application user manual is shown, in which an image of a Recording Playback screen 144 is shown and described. The Recording Playback screen is invoked by highlighting the Video Mode 126 in the File Management Screen 120 and selecting an appropriate data file.

In the Recording Playback screen 144 it is possible to play back a pre-recorded video feed associated with a chosen data file. As well as playing back the recorded video feed, the Recording Playback screen also displays other associated data such as telemetry data 146. For example, date, time, speed, forward/backward G-forces, latitude, longitude and heading information is overlaid onto the video feed. As the video is played back, these values will typically change depending on the behaviour of the vehicle, as recorded by the mobile device.

Forward and backward G-forces are those that correspond to the forward and backward movement of the vehicle and are the primary metric for determining an event such

as a crash. However, other G-forces (e.g. up/down and side-to-side) may also be measured by the device – even if they are not necessarily displayed on the mobile screen.

As recited in Figure 8, the Recording Playback screen provides further user controls in the form of:

- 5 • **Playback Position Scrub Bar** 148 (horizontal bar at bottom of screen)
- **Playback Speed Bar** 150 (vertical bar at left side of screen)
- **Pause** 152 (pauses playback)
- **Eject** 154 (return to previous screen)
- **Loop** 156 (plays the data file continuously)

10

The Playback Position Scrub Bar 148 allows a user to jump to different positions within the recording without necessarily needing to watch all of the recorded footage.

Advantageously, this allows a user to more quickly locate a desired item of footage within a given data file. Also, the Playback Speed Bar 150 can be used to speed up or slow down the

15 playback of the data file. This allows a desired item of footage to be found more quickly through sped-up playback, and also allows an item of footage to be more carefully analysed through slowed-down playback. Furthermore, it is possible to zoom in and out of a region of the video file using a ‘pinch and zoom’ movement as is standard with most multi-touch touch-screen devices.

20 Referring to Figure 9, a fifth page 158 of the Witness application user manual is shown, in which a different type of Recording Playback screen 160 is shown and described. Specifically, the image represents playback of a pre-recorded data file as can be invoked by highlighting the Map Mode 128 in the File Management Screen 120 and selecting an appropriate data file.

In contrast with the Video Mode playback, this Map Mode playback shows a map of the area 162 where the recording took place. A blue breadcrumb trail 164 is overlaid on to the map showing the extent of movement of the vehicle during the recorded period. A scrub slider 166 is shown, which is user-operable to adjust the time within the recorded period. As the slider is adjusted, a pin 168 moves along the blue breadcrumb 164 to show the position of the vehicle at the time as specified by the slider 166. Tapping the pin 168 displays associated telemetry data 170 at that position and time.

Referring to Figure 10, a sixth page 172 of the Witness application user manual is shown, in which an image of a Video Export Screen 174 is described. The Video Export Screen 174 may be invoked by highlighting the Export button 130 in the File Management Screen 120 and selecting an appropriate data file.

The Video Export Screen 174 allows the quality of the video associated with the selected data file to be adjusted, before that video is exported. Advantageously, this can allow the user to control the size of the data to be exported. Telemetry data (i.e. sensor data) is also exported, embedded within the video file. Video data can be exported with or without sound, depending on the permissions of the user. Export typically involves copying data files from the mobile device to a local computer (e.g. via a data cable) or a remote server (e.g. via a wireless connection).

Referring to Figure 11, a seventh page 176 of the Witness application user manual is shown, in which an image of the Settings Screen 178 is displayed and described. The Settings Screen 178 allows the operation of the Recording Strategy to be controlled. Specifically, the Settings Screen allows a user to select the number of video segments that the application should store, and the size of those segments (i.e. a data file period). Accordingly, the user is able to set a limit to the storage usage of the Recording Stack (i.e. the size of the buffer 34a)

part of the program. The user can also control the storage usage of the Recording Stack through the use of the video quality buttons.

Note that the Witness application may be arranged to calculate the remaining memory available on the smart-phone and suggest the appropriate settings automatically.

- 5 The Recording Strategy involves maintaining a user-controlled number of video segments. When a new video recording is initialised – instantiating a new segment – this is written over the oldest video segment. Thus only the most recently recorded videos are maintained in the Recording Stack.

- Another setting that can be controlled in the Settings Screen 178 is the G-force threshold at which the Witness application will assume that a crash has taken place. It is expected that different vehicles and driving styles will need different G-force thresholds to be set to ensure a reasonable sensitivity to crash forces whilst also prevent crash detection false positives. It should be noted that although the manual recites “*Raise the sensitivity if you find that crash detection is triggered during normal driving...*” it is the sensitivity *threshold* that is to be raised, and not the sensitivity itself. A slider 180 allows the sensitivity threshold to be set via the touch-sensitive screen.
- 10
- 15

The Settings Screen 178 also has a button 182 to allow a user to define more settings via a More Settings Screen.

- Referring to Figure 12, an eighth page 184 of the Witness application user manual is shown, in which an image of the More Settings Screen 186 is displayed and described. Here, it is possible for the user to select speed units 188 and also select whether the map should be displayed during recording 190, and at which speed it should be displayed in favour of the video feed. This is a safety feature of the Witness application that hides the video feed during recording when the vehicle is detected as travelling above a predetermined speed. The video
- 20

feed is replaced by a map of the location of the vehicle – as is typical with in-vehicle GPS devices. Note that although the on-screen video feed is replaced with a map, video recording continues in the background.

In alternatives, the application may be arranged to detect the vehicle speed, and at a particular speed, switch off the screen entirely. It should be understood that the device will continue to record video, telemetry and other information even when the screen is switched off. Entirely switching off the screen of the device is advantageous as it significantly reduces the drain on the battery of the mobile device.

Note that the Witness application is also arranged to interface with the phone to detect low-light conditions and in response change the brightness of the screen to prevent the user/driver being dazzled. This can also save battery life.

The More Settings Screen 186 also includes a Personal Details button 192 which, when pressed invokes a Personal Details Screen.

Referring to Figure 13, a ninth page 194 of the Witness application user manual is shown, in which an image of the Personal Details Screen 196 is displayed and described.

Here, the name 198, vehicle registration number 200, mobile number 202 and email address 204 to be used in an emergency, can be specified by the user. In the event of a detected incident, these details, along with information regarding the detected incident (e.g. time of incident, location and optionally telemetry data) will be emailed to the specified email address automatically. This can ensure that the chosen recipient of that email will be informed immediately about the occurrence and nature of the detected incident.

This Personal Details Screen 196 also allows the user to set whether it is possible for the video stack to be deleted 206. A security PIN protects the changing of this option so that if a first user having the PIN (for example, a parent) can review the driving style and

behaviour of a second user not having the PIN (for example, their son or daughter) by reviewing the Recording Stack – as the Recording Stack cannot be deleted by that second user. As shown in Figure 24, the PIN can be set for the first time by entering it twice into the appropriate PIN fields 208.

- 5 Referring to Figure 14, a tenth page 210 of the Witness application user manual is shown, in which images of an Accident Management Screen 212 and Witness Details Screen 214 are displayed and described.

The Accident Management Screen 212 can be invoked by the user selecting the accident management button 90 on the Main Menu , or can be automatically switched to after
10 the Witness application has detected that there has been an incident (e.g. via G-forces exceeding a threshold level). Similarly, data can automatically be permanently stored as “Kept” and/or sent if high G-forces are detected.

As can be seen on the Accident Management Screen 212, there are the following user selectable buttons:

- 15 • **Accident Advice / What to do 214**

This option provides guidance as to what to do during an accident – see Figures 15 and 16 for the displayed Accident Advice Screens.

- **Witnesses 216**

This option invokes functionality to allow the collection of information from or about
20 witnesses to an incident. An image of the Witnesses Detail information summary screen 214 is shown in Figure 14. Figure 17 shows the Witness Detail information collection screen 218. Voice notes can also be taken via the microphone of the smart-phone.

- **Photos 220**

This option enables the camera to allow a user to capture images associated with an incident.

- **Drivers 222**

This option invokes functionality to allow collection about the other drivers involved in an incident, such as their vehicle and insurance details. The Drivers Detail information collection screen 224 is shown in Figure 18.

5

- **Your Details 226**

This option provides a readily available store of the details of the user - as to be provided to other drivers – and can contain name, address and insurance details. The ‘Your Details’ screen 228 is shown in Figure 19.

10 Details recorded via the Accident Management Screen 212 are electronically authenticated and feature a time-stamp. In alternatives, this data may be encrypted to ensure the integrity of the stored data.

 Furthermore, in alternatives, the exchange of the details of the drivers and witnesses can be conducted, at least in part, via Bluetooth® (for example, between mobile devices) –
 15 and/or via email. Relevant information associated with the driver is pre-stored on the Witness application in a format that can be sent readily, via a communication channel such as Bluetooth® or email.

 Finally, note that in each Screen or Menu, there is a button 230 provided to go back to the previous menu. Also, when certain actions are performed or selected by a user, the
 20 Witness application is arranged to provide an audible feedback signal (for example, a beep). For example, this could be in response to starting a recording, keeping a video segment and/or a stopped recording.

Alternatives and extensions

The Witness application can be extended to interface with remote users to allow them to control the operation of the application as well as view information logged by the application.

In particular, the present application can be extended to a scenario where the Witness
 5 application is under the control of an insurance company. Such an insurance company may provide insurance to the user, and so may have an interest in the behaviour of that user, and moreover, a vehicle under the control of that user, as described previously.

In such a scenario, the insurance company will maintain a device monitoring system that can interface with a mobile device running the Witness application. In fact, the device
 10 monitoring system may interface with a large number of mobile devices, each running an individual copy of the Witness application, logging respective user/vehicle behaviours. This could be the insurance provider server 5 of Figure 1.

With such a monitoring system, it is unpractical to actively monitor each and every mobile device and receiving and handling the sheer quantity of data from each and every
 15 device would also be very difficult.

Consequently, the device monitoring system and the mobile devices are advantageously arranged to automatically and intelligently interface with one another in a way that minimises the computational and bandwidth burden on the device monitoring system.

20 In particular, each mobile device running the Witness application is arranged to make a determination as to whether there is a need to transfer data to the device monitoring system. For example, the Witness application may be arranged to automatically send data to the device monitoring system that only has high G-force activity associated with it, as this may be indicative of a crash or another driving incident. Alternatively, the Witness application

may be arranged to send detailed or high-bandwidth information if a user indicates that an accident has occurred.

In either case, the video segments and associated sensor and/or derived driving information data associated with the relevant event will be sent. However, no other data (for
5 example, from another date) will be sent.

Alternatively, less computationally or bandwidth intensive information may be sent on a periodic basis – for example, every day, week or month. Such general information may be sent to establish a profile of a particular user. For example, many high G-force related activities may indicate that the driver is driving aggressively. A determination about the
10 profile can be made automatically by requesting and automatically analysing further data. For example, the location and speed information can be used to determine whether a vehicle is found to frequently break the speed limit. If this is the case, then the profile of the user can be set accordingly.

Such general and periodically obtained information can also be used to remotely
15 adjust the settings of the application. For example, many high G-force related activities may instead indicate that the set up of the car is such that the mobile device is subjected to high G forces (rather than the driver driving aggressively). If the driving is determined to be safe, but the mobile device is setting off many false positives, then the device monitoring system can automatically adjust the settings of the application. For example, the G-force sensitivity
20 threshold may be increased remotely.

Thus, the initial data that is automatically transmitted from the mobile device to the vehicle monitoring system is limited in bandwidth so as not to overload the vehicle monitoring system as a whole. However, after processing or analysis is performed on the initial data, further information may be requested. For example, further information may be

requested automatically by the system or manually by a controller acting for the insurance company. Such further information may include high resolution video logs and sensor data and derived driving information such as G-force measurements.

It will be understood that the mobile device may also automatically keep certain data
 5 at random. Furthermore, the reason for keeping certain data may also be logged (e.g. logged as a result of a manual request by the user, or in response to a high G-force event).

The mobile device and device monitoring system may also be arranged to highlight detected transgressions. For example, driving during curfew hours, or driving at locations where insurance is not valid (e.g. other countries, off-road, race tracks etc).

10 As will be appreciated, the interaction of the mobile device and the device monitoring system has the advantage of actively improving user driving behaviour. That is, if the user knows that their logged driving behaviour may adversely effect their insurance policy, then it is likely that the user will be dissuaded from driving recklessly. In view of this, an insurance company may be able to incentivise users through lower insurance premiums.

15 However, so that users do not wrongfully benefit from such incentives, it is necessary to enforce the correct and consistent use of the Witness application.

It would not be beneficial from the perspective of the insurance company if the user could choose when to enable the application. For example, if a user could choose to disable the application when speeding then the effectiveness of the application would be reduced.

20 Accordingly, the application may include measures to guarantee that the application is enabled whenever a given insured vehicle is being driven.

Such measures may involve matching data recorded by the Witness application with that recorded independently by the vehicle. For example, the Witness application records the distance travelled during every journey. To ensure the summed distances of all journeys

tracked by the Witness application tally with the total travelled distance of the vehicle, the user may be prompted to enter the odometer mileage periodically.

If the distance recorded by the Witness application does not correlate with the difference between odometer readings, then the discrepancy will be flagged to the user and/or the insurance company. A substantial discrepancy will typically indicate that the Witness application has not been monitoring all vehicle journeys and the appropriate action can be taken (e.g. the user can be warned, insurance premium may be raised etc).

It will be appreciated that such a tallying exercise depends on the Witness application being used every time one particular vehicle is driven. However, in alternatives, if the Witness application is used with different vehicles, the Witness application may be arranged to register the different vehicles so that their respective odometer readings can be tallied with distance recordings associated with each respective vehicle.

Other measures can be implemented in conjunction with the Witness application to guarantee that the application is enabled whenever a given vehicle is being driven. For example, the mobile device on which the Witness application is installed may comprise an NFC device, such as an RFID tag. The NFC device may be compatible with a complementary device on a so-called 'smart-holster' into which the mobile device may be fitted during operation.

The smart-holster interacts with the NFC device on the smart-phone to determine whether or not the smart-phone is inserted into the smart-holster. The smart-holster can then be interfaced with the engine management system of the vehicle so that the vehicle may be activated and driven only when the mobile device is in place within the smart-holster.

It will be appreciated that the mobile device has so far been described in the context of a smart-phone. However, it will be appreciated by a person skilled in the art that other

devices may also be suitable for performing the functions described in relation to the Witness application. For example, the Witness application may be adapted to run on a general purpose tablet-style computing device, such as an iPad[®].

Furthermore, it will be understood that features, advantages and functionality of the
5 different embodiments described herein may be combined where context allows. In addition,
a skilled person will appreciate that the functionality described above may be implemented
using the mobile device suitably programmed.

Having described several exemplary embodiments of the present invention and the
implementation of different functions of the device in detail, it is to be appreciated that the
10 skilled addressee will readily be able to adapt the basic configuration of the device to carry
out described functionality without requiring detailed explanation of how this would be
achieved. Therefore, in the present specification several functions of the device have been
described in different places without an explanation of the required detailed implementation
as this not necessary given the abilities of the skilled addressee to code functionality into the
15 device.

Claims

1. A method of logging driving information associated with a vehicle, when driven, comprising the steps of:

adapting and installing a mobile telecommunications device to a vehicle, the mobile telecommunications device comprising:

at least one sensor set comprising an image sensor, an audio sensor, an accelerometer, or a positioning module, or a combination thereof;

user interface;

processor;

memory;

determining, based on inputs received by the user interface and sensor data from the sensor set, a start of a driving period during which the mobile device is removably attached to the vehicle and the vehicle is in use;

deriving driving information associated with how the vehicle is driven by processing the sensor data from the sensor set during the driving period;

storing a selection of the driving information to the memory, wherein the driving information is derived without data from vehicle sensors; and,

controlling the mobile telecommunications device by a downloaded application to register the start of the driving period in response to an initialization input generated automatically in response to the sensor data having predetermined values, wherein the initialization input is generated in response to sensor data reflecting a detected speed above a predetermined threshold.

2. The method of claim 1, wherein the mobile communications device registers the attachment of the mobile device to the vehicle and determines a match between a location of the mobile device and a location of the vehicle.
3. The method of claim 1, wherein a downloaded application controls the mobile telecommunications device to down-sample sensor data from a first sampling rate to a second sampling and store the sensor data at said second sampling rate.
4. A method of logging driving information associated with a vehicle comprising the steps of:
 - adapting and installing a mobile telecommunications device comprising:
 - at least one sensor set comprising an image sensor, an audio sensor, an accelerometer, or a positioning module, or a combination thereof;
 - user interface;
 - processor;
 - memory;
 - determining, based on inputs received by the user interface and sensor data from the sensor set, a start of a driving period during which the mobile device is removably attached to the vehicle and the vehicle is in use;
 - deriving driving information associated with how the vehicle is driven by processing the sensor data from the sensor set during the driving period;
 - storing a selection of the driving information to the memory, wherein the driving information is derived without data from vehicle sensors; and,
 - controlling the mobile telecommunications device by a downloaded application to process the sensor data from the sensor set during a plurality of driving periods and deriving

driving information associated with how the vehicle is driven during the driving periods, processing the sensor data during a first set of driving periods defining a benchmark against which sensor data is compared during subsequent sets of driving periods.

5. The method of claim 4, further comprising the steps of:

detecting occurrence of a predetermined event by correlating the sensor data against at least one event indication model, the at least one event indication model comprising a set of predetermined data values that are compared against corresponding sensor data; and, modifying the at least one event indication model in response to the benchmark.

6. A method for logging driving information received from a remote mobile telecommunications device, comprising the steps of:

storing in a database a plurality of accounts, each account having a unique identifier and the database being arranged to store driving information associated with at least one of a vehicle and a driver;

communicating through a communications interface arranged to communicate with the remote mobile telecommunications device, and receiving therefrom:

a unique identifier for association of the remote mobile telecommunications device with a corresponding one of the plurality of accounts; and,

driving information to be logged to that corresponding account, the driving information derived based on inputs received by a user interface of the remote mobile telecommunications device and sensor data from a sensor set of the remote mobile telecommunications device, the driving information derived without data from vehicle sensors.

7. A method of logging driving information received from a remote mobile telecommunications device, comprising the steps of:

storing in a database a plurality of accounts, each account having a unique identifier and the database being arranged to store driving information associated with at least one of a vehicle and a driver;

communicating through a communications interface with the remote mobile telecommunications device, and receiving therefrom:

a unique identifier for association of the remote mobile telecommunications device with a corresponding one of the plurality of accounts;

driving information to be logged to that corresponding account, the driving information derived based on inputs received by a user interface of the remote mobile telecommunications device and sensor data from a sensor set of the remote mobile telecommunications device, the driving information derived without data from vehicle sensors;

wherein the driving information comprises at least one of a driving score and sensor data captured and processed by the remote mobile telecommunications device during a driving period during which the remote mobile telecommunications device is removably attached to the vehicle being driven by the driver; and,

generating a driving score by processing the driving information logged to a corresponding account, the driving score used to determine a risk profile for at least one of the vehicle and driver.

8. A method for logging driving information received from a remote mobile telecommunications device, comprising the steps of:

storing in a database a plurality of accounts, each account having a unique identifier and the database being arranged to store driving information associated with at least one of a vehicle and a driver;

communicating through a communications interface with the remote mobile telecommunications device, and receiving therefrom:

a unique identifier for association of the remote mobile telecommunications device with a corresponding one of the plurality of accounts;

driving information to be logged to that corresponding account, the driving information derived based on inputs received by a user interface of the remote mobile telecommunications device and sensor data from a sensor set of the remote mobile telecommunications device, the driving information derived without data from vehicle sensors; and,

wherein the driving information comprises at least one of a driving score and sensor data captured and processed by the remote mobile telecommunications device during a driving period during which the remote mobile telecommunications device is removably attached to the vehicle being driven by the driver;

generating a driving score by processing the driving information logged to a corresponding account, the driving score used to determine a risk profile for at least one of the vehicle and driver;

using the driving score to define an insurance premium associated with the account; and,

communicating to the remote mobile telecommunication device an insurance offer generated in response to the driving information received from the remote mobile telecommunications device.

Abstract

Methods and systems for logging driving information associated with a vehicle when driven are disclosed. In one aspect, a mobile telecommunications device is provided that is adapted for installation to a vehicle and configured to log driving information associated with the vehicle when driven. The mobile device is arranged to register the start of a driving

5 period during which the mobile device is installed to the vehicle and the vehicle is being driven by a driver. The mobile device is also arranged to process sensor data during the driving period to derive driving information associated with how the vehicle is driven. The mobile device is also arranged to store a selection of the driving information to a memory.

10

1/25

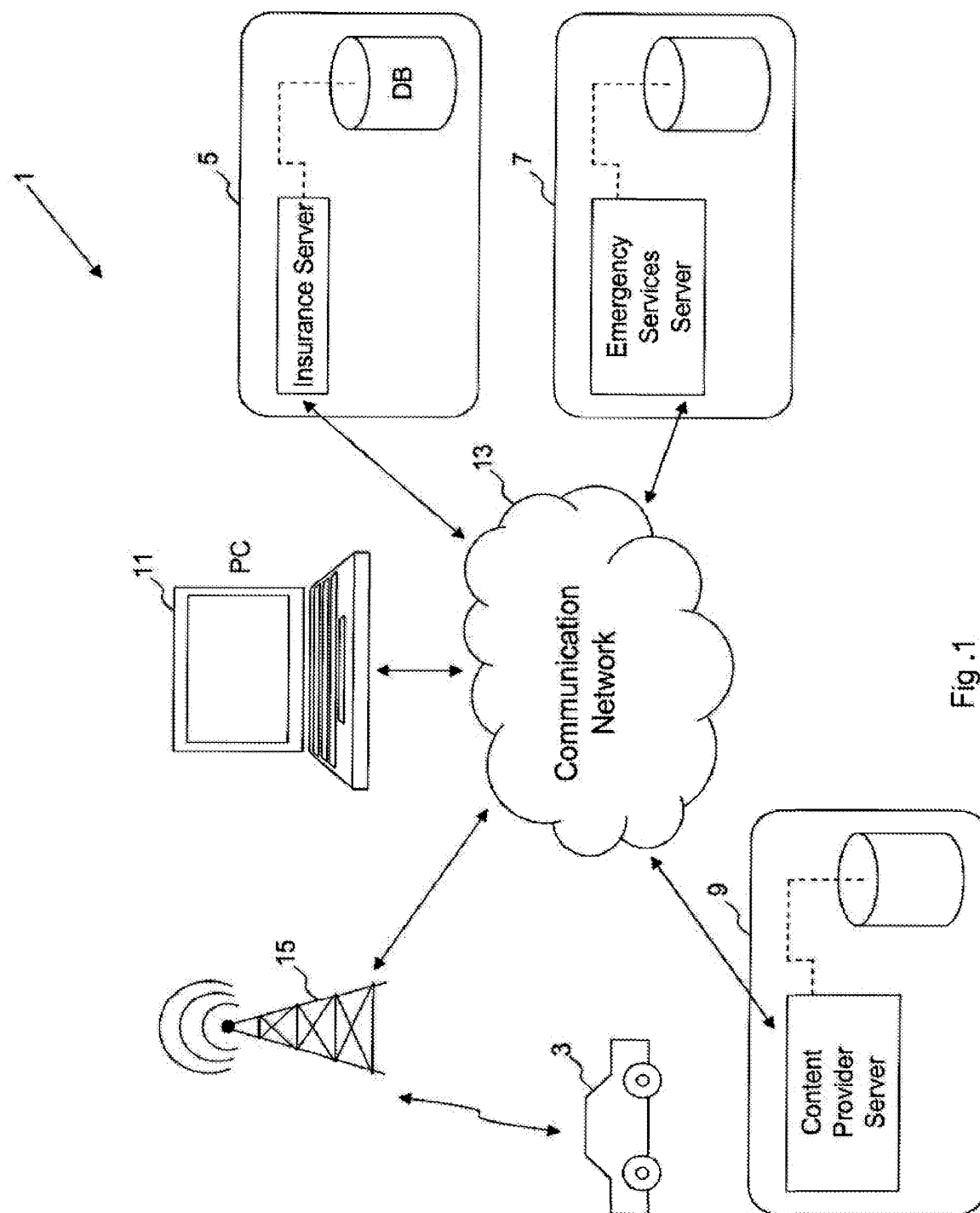


Fig. 1

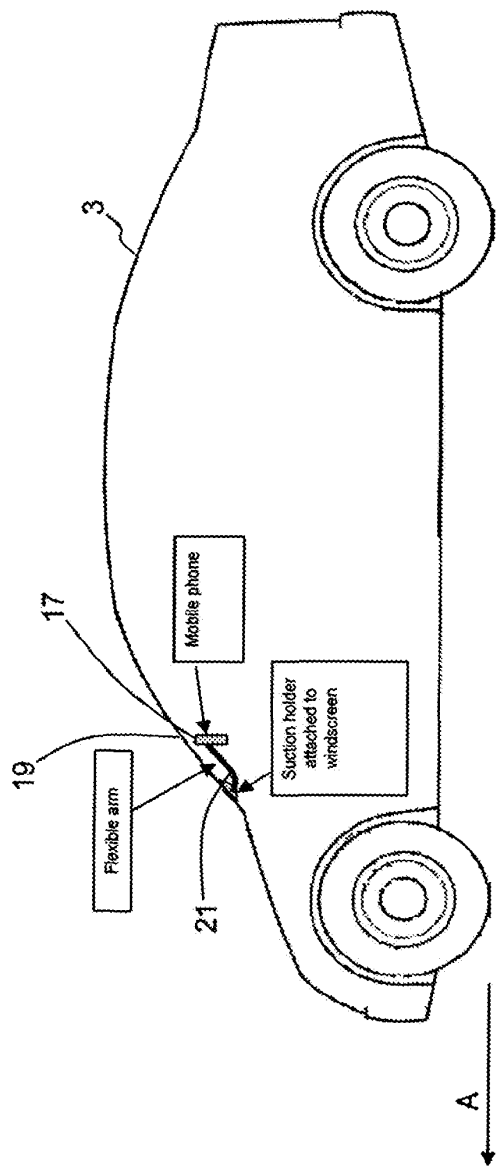


Fig. 2

3/25

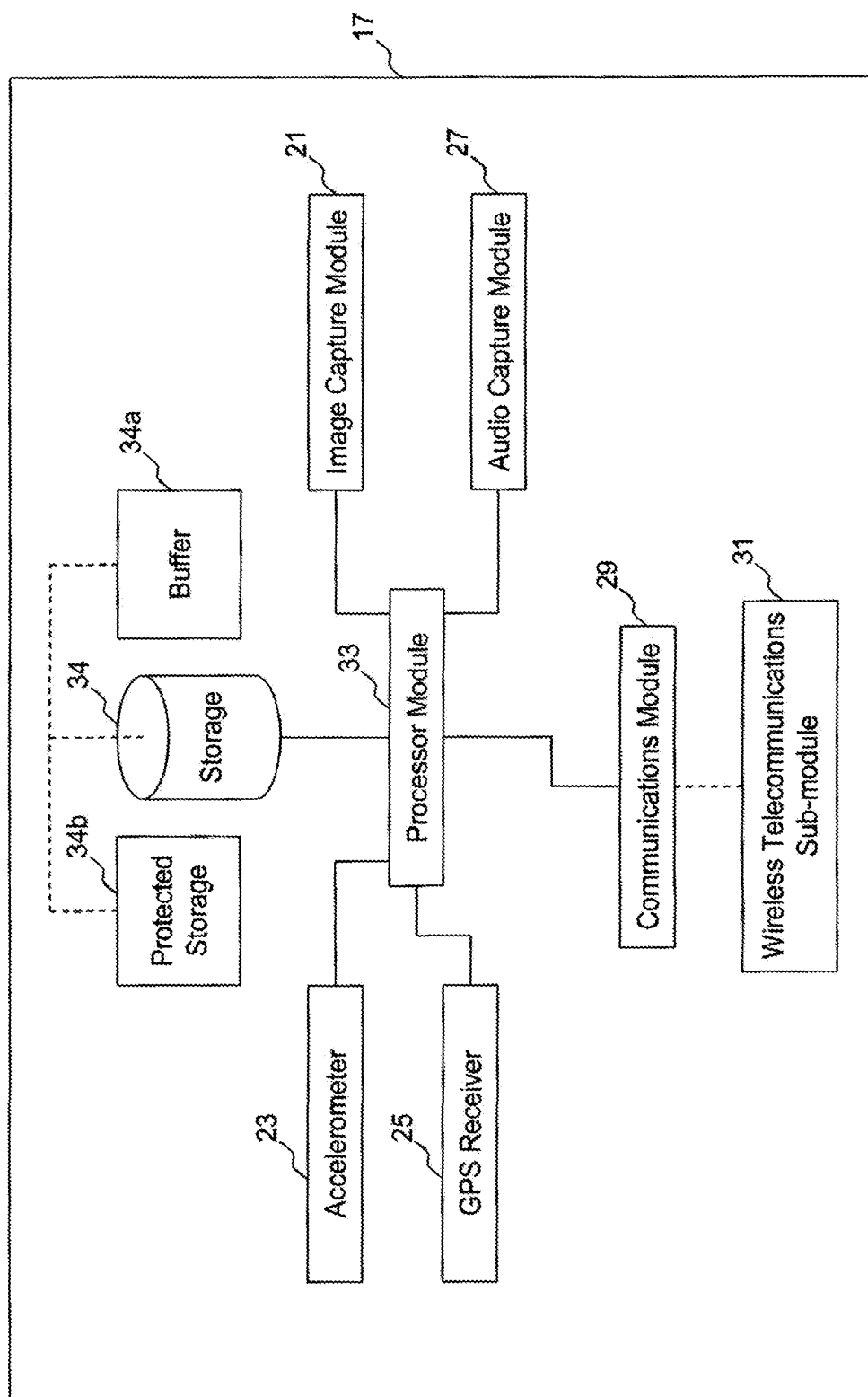


Fig .3

4/25

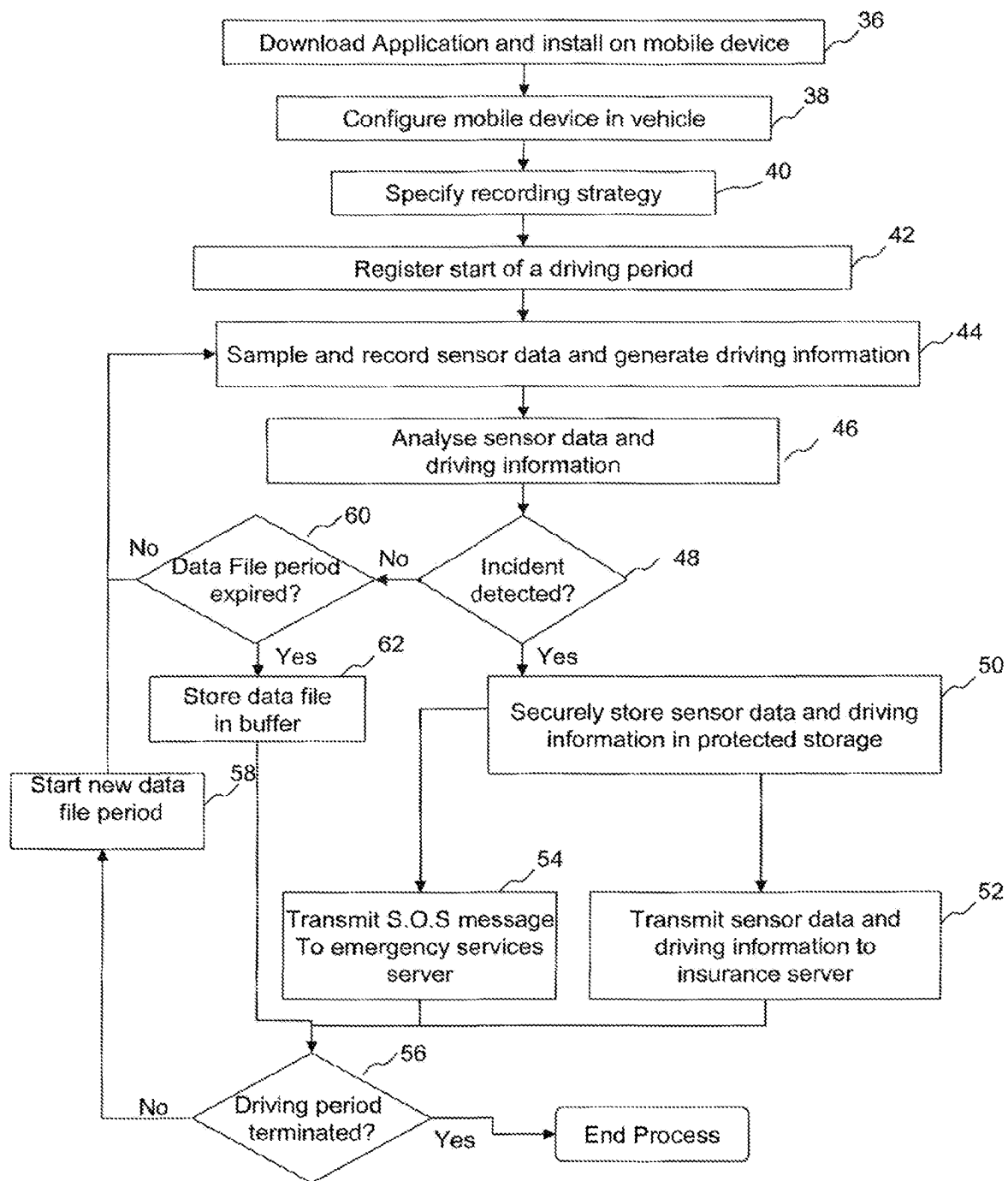


Fig. 4a

5/25

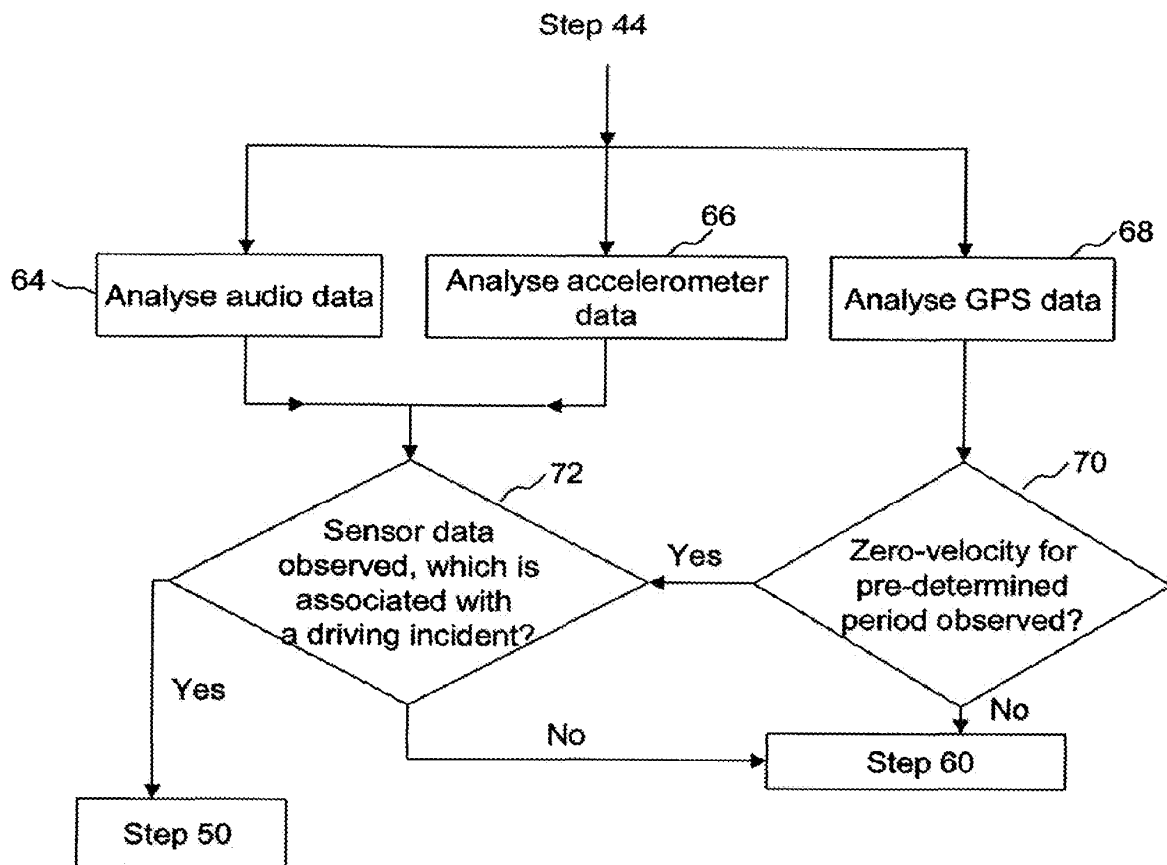


Fig. 4b

6/25

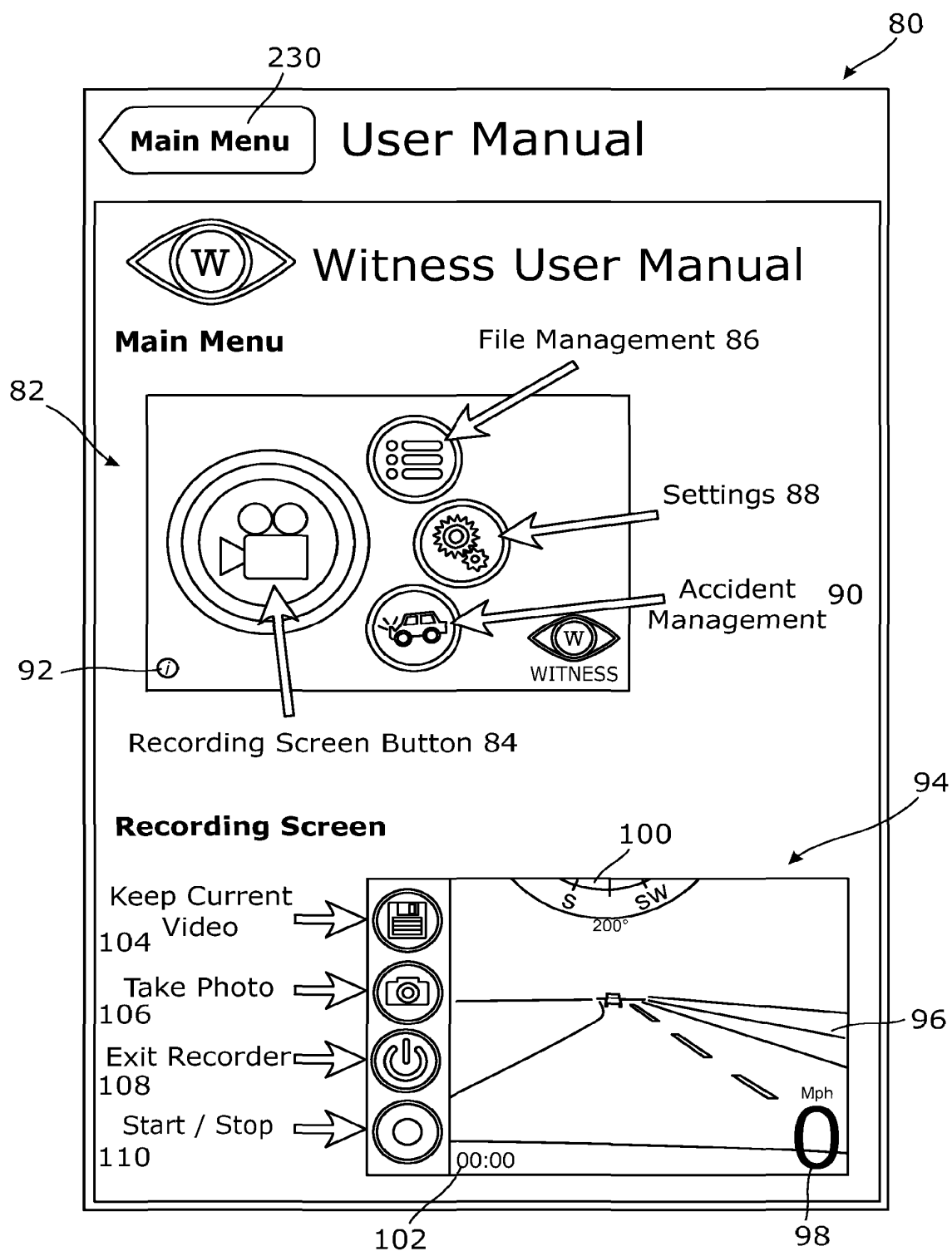


Fig. 5

7/25

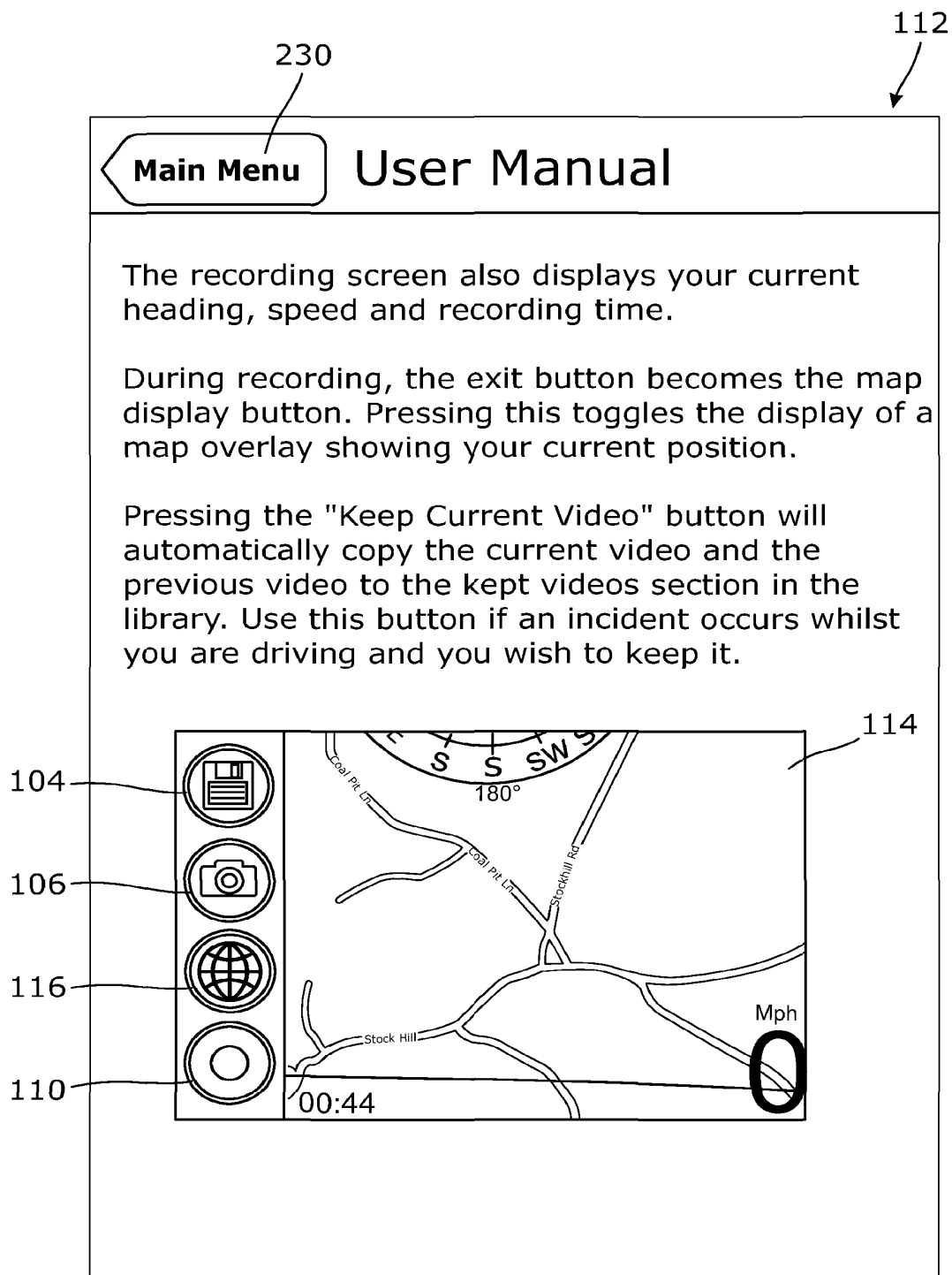


Fig. 6

8/25

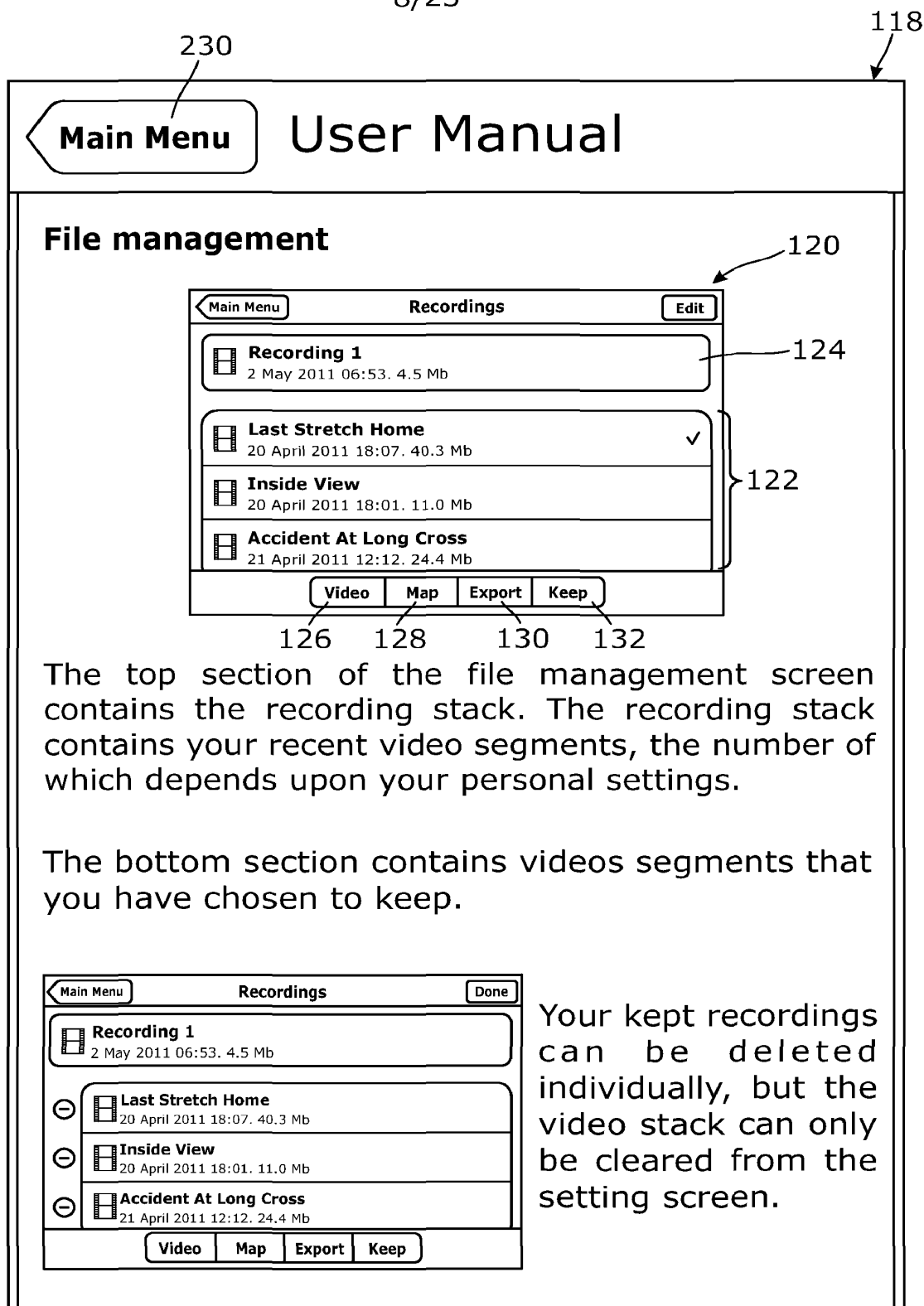


Fig. 7

9/25

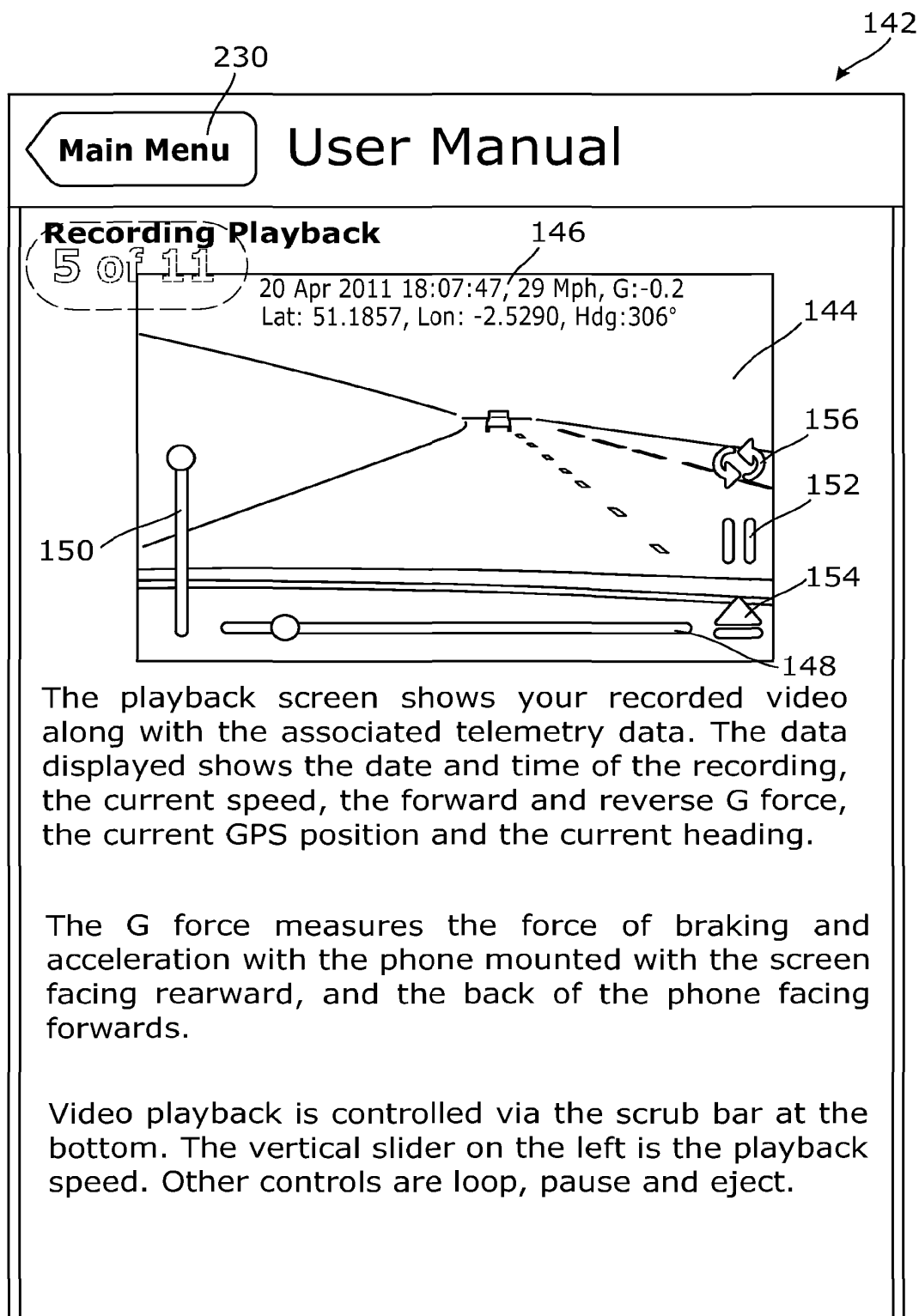


Fig. 8

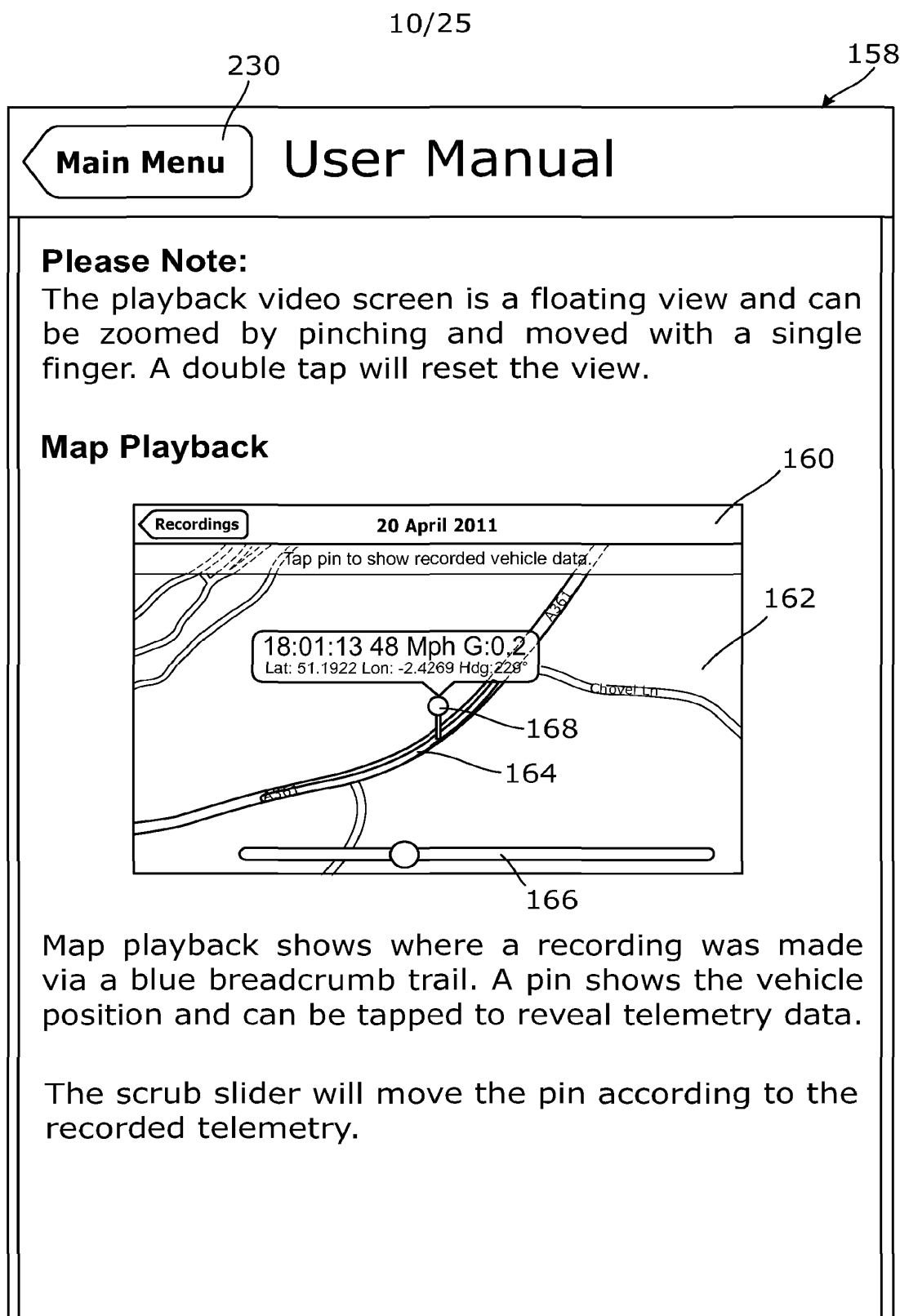


Fig. 9

11/25

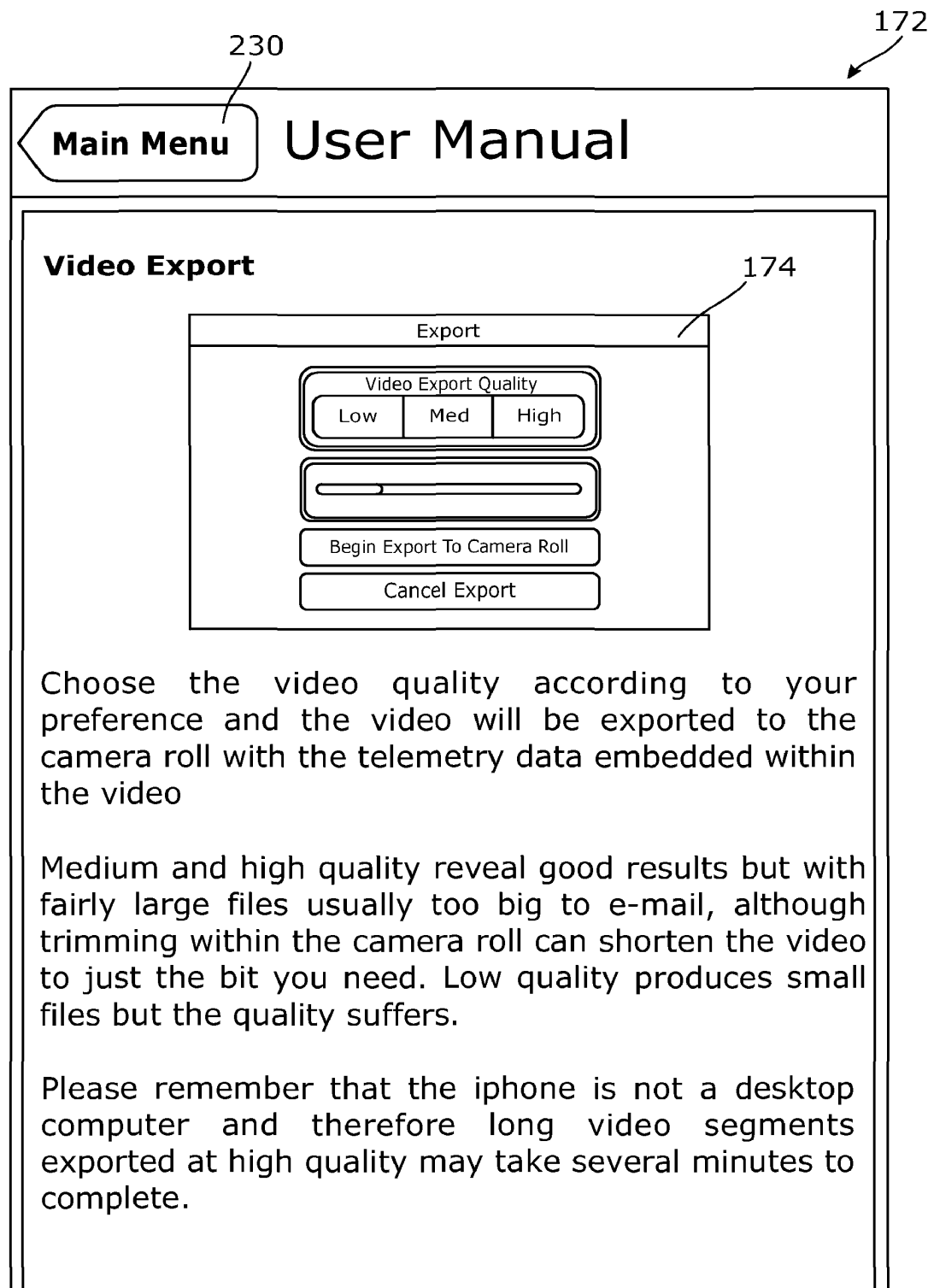


Fig. 10

12/25

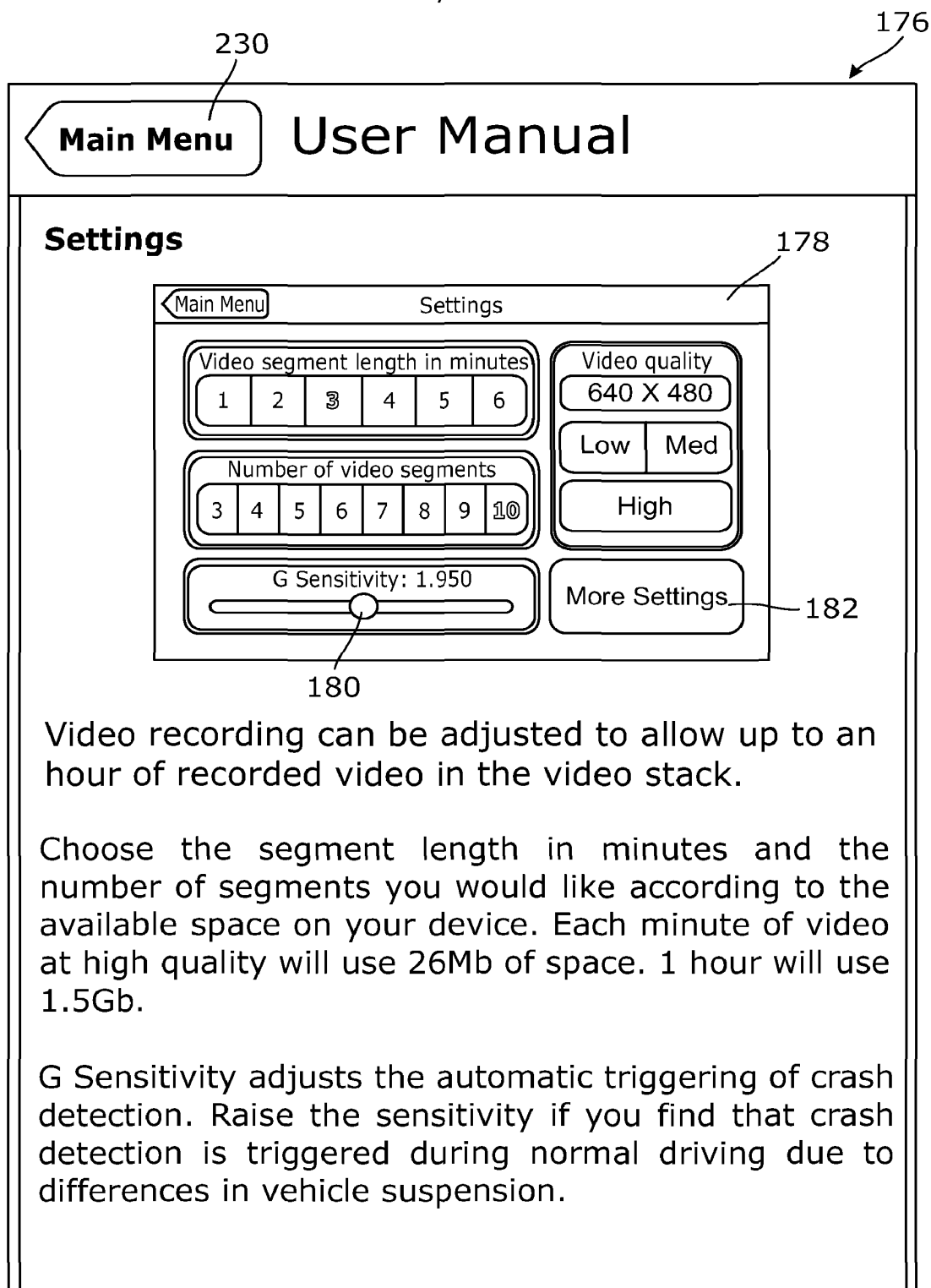


Fig. 11

13/25

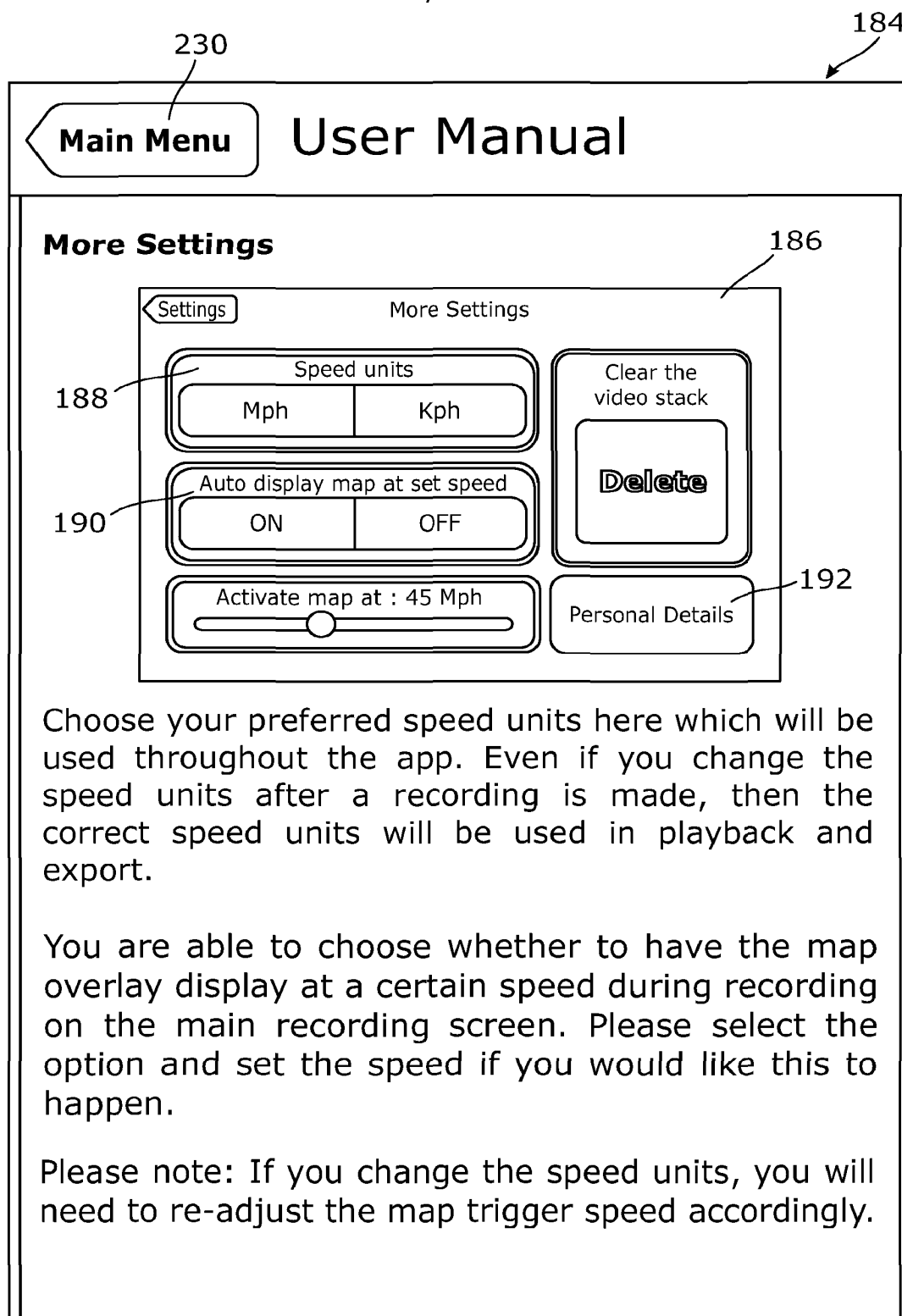


Fig. 12

14/25

The image shows a mobile application screen titled "User Manual" (194). At the top left is a "Main Menu" button (230). Below the title is the "Personal Details" section. This section contains a sub-form with a "More Settings" button (196) and a "Change PIN" button (196). The sub-form has four input fields: "Name:" (198), "Car Reg:" (200), "Mobile No:" (202), and "e-mail address to use in an emergency:" (204). Below these fields is a toggle switch (206) labeled "Allow the video stack to be deleted by the user" with "NO" and "YES" options. To the right of the sub-form, there is explanatory text: "These details will be used in the event of an accident to send an automated message." and "Enter your name, the registration number of the car the device will be used in, the telephone number of this device and the e-mail address of the person you would like contacted".

User Manual

Personal Details

More Settings Change PIN

Name:

Car Reg:

Mobile No:

e-mail address to use in an emergency:

Allow the video stack to be deleted by the user

NO YES

These details will be used in the event of an accident to send an automated message.

Enter your name, the registration number of the car the device will be used in, the telephone number of this device and the e-mail address of the person you would like contacted

Fig. 13

15/25

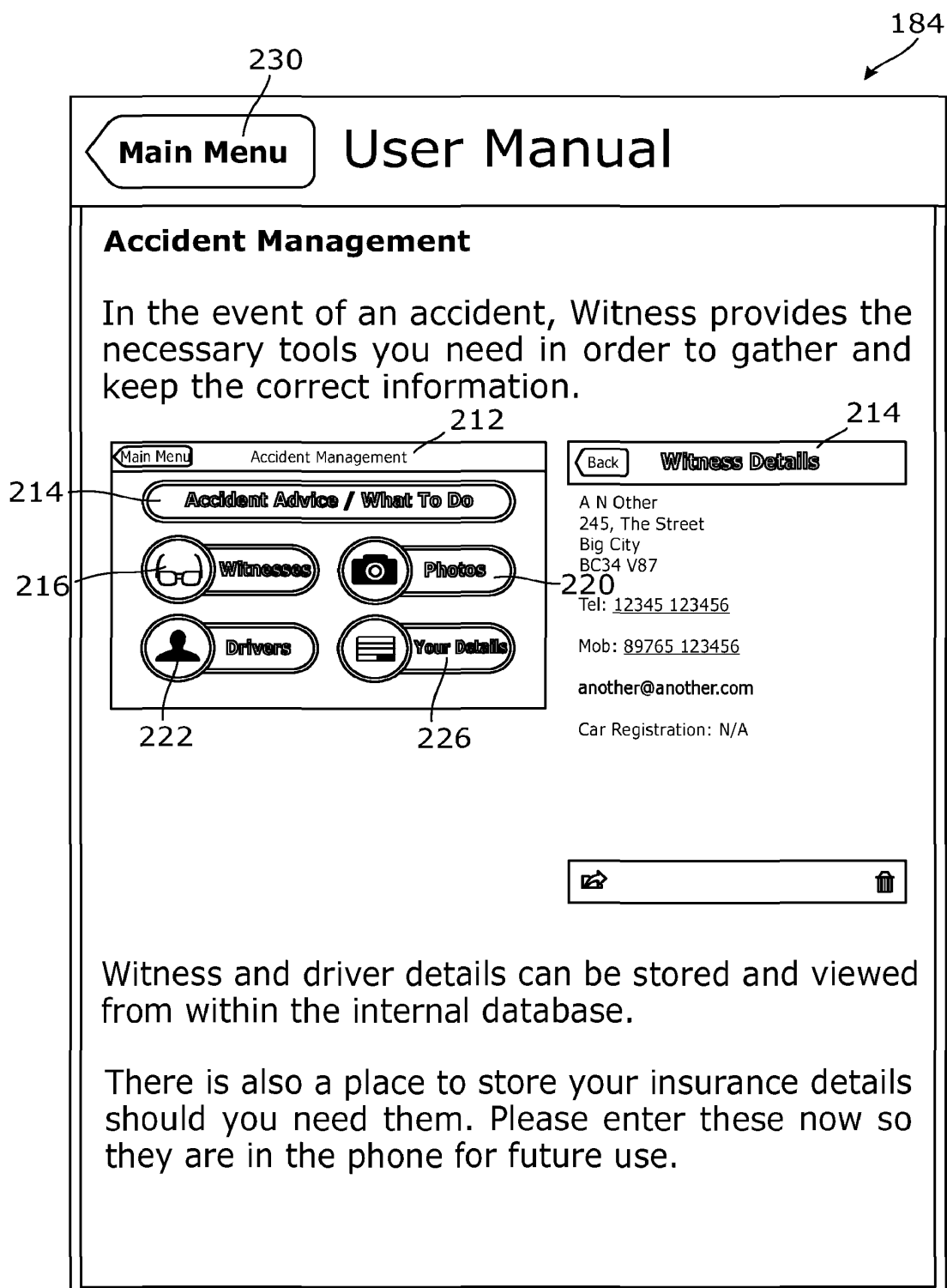


Fig. 14

16/25

230

Accident Management

What should you do?

Make sure you and others are safe

- * Is anyone injured?
- * Is the accident causing a hazard?
- * Has someone left the scene?

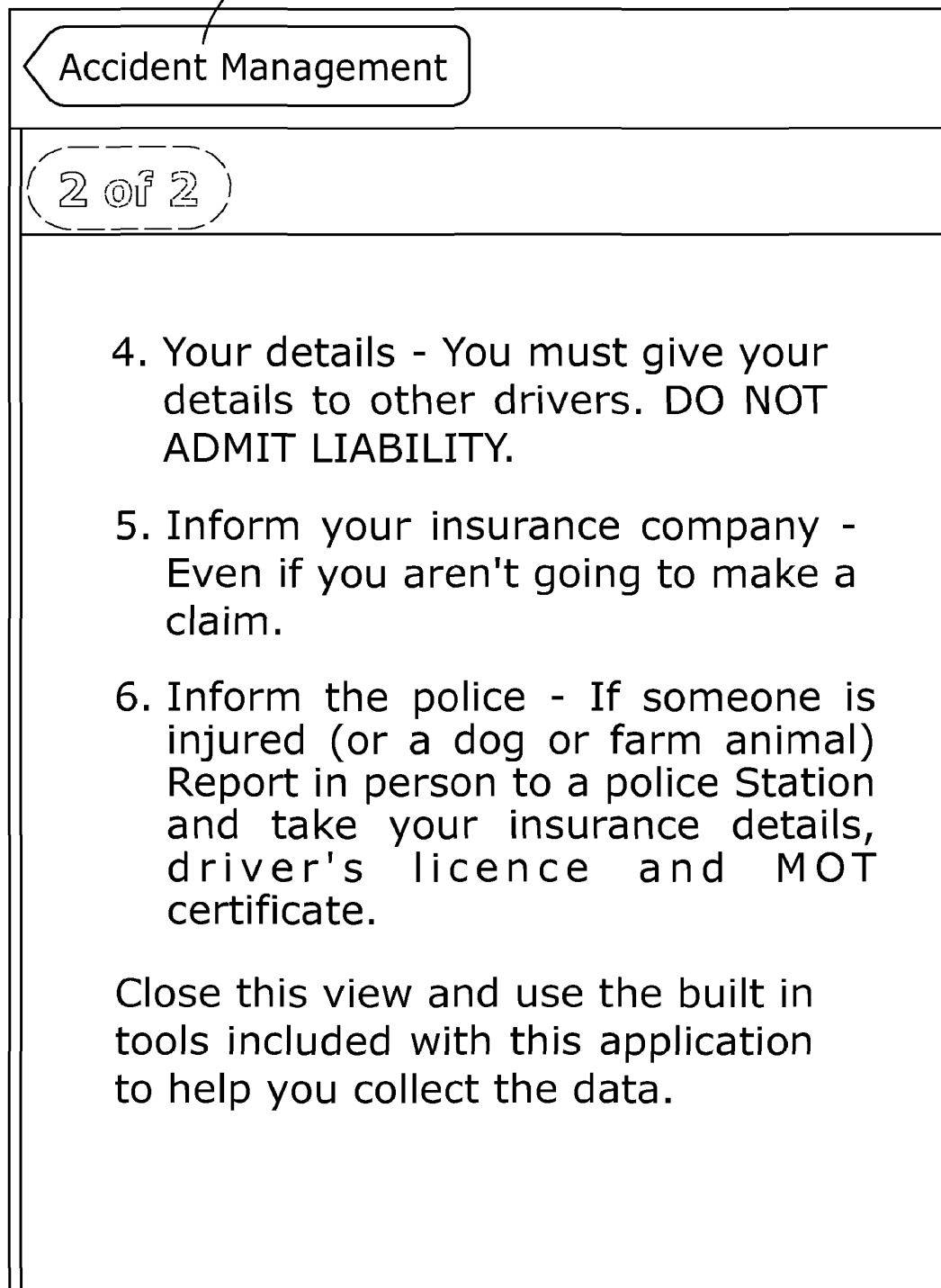
If yes to any of these, then call the emergency services

1. Witnesses - Collect the names and addresses of any witnesses.
2. Photographs - Take pictures of the scene of the accident, damage to cars and other property, and the occupants of the other vehicle.
3. Drivers - Collect names, addresses, registration numbers and insurance details of all other drivers involved.

Fig. 15

17/25

230



Accident Management

2 of 2

4. Your details - You must give your details to other drivers. DO NOT ADMIT LIABILITY.
5. Inform your insurance company - Even if you aren't going to make a claim.
6. Inform the police - If someone is injured (or a dog or farm animal) Report in person to a police Station and take your insurance details, driver's licence and MOT certificate.

Close this view and use the built in tools included with this application to help you collect the data.

Fig. 16

18/25

The image shows a mobile application interface for entering witness details. At the top, there is a header bar with a 'Back' button on the left and the title 'Witness Details' in the center. Below the header, there are six input fields, each preceded by a label. The labels are: 'Full name of witness', 'House number or name', 'Street name', 'Postal town or city name', 'Postal / Zip code', and 'Home telephone number'. Each input field is a simple rounded rectangle. The entire form is enclosed in a rectangular border.

230

218

Back

Witness Details

Full name of witness

House number or name

Street name

Postal town or city name

Postal / Zip code

Home telephone number

Fig. 17

19/25

230

Back

224

Drivers Details

Full name of driver

House number or name

Street name

Postal town or city name

Postal / Zip code

Home telephone number

Fig. 18

20/25

230

228

Accident Management Your Details

Insurance company:

Insurance policy number:

Policy expiry date:

Fig. 19

21/25

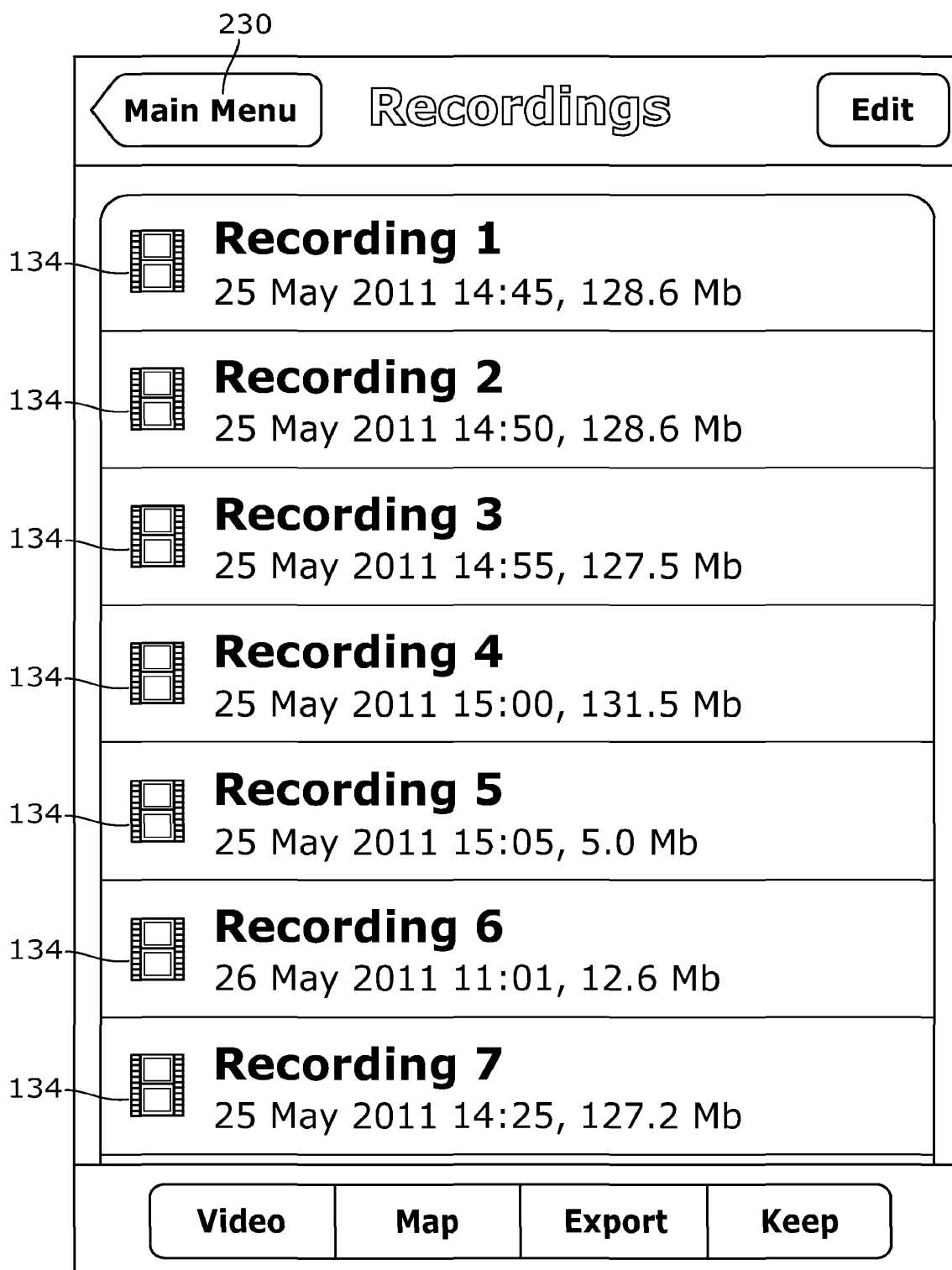


Fig. 20

22/25

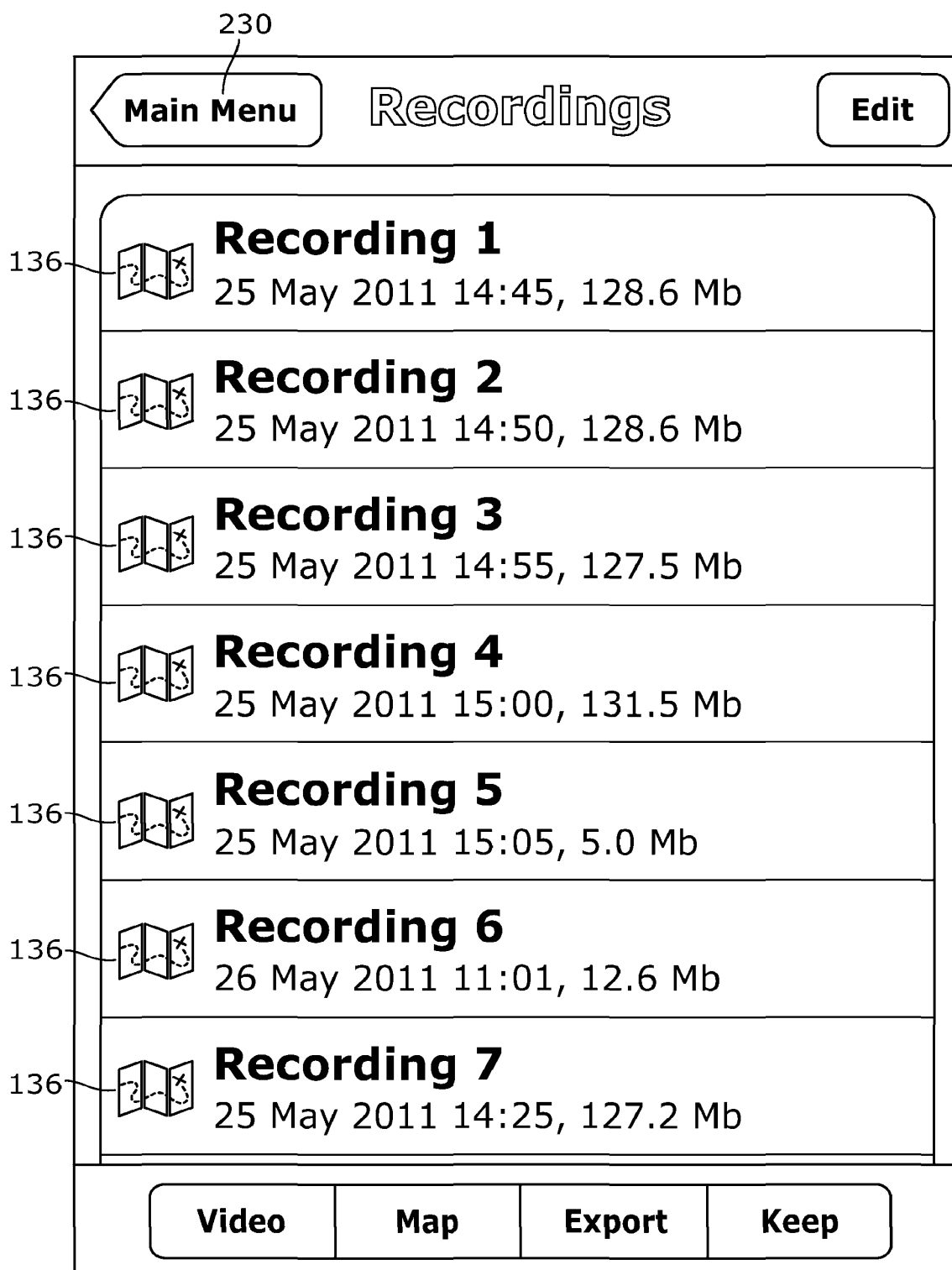


Fig. 21

23/25

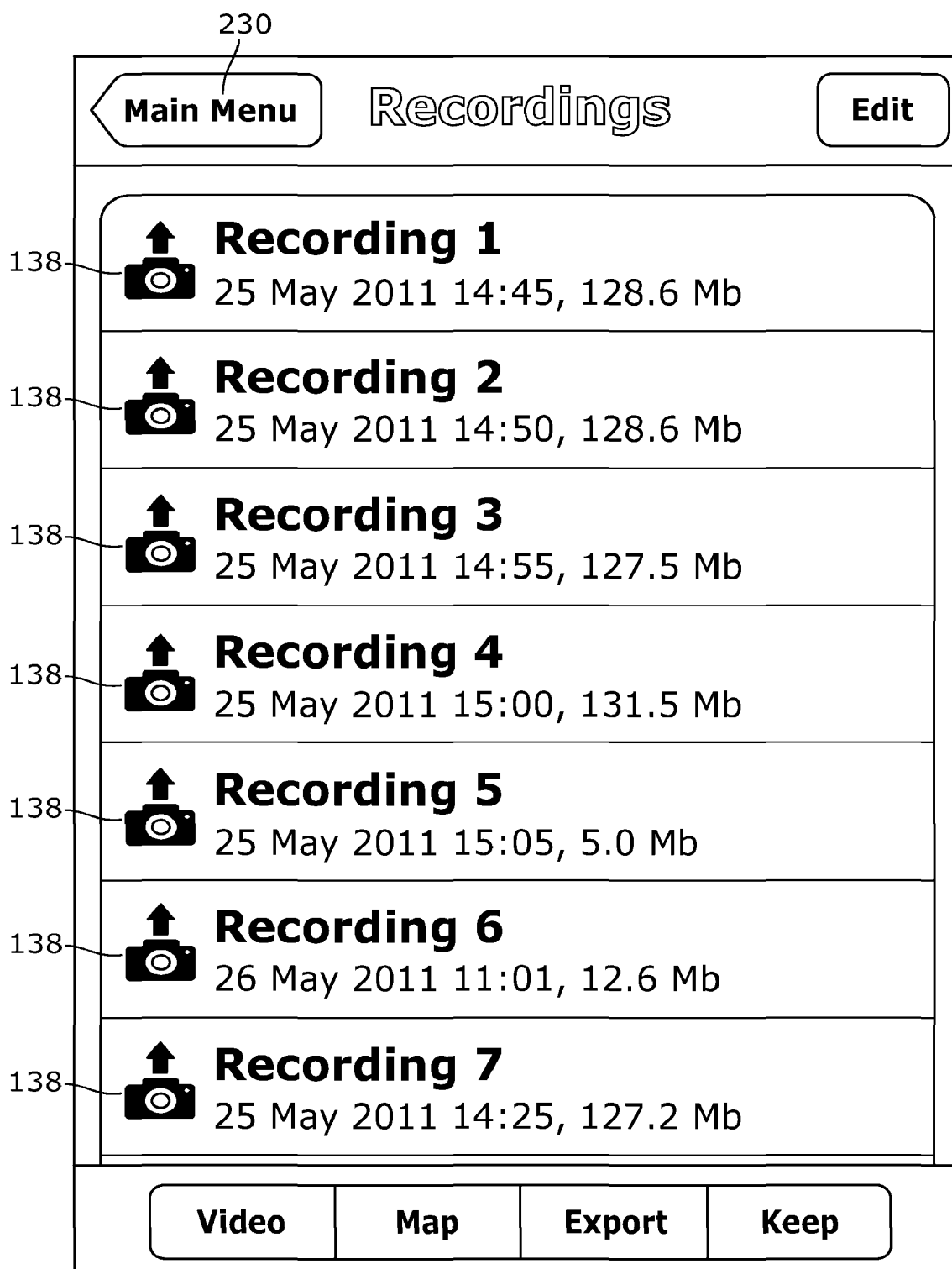


Fig. 22

24/25

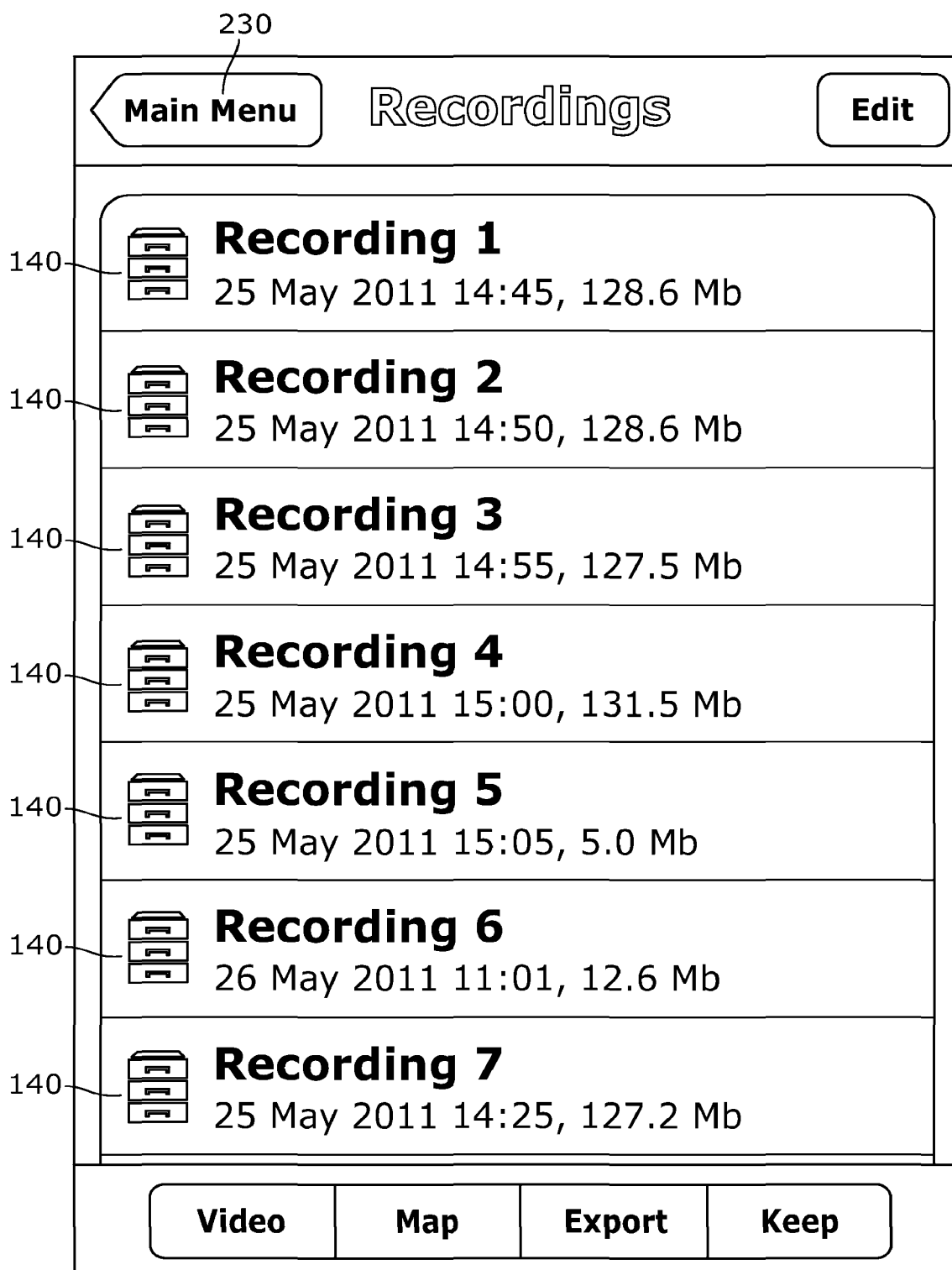


Fig. 23

25/25

PIN

Repeat PIN

Fig. 24

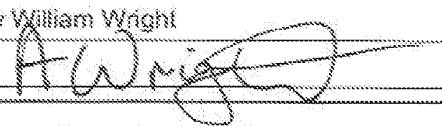
PTC/AIA/01 (06-12)

Approved for use through 01/31/2014 OMB 0551-0522

U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	METHOD AND SYSTEM FOR LOGGING VEHICLE BEHAVIOR
As the below named inventor, I hereby declare that: This declaration is directed to: ☐ The attached application, or ☒ United States application or PCT international application number <u>13/994,455</u> filed on <u>June 14, 2013</u> The above-identified application was made or authorized to be made by me. I believe that I am the original inventor or an original joint inventor of a claimed invention in the application. I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.	
WARNING: Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.	
LEGAL NAME OF INVENTOR Inventor: <u>Andrew William Wright</u> Date (Optional): <u>23/7/2013</u> Signature: <u></u>	
Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.	

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. This 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 1.11 and 1.14. This collection is estimated to take 5 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 ON COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing this form, call 1-800-PTO-39100 and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	044228.010201
		Application Number	
Title of Invention	Method and System for Logging Vehicle Behavior		
The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.			

Secrecy Order 37 CFR 5.2:

☐	Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)
--------------------------	---

Inventor Information:

Inventor 1 Remove				
Legal Name				
Prefix	Given Name	Middle Name	Family Name	Suffix
	Andrew	William	Wright	
Residence Information (Select One) ☐ US Residency ☒ Non US Residency ☐ Active US Military Service				
City	Surrey	Country of Residence ⁱ	GB	
Mailing Address of Inventor:				
Address 1		Cedar Springs, Waverly Drive		
Address 2				
City	Virginia Water	State/Province		
Postal Code	GU25 4 PZ	Country ⁱ	GB	
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button. Add				

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).			
☐ An Address is being provided for the correspondence information of this application.			
Customer Number	30734		
Email Address	patents@bakerlaw.com	Add Email	Remove Email

Application Information:

Title of the Invention	Method and System for Logging Vehicle Behavior		
Attorney Docket Number	044228.010201	Small Entity Status Claimed	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	25	Suggested Figure for Publication (if any)	1

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	044228.010201
		Application Number	
Title of Invention	Method and System for Logging Vehicle Behavior		

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative information during processing.

Please Select One:	☒ Customer Number	☐ US Patent Practitioner	☐ Limited Recognition (37 CFR 11.9)
Customer Number	30734		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending	Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Continuation of	13994455	2013-07-24

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	044228.010201
		Application Number	
Title of Invention	Method and System for Logging Vehicle Behavior		
Prior Application Status	Expired	Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
13994455	a 371 of international	PCT/GB11/52491	2011-12-15
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.			

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)¹ the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Remove Access Code ^j (if applicable)
1118777.0	GB	2011-10-31	
Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Remove Access Code ^j (if applicable)
1109759.9	GB	2011-06-10	
Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Remove Access Code ^j (if applicable)
1101259.8	GB	2011-01-25	
Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Remove Access Code ^j (if applicable)
1021292.6	GB	2010-12-15	
Additional Foreign Priority Data may be generated within this form by selecting the Add button.			

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013. NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	044228.010201
		Application Number	
Title of Invention	Method and System for Logging Vehicle Behavior		

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	044228.010201
		Application Number	
Title of Invention	Method and System for Logging Vehicle Behavior		

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.				
Applicant 1				
If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.				
Clear				
☒ Assignee		☐ Legal Representative under 35 U.S.C. 117		☐ Joint Inventor
☐ Person to whom the inventor is obligated to assign.		☐ Person who shows sufficient proprietary interest		
If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:				
Name of the Deceased or Legally Incapacitated Inventor:				
If the Applicant is an Organization check here. ☐				
Prefix	Given Name	Middle Name	Family Name	Suffix
	<u>Gillian</u>		<u>Switalski</u>	
Mailing Address Information For Applicant:				
Address 1		<u>16 Monks Road</u>		
Address 2				
City	<u>Wentworth</u>	State/Province		
Country	<u>GB</u>	Postal Code	<u>GU25 4RR</u>	
Phone Number		Fax Number		
Email Address				
Additional Applicant Data may be generated within this form by selecting the Add button.				

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	044228.010201
		Application Number	
Title of Invention	Method and System for Logging Vehicle Behavior		

Applicant 2		
If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section. Clear		
☐ Assignee	☐ Legal Representative under 35 U.S.C. 117	☐ Joint Inventor
☐ Person to whom the inventor is obligated to assign.	☐ Person who shows sufficient proprietary interest	
If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:		
Name of the Deceased or Legally Incapacitated Inventor:		
If the Applicant is an Organization check here. ☐		

Prefix	Given Name	Middle Name	Family Name	Suffix
	<u>Andrew</u>	<u>William</u>	<u>Wright</u>	

Mailing Address Information For Applicant:				
Address 1		<u>16 Monks Road</u>		
Address 2				
City	<u>Wentworth</u>	State/Province		
Country	<u>GB</u>	Postal Code	<u>GU25 4RR</u>	
Phone Number		Fax Number		
Email Address				

Additional Applicant Data may be generated within this form by selecting the Add button.

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Assignee 1
Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	044228.010201
		Application Number	
Title of Invention	Method and System for Logging Vehicle Behavior		

If the Assignee or Non-Applicant Assignee is an Organization check here. ☐				
Prefix	Given Name	Middle Name	Family Name	Suffix
Mailing Address Information For Assignee including Non-Applicant Assignee:				
Address 1				
Address 2				
City		State/Province		
Country ⁱ		Postal Code		
Phone Number		Fax Number		
Email Address				
Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.				

Signature:

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). However, if this Application Data Sheet is submitted with the **INITIAL** filing of the application and either box A or B is **not** checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/Mark H. Krietzman/		Date (YYYY-MM-DD)	2016-03-04
First Name	Mark H.	Last Name	Krietzman	Registration Number
41128				
Additional Signature may be generated within this form by selecting the Add button.				

This collection of information is required by 37 CFR 1.76. 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 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the international Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt	
EFS ID:	25113244
Application Number:	15061910
International Application Number:	
Confirmation Number:	4319
Title of Invention:	Method and System for Logging Vehicle Behavior
First Named Inventor/Applicant Name:	Andrew William Wright
Customer Number:	30734
Filer:	Mark Krietzman H/Kate Duttera
Filer Authorized By:	Mark Krietzman H
Attorney Docket Number:	044228.010201
Receipt Date:	04-MAR-2016
Filing Date:	
Time Stamp:	20:31:18
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
------------------------	----

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Application Data Sheet	044228_010201_ADS_UPDATE D.PDF	123642 449b2aca675a462a84b093d1d03331a5a2758535	no	8

Warnings:**Information:**

This is not an USPTO supplied ADS fillable form	
Total Files Size (in bytes):	123642
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. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.	