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Application Number: 16987919 Document Date: 08/07/2020

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Form Revision Date: March 1, 2019

Doc Code: PA..
Document Description: Power of Attorney

PTO/AIA/82A (07-13)
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TRANSMITTAL FOR POWER OF ATTORNEY TO ONE OR MORE REGISTERED PRACTITIONERS

NOTE: This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

Application Number	
Filing Date	August 7, 2020
First Named Inventor	Angel A. Penilla
Title	DIGITAL CAR KEYS AND SHARING OF DIGITAL CAR KEYS USING MOBILE DEVICES
Art Unit	
Examiner Name	
Attorney Docket Number	VOLTP18.5.C5.6

SIGNATURE of Applicant or Patent Practitioner

Signature	/Albert Penilla/	Date (Optional)	
Name	Albert S. Penilla	Registration Number	39487
Title (if Applicant is a juristic entity)	attorney		
Applicant Name (if Applicant is a juristic entity)			

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. If more than one applicant, use multiple forms.

☐ *Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. 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 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 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.

IPR2024-00981
Emerging Auto EX2024

Doc Code: PA..
Document Description: Power of Attorney

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POWER OF ATTORNEY BY APPLICANT

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

Application Number	Filing Date
	August 7, 2020

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)

☐ I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above:

OR

☑ I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

Please recognize or change the correspondence address for the application identified in the attached transmittal letter or the boxes above to:

☐ The address associated with the above-mentioned Customer Number

OR

☑ The address associated with Customer Number: 25920

OR

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

I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

Emerging Automotive, LLC

☐ Inventor or Joint Inventor (title not required below)

☐ Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)

☑ Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)

☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature	/Albert Penilla/	Date (Optional)	
Name	Albert S. Penilla		
Title	Officer of Emerging Automotive, LLC		

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.

☐ Total of forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. 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 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 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.

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POWER OF ATTORNEY BY APPLICANT

No more than ten (10) patent practitioners total may be appointed as set forth below by name and registration number. This page need not be submitted if appointing the Patent Practitioner(s) associated with a Customer Number (see form PTO/AIA/82B):

Name	Registration Number
Albert S. Penilla	39487

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 Patent Application Fee Transmittal

Application Number:	
Filing Date:	
Title of Invention:	DIGITAL CAR KEYS AND SHARING OF DIGITAL CAR KEYS USING MOBILE DEVICES
First Named Inventor/Applicant Name:	Angel A. Penilla
Filer:	Albert S. Penilla
Attorney Docket Number:	VOLTP018.5.C5.6

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	75	75
UTILITY SEARCH FEE	2111	1	330	330
UTILITY EXAMINATION FEE	2311	1	380	380
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**785**

Electronic Acknowledgement Receipt	
EFS ID:	40226462
Application Number:	16987919
International Application Number:	
Confirmation Number:	1086
Title of Invention:	DIGITAL CAR KEYS AND SHARING OF DIGITAL CAR KEYS USING MOBILE DEVICES
First Named Inventor/Applicant Name:	Angel A. Penilla
Customer Number:	25920
Filer:	Albert S. Penilla
Filer Authorized By:	
Attorney Docket Number:	VOLTP018.5.C5.6
Receipt Date:	07-AUG-2020
Filing Date:	
Time Stamp:	15:05:09
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$785
RAM confirmation Number	E202087F05355671
Deposit Account	500805
Authorized User	Albert Penilla
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	Specification	VOLTP018_5_C5_6_App_Efiled.pdf	445454 37a9fade4f47157f703508f20d528284e5a2a4cb	no	78
Warnings:					
Information:					
2	Application Data Sheet	ADS_VOLTP0185C5_6.pdf	1433430 3f0d9eff0a38650b505eb277ac9048da25ca84cb	no	7
Warnings:					
Information:					
3	Oath or Declaration filed	DEC_AAP.pdf	175629 10d465a07abc8c767c6fc575bc6af1fa043b7603	no	2
Warnings:					
Information:					
4	Oath or Declaration filed	DEC_ASP.pdf	175634 ff2db1fae95b75ac484aa1860e1db3f66cc40255	no	2
Warnings:					
Information:					
5	Drawings-only black and white line drawings	VOLTP0185_C6_Formal_drawings_Efiled.pdf	637195 ee12bf3363086ad28d77d048e2e927c5a1744965	no	40
Warnings:					
Information:					
6	Power of Attorney	POA_Efiled.pdf	136068 2bb06f6deb522524c716eed4f77b697014ffde5c	no	4
Warnings:					
Information:					

7	Fee Worksheet (SB06)	fee-info.pdf	35011 b7b24c4dd69041c5f7de2a516c82bf041a1056f7	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	3038421	

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.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	VOLTP018.5.C5.6
	Application Number	
Title of Invention	DIGITAL CAR KEYS AND SHARING OF DIGITAL CAR KEYS USING MOBILE DEVICES	

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
	Angel	A.	Penilla	

Residence Information (Select One) ● US Residency Non US Residency Active US Military Service

City	Sacramento	State/Province	CA	Country of Residence	US

Mailing Address of Inventor:

Address 1	710 Lakeway Drive Suite 200		
Address 2			
City	Sunnyvale	State/Province	CA
Postal Code	94085	Country	US

Inventor 2 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Albert	S.	Penilla	

Residence Information (Select One) ◉ US Residency Non US Residency Active US Military Service

City	Sunnyvale	State/Province	CA	Country of Residence	US

Mailing Address of Inventor:

Address 1	710 Lakeway Drive Suite 200		
Address 2			
City	Sunnyvale	State/Province	CA
Postal Code	94085	Country	US

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	VOLTP018.5.C5.6
	Application Number	
Title of Invention	DIGITAL CAR KEYS AND SHARING OF DIGITAL CAR KEYS USING MOBILE DEVICES	

☐ **An Address is being provided for the correspondence Information of this application.**

Customer Number	25920		
Email Address	al@penillaip.com	Add Email	Remove Email

Application Information:

Title of the Invention	DIGITAL CAR KEYS AND SHARING OF DIGITAL CAR KEYS USING MOBILE DEVICES		
Attorney Docket Number	VOLTP018.5.C5.6	**Small Entity Status Claimed**	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Suggested Class (if any)		**Sub Class (if any)**	
Suggested Technology Center (if any)	2859		
Total Number of Drawing Sheets (if any)	40	**Suggested Figure for Publication (if any)**	35

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	25920		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this 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.

Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	Continuation of	16653958	2019-10-15

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	VOLTP018.5.C5.6
	Application Number	
Title of Invention	DIGITAL CAR KEYS AND SHARING OF DIGITAL CAR KEYS USING MOBILE DEVICES	

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
16653958	Continuation of	15854241	2017-12-26	10442399	2019-10-15
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15854241	Continuation of	15607418	2017-05-26	10407026	2019-09-10
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15607418	Continuation of	15344566	2016-11-06	9663067	2017-05-30
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15344566	Continuation of	15180306	2016-06-13	9499129	2016-11-22
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15180306	Continuation of	14303442	2014-06-12	9365188	2016-06-14
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14303442	Continuation of	14063638	2013-10-25	9189900	2015-11-17
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14063638	Continuation in part of	13842158	2013-03-15	9229905	2016-01-05
Prior Application Status	Expired				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)		
13842158	non provisional of	61745729	2012-12-24		
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14063638	Continuation in part of	13452882	2012-04-22	9123035	2015-09-01
Prior Application Status	Expired				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)		
13452882	non provisional of	61478436	2011-04-22		

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button. Add

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	VOLTP018.5.C5.6
	Application Number	
Title of Invention	DIGITAL CAR KEYS AND SHARING OF DIGITAL CAR KEYS USING MOBILE DEVICES	

Foreign Priority Information:

This section allows for the applicant to claim benefit of foreign priority and to identify any prior foreign application for which priority is not claimed. 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(a).

Remove

Application Number	Country[i]	Filing Date (YYYY-MM-DD)	Priority Claimed
			● Yes No

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button. Add

Authorization to Permit Access:

Authorization to Permit Access to the Instant Application by the Participating Offices

If 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 World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the instant patent application is filed access to the instant patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the instant patent application is filed to have access to the instant patent application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the instant patent application with respect to: 1) the instant patent application-as-filed; 2) any foreign application to which the instant patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the instant patent application; and 3) any U.S. application-as-filed from which benefit is sought in the instant patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing this Authorization.

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.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	VOLTP018.5.C5.6
	Application Number	
Title of Invention	DIGITAL CAR KEYS AND SHARING OF DIGITAL CAR KEYS USING MOBILE DEVICES	

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. ☒

Organization Name	Emerging Automotive, LLC		
Mailing Address Information:			
Address 1	2053 Grant Road #366		
Address 2			
City	Los Altos	**State/Province**	CA
Country	US	Postal Code	94024
Phone Number	408-749-6903	Fax Number	
Email Address			

Additional Applicant Data may be generated within this form by selecting the Add button. Add

Non-Applicant Assignee Information:

Providing assignment information in this section does not subsitute 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 only if non-applicant assignee information is desired to be included on the patent application publication in accordance with 37 CFR 1.215(b). Do not include in this section 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), as the patent application publication will include the name of the applicant(s).

Remove

If the Assignee is an Organization check here. ☐

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	VOLTP018.5.C5.6
	Application Number	
Title of Invention	DIGITAL CAR KEYS AND SHARING OF DIGITAL CAR KEYS USING MOBILE DEVICES	

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

Mailing Address Information:

Address 1			
Address 2			
City		**State/Province**	
Country [i]		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Assignee Data may be generated within this form by selecting the Add button. Add

Signature:

Remove

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

Signature	/Albert Penilla/			Date (YYYY-MM-DD)	2020-08-07
First Name	Albert	Last Name	Penilla	Registration Number	39487

Additional Signature may be generated within this form by selecting the Add button. Add

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.**

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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:

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2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	VEHICLES AND CLOUD SYSTEMS FOR SHARING E-KEYS TO ACCESS AND USE VEHICLES

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 _____

filed on _____.

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: Angel A. Penilla Date (Optional) :_____

Signature: /Angel Penilla/

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. 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 1 minute 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.**

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I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

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LEGAL NAME OF INVENTOR

Inventor: Albert S. Penilla Date (Optional) :_____

Signature: /Albert Penilla/

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.

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Remote distributed or centralized User / login specific vehicle use metrics, history, data storage, tracking and analysis repository
Remote distributed or centralized User / login authentication system or on board vehicle authentication system
Login Credentials, vehicle data
Authentication Response, Vehicle settings
Network
User 1
User 2
User 3
User N
On board vehicle login interface, remote control, biometric interface

FIG. 1



User 1

User 1 Logins	User 1 Roles	User 1 Vehicles
• Administrator(edit) Add New	• Owner(edit) • Weekend driving(edit) • Commute driving(edit) Add New	• Ford SUV(edit) • Honda Hybrid(edit) Add New



User 2

User 2 Logins	User 2 Roles	User 2 Vehicles
• Child(edit)	• School commute(edit) • Errands(edit)	• Honda Hybrid



User 1

User 2 Logins	User 2 Roles	User 2 Vehicles
• Child(edit) Add New	• School commute(edit) • Errands(edit) Add New	• Honda Hybrid Add New

FIG. 2

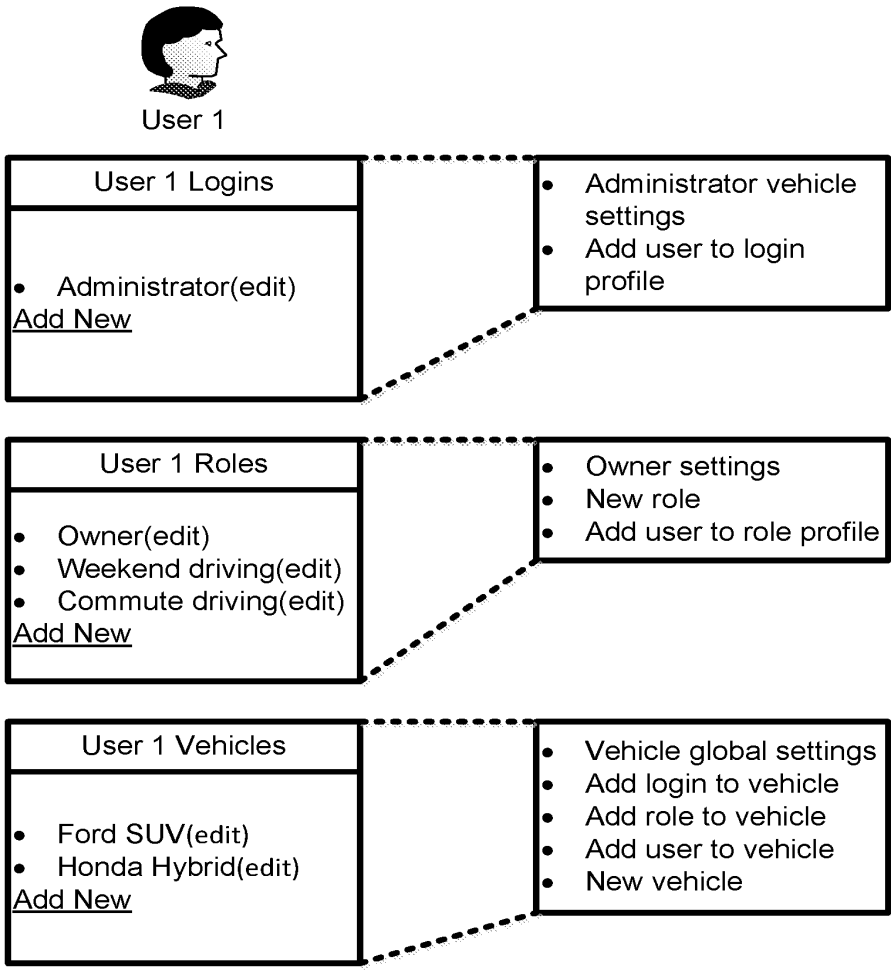

User 1
User 1 Logins
Administrator(edit)
Add New
Administrator vehicle settings
Add user to login profile
User 1 Roles
Owner(edit)
Weekend driving(edit)
Commute driving(edit)
Add New
Owner settings
New role
Add user to role profile
User 1 Vehicles
Ford SUV(edit)
Honda Hybrid(edit)
Add New
Vehicle global settings
Add login to vehicle
Add role to vehicle
Add user to vehicle
New vehicle

FIG. 3



User 2

User 2's login settings for login: CHILD	
Fuel use settings	• Electric battery • Plug in • Fuel • Hybrid
Driving characteristics	• Speed restrictions • Fuel use restrictions
Location based settings	• GPS aided travel restrictions • Map restrictions • Travel radius boundaries • Dynamically load maps • Dynamically load directions • Dynamically load fuel • Dynamically load charge • Dynamically load battery • Fuel purchase location restrictions
Time based use and restrictions	• Day driving • Night driving • Time specific driving
Automatic purchase settings	• Financial institution linking • Fuel purchase settings • Charge time purchase settings • Battery purchase settings • Car wash purchase settings

User editable

Admin or restricted

FIG. 4



User 2

User 1's login settings for login: CHILD	
Tracking & metrics	• Vehicle cameras • Vehicle event recording • Mileage usage characteristics • Top & average speeds • Driving history maps and graphs • Fuel efficiency • Wear and tear notifications
Comfort	• Climate • Seats positions • Seat heater / cooler • Suspension/ride settings • Entry lighting • Remote start / stop
Entertainment	• Radio Memory • Internet access settings • Streaming services
Driving Modes	• Sport • Comfortable • Soft • Off-road • High performance • Economy
Refueling routing and purchase	• Incentive based fuel finder • Refueling availability maps • Offers • History • Metrics

User editable

Admin or restricted

FIG. 5

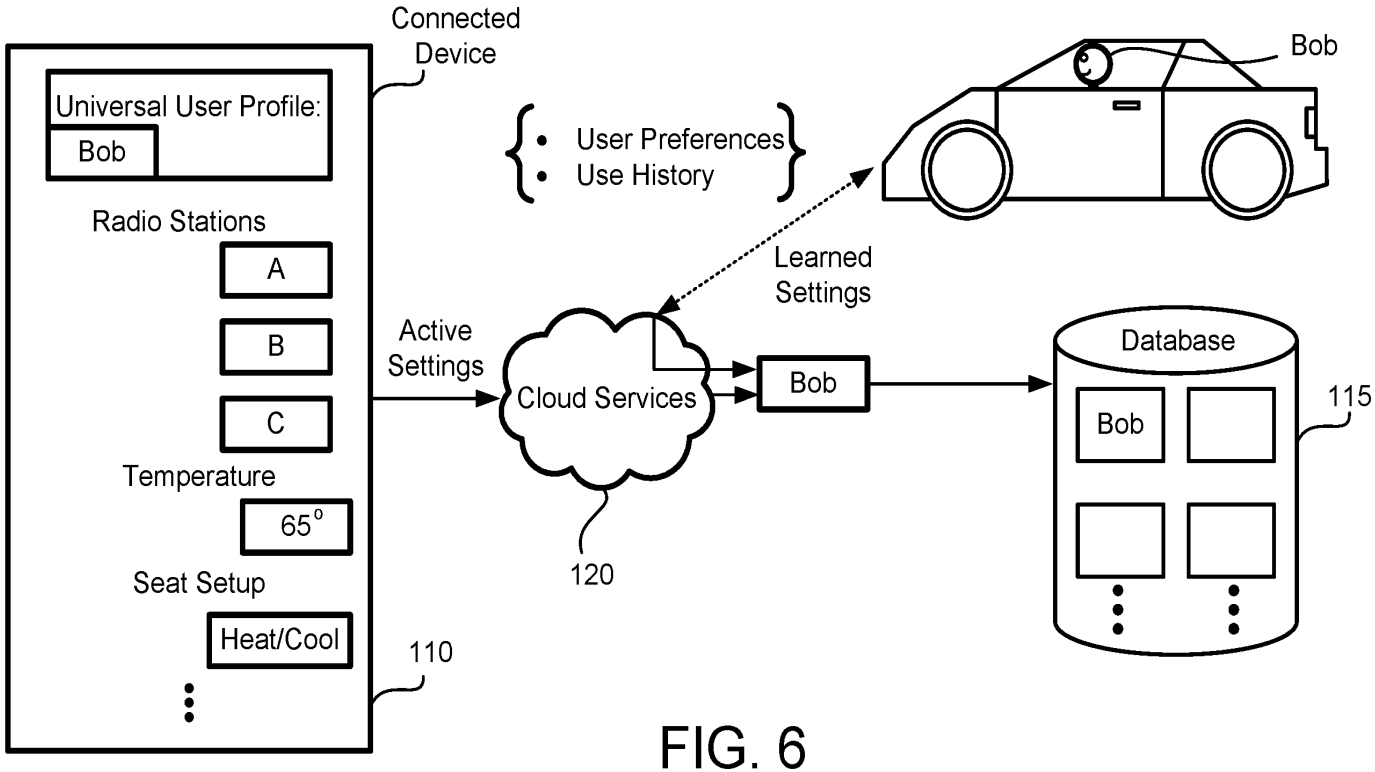


FIG. 6

EA_KIA-006620
IPR2024-00981
Emerging Auto EX2024

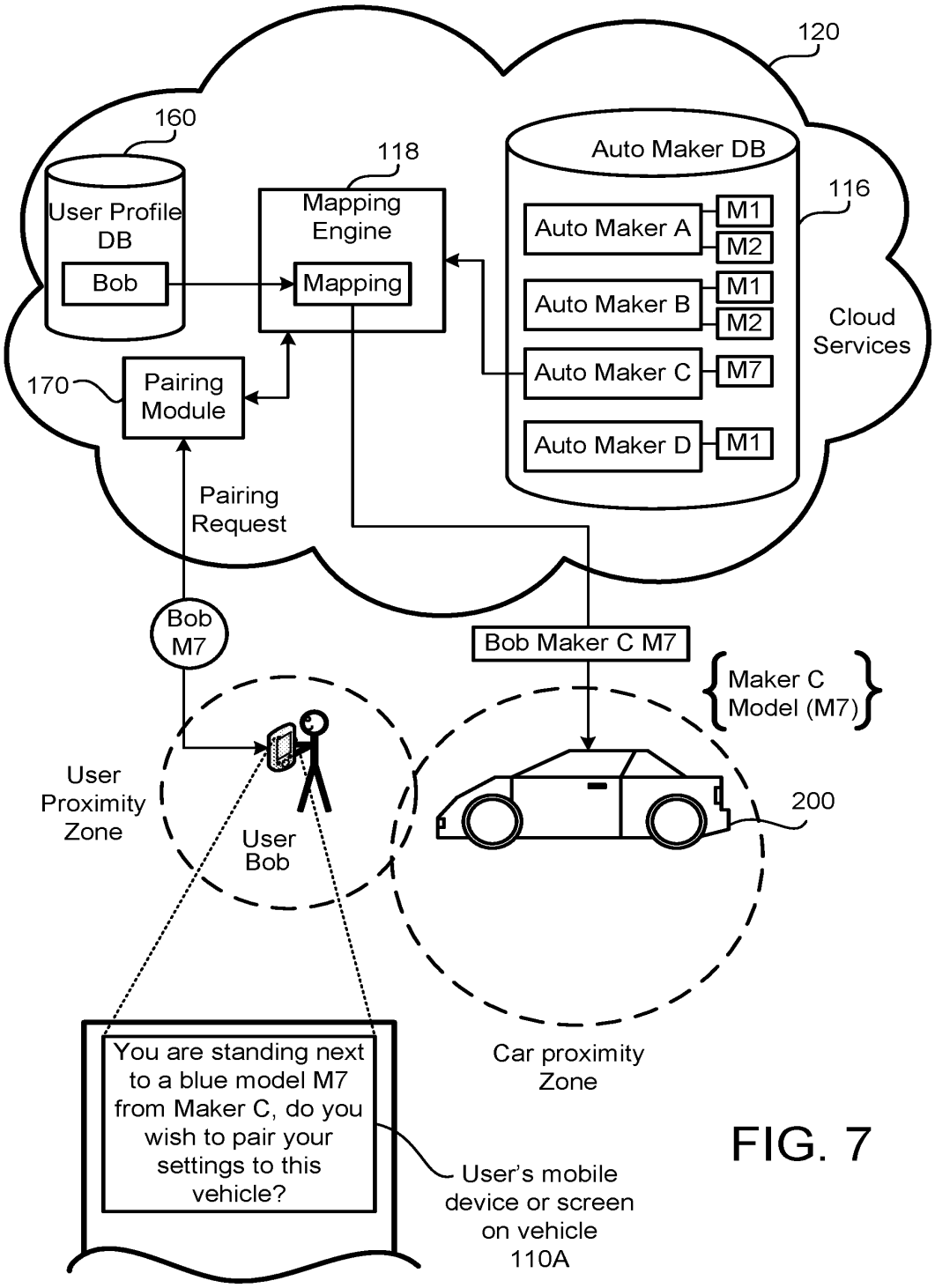
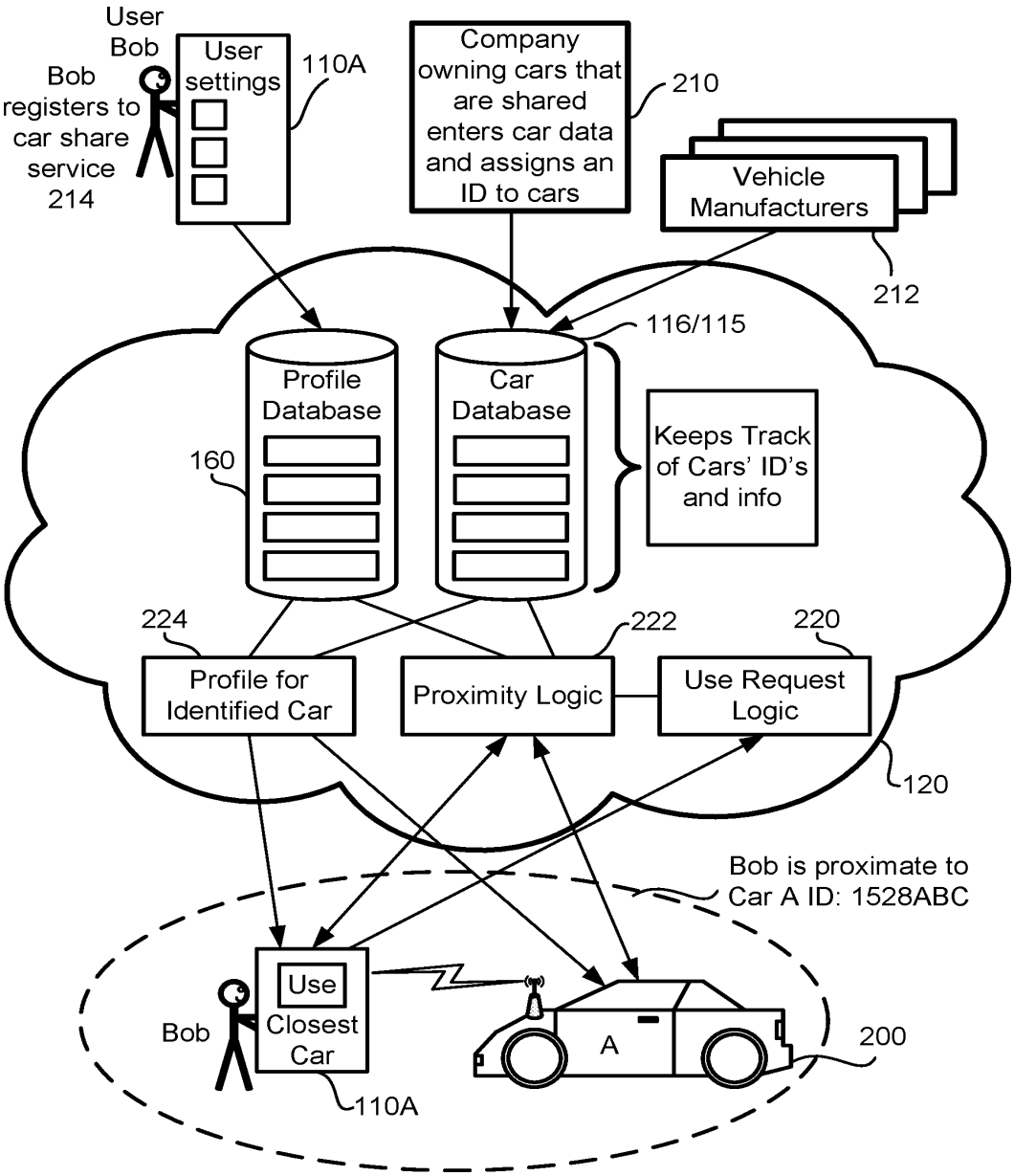

120
160
118
Auto Maker DB
116
User Profile DB
Bob
Mapping Engine
Mapping
Auto Maker A
M1
M2
Auto Maker B
M1
M2
Auto Maker C
M7
Auto Maker D
M1
Cloud Services
170
Pairing Module
Pairing Request
Bob M7
Bob Maker C M7
Maker C Model (M7)
User Proximity Zone
User Bob
200
Car proximity Zone
You are standing next to a blue model M7 from Maker C, do you wish to pair your settings to this vehicle?
User's mobile device or screen on vehicle 110A

FIG. 7



- Car beeps / lights up when enabled
- Opens
- Profile transferred to Car A
- Use of Car A is Managed in Bob's online account
- Payment for use made direct
- Use of Car A is allowed by predefined rules

FIG. 8

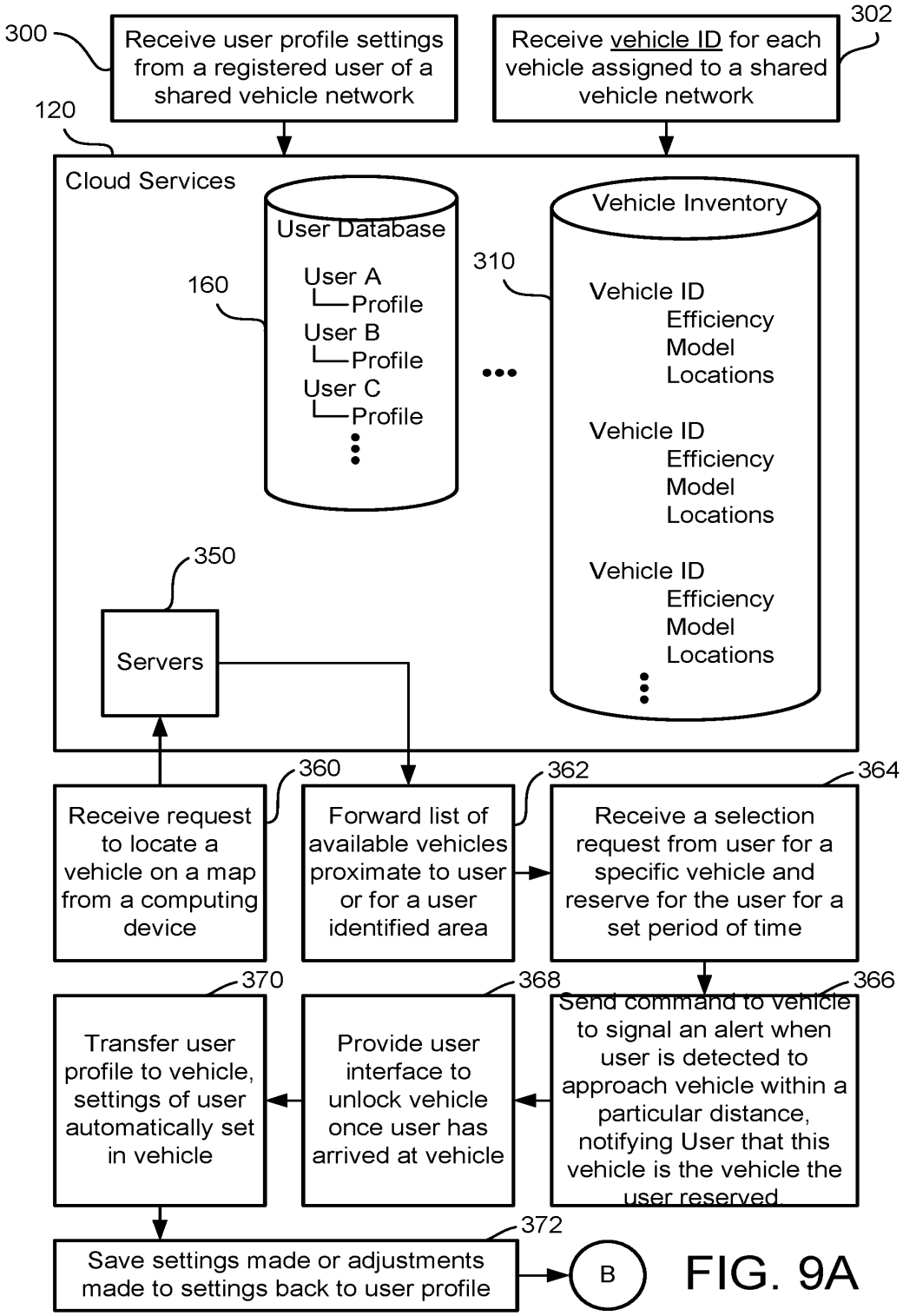

300
Receive user profile settings from a registered user of a shared vehicle network
302
Receive vehicle ID for each vehicle assigned to a shared vehicle network
120
Cloud Services
User Database
160
User A
Profile
User B
Profile
User C
Profile
310
Vehicle Inventory
Vehicle ID
Efficiency
Model
Locations
Vehicle ID
Efficiency
Model
Locations
Vehicle ID
Efficiency
Model
Locations
350
Servers
360
Receive request to locate a vehicle on a map from a computing device
362
Forward list of available vehicles proximate to user or for a user identified area
364
Receive a selection request from user for a specific vehicle and reserve for the user for a set period of time
370
Transfer user profile to vehicle, settings of user automatically set in vehicle
368
Provide user interface to unlock vehicle once user has arrived at vehicle
366
Send command to vehicle to signal an alert when user is detected to approach vehicle within a particular distance, notifying User that this vehicle is the vehicle the user reserved.
372
Save settings made or adjustments made to settings back to user profile
B

FIG. 9A

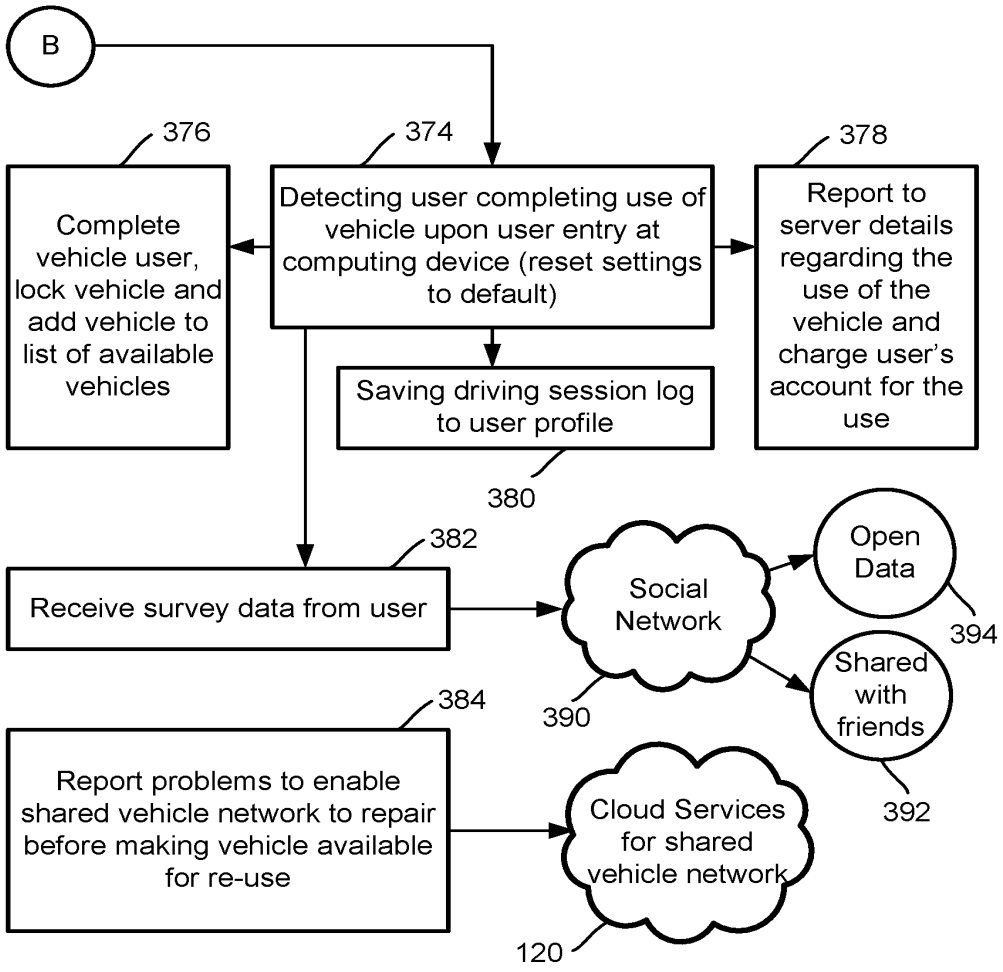

B
376
374
378
Complete vehicle user, lock vehicle and add vehicle to list of available vehicles
Detecting user completing use of vehicle upon user entry at computing device (reset settings to default)
Report to server details regarding the use of the vehicle and charge user's account for the use
Saving driving session log to user profile
380
382
Receive survey data from user
Social Network
Open Data
394
Shared with friends
390
392
384
Report problems to enable shared vehicle network to repair before making vehicle available for re-use
Cloud Services for shared vehicle network
120

FIG. 9B

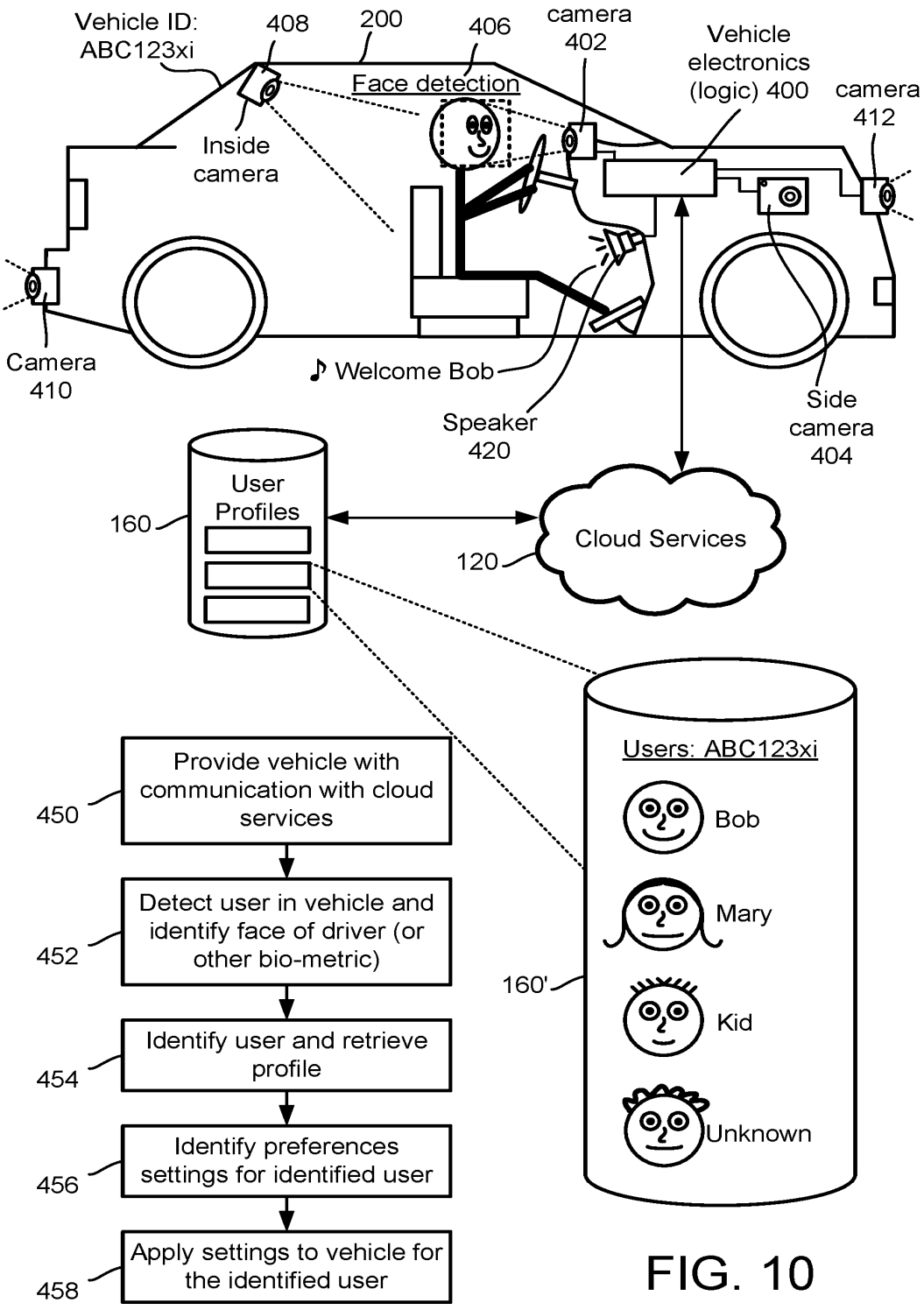

Vehicle ID:
ABC123xi
408
200
406
camera
402
Vehicle
electronics
(logic) 400
camera
412
Face detection
Inside
camera
Camera
410
♪ Welcome Bob
Speaker
420
Side
camera
404
User
Profiles
160
Cloud Services
120
Users: ABC123xi
Bob
Mary
Kid
Unknown
160'
Provide vehicle with communication with cloud services
450
Detect user in vehicle and identify face of driver (or other bio-metric)
452
Identify user and retrieve profile
454
Identify preferences settings for identified user
456
Apply settings to vehicle for the identified user
458

FIG. 10

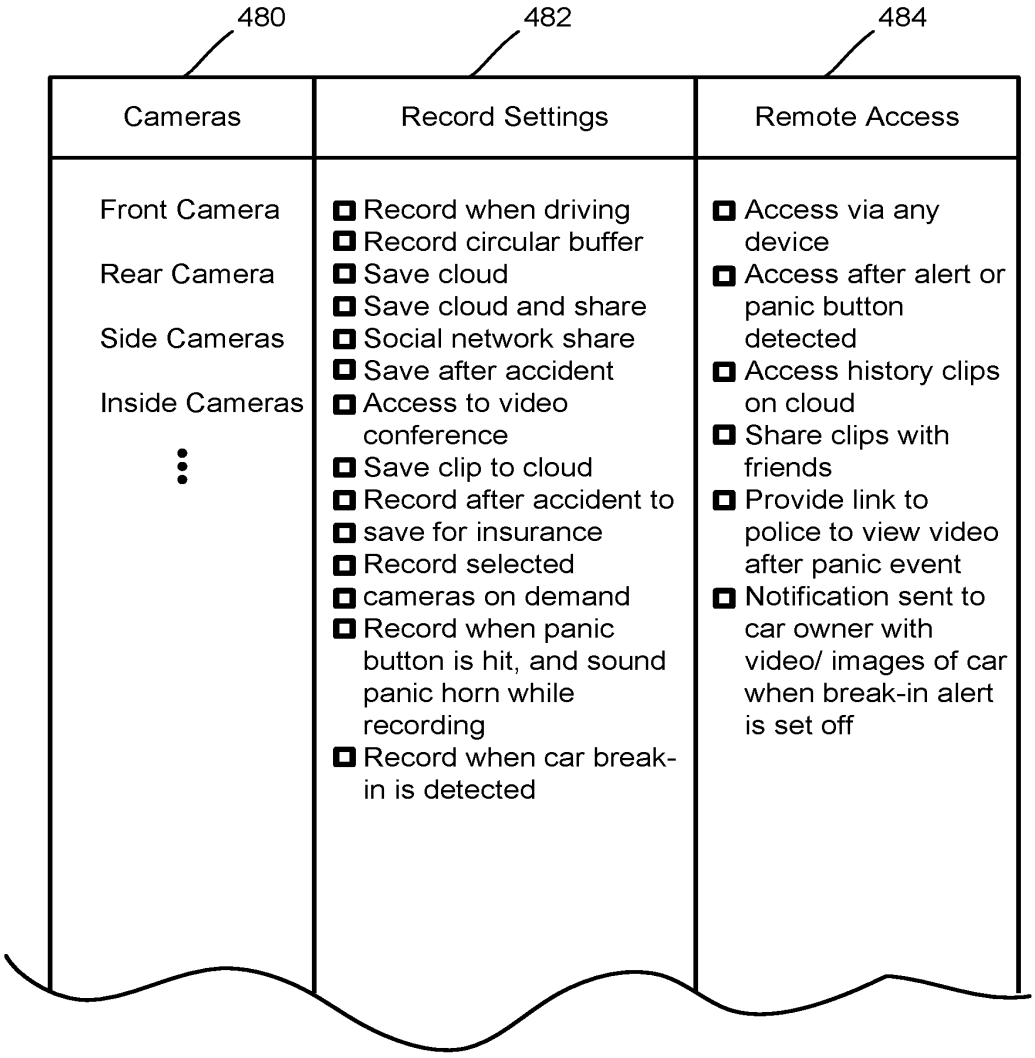

480
482
484
Cameras
Record Settings
Remote Access
Front Camera
Rear Camera
Side Cameras
Inside Cameras
Record when driving
Record circular buffer
Save cloud
Save cloud and share
Social network share
Save after accident
Access to video conference
Save clip to cloud
Record after accident to save for insurance
Record selected cameras on demand
Record when panic button is hit, and sound panic horn while recording
Record when car break-in is detected
Access via any device
Access after alert or panic button detected
Access history clips on cloud
Share clips with friends
Provide link to police to view video after panic event
Notification sent to car owner with video/ images of car when break-in alert is set off

FIG. 11

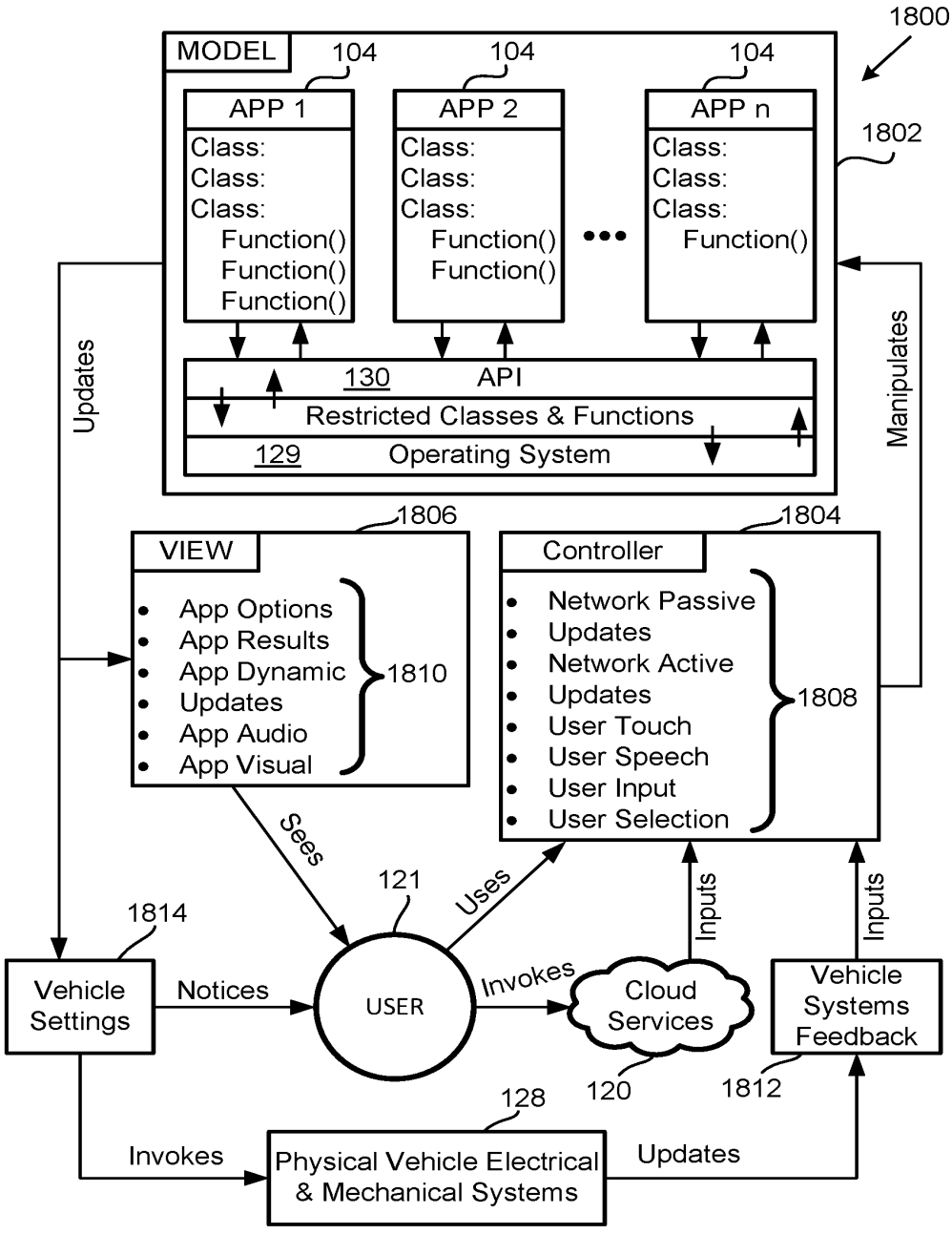

1800
MODEL
104
104
104
APP 1
APP 2
APP n
1802
Class:
Class:
Class:
Function()
Function()
Function()
Class:
Class:
Class:
Function()
Function()
Class:
Class:
Class:
Function()
Updates
Manipulates
130
API
Restricted Classes & Functions
129
Operating System
1806
1804
VIEW
Controller
App Options
App Results
App Dynamic
Updates
App Audio
App Visual
1810
Network Passive
Updates
Network Active
Updates
User Touch
User Speech
User Input
User Selection
1808
Sees
121
Uses
Inputs
Inputs
1814
Vehicle Settings
Notices
USER
Invokes
Cloud Services
Vehicle Systems Feedback
120
1812
128
Invokes
Physical Vehicle Electrical & Mechanical Systems
Updates

FIG. 12

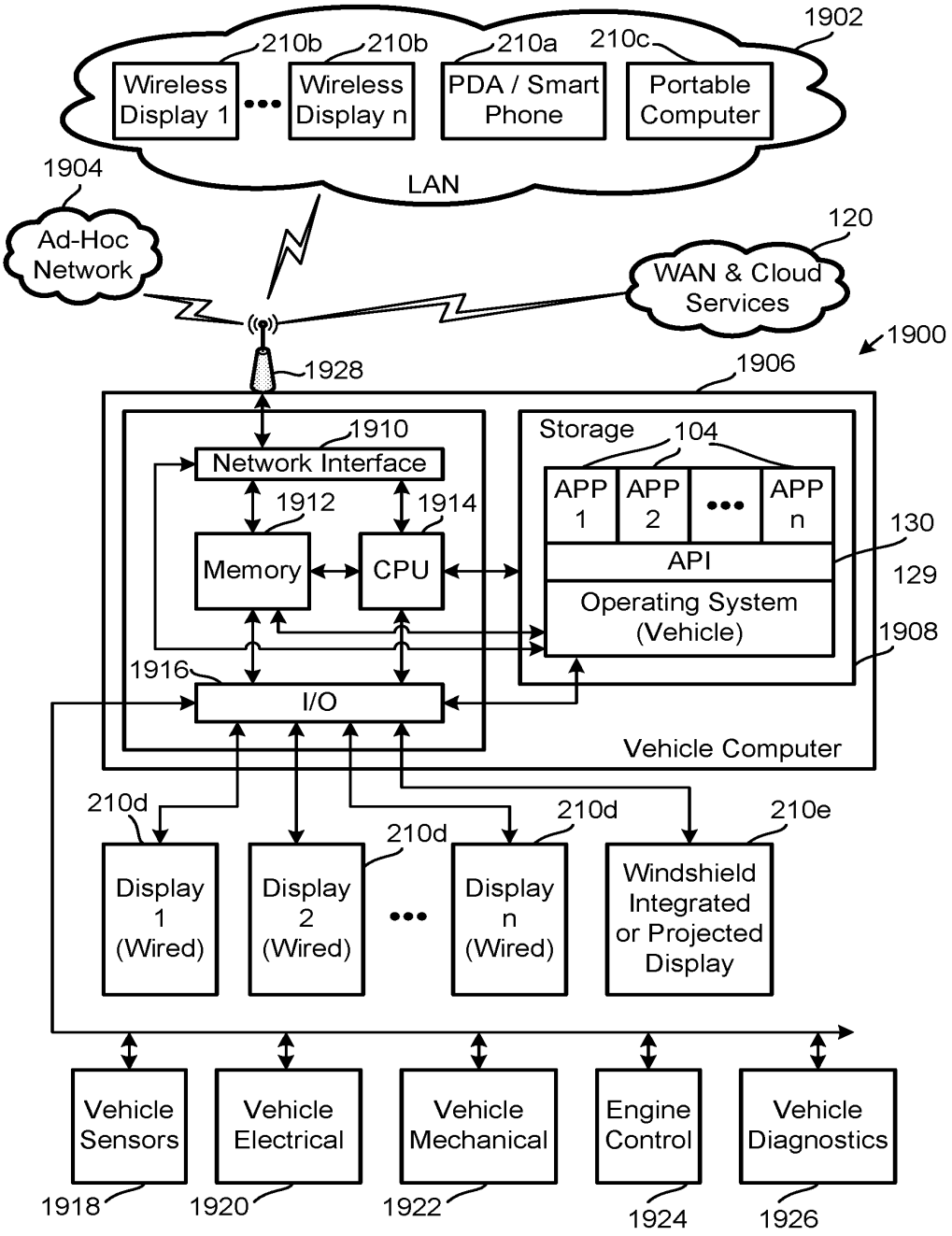

1902
210b
210b
210a
210c
Wireless Display 1
Wireless Display n
PDA / Smart Phone
Portable Computer
LAN
1904
Ad-Hoc Network
120
WAN & Cloud Services
1900
1928
1906
1910
Network Interface
Storage
104
APP 1
APP 2
APP n
1912
1914
Memory
CPU
API
130
129
Operating System (Vehicle)
1908
1916
I/O
Vehicle Computer
210d
210d
210d
210e
Display 1 (Wired)
Display 2 (Wired)
Display n (Wired)
Windshield Integrated or Projected Display
Vehicle Sensors
Vehicle Electrical
Vehicle Mechanical
Engine Control
Vehicle Diagnostics
1918
1920
1922
1924
1926

FIG. 13A

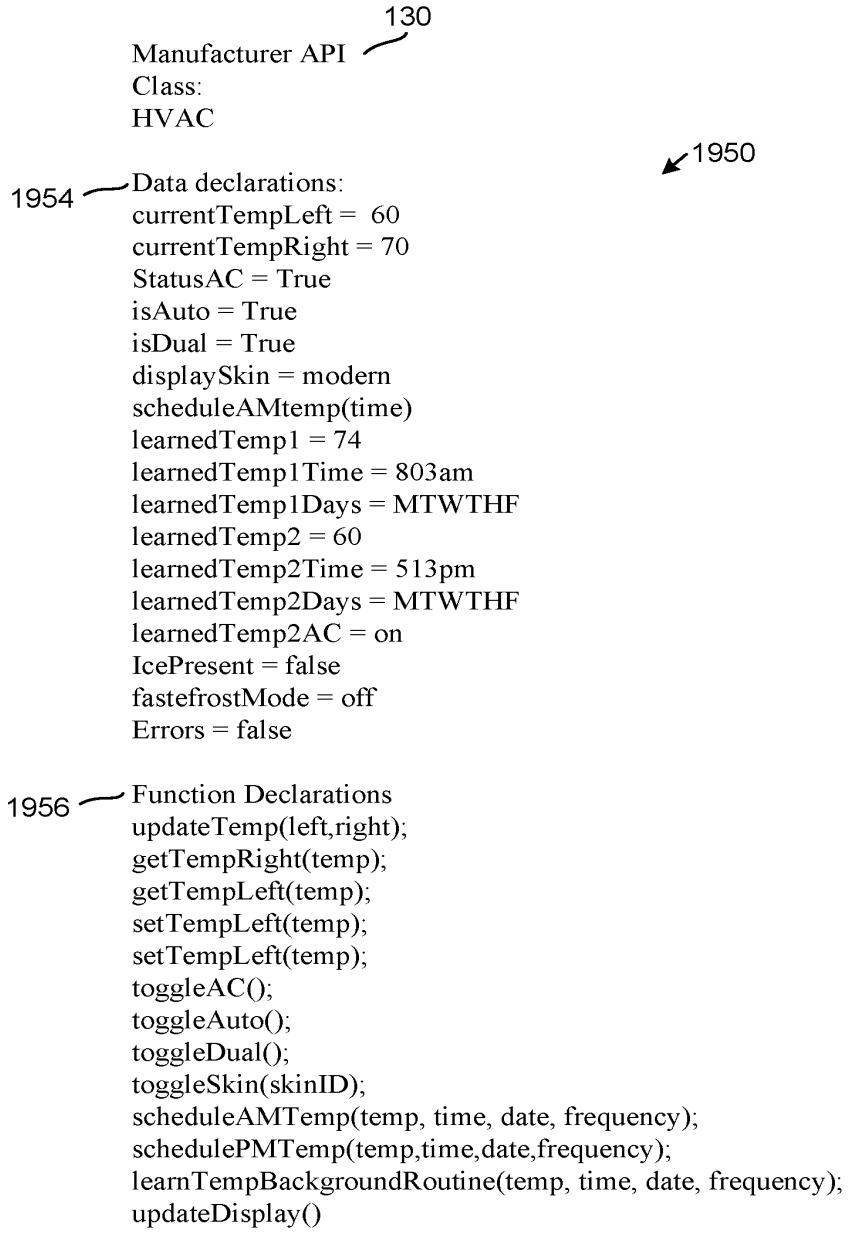

130
Manufacturer API
Class:
HVAC
1950
1954
Data declarations:
currentTempLeft = 60
currentTempRight = 70
StatusAC = True
isAuto = True
isDual = True
displaySkin = modern
scheduleAMtemp(time)
learnedTemp1 = 74
learnedTemp1Time = 803am
learnedTemp1Days = MTWTHF
learnedTemp2 = 60
learnedTemp2Time = 513pm
learnedTemp2Days = MTWTHF
learnedTemp2AC = on
IcePresent = false
fastefrostMode = off
Errors = false
1956
Function Declarations
updateTemp(left,right);
getTempRight(temp);
getTempLeft(temp);
setTempLeft(temp);
setTempLeft(temp);
toggleAC();
toggleAuto();
toggleDual();
toggleSkin(skinID);
scheduleAMTemp(temp, time, date, frequency);
schedulePMTemp(temp,time,date,frequency);
learnTempBackgroundRoutine(temp, time, date, frequency);
updateDisplay()

FIG. 13B

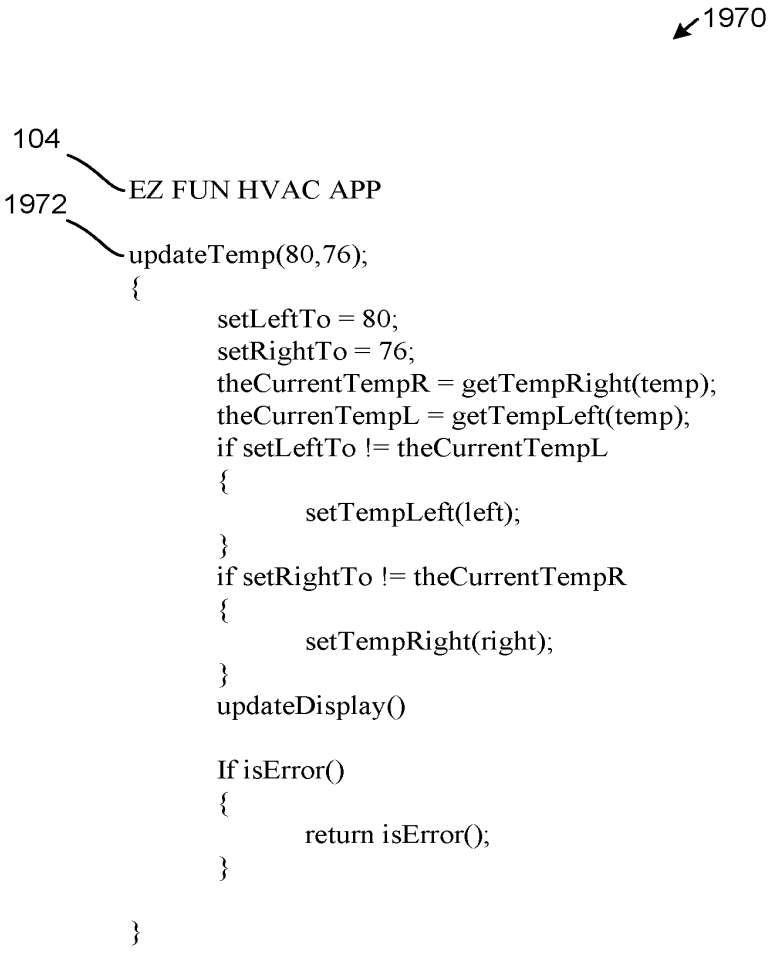

1970
104
EZ FUN HVAC APP
1972
updateTemp(80,76);
{
setLeftTo = 80;
setRightTo = 76;
theCurrentTempR = getTempRight(temp);
theCurrenTempL = getTempLeft(temp);
if setLeftTo != theCurrentTempL
{
setTempLeft(left);
}
if setRightTo != theCurrentTempR
{
setTempRight(right);
}
updateDisplay()
If isError()
{
return isError();
}
}

FIG. 13C

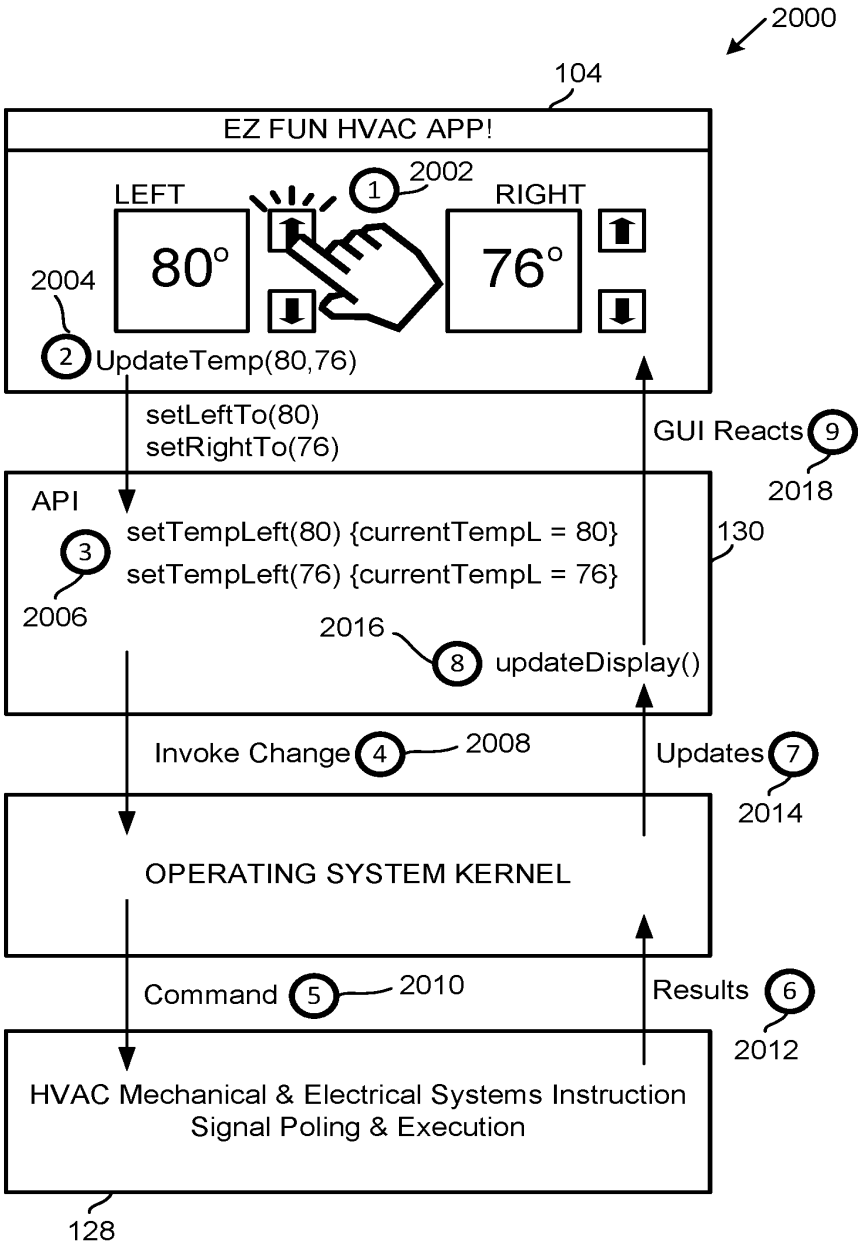

2000
104
EZ FUN HVAC APP!
LEFT
RIGHT
1
2002
80°
76°
2004
2
UpdateTemp(80,76)
setLeftTo(80)
setRightTo(76)
GUI Reacts
9
2018
API
3
setTempLeft(80) {currentTempL = 80}
setTempLeft(76) {currentTempL = 76}
2006
130
2016
8
updateDisplay()
Invoke Change
4
2008
Updates
7
2014
OPERATING SYSTEM KERNEL
Command
5
2010
Results
6
2012
HVAC Mechanical & Electrical Systems Instruction
Signal Poling & Execution
128

FIG. 14

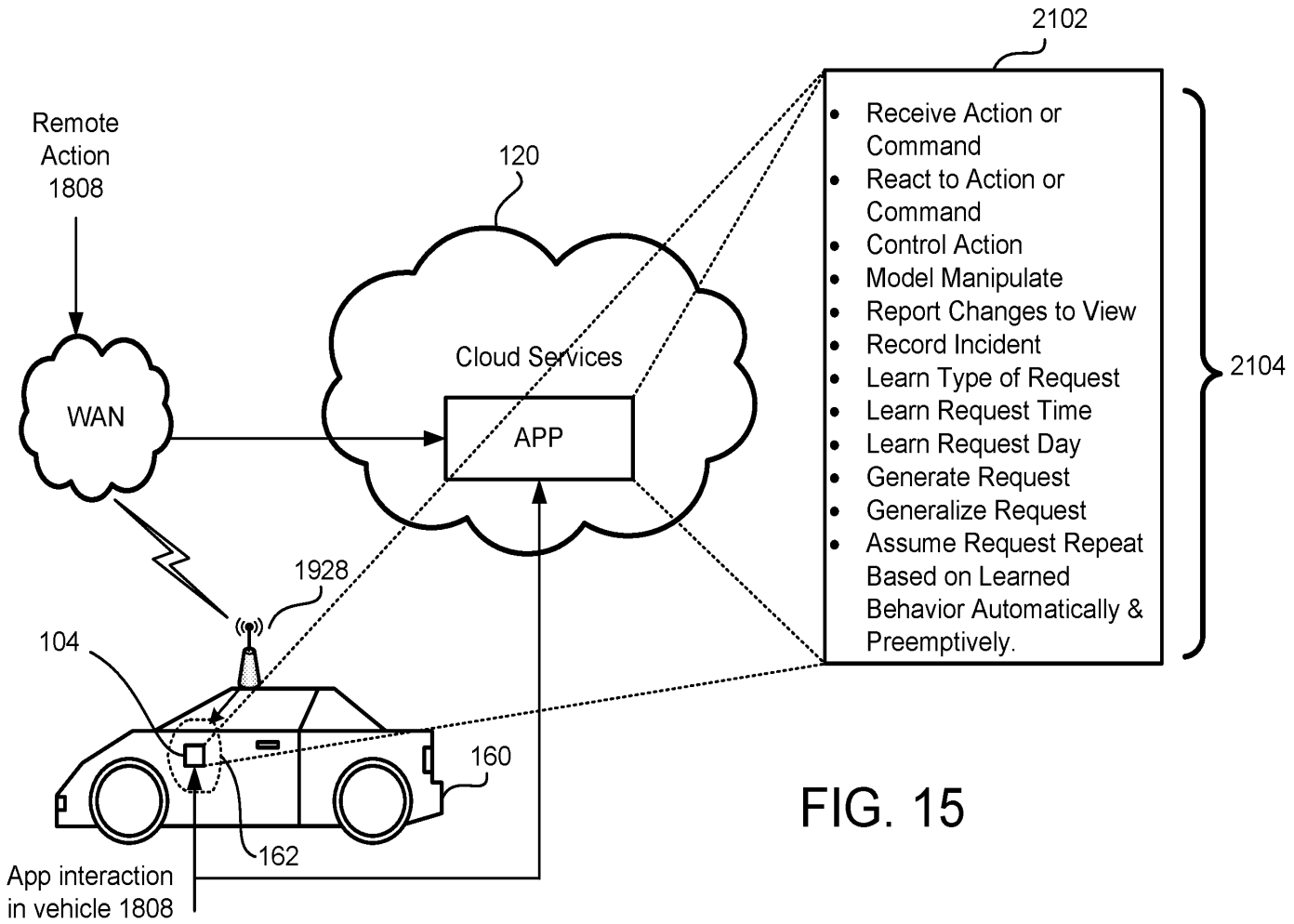


FIG. 15

IPR2024-00981
Emerging Auto EX2024
EA_KIA-006632

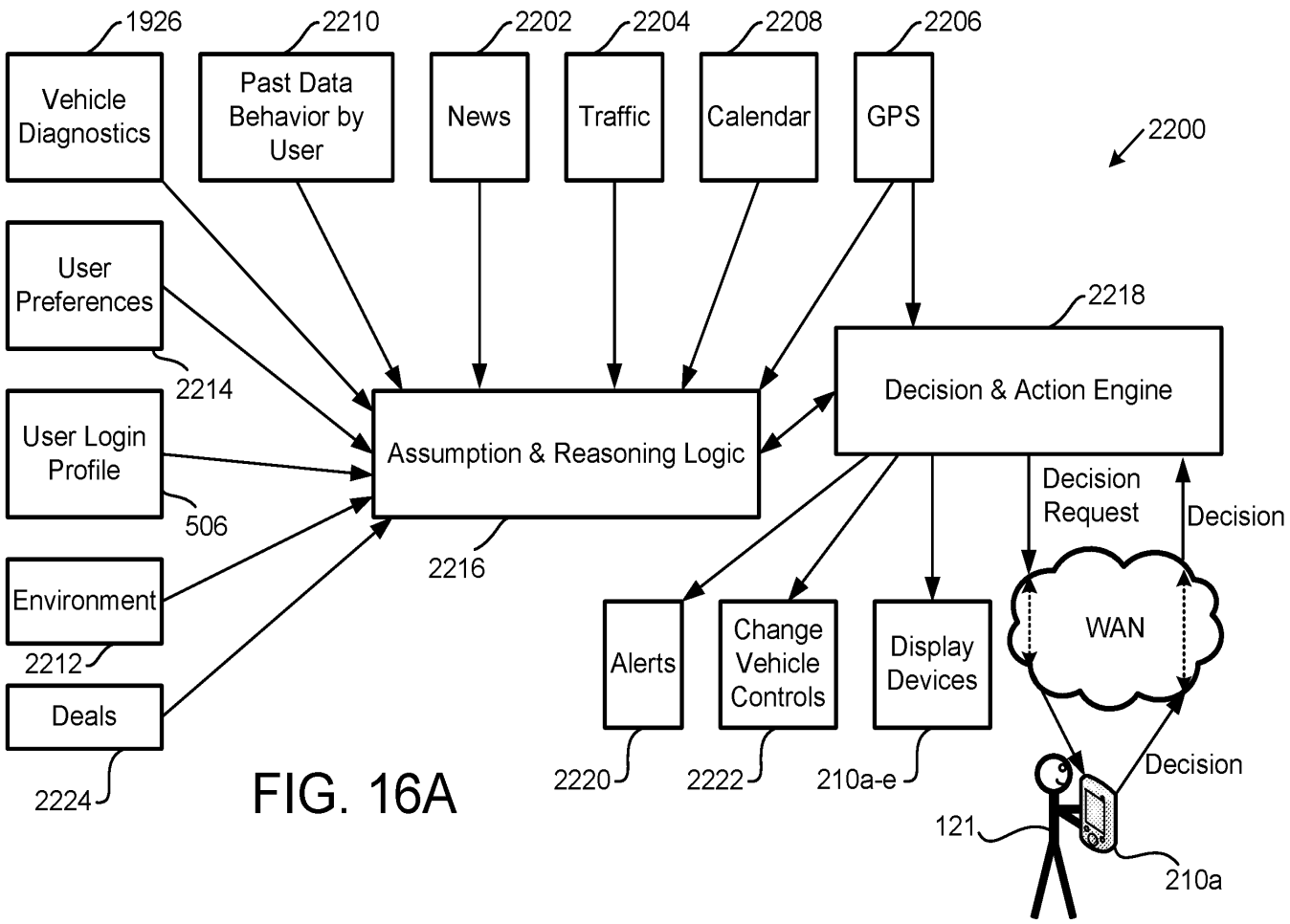


FIG. 16A

IPR2024-00981
Emerging Auto EX2024
EA_KIA-006633

Learned Behavior Vehicle Application



FIG. 16B

Learned Behavior Vehicle Application

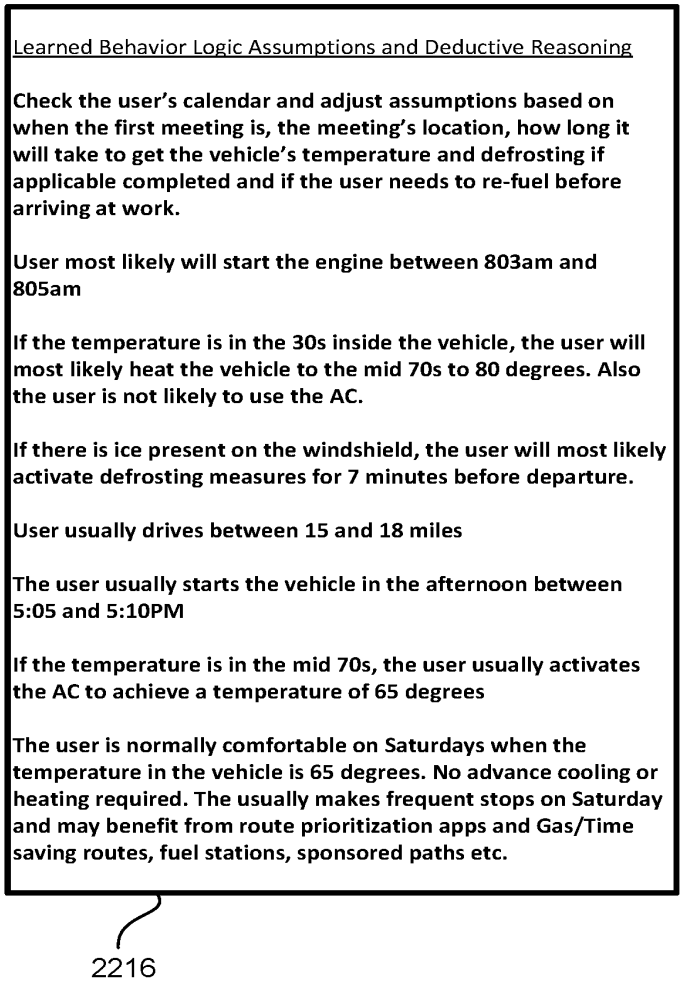


FIG. 16C

Learned Behavior Vehicle Application

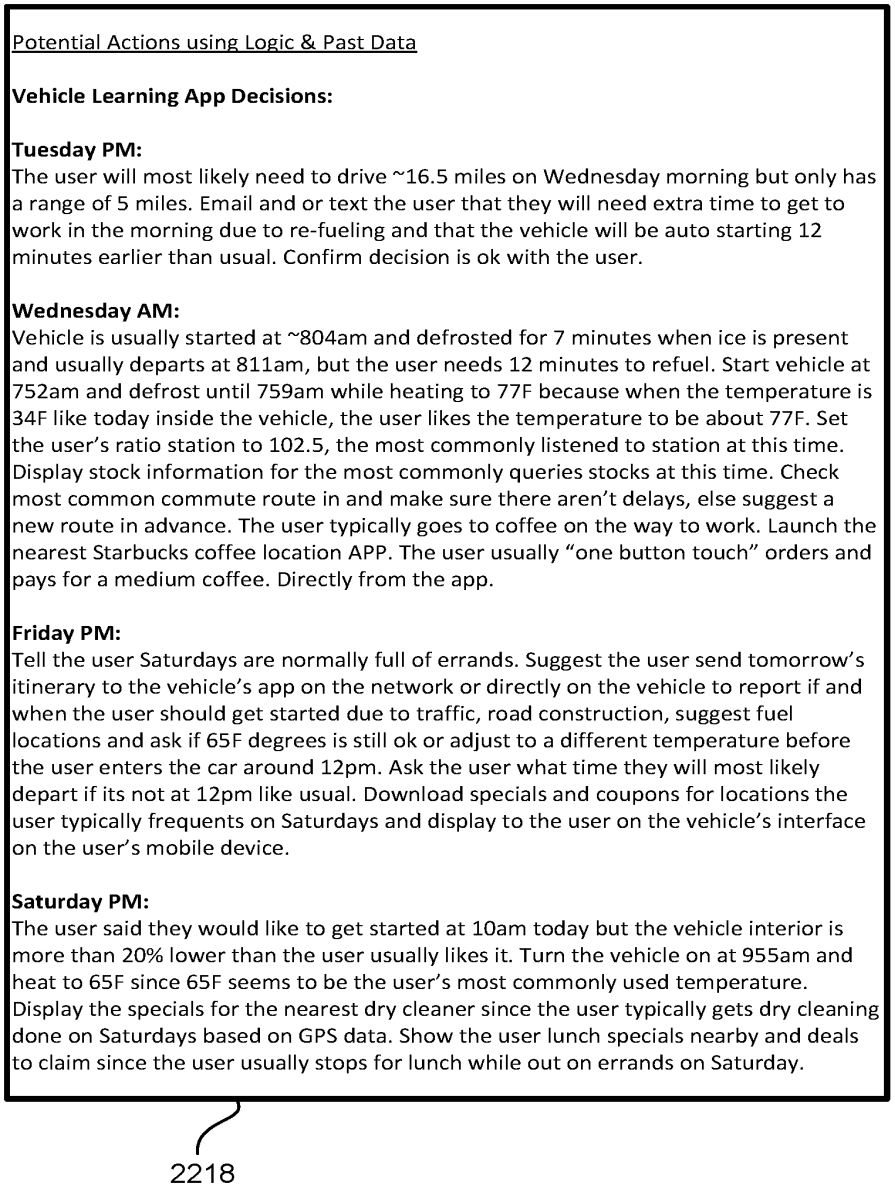


FIG. 16D

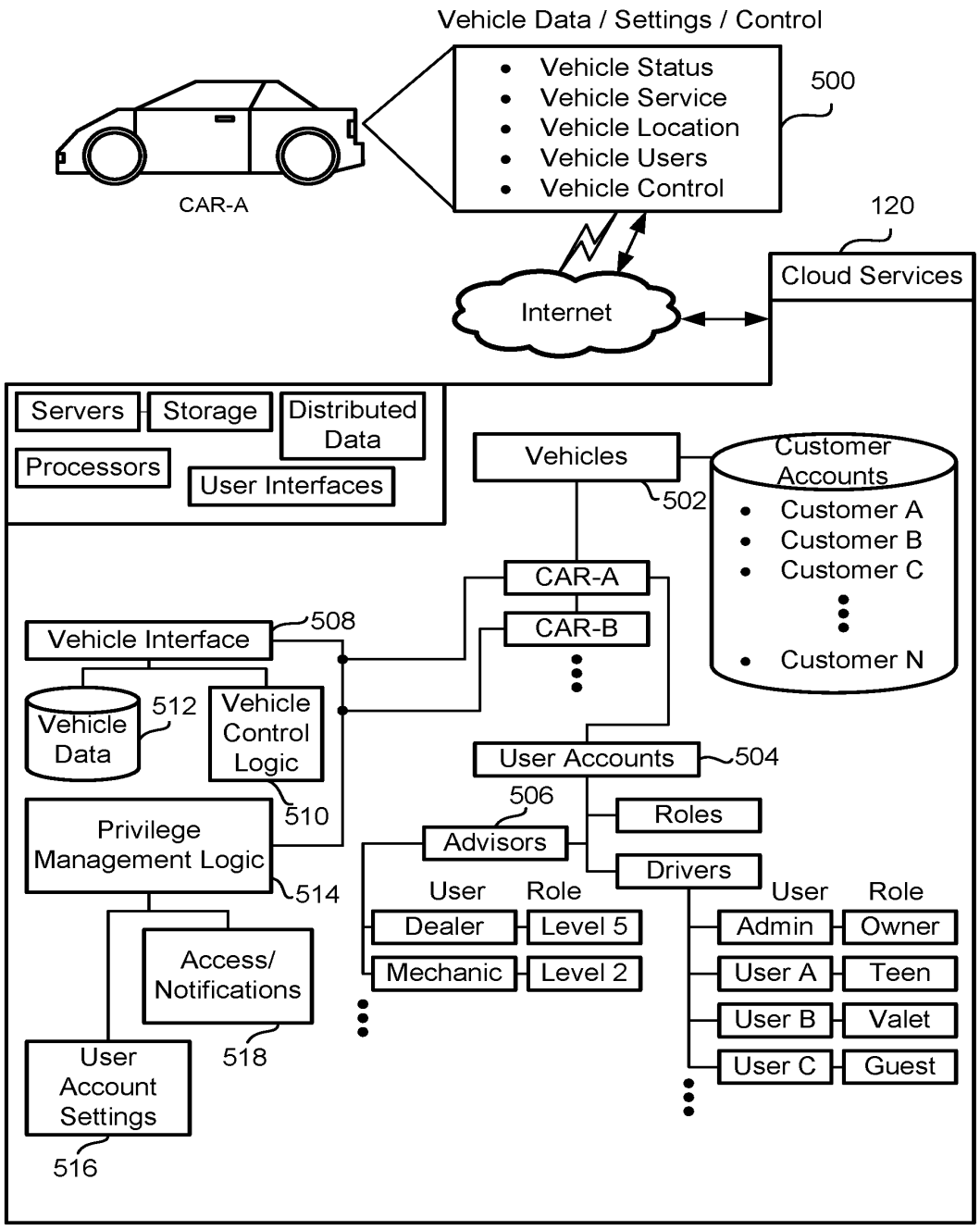

Vehicle Data / Settings / Control
Vehicle Status
Vehicle Service
Vehicle Location
Vehicle Users
Vehicle Control
500
CAR-A
120
Cloud Services
Internet
Servers
Storage
Distributed Data
Processors
User Interfaces
Vehicles
502
Customer Accounts
Customer A
Customer B
Customer C
Customer N
CAR-A
CAR-B
Vehicle Interface
508
Vehicle Data
512
Vehicle Control Logic
510
User Accounts
504
506
Roles
Advisors
Drivers
Privilege Management Logic
514
User
Role
Dealer
Level 5
Mechanic
Level 2
User
Role
Admin
Owner
User A
Teen
User B
Valet
User C
Guest
Access/ Notifications
518
User Account Settings
516

FIG. 17

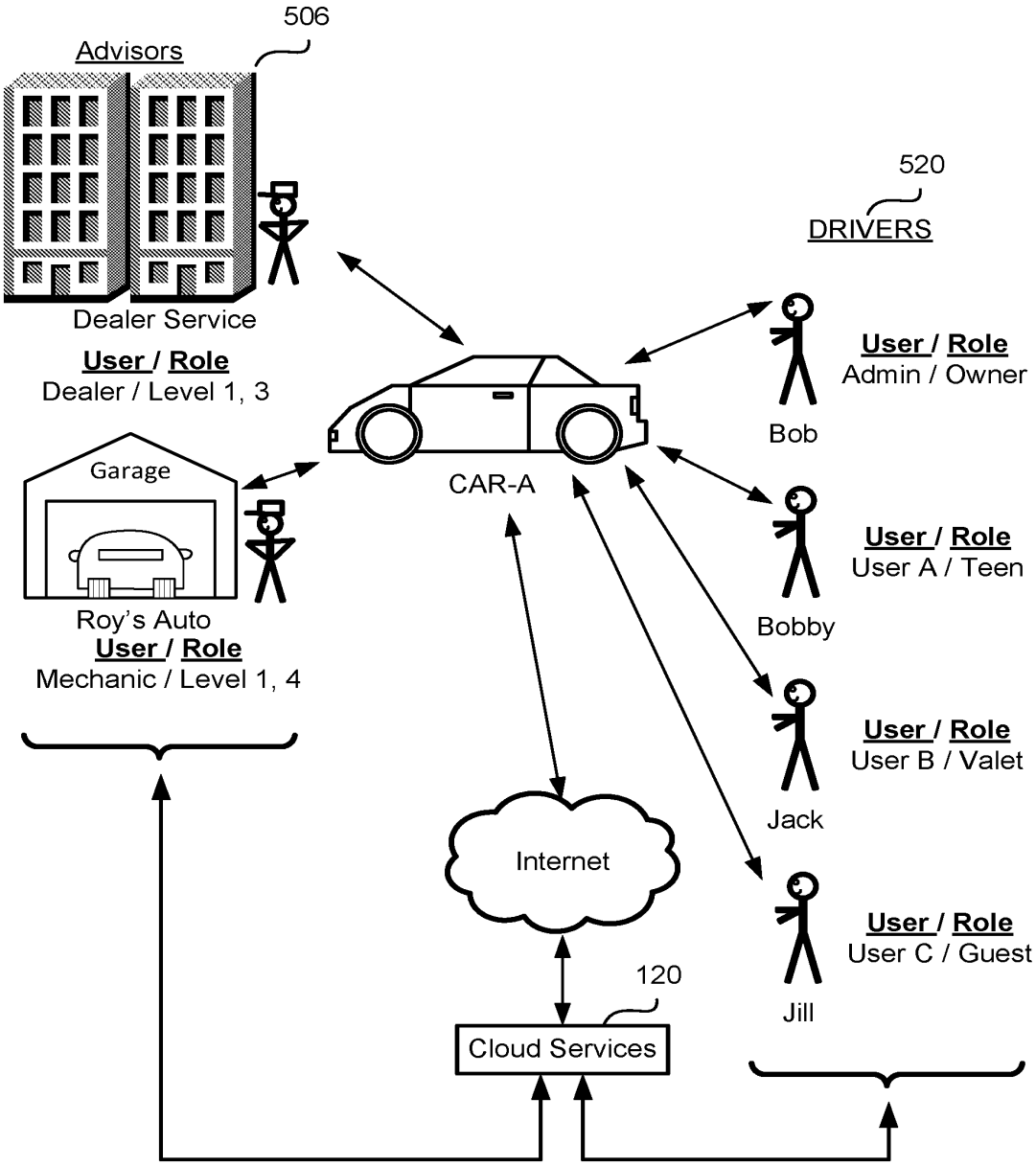

506
Advisors
Dealer Service
User / Role
Dealer / Level 1, 3
520
DRIVERS
User / Role
Admin / Owner
Bob
CAR-A
Garage
Roy's Auto
User / Role
Mechanic / Level 1, 4
User / Role
User A / Teen
Bobby
User / Role
User B / Valet
Jack
Internet
User / Role
User C / Guest
Jill
120
Cloud Services

FIG. 18

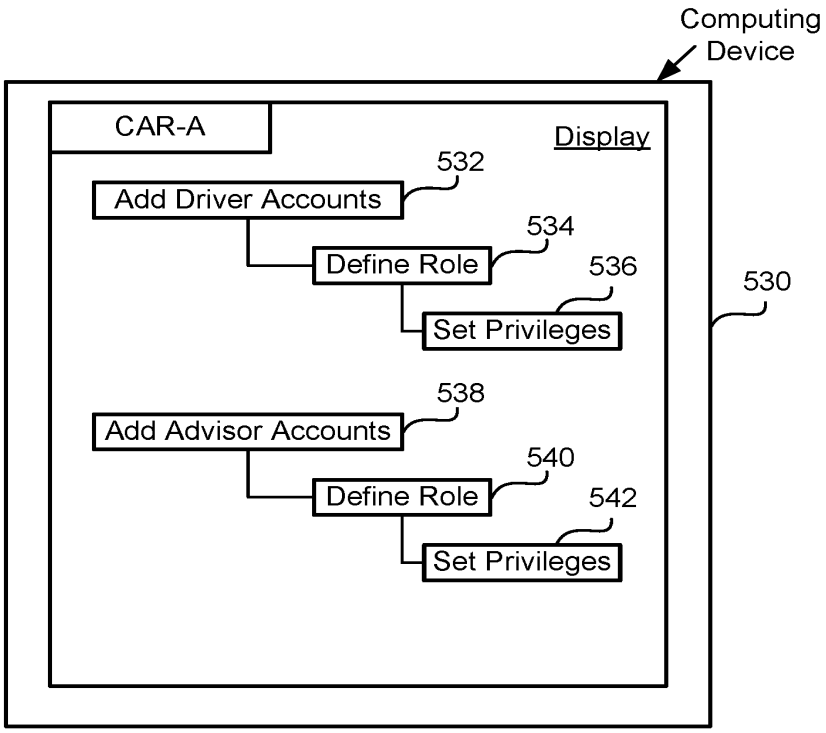

Computing Device
CAR-A
Display
532
Add Driver Accounts
534
Define Role
536
Set Privileges
530
538
Add Advisor Accounts
540
Define Role
542
Set Privileges

FIG. 19

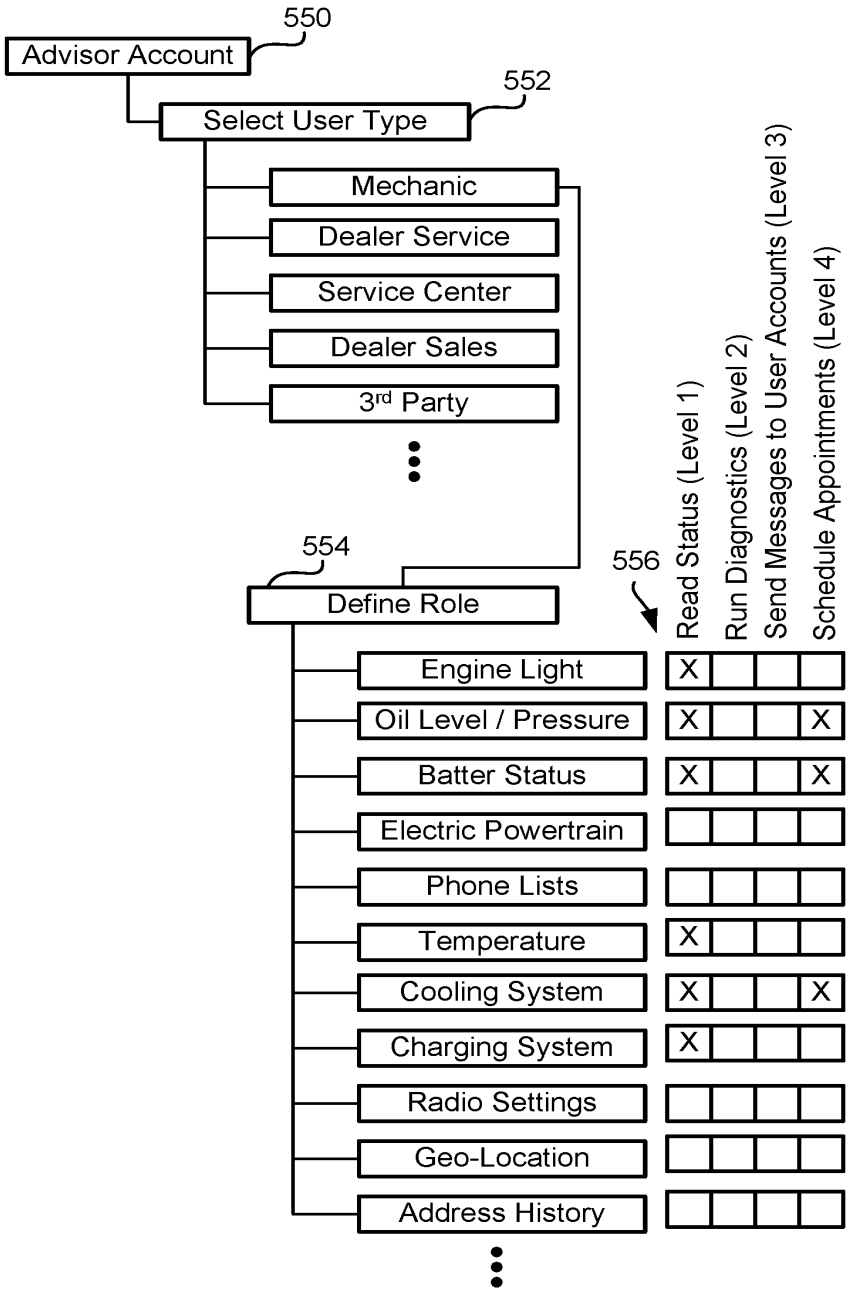

550
Advisor Account
552
Select User Type
Mechanic
Dealer Service
Service Center
Dealer Sales
3rd Party
554
Define Role
556
Read Status (Level 1)
Run Diagnostics (Level 2)
Send Messages to User Accounts (Level 3)
Schedule Appointments (Level 4)
Engine Light
Oil Level / Pressure
Batter Status
Electric Powertrain
Phone Lists
Temperature
Cooling System
Charging System
Radio Settings
Geo-Location
Address History

FIG. 20

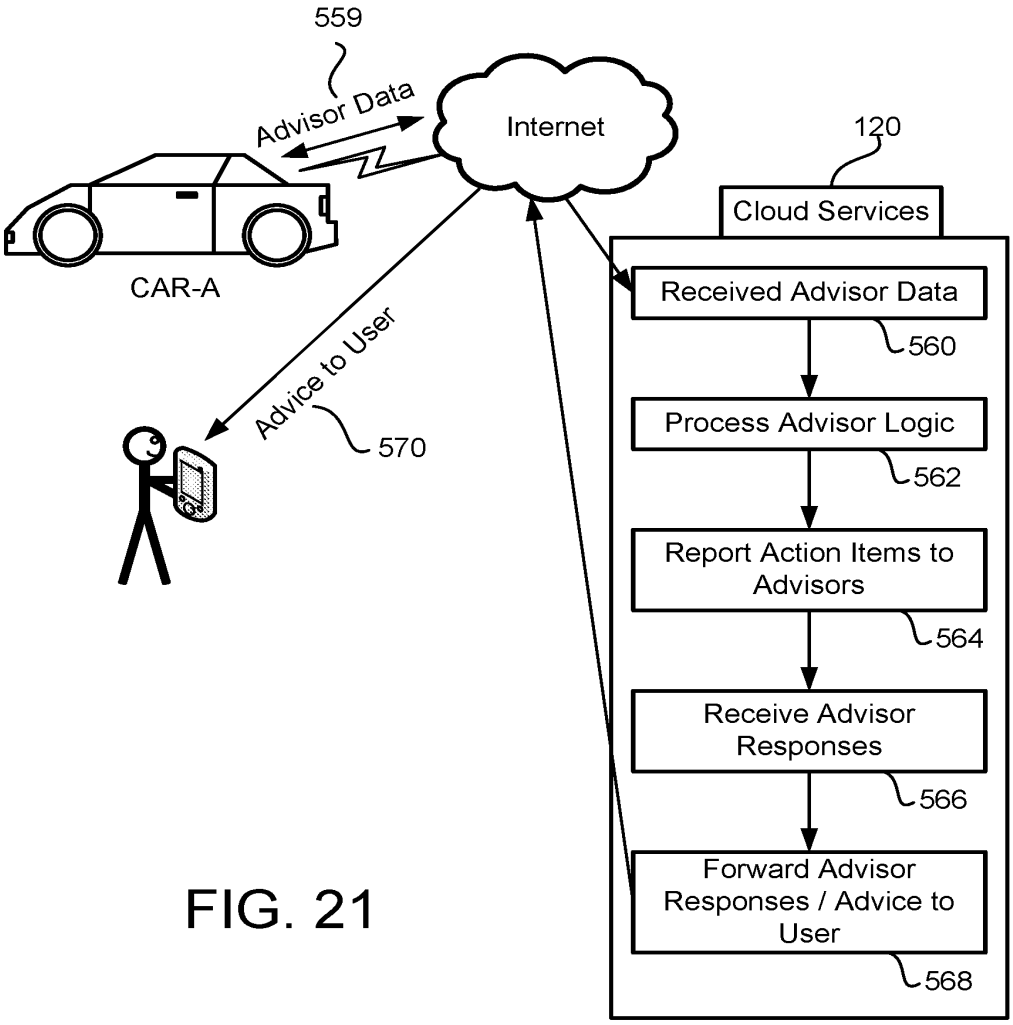

559
Advisor Data
Internet
120
Cloud Services
CAR-A
Advice to User
570
Received Advisor Data
560
Process Advisor Logic
562
Report Action Items to Advisors
564
Receive Advisor Responses
566
Forward Advisor Responses / Advice to User
568

FIG. 21

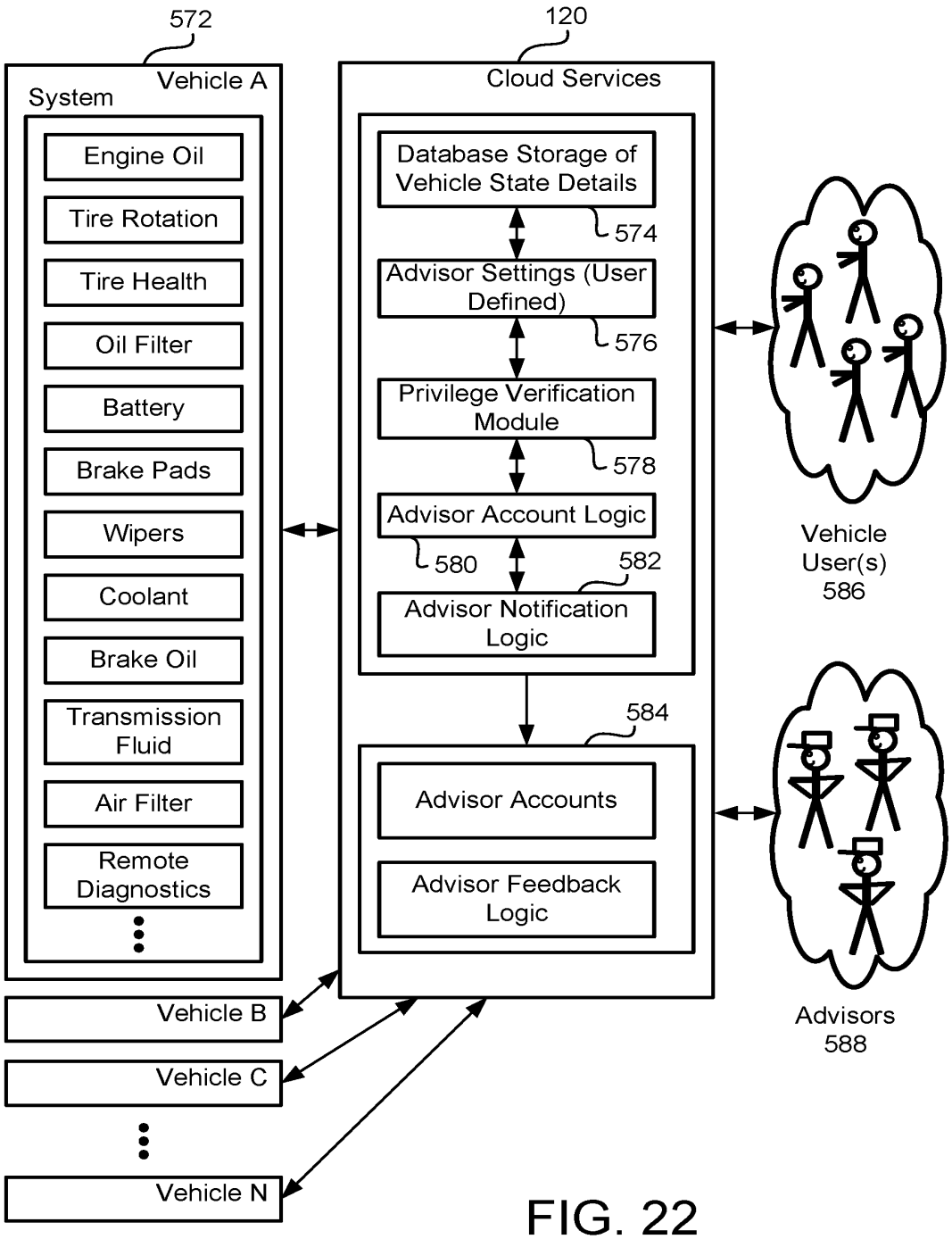

572
Vehicle A
System
Engine Oil
Tire Rotation
Tire Health
Oil Filter
Battery
Brake Pads
Wipers
Coolant
Brake Oil
Transmission Fluid
Air Filter
Remote Diagnostics
120
Cloud Services
Database Storage of Vehicle State Details
574
Advisor Settings (User Defined)
576
Privilege Verification Module
578
Advisor Account Logic
580
582
Advisor Notification Logic
584
Advisor Accounts
Advisor Feedback Logic
Vehicle User(s) 586
Advisors 588
Vehicle B
Vehicle C
Vehicle N

FIG. 22

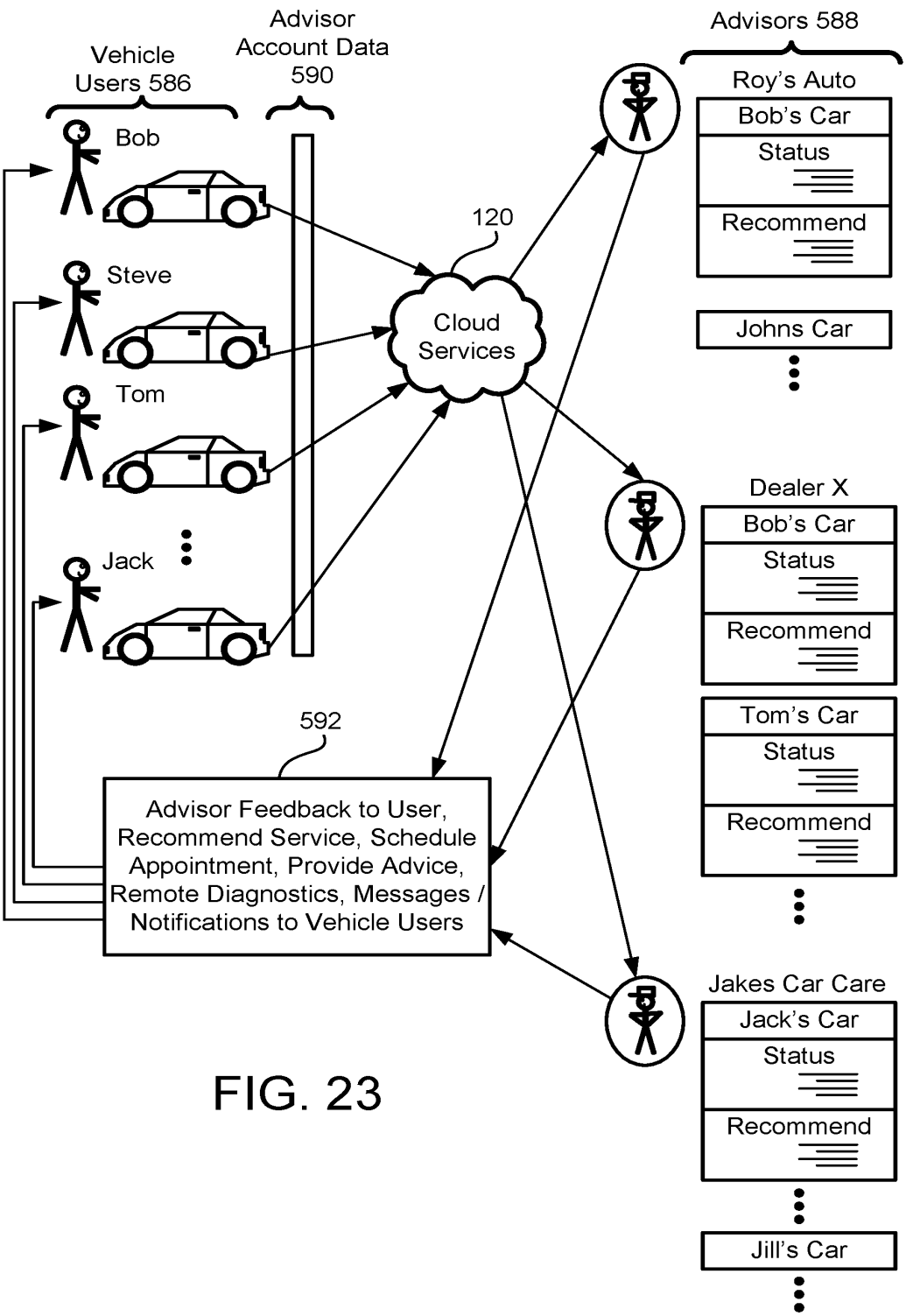

Vehicle Users 586
Advisor Account Data 590
Advisors 588
Bob
Steve
Tom
Jack
120
Cloud Services
Roy's Auto
Bob's Car
Status
Recommend
Johns Car
Dealer X
Bob's Car
Status
Recommend
Tom's Car
Status
Recommend
592
Advisor Feedback to User, Recommend Service, Schedule Appointment, Provide Advice, Remote Diagnostics, Messages / Notifications to Vehicle Users
Jakes Car Care
Jack's Car
Status
Recommend
Jill's Car

FIG. 23

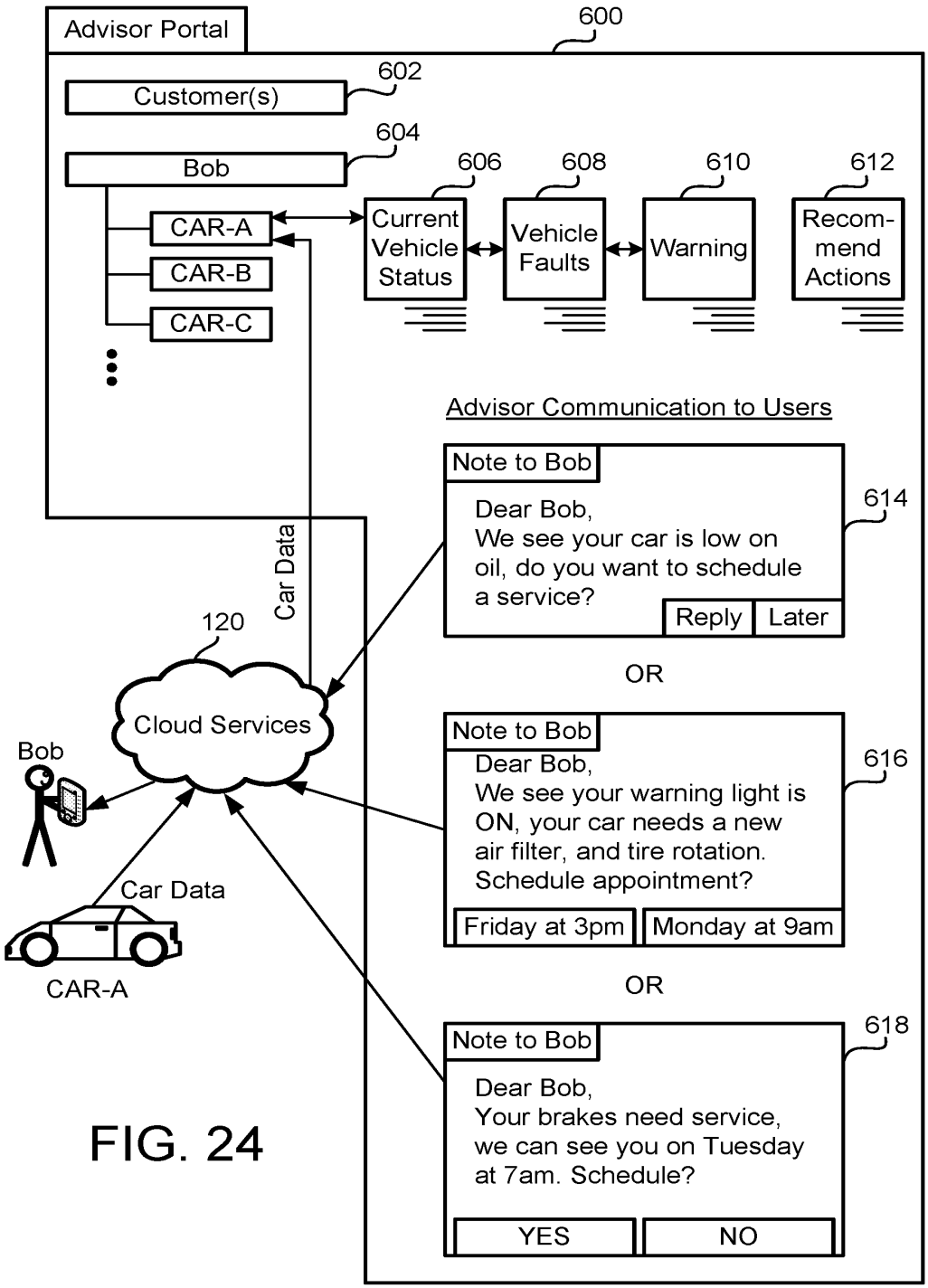

Advisor Portal
600
Customer(s)
602
Bob
604
606
608
610
612
CAR-A
CAR-B
CAR-C
Current Vehicle Status
Vehicle Faults
Warning
Recom-mend Actions
Advisor Communication to Users
Note to Bob
Dear Bob,
We see your car is low on oil, do you want to schedule a service?
Reply
Later
614
OR
Note to Bob
Dear Bob,
We see your warning light is ON, your car needs a new air filter, and tire rotation. Schedule appointment?
Friday at 3pm
Monday at 9am
616
OR
Note to Bob
Dear Bob,
Your brakes need service, we can see you on Tuesday at 7am. Schedule?
YES
NO
618
Car Data
120
Cloud Services
Bob
Car Data
CAR-A

FIG. 24

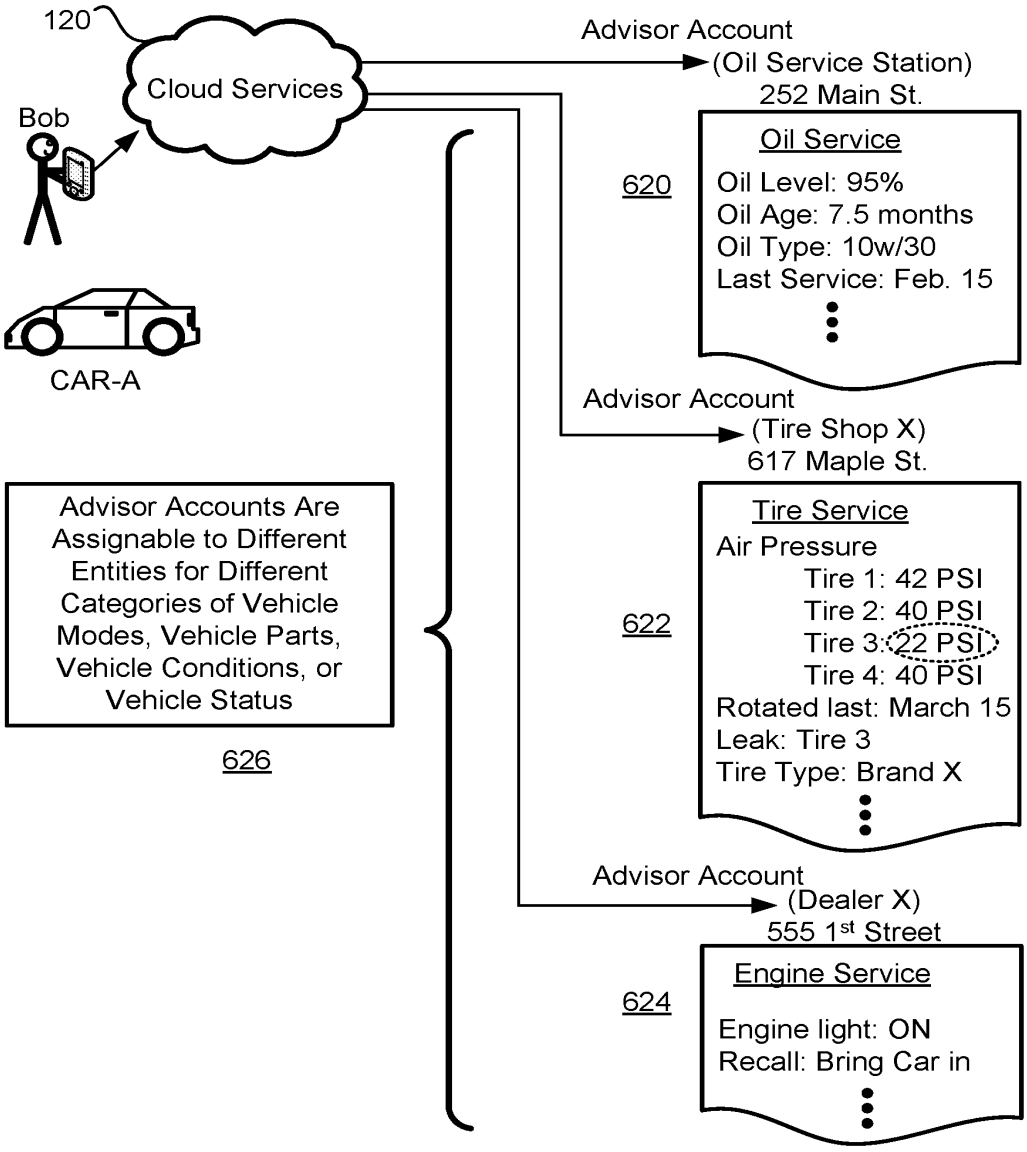

120
Cloud Services
Bob
CAR-A
Advisor Accounts Are Assignable to Different Entities for Different Categories of Vehicle Modes, Vehicle Parts, Vehicle Conditions, or Vehicle Status
626
Advisor Account
(Oil Service Station)
252 Main St.
620
Oil Service
Oil Level: 95%
Oil Age: 7.5 months
Oil Type: 10w/30
Last Service: Feb. 15
Advisor Account
(Tire Shop X)
617 Maple St.
622
Tire Service
Air Pressure
Tire 1: 42 PSI
Tire 2: 40 PSI
Tire 3: 22 PSI
Tire 4: 40 PSI
Rotated last: March 15
Leak: Tire 3
Tire Type: Brand X
Advisor Account
(Dealer X)
555 1st Street
624
Engine Service
Engine light: ON
Recall: Bring Car in

FIG. 25

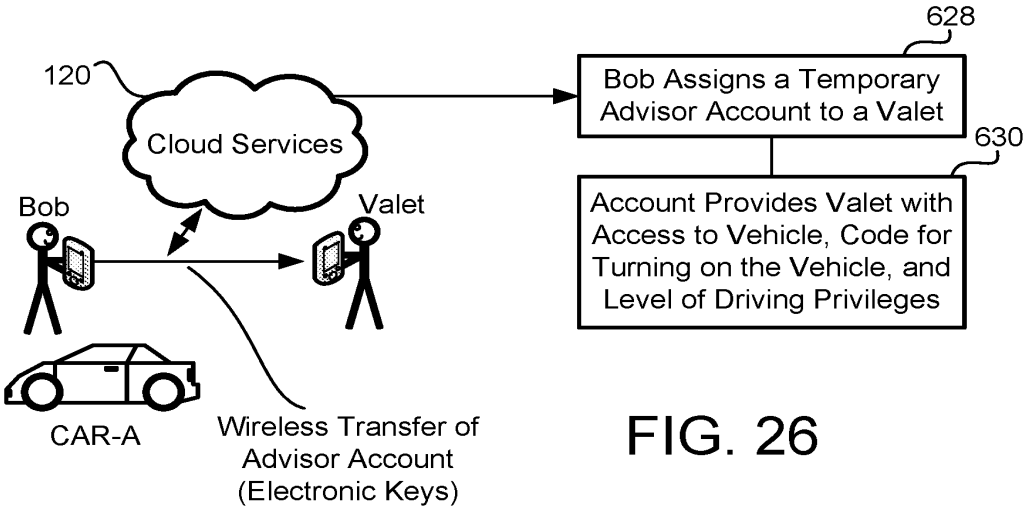

628
120
Cloud Services
Bob Assigns a Temporary Advisor Account to a Valet
630
Account Provides Valet with Access to Vehicle, Code for Turning on the Vehicle, and Level of Driving Privileges
Bob
Valet
CAR-A
Wireless Transfer of Advisor Account (Electronic Keys)

FIG. 26

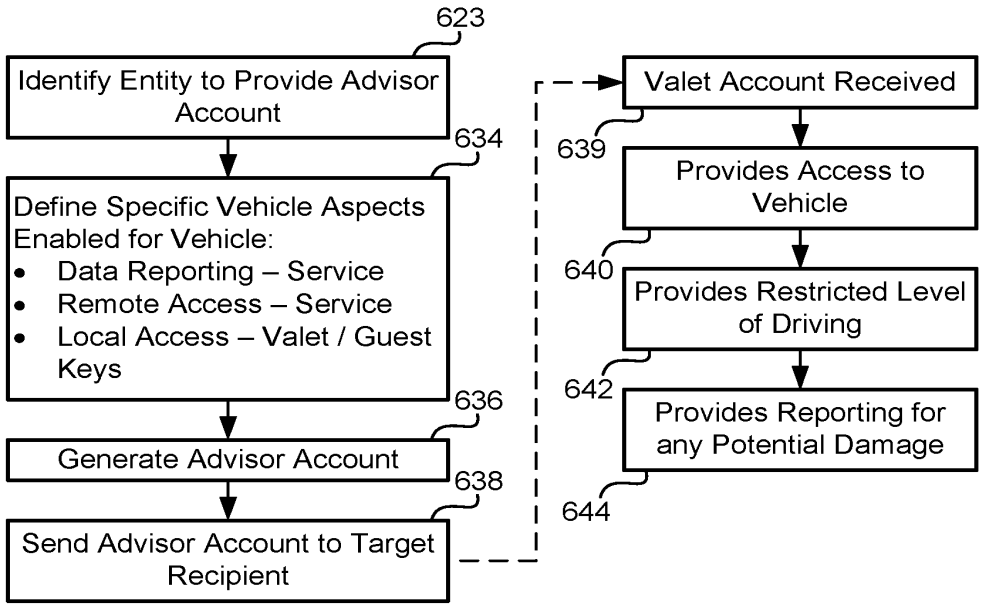

623
Identify Entity to Provide Advisor Account
634
Define Specific Vehicle Aspects Enabled for Vehicle:
• Data Reporting – Service
• Remote Access – Service
• Local Access – Valet / Guest Keys
636
Generate Advisor Account
638
Send Advisor Account to Target Recipient
Valet Account Received
639
Provides Access to Vehicle
640
Provides Restricted Level of Driving
642
Provides Reporting for any Potential Damage
644

FIG. 27

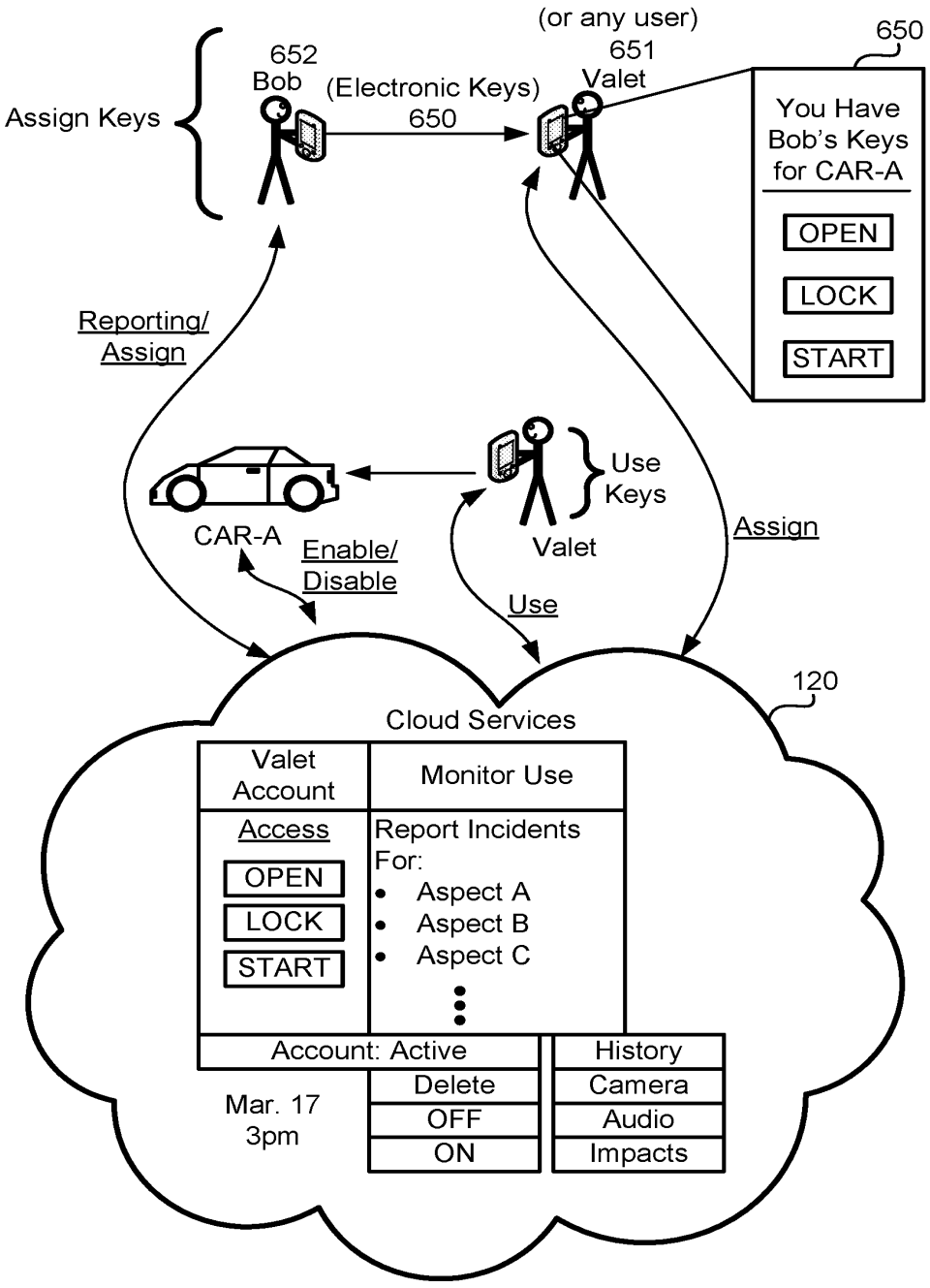

(or any user)
651
Valet
650
652
Bob
(Electronic Keys)
650
Assign Keys
You Have Bob's Keys for CAR-A
OPEN
LOCK
START
Reporting/ Assign
Use Keys
CAR-A
Enable/ Disable
Valet
Use
Assign
120
Cloud Services
Valet Account
Monitor Use
Access
OPEN
LOCK
START
Report Incidents For:
Aspect A
Aspect B
Aspect C
Account: Active
Mar. 17 3pm
Delete
OFF
ON
History
Camera
Audio
Impacts

FIG. 28

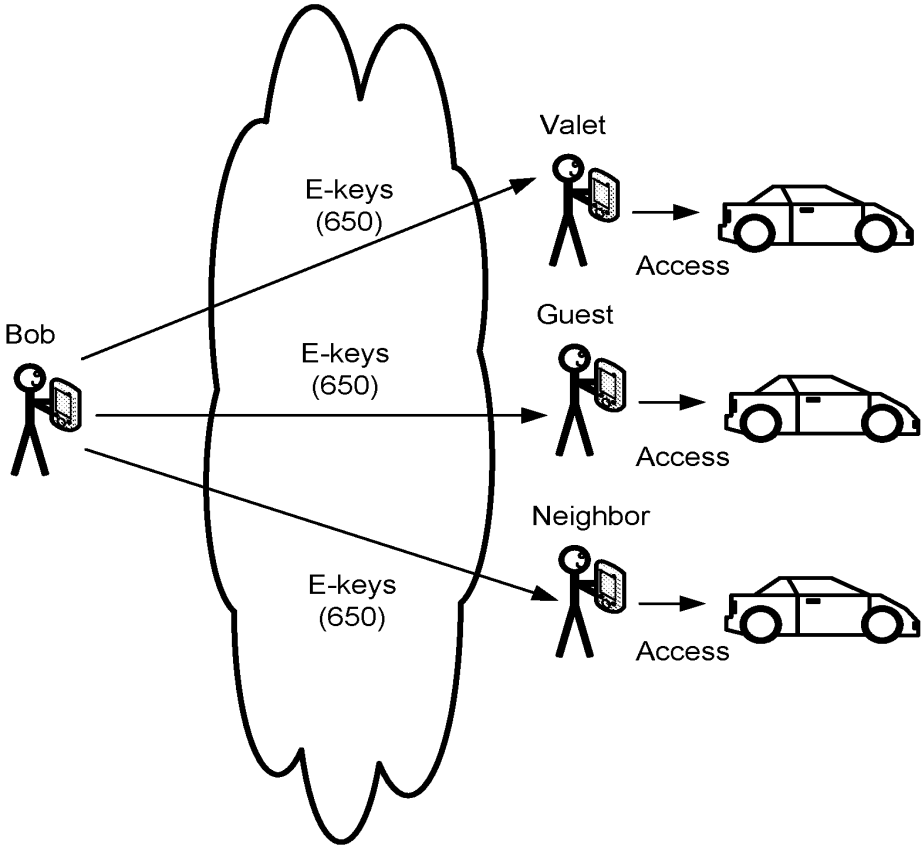

Valet
E-keys
(650)
Access
Guest
Bob
E-keys
(650)
Access
Neighbor
E-keys
(650)
Access

FIG. 29

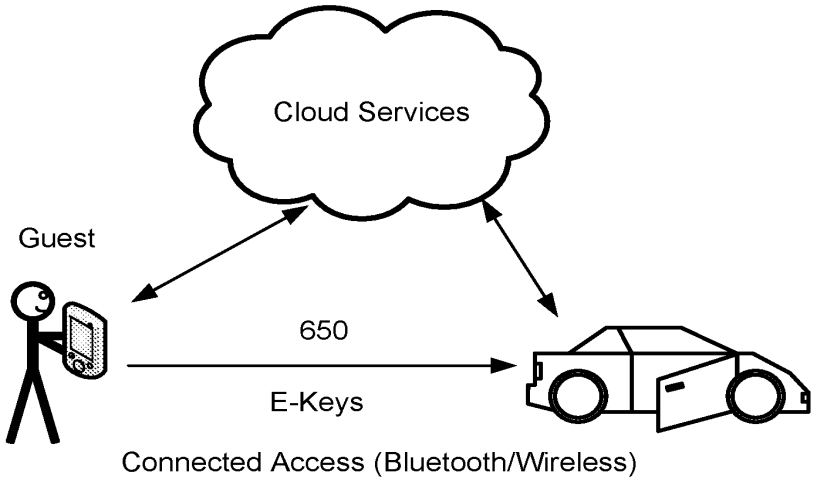


FIG. 30A

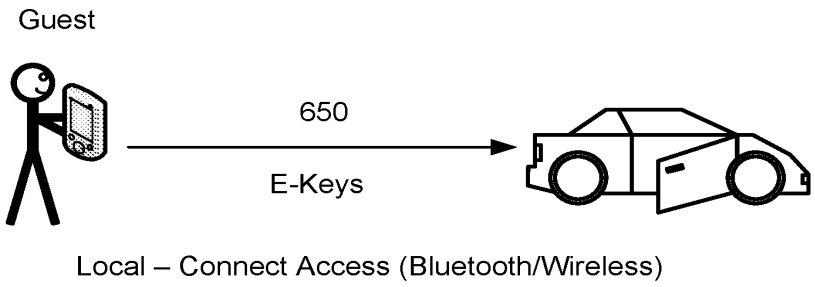


FIG. 30B

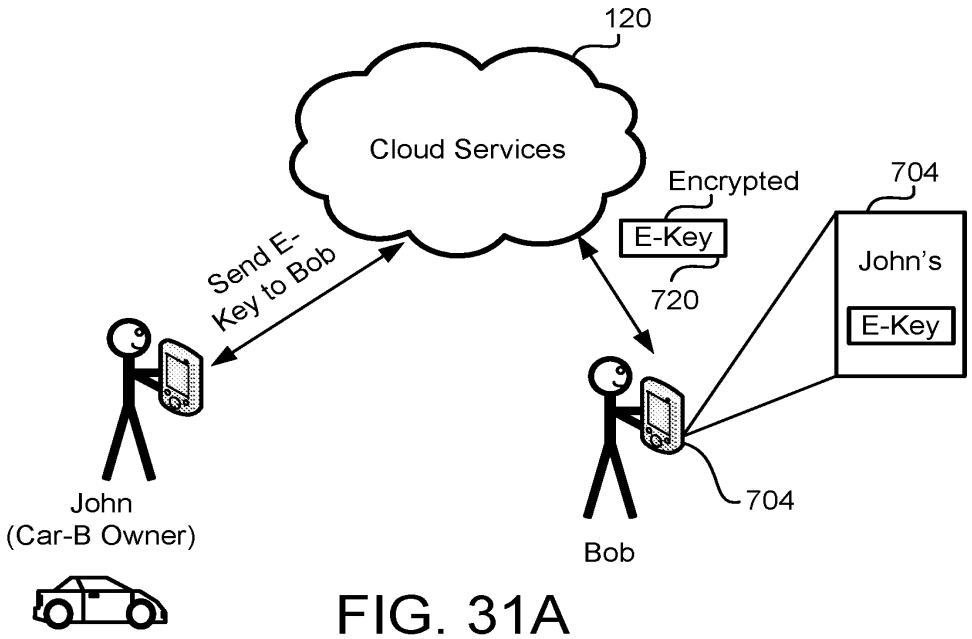

120
Cloud Services
Encrypted
E-Key
720
704
John's
E-Key
Send E-Key to Bob
John
(Car-B Owner)
Bob
704

FIG. 31A

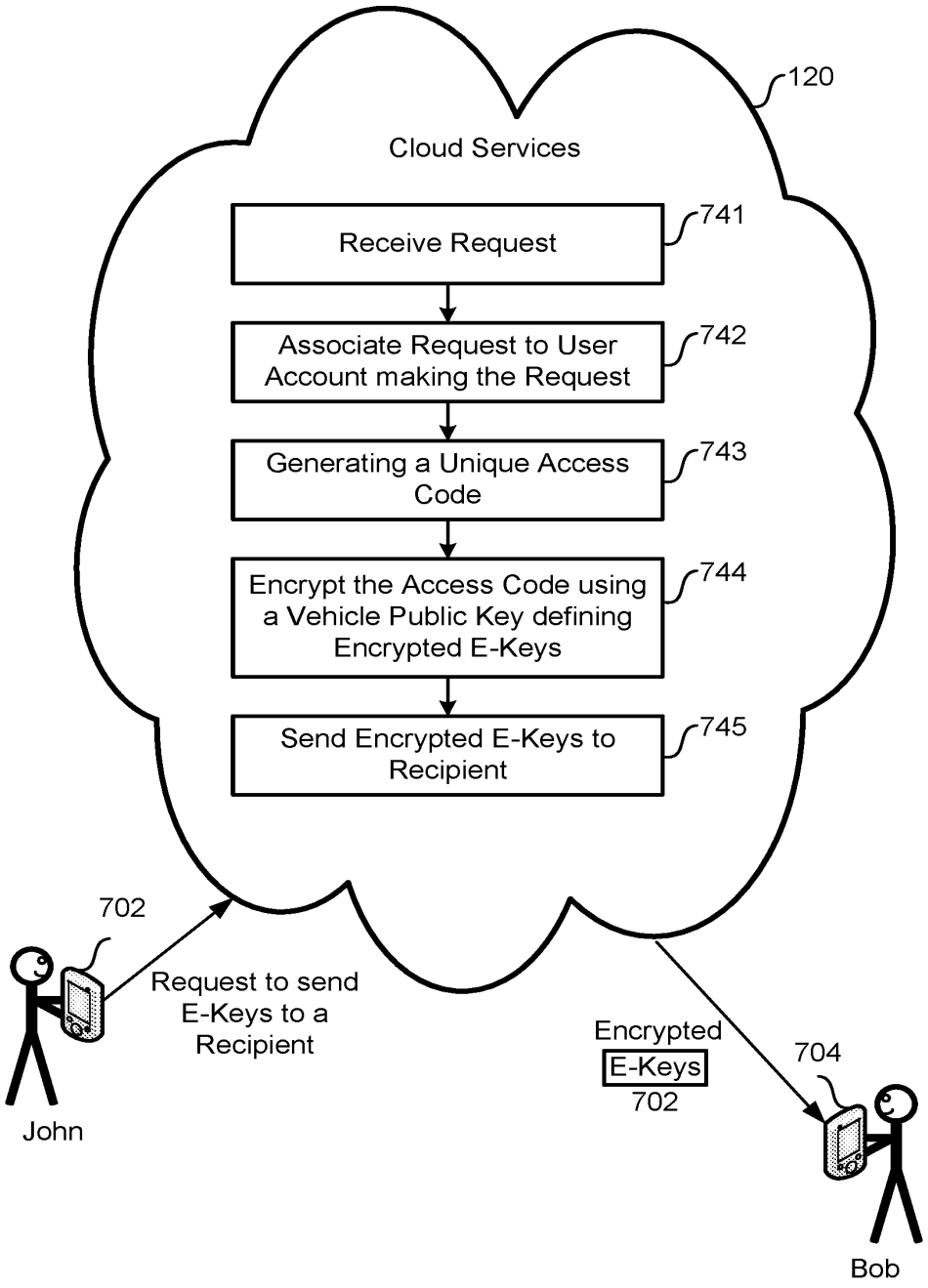

120
Cloud Services
Receive Request
741
Associate Request to User Account making the Request
742
Generating a Unique Access Code
743
Encrypt the Access Code using a Vehicle Public Key defining Encrypted E-Keys
744
Send Encrypted E-Keys to Recipient
745
702
Request to send E-Keys to a Recipient
John
Encrypted
E-Keys
702
704
Bob

FIG. 31B

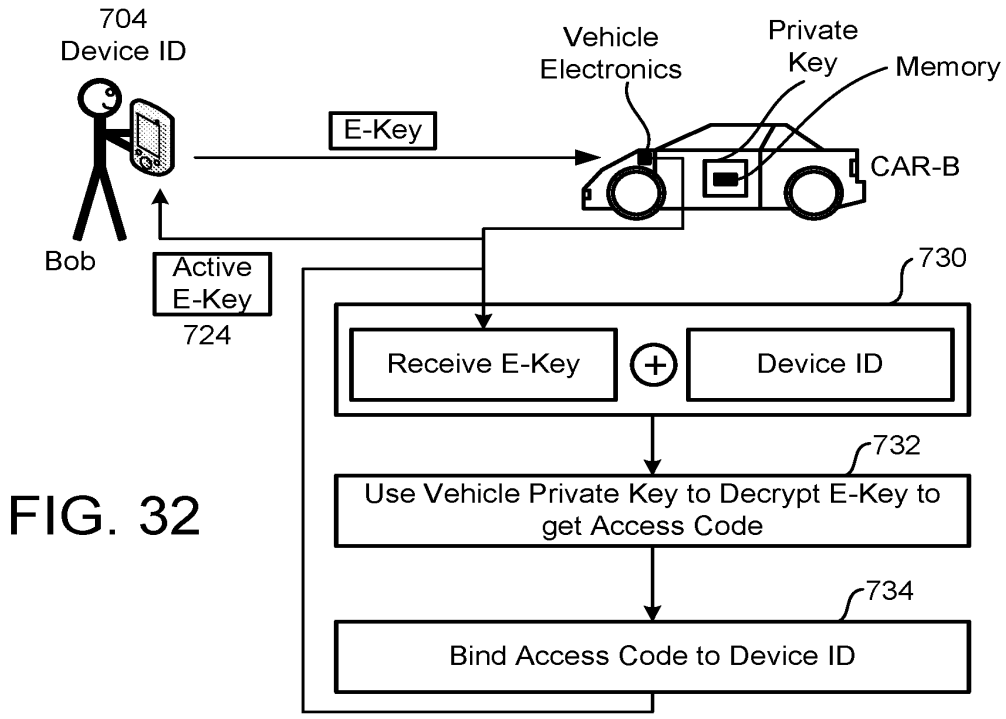

704
Device ID
Vehicle
Electronics
Private
Key
Memory
E-Key
CAR-B
Bob
Active
E-Key
724
730
Receive E-Key
Device ID
732
Use Vehicle Private Key to Decrypt E-Key to get Access Code
734
Bind Access Code to Device ID

FIG. 32

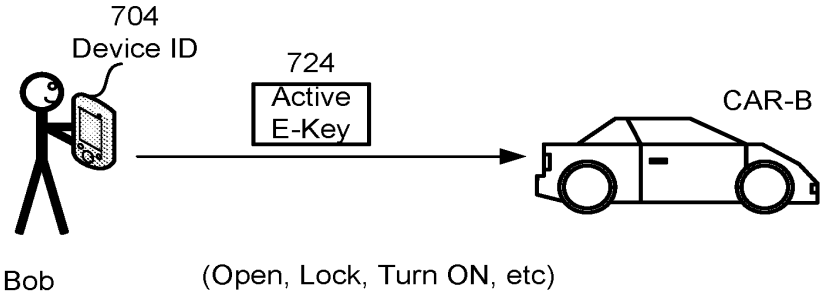

704
Device ID
724
Active
E-Key
CAR-B
Bob
(Open, Lock, Turn ON, etc)

FIG. 33

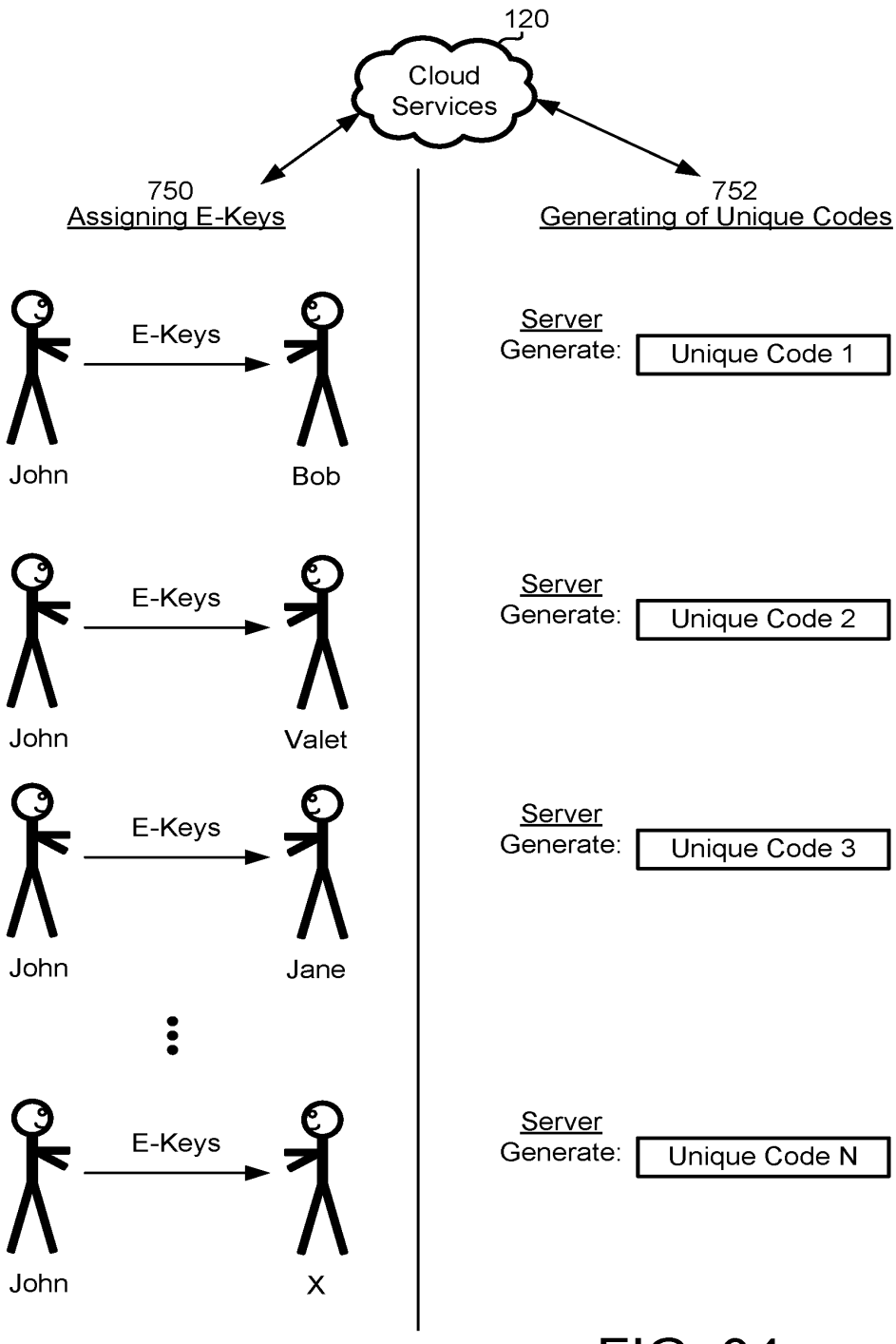

120
Cloud Services
750
Assigning E-Keys
752
Generating of Unique Codes
E-Keys
John
Bob
Server Generate:
Unique Code 1
E-Keys
John
Valet
Server Generate:
Unique Code 2
E-Keys
John
Jane
Server Generate:
Unique Code 3
E-Keys
John
X
Server Generate:
Unique Code N

FIG. 34

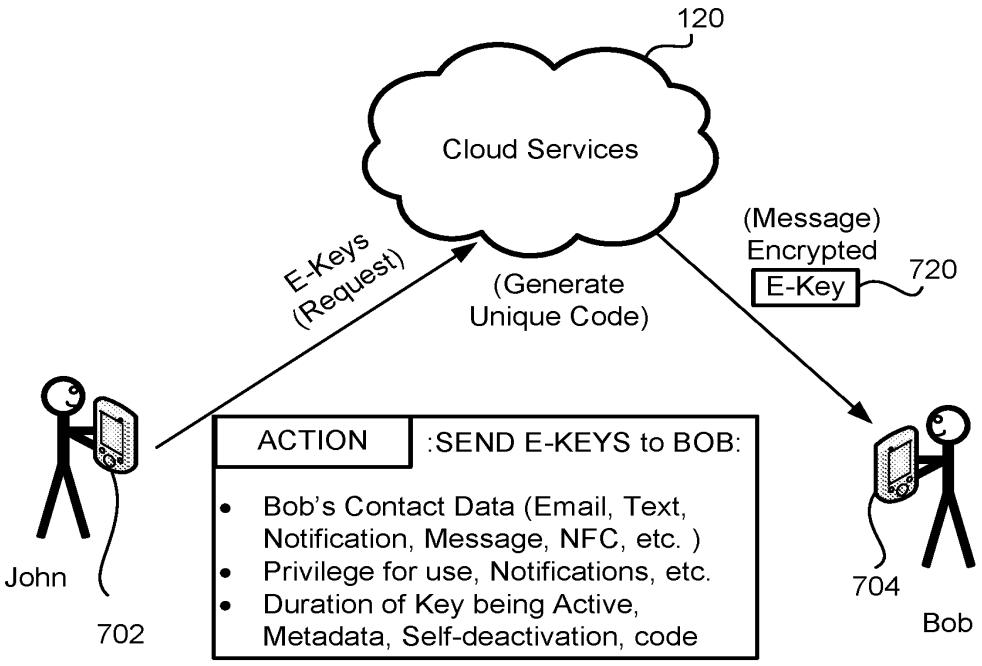

120
Cloud Services
E-Keys
(Request)
(Generate
Unique Code)
(Message)
Encrypted
E-Key
720
John
702
ACTION
:SEND E-KEYS to BOB:
• Bob's Contact Data (Email, Text, Notification, Message, NFC, etc.)
• Privilege for use, Notifications, etc.
• Duration of Key being Active, Metadata, Self-deactivation, code
704
Bob

FIG. 35

DIGITAL CAR KEYS AND SHARING OF DIGITAL CAR KEYS USING MOBILE DEVICES

By Inventors:
Angel A. Penilla
Albert S. Penilla

Claim of Priority

[0001] The present application is a continuation of U.S. Application No. **16/653,958**, filed on **October 15, 2019,** entitled "VEHICLES AND CLOUD SYSTEMS FOR SHARING E-KEYS TO ACCESS USE OF VEHICLES," which is a continuation of U.S. Application No. **15/854,241**, filed on **December 26, 2017,** (now U.S. Pat. No. **10,442,399**, issued on **October 15, 2019**) entitled "VEHICLES AND CLOUD SYSTEMS FOR SHARING E-KEYS TO ACCESS USE OF VEHICLES," which is a continuation of U.S. Application No. **15/607,418**, filed on **May 26, 2017** (now U.S. Pat. No. **10,407,026**, issued on **September 10, 2019**) entitled "VEHICLES AND CLOUD SYSTEMS FOR ASSIGNING TEMPORARY E-KEYS TO ACCESS USE OF A VEHICLE," which is a continuation of U.S. Application No. **15/344,566**, filed on **Nov. 6, 2016** (now U.S. Pat. No. **9,663,067**, issued on **May 30, 2017**) entitled "METHODS AND SYSTEMS FOR USING CLOUD SERVICES TO ASSIGN E-KEYS TO ACCESS VEHICLES AND SHARING VEHICLE USE VIA ASSIGNED E-KEYS," which is a continuation of U.S. Application No. **15/180,306**, filed on **June 13, 2016** (now U.S. Pat. No. **9,499,129**, issued on **Nov. 22, 2016)** entitled "METHODS AND SYSTEMS FOR USING CLOUD SERVICES TO ASSIGN E-KEYS TO ACCESS VEHICLES," which is a continuation of U.S. Application No. **14/303,442**, filed on **June 12, 2014** (now U.S. Pat. No. **9,365,188**, issued on **June 14, 2016**) entitled "METHODS AND SYSTEMS FOR USING CLOUD SERVICES TO ASSIGN E-KEYS TO ACCESS VEHICLES," which is a continuation of U.S. Application No. **14/063,638**, filed on **October 25, 2013** (now U.S. Pat. No. **9,189,900**, issued on **November 17, 2015**) entitled "METHODS AND SYSTEMS FOR ASSIGNING E-KEYS TO USERS TO ACCESS AND DRIVE VEHICLES," which is a continuation-in-part of U.S. Application No. **13/842,158** filed on **March 15, 2013** (now U.S. Pat. No. **9,229,905**, issued on **Jan. 5, 2016**) entitled "METHODS AND SYSTEMS FOR DEFINING VEHICLE USER PROFILES AND MANAGING USER PROFILES VIA CLOUD SYSTEMS AND APPLYING LEARNED SETTINGS TO USER PROFILES,"

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which claimed priority to U.S. Provisional Patent Application No. **61/745,729**, filed on **December 24, 2012**, and entitled "METHODS AND SYSTEMS FOR ELECTRIC VEHICLE (EV) CHARGING, CHARGING SYSTEMS, INTERNET APPLICATIONS AND USER NOTIFICATIONS," each of which is herein incorporated by reference.

[0002] U.S. Application No. **14/063,638**, filed on **October 25, 2013** (now U.S. Pat. No. **9,189,900**, issued on **November 17, 2015**) is a continuation-in-part of US Application No. **13/452,882**, filed **April 22, 2012** (now U.S. Pat. No. **9,123,035**, issued on **September 1, 2015**) and entitled "ELECTRIC VEHICLE (EV) RANGE EXTENDING CHARGE SYSTEMS, DISTRIBUTED NETWORKS OF CHARGE KIOSKS, AND CHARGE LOCATING MOBILE APPS", which claims priority to US Provisional Application No. **61/478,436**, filed on **April 22, 2011**, each of which is incorporated herein by reference.

Field of the embodiments

[0003] The present invention relates to systems and methods for generating and sharing electronic keys (e-Keys) with users and cloud-based processing systems, said e-Keys being sharable for enabling shared use of a vehicle.

BACKGROUND

[0004] Vehicles, such as motorized vehicles and electric vehicles have been around for some time. Vehicles provide a means that enable humans to drive from place to place. In today's world, vehicles have become an indispensable mode of transportation, and provide the freedom to travel at any time of day and for various distances. Vehicles can be publically operated or can be privately owned. Humans most commonly operate vehicles, no matter the type, whether electric or combustion engine based. In recent years, technology has been advancing to allow for better wireless interfacing and networking with vehicles.

It is in this context that embodiments of the invention arise.

SUMMARY

[0005] The methods, systems and apparatus are provided for connected vehicles and cloud based processing.

[0006] In one embodiment, a method is for providing access to a vehicle is provided. The method includes sending, by a server, an access code for the vehicle to a portable device. The access code is configured to be transferred by the portable device to the vehicle. Then, receiving, by the server, data from the portable device that is indicative that the portable

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device is located outside of the vehicle or proximate thereto. Sending, by the server, validation to the vehicle that the access code received by the vehicle was sent to the portable device, and then the vehicle is configured to send an electronic key to the portable device upon receiving the validation. The electronic key is associated with at least one privilege associated with use of the vehicle, and the at least one privilege is defined based on the access code.

[0007] In one embodiment, a vehicle configured to communicate with a server of a cloud system to enable access to use the vehicle via one or more electronic keys is provided. The vehicle includes electronics and a subsystem of the vehicle for enabling unlocking of the vehicle. The subsystem is interfaced with the electronics and a subsystem of the vehicle for enabling starting of the vehicle for use of the vehicle. The vehicle further includes communications circuitry that is interfaced with electronics of the vehicle. The communications circuitry is programmable to communicate with the server of the cloud system and communicate with a mobile device. The communications circuitry of the vehicle is configured to receive a request from the mobile device for unlocking of the vehicle. The request from the mobile device includes a unique access code obtained by the mobile device from the server to enable sending the request to the vehicle. The unique access code is associated with privileges for use of the vehicle. The privileges are defined for the unique access code, and the vehicle is configured to receive information from the server to authenticate the request by the mobile device. And, if the request is authentic, the mobile device is provided with data to enable an electronic key to use the vehicle, and the electronics of the vehicle instructs the subsystem of the vehicle to enable unlocking of the vehicle and enable starting of the vehicle for use of the vehicle via the electronic key consistent with the privileges of the unique access code.

[0008] In another embodiment, a method or processing communication of electronics associated with a vehicle and a portable device to provide access to the vehicle, is provided. One method includes receiving, at a server, a request from a user via the portable device to grant access to use the vehicle via an electronic key (e-key). The vehicle is pre-associated to a user account that defines use options of the vehicle. The server is configured to generate a unique access code for the request, and the unique access code is configured with privileges for use of the vehicle. The privileges are defined for the unique access code based on an identity of the user and the privileges being active for use of the vehicle. The server is configured to encrypt the unique access code. The encrypting is predefined for decryption by

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the electronics associated with of the vehicle. The unique access code is sent as an encrypted unique access code to the portable device over a wireless network. The encrypted unique access code is configured for local wireless transmission to said electronics associated with said vehicle. The electronics associated with said vehicle is configured to decrypt the encrypted access code and enable access to use said vehicle in accordance with the privileges for use defined by said unique access code. The privileges for use further defining a period of time during which the unique access code is to remain active for use of the vehicle. The unique access code when active operates as the e-key for the vehicle to enable one or more functions of unlocking of the vehicle, starting the vehicle, driving the vehicle, or locking the vehicle. The enabled functions are accessed via an application executed on said portable device. The application is configured to communicate with the server for sending the request to grant access to share use the vehicle and to enable use of said local wireless transmission with said electronics associated with said vehicle.

[0009] In another embodiment, a method is provided that includes receiving a request to generate electronic key (e-key) for an identified recipient to use a vehicle. The request includes identifying information for enabling sending of the e-key to the recipient via an electronic transmission. The request includes a condition of use of the vehicle. The method includes generating the e-key. The e-key is associated with the condition of use of the vehicle. The method includes transmitting the e-key to a device or user account of the recipient. The method further includes transmitting data to the vehicle to enable use of the vehicle via the e-key and receiving use data regarding use of the vehicle for when the vehicle is used via the e-key. The use data identifies information regarding the use of the vehicle. The information identifies violations of the condition of use.

[0010] In some implementations, the method includes sending a warning notification to the device of the recipient, or the vehicle, or both the device of the recipient, the vehicle warning notification identifying the violation of the condition of use.

[0011] In some implementations, the receiving and the transmitting is processed by at least one server having logic for generating e-keys and receiving data regarding use of the vehicle when the e-key is used for the vehicle, the server being accessible over the Internet, the vehicle having wireless communication systems for communicating with the server and for communicating with devices local to the vehicle; wherein the request to generate the e-key is received from one of an administrator of the vehicle, or an owner of the vehicle, or a rental

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car operator of the vehicle, or a fleet operator for the vehicle, or a user account holder that has the vehicle associated thereto, or a user authorized to request e-keys for the vehicle.

[0012] In some implementations, the method includes sending data to one or both of the vehicle and the device of the recipient to notify that the e-key will become disabled due to the violation of the condition.

[0013] In some implementations, the condition of use is one of a geographic restriction for where the vehicle is allowed to be used, or a speed restriction, or an occupancy restriction, or a time frame of use, or a time expiration of use, or combinations thereof.

[0014] In some implementations, the identifying information includes one or more of an email address, a phone number, a text, a message address, a notification, a link, a web address, a social network address, or combinations thereof.

[0015] In some implementations, receiving use data for use of the vehicle for when the vehicle is used via the e-key includes one or more of a history of where the vehicle has been, or speeds of the vehicle, or events of the vehicle, or violations of the condition of use, or combinations thereof.

[0016] In some implementations, the method includes sending messages to one or both of the vehicle and the device of the recipient regarding warnings of when the use of the vehicle may exceed, has exceeded, or is about to exceed the condition of use.

[0017] In some implementations, the e-key provide access to at least one of operating functions of the vehicle, or opening the vehicle, or starting the vehicle, using user interfaces of the vehicle, or turning-off the vehicle, or combinations thereof.

[0018] In some implementations, the e-key enables graphical icons on a screen of the device to be active for enabling use of the vehicle, at least one of the graphical icons on the screen enabling unlocking of the vehicle, or turning on of the vehicle, or locking the vehicle.

[0019] In some implementations, the device is one of a smartphone, or a smartwatch, or smart glasses, or a portable device, or a computer, or a digital assistant, or a key fob.

[0020] In some implementations, the e-key, once used via the device of the recipient, the e-key cannot be used via another device or send to another device to enable use of the e-key without receiving data to reactivate the e-key.

[0021] In some implementations, the method includes receiving a plurality of requests to generate e-keys for the vehicle from time to time, such that a plurality of e-keys can be

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generated for the vehicle and the e-keys that are generated are associated with a user account, and any one of the generated e-keys are removable from being active via the user account, the user account being used for making the requests to generate the e-key or e-keys.

[0022] In some implementations, a plurality of e-keys for the vehicle is producible, the plurality of e-keys can co-exist, and wherein, only one e-key is associated with active use of the vehicle at one time.

[0023] In some implementations, a particular e-key in use with the vehicle can be swapped for another e-key having access to the vehicle, such that each e-key has the same or different privileges or conditions of use.

[0024] In some implementations, a priority order of e-keys is defined, such that higher level priority e-keys are placed in use over lower priority e-keys.

[0025] In some implementations, the method includes receiving data indicative that the device having the e-key remains within a communication distance of the vehicle during use of the e-key; and sending data to disable the e-key and prevent use of the vehicle after a period of time when the data indicates that the device is not within the communication distance of the vehicle for which the e-key is to be used or used; and sending a notification or a report, or a log to an administrator of the vehicle to report activity of use of the vehicle in association with use of the e-key.

[0026] In some implementations, the method includes receiving data from the vehicle being indicative of interface inputs or settings made during use with the e-key, the inputs or settings being examined to identify patterns, and learning the patterns to provide recommendations, to the recipient or to an account of the recipient, for settings that should or may be made to the vehicle when using the e-key.

[0027] In some implementations, the transmitted e-key is encrypted and configured for decryption to enable use of the vehicle using the e-key.

[0028] In some implementations, the condition of use defines one or more privileges associated to use of the e-key, and further comprising, receiving a request from the device of the recipient to expand use, or remove a privilege, or add a privilege of the condition of use.

[0029] In some implementations, the e-key received at the device of the recipient includes data indicative of a level of monitoring that is to occur of the vehicle when the e-key is used for the vehicle, wherein a log is made to save the use of vehicle to a cloud storage, or storage

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of the vehicle or both, the log including one or more of driving data that took place, or where the vehicle was driven, or speeds of the vehicle, or damage of the vehicle, or radio stations listened to, or conversations had, or images of drivers during specific times, or combinations to two or more thereof.

[0030] In some implementations, the request to generate electronic key e-key for the identified recipient is made using a template having a set of privileges, wherein the template is selectable instead of selecting individual privileges to be associated with the e-key.

[0031] In some implementations, the template is one of a child template, or a teen template, or a spouse template, or a mechanic template, or a valet attendant template, or a friend template, or a custom template.

[0032] Methods and systems provide access to cloud services over the Internet for managing a user profile of a vehicle on a cloud processing system connected to the Internet. One example method includes receiving requests to access the user profile to define settings for one or more vehicles. The method includes receiving input for user settings at the vehicle using the cloud processing system. The method includes processing the input over time to learn behavior associated with the input to the use settings. The method includes transmitting settings to the vehicle to be automatically implemented based on the learned behavior. In one example, the profile is associated with a plurality of vehicle types and the method includes detecting a violation of a setting or an incompatible setting in the profile that is user defined via the user account. The method can then automatically send a notification to a predefined administrator of the profile. The method being executed by a processor.

[0033] The profile can be transferred to one or more vehicles, can be set for a temporary period of time, can be set with wireless payment systems, and is accessible over the Internet to accept changes or updates.

[0034] In one embodiment, a user can assign an ad advisor account to any individual. The Advisor account can be for any duration, and the duration can be set by the user. In one embodiment, the advisor account can be assigned to a guest driver of a vehicle. The guest driver can be, for example, a friend, a known individual, a service person, a valet person or valet service, etc. The creation of an advisor account can therefore be for a short duration, or long duration, or permanently, or until the account is canceled, stopped, revoked, expires, or

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eliminated by the person/user that issued or created the advisor account. In one embodiment, the advisor account can act to provide access to a vehicle.

[0035] In one embodiment, access can be by way of electronic keys (e.g., e-keys), which can be sent by a vehicle owner/admin to some person or entity. For example, the user-owner of the vehicle can assign a valet with access to the vehicle by going on an application (App or website) on a computing device (e.g., mobile or non-mobile device), identifying the recipient, identifying a mode for communicating with the recipient (e.g., text, email, message, notification, etc.), selecting the advisor account privileges (e.g., what type of access, speed limits, geographic restrictions, amount of time the e-keys will be valid (or else expire), and requesting that e-keys be sent to the recipient.

[0036] In one example, the app on the user's mobile device can request that a message be sent to the recipient, so that the recipient can receive the e-keys and be granted access to the vehicle. In one embodiment, the recipient may have a mobile device or computing device (e.g., smartphone, tablet computer, laptop computer, personal digital assistant, smartwatch, computer glasses, or the like), on which a communication can be received that provides instructions for obtaining/validating/using the e-keys. In one example, a message can be sent to the recipient, which may provide instructions on how to activate the e-keys. In one embodiment, the message may have a link to an application that can be launched, which can be used to complete the activation and access with the vehicle. In another embodiment, a simple link can be sent, which when selected will link the user to a webpage, which provides instructions for activating the access for the e-keys.

[0037] In one embodiment, application or webpage can identify that e-keys were sent to the individual recipient and will also identify the vehicle (e.g., brand, year, model, color, license plate, or more or less data), may identify the restrictions, and may identify the duration during which the e-keys will remain active. After the duration (or earlier if the e-keys are cancelled by the user), the e-keys will discontinue to work. If, for some reason, the recipient still needs access to the vehicle, the original message or link can provide a method for allowing the user to request more time. The user (e.g., owner of the vehicle) can therefore, via the app or website, reactivate the e-keys.

[0038] In some embodiments, the e-keys when active will provide a graphical user interface on the device of the recipient, which may allow access, such as icon buttons to unlock, lock, start and stop the vehicle. The app can also send notifications to the recipient; if for example,

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the user wishes to provide the recipient with more time or less time. While the e-keys are active, in one embodiment, the vehicle can report back activity of the vehicle, while under the care/use of the recipient. The user may have access to audio input or cameras, to communicate with the driver/recipient. The vehicle use history can also be saved to a server, such that the recipient's use activity can be audited, or viewed or accessed.

[0039] In one embodiment, a method is provided. The method includes receiving a request, at a server, to grant e-keys to a recipient for use of a vehicle, the vehicle being pre-associated to a user account. The method further includes generating a unique access code, at the server, in response to receiving the request. The method then encrypts the access code, at the server, using a vehicle public key associated with the vehicle; the vehicle public key is associated with the user account. The method includes sending the encrypted access code to the recipient for receipt by a device of the recipient. The encrypted access code is defined for transmission to the vehicle by way of the device of the recipient, and the encrypted access code is associated with instructions to cause the vehicle to decrypt the access code using a private key of the vehicle and to transmit the access code after decryption back to the device of the recipient along with privilege settings for the use of the vehicle. The access code received from the vehicle functions as e-keys for the vehicle that enable access to use of the vehicle in accordance with conditions defined in the privilege settings.

[0040] In some embodiments, a device ID of the device of the recipient is caused to be transferred with the encrypted access code to the vehicle, the device ID being a code that identifies the recipient's device, such that access of the vehicle using the access code is limited to the device of the recipient having the device ID.

[0041] In some embodiments, the access and use of the vehicle using the access code remains valid while the device of the recipient is detected to be within a communication range of the vehicle, and when the device of the recipient is detected to be outside of the communication range of the vehicle the vehicle invalidates the access code and disallows further use.

[0042] In some embodiments, the e-keys provide access to at least one of operating functions of the vehicle, or opening the vehicle, or starting the vehicle, using user interfaces of the vehicle, or turning-off the vehicle.

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[0043] In some embodiments, a method may include receiving metadata along with the request to grant the e-keys, the metadata includes the privileges settings, the privilege settings defining types of functional access of the vehicle, expiration data for the access code.

[0044] In some embodiments, the e-keys enable graphical icons on a screen of the device to be active for use of the vehicle, at least one of the graphical icons on the screen enabling unlocking of the vehicle, turning on of the vehicle, or locking the vehicle.

[0045] In some embodiments, the e-keys enable graphical icons on a screen associated with an application executed on the device, the e-keys being active enables use of the vehicle via the application, the application enabling at least unlocking of the vehicle, turning on of the vehicle, or locking the vehicle.

[0046] In some embodiments, the device is one of a smartphone, or a smartwatch, or smart glasses, or a portable device, or a computer, or a digital assistant.

[0047] In some embodiments, the privilege settings include a time code defining a length of during which the e-keys will remain active.

[0048] In one embodiment, a method, executed by a processor, is used for assigning e-keys to enable access and use of a vehicle using the e-keys. The method includes receiving, at a server, a request to generate e-keys for a vehicle associated with a user account, the request identifying a recipient and metadata defining privileges of use for the e-keys. The method includes generating an access code for the request, the access code being unique for the request. The method further includes encrypting the access code and at least part of the metadata to generate encrypted e-keys and sending the encrypted e-keys to a device of the recipient. The encrypted e-keys are configured for wireless transfer to the vehicle from the device of the recipient. The wireless transfer includes transfer of a device ID of the device of the recipient, and the encrypted e-keys are configured to be decrypted by the vehicle and the access code is associated with the device ID on the vehicle. The access code is transmitted to the device of the recipient from the vehicle, such that the vehicle provides access for use to the device when the access code is used by the device having the device ID. The access code functions as the e-keys for the vehicle and the metadata includes privileges for use of the vehicle while using the e-keys.

[0049] In some embodiments, the server receives data during the use of the e-keys, the data including at least use metrics of the vehicle, the use metrics being stored by the server as history of use for the e-keys.

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[0050] In some embodiments, the server, upon receiving a request to cancel the e-keys, sends deactivation instructions to one or both of the devices of the recipient and the vehicle.

[0051] In some embodiments, a plurality of requests to generate e-keys for the vehicle is received by the server from time to time, such that a plurality of e-keys can be generated for the vehicle and the e-keys that are generated are associated with the user account, and any one of the generated e-keys are removable from being active via the user account.

[0052] In some embodiments, a plurality of e-keys for the vehicle are producible, the plurality of e-keys can co-exist. In some embodiments, only one e-key is associated with active use of the vehicle at one time. In some embodiments, a particular e-key in use with the vehicle can swapped for another e-key having access to the vehicle, such that each e-key has the same or different privileges. In some embodiments, a priority order of e-keys is defined, such that higher level priority e-keys are placed in use over lower priority e-keys, when devices associated with the e-keys are within a communication distance of the vehicle.

[0053] In some embodiments, each of a plurality of activated e-keys is associated with different or same privilege settings, as defined in the request to assign the e-keys.

[0054] In some embodiments, each e-key is associated with an expiration time, and upon reaching the expiration time, the e-keys are invalidated.

[0055] Some embodiments further include receiving interface data with the vehicle during use by the recipient, the interface data being examined to determine learned patterns, the learned patters identifying recommendations to the recipient for settings of the vehicle.

[0056] In one embodiment, a method for gaining access to e-keys for access to a vehicle using a smartphone is provided. The method includes receiving at the smartphone a message indicating that e-keys were granted to the user of the smartphone. The message includes encrypted e-keys that contain a generated access code. The generated access code being unique for the message. The method includes transmitting the encrypted e-keys to a vehicle using a wireless protocol, a device ID of the smartphone being sent to the vehicle along with the encrypted e-keys. The method also includes receiving activated e-keys from the vehicle at the smartphone. The activated e-keys include the access code, and the access code enables one or more graphical user interface controls that when selected provide to unlock the vehicle, start the vehicle, turn-off the vehicle, and lock the vehicle.

[0057] In some embodiments, a plurality of requests to generate e-keys for the vehicle is received by the server from time to time, such that a plurality of e-keys can be generated for

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the vehicle and the e-keys that are generated are associated with a user account, and any one of the generated e-keys are removable from being active via the user account.

[0058] In one embodiment, the e-keys can be sent to any person, via a communication message. The e-keys, in one embodiment, are sent to a user in a message so that the recipient can get a graphical user interface that allows the recipient to activate the e-keys and then open the car, turn on the car, drive the car, turn off the car, lock the car, etc.

[0059] BRIEF DESCRIPTION OF DRAWINGS

[0060] Figure 1 shows example profiles settings for a vehicle, and association to roles, in accordance with one embodiment.

[0061] Figure 2 shows additional role settings for different users, in accordance with one embodiment.

[0062] Figures 3-5 show additional vehicle profile settings, in accordance with one embodiment.

[0063] Figures 6-9B show example pairing of a vehicle to a user profile, and examples of a shared vehicle transfers of profiles for limited use of the profiles on the shared vehicles, in accordance with one embodiment.

[0064] Figure 10 illustrates validation method for enabling a profile on a vehicle and biometric validation, in accordance with one embodiment.

[0065] Figure 11 illustrates various settings for a profile and adjustments that can be made over the Internet via a device, e.g., using a portable device or the vehicle electronics and displays, and remote controls and settings in accordance with one embodiment.

[0066] Figure 12 describes a system in which a user interacts with a model view controller software environment useful for processing APPS using APIs on vehicles with vehicle operating systems capable of processing computer code, in accordance with one embodiment.

[0067] Figure 13A describes how vehicle on board computer with input output system useful for accepting input, processing input and displaying results in conjunction with stored computer readable programs or functions in the forms of APPs may be structured, in accordance with one embodiment.

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[0068] Figure 13B describes one example of how stored data and function declarations may be compiled to provide intermediary access to a vehicle's computer controlling vehicle systems, in accordance with one embodiment.

[0069] Figure 13C describes a set of computer readable and executable code that can be compiled together by a third party APP developer in the form of an APP, in accordance with one embodiment.

[0070] Figure 14 describes the stepped flow of events as a user interacts with an APP, in this case, an HVAC APP, in accordance with one embodiment.

[0071] Figure 15 Describes further ways an APP may take, process and produce results, in accordance with one embodiment.

[0072] Figure 16A describes an ecosystem where an APP in conjunction with a vehicle API may work together to make assumptions, make decisions and take actions, in accordance with one embodiment.

[0073] Figure 16B describes how one of many types of inputs into an assumption and reasoning logic module can be compiled over time, in accordance with one embodiment.

[0074] Figure 16C describes one example of what an assumption and reasoning logic module may produce using the data points collected on an ongoing basis in Figure 16B, in accordance with one embodiment.

[0075] Figure 16D describes an example list of decision the decision and action engine may take based on information provided by the assumption and reasoning logic module and sets of assumptions created, in accordance with one embodiment.

[0076] Figures 17-25 define methods and systems for assigning advisor accounts for accessing data regarding the vehicle.

[0077] Figures 26-35 illustrate methods and systems for assigning e-keys for enabling access of a vehicle to a remote user.

DETAILED EMBODIMENTS

[0078] Embodiments of the present invention define methods, systems and apparatus for use in vehicles. The methods, systems and apparatus include electronics of vehicles that drive display devices in vehicles and communicate wirelessly with Internet services.

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[0079] The Internet services provide access to cloud services. The cloud services provide access to user accounts and access to settings, configurations, applications and other customization defined by the user. Customization can include user interface customization of a vehicle display or displays. The customization can include the ability to select specific applications (APPS) to be activated by the vehicle and interfaced via the display or displays, voice input, touch input, etc. The customization is also provided with a learning engine that learns use behavior by the user or patterns of behavior of multiple users, and automatically implements settings or programming to aspects of the user interface, or provides recommendations or notifications with recommendations. The programming can include automatic programming at certain times, days, months, years, etc., and can be updated or molded over time as the user continues to use the vehicle UI.

[0080] In one embodiment, a user can assign and add advisor account to any individual. The Advisor account can be for any duration, and the duration can be set by the user. In one embodiment, the advisor account can be assigned to a guest driver of a vehicle. The guest driver can be, for example, a friend, a known individual, a service person, a valet person or valet service, etc. The creation of an advisor account can therefore be for a short duration, or long duration, or permanently, or until the account is canceled, stopped, revoked, expires, or eliminated by the person/user that issued or created the advisor account. In one embodiment, the advisor account can act to provide access to a vehicle.

[0081] In one embodiment, access can be by way of electronic keys (e.g., e-keys), which can be sent by a vehicle owner/admin to some person or entity. For example, the user-owner of the vehicle can assign a valet with access to the vehicle by going on an application (App or website) on a computing device (e.g., mobile or non-mobile device), identifying the recipient, identifying a mode for communicating with the recipient (e.g., text, email, message, notification, etc.), selecting the account privileges (e.g., what type of access, speed limits, geographic restrictions, amount of time the e-keys will be valid (or else expire)), and requesting that e-keys be sent to the recipient.

[0082] In one embodiment, a user can access cloud services for a vehicle manufacturer and identify the particular vehicle from selected choices. The user can then identify a customization profile for the vehicle by defining the look and feel of a UI display, arrangement of vehicle controls on displays, add and associate third party APPS to the vehicle display, and save the configuration.

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[0083] The configuration, in one embodiment, is saved to the profile of the user. In one embodiment, the profile is saved on a database of a specific vehicle manufacturer that offers the customization option. In still other embodiments, once a configuration is saved to the profile account of a user, that configuration can be shared to other vehicles of the user. In still other embodiments, when a user buys a new car, the custom configuration can be transferred either entirely or partially to the new vehicle. In some embodiments, if the vehicle has more or less system functions, the customization can be adjusted automatically or the user can be provided with options to update the customization to add or delete features. In one embodiment, the customization will be facilitated via a website. In one embodiment, the website may be of the vehicle manufacturer. In one embodiment, the website of the vehicle manufacturer can allow the user to add APPS that are created by third parties. The third parties can create APPS that communicate with APIs of the system components of specific vehicles of the manufacturer. Once APPS are selected, the user can add them to the custom user interface (UI) display.

[0084] The user can also be allowed to arrange the APPS or icons of APPS in a specific custom arrangement that is saved to the user's profile. In one embodiment, the user's profile can also be run on various vehicles, other than those owned by the user. For instance, if the user is renting a vehicle and the vehicle has access to cloud services, the user can enter his user name and password (or other identifiers), which log the user into the cloud services and saved profiles. The saved profiles will then enable logic to build a custom UI for the user based on the vehicle being driven. In one embodiment, the system components and APIs of the system components of the rented vehicle can be paired or linked to the users saved APP selections.

[0085] The user's saved UI configuration may also be transferred to the display of the rented (or other vehicle) vehicle. A best-fit configuration can also be generated using the user's profile selections, so that the configuration provided for the other vehicle will closely resemble or appear as it does for the configured vehicle. In other embodiments, the user's use metrics can be monitored. The use metrics can include use of APPS, use be of system components of the vehicle, use of the vehicle, environment conditions, and historical actions taken by the user via the input/output controls of the vehicle (e.g., buttons, levers, keys, fobs, display selections, display interface actions, communication actions, etc.).

[0086] These historical actions can then be used to define learned actions. The learned actions can be analyzed to change configuration settings in the user's saved profile. For

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instance, if the user uses a particular APP every day at a particular time, that APP icon can be surfaced to the display or preset to start. The APP can then provide information to the user at about the same time the user normally needs the information. Other historical use patterns can be monitored and such data can be saved to the user's profile.

[0087] The data can then be used by algorithms that build assumptions based on historical inputs by a user as well as environmental inputs, location inputs, vehicle diagnostic inputs; internet connected marketing deals, the user's calendar, traffic conditions as well as news. The assumptions the algorithm builds are then processed into decisions and actions by an additional algorithmic process to activate local or remote audio and visual alerts, change vehicle systems, display information on a vehicle's displays and request a decision from a user locally or remotely to complete an action.

[0088] A number of embodiments are described below, with reference to specific implementations that refer to vehicles, but such implementations should be broadly construed to include any type of vehicle, structure or object. Without limitation, vehicles can include any type of moving object that can be steered, and can include vehicles that are for human occupancy or not. Vehicles can include those that are privately owned, owned by corporations, commercially operated vehicles, such as buses, automobiles, trucks, cars, buses, trains, trolleys, etc. Example vehicles can include those that are combustion engine based, electric engine (EV) based, hybrids, or other types of energy source vehicles.

[0089] A cloud processing system, as described herein, will include systems that are operated and connected to the Internet or to each other using local networking communication protocols. A cloud processing system can be defined as interconnected and distributed physical or virtual software defined network that utilizes virtual or physical processing and storage machines that enable various applications and operating systems to facilitate the communication with and between various client devices (vehicles, user devices, structures, objects etc.).

[0090] The communication with and between the various client devices will enable the cloud processing system to deliver additional processing information, data, and real-time metrics concerning data obtained from other processing systems as well as client feedback data. The distributed nature of the cloud processing system will enable users of various vehicles, structures and objects to access the Internet, and be presented with more flexible processing power that will provide the requested services in a more effective manner.

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[0091] The processing systems can be defined from various data centers that include multiple computing systems that provide the processing power to execute one or more computer readable programs. The processing of the computer readable programs can produce operations that can respond to requests made by other processing systems that may be local to a vehicle's electronic system. For example, a vehicle can include electronics that utilize memory and a processor to execute program instructions to provide services.

[0092] In other embodiments, the electronics of a vehicle can synchronize with a user's portable electronics. The user's electronics can include, for example mobile devices that include smartphones, tablet computers, laptop computers, general-purpose computers, special purpose computers, etc. The various computing devices of the vehicle, and or the computing devices of the user (smart devices) can be connected to the Internet or to each other. Provided that a user has access or account access to the cloud service, the cloud processing services on the Internet can provide additional processing information to the electronics of the vehicle.

[0093] The wireless communication can include cellular tower communication that couples and communicates through various networks to the Internet, to provide access to cloud processing 120. Other methods can include providing Wi-Fi communication to local Wi-Fi transmitters and receivers, which communicate with cloud processing 120. Other types of communication can include radio frequency communication, such as 802.11.ac, 802.11ad and subsequent wireless networking protocols, Bluetooth communication or combinations of Wi-Fi and Bluetooth. It should be understood that vehicle electronics can communicate with cloud processing 120 via any number of communication methods, so long as exchanges of data can be made with cloud processing 120 from time to time.

[0094] The communication can be made by vehicle electronics while the vehicle is on or when the vehicle is off, so long as communication and processing circuitry of vehicle electronics has a power source. The power source can include battery power that powers vehicle electronics to communicate with cloud processing 120 when vehicle is turned off. When vehicle is turned on, the battery that drives vehicle electronics can be recharged.

[0095] Still further, certain applications can increase in size when being used or decrease in size to enable selection at a later time. For example, selecting the temperature system component may expand the system component to a larger space, thus temporarily removing other displayed components. The user can also select other buttons to access other system controls, other apps, or modify or add applications or system controls. When modifications

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are made, the modifications are saved to a user database and profile of the user, as managed by cloud services.

[0096] Cloud services will therefore allow any future modifications to be made to the custom configuration at any time and from any computer connected to the Internet. Still further, the custom configuration can be transferred to a second vehicle. If the custom configuration is transferred to a second vehicle, the system can select the system components for the second vehicle and attempted do a best match of applications available for the second vehicle that resemble or match the ones used in a first vehicle. Specific settings, arrangements and other features may also be transferred to a second vehicle, by simply transferring the custom configuration to a second vehicle.

[0097] In one embodiment, the functions of the specific applications illustrated in the display will be monitored and restricted depending on safety considerations while driving. For example, if the interfacing functionality requires more interactivity with the display, or requires a reading of text or inputting text, those functions will be disabled during operation of the vehicle. Once the vehicle comes to a stop, or is placed in Park, certain of these functions will be activated. In other embodiments, other safety considerations will allow for applications to shift from outputting text to outputting audio or voice. The input can also be changed from touchscreen, button touches, selections, and/or voice input. In still other embodiments, safety considerations can allow certain user interface components to move about the display to provide easier reading while driving or automatic conversion of text to audio.

[0098] For example, content being displayed in the center panel display of the vehicle, can be automatically shown in the dashboard display region of the vehicle, such as in front of the steering wheel. In still other embodiments, some content or display data can be moved from the center console or the display in front of the steering wheel to the windshield of the vehicle in a heads-up display area. Accordingly, algorithms executed by the applications and applications of the manufacturer, can cooperate to provide functionality to the application features and interfaces, while maintaining safety parameters defined by rules. The safety parameters will therefore allow content of the user interface to be shifted around to various displays of the vehicle, or translated to voice or audio at certain points in time.

[0099] These settings and customizations can be made through the web/cloud services and tools provided by the website of, for example the manufacturer of the vehicle. In one

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embodiment, the cloud services provided by the manufacturer can be provided by a partner of the manufacturer. The partners of the manufacturer can include software companies that develop, host, or manage certain functionality provided by the vehicle manufacturer. In other embodiments, the partner software companies can integrate tools or components with tools and components of the vehicle manufacturer. This provides for integration with one or more cloud services, software services, Internet services, and services provided by systems of vehicles or systems of the vehicle manufacture. In either case, whether the software and logic is designed and constructed by one or more entities, the cloud services provided by the vehicle manufacturer or the website that provides the tools for customization will appear as a unified simple to use interface for the user. As mentioned above, the cloud services can provide databases for saving the user profile and data associated with the user account.

[00100] The user profile can include settings made by the user, customizations made by the user, identification of applications purchased or added to the vehicle customizations, etc. Still further, the user profile data can be part or be associated with the user account. In this manner, the user that customized a user interface can access the Internet at any time, whether through the vehicle or through any other computing device having access to the Internet and make changes, modifications, or access control features of the vehicle remotely. In one embodiment, the profile of the user can be accessed from any vehicle, such as rented vehicles or shared vehicles. Settings and profile data can then be shared for a period of time on any vehicle and use data on that vehicle can be stored.

[00101] When the user is not using the vehicle, the custom configuration can be turned off or locked out for another session. Once the user wants to start a new session, the user can log back in and the custom configuration returns. In other embodiments, the custom configuration will automatically turn off when the user is not driving the vehicle or has not logged into the vehicle. In other embodiments, the custom configuration can be automatically turned on when the user is detected. The user can be detected using biometrics, login credentials, image detection of the face, fingerprint detection, retina scans, etc. In some embodiments, biometrics can include data used to identify the user, such as face recognition, fingerprint reading, retina scans, voice detection, or combinations thereof. Still further, the custom configuration can be transferred to other vehicles.

[00102] If the user wishes to use his or her custom configuration in another vehicle, the user can login to the custom configuration or user account from another vehicle. If the other vehicle does not have all the system components needed to define the custom

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configuration, the custom configuration can be supplemented with other similar components automatically. In other embodiments, the custom configuration can be transferred from one vehicle to another, or when the user buys a new vehicle. In another embodiment, the custom configuration can be adjusted based on the driver. The custom configuration can also be preset remotely from the Internet, using the cloud services. The custom configuration can also be configured to provide limited use of certain systems or the vehicle, such as when a guest is driving the vehicle. In other embodiments, restrictions can be placed on the vehicle speed, location of driving, and automatic notifications for the user or the master user of the vehicle. The master user of the vehicle can have a master account with administrator credentials.

[00103] In still another embodiment, the vehicle can be loaned to a child of driving age (under 21/18 years of age), and the child can be provided with restricted use of the vehicle. When the child exceeds or does not follow the restrictions of the vehicle, automatic notifications can be provided to the user that is the administrator of the vehicle. The notifications can be by cell phone, smartphone, tablet computer, mobile device, text messages, phone calls, commendations of phone calls and text, audio messages, audible sounds, vibrations, and commendations thereof. History use of the vehicle can also be maintained in cloud services. The history use can provide the user with information as to where the vehicle has been, the speed or events, violations that occurred when use of the vehicle etc. The configuration can also provide messages to the driver warning the driver of when the vehicle has exceeded a restriction, or is approaching a restriction in use, driving area, speed, etc.

[00104] The screen displays can have various configurations, placements, sizes, number of pages, tabs, etc., and the user can provide controls for some or all of the interfaces and controls in certain locations. The selection can be enabled for third-party applications. The third-party applications can be selected from the vehicle site, or by providing links to third-party sites. The third-party applications can be pre-identified by the site and displayed to the user if they are compatible with the particular vehicle selected. In another embodiment, the third-party applications can all be shown to the user whether or not they are compatible with the vehicle. Upon binding/pairing or attempting to find application for the vehicle, compliance as to whether the applications operate or comply with the particular vehicle can be made.

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[00105] In one embodiment, certain third-party applications can be reviewed by the vehicle site administrators before they are made available to users for selection. In other embodiments, the third-party applications can be approved or disapproved. In still other embodiments, the third-party applications can be augmented with restrictions made by the vehicle manufacturer, or dictated by law. The restrictions can be applied, based on the anticipated interfacing with the vehicle interfaces, to ensure safety during driving. For instance, if a particular application requires entry of text, navigation of controls, or other activities that would distract the driver during operation of the vehicle, such vehicle controls or application controls for application interfaces can be temporarily disabled, or can be automatically transferred to a heads up display, or can switch to take audio vocal input from the user. In some embodiments, when the vehicle has come to a stop or is place to park, certain controls or interfaces can be re-enabled, or moved back to original display location or converted back from voice input to touch input. In one embodiment, tools provided by the vehicle site or third-party site can provide for customization of the layout of the display screens of the user interface.

[00106] The customization can include organizing or laying out system interfaces as well as application interfaces, such as those interfaces provided by 3rd parties. In one embodiment, interface rules are applied to determine if the system interfaces can be replaced with third-party application interfaces, while providing access to the control interfaces via the APIs of the systems. For example, if the user wants to provide a custom speed indicator, the speed indicator must be compliant (via APIs and/or mapping) with the system interfaces so that the speed readings can be populated to the third-party application. In one embodiment, rules can be integrated with or applied to the applications and system user interfaces for when the vehicle is moving. As mentioned above, such rules can limit interactivity with certain user interfaces while the vehicle is moving to prevent unsafe driving. In one embodiment, the custom user interface is saved to the user profile.

[00107] The user profile may contain settings, such as selections of the user interface components associated with the system of the vehicle, as well as user interface is provided by third-party applications. In addition, the user profile can contain and store settings provided by the user. The settings provided by the user, as mentioned is this disclosure can also be learned settings based on use. The settings can further include remote access settings, as well as settings allow the user to control vehicle components from a remote location or a remote computer. The setting can also include providing access to the user account to view historical

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driving patterns, recent driving activities, the performance of the vehicle during specific driving sessions, the performance of specific vehicle components, etc.

[00108] In one embodiment, the custom user interface configuration can be transferred to the vehicle. The custom configuration, as mentioned above is stored in the database of the vehicle manufacturer, or a database held by a 3rd party that cooperates with the vehicle manufacturer to provide cloud services. The database, in one embodiment, is a network accessible storage which allows access to the user to program and modify the user interface using any computer or device having access to the Internet, including the vehicle itself or a third-party vehicle. The method then proceeds to operation where the custom user interface can be activated in managed for Internet connectivity for components of the custom interface. For example, the vehicle's Internet access protocols can be set, or registered with an Internet provider or service provider for the cloud services. The service provider for the cloud services can be the vehicle manufacturer, a company cooperating with the vehicle manufacturer, a third-party company, or combinations thereof.

[00109] In one embodiment, the method/logic can also enable local communication with mobile devices that may be in the vehicle. The enablement may be provided by allowing synchronization with the computing system of the vehicle, or with the computing communications of the portable device. For example, the local communication can be paired automatically, based on a preset pairing process where pairing keys are entered. This provides for automatic settings and synchronization when the user enters the vehicle with the portal device. As mentioned above, user interfaces associated with applications loaded on the user's portal device can also synchronize to the display screens of the vehicle, as predefined by the user.

[00110] In one embodiment, vehicle settings are saved to either a memory number button on the vehicle or synced to a key fob, or accessible via an interface or voice activation. In one example, a vehicle operator profile is provided to allow users to maintain their individualized profiles, settings and accounts for vehicles from any internet connected device or be able to login to their vehicle physically in or near the vehicle by the use of a fob, thumb print, eye scan and or manual login using an input device that interacts with the vehicle's login system.

[00111] In one embodiment, the profile can be managed at a user account saved to a central or cloud distributed system, to manage access. Any vehicle can be abstracted so that

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any user can log into any vehicle if they have an account that allows access to that vehicle. For instance, a vehicle owner with the role of "administrator" (e.g., an administrator of a user account that has a profile associated therewith or multiple/sub profiles) can create logins for his or her vehicle(s) for additional users such as his or her children, spouse, mechanic, and valet driver among other applications. Logins can be created for individuals or for roles such as the role of "child" where all users with the role "child" would have the same vehicle specifications applied to the vehicle they will be logging into. Similarly, the role of valet can be given and shared by any valet driver.

[00112] The purpose of abstracting vehicle operators from the vehicle itself is a shift from the current state of the art in which settings are vehicle specific- each vehicle typically only having the ability to store 1-3 sets of settings, to where vehicle settings are user specific and 1-n logins can be managed through an access management system. The embodiments defined herein allow each user to apply his or her settings to any vehicle based on their login information in which they provide their login and password. When a user logs into a vehicle, the vehicle will determine locally on board and/or communicate remotely with a central or distributed access management system to determine the validity of the login presented to the system. If the user's login is recognized, the system will apply settings and use privileges to the vehicle prescribed by the login.

[00113] Logins can have "role" specific settings and privileges or settings and privileges set only by the administrator that cannot be overridden by the user of the login. For instance, an administrator may create a login for "John" their 16-year-old son. The administrator can apply settings to John's login that John cannot override such as the maximum speed the vehicle can travel. For instance, Although the vehicle may have the ability to travel at a speed of 130 mph, John's login will only allow the vehicle to travel at a speed up to 90 mph. Additionally, every login may have settings that the user of the login can toggle to their liking such as the list of radio stations they would like pre-programed every time they log in to any vehicle that accepts their login.

[00114] Logins can control all aspects of a vehicle's behavior and can be attributed to individuals or roles. These settings can be toggled via a network connected device such as a computer, web application, smart-phone or directly on the vehicle. Administrators can decide which settings are locked for specific logins or roles, which are open for the login user to toggle and which settings are to be enforced depending on the time of year, or time or day etc., or when a condition or event is detected.

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[00115] Login settings that can be set and remotely administered include but are not limited to, driving characteristics (rate of speed, fuel consumption guidelines) location based settings (GPS aided travel restrictions, travel radius boundaries, dynamically loading maps, dynamically loading directions, dynamically loading fuel, charge and battery service and purchase locations etc.), time of day based use restrictions (day driving only for example), automatic purchase settings (financial institution linking for automatic purchasing of fuel, charge time, batteries, car washes, etc.), fuel settings (Electric only, fuel only, hybrid only etc.), refueling routing and purchase (incentive based re-fueling maps, incentive based refueling offers etc.) driving characteristic settings (sport, comfortable, soft, off-road, high performance, economy mode), entertainment system settings (radio memory settings, internet access or restriction, streaming services settings), comfort & HVAC settings (climate control, seat positions, seat heater/cooler, suspension/ride settings, entry lighting, remote start, remote stop etc.) tracking/metric settings (camera/video recording guidelines, mileage, top speed, average speed, MPG, wear and tear settings and notifications, historical travel maps).

[00116] Automatic purchase settings can be processed in response to requests from the vehicle. The request can be, for example, to transact a payment is for one of a car wash service, a fast food service, a toll road service, a goods purchase service, a rental service, a lease service, or combinations thereof.

[00117] Additionally, combinations of settings or setting profiles (such as "sport" where your seat moves to sport position for additional support, suspension stiffens, throttle response becomes aggressive etc.) can be set as well instead of individually setting use characteristics. In one embodiment, logins are user specific, not vehicle specific, so any family member can use their login on any family vehicle and the vehicle will perform based on the metrics and restrictions dictated by the login used to operate the vehicle.

[00118] Companies or entities can create and manage logins to company vehicles for delivery drivers, car washers, and mechanics among other applications. Each login can be configured to provide or restrict access based on the user logged into the vehicle. A company may only allow a delivery vehicle to travel at a maximum speed of 80 mph to limit reckless driving. A company may create a role of "local delivery only" where a driver with that login can only drive the vehicle within their territory. Breaches in territory travel will result in a recorded event and notification to the vehicle administrator as well as the vehicle operator. A grace period will be given to re-route back into the driver's territory before more aggressive

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vehicle disabling mechanisms are deployed. The driver will be given visual and audio cues as to how to avoid vehicle disabling.

[00119] A dealership can grant "test drive" logins to potential customers, which allows them to operate less than 100mph and only within a 5-mile radius. In one embodiment, alerts or notifications can be automatically triggered if violations in the restrictions are detected. A dealership may also grant a "demo" login for instance which showcases the vehicle's capabilities, available APPS, features and benefits. Variations of the "demo" login can be used on variations of potential buyers. An "18-24 year old demo" may be useful for enticing that demographic and showcases the vehicle's features 18-24 year olds are most receptive to.

[00120] A valet can be given a password to login only as "Valet" which will impose restrictions on trunk operation, vehicle speed operation, vehicle location notification settings etc. A recording option can be provided, which can set a recording within and around the vehicle when in the valet mode. This way, the user can login to see what the valet driver did while in possession the car, in case the owner feels that something is not correct when the vehicle is returned to the owner. Additionally, while the valet is driving the car, a notification can be provided to the valet that will alert the valet that recording is in progress, and their face can be shown on the display while the valet parks the car.

[00121] A user may set the valet login to alert the user that left the vehicle with a valet that the car has traveled beyond the allowed radius or has reached a speed greater than 100mph, for example. This alert can be sent wirelessly to an email address, texted via mobile phone number or sent to a mobile device having a login-profile mobile application capable of sharing current vehicle location, speed, fuel status among other metrics. The last logged in user of the vehicle or vehicle administrator can send visual, audio or auto override notifications to the valet letting them know they need their car back, they are traveling too fast or even auto shut down to prevent theft.

[00122] A parent can set up a login to the family vehicle for their child that only allows the child to drive within a certain radius. For example the vehicle may only be used to drive between home and school. A map can be outlined on the account management interface by a parent when setting up the child's login to support the home to school restriction intended.

[00123] In one embodiment, a parent or company may give a child or company driver a login that also carries a financial allowance connected to one or more financial institutions

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administered through the access management and/or login management system by administrators. For instance, a child may have the need to re-fuel the vehicle by purchasing either traditional fuel, battery units, and or charging time but a parent does not want to give a general credit card to the child. The parent will set a budget for fuel purchase for the given login and the login will then allow the vehicle will communicate with the fuel, battery, and or charge-dispensing unit automatically using wired or wireless communication systems funding the purchase automatically up to the allotted budget set in the login of the vehicle.

[00124] In one embodiment, these features are useful for fleet vehicles where company vehicle users currently use a corporate credit card to purchase fuel where fraud may exist in the form of using company credit cards, or company fuel accounts to fuel personal vehicles. The new system ensures only the company owned vehicle is approved to purchase the traditional fuel, battery, charging time and also maintains metrics on which logged in user consumed fuel and re-fueled which vehicle.

[00125] In one embodiment, a process is created so that some or all manufacturers use the same type of login/access management system. By way of example, any user can log into any vehicle from any brand in so far as they have account creation access or a recognized login. Once logged in, each vehicle will receive and impose the login-based settings as long as the manufacturer supports the login/access system.

[00126] Figure 1 shows various methods a user can interact with a vehicle login system, in accordance with one embodiment. The user may use any network-connected device ranging from a mobile computer, mobile phone; mobile network device all connecting to a remote converged or distributed network cloud system. The user may also interact with the vehicle login system directly on or near the vehicle. The user supplies login credentials to a vehicle login interface which are sent to the remote distributed or centralized user login authentication system or onboard vehicle authentication system. The processing logic receiving the login credentials processes the data and returns an authentication response to the user attempting to log in. If the authentication is a success, the vehicle the user attempted to log into has vehicle settings applied to it and the user is allowed to operate the vehicle. If the authentication is a failure, the user is presented with a failed access notification on the login interface.

[00127] Figure 2 shows two different types of users and an example of how the user is organized, in accordance with one embodiment. In this example, User 1 is an administrator

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of a vehicle login system over vehicles he or she owns. User 1 has the ability to add or remove logins, roles and vehicles to his login system. Since User 1 is an administrator, he or she can add more logins and or roles to the system to allow a family member to have access to the family vehicles for instance. In this case, a family member "User 2" is shown. The administrator has given this family member a login named User 2 and has granted two roles to User 2. User 1 may only want User 2 to have access to a certain vehicle and to certain roles only. User 1 may only want User 2 to have access to the vehicle for the purposes of traveling between school and home. In this case User 1 has created a role that is applied to User 2, which only allows the vehicle to travel within certain restrictions and geographical locations.

[00128] In this example, User 2 does not have the ability to alter his or her login, role or vehicle since they do not have administrator access. However, User 1 can make changes on behalf of User 2. The full range of settings over a vehicle that applies to a given role or login is a super set of settings. User 2 may have access to a subset of settings that User 1 allows changes to by User 2.

[00129] Figure 3 shows a graphical representation of an example set of settings an administrator such as User 1 may have to administer logins, roles, and vehicles. Figure 3 further expands the depth of settings, including but not limited to, vehicle administration, adding or deleting users and roles, vehicle global settings that apply to all roles and logins, adding or deleting vehicles among other settings.

[00130] Figure 4 shows one sample of many potential configuration settings for a given vehicle. In this case, User 2 has a login created for him or her named "CHILD". This login contains a set of settings that may or may not be configurable by User 2 since User 2 is not an administrator, only a subset of settings are open to him or her to alter. The drawing illustrates the settings that are user editable and admin only or restricted. The left column lists the type of settings corresponding on the same row on the right column. These settings are examples and may be altered, added to, or subtracted from in different embodiments. For instance, fuel use settings allow an admin in this case to choose what type of fuel the user login CHILD is allowed to use while logged into the vehicle. Similarly, location based settings allows an administrator to draw out a map of the area the user login CHILD is allowed to travel within while logged into the vehicle.

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[00131] Figure 5 describes extended settings from Figure 4. This figure describes additional vehicle settings that are configurable by the user with the login "CHILD" and those that are only configurable by User one being the Administrator. Figure 5 also describes a subset of settings a user login CHILD in this case is allowed to change. For example, the user login CHILD is allowed to select his or her radio stations, streaming services, and Internet access settings for a unified experience in any vehicle they log into using this log in. Similarly, the user login CHILD can access driving modes and set the vehicle mode to sport for instance. It should be understood that the example "CHILD" profile is just that, an example, and any type of user profile may be set with the defined privileges and/or restrictions.

[00132] Figure 6 illustrates an example of utilizing a profile of the user, to access cloud services 120, and a database 115, in accordance with one embodiment of the present invention. In this example, a user may utilize a connected device 110 to access cloud services 120. Using the connected device 110, the user, in this case Bob, is accessing his universal profile settings. His profile settings may include settings that have been selected before in earlier sessions, or default settings implemented by a vehicle manufacturer, or another user such as an administrator. In the example, the user may access particular active settings managed by cloud services 120 which can cause Bob's profile in database 115 to be updated.

[00133] In one embodiment, Bob's profile can include specific settings, preferences, use history, and learned settings from earlier uses of one or more vehicles. The profile settings defined by Bob, are then transferred by cloud services 122 one or more vehicles utilized by Bob. For example, if the user wishes to utilize his regular everyday car, the profile settings may already be stored on the vehicle. If the user wishes to utilize a different vehicle, such as a friend's vehicle, a rented vehicle, a shared vehicle, a temporary vehicle, a loaner vehicle, a test drive vehicle, a company vehicle, etc., the user's profiles can also be transferred to that vehicle.

[00134] The user profiles can include standard settings that may be set at the various vehicles, or custom settings that can be selected for the user based on learned settings over time by use of various vehicles. In one embodiment, the user profiles are continuously updated and store to a database 115, which is accessible by cloud services 120. Database 115 may include data storage, such as cloud storage, data center databases, distributed databases, local storage on vehicles, network storage, and the like.

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[00135] Figure 7 illustrates an example of a user (Bob) that may wish to utilize a car 200, in accordance with one embodiment of the present invention. For example, the car 200 may be a shared vehicle, such as those commonly shared in urban cities. Shared vehicles are those that belong to a company and where the company provides accounts to users to access the vehicles for specific trips, specific times, periods of time, etc. Users that share those vehicles typically park the vehicles at different locations throughout an urban city. Users wishing to find a vehicle to use can access an application or website having access to an Internet connected application to find the vehicle closest to the particular user.

[00136] Once the user has located a proximate vehicle, such as car 200, the user may approach the vehicle so as to utilize the vehicle 200. In one embodiment, when the user approaches the vehicle, and comes in close proximity to the vehicle as detected by the geo-location of the user's mobile device, a pairing request can be detected. The pairing request may be triggered once the proximity zone of the car 200 and the proximity zone of the user substantially or partially overlap. The proximity zones may overlap when the user comes in close proximity to the vehicle, such as within a few feet, within a mile, or the user has touched or bumped the vehicle.

[00137] The pairing request may be automatically sent by the user's device to cloud services 120. The pairing request can include sending the model of the vehicle 200 that may have been obtained by the user's mobile device from the vehicle 200 directly. In the illustrated example, the pairing request by the user's mobile device can include identification of the vehicle that the user has come in close proximity to. A pairing module 170, can then communicate with a mapping engine 118 that determines information associated with car 200.

[00138] An automaker database 116 can include data regarding a plurality of vehicles, including standard user interfaces, configuration interfaces, and other information necessary to provide user Bob with a custom interface for vehicle 200.

[00139] The mapping engine 118, in this example includes a map or that communicates with the automakers database to identify the settings, applications, APIs, or modules that allow integration of Bob's user profile from the user profiles database 160 so that Bob's profile can be sent to car 200. In the illustrated example, the mapping engine, the of the mapper, will obtain Bob's profile 160 for cloud services and obtain vehicle information for the user interfaces of the vehicle desired for use by the user.

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[00140] The mapping engine 118 will the transfer Bob's profile to vehicle 200. At this point, the user, Bob, can be provided with an interface on a mobile device to allow access to the vehicle. The user interface can include a plurality of screens with instructions, check information, cost information, billing information, etc. As illustrated in figure 7, the users mobile device can provide various notifications, such as identifying to the user that the user standing next to a blue model M7 from maker C. The user interface can ask Bob if Bob wishes to pair settings to the specific vehicle 200. If Bob desires to actually utilize the shared vehicle 200, the pairing request may be initiated as mentioned above.

[00141] Figure 8 illustrates another embodiment where the user Bob has utilized his mobile device 100a to define or access a plurality of settings. In one embodiment, the user may register 214 with a car sharing service, such as via a user interface or application having access to the Internet and the company providing the service. Cloud services 120 can then provide access to the profile database 160 where Bob's profile may be stored. The profile 160 may be accessible to 3rd parties, such as car sharing service.

[00142] Also shown in cloud services 120 is the car database 116/115. The car database can then be provided with information from the car sharing company 210 that identifies the cars that the company owns and that are shared with the service. The car data including assigned IDs to the vehicles and cars can be stored in the car database 116/115. Additional data can be supplemented from vehicle manufacturers 212. The cloud services 120, in accordance with one embodiment, can include logic for profile identification for vehicles 224, logic for proximity detection 222, user request logic 220, and other managing logic for receiving request from users, managing databases from a car sharing database, managing data from vehicle manufacturers, and receiving request to manage profiles an axis vehicles.

[00143] As illustrated, when the user Bob approaches the vehicle 200, the Bob's mobile device 110a can identify the closest car, which may be car A. In this example, Bob is identified to be proximate to the car having an ID 1528ABC. In one embodiment, when the user comes in proximity to the car 200, the car can beep or light up when enabled, it can open the doors to allow the user to access the vehicle when the logic has paired the user to the vehicle, the profile of the user can be transferred to the vehicle, the use of the vehicle is managed by the user's online account (storing historical use data and any billing information), automatic payment for use can be made from predefined payment arrangements stored in the profile, and use of the vehicle can be restricted to predefined rules, based on the

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profile. Accordingly, the profile database 160 can include both profiles of the user, such as user settings, as well as profile restrictions that may be set by the car sharing service.

[00144] Figure 9A shows one example process for utilizing user profile settings from a registered user and utilizing settings of a shared vehicle network, in accordance with one embodiment of the present invention. In this illustration, operation 300 receives the user profile settings from a registered user of a shared vehicle network. The registered users profile can be obtained from a cloud services profile, such as the profile used for a number of vehicles which may be in or outside of the shared vehicle network.

[00145] In another embodiment, the profile may be the profile set by the shared vehicle network, based on the service contract entered by the user. In operation 302, vehicle IDs for each vehicle assigned to a shared vehicle network are received by cloud services 120. Cloud services 120 will therefore maintain a user database 160 with a plurality of user profiles.

[00146] Cloud services can also maintain a vehicle inventory database 310 for the shared vehicle network. Servers 350, which operate cloud services 120, and therefore managing access database 160 and 310, as well as provide logic for providing access to vehicles, unlocking vehicles, and transferring user profiles to specific vehicles. In operation 360, the servers 350 may receive a request to locate a vehicle on a map from a computing device. The request may be provided with reference to the user's current location, using GPS or the like. The request is then processed by servers 350, and servers 350 communicate the forward a list of available vehicles proximate to the user or for the users identified area in operation 362. In operation 364, a selection request is received from the user for a specific vehicle and a reservation is made for the use of the vehicle for a set period of time.

[00147] In operation 366, a command is sent to the vehicle the signal alert when the user is detected to approach the vehicle within a particular distance, notifying the user that the vehicle is the vehicle that the user reserved. This provides for a method of allowing the user to easily identify the vehicle that the user reserved. For example, if the user is instructed to go to a specific parking lot to identify the vehicle that was reserved, the user would have a difficult time identifying which vehicle it is that the user reserved. However, by allowing cloud services to signal to the vehicle to sound the alarm, turn on a light, beep, for make any other identifying gesture, the user can easily identify the vehicle in the parking lot.

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[00148] In operation 368, a user interface is provided to the user's mobile device that will provide a notification to the user indicating that the person/user has arrived at the vehicle. In operation 370, the users profile is transferred to the vehicle. The transfer of the profile will allow the settings of the user to automatically be set in the vehicle. The settings can include, for example, temperature, radio settings, seat settings, meter settings, air settings, etc.

[00149] In operation 372, the settings that are made by the user when in the vehicle or adjustment settings can be sent back to the user profile. Thus, when the user offering the vehicle and making changes to his or her profile, those changes can also be communicated back to the profile database in cloud services 120. This provides for a continuous feedback loop over time, to allow the users profile settings to be managed and maintained current to the users best liked preferences. The operation then proceeds to B in Figure 9B.

[00150] In operation 374, it is detected that the user has completed use of the vehicle upon some user entry at a computing device. The computing device may be computing device of the vehicle, or a mobile device. The entry can be, for example, the user logging out of the vehicle indicating that the user has terminated use of the vehicle. At logout, the vehicle's original profile settings will then be returned, and the users custom profile settings will be terminated.

[00151] In operation 378, a report sent back to the server regarding the use of the vehicle and the charges to the users account for the use. In one embodiment, the use reporting can occur continuously while the user is driving vehicle. In operation 380, the driver's session log can be saved user profile, keeping a history of the user's travels. In operation 382, survey data can be requested of the user regarding the vehicle use. Because the user was utilizing a shared vehicle, feedback from the user can be helpful to potential future users that may want to rent or utilize vehicles from the same company.

[00152] The user may be provided with options to publish likes and dislikes or commentary to a social network 390. Ratings can also be transferred to rating companies, such as those that allow internet users to view user comments, reviews, complaints, etc. The social network 390 can allow the data to be open data 394, or data that is shared with friends 392. In operation 384, problems with shared vehicle can be reported to the vehicle network to allow repairs before making the vehicle available for reuse. Cloud services for the shared vehicle network can then be updated in cloud services 120. For example, if the vehicle has

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been identified as having some mechanical malfunction, the cloud services can update that vehicle as being out of service, so that discovery of that vehicle does not cause users to access that specific vehicle that may be out of commission.

[00153] Figure 10 illustrates a user (Bob) entering the vehicle, such as a shared vehicle 200, in accordance with one embodiment of the present invention. In this example, the user has been identified by the vehicle, such as using a camera 402. The camera 402 may use face detection 406 to automatically identify the user, and set the users preferences and settings for the vehicle automatically. In some embodiments, this allows verification that the user driving the vehicle 200, from the shared network, is the driver that unlocked the vehicle from a remote location (such as a mobile device). In this example, the vehicle 200 may also include a plurality of cameras, such as cameras 404, 408, 410, 412, 402, etc. Any one of these cameras can be accessed from a remote location, if the user's profile provides access, or the privacy setting allows such access.

[00154] These cameras can be used to detect and monitor the exterior portions of the vehicle as the vehicle drives around, as well as interior portions of the vehicle. These cameras can be used by the vehicle sharing company to monitor the status of the vehicle, and the location where the vehicle is parked. In one embodiment, the user who has rented the vehicle can set a privacy setting to disable certain cameras. In one embodiment, a speaker 420 can be activated to allow the vehicle to speak and communicate with the user. Vehicle electronics and logic 400 can be in communication with cloud services 120.

[00155] Cloud services 120 can also be in communication with user profiles 160. In one embodiment, the user profiles 160 can also include specific profiles for registered users. In one embodiment, the registered users can include a family of users. A specific family can have a number of drivers or users that have been registered with a service. For example, the database can include users ABC123xi (such code is only an example, and any form of ID/code can be used), and the users can include a particular family or group of people. The group of people can also be a group associate with a company, a sharing service, a group established for a particular event, or other types of groupings. The vehicles can therefore be monitored for use by the specific users in a particular family or group. In one embodiment, the particular family and groups can be associated with their own profile history settings, which include data from their previous uses.

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[00156] In one embodiment, figure 10 illustrates a process utilize to communicate between vehicles, users, and cloud services. In operation 450, a vehicle with communications is provided with cloud services. The cloud services will be in account, software, or interface that allows communication with cloud services 120. In operation 452, the user in the vehicle may be detected, and the face of the driver or other biometric data can be used to identify the specific user sitting in the car. The detection of the user can, in one embodiment be enabled or restricted based on privacy settings desired by the user.

[00157] In operation 454, the user may be identified and the users profile can be automatically retrieved from cloud services and the user profile 160. The preferences settings for the user can be identified from the database in operation 456, and the settings can be applied in operation 458. The settings can be applied to the vehicle for the identified user. When the user terminates use of the vehicle, the settings can be deactivated, or returned to a neutral setting.

[00158] Figure 11 illustrates an example of particular types of settings that can be set, or recorded, or accessed, in accordance one embodiment of the present invention. In one example, cameras 480 can be provided as options for access by the user. The cameras can be accessed to view historical uses by the user, or can be access to view current and live video of the vehicle. For example, if the user has rented a vehicle for a period of time, and parked it in a specific location, the user can monitor the vehicle from a remote device connected to the Internet.

[00159] Record settings 482 can also be set by the user, the vehicle provider, or cloud services. A plurality of recording options and access can be set or adjusted by the user from a remote location. Remote access 484 also provides the user with options to control specific features of the vehicle. The control the vehicle can be set for a period of time when the users profile is associated with the vehicle.

[00160] In a car sharing environment, the remote access of the vehicle can be enabled during the period of time when the user is assigned or the users account is assigned to that vehicle. In examples where the user owns the vehicle or is more tightly connected to the vehicle, the remote access can be provided by entering axis control information, credentials, passwords, usernames, and biometric data or combinations of one or more.

[00161] In still other embodiments, user interfaces are provided to provision customized data regarding available charge station locations. In one embodiment, users

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having other devices, such as smartphones or portable electronics can obtain data, which can be shared with other user interfaces. The sharing can be by way of a sync operation, that can be automatic when the user enters the vehicle or on demand by the user. In other embodiments, the application or program running on the user portable electronic device can continue to execute the processing, while allowing the display of the vehicle to show all activity on the display. For example, if the vehicle electronics are not capable for processing an application or access a cloud service, the portable device can act as the agent for the vehicle electronics. In one embodiment, the display and I/O of the EV simply acts as a passive interface, while the processing or accessing to cloud processing is done by the user's portable electronics (e.g., smartphone or the like).

[00162] In some embodiments, the user's portable device is already programmed with access codes, passwords, etc., so the user may wish to use the portable electronics instead of having to program the vehicle. This is important when users share a vehicle. If users share a vehicle, one user may have the electronics programmed to their likes or dislikes. By allowing programming, data settings, etc., to be shared or synced (e.g., temporarily or not), users can more easily share vehicles, while keeping the settings that the user is used to having.

[00163] In still another embodiment, allowing the user's smart phone or portable electronics to sync with an EV, users of rental cars can more easily step into cars with pre-programmed settings. Thus, users that temporarily use vehicles need not worry about programming the car's settings upon entering the car, but simply sync with the vehicle to allow the vehicle to run display, IO and services based on the custom settings of the user's portable device.

[00164] This processing that allows users to sync a vehicle with a user's custom settings stored in the user's portable device can also have application to car sharing environments. In big cities, companies allow users to locate vehicles in a proximity to their current location, and simply enter the vehicle using their membership code. In addition to providing users with access to the vehicle, the user/driver's settings can be synced to the vehicle. This can include settings of the seats, the mirrors, the temperature, the radio stations, and the Internet apps to display on the car's display, etc. Custom information, such as prior uses of the car, cost for driving, etc., can be displayed on the car's display, via the sync data from the user's portable device. The sync data can be obtained at any time, such as by using the user's portable Internet link, etc.

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[00165] In one embodiment, a user's EV or non-EV vehicle can be in communication with cloud services, and the cloud services can be interfaced with data from various entities that provide power for the grid, provide charging units (CUs), provide discounts to charge at particular CUs, geo location services, mapping services, live traffic data, etc. The user of the EV can communicate with the vehicles electronics via a display unit and its associated electronics, can provide input via touch or voice, can request data regarding routs to local charge stations, cost estimates at the various charge locations, how crowded the charge stations are at the various locations, etc.

[00166] The cloud services 120 are also accessible via a computer that has access to the Internet, a smart device (e.g., smart phone, tablet, etc.), etc. Thus, data can be acquired from various sources and data can be consumed by various sources. The data that is acquired, shared or accessed can be launched on the user's device and then transferred to share in real-time with the display and/or electronics of the vehicle. Thus, a unified access display can be customized to the user, regardless of the vehicle that the user chooses to drive. This is in contrast to current models that customize settings for one vehicle owner or owners.

[00167] In one embodiment, the user's settings are seamlessly transferred to the vehicle the user chooses to drive. This is especially useful for cases where a user drives many cars, but wishes to keep his settings constant. Settings can include cloud services, or local settings such as seat positions for the size of the user, mirror positions, radio stations, weather stations, history of routs taken, favorite locations to visit, etc. The application that allows syncing of a user's settings on a portable device to the vehicle electronics is especially useful for car sharing applications, which is common in large cities and may expand in the future. As car sharing increases, it is most useful to allow a user to save his/her settings in their mobile device, instead of relying on the fixed settings of the vehicle. In another embodiment, it is also possible for a user to type in their universal login code (e.g., user name / password) into the car display, and all of the user's settings are transferred to the vehicle while the user is driving the EV. Once the user stops using the EV, the car can go back to the normal mode for another user to login. The data regarding the user's settings would, in this embodiment, be saved in the cloud.

[00168] In one embodiment, user interfaces of a mobile device can share data with the vehicle's display and native apps. App unification allows EV system to display APPS on the user's smartphone device in an opt-in PAIR mode. In one embodiment, this allows one person to enter another's EV, share apps on the EV display while in the EV, and when the

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person leaves the EV, the Apps de-pair. This auto-sync facilitates sharing of data and also allows users to unify their settings across any number of vehicles the user may drive.

[00169] In one embodiment, the synchronization will enable users to universally transfer settings from portable devices to electronics of a vehicle. In some embodiments, the vehicle that the user wishes to drive is not his vehicle. For instance, the vehicle may be a friend's vehicle, a rented vehicle or a shared vehicle. If the user has programmed settings in his or her device, the settings that are useful for the vehicle will be transferred to the vehicle. Settings can include travel speed restrictions, car seat settings, mirror settings, remote access to home controls (e.g., lighting, garage doors, etc.), radio settings, satellite radio settings, internet settings, etc. In some cases, only some settings are directly transferrable. In other embodiments, a database can be accessed to find a translation metric. The translation metric can include mapping tables that allow for settings to be transferred between functions of one vehicle to other vehicles. In one embodiment, vehicle makers can upload their translation metric for each model and the mapping tables can be used to provide the sync operation.

[00170] Figure 12 describes a system in which a user interacts with a model view controller software environment 1800 useful for processing APPS using APIs 130 on vehicles with vehicle operating systems 129 capable of processing computer code. The APPS can execute profile retrieval, updates, and sync operations. The model view controller paradigm 1800 shows basic interaction, control, processing, and updating of data useful for manipulating and viewing resulting actions by ta vehicle running an APP in such a system. Such a system useful for running APPS on vehicle operating systems will accept inputs by a user 121, cloud services 120 via data streams, vehicle systems feedback and data streams 1812 used by a controller 1804 that may constantly poll electrical, capacitive and physical sensors, and input streams to detect if interactions 1808 such as network passive updates, network active updates, user touch, user speech, user input, user selection among others has been triggered.

[00171] Each input 1804 will then trigger manipulation of the system's model 1802 portion of the APP software paradigm thus invoking stored routines within APPS 104 which then in turn interact with the vehicle's API system 130 built upon the vehicle's operating system 129. Depending on the app presented to the user 121, the input may trigger stored routines or functions on APP software or operating system level restricted stored routines or functions.

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[00172] After the processing of stored procedure code is manipulated with arguments provided by the controller 1804 inputs, visual and or sensory results are presented to the user in the view 1806 portion of the model view controller paradigm. These sensory outputs, data streams, electrical signals may all be translated as additional options, results, dynamic updating, audio or visual graphical user interface changes 1810 on any of the user's connected display devices. The user will notice these results visually or audibly but may also feel or detect changes in the vehicle's mechanical systems. Updates from the model 1802 may also be used to toggle vehicle settings 1814 which in turn may invoke changes in the vehicle's physical, mechanical and electrical systems 128.

[00173] Finally, the system controller 1804 may receive additional updates from the vehicle systems affected or additional user 121, cloud services 120, vehicle systems feedback inputs 1812 to re-engage the user in a cyclical fashion. If no inputs are sensed, the system's controller will continue to poll its electrical and data I/O systems for input on a continuous basis.

[00174] The model view controller paradigm 1800 described is one example of the software input output lifecycle that may be used to invoke, manipulate, process, update portions of computer readable code such as APPS 104 using an intermediary API 130 to communicate with the vehicle's operating system 130. However, APPS 104 may be run on physically wired, wirelessly connected or remote devices having processing abilities to translate the computer readable code in APPS into actionable invocations on one or more vehicles in order to facilitate or utilize the vehicle's electrical and mechanical systems in prescribed or customizable fashions.

[00175] Figure 13A describes how vehicle on board computer with input out put system 1900 useful for accepting input, processing input and displaying results in conjunction with stored computer readable programs or functions in the forms of APPs 104 may be structured. Although system 1900 describes one way to provide vehicle on board computing power to run APPs 104, the arrangement of the vehicle computer 1906 may be altered or arranged in differing fashions with differing connection routing in order to achieve the same. In this example, vehicle on board computer 1906 may be comprised of components such as the network interface 1910, memory 1912, a central processing unit 1914, an input output buffer useful for streaming data 1916, storage 1908 having the ability to store computer data in long term or short term fashion useful for stored computer code procedures in the form of an operating system 129, intermediary stored procedure code in the form of

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APIs 130, stored subsets of computer code procedures APPs 104 interacting with API 130 as an intermediary to the operating system 129.

[00176] In this example, the vehicle computer 1906 has the ability to transmit, receive and process information using wired or wireless connections. One such wireless connection is provided by a wireless data sending and receiving antenna 1928 connected to a network interface 1910 useful for pairing with and communicating data with portable or stationary wireless devices which may or may not be part of a network 1902. Such wireless devices include but are not limited to wireless displays 210b, portable smart phones 210a, portable computers, 210c and even stationary objects, structures, buildings, toll bridges, other vehicles etc. The vehicle's network interface 1910 through antenna 1928 may also communicate with cloud services 120 to receive instructions from a remote location that invokes stored programs such as APPs 104 on the vehicle's computer.

[00177] The vehicle may also send and receive data wirelessly in order to establish a connection with a peer-to-peer ad-hoc network. Invocations may result in output data streams interpreted by wireless devices 210b, 210a, 210c as well as wired devices such as wired displays 210d or vehicle integrated display devices such as windshield heads up projected display or integrated glass displays 210e. All data streams generated by APPs 104 stored on the vehicle's computer may also be triggered by wired devices such as vehicle sensors 1918, vehicle electrical systems 1920, vehicle electrical systems 1922, engine control systems 1924, vehicle diagnostics systems 1926, user input as well as environmental input.

[00178] A user and or vehicle may find system 1900 useful in one example, where the user drives the vehicle past an electronic toll bridge where a fee is required to pass the toll bridge. The vehicle's computer will communicate wirelessly as it passes the stationary structure transmitting and receiving information with it as it drives by. The user's vehicle may have an APP 104 installed on the vehicle computer 1906 that can process the input using the computer's wireless antenna 1928, network interface 1910, input output system, 1916 automatically responding to the toll bridge with payment information. Once the payment is received and processed, the APP 104 receives information from the stationary wireless toll taking device which is then stored either locally on the vehicle's storage 1908 or remotely using cloud services 120. The results of the transaction are then sent via data stream from the compute code running on the APP 104 to a display device(s) where the user can visually confirm that the toll was paid, accepted and show the user's remaining balance all through the GUI displayed for APP 104.

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[00179] Figure 13B describes one example of how stored data and function declarations may be compiled to provide intermediary access to a vehicle's computer controlling vehicle systems 1950. Such routines, data and functions may be arranged in such a way that limited access is given to third party code on APPs 104 to manipulate certain unrestricted operating system functions and vehicle systems. Such a method of providing the intermediary allowed stored function set to third party code can be referred to as an API 130.

[00180] In this example of an API 130, computer readable code is arranged in such a fashion that the type of API is described and in this case, an API that allows third party control of the vehicle's HAVC system is declared. A declaration may be useful for reserving the vehicle's computer long term and short-term memory in order to run stored procedures. The shown declaration 1954 describes an example set of data that may reference memory locations and their contents. The contents of this memory location may be modified by stored procedures 1956 or functions.

[00181] This HVAC API 130 has the ability to store data relating to the vehicle's temperature, status, target temperature, split zone temperate, data from electrical and mechanical sensors, calendar dates, error information among others. Invocable functions 1956 are the methods by which a third party APP 104 may manipulate data 1954 on board a computer. Free access is not given to the restricted data on a vehicle's computer, thus a structured method or methods are described for user by third party APP developers.

[00182] These functions 1956 that may or may not take arguments in order to execute may include functions in the example HVAC API that update temperatures for both the left and right or given zones of the vehicle, toggle are conditioning, allow visual skins on the APP GUI, manipulate schedules and displays etc. The HVAC API 130 described is one example of how one API can control one vehicle system. There may be variations of the APIs for multiple vehicle systems or one superset API that allows access to all of the vehicle's systems through stored procedures or methods.

[00183] Figure 13C describes a set of computer readable and executable code 1970 that can be compiled together by a third party APP 104 developer in the form of an APP. The APP 104 uses structured programming languages to execute stored functions allowed by the vehicle's system API 130. In this example, the APP is a third party HVAC app that allows a GUI to be displayed to a user giving them the option to adjust the temperature on the left or right side of the vehicle up or down. In this case, the APP's GUI has provided a data stream

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to the APP letting it know that the user has selected to set the temperature on the left side of the vehicle to 80 degrees and the right side of the vehicle to 76 degrees.

[00184] The APP 104 will then use functions available from the vehicle's API 130 to manipulate the data on the vehicle's storage system which in turn will be electrically polled by sensors, data streams etc. to manipulate the vehicle's electrical and mechanical HVAC systems. The user will notice the result visually by the data provided by the APP to the GUI as well as environmentally as the temperature is changed in the vehicle.

[00185] Figure 14 describes the stepped flow of events 2000 as a user interacts with an APP 104, in this case, an HVAC APP 104. The GUI shown for APP 104 describes the first step 2002 where a user physically interacts with a sensor, screen, voice system etc. polling to see if an input has been received. The user's input in 2002 has been interpreted by the app to raise the temperature on the left hand side of the vehicle to 80 degrees and maintain the temperature on the right hand side of the vehicle at 76 degrees. This input invokes step 2004, which calls a stored function on the APP 104 that is API 130 allowable with arguments. The stored function may invoke other helper or associate functions within the API 130 in step 2006, which all in tern invokes restricted computer readable code at the operating system and or kernel level in step 2008. These invocations will then in turn command mechanical and or electrical systems in step 2005 in order to achieve the requested response in step 2002.

[00186] The results of the commands on the vehicles systems are based back to the vehicle's operating system or kernel level in step 2012 which then updates data on the API 130 in step 2014 that the APP 104 is polling, such as updating the display to show the resulting temperature in step 2016. The results of a function that is invoked at the API 130 level updating the display produces a data stream translatable and displayable by the vehicle's screen showing the APP 104's GUI in 2018.

[00187] Figure 15 describes further example ways an APP 104 may take, process and produce results 2100. Figure 14 shows a way to interact with an APP 104 locally but a vehicle computer system may relay data, inputs and information to the APP while connected to a wide area network, local area network, cloud process 120 or private cloud. A remote action to invoke change on an APP 1808 may be initiated via a network and pass to the APP running on the vehicle 160 using the vehicle's antenna 1928 or wired interface. An APP 104 running virtually on a network or cloud services 120 may also take input remotely and process the results accordingly.

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[00188] Some of the inputs and results 2102 that an APP can take and produce locally or remotely include but are note limited to the set 2104 that can receive an action, react to an action, control an action, manipulate data models, report changes to a view or GUI, record events or incidents, learn the types of requests being submitted, learn the times of request being submitted over time, learn the days of the year the requests are being submitted over time, generalize and interpret requests, assume user intent in order to automatically invoke changes, automatically and pre-emptively act on behalf of a user, fine tune learned user behavior etc.

[00189] The learned behavior (e.g., learned settings that provide for automatic programming) can be assigned to particular applications, particular sub-features of applications, to particular native system features of the vehicle, or combination of one or more thereof. The learned settings can also be managed via an interface, which shows to the user settings that have been learned and provides the user with options to modify learned settings.

[00190] The modifications of the learned settings can be made via the vehicle display or any other device having access to cloud services. The learned settings can also be communicated to the user via notifications. Such as, "*We noticed you like your truck temperature at 3 pm to be 60 degrees? Please confirm*," or "*We noticed you like your car temperature at 8 am to be 75 degrees, this will be preset for you automatically*," or "*We have detected your favorite settings, please login to your account to see settings we have programmed for you or make updates*," or other similar notifications via the vehicle or to any connected device over the Internet.

[00191] In other cases, notifications may not be sent. In some cases, the settings will just occur automatically. In some examples, notifications can be provided with a link or access to a user interface of an application. Via the application, the user can manage, set, control or view any aspect of the connected vehicle. In some cases, the settings can be manually adjusted by the user way from the auto settings. In such cases, the manual setting can be learned and can be provided more weighting since the user took the time to correct an auto setting. Thus, various levels of weighting or importance can be given to learn settings. In other embodiments, the learned settings can be compared against learned settings of other vehicle owners having access to cloud processing. Using data from these different user profiles, learned settings can be obtained or generated.

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[00192] Generation or analysis can be by way of overlap processes, cluster analysis algorithms, Connectivity based clustering, centroid-based clustering, clustering model most closely related to statistics is based on distribution models, cluster validation, density-based clustering, KNN/profile similarity, collaborative filtering, content-based filtering, hybrid recommender systems, mobile recommender systems, cross-sectional analysis, similarities in particular data types or settings, concentration in similar settings by particular demographics, and other similarity analysis calculators and aggregators. These settings can then be recommended to the user or can be automatically added to the profile. Recommender systems can the user the analyzed data to generate the custom recommendations for settings to users' profiles.

[00193] Figure 16A describes an ecosystem where an APP 104 in conjunction with a vehicle API 130 may work together to make assumptions, make decisions and take actions 2200. API and APP code together can be arranged in such a fashion that creates an assumption and reasoning logic module 2216. This Assumption and reasoning logic module can take inputs from various systems and data streams including but not limited to GPS 2206, calendars 2208, traffic conditions 2204, local news 2202, past data of user behavior and interaction 2210, vehicle diagnostics 1926, user preferences 2214, user login profiles 506, environmental interpretations by sensors 2212, marketing deals 2224 among others. These inputs can be local and physical or remote and abstract via a network. The assumption and reasoning logic module 2216 compiles data from these sources to invoke decisions and actions on a decision and action engine 2218.

[00194] This decision and action engine 2218 has the ability to execute on what the assumption and reasoning logic module has determined needs to be done. The decision and action engine has the ability to produce alerts, both local, on screen, audibly, visually or remotely on a remote display device 210a-e using a data network. The decision and action engine 2218 also has the ability to change vehicle controls automatically on behalf of a user without user action based on assumptions made by the assumption and reasoning logic module 2216. Additionally, the decision and action engine has the ability to request a decision from the user preemptively in order to change vehicle controls.

[00195] This may be achieved locally or remotely requiring input from a user to proceed. For instance, the assumption and reasoning logic engine has determined that the user may want to have his or her car automatically started at 7:55 am because the user typically starts the car at 8 am. Starting the car at five minutes early will allow the system to

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heat the vehicle to the user's typical liking. However, the assumption and reasoning logic may have only reached a level of confidence of 75% where 80% confidence is required to act without user input. Thus, the system, being only 75% sure that the car should be turned on will automatically send the user an alert requesting a decision on whether or not to turn the vehicle on. Once the user 121 provides a decision remotely on their remote device 210a, the decision engine 2218 updates the assumption module 2216 so that it can augment it's assumptions for an updated level of confidence on the next action trigger. These actions by the user automatically and continually update the assumption and reasoning logic module 2216 in order to fine tune the level of confidence on acting without user input and learn the user's behavior for future decisions.

[00196] Figure 16B describes how one of many types of inputs into an assumption and reasoning logic module 2216 can be compiled over time. Although inputs can come from many sources, this particular example focuses on input into the assumption and reasoning logic module 2216 from past data originating and triggered by user behavior in order for module 2216 to learn. Past actions 2210 are logged into a database either locally on the vehicle computer or remotely which are fed into to module 2216. In this example, data about when the user's actions are stored, along with unique identifiers that will allow assumptions to be made in the future.

[00197] These identifiers include times, dates, rates, capacities, temperatures, frequency, degrees, distance, etc. In this example, the system has been keeping track of when the user has been starting his or her engine in the morning on weekday sand weekends. The system harvests all data points associated with given events. These data points 2210 are purely mined data points and no assumptions or reasoning occurs at this point. This data will be used by the assumption and reasoning logic 2216 to determine future actions.

[00198] Figure 16C describes one example of what an assumption and reasoning logic module 2216 may produce using the data points collected on an ongoing basis in Figure 16B. Over time, using inputs that are continually harvested by a user's action, assumptions are made and refined to aid in making decisions for a user in advance or behalf. Module 2216 has taken the inputs provided by 2210 past data and behavior to determine that before a decision can be made, the user's local or network-stored calendar should be polled to determine how the user's schedule might impact the system's pending actions. For instance, if the system had determined that the user typically starts his vehicle at 8am but the user's calendar shows a meeting at 730am located at a location that does not match the current

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location, the vehicle may assume that the car should be started at 725. They system will determine its level of confidence of the decision and may poll the user for a decision.

[00199] The system, by using prior data points has stored assumptions based on conditions, the day it is, the temperature of the environment and historical events, that the user will most likely start the vehicle's engine between 803am and 805am, and if the temperature is in the 30s inside the vehicle, the user will most likely set the interior temperature to between 70 and 80 degrees, it is not likely that the user will use the are conditioning unit, if there is ice on the windshield, the user will most likely defrost the windshield for 7 minutes before departure, the user usually drives between 15 and 18 miles at this time of day, the user typically starts the vehicle again in the afternoon between 505pm and 510pm, if the temperature is in the mid 70s, the user usually activates the AC and sets the temperature to 65 degrees, typical weekend behavior, the user typically makes frequents stops, does not have a set time the vehicle is started, uses certain APPs at certain times and has a history of certain destinations as recorded by GPS.

[00200] Figure 16D describes an example list of decision the decision and action engine 2218 may take based on information provided by the assumption and reasoning logic module 2216 and sets of assumptions created. The decision and action engine 2218 will attempt, using a degree of confidence to anticipate what the user will want to do in terms of engine start and stop, location destinations, preferences of temperature, driving habits and poll vehicle capacities to ensure the intended path the user usually takes is attainable. For example, the user usually drives a distance in the morning at a certain time, however, the vehicle's fuel supply will not allow for that distance to be traveled. Thus, the decision and action engine polls the user as a reminder that the user should begin their intended travel sooner than usual to allow for refueling time.

[00201] In one embodiment, at a remote location, a user is able to access a user interface for an application, which provides users access to user accounts. A user account can be for a user and the user can add one or more vehicles, objects, data or appliances for remote reporting, viewing and control. In one embodiment, a user is an owner or user of a vehicle. The user can register the vehicle with a remote service.

[00202] The remote service can be accessed over the Internet, such as via a website or application of a portable device. The remote service can provide a multitude of cloud services for the user, such as remote control features, remote viewing services, remote alarm

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controls, remote camera activation, remote audio/video recording of the vehicle (i.e., areas around the vehicle and inside the vehicle). In one embodiment, the vehicle is able to connect to the Internet (e.g., when the vehicle engine is off, on, and/or is occupied or un-occupied) to allow a user, via a remote cloud service, to access features of the vehicle. The vehicle can be accessed when running, when parked, when stopped, when moving, etc. The vehicle and its audio recording devices and video cameras can be accessed from remote locations, to allow users to remotely communicate with the vehicle or with people riding or residing inside the vehicle.

[00203] The remote communication can also allow a person to communicate remotely with people standing outside (or inside) of a vehicle. For instance, if a user is accessing his or her vehicle from a remote location, cameras installed in and/or on the vehicle allow the remote user to see a person standing proximate to the vehicle. The remote user can then communicate with a person standing proximate to the vehicle using microphones and speakers of the vehicle.

[00204] In some embodiments described herein, vehicles, structures and objects may include circuitry and communication logic to enable communication with a cloud processing system over the Internet.

[00205] In one embodiment, the services provided by the electronic systems of a vehicle can include services that access the various components or subsystems of a vehicle, such as door locks, service histories, user profiles, audio settings, entertainment settings, mapping functions, communications systems, telecommunication synchronization systems, speakers, heating and cooling functions, auto-engine start/shut-off remotely via smart devices, remote heating/cooling initiation, remote face-to-face conferencing, etc. The electronic systems within a vehicle can also provide a user interface, such as a graphical user interface. The graphical user interface can include a plurality of buttons, controls and transceivers to receive input from a user.

[00206] The input from a user can also be provided by voice input, facial recognition, eye-retina scans, fingerprint scans, a combination of biometrics, or via a capacitive or regular touchscreen contained or displayed within the vehicle, the vehicle's glass, doors, dashboard, etc.

[00207] In one embodiment, vehicles can maintain information regarding where they are, where they are heading and their destination maintained which is maintained by GPS and

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navigation systems on board. The information collected and maintained by every vehicle may be mutually exclusive, meaning that only each individual vehicle is aware of its own heading, rate of speed and current location. This information, in one embodiment is crowd sourced and/or crowd shared/consumed for use in for accident avoidance or other communication. By networking vehicles within a certain radius together, all individually location-aware vehicles become aware of all other vehicles in their sphere of influence. Vehicles may network with vehicles in their range using wireless communication systems such as but not limited to Wi-Fi, Wi-Gig LTE, cellular, radio, near field communication or other methods.

[00208] In one embodiment, the communications of the vehicle and electronics of the vehicle will enable direct communication with a user of the vehicle. The user of the vehicle can include, for instance, the owner of the vehicle, a driver of the vehicle, or any third party having access to the vehicle (either to drive the vehicle, to monitor the vehicle remotely, etc.)

[00209] The access to the data can also be encrypted to prevent unauthorized access to the data. GPS and mapping services can also be in communication with the cloud processing 120 provide data concerning the locations of the vehicles and activities that occurred to the vehicles when at particular locations. The cloud processing 120 can be access by the vehicles themselves using their electronics and communications, via mobile devices, from home, from work, etc.

[00210] In some embodiments, the vehicles may establish peer-to-peer links to facilitate fast transfer of data. In other embodiments, vehicles may link to each other using pairing algorithms that allow the vehicles to exchange data using WiFi, Bluetooth, near field communication (NFC), or some other short range communication protocol.

[00211] A user's APP homepage may also include dynamically updating sections in which the most important information at a given time may be displayed or surfaced to a user. If a user has parked in a certain parking area, he or she may want to monitor metrics related to incidents that may have occurred to his or her vehicle, vehicles around his or her vehicle, any dynamically received alerts, as well as precaution levels. Additionally, a user may choose to configure his or her APP homepage to display the most pertinent audio and video feeds to their needs.

[00212] In one embodiment, the vehicles can communicate directly with each other via a temporary pairing process. The temporary pairing process can be automatically enabled

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when vehicles become too close to each other, for example. When this happens, local communication between the vehicles, such as a peer-to-peer connection, Wi-Fi connection, NFC connection, or Bluetooth connection can be established to enable the vehicles to share information concerning their proximity to one another.

[00213] This local communication will enable one or both vehicles to take correction actions or alert a driver to change course or trigger automatic collision prevention measures (e.g., more aggressive notifications to one or both operators, slow the speed of one or more vehicles, change the driving direction of one or more vehicles, etc.). Once the close proximity communication occurs and some corrective action is made, the data regarding the occurrence and the actions taken can be communicated to the cloud system for storage. The information can then be viewed by a registered user having access to an account for the vehicle(s).

[00214] Figures 17-30B define methods and systems for assigning advisor accounts for accessing data regarding the vehicle, and also describe the use of electronic keys (e-keys), in accordance with several embodiments.

[00215] In one embodiment, users of vehicles may wish to provide advisors with access to select data associated with a vehicle. For example, a vehicle owner may decide to make a user account for an advisor. The advisor, in one embodiment, can be any person or entity. The advisor, in one embodiment, may be a service person, a dealership service department, a mechanic, an auto shop, a consultant that provides auto advice, or a fiend of the vehicle owner. In one embodiment, an owner of a vehicle can define particular aspects of the vehicle data, as being available for providing or sharing with an advisor. The aspects can include, for example, maintenance type information or vehicle status.

[00216] Other aspects can include, without limitation, engine indicator data, tire status, tire air pressure, oil level, transmission fluid level, oil grade level, electric vehicle battery status, battery charge level, battery faults, temperature over heating data, service date expiration, mileage data, next service time, coolant level or status, transmission faults, air filter state, wiper change/status, brake pads, brake fluid, tire rotation, remote diagnostics requests, history data, etc. In one embodiment, a user of a vehicle can define or establish an advisory account, which will be provided with limited or select access to specific vehicle data, so that the advisor can process the data and provide recommendations to the user.

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[00217] For instance, certain vehicle data can include data that is not personal or sensitive. The vehicle data can then be used by the advisor to process the data, examine the data, and based on some expertise or knowledge, the advisor can provide some recommendation to the user. The recommendation can include, for example, notifying the user that the vehicle needs some service or action. The recommendation can include, for example, sending the user information regarding the recommendation and suggesting available times, dates, etc., to allow scheduling of an appointment.

[00218] In one embodiment, the communication from the advisor can be in the form of an email, a notification, a phone call, a text message, or combinations thereof. The communications can include, for example, icons, links or graphics to allow the user to accept a schedule time for brining in the vehicle for service. In one embodiment, when the engine light comes on, the advisor is notified, and the advisor can contact the user to tell the user that the engine light is critical or not, and the advisor can be allowed to do remote diagnostics to better define the significance of the engine light warning. The advisor can then provide more informed advice to the user. In one embodiment, the advisor account is limited to the predefined data that the user wishes to provide access to.

[00219] In one embodiment, when the advisor is given an advisor account by a user, the advisor may be provided with an email, link, phone number, text, message, etc., which will allow the advisor to login to an advisor portal of cloud processing. The advisor portal will provide the user with a website that shows the current vehicle status for each of the vehicles that the advisor is monitoring or for which the advisor was provided an advisor account.

[00220] The advisor portal will allow the advisor to set logic or rules to be alerted when certain types of important data is received for particular vehicles. For instance, if the advisor is monitoring a plurality of vehicles, the advisor may wish to know when particular vehicles see a particular type of fault or error, which may be important enough for the advisor to handle immediately. The advisor may see that a certain user's car is running too hot, the advisor may be notified or alerted so that the advisor can contact the user of the monitored vehicle. The advisor can execute or cause to execute remote monitoring procedures to query the vehicle to see what other condition are, so that a proper recommendation can be provided.

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[00221] In one embodiment, the user can add a mechanic or auto repair shop and assign them an adviser account. The adviser account would get access to specific vehicles (that pre-allow access), and the user can define specific vehicle data for which access or privileges are provided. For instance, as a user drives around, the car may detect a fault, and the adviser may get a message or notification regarding the fault. The adviser can then communicate with the user to provide his/her technical advice, recommend actions to take, recommend to come in for service, or the advisor can pre-order a part needed for the service, or notify the user that a part of the vehicle is defective or is on recall.

[00222] The adviser account can be defined for auto dealers, mechanics, service stations, persons having vehicle knowledge or expertise, etc. Dealers that provide service (e.g., service departments) can receive selected notifications regarding the vehicle health, and based on the degree of seriousness, the dealer/service center can ask you to bring the car in. Currently, dealers rely on users to notify them when warning lights go off. If the problem is serious, and the driver ignores the warning lights the car can get damaged. In one embodiment, these methods/systems provide ways to share specific vehicle maintenance data with select entities. The reporting by the car can be saved to a log/database of events that are reported, and the adviser/dealer can reply to the notices to communicate instructions or recommendations.

[00223] Figure 17 illustrates a block diagram of a process where a vehicle (CAR-A) is associated with vehicle data, settings and control 500, and the vehicle is connected or connectable with the Internet and cloud services 120. In one embodiment, the vehicle can produce a plurality of types of data, such as vehicle status, vehicle service, vehicle location, vehicle users, and vehicle control, etc. The type of data that a vehicle produces can essentially be limitless, and will depend on the type of vehicle, activity of vehicle, the types of users, the location of the vehicle, features the vehicle, use of the vehicle, etc. Additionally, various aspects of the vehicle can be controlled remotely via the Internet, and through cloud services 120 in response to control systems, algorithms, methods, circuits, and the like.

[00224] In one embodiment, cloud services 120 can include a customer account database that includes a plurality of customers. Customers may be customers that have registered with a service that manages or provide access to features of a vehicle. The service may be a separate company from a dealer, or it may be a dealership, it may be a car service center, a private service, a friend, or an Internet service, etc. In one example, the customer database has is a plurality of customers that have registered with the service to enable

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issuance and management of user accounts for their vehicles that have been registered with the service(s).

[00225] In this example, the customers include customer A, customer B, customer C …customer N. In one embodiment, each customer may register one or more vehicles for the service. For example, customer A is shown to have two vehicles 502 (CAR-A and CAR-B). For CAR-A, the customer may have user accounts 504. The user accounts 504 can include different types of accounts. One such account can be those associated with drivers that may be driving the vehicle. The drivers will each have different roles that defined the type of user and associated privileges. For example, one user may be administrator (admin), wherein administrators are usually the owners, the person that leased the vehicle, or a person that has some control over the vehicle. In other embodiments, the administrator may be the dealership for the service provider.

[00226] Other users can be assigned as drivers, such as teenagers of the family, valet drivers, guest drivers, etc. Each of these drivers can be associated with their own user account, which provides specific privileges (use capabilities, restrictions, limits, parameters, etc.). In another embodiment, user accounts viewed as advisors 506 can also be created. As noted above, advisor accounts are those that provide third parties with access to the vehicle or access to data about the vehicle. Such parties can include dealerships, mechanics, service people, personal advisors, friends, etc. Each advisor account can be assigned a different role, which is linked to a level of privilege. The more privileges that are provided to an advisor account, the more data that the advisor can receive, access, or control.

[00227] In one embodiment, if the dealer is an advisor having an advisor accounts, the owner the vehicle can define the level of privileges provided to the dealership. The level of privileges can identify what aspects of the car the user wishes to allow the dealership to know or be made aware of. For instance, the advisor account can set that the vehicle will automatically provide certain data to the dealership. Such data can include the status of the vehicle, engine light data, health information about the vehicle, malfunctions of the vehicle, service information of the vehicle, etc. However, because the advisor account can be specifically tailored to only provide certain information and privileges to the dealer, the owner or admin of the vehicle can define the specific advisor accounts to share only certain sub-sets of information.

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[00228] For example, certain information that would likely not be shared can include, location of the vehicle, history of routs of the vehicle, radio station data, Internet communications, camera data, voice data, or other information that may be private or sensitive to the user. Of course, this information can be shared if desired. In essence, the advisor account can be defined to provide only the information that the user wishes to share with that specific advisor. This allows for information sharing about the vehicle to be spliced down to the specific feature and data and the specific recipient of the data via the advisor account.

[00229] Thus, the information can be parsed to various advisors, by defining multiple advisor accounts. For instance, the user can define an advisor account for a tire dealership and a separate advisor account for an oil changing service station (e.g., for the same vehicle). The vehicle can then automatically transmit data to the service provider, or cloud services, which can then allow the entities associated with the advisor counts to see the data coming from the vehicle or posted by the vehicle to a website. The operators of the services for which the advisor accounts were assigned can then communicate with the user and provide advice regarding the operation of the vehicle, information about updates, warnings, service scheduling, or provide for remote access to the vehicle diagnostics and make changes when necessary.

[00230] Therefore, by providing this level of detail to specific advisor accounts, the user can predefine what type of data will be shared with the advisor accounts while not sharing data that is sensitive to the user, administrator, owner, or proprietor of the vehicle.

[00231] In one embodiment, cloud services 120 will be defined by a plurality of servers, storage, dash-board data websites, graphical user interface APIs, processors, user interfaces, and the like. The configuration of services offered via cloud services 120 can depend on the service provider. As noted above, the service providers can include any number of entities. Entities can include car dealerships, service providers, mechanics, private entities, individuals, etc.

[00232] In one embodiment, the service provider operating a cloud service 120 can include a vehicle interface 508. Vehicle interface 508 is logic that will enable cloud services 120 to communicate with the electronics and software with specific vehicles. Different vehicles have different APIs, systems, software, firmware, etc., and the vehicle interface 508 can facilitate the handshake between cloud services 120 and a specific vehicles. Vehicle

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interface 508 can include database 512 for vehicle data. Additionally, the vehicle interface file a can include or have contact with vehicle control logic 510, which manages the interfacing with the specific vehicles. For example, if one vehicle type requires a specific algorithm, packet structure, API, etc., the vehicle interface 508 will utilize that communication protocol.

[00233] Vehicle control logic 510 can further provide the APIs and commands that are necessary to provide or obtain information associated with the vehicle. The information can requests for data from the vehicle, and can include instructions to the vehicle to perform certain executable tasks. Executable tasks can include, for example, running diagnostics, testing component parts or functions, communicating with occupants of the vehicle, etc. Cloud services 120 can also include logic for managing privileges 514, which can interface with user account settings 516 and can also manage the access and notification requirements or privileges 518.

[00234] Accordingly, each of the customer accounts can include a plurality user accounts, and each of the user accounts can be associated with specific user account settings that define the privileges for that account, whether it be a driver account or an advisor account.

[00235] Figure 18 illustrates an example a vehicle being associated with advisor accounts 506 and driver accounts 520. Advisor accounts 506 can include, for example a dealership, a mechanic, and other entities that will have restricted access to data of the vehicle or specific suites of information regarding the vehicle and/or access to communicate or control features functions or parts of the vehicle from a remote location.

[00236] The drivers 520 can also include a plurality of drivers, which may have predefined access to the vehicle. Some accounts can also be associated with temporary drivers, such as valets, mechanics, service people, friends, etc. In one embodiment, the driver can place the car in the valet account mode when the vehicle is provided to a valet for parking. In the valet mode, the vehicle will have restricted use parameters, and will also provide for reporting back to the user in case violations occur in accordance with the predefined privileges assigned to a valet. Examples of violation can include, driving too fast, driving out of an area, accelerating too fast, stopping too fast, parking too close to a structure or other vehicle, coming in contact with a structure or another vehicle, slamming the door, turning on the radio, changing personal user settings such as seats and mirrors, etc.

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[00237] Cloud services 120 can therefore assign the advisor accounts and the driver accounts accordingly and manage the privileges associated with those accounts. The cloud services will also enable efficient communication with the vehicle to provide and place/set the various accounts at different times.

[00238] Figure 19 illustrates an example of a computing device, which may have a plurality of user interface icons for assigning new driver accounts 532, or advisor accounts 538, in accordance with one embodiment of the present invention. Using Add driver account 532, the user can defined the roles of the driver 534. The roles of the driver can also include a set of privileges 536. For example, the driver account can be for a teenager and the role can be set to limit the speed, or provide notifications when the teenager has driven the car beyond a particular area or geographic location.

[00239] The privileges can also moderate access to the speed of the vehicle, and used during specific periods of time. For setting an advisor account, the user can set advisor account and defined the roles 540, and set the privileges 542. The diagrams on device 530, maybe part of a user interface that includes icons and buttons that allow the user to select, edit and add accounts, or management of the accounts that the previously set.

[00240] Accessing the accounts that have been previously set can also allow access to the history database. The history database can include information regarding the use of the vehicle when the vehicle was controlled under a specific user account, or the types of actions taken by an advisor via an advisor account. Access to these user interfaces can also be through a website provided by the service provider. The website can provide access to the user by user name and password, or other credentials. This access will therefore be tied to a user account. The user account can include identifying information of the user, the vehicle, privileges, encryption keys, etc. The user, upon access, can view the historical use of the vehicle, assign new accounts, revoke accounts, remove accounts, store historical information, and communicate with holders of the accounts.

[00241] For instance, the user can log in to website and communicate with their advisors if advisers had left a message for the user/owner of the vehicle. In one case, the advisor account of a dealership may have left a message for the owner indicating that the engine light is on and the vehicle must not be driven due to a recall. Via the website, the dealership may propose certain dates for the service or an appointment to have the vehicle picked up or serviced. These messages may also be transferred to the user's mobile device,

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and urgent communications can be sent by e-mail, text, notification, phone calls, voice messages, or any combination thereof.

[00242] Figure 20 illustrates an example of an advisor account 550, where the user has selected the type of user for that advisor account 552, in accordance with one embodiment of the present invention. In this example, the user may select the type of advisor account to be for a mechanic, a dealer, a service station, service center, a dealer in sales, a third party, etc. For this illustration, the advisor accounts 550 is for a mechanic, and the user can defined the role 554 of the advisor account when mechanic. The mechanic may be given access to specific features of the car but not access to other features of the car. The features can be associate with different levels of privileges, and the user can use selection buttons, icons, tick boxes, radio buttons, touch screens, keyboards, etc., to select some or all or none of the specific privileges for each of the types of functions or actions or data that may be accessible or usable by the mechanic using advisor account 550.

[00243] For illustration, the roles 554 can define access the various features, for example engine light, oil level or pressure, battery status, electric powertrain, phone lists, temperature, cooling system, charging system, radio settings, entertainment settings, geo-location data, historical data, advisers history, etc. This listing of features or information regarding the vehicle is only exemplary, and should be understood that more features can be accessible depending on the type of vehicle and the type of features provided by the vehicle. Additionally, the advisor account can be associated with specific ones of the features and for each feature that is associated with the advisor account, the levels of privileges can also be defined.

[00244] Figure 21 illustrates an example where a user having an advisor accounts can communicate with an advisor application to receive advisor data regarding the vehicle. The advisor data is data that is provided by the advisors in response to the advisor receiving data from the vehicle. The data from the vehicle, in one embodiment, is automatically sent by the vehicle over the Internet/cloud services 120. As discussed above, the type of data sent to cloud services from the vehicle will depend on the advisor account and the privileges for the specific features and/or control provided to the advisor user. As shown, advisor data 559 is transferred to cloud services 120. Cloud services will receive the advisor data 560, and it will process the advisor data using advisor logic 562.

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[00245] In one example, the advisor logic 562 will include programs that will define what will happen to the data that is received. Some of the received data will be processed to generate recommendations, some data will be processed and added to a log, some data will be send and processed to automatically notify the vehicle owner about a vehicle event. Certain of the data will produce or require that action items be reported to the advisor. Advisors will receive data 566 from the vehicles that were assigned to the advisors, and in return the advisors can provide feedback to the vehicle owners.

[00246] In some embodiments, an advisor will have advisory accounts from many vehicles (such as a dealership advisor), and the dealership can provide feedback to the different vehicle owners. Advisor responses and advisor feedback is then forwarded to the user in operation 568. This forwarding of the advice can include automatically generated notifications, messages, or custom notifications as feedback based on the advisor data 559 received from the vehicle over time or for one event. The vehicle owner or user will then receive advice 570 from the advisor account reporting back to the user, based on the data provided by the vehicle automatically, based on the advisor accounts.

[00247] Figure 22 illustrates an example of various vehicles in communication with cloud services 120. Cloud services 120 is also in communication with vehicle users 586 and advisors 588. The type of information received from vehicles can include any number of metrics associated with features, functions, parts, operation, etc. For purposes of example only, some system features can include engine oil, tire rotation, tire health, oil filter, battery, brake pads, wipers, coolant, transmission fluid, air filter, remote diagnostics, etc. Cloud services can include a number of operations and systems and programs that operate on the data, notify vehicle owners, receive data from vehicles, hold and exchange data between advisors and vehicle owners, etc. In one example, cloud services can include an operation where a database storage vehicle state data 574 is managed.

[00248] Additional data can include advisors settings and user defined settings 576. Also included are privileged verification modules 578 which assign privileges to the various user accounts and manage enforcement of the privileges defined by the users for each of the various accounts.

[00249] Advisor account logic 580 is also provided, which allows advisors the custom defined what programs, actions, or operation will take place either automatically or require notification to the advisor when vehicle data is received from vehicles placed in their advisor

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care. The advisor account logic 580 can also provide access to the advisors via website, which allows advisors to view, access, communicate, adjust, control, and interface with features that were provided by the user in the privileges for that advisor account.

[00250] The advisors not having access to certain features, as defined by the advisor account will not be allowed access via the website and the advisor account logic 580 will restrict that access. Advisor notification logic 582 is also provided, which provides for communication modules that will interface between the user, the vehicle, and the advisor. The communication modules can also include interfaces for communicating with users via third-party applications, such as e-mails, notifications, social media, text, web applications, and general messages.

[00251] Advisors module 584 is also provided, which provides for management of the advisor accounts, creation of advisor accounts, management of advisor feedback logic, and historically tracking actions taken or not taken by advisors using the advisor accounts 584 on specific vehicles.

[00252] Figure 23 illustrates an example where a plurality of vehicles 586 exchange advisor account data 590 with cloud services 120. Cloud services 120 will then communicate with the various advisors 588. The advisors and be an auto shop, such as Roy's Auto, a dealership, a car care service, etc. The various owners of the vehicles can therefore define specific advisor accounts for different types of features, functions, or parts of the vehicle. Data seen from the advisors 588 is therefore provided as advisor feedback to the users 592. The advisor feedback can include recommendations for service, scheduling of appointments, providing advice, providing remote diagnostics, providing messages and notifications to the users that assigned the advisor accounts. The communications, messages, notifications from the advisors will then be sent back to the vehicle users 586.

[00253] Accordingly, data is passively sent from the vehicles to cloud services 120 as the advisor account data 590, and only specific data is sent to the specific advisor accounts. The advisor accounts will receive only that data identified by the privileges set in the advisor accounts assigned to them by the vehicle users. The vehicle users will then receive information back from the advisors, as set by the owners/admins of the vehicles. Some owners/admins may only use one advisor account for a limited feature, such as oil changes, and no more. This is possible as well as the other extreme where many advisor accounts are set up for different parts or same parts of the vehicle.

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[00254] Figure 24 illustrates an example of an advisor portal 600. The advisor portal 600 may be a website provided to an advisor that has been provided an advisor account by a vehicle owner Bob 604, which is a customer 602. Bob may have various cars set up with advisor accounts with the same advisor. For the specific cars that Bob has assigned to this advisor, the advisor can view specific information regarding the car and can provide communications back to Bob regarding the car. In this example, the advisor can view current vehicle status 606, vehicle faults 608, warning lights 610, recommended actions 612, and can interface with the information via graphical user interfaces to expose more data if privileges were provided. The advisor can also provide specific communications to the vehicle owner Bob. A note to Bob 614 can be generated to notify Bob that his car is low on oil and recommends a service. Bob can also be notified that the warning light is on and can provide a recommended/appointment date and time 616. The message can also be sent to Bob regarding his brakes, along with a recommended scheduling time 618.

[00255] Cloud services 120 can then communicate the advisors responses to Bob, and the car can communicate car data back to cloud services 120. In this manner, information that is traditionally only stored in the vehicle and accessible when the vehicle is taken in for service can now be automatically transferred to those advisors that have knowledge about the vehicle and can provide feedback in substantial real-time.

[00256] Figure 25 illustrates an example where Bob utilizes cloud services 120 to assign multiple and different advisor accounts for the same vehicle. In this example, an adviser account has been set up for an oil service station 620. Advisor account has been set up for a tire shop 622. And advisor account has been set up for a dealer 624. Because advisor accounts can be set up for specific parts or functions of vehicle, is possible to assign specific advisor accounts for specific functions of the vehicle, while excluding other functions. The advisor account for the oil service station will not have access to the tire information of the vehicle. In this example, the tire shop will likewise not have access to the oil service information of the vehicle. Cloud services 120 will manage sending only the information that relates to that specific advisor account to their advisor accounts, and in accordance with the privileges. Advisor accounts are assignable 626 to different entities for different categories of vehicle modes, vehicle parts, vehicle conditions, vehicle states, etc.

[00257] Figure 26 illustrates an example where the vehicle owner Bob has assigned advisor account to a valet, in accordance with one embodiment of the present invention. Using cloud services 120, Bob can utilize his mobile device to assign on the spot an advisor

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account to the valet, who will utilize his or her mobile device to access the vehicle. It is example, the advisor account is able to transfer electronic keys (e-keys) to the valet for use via his mobile device. In operation 628, Bob assigns a temporary advisor account to the valet. In operation 630, the account will provide the valet with access the vehicle, such as for unlocking/locking and turning on the vehicle. In this example, metadata sets the level of privileges for the vehicle during the use of the electronic keys.

[00258] Figure 27 illustrates an example where electronic keys are assigned to an advisor account. In operation 632, that entity that is to receive an advisor account is identified. The identification of the entities can be by way of sending an entity e-mail, a text message, a notification, a near field communication (NFC) signal, a bump signal, a Bluetooth signal, a WiFi signal, or some electronic transfer signal or signals. In operation 634, the privileges are set for the advisor account, where specific vehicle aspects are enabled for the vehicle.

[00259] Information regarding data reporting can be set, remote access privileges can be set, local access can be set for using the vehicle (such as starting the vehicle opening the vehicle, locking the vehicle, unlocking the vehicle, restricting speeds, restricting distances, etc.). In operation 636, the advisor account is generated. The advisor account is then sent to the target recipient in operation 638. Sending the advisor account to enable use of the vehicle, in one embodiment includes sending encrypted e-keys to the recipient.

[00260] The target recipients can be the person to which the advisor account is being set. For example, the advisor account can be for a mechanic, a dealership, a service station, a valet attendant, a person, a corporation, and entity, etc. In the case of the valet, the advisor account can be sent to the recipient user or person working at the valet station. The valet account will then be received operation 639. The valet account will provide access 640 to the vehicle. As noted above, the access may include unlocking the vehicle, enabling starting of the vehicle, locking the vehicle, etc. This will allow the valet to drive the vehicle for the restricted privileges set by the valet account 642. During the use of the valet accounts, the vehicle will maintain a history of the use of the vehicle and will provide reports or save the information to a log on a server or on the vehicle. In one embodiment, the vehicle can provide reporting 644 regarding any potential damage to the vehicle while it was under the care of the valet.

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[00261] In some embodiments, the valet account can be set using the vehicle electronics. For example, the user can go to a screen of the vehicle, select the type of account which will enable use of the vehicle under those privileges for a period of time.

[00262] Figure 28 illustrates an example of the assignment of electronic keys (e-keys) by Bob to a valet. In this example, Bob utilizes his smart phone 652 to transfer electronic key 652 the valet's device 651. The valet's device 651 is the recipient of the electronic keys. In one embodiment, the electronic keys transferred by Bob are sent to the valet by way of cloud services 120. For example, Bob can request that keys be sent to the valet, and the request is sent to the server operating in cloud services 120. The request can include information regarding the privileges, limitations, and/or metadata associated with the request for the electronic keys that are to be sent to the valet. The valet can then use the electronic Keys to use the vehicle in accordance with the privileges set by the requesting user (Bob).

[00263] In this example, cloud services can maintain information regarding the monitored use of the vehicle during the assignment of the electronic keys to the valet. A history can be regarding the use. The history can include vehicle functionality, vehicle use, as well as occupant information such as camera data, audio data, exterior conditions, camera conditions exterior to the vehicle, breach violations, attempted thefts, actual theft, damage data, etc. while the account is active. The issuing user can also request that the account be deactivated, deleted, or turned off at any time. Reporting regarding the use of the vehicle can also be managed by cloud services which will inform Bob of any activity or specific activity about the vehicle while the valet utilizes the vehicle using the e-keys assigned to the valet. The assignment of the electronic keys can also have an expiration time, time frame, and an expiration time or date or combinations thereof.

[00264] Figure 29 illustrates an example where an owner of the vehicle Bob, is able to assign electronic keys (e-keys) 650 to any number of users. The keys can be assigned to users with various privilege settings. Additionally, the electronic keys can be sent to users that are remote from the user. For example, if Bob left his car at home, while at work Bob can e-mail, text, message, or send electronic keys to a person that may need access to the vehicle that is remote from Bob. The user (e.g., Bob) can be at a location remote from the vehicle or can be standing next the vehicle or be in the vehicle when assignment of electronics is made. In one embodiment, the electronic keys can be assigned to a number of users, where the

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privileges are different for the same. The electronic keys for each user can be associated with a different expiration time and privilege priority level.

[00265] Each e-key, in one embodiment, will include a unique access code or substantially unique access code. The unique access code can be generated by a server, such as cloud services 120. In other embodiments, the access code can be generated by the vehicle electronics/logic/programs or can be generated by a mobile device or other computing system that is separate from a server. In other embodiments, the access codes can be generated on a remote device from the server or on the server itself. The unique generation of access codes enables each electronic keyed to be different for each user and each e-key can expire at any time set by a requesting user or can be canceled at any time from a device having access to the Internet.

[00266] Thus, multiple e-keys can co-exist. In one embodiment, if more than one person wishing to access or ride in the car has an e-key, one of the e-keys can open and turn on the car. If a user with an e-key having higher levels of privileges is riding in the car, the car can either automatically transfer to the higher level or ask for permission to transfer privileges from higher level e-keys, even if the e-keys that first accessed the vehicle were lower level in privilege setting.

[00267] Figures 30A and 30B are illustrative examples of having electronic keys transferred to a guest that requires access to the vehicle. The electronic keys 650 can be transferred to the vehicle and verified by the vehicle or cloud services or both, before access is given to the guest. The communication by the guest to the vehicle can be performed using any number of wireless communications, such as radio communication, Wi-Fi communication, Bluetooth communication, etc. The device of the guest, who is the recipient of the electronic keys can be of any type of the device. Example devices can include smart phones, tablet computers, computer glasses, wristwatch computers, computer chips, thumb drive computers, or any other device having the capability of storing data, processing data, and exchanging data either wirelessly or via some wired connection.

[00268] Figures 26-35 illustrate methods and systems for assigning e-keys for enabling access of a vehicle to a remote user, and related account privileges, as defined in several exemplary embodiments.

[00269] In one embodiment, a user can assign an ad advisor account to any individual. The Advisor account can be for any duration, and the duration can be set by the user. In one

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embodiment, the advisor account can be assigned to a guest driver of a vehicle. The guest driver can be, for example, a friend, a known individual, a service person, a valet person or valet service, etc. The creation of an advisor account can therefore be for a short duration, or long duration, or permanently, or until the account is canceled, stopped, revoked, expires, or eliminated by the person/user that issued or created the advisor account. In one embodiment, the advisor account can act to provide access to a vehicle.

[00270] In one embodiment, access can be by way of electronic keys (e.g., e-keys), which can be sent by a vehicle owner/admin to some person or entity. For example, the user-owner of the vehicle can assign a valet with access to the vehicle by going on an application (App or website) on a computing device (e.g., mobile or non-mobile device), identifying the recipient, identifying a mode for communicating with the recipient (e.g., text, email, message, notification, etc.), selecting the advisor account privileges (e.g., what type of access, speed limits, geographic restrictions, amount of time the e-keys will be valid (or else expire)), and requesting that e-keys be sent to the recipient.

[00271] Figure 31A illustrates an example where a user, John, utilizing his mobile device 702, is able to communicate and send e-keys to another user (Bob). In this example, the sending of e-keys will include the sending of the request to a server, which may be operated by cloud services 120. At the server, the server will generate an access code for the vehicle (car – B). The access code will then be encrypted by the server and then sent as encrypted e-keys 722 to Bob's device 704. Bob's device 704 may be a mobile device, such as a smart phone. The mobile device will include screen having interfaces and icons, and the ability to receive messages, notifications, text messages, and e-mail. In one embodiment, a notification will be received by Bob indicating that John has provided e-keys to Bob.

[00272] In figure 32, Bob utilizing his mobile device 704 will transfer the encrypted e-keys 720 to the vehicle that belongs to John (car – B). In one embodiment, the receipt of the encrypted e-keys 720 will also include code, logic, or program instructions that will request that the device ID of Bob's device 704 should be transferred to the vehicle along with the encrypted e-keys 720. At the vehicle, the vehicle will receive the encrypted e-keys and the device ID of Bob's device 704. The vehicle will hold a private key to unlock and un-encrypt the encrypted e-keys 720.

[00273] The encryption by the server of the-keys utilize a public key that is associated with John's car, and held in or associated with an account managed for John. In this manner,

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John's car, holding the private key in memory can decrypt the encrypted e-keys 720. At the vehicle, the decrypted e-keys will be bound, associated, or paired with the device ID that transferred the e-keys in operation 730.

[00274] Because Bob transferred the encrypted e-keys 720 to the vehicle, Bob's device ID is associated with the encrypted e-keys that were transferred to the vehicle. This will assure that future accesses using e-keys that are activated for the car – B will be from the device 704 that received the e-keys from the owner. The target device that receives the e-keys is the recipient device that is identified by the user that requested that the e-keys be provided to the recipient. In operation 732, as mentioned above, the vehicle private key is used to decrypt the e-keys to get access to an access code. The access code is the code that will enable the e-keys to be activated e-keys 724. In operation 734, the access code is bound to the device ID, as mentioned above. The access code is then sent as activated e-keys 724 back to Bob's device 704. Bob's device 704 can now access the vehicle in accordance with the privileges set by John, the owner of the vehicle.

[00275] Figure 33 illustrates an example where Bob utilizes his device 704 to activate, open, lock, turn on, unlock, John's vehicle (car – B). The access by Bob is facilitated by the activated e-keys 724, which are used via device 704 having the device ID that is paired or associated with the access code associated with the activated e-keys 724.

[00276] Figure 31B illustrates an example of operations that may be performed by cloud services 120 when a request to send e-keys to a recipient is received. Cloud services can receive the request 741. The request can include identification of the recipient and the privileges defined by the requester for that issuance of e-keys to the recipient and identification of the device that will receive the e-keys.

[00277] In one embodiment, the exact device that is to receive the e-keys is not identified in advance, but only the communication modes to identify the user. For example, the user may have multiple devices that can receive messages. The device that actually receives the message and communicates with the vehicle will be the device that will receive and be able to use the activated e-keys when the transaction to use the e-keys is made with the vehicle. Once the e-keys are activated on one device, the e-keys cannot be activated on other devices unless new e-keys are requested again.

[00278] In operation 742, the request is associated with the user account making the request. The user account will be John's account, which will have predefined information

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associated with the vehicles that John is able to assign e-keys for. Additionally, the user account for John can also include templates that John can use to assign e-keys with various privileges. Some templates can be assigned to teenage users, spouses, mechanics, valet attendants, etc. In this manner, the user does not need to assign the specific individual privileges each time e-keys are assigned, but simply can assign a template of a group of privileges for the specific assignment.

[00279] In operation 743, the server will generate a unique access code. The unique access code can be generated by a number generator, and alphanumeric random generator, in incremental number generator, or any other generation device that can generate codes that are unique or substantially unique. In operation 744, the access code is encrypted using the vehicles public key, which is held by the server. The public key held by the server enables encryption of the access code and any associated metadata, privileges, or communication data or codes, which will be sent to the recipient device for accessing of the vehicle. In operation 745, the encrypted e-keys are sent to the recipient. In this example, the encrypted e-keys 720 are sent to Bob and received by device 704.

[00280] Figure 34 illustrates examples of various assignments of e-keys 750 and the generation of unique codes 752, as transactions between users and servers of cloud service 120. In the example shown, various e-keys can be assigned by John to various different parties. Each e-key assignment can be associate with a different unique code generated by the server. Each unique code can then be used to associate those e-keys with the same vehicle, but assigned to different devices/people with different privileges. The different e-keys having different access codes can then be encrypted and sent to the user for access of the vehicle.

[00281] In other embodiments, the access codes are not encrypted and will enable direct access to the vehicle when the e-keys are sent directly to a recipient. In that embodiment, a user can send e-keys directly from one smart phone to another smart phone or one device to another device without the need for server involvement. Assignment of e-keys in this manner may have lower levels of security, but the assignment of e-keys can still be associate with uniquely associated access codes. The unique access codes can be generated by the mobile devices using applications, and expiration, cancellation or revoking of assignee-keys can be made or conducted via the mobile device (or any computing device, including the electronics of the vehicle). In some embodiments, the mobile device will

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communicate with the server and in other embodiments no server communication will be needed.

[00282] Figure 35 illustrates an example where a request is sent by John via device 702 to cloud services 120. Cloud services 120 can generate the unique access code which is then encrypted in a message and sent as encrypted e-keys 720 to the recipient, Bob, who receives it via device 704. The request sent by the requester can include an action request. The action can be to send e-keys to Bob. The requester will identify Bob's contact data, such as e-mail, text, notifications, messages, NFC, etc. and can defined privileges for use. The duration that the e-keys will remain active can also be set by the requester. Metadata defining the active state of the e-keys can also be managed by the request, including deactivating codes or self-destructing access code routines when violations occur.

[00283] In one example, the app on the user's mobile device can request that a message be sent to the recipient, so that the recipient can receive the e-keys and be granted access to the vehicle. In one embodiment, the recipient may have a mobile device or computing device (e.g., smartphone, tablet computer, laptop computer, personal digital assistant, smartwatch, computer glasses, or the like), on which a communication can be received that provides instructions for obtaining/validating/using the e-keys. In one example, a message can be sent to the recipient, which may provide instructions on how to activate the e-keys.

[00284] In one embodiment, the message may have a link to an application that can be launched, which can be used to complete the activation and access with the vehicle. In another embodiment, a simple link can be sent, which when selected will link the user to a webpage, which provides instructions for activating the access for the e-keys.

[00285] In one embodiment, application or webpage can identify that e-keys were sent to the individual recipient and will also identify the vehicle (e.g., brand, year, model, color, license plate, or more or less data), may identify the restrictions, and may identify the duration during which the e-keys will remain active. After the duration (or earlier if the e-keys are cancelled by the user), the e-keys will discontinue to work. If, for some reason, the recipient still needs access to the vehicle, the original message or link can provide a method for allowing the user to request more time. The user (e.g., owner of the vehicle) can therefore, via the app or website, reactivate the e-keys.

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[00286] In some embodiments, the e-keys when active will provide a graphical user interface on the device of the recipient, which may allow access, such as icon buttons to unlock, lock, start and stop the vehicle. The app can also send notifications to the recipient, if for example, the user wishes to provide the recipient with more time or less time. While the e-keys are active, in one embodiment, the vehicle can report back activity of the vehicle, while under the care/use of the recipient. The user may have access to audio input or cameras, to communicate with the driver/recipient. The vehicle use history can also be saved to a server, such that the recipient's use activity can be audited, or viewed or accessed.

[00287] In one embodiment, the e-keys can be sent to any person, via a communication message. The e-keys, in one embodiment, are sent to a user in a message so that the recipient can get a graphical user interface that allows the recipient to activate the e-keys and then open the car, turn on the car, drive the car, turn off the car, lock the car, etc.

[00288] For security purposes, e-keys are generated at a server, which may be managed by a server to execute cloud services. The server may receive requests from registered users who may wish to assign e-keys to some individual or entity. The request is associated to the user account, as managed by the service. If the user has multiple vehicles, the request may further include identification of the vehicle, such as CAR-A or CAR-B, etc. At the server, the server is configured to execute the generation of access codes for a particular request. The access codes can be uniquely generated by the server, for each received request. In one embodiment, the access code format or form is set, so that a vehicle knows what to expect and reject access codes that do not meet the format or form. Once the access code is generated for the request, the access code is encrypted using a public key of the vehicle, which is assigned a public/private key pair.

[00289] In one embodiment, the public/private key pair can be re-generated from time to time, if the user feels that a security breach has taken place. Usually, however, one public/private key pair may serve for a life of a vehicle. The server keeps and maintains the public key and the private key is stored in storage/memory of the electronics of the vehicle. Although traditional encryption may make the public key freely available, in one embodiment, the public key is only referred to as "public" for purposes of defining the encryption logic, but preferably the public key is kept private or securely held by the server. The private key can be stored or programmed when the vehicle is registered with a service or at any other time, when the public/private key pair are re-generated for security purposes. The transfer of the private key to the vehicle can take place over any wired or wireless

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network, or by transfer via some connector, plug, memory card, thumb drive, etc. In any event, the private key is stored and kept secure by the vehicle.

[00290] In one embodiment, in addition to the access code being encrypted, other data can also be encrypted along with the access code. Such other data can include, for instance, metadata. The metadata may include a number of control information/parameters, programming information, privileges defined by the requesting user, the expiration time of the e-keys, code/logic for self-deleting the access code of the e-keys on the recipient's device when the expiration time is reached, etc. In some embodiments, the device of the recipient, once the access code has been activated, can communicate with the server in a background mode. The communication can include, for instance, having the server de-activate the access code if the issuing user decides to cancel the access code.

[00291] For ease of discussion, reference will be made to encrypting the access code, but it should be understood that other data may also be encrypted. The encrypted access code is then sent to the recipient, as identified by the requesting user. The recipient will, in one embodiment, receive the message that tells the recipient that he/she has received e-keys, and to click on a link or select a button provided or associated with the message when the recipient is within communication distance to the vehicle. The recipient can then approach the vehicle, e.g., at wireless communication distance (e.g., WiFi, Bluetooth, NFC, radio, etc.). The device of the recipient, upon the recipient selecting the button or link, will cause the device of the recipient to transfer the encrypted access code (e.g., e-keys) to the vehicle.

[00292] In addition, a device ID of the device that sent the encrypted e-keys to the vehicle will also be received by the vehicle. The vehicle, because it has the private key of the public/private key pair, will be able to decrypt the access code. The vehicle will then bind the access code with the device ID. The access code, being bound or associated with the device ID will be returned to the recipient's device, which will be the activated e-keys. The activated e-keys will therefore allow the recipient, using the device with the device ID to use screens, graphical user interfaces, apps, or buttons on the screen or device to actively use the vehicle.

[00293] The activated e-keys will, however, only be active for the period of time set by the vehicle owner that sent the request to grant the e-keys to the user. As used herein, the device ID can be any type of device identifier, such as a model number, a code, a serial number, an alphanumeric string, a numeric string, a simple number codes, or any type of

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identifying data. In one embodiment, the device ID is a MAC address of the recipient's device.

[00294] A cloud services website, which may be managing the generation of e-keys will set metadata that defines what the limits or restrictions or parameters of the e-keys are, such as how long the-keys will be active. In one embodiment, the generation of the e-keys can be for a predefined set period of time, e.g., such as 1 hour, 1 day, 1 week, 2 weeks, 1 month, 1 minute, 2 minutes, 30 seconds, or until cancelled or eliminated by the user. For example, the e-keys can be generated as a spare e-key for a person's wife or child. In that case, the-keys may not expire, until the account is cancelled, thus deleting the key pair validation and associated encryption.

[00295] In one embodiment, each e-key generated is unique, as the generated access code was unique for the specific request. A random number generator can be used to provide access codes. Each unique e-key, being unique, can be cancelled and eliminated without affecting other issued e-keys. The number of e-keys generated can therefore be essentially unlimited, as each e-key is unique. In one embodiment, each e-key assigned to a recipient can be associated with a log of activity. The log can identify what driving took place, where the vehicle was driven, speeds, damage sustained, radio stations listened to, conversations had, images of drivers during that time, etc. In some embodiments, the level of monitoring can be more limited.

[00296] In some embodiments, the level of monitoring can be provided in a message, at the same time the e-keys are assigned to a recipient. In this manner, each recipient will know in advance what monitoring is occurring on the vehicle while the vehicle is used with the issued e-keys associated with the account or advisor account. In some embodiments, more monitoring will be acceptable, such as when the vehicle is driven by a valet. In some embodiments, less monitoring is more acceptable, such as when a spouse is driving the vehicle.

[00297] The recipient user, in one embodiment will have a computing device for receiving the e-keys. The computing device may be a phone, a watch, a computer chip, or some processing device or storage. The recipient, once receiving the e-keys from a server can then access a link or icons on an app or website of his/her device. The recipient is instructed to press a button or select an icon or link to initiate access with the target vehicle. The action taken by the recipient will cause data packets to be transferred to the electronics

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of the vehicle. The data packets can include, for example, the encrypted e-keys (e.g., having the access code).

[00298] The encrypted e-keys will be accepted and/or validated by the vehicle, and in one embodiment, can also include receipt of the device ID of the recipient desiring the access. Once validated, the recipient will have access to the vehicle. The access may, for example, be in response to the user selecting buttons, icons or app controls on his device, e.g., smartphone or the like. Each time the device sends control data to the vehicle, the control data (e.g., to open the vehicle, start the vehicle, etc.), in one embodiment, the control data can be sent with the server as well for tracking use.

[00299] As noted above, the e-keys can be assigned for any period of time, e.g., such as a very temporary period of time or for a longer period of time. For example, a user can assign e-keys to a friend if the user is far from home and the friend needs access to the vehicle that may still be at home. The e-keys can expire, based on the defined period of time for the e-keys. The e-keys can be managed by the user on a website, such as a site managed by cloud services. The user can see all e-keys that have been assigned in the past, which e-keys are active, deactivate any e-keys, see use history associated with any previously assigned e-keys, etc.

[00300] In another embodiment, a user can also receive notifications when a vehicle is being accessed, driven or used in a manner that is in violation of the privileges assigned to the e-keys. For instance, if the e-keys were assigned to a valet and the valet attempts to speed excessively during the use of the e-keys, the user can be notified of the privilege breach or violation. In one embodiment, the account associated with the e-keys can act to automatically deactivate the e-keys upon detecting a violation.

[00301] In one embodiment, instead of waiting for a user to request that e-keys be sent to a recipient, the recipient may directly request e-keys. For instance, if the vehicle is one that is from a car sharing entity, the user may wish to access a particular car parked as some location. The car may be identified by serial number or some other identifier. The user, in one embodiment, using an application of the car entity can request e-keys. The request can be processed similar to when a user shares his/her keys with an individual. The requesting user waits for the server to issue encrypted e-keys, which are transferred to the vehicle for decryption and verification. The vehicle can then issue activated e-keys to the user for opening the car, starting the car, locking the car, etc. In one embodiment, the user can

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continue using the vehicle until a pre-determined period of time or during a time that the user wishes to use the vehicle. Vehicle use can be communicated, for the used e-keys, back to the vehicle sharing entity. The vehicle sharing entity can then bill the user for the time used and any incidentals.

[00302] Accordingly, it should be understood that the issuing or sharing of e-keys facilitates access and use of vehicles for any defined duration. It should be further understood that issued e-keys can also be issued to multiple individuals at one time. For example, a vehicle owner can have an active set of e-keys on his/her phone. The vehicle owner may also have a set of e-keys active for a child of the home. The vehicle owner may also activate e-keys for service people, mechanics, valet people, etc. These e-keys can co-exist and can all be active at any particular point in time. If both there are two users that wish to ride and/or drive the car, the first user to activate the access via the e-keys will be the e-keys that are logged as active. More specifically, if a husband and wife wish to go to an event in the vehicle, and the wife is the first to activate the vehicle using her e-keys, the e-keys used to activate the vehicle will be the ones that are associated with the active use.

[00303] In one embodiment, if the user that activated the vehicle with his/her e-keys does not proceed to drive or ride in the vehicle, the e-keys may be disabled in a safe manner. Thus, in one embodiment, a background signal between the device used to activate the e-keys will communicate with the vehicle to confirm that the device is in the vehicle. In one embodiment, the background signal operates as a tether.

[00304] In still another embodiment, if a vehicle is stolen, the owner can access the website or app, and immediately cancel all e-keys for the vehicle. This will act to safely stop the vehicle, e.g., by slowing down the vehicle if it is in motion, or lock the vehicle, report GPS coordinates, etc. The vehicle can, in one embodiment report activity, camera data, voice data, or any other monitoring data associated with the condition that caused the e-keys to be violated.

[00305] In other embodiments, the vehicle can also participate and communicate with the server of cloud services to perform either initial assignment of the access codes, verification or monitoring.

[00306] Reporting data and history of use can also be logged separately for each e-key that is active or was active. As noted above, the e-keys can be assigned for particular privileges. In one embodiment, the privileges can be assigned by selecting tick boxes, icons,

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drop down menus, time durations, set limitations, conditions, etc. In some embodiments, a template can be provided for users. A template can have certain predefined privileges that match the assignment of the e-keys. For instance, a template can be provided for a valet, a mechanic, a service store, a child, a spouse. The templates can be pre-defined by the system and can also be adjusted or customized by the owner of the vehicle or admin of the vehicle. Furthermore, although specific reference is made to a vehicle, the embodiment can also be used for other types of devices, homes, structures, real estate lock boxes, lock boxes, safes, robots, electronics, etc.

[00307] The various embodiments may be embodied in computer readable media, which is saved in storage. The storage may be saved on cloud storage, data centers, or the like, which are accessible over the Internet. The access may be wired or wireless. In vehicles, the connection to the Internet may be wireless, and the connection can be continuous or non-continuous depending connection. Code on the vehicle electrons can execute at least some of the method operations when not connected and other operations are executed jointly between vehicle electronics (e.g., memory, code and processors of a vehicle) and cloud processing, which may implement one or more servers, either virtual or not.

[00308] It will be obvious, however, to one skilled in the art, that the present invention may be practiced without some or all of these specific details. In other instances, well known process operations have not been described in detail in order not to unnecessarily obscure the present invention.

[00309] The various embodiments defined herein may define individual implementations or can define implementations that rely on combinations of one or more of the defined embodiments. Further, embodiments of the present invention may be practiced with various computer system configurations including hand-held devices, microprocessor systems, microprocessor-based or programmable consumer electronics, minicomputers, mainframe computers and the like. The invention can also be practiced in distributed computing environments where tasks are performed by remote processing devices that are linked through a wire-based or wireless network.

[00310] With the above embodiments in mind, it should be understood that the invention could employ various computer-implemented operations involving data stored in computer systems. These operations are those requiring physical manipulation of physical quantities. Usually, though not necessarily, these quantities take the form of electrical or

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magnetic signals capable of being stored, transferred, combined, compared and otherwise manipulated.

[00311] Any of the operations described herein that form part of the invention are useful machine operations. The invention also relates to a device or an apparatus for performing these operations. The apparatus can be specially constructed for the required purpose, or the apparatus can be a general-purpose computer selectively activated or configured by a computer program stored in the computer. In particular, various general-purpose machines can be used with computer programs written in accordance with the teachings herein, or it may be more convenient to construct a more specialized apparatus to perform the required operations.

[00312] The invention can also be embodied as computer readable code on a computer readable medium. The computer readable medium is any data storage device that can store data, which can thereafter be read by a computer system. The computer readable medium can also be distributed over a network-coupled computer system so that the computer readable code is stored and executed in a distributed fashion.

[00313] It should be understood that various examples are shown herein, and the examples and figures should not limit a claimed embodiment to any specific example or figure. To the contrary, it should be understood that various embodiments are possible which can be made by combined features found in the illustrations, description and figures. Thus, some embodiments are possible for specific combinations of figures and parts taken from the various drawings, descriptions to define specific implementations, as supported by the description. Additionally, any of the flow diagrams should not require any embodiments to include any enumerated step, operation or order. Some operations may be taken in different orders from that show as examples in the figures, depending on the desired implantation, as supported by the description.

[00314] Although the foregoing invention has been described in some detail for purposes of clarity of understanding, it will be apparent that certain changes and modifications can be practiced within the scope of the appended claims. Accordingly, the present embodiments are to be considered as illustrative and not restrictive, and the invention is not to be limited to the details given herein, but may be modified within the scope and equivalents of the description and claims.

what is claimed is:

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CLAIMS

1. A method for sharing an electronic key (e-key) to use a vehicle with the e-key, comprising:

sending, via a first application of a first mobile device, a message to a second mobile device to initiate providing access to the vehicle via the e-key;

receiving, by the first mobile device, data confirming from the second mobile device indicating receipt and creating the e-key at the second mobile device for the vehicle with a level of access that was set via the first application of the first mobile device, the data confirming receipt for the e-key being authenticated by the first mobile device; and

sending, by the first mobile device, verification of the e-key for use via the second mobile device, the e-key being registered with a server to enable activation of the e-key on the second mobile device, wherein a second application of the second mobile device provides a user interface for access of the e-key for unlocking and starting the vehicle.

2. The method of claim 1, wherein communication for sharing the e-key uses encryption, the first mobile device having an administrator e-key that was previously paired, validated and activated with the vehicle and the server, wherein the administrator e-key enables said sharing of the e-key for the vehicle based on the prior validation.

3. The method of claim 1, wherein an access code is generated at the first mobile device identifying the vehicle and identifying the level of access, wherein the first mobile device being previously validated during creation of an administrator e-key that was registered and activated responsive to communication with the server.

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4. The method of claim 3, wherein the message to provide access to the vehicle is generated by the first mobile device without involvement by the server, wherein the server is subsequently used for said registering and activation of the e-key to be used by the second mobile device.

5. The method of claim 1, wherein the e-key is used to access the vehicle using wireless communication that includes one of WiFi communication, or Bluetooth communication, or near field communication (NFC), or a cellular communication, or radio communication.

6. A method for sharing an electronic key (e-key) to use a vehicle, comprising:

sending, from a first mobile device to a second mobile device, a message to provide access to the vehicle via the e-key, the message includes an access code that that identifies authentication for the vehicle and identifies a level of access for use of the vehicle;

receiving, by the first mobile device, confirmation from the second mobile device that the e-key was created using the authentication and the level of access; and

sending verification of the e-key to the second mobile device, and responsive to the verification the second mobile device is configured to register the e-key with a server to activate the e-key to use the vehicle with the level of access granted by the first mobile device.

7. The method of claim 6, wherein the authentication for the vehicle includes encryption data for the vehicle, the encryption data for the vehicle is provided by the first mobile device, the first mobile device being paired with the vehicle with an administrator e-key, and wherein the access code is generated at the first mobile device, the first mobile device being paired with the vehicle with an administrator e-key.

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8. The method of claim 6, wherein the message to provide access to the vehicle is generated by the first mobile device without server involvement by the server, and the server is used for said registering and activation of the e-key to be used by the second mobile device.

9. The method of claim 6, further comprising,

accessing an application on the first mobile device to select sharing of the e-key and identification of a recipient of the e-key, the recipient associated with the second mobile device, wherein the first mobile device is paired with the vehicle with an administrator e-key before sending the message to share the e-key with the second mobile device.

10. The method of claim 6, wherein the first mobile device is paired with the vehicle by processing a pairing transaction between the first mobile device and the vehicle and registering an administrator e-key with the server, the server including one or more servers, and wherein the server or one or more servers include an automaker server that stores a database for authenticating e-keys to vehicles.

11. The method of claim 6, wherein the e-key, once registered and activated, is configured for use by the second mobile device with electronics and software of the vehicle, and wherein wireless communication between the second mobile device and the vehicle enable use of the e-key to unlock and start the vehicle in accordance with said level of access.

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12. The method of claim 11, wherein said wireless communication includes one of WiFi communication, or Bluetooth communication, or near field communication (NFC), or a cellular communication, or radio communication.

13. The method of claim 6, wherein the first and second mobile devices are one of a smartphone, or a smartwatch, or smart glasses, or a computer, or a digital assistant.

14. The method of claim 6, wherein the message sent by the first mobile device is via a message notification, or an email address, or a phone number, or a text number, or a message address, or a notification, or a link, or a web address, or a social network address, or a combination of two or more thereof.

15. The method of claim 6, wherein the level of access defines a privilege of use for the vehicle as set via the first mobile device for use by a user of the second mobile device, the privileges define one of a geographic restriction for where the vehicle is allowed to be used, or a speed restriction, or an occupancy restriction, or a time frame of use restriction, or a time of day use restriction, or a time expiration of use restriction, or a combination of two or more thereof.

16. The method of claim 6, further comprising,

sending, by the first mobile device, revocation message to disable the e-key shared with the second mobile device.

17. The method of claim 6, further comprising:

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binding the e-key to the second mobile device once the e-key is registered and activated for use via the second mobile device, and wherein e-key of the second mobile device when activated, enables access of the vehicle via a near field communication (NFC) transmission between the second mobile device and the vehicle.

18. A method for using an electronic key (e-key) with a vehicle, comprising:

initiating, by a mobile device, a wireless connection with communication circuitry of the vehicle for initiating pairing of the mobile device with the vehicle, the mobile device is configured to use an access code obtained from a server to establish the wireless connection with the vehicle for pairing;

receiving, by the mobile device, encrypted information from the vehicle, the encrypted information is decrypted using data from the access code, wherein a confirmation of the decryption of the information is sent by the mobile device to the vehicle for pairing the mobile device and the vehicle using the e-key; and

communicating, by the mobile device with a server data confirming the pairing to cause registration of the e-key and activation of the e-key, wherein the activation of the e-key enables use of the e-key to unlock and start the vehicle.

19. The method of claim 18, wherein wireless communication between the mobile device and the vehicle uses a protocol including one of a WiFi communication, or a Bluetooth communication, or a near field communication (NFC), or a cellular communication, or a radio communication.

20. The method of claim 18, wherein the mobile device is one of a smartphone, or a smartwatch, or smart glasses, or a computer, or a digital assistant.

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DIGITAL CAR KEYS AND SHARING OF DIGITAL CAR KEYS USING MOBILE DEVICES

Abstract

Methods and systems for sharing digital electronic keys (e-keys) to use a vehicle with the e-key are provided. One example method includes sending, via a first application of a first mobile device, a message to a second mobile device to initiate providing access to the vehicle via the e-key. The method includes receiving, by the first mobile device, data confirming from the second mobile device indicating receipt and creating the e-key at the second mobile device for the vehicle with a level of access that was set via the first application of the first mobile device. The data confirming receipt for the e-key is authenticated by the first mobile device. The method includes sending, by the first mobile device, verification of the e-key for use via the second mobile device. The e-key is registered with a server to enable activation of the e-key on the second mobile device. A second application of the second mobile device provides a user interface for access of the e-key for unlocking and starting the vehicle. In one example, the e-key is usable via wireless communication with the vehicle over a near field communication (NFC) connection. In one example, the first application of the first mobile device is provided with an interface to enable revocation to disable the e-key shared with a user of the second mobile device.

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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 16/987,919

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	75		N/A	
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	330		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	380		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	20 minus 20 =	*	x 50 =	0.00	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3 minus 3 =	*	x 230 =	0.00			
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			
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	785		TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT A	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))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT B	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))									
	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.

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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
16/987,919	08/07/2020	2683	785	VOLTP018.5.C5.6	20	3

CONFIRMATION NO. 1086

FILING RECEIPT

25920
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OC000000119220446

Date Mailed: 08/14/2020

Receipt is acknowledged of this non-provisional utility 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 FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

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Domestic Priority data as claimed by applicant

This application is a CON of 16/653,958 10/15/2019
which is a CON of 15/854,241 12/26/2017 PAT 10442399
which is a CON of 15/607,418 05/26/2017 PAT 10407026
which is a CON of 15/344,566 11/06/2016 PAT 9663067
which is a CON of 15/180,306 06/13/2016 PAT 9499129
which is a CON of 14/303,442 06/12/2014 PAT 9365188
which is a CON of 14/063,638 10/25/2013 PAT 9189900
which is a CIP of 13/842,158 03/15/2013 PAT 9229905
which claims benefit of 61/745,729 12/24/2012
and said 14/063,638 10/25/2013
is a CIP of 13/452,882 04/22/2012 PAT 9123035
which claims benefit of 61/478,436 04/22/2011

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Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

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Permission to Access Search Results: No

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

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The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 16/987,919**

Projected Publication Date: 11/19/2020

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

DIGITAL CAR KEYS AND SHARING OF DIGITAL CAR KEYS USING MOBILE DEVICES

Preliminary Class

340

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

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/987,919	08/07/2020	Angel A. Penilla	VOLTP018.5.C5.6

CONFIRMATION NO. 1086

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PUBLICATION NOTICE

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Title:DIGITAL CAR KEYS AND SHARING OF DIGITAL CAR KEYS USING MOBILE DEVICES

Publication No.US-2020-0361335-A1
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Substitute for form 1449/PTO **INFORMATION DISCLOSURE STATEMENT BY APPLICANT** *(Use as many sheets as necessary)*				***Complete if Known***	
				Application Number	16/987,919
				Filing Date	August 7, 2020
				First Named Inventor	Angel Penilla
				Art Unit	2859
				Examiner Name	
				Attorney Docket Number	VOLTP018.5.C5.6

U.S. Patent Publications

Examiner Initials	Publication Date	Reference	Name of Patentee or Applicant	Cite No.
	5/30/2002	US20020064258	Charles Schelberg et al.	1
	7/4/2002	US20020085043	Amnon Ribak	2
	9/19/2002	US20020133273	Larkin Lowrey et al.	3
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				First Named Inventor	Angel Penilla
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				First Named Inventor	Angel Penilla
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	9/14/2010	US7796052	Fred Katz	301
	12/14/2010	US7850351	Todd W. Pastrick, et al.	302

Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

EA_KIA-006746

IPR2024-00981
Emerging Auto EX2024

Substitute for form 1449/PTO **INFORMATION DISCLOSURE STATEMENT BY APPLICANT** *(Use as many sheets as necessary)*				***Complete if Known***	
				Application Number	16/987,919
				Filing Date	August 7, 2020
				First Named Inventor	Angel Penilla
				Art Unit	2859
				Examiner Name	
				Attorney Docket Number	VOLTP018.5.C5.6

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	5/24/2011	US7949435	Seth B. Pollack	305
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	7/26/2011	US7986126	Jonathan P. Bucci	308
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	4/8/2014	US8694328	Joseph Gormley	343

Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

EA_KIA-006747

IPR2024-00981
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Substitute for form 1449/PTO **INFORMATION DISCLOSURE STATEMENT BY APPLICANT** *(Use as many sheets as necessary)*				***Complete if Known***	
				Application Number	16/987,919
				Filing Date	August 7, 2020
				First Named Inventor	Angel Penilla
				Art Unit	2859
				Examiner Name	
				Attorney Docket Number	VOLTP018.5.C5.6

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Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

Electronic Acknowledgement Receipt

EFS ID:	41935218
Application Number:	16987919
International Application Number:	
Confirmation Number:	1086
Title of Invention:	DIGITAL CAR KEYS AND SHARING OF DIGITAL CAR KEYS USING MOBILE DEVICES
First Named Inventor/Applicant Name:	Angel A. Penilla
Customer Number:	25920
Filer:	Albert S. Penilla
Filer Authorized By:	
Attorney Docket Number:	VOLTP018.5.C5.6
Receipt Date:	16-FEB-2021
Filing Date:	07-AUG-2020
Time Stamp:	16:22:19
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	IDS_letter_Efiled.pdf	22347 6c9919b449477b76a6ef7d835346fcab4a231ce3	no	1

Warnings:

Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	IDS1449_Efiled.pdf	125770 51034eee20f9b3ba08446a7e62123af189a6792f	no	10
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
			Total Files Size (in bytes):	148117	

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.

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:	
Angel A. Penilla	Group Art Unit: 2859
Application No: 16/987,919	Examiner: Atty. Docket No: VOLTP018.5.C5.6
Filed: August 7, 2020	Date: Feb. 16, 2021
For: DIGITAL CAR KEYS AND SHARING OF DIGITAL CAR KEYS USING MOBILE DEVICES	Conf. No. 1086

CERTIFICATE OF E-FILING

I hereby certify that this correspondence is being transmitted to the United States Patent and Trademark Office via electronic filing with EFS-Web on **Feb. 16, 2021.**

_____/Albert Penilla/_____
Albert Penilla

INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §§1.56 AND 1.97(c)

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

Dear Sir:

The references listed in the attached PTO Form 1449, may be material to examination of the above-identified patent application. Applicant submits these references in compliance with his duty of disclosure pursuant to 37 CFR §§1.56 and 1.97. The Examiner is requested to make these references of official record in this application.

This Information Disclosure Statement (IDS) is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that these references indeed constitute prior art.

This Information Disclosure Statement is being filed before the first Office action on the merits. Accordingly, it is believed that no fees are due in connection with the filing of this Information Disclosure Statement. However, if it is determined that any fees are due, the Commissioner is hereby authorized to charge such fees to Deposit Account 50-0805 (Order No. VOLTP018.5.C5.6)

Respectfully submitted,

PENILLA IP, APC

/Albert Penilla/
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Reg. No. 39,487

1200 Pacific Avenue
Santa Cruz, CA 95062
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/987,919	08/07/2020	Angel A. Penilla	VOLTP018.5.C5.6	1086

25920 7590 07/14/2021

PENILLA IP, APC - PATENT LAW
1200 PACIFIC AVENUE
SUITE 250
SANTA CRUZ, CA 95060

EXAMINER
WU, ZHEN Y

ART UNIT	PAPER NUMBER
2685	

NOTIFICATION DATE	DELIVERY MODE
07/14/2021	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):

efrain@penillaip.com
pipdocket@penillaip.com

EA_KIA-006752
IPR2024-00981
Emerging Auto EX2024

Office Action Summary	**Application No.** 16/987,919	**Applicant(s)** Penilla et al.	
	Examiner ZHEN Y WU	**Art Unit** 2685	**AIA (FITF) 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 08/07/2020.

☐ 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) 1-20 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☑ Claim(s) 18-20 is/are allowed.

7) ☑ Claim(s) 1-9 and 11-17 is/are rejected.

8) ☑ Claim(s) 10 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 08/07/2020 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: _____.

EA_KIA-006753
IPR2024-00981
Emerging Auto EX2024

DETAILED ACTION

Notice of Pre-AIA or AIA Status

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

Claim Status

Claims 1-20 are currently pending for examination.

Priority

The present application claims the earliest effective filing date of Apr 22, 2011. However, a review of the continuity history suggests the earliest application that discloses the present subject matter was first disclosed in prior App. No.: 14/063,638, filed on Oct 25, 2013. Therefore, the present claims have the effective filing date of Oct 25, 2013.

Claim Objections

Regarding claim 6, recites the limitation “that that” in line 3. Please consider to remove one “that”.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

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.

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 negatived by the manner in which the invention was made.

The factual inquiries 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.

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.

Claims 1-9 and 11-17 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Nishimoto (Pub. No.: US 2013/0179005 A1) in view of Zaid (Pub. No.: US 2011/0112969 A1).

Regarding claim 1, Nishimoto teaches **a method for sharing an electronic key (e-key) to use a vehicle with the e-key** (Abstract, authorized electronic key to operate a vehicle)**, comprising:**

sending, via a first application of a first mobile device, a message to a second mobile device to initiate providing access to the vehicle via the e-key (Fig. 11, the first smartphone 2a transmits a challenge message to the second smartphone 2b)**;**

receiving, by the first mobile device, data confirming from the second mobile device indicating receipt and creating the e-key at the second mobile device for the vehicle with a level of access that was set via the first application of the first mobile device, the data confirming receipt for the e-key being authenticated by the first mobile device (para [0069], "The communication of the usage authorization assignment information Srs uses, for example, challenge-response authentication. In the challenge-response authentication, a master device (in this case, the smartphone 2a) transmits a challenge code to a communication peer device (in this case, the smartphone 2b), receives a response code corresponding to the challenge code from the communication peer device, and determines whether or not the response code is correct." and para [0070] "The usage authorization assignment information Srs includes the user ID,

user password, unique terminal information of the first smartphone 2a, usage authorization information, and usage authorization restriction information.". The first smartphone receives a response code or acknowledgment from the second smartphone in response to the transmission of the authorization message Srs and the second smartphone creates authorization key based on the received authorization message Srs.)**; and**

sending, by the first mobile device, verification of the e-key for use via the second mobile device (Fig. 11, para [0070], the first smartphone transmits vehicle usage permission information to the second smartphone)**, the e-key being registered with a server to enable activation of the e-key on the second mobile device, wherein a second application of the second mobile device provides a user interface for access of the e-key for starting the vehicle** (Fig. 12, para [0071]-[0072], the usage permission information is registered by the server to authorize the second smartphone to operate the vehicle)**.**

Nishimoto teaches the second smartphone is authorized to start the vehicle engine but fails to teach **unlocking the vehicle.**

However, in the same field of vehicle control system, Zaid teaches the smartphone is authorized to open/close vehicle door and to start vehicle engine. See para [0068], "In various embodiments, providing vehicle access includes opening the vehicle door, allowing the start of vehicle

engine, and/or allowing actuation of various other vehicle functions.".

Therefore, it would have been obvious to a person having ordinary skill in the art before the effective filing date of the claimed invention of modify the Nishimoto's second smartphone with the authorization to unlock the vehicle door to allow the driver to enter into the vehicle.

Regarding claim 2, Nishimoto in the combination teaches **the method of claim 1, wherein communication for sharing the e-key uses encryption** (para [0069], a challenge-response authentication)**, the first mobile device having an administrator e-key that was previously paired, validated and activated with the vehicle and the server** (Fig. 4A, smartphone No. 1 is stored in the database as the master and valid for operation)**, wherein the administrator e-key enables said sharing of the e-key for the vehicle based on the prior validation** (Fig. 4A-4B, para [0048], "As shown in FIG. 1, the data center 4 includes a valid terminal setting unit 37, which sets one of the smartphones 2 as a valid terminal. When determining that the user ID and user password have been verified, the valid terminal setting unit 37 sets the smartphone 2 that has been verified as a valid terminal and marks the valid registration information field of the database 18.". The master smartphone is validated to share vehicle operation with another smartphone)**.**

Regarding claim 3, Nishimoto in the combination teaches **the method of claim 1, wherein an access code is generated at the first mobile device identifying the vehicle and identifying the level of access** (Fig. 11)**, wherein the first mobile device being previously validated during creation of an administrator e-key that was registered and activated responsive to communication with the server** (Figs. 2-4, the smartphone 2a was previously registered with the data center as a master unit)**.**

Regarding claim 4, Nishimoto in the combination teaches **the method of claim 3, wherein the message to provide access to the vehicle is generated by the first mobile device without involvement by the server** (Fig. 11, the authorization is generated by the first smartphone without server)**, wherein the server is subsequently used for said registering and activation of the e-key to be used by the second mobile device** (Fig. 12, the second smartphone 2b uses the received authorization information to register and to activate vehicle control)**.**

Regarding claim 5, Nishimoto in the combination teaches **the method of claim 1, wherein the e-key is used to access the vehicle using wireless communication that includes one of WiFi communication, or Bluetooth communication, or near field communication (NFC), or a cellular**

communication, or radio communication (Fig. 1 and para [0027], radio communication. Smartphone uses cellular communication)**.**

Regarding claim 6, recites a method that is similar to the method of claim 1. Therefore, it is rejected for the same reasons.

Regarding claim 7, Nishimoto in the combination teaches **the method of claim 6, wherein the authentication for the vehicle includes encryption data for the vehicle, the encryption data for the vehicle is provided by the first mobile device, the first mobile device being paired with the vehicle with an administrator e-key, and wherein the access code is generated at the first mobile device, the first mobile device being paired with the vehicle with an administrator e-key** (Abstract "A key registration unit registers an encryption key, which is provided from the server, to the first portable electronic device. An access authorization unit uses the encryption key, which is registered in the first portable electronic device, to grant access authorization for accessing the server to a second portable electronic device so that the second portable electronic device functions as the electronic key authorized to operate the vehicle.")**.**

Regarding claim 8, Nishimoto in the combination teaches **the method of**

claim 6, wherein the message to provide access to the vehicle is generated by the first mobile device without server involvement by the server, and the server is used for said registering and activation of the e-key to be used by the second mobile device (Fig. 10, Fig. 11, the first smartphone generates the authorization message with its own access authorization granting unit 24 which is without the server involvement)**.**

Regarding claim 9, Nishimoto in the combination teaches **the method of claim 6, further comprising,**

accessing an application on the first mobile device to select sharing of the e-key and identification of a recipient of the e-key, the recipient associated with the second mobile device, wherein the first mobile device is paired with the vehicle with an administrator e-key before sending the message to share the e-key with the second mobile device (Abstract, Fig. 1-12, the first smartphone registers with the server as a master unit before allowing the first smartphone to authorize the second smartphone to access the vehicle)**.**

Regarding claim 11, recites a claim limitation that is similar to the last clause of claim 1. Therefore, it is rejected from the same reasons.

Regarding claim 12, recites a claim limitation that is similar to the last clause of claim 5. Therefore, it is rejected from the same reasons.

Regarding claim 13, Nishimoto in the combination teaches **the method of claim 6, wherein the first and second mobile devices are one of a smartphone, or a smartwatch, or smart glasses, or a computer, or a digital assistant** (Fig. 10, smartphones 2a, 2b)**.**

Regarding claim 14, Nishimoto in the combination teaches **the method of claim 6, wherein the message sent by the first mobile device is via a message notification, or an email address, or a phone number, or a text number, or a message address, or a notification, or a link, or a web address, or a social network address, or a combination of two or more thereof** (Fig. 11, authorization message/notification)**.**

Regarding claim 15, Nishimoto in the combination teaches **the method of claim 6, wherein the level of access defines a privilege of use for the vehicle as set via the first mobile device for use by a user of the second mobile device, the privileges define one of a geographic restriction for where the vehicle is allowed to be used, or a speed restriction, or an occupancy restriction, or a time frame of use restriction, or a time of day use restriction, or a time expiration of use restriction, or a combination of two or more thereof** (para [0044], "The access restriction unit 27 generates usage restriction information (additional information)

notified to the second smartphone 2b, such as the access authorization period, the authorized number of accesses, and function restrictions.”).

Regarding claim 16, Nishimoto in the combination teaches **the method of claim 6, further comprising, sending, by the first mobile device, revocation message to disable the e-key shared with the second mobile device** (para [0049], “As shown in FIG. 1, the controller 6 of the first smartphone 2a includes an access authorization cancellation unit 38 so that the first smartphone 2a can forcibly cancel the access authorization granted to the second smartphone 2b. For example, when the user performs an access authorization cancellation operation with the first smartphone 2a, the access authorization cancellation unit 38 transmits an access authorization cancellation request signal Sat to the data center 4.”).

Regarding claim 17, Nishimoto in the combination teaches **the method of claim 6, further comprising:**

binding the e-key to the second mobile device once the e-key is registered and activated for use via the second mobile device, and wherein e-key of the second mobile device when activated, enables access of the

vehicle communication transmission between the second mobile device and the vehicle (para [0073], "To reduce the amount of transmission data, the second or subsequent login operation request signal Sds only includes the user ID, user password, and unique terminal information of the second smartphone 2b. When the data center 4 (user verification unit 20) verifies the user (second smartphone 2b) based on the information in the operation request signal Sds, the data center 4 transmits an engine start permission notification for the vehicle 1 to the network center 5. Then, the network center 5 transmits the engine start permission signal Sgn to the vehicle 1.")**.**

Nishimoto teaches the second smartphone communicates with the vehicle via communication network via either NFC unit 42 or communication 31 but fail to expressly teach the network is **a near field communication (NFC) transmission.**

However, it would have been obvious to a person having ordinary skill in the art before the effective filing date of the claimed invention of modify the Nishimoto's second smartphone to communicate with the vehicle indirectly via any one of the smartphone's internal communication units, such as the NFC unit 42, since it is obvious to try any one of the two communication unit to communicate with vehicle.

Allowable Subject Matter

Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 18-20 are allowed.

Conclusion

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

Peirce (Pub. No.: US 2014/0270172 A1) teaches a secure command path between a vehicle and a personal wireless device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ZHEN Y WU whose telephone number is (571)272-5711. The examiner can normally be reached on Monday-Friday, 10AM-6PM, EST.

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, Hai Phan can be reached on 5712726338. 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 https://ppair-my.uspto.gov/pair/PrivatePair. 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.

/ZHEN Y WU/
Primary Examiner, Art Unit 2685

Notice of References Cited	Application/Control No. 16/987,919	Applicant(s)/Patent Under Reexamination Penilla et al.	
	Examiner ZHEN Y WU	Art Unit 2685	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-20130179005-A1	07-2013	NISHIMOTO; Keigo	B60R25/24	701/2
*	B	US-20110112969-A1	05-2011	Zaid; Sam	G07C9/00571	705/50
*	C	US-20140270172-A1	09-2014	Peirce; Kenneth L.	H04L9/083	380/270
	D					
	E					
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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.

EA_KIA-006767
IPR2024-00981
Emerging Auto EX2024

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/987,919	Penilla et al.
	Examiner	Art Unit
	ZHEN Y WU	2685

CPC - Searched*		
Symbol	**Date**	**Examiner**
B60L 53/65,53/68, 53/665 , 53/80 ,2250/20, 2270/36 , 2240/547 , 2240/70 , 2250/10 , 2250/16	07/09/2021	ZYW
G07C 2009/00412 , 2009/00769	07/09/2021	ZYW
Y02T 10/70, 10/7072, 10/72, 90/12 , 90/14 , 90/16, 90/167	07/09/2021	ZYW
H04W 4/44	07/09/2021	ZYW
G07C 9/20	07/09/2021	ZYW
B60R 25/2018 , 25/241	07/09/2021	ZYW
G06Q 10/02, 10/20, 20/18 , 20/32 , 20/3829 , 30/00 , 30/0643,30/0645 , 50/06	07/09/2021	ZYW
G07C 9/00309 , 9/00571	07/09/2021	ZYW
G07F 15/005	07/09/2021	ZYW
H04L 67/10	07/09/2021	ZYW

CPC Combination Sets - Searched*		
Symbol	**Date**	**Examiner**

US Classification - Searched*			
Class	**Subclass**	**Date**	**Examiner**
340	5.61	07/09/2021	ZYW

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

/ZHEN Y WU/ Primary Examiner, Art Unit 2685	

EA_KIA-006768
IPR2024-00981
Emerging Auto EX2024

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/987,919	Penilla et al.
	Examiner	Art Unit
	ZHEN Y WU	2685

Search Notes		
Search Notes	**Date**	**Examiner**
All CPC and USPC classifications listed were searched in combination with keywords in EAST	07/09/2021	ZYW
Inventor, assignee and double patenting searches	07/09/2021	ZYW
NPL searches (eg. Google, Google scholar, IP.com)	07/09/2021	ZYW

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

/ZHEN Y WU/ Primary Examiner, Art Unit 2685	

EA_KIA-006769
IPR2024-00981
Emerging Auto EX2024

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/987,919	Penilla et al.
	Examiner	Art Unit
	ZHEN Y WU	2685

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

CLAIMS

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	07/09/2021								
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	18	=								
	19	=								
	20	=								

EA_KIA-006770

IPR2024-00981
Emerging Auto EX2024

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
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			JPO; DERWENT; IBM_TDB			
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		US-20100161481-$ | US-20100161482-$ | US-20100169008-$ | US-20100198508-$ | US-20100198513-$ | US-20100211340-$ | US-20100211643-$ | US-20100222939-$ | US-20100268426-$ | US-20100280956-$ | US-20100304349-$ | US-20110032110-$ | US-20110074350-$ | US-20110074351-$ | US-20110077809-$ | US-20110106329-$ | US-20110112969-$ | US-20110130885-$ | US-20110187521-$ | US-20110191265-$ | US-20110193522-$ | US-20110202218-$ | US-20110246252-$ | US-20110279083-$ | US-20110309929-$ | US-20120233077-$ | US-20120013300-$ | US-20120019204-$ | US-20120025765-$ | US-20120028680-$ | US-20120041624-$ | US-20120053754-$ | US-20120074903-$ | US-20120105197-$ | US-20120123670-$ | US-20120136743-$ | US-20120136802-$ | US-20120158244-$ | US-20120179323-$ | US-20120218128-$ | US-20120229056-$ | US-20120229085-$ | US-20120232965-$ | US-20120262002-$ | US-20120268068-$ | US-20120268076-$ | US-20120268242-$ | US-20120280654-$ | US-20120296512-$ | US-20120303397-$ | US-20120306445-$ | US-20120310713-$ | US-20120316671-$ | US-20130002876-$ | US-20130020139-$ | US-20130021162-$ | US-20130037339-$ | US-20130099892-$ | US-20130103236-$ | US-20130110296-$ | US-20130110632-$ | US-20130110653-$ | US-20130127247-$ | US-20130135093-$ | US-20130144520-$ | US-20130145065-$ | US-20130179057-$ | US-20130204466-$ | US-20130241720-$ | US-20130253746-$ | US-20130280018-$ | US-20130300554-$ | US-20130317693-$ | US-20130317694-$ | US-20130328387-$ | US-20130338820-$ | US-20130342363-$ | US-20140002015-$ | US-20140019280-$ | US-			

		20140021908-$ | US-20140042968-$).DID.				
S3	188	(US-20140047107-$ | US-20140066049-$ | US-20140089016-$ | US-20140106726-$ | US-20140118107-$ | US-20140120829-$ | US-20140125355-$ | US-20140142783-$ | US-20140163771-$ | US-20140163774-$ | US-20140164559-$ | US-20140172192-$ | US-20140172265-$ | US-20140172727-$ | US-20140179353-$ | US-20140200742-$ | US-20140203077-$ | US-20140207333-$ | US-20140214261-$ | US-20140214321-$ | US-20140218189-$ | US-20140232331-$ | US-20140236414-$ | US-20140236463-$ | US-20140253018-$ | US-20140277936-$ | US-20140278089-$ | US-20140300739-$ | US-3690397-$ | US-3799063-$ | US-3867682-$ | US-4052655-$ | US-4102273-$ | US-4132174-$ | US-4162445-$ | US-4309644-$ | US-4347472-$ | US-4383210-$ | US-4389608-$ | US-4405891-$ | US-4433278-$ | US-4450400-$ | US-4532418-$ | US-4789047-$ | US-4815840-$ | US-5049802-$ | US-5121112-$ | US-5132666-$ | US-5184058-$ | US-5202617-$ | US-5297664-$ | US-5306999-$ | US-5315227-$ | US-5327066-$ | US-5343970-$ | US-5422624-$ | US-5434781-$ | US-5441122-$ | US-5449995-$ | US-5487002-$ | US-5488283-$ | US-5492190-$ | US-5548200-$ | US-5549443-$ | US-5555502-$ | US-5563491-$ | US-5585205-$ | US-5594318-$ | US-5595271-$ | US-5596258-$ | US-5612606-$ | US-5627752-$ | US-5636145-$ | US-5642270-$ | US-5666102-$ | US-5691695-$ | US-5694019-$ | US-5701706-$ | US-5736833-$ | US-5760569-$ | US-5778326-$ | US-5790976-$ | US-5892598-$ | US-5916285-$ | US-5974136-$ | US-5998963-$ | US-6014597-$ | US-6049745-$ | US-6067008-$ | US-6081205-$ | US-6085131-$ | US-	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/02 23:49

		6151539-$ | US-6175789-$ | US-6225776-$ | US-6234932-$ | US-6236333-$ | US-6252380-$ | US-6301531-$ | US-6307349-$ | US-6330497-$ | US-6330499-$ | US-6370475-$ | US-6373380-$ | US-6416209-$ | US-6434465-$ | US-6456041-$ | US-6466658-$ | US-6480767-$ | US-6487477-$ | US-6498454-$ | US-6511192-$ | US-6586866-$ | US-6614204-$ | US-6629024-$ | US-6727809-$ | US-6741036-$ | US-6765495-$ | US-6789733-$ | US-6794849-$ | US-6850898-$ | US-6915869-$ | US-6922629-$ | US-6937140-$ | US-6940254-$ | US-7013205-$ | US-7039389-$ | US-7084781-$ | US-7201384-$ | US-7269416-$ | US-7289611-$ | US-7376497-$ | US-7379541-$ | US-7402978-$ | US-7532965-$ | US-7565396-$ | US-7630802-$ | US-7650210-$ | US-7674536-$ | US-7683771-$ | US-7693609-$ | US-7698078-$ | US-7740092-$ | US-7751945-$ | US-7778746-$ | US-7796052-$ | US-7850351-$ | US-7869576-$ | US-7885893-$ | US-7949435-$ | US-7956570-$ | US-7979198-$ | US-7986126-$ | US-7991665-$ | US-8006793-$ | US-8027843-$ | US-8036788-$ | US-8054048-$ | US-8072318-$ | US-8103391-$ | US-8256553-$ | US-8262268-$ | US-8265816-$ | US-8266075-$ | US-8294420-$ | US-8333492-$ | US-8336664-$ | US-8350526-$ | US-8366371-$ | US-8392065-$ | US-8405347-$ | US-8482255-$ | US-8483775-$ | US-8483907-$ | US-8490005-$ | US-8508188-$ | US-8521599-$ | US-8527135-$ | US-8527146-$ | US-8552686-$ | US-8589019-$ | US-8624719-$ | US-8630741-$ | US-8635091-$ | US-8643329-$ | US-8660734-$ | US-8686864-$ | US-8694328-$ | US-8706394-$).DID.				
S4	13	(US-8713121-$ | US-8717170-$ | US-8725551-$ | US-8751065-$ | US-8751271-$ | US-8760432-$ | US-	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/02 23:49

		8799037-$ | US-8816845-$ | US-8818622-$ | US-8818725-$ | US-8819414-$ | US-8825222-$ | US-8836281-$).DID.				
S5	357	S2 or S3 or S4	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/02 23:49
S6	4	S5 and (vehicle near2 sharing)	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/02 23:50
S7	43	S5 and (vehicle or car) near3 (sharing or rental)	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/02 23:51
S8	1	"15824662"	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 10:49
S9	283	(Emerging near2 Automotive) (Penilla near2 Angel) (Penilla near2 Albert)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/01/03 13:43
S11	5	S9 and (unique code unlock$3 vehicle key).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/03 13:44
S12	11	"14063638"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/03 13:51
S13	4	S9 and (unique code unlock$3 vehicle key decrypt$3).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/03 14:07
S14	3	S9 and (unique code unlock$3 vehicle key decrypt$3 period).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	AND	ON	2019/01/03 14:10

			DERWENT; IBM_TDB			
S15	3	S9 and (unique code vehicle key decrypt$3 period).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/03 14:15
S16	2	S9 and (unique code vehicle key screen server).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/03 14:17
S17	2	"15607418" "15344566" "15180306" "14303442" "14063638" "13842158" "14063638" "13452882"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/03 14:24
S18	102	"15607418" "15344566" "15180306" "14303442" "14063638" "13842158" "14063638" "13452882"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/01/03 14:24
S19	101	"15607418" "15344566" "15180306" "14303442" "14063638" "13842158" "14063638" "13452882"	US-PGPUB; USPAT; USOCR	OR	ON	2019/01/03 14:24
S20	50	"15607418" "15344566" "15180306" "14303442" "14063638" "13842158" "14063638" "13452882"	US-PGPUB	OR	ON	2019/01/03 14:24
S21	7	S9 and (access code vehicle key screen server).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/03 14:27
S22	34	"607418".ap. "344566".ap. "180306".ap. "303442".ap. "063638".ap. "842158".ap. "063638".ap. "452882".ap.	US-PGPUB	OR	ON	2019/01/03 14:47

S23	86	"607418".ap. "344566".ap. "180306".ap. "303442".ap. "063638".ap. "842158".ap. "063638".ap. "452882".ap.	US-PGPUB; USPAT; USOCR	OR	ON	2019/01/03 14:47
S24	0	S23 and (vehicle unlock$3 server mobile access code key screen).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 14:49
S25	3	S23 and (vehicle unlock$3 server access code key screen).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 14:51
S26	3	S23 and (vehicle unlock$3 server access code key screen computer).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 14:52
S27	8	"9663067".pn. "9499129".pn. "9365188".pn. "9189900".pn. "9229905".pn. "9189990".pn. "9123035".pn. "20170267214".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2019/01/03 15:06
S28	2	S27 and (vehicle unlock$3 server access code key screen computer).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 15:08
S29	2	S27 and (vehicle unlock$3 server access code key screen start$3).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 15:09
S30	1	S27 and (vehicle account access code encrypt$3 decrypt$3 key period).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 15:19
S31	1	"20170267214".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2019/01/03 15:21
S32	2	S27 and (vehicle account access code decrypt$3 key period).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 15:23
S33	2	S27 and (vehicle account (encrypt$3 or decrypt$3) access code period server).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 15:27
S34	0	S27 and (brand).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 15:28
S35	0	S9 and (vehicle access code brand).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 15:28
S36	2	"9499129".pn. "9189900".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2019/01/03 15:34
S37	2	S36 and location	US-PGPUB; USPAT; USOCR	OR	ON	2019/01/03 15:48

S38	0	S36 and (location).clm.	US-PGPUB; USPAT; USOCR	OR	ON	2019/01/03 15:49
S39	0	S36 and (another).clm.	US-PGPUB; USPAT; USOCR	OR	ON	2019/01/03 15:50
S40	1	S36 and (owner).clm.	US-PGPUB; USPAT; USOCR	OR	ON	2019/01/03 15:50
S41	0	S36 and (session).clm.	US-PGPUB; USPAT; USOCR	OR	ON	2019/01/03 15:51
S42	2	"9633067".pn. or "20170267214".pn.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 15:54
S43	1	S42 and (notification).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 15:54
S44	1	S42 and (location or geolocation).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 15:57
S45	0	S42 and (area).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 15:57
S46	0	S42 and ((door or truck) operation).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 15:58
S47	0	S42 and (another).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 15:58
S48	0	S42 and (notification intended).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 15:58
S49	0	S42 and (confirm).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 15:59
S50	0	S42 and (receipt).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 15:59
S51	0	S42 and (wireless).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 15:59
S52	0	S42 and (brand).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 16:00

S53	0	S42 and (camera).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 16:00
S54	0	S42 and (video).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 16:00
S55	1	"9365188".pn.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 16:05
S56	3	S27 and (vehicle unlock$3 server access key screen start$3).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 16:07
S57	3	"9229905".pn. "9189990".pn. "9123035".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2019/01/03 16:10
S58	11	"14063638"	US-PGPUB; USPAT; USOCR	OR	ON	2019/01/03 16:11
S59	13	"063638".ap.	US-PGPUB; USPAT; USOCR	OR	ON	2019/01/03 16:11
S60	7	"9663067".pn. "9499129".pn. "9365188".pn. "9189900".pn. "9229905".pn. "9189900".pn. "9123035".pn. "20170267214".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2019/01/03 16:11
S61	3	"9229905".pn. "9189900".pn. "9123035".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2019/01/03 16:12
S62	2	S60 and (vehicle unlock$3 server access code key screen start$3).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 16:13
S63	0	"2004022287".pn.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 16:19
S64	1	"20040222877".pn.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 16:19
S65	1	"20100037057".pn.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 16:19
S66	1	"20030160692".pn.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 16:21
S67	16	(car or vehicle) near2 (rental or sharing) with remote near10 unlock	US-PGPUB; USPAT; USOCR; FPRS; EPO;	AND	ON	2019/01/03 16:32

			JPO; DERWENT; IBM_TDB			
S68	3	"20110060480".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/03 16:36
S69	784	car near2 rental with account	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/04 13:22
S70	6	(US-20180134254-$ or US-20110112969-$ or US-20140172727-$ or US-20100037057-$ or US-20110060480-$).did. or (US-6850898-$).did.	US-PGPUB; USPAT	AND	ON	2019/01/04 13:36
S71	4	S70 and notification	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/04 13:36
S72	3	S70 and notif$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/04 13:37
S73	156	(US-0233077-$ | US-20020064258-$ | US-20020085043-$ | US-20020133273-$ | US-20030137277-$ | US-20030153278-$ | US-20030205619-$ | US-20030234325-$ | US-20040046506-$ | US-20040064235-$ | US-20040092253-$ | US-20040093155-$ | US-20040265671-$ | US-20050021190-$ | US-20050044245-$ | US-20050231119-$ | US-20060125620-$ | US-20060182241-$ | US-20060282381-$ | US-20060287783-$ | US-20070068714-$ | US-	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/04 13:41

		20070126395-$ | US-20070282495-$ | US-20080039979-$ | US-20080039989-$ | US-20080040129-$ | US-20080040223-$ | US-20080040295-$ | US-20080052145-$ | US-20080086411-$ | US-20080097904-$ | US-20080155008-$ | US-20080180027-$ | US-20080203973-$ | US-20080228613-$ | US-20080281663-$ | US-20080294283-$ | US-20080312782-$ | US-20090011639-$ | US-20090021213-$ | US-20090021385-$ | US-20090030712-$ | US-20090043519-$ | US-20090058355-$ | US-20090066287-$ | US-20090076913-$ | US-20090082957-$ | US-20090091291-$ | US-20090092864-$ | US-20090144001-$ | US-20090157289-$ | US-20090164473-$ | US-20090174365-$ | US-20090177580-$ | US-20090210357-$ | US-20090287578-$ | US-20090312903-$ | US-20090313032-$ | US-20090313033-$ | US-20090313034-$ | US-20090313098-$ | US-20090313104-$ | US-20090313174-$ | US-20100013434-$ | US-20100017045-$ | US-20100017249-$ | US-20100049396-$ | US-20100049533-$ | US-20100049610-$ | US-20100049639-$ | US-20100049737-$ | US-20100057306-$ | US-20100112843-$ | US-20100141206-$ | US-20100161481-$ | US-20100161482-$ | US-20100169008-$ | US-20100198508-$ | US-20100198513-$ | US-20100211340-$ | US-20100211643-$ | US-20100222939-$ | US-20100268426-$ | US-20100280956-$ | US-20100304349-$ | US-20110032110-$ | US-20110074350-$ | US-20110074351-$ | US-20110077809-$ | US-20110106329-$ | US-20110112969-$ | US-20110130885-$ | US-20110187521-$ | US-20110191265-$ | US-20110193522-$ | US-20110202218-$ | US-20110246252-$ | US-20110279083-$ | US-20110309929-$ | US-20120233077-$ | US-20120013300-$ |			

		US-20120019204-$ | US-20120025765-$ | US-20120028680-$ | US-20120041624-$ | US-20120053754-$ | US-20120074903-$ | US-20120105197-$ | US-20120123670-$ | US-20120136743-$ | US-20120136802-$ | US-20120158244-$ | US-20120179323-$ | US-20120218128-$ | US-20120229056-$ | US-20120229085-$ | US-20120232965-$ | US-20120262002-$ | US-20120268068-$ | US-20120268076-$ | US-20120268242-$ | US-20120280654-$ | US-20120296512-$ | US-20120303397-$ | US-20120306445-$ | US-20120310713-$ | US-20120316671-$ | US-20130002876-$ | US-20130020139-$ | US-20130021162-$ | US-20130037339-$ | US-20130099892-$ | US-20130103236-$ | US-20130110296-$ | US-20130110632-$ | US-20130110653-$ | US-20130127247-$ | US-20130135093-$ | US-20130144520-$ | US-20130145065-$ | US-20130179057-$ | US-20130204466-$ | US-20130241720-$ | US-20130253746-$ | US-20130280018-$ | US-20130300554-$ | US-20130317693-$ | US-20130317694-$ | US-20130328387-$ | US-20130338820-$ | US-20130342363-$ | US-20140002015-$ | US-20140019280-$ | US-20140021908-$ | US-20140042968-$).DID.				
S74	188	(US-20140047107-$ | US-20140066049-$ | US-20140089016-$ | US-20140106726-$ | US-20140118107-$ | US-20140120829-$ | US-20140125355-$ | US-20140142783-$ | US-20140163771-$ | US-20140163774-$ | US-20140164559-$ | US-20140172192-$ | US-20140172265-$ | US-20140172727-$ | US-20140179353-$ | US-20140200742-$ | US-20140203077-$ | US-20140207333-$ | US-20140214261-$ | US-20140214321-$ | US-20140218189-$ | US-20140232331-$ | US-	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/04 13:41

		20140236414-$ | US-20140236463-$ | US-20140253018-$ | US-20140277936-$ | US-20140278089-$ | US-20140300739-$ | US-3690397-$ | US-3799063-$ | US-3867682-$ | US-4052655-$ | US-4102273-$ | US-4132174-$ | US-4162445-$ | US-4309644-$ | US-4347472-$ | US-4383210-$ | US-4389608-$ | US-4405891-$ | US-4433278-$ | US-4450400-$ | US-4532418-$ | US-4789047-$ | US-4815840-$ | US-5049802-$ | US-5121112-$ | US-5132666-$ | US-5184058-$ | US-5202617-$ | US-5297664-$ | US-5306999-$ | US-5315227-$ | US-5327066-$ | US-5343970-$ | US-5422624-$ | US-5434781-$ | US-5441122-$ | US-5449995-$ | US-5487002-$ | US-5488283-$ | US-5492190-$ | US-5548200-$ | US-5549443-$ | US-5555502-$ | US-5563491-$ | US-5585205-$ | US-5594318-$ | US-5595271-$ | US-5596258-$ | US-5612606-$ | US-5627752-$ | US-5636145-$ | US-5642270-$ | US-5666102-$ | US-5691695-$ | US-5694019-$ | US-5701706-$ | US-5736833-$ | US-5760569-$ | US-5778326-$ | US-5790976-$ | US-5892598-$ | US-5916285-$ | US-5974136-$ | US-5998963-$ | US-6014597-$ | US-6049745-$ | US-6067008-$ | US-6081205-$ | US-6085131-$ | US-6151539-$ | US-6175789-$ | US-6225776-$ | US-6234932-$ | US-6236333-$ | US-6252380-$ | US-6301531-$ | US-6307349-$ | US-6330497-$ | US-6330499-$ | US-6370475-$ | US-6373380-$ | US-6416209-$ | US-6434465-$ | US-6456041-$ | US-6466658-$ | US-6480767-$ | US-6487477-$ | US-6498454-$ | US-6511192-$ | US-6586866-$ | US-6614204-$ | US-6629024-$ | US-6727809-$ | US-6741036-$ | US-6765495-$ | US-6789733-$ | US-6794849-$ | US-6850898-$ | US-6915869-$ | US-6922629-$ | US-6937140-$ | US-6940254-$ | US-7013205-$ | US-7039389-$ | US-7084781-$ | US-			

		7201384-$ | US-7269416-$ | US-7289611-$ | US-7376497-$ | US-7379541-$ | US-7402978-$ | US-7532965-$ | US-7565396-$ | US-7630802-$ | US-7650210-$ | US-7674536-$ | US-7683771-$ | US-7693609-$ | US-7698078-$ | US-7740092-$ | US-7751945-$ | US-7778746-$ | US-7796052-$ | US-7850351-$ | US-7869576-$ | US-7885893-$ | US-7949435-$ | US-7956570-$ | US-7979198-$ | US-7986126-$ | US-7991665-$ | US-8006793-$ | US-8027843-$ | US-8036788-$ | US-8054048-$ | US-8072318-$ | US-8103391-$ | US-8256553-$ | US-8262268-$ | US-8265816-$ | US-8266075-$ | US-8294420-$ | US-8333492-$ | US-8336664-$ | US-8350526-$ | US-8366371-$ | US-8392065-$ | US-8405347-$ | US-8482255-$ | US-8483775-$ | US-8483907-$ | US-8490005-$ | US-8508188-$ | US-8521599-$ | US-8527135-$ | US-8527146-$ | US-8552686-$ | US-8589019-$ | US-8624719-$ | US-8630741-$ | US-8635091-$ | US-8643329-$ | US-8660734-$ | US-8686864-$ | US-8694328-$ | US-8706394-$).DID.				
S75	13	(US-8713121-$ | US-8717170-$ | US-8725551-$ | US-8751065-$ | US-8751271-$ | US-8760432-$ | US-8799037-$ | US-8816845-$ | US-8818622-$ | US-8818725-$ | US-8819414-$ | US-8825222-$ | US-8836281-$).DID.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/04 13:41
S76	357	S73 or S74 or S75	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/04 13:41
S77	87	S76 and notification	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/04 13:41
S78	1	S76 and notification with unlock$3	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/04 13:41
S79	0	report with vehicel with usage with user with account	US-PGPUB; USPAT; USOCR; FPRS; EPO;	AND	ON	2019/01/04 14:02

			JPO; DERWENT; IBM_TDB			
S80	1	report with vehicle with usage with user with account	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/04 14:02
S81	13	(car or vehicle) near5 (rental or sharing) with report with usage	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/04 14:03
S82	6	(car or vehicle) near5 (rental or sharing) same report with usage with user	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/04 14:06
S83	362	vehicle with usage with monitoring and unlock$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/04 14:07
S84	132	vehicle with usage with monitoring and unlock$3 and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/04 14:08
S85	5	monitor$23 with renter with activit$3 and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/04 14:13
S86	1,696	monitor$23 with vehicle with activit$3 and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	AND	ON	2019/01/04 14:13

			DERWENT; IBM_TDB			
S87	154	S76 and account	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/04 14:14
S88	154	S76 and account	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/04 14:14
S89	4	S76 and account with (car or vehicle) near5 (rental or sharing)	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/04 14:15
S90	2	(car or vehicle) near5 (rental or sharing) with notif$3 with unlock	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/04 14:17
S91	61	notify with vehicle with door with unlock$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/04 14:39
S92	27	notify with vehicle with door with unlock$3 and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/04 14:39
S93	107	vehicle near5 (activit$3) near5 log and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/04 14:43
S94	51	vehicle near5 (activit$3) near5 log and door and @ad<"20110422"	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/04 14:44
S95	12	notif$3 with vehicle with door near2 unlocked and @ad<"20110422"	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/04 14:48
S96	542,442	340/005.610 B60R25/241 H04W4/44 B60L11/1816 B60L11/1822 B60L11/1844 B60L11/1846	US-PGPUB; USPAT; USOCR;	OR	ON	2019/01/04 17:08

		B60L11/1848 B60L11/1861 B60R25/2018 B60S5/06 G06Q10/02 G06Q10/20 G06Q20/18 G06Q20/32 G06Q20/3829 G06Q30/00 G06Q30/0643 G06Q30/0645 G06Q50/06 G07C9/00007 G07C9/00309 G07C9/00571 G07F15/005 H04L67/10 H04W4/046 B60L11/1824 B60L2230/10 B60L2230/40 B60L2240/547 B60L2240/70 B60L2250/10 B60L2250/16 B60L2250/20 B60L2270/36 G07C2009/00412 G07C2009/00769 Y02T10/7005 Y02T10/7044 Y02T10/705 Y02T10/7072 Y02T10/7088 Y02T10/7291 Y02T90/121 Y02T90/124 Y02T90/128 Y02T90/14 Y02T90/16 Y02T90/163 Y02T90/169 Y04S30/14	FPRS; EPO; JPO; DERWENT; IBM_TDB			
S97	2,938	S96 and (vehicle or car) near3 (sharing or rental)	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/04 17:09
S98	959	S96 and (vehicle or car) near3 (sharing or rental) and @ad<"20110422"	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/04 17:09
S99	58	S96 and (vehicle or car) near3 (sharing or rental) with access and @ad<"20110422"	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/04 17:10
S100	9	"9663067".pn. or "15607418"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/16 17:59
S101	7	"9663067".pn. or "15607418"	US-PGPUB; USPAT	AND	ON	2019/05/16 17:59
S102	1	"15854241"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/16 18:18
S103	1,144	(("20140201266") or ("9253251") or ("20140201213") or ("20120106801") or ("8781169") or ("20130117078") or ("8831970") or ("10126740") or ("20160342156") or ("20140201064") or ("9406086") or ("8346217") or	US-PGPUB; USPAT; USOCR	OR	OFF	2019/05/16 18:23

		("20080014917") or ("8489598") or ("8160304") or ("8447067") or ("20110019001") or ("20120214442") or ("20130048720") or ("9129230") or ("8457449") or ("20100293106") or ("20080019569") or ("20090286572") or ("8073565") or ("7536034") or ("8671143") or ("9100793") or ("20160078281") or ("20100241595") or ("20130218931") or ("20100045816") or ("20160037303") or ("8489669") or ("8538064") or ("20100131584") or ("20180032535") or ("8930233") or ("20090031006") or ("20120237908") or ("8060389") or ("20140066100") or ("8984059") or ("10032066") or ("8380630") or ("8520900") or ("7760905") or ("20110066658") or ("20070192872") or ("7174031") or ("20060022048") or ("20070250920") or ("20070276841") or ("9959694") or ("20070276928") or ("20120270567") or ("7792325") or ("20140073357") or ("20070274561") or ("7552467") or ("20090259588") or ("20110026777") or ("20050213790") or ("20130159021") or ("20130263227") or ("20180247483") or ("7406214") or ("9225701") or ("8081817") or ("8600895") or ("6947571") or ("9955352") or ("20080306872") or ("7805377") or ("7587368") or ("9124650") or ("20110225417") or ("20160066189") or ("20020010679") or ("20090287837") or ("8615581") or ("20140222684") or ("20180206124") or ("8498941") or ("7596260") or ("20020174010") or ("20160210602") or ("20110286638") or ("8401233") or ("20130183924") or ("8624727") or ("20050070276") or ("8094647") or ("20120069131") or ("8194646") or ("5867494") or ("5999525") or ("7869425") or ("20080095339") or ("20090109959") or ("8856322") or ("9589266") or ("9386447") or ("6909708") or ("20170200162") or ("20020064149") or ("6754181") or ("9183572") or ("20190080325") or ("10169760") or ("7120928") or ("8612582") or ("20160086108") or ("7145898") or ("7292723") or				

		("9954961") or ("20040012613") or ("20180115620") or ("20020194502") or ("7729532") or ("8788655") or ("20120253852") or ("9361606") or ("20110145049") or ("8745213") or ("20160283923") or ("6731625") or ("6335927") or ("8401522") or ("20160086166") or ("8521857") or ("9344522") or ("20120036552")).PN. or (("20110060994") or ("9185526") or ("20090299857") or ("9615213") or ("8650290") or ("9373149") or ("20060239545") or ("20130144976") or ("20070070213") or ("20060239546") or ("20160140614") or ("8345963") or ("9342829") or ("8824784") or ("20090288012") or ("20120092444") or ("10002337") or ("20150371215") or ("20160309018") or ("8613052") or ("20130024371") or ("20130084847") or ("20040186813") or ("8768294") or ("9531696") or ("9871874") or ("20130215116") or ("20140196118") or ("20060248028") or ("20040190767") or ("20130040600") or ("20140113619") or ("20170359683") or ("9083581") or ("20120086549") or ("20140136414") or ("20180056179") or ("9311656") or ("20170203767") or ("20120036442") or ("20120216260") or ("20120209677") or ("20100030578") or ("20140308915") or ("20120240195") or ("20060248027") or ("20160359850") or ("20190108684") or ("20120056742") or ("20060245622") or ("20110313893") or ("20130066750") or ("20140082506") or ("20140213344") or ("9509674") or ("20140019352") or ("8629755") or ("20120124496") or ("20170070563") or ("20160071325") or ("20170054571") or ("20020013815") or ("20190109912") or ("20080006685") or ("9757644") or ("20090024943") or ("8527013") or ("10277689") or ("9398169") or ("20120123786") or ("10096161") or ("8571937") or ("20150095158") or ("20110145053") or ("8583915") or ("8825535") or ("20140222594") or ("20110252071") or ("8527549") or				

		("20140136847") or ("10102539") or ("8769297") or ("20110009107") or ("9002944") or ("20120078700") or ("20170118037") or ("8868036") or ("20130316737") or ("20140214653") or ("20050283438") or ("20170070361") or ("20080059605") or ("9760871") or ("20140333412") or ("10148774") or ("9858595") or ("8958773") or ("9922345") or ("20120036245") or ("10115087") or ("10204327") or ("10223691") or ("20140357222") or ("8510123") or ("20150234636") or ("10164985") or ("20120215648") or ("10009480") or ("20180025334") or ("20140111304") or ("20160323731") or ("20150373206") or ("20150163366") or ("8417258") or ("20180278700") or ("20090216569") or ("9996315") or ("8510137") or ("8560366") or ("20190080307") or ("8347088") or ("20110251868") or ("20160292737") or ("20140199962") or ("20020072974") or ("8256665") or ("20140337175") or ("7805338")).PN. or (("9094538") or ("20090157513") or ("8818331") or ("20050136949") or ("20100141779") or ("20110062229") or ("20060181411") or ("8645303") or ("5867495") or ("9740988") or ("9185068") or ("8826154") or ("20120036220") or ("7957991") or ("20120032945") or ("8897760") or ("20100306154") or ("20110248818") or ("8606314") or ("20050033855") or ("20120131004") or ("20060178918") or ("8311513") or ("20190121956") or ("8599277") or ("8296664") or ("7917439") or ("20100135643") or ("20120202527") or ("20120303425") or ("20040128514") or ("9106768") or ("20120036440") or ("20150256684") or ("20160294837") or ("20070061266") or ("9864958") or ("20130096966") or ("8818976") or ("9860709") or ("9288337") or ("7327258") or ("20130104251") or ("20020156704") or ("8867575") or ("7837094") or ("20170295258") or ("9542493") or ("20140199961") or ("8321791") or ("20160142871") or ("20070118426") or ("7562304") or				

		("8516377") or ("20160191715") or ("20140357221") or ("20120096490") or ("20160234341") or ("8032409") or ("8826155") or ("8126862") or ("7683940") or ("20120215701") or ("20120089410") or ("8694366") or ("20080292137") or ("20060279628") or ("20020131076") or ("7487112") or ("20030233278") or ("20120096358") or ("20110170837") or ("20090144624") or ("8429545") or ("20040260470") or ("20140162595") or ("20070173266") or ("9042876") or ("9183560") or ("20080033635") or ("20150356569") or ("20180047044") or ("20070109266") or ("20140294180") or ("6563910") or ("7628320") or ("8126960") or ("20080010365") or ("6650761") or ("6606744") or ("6609103") or ("8611919") or ("20150269617") or ("10121148") or ("10013705") or ("20100241501") or ("20030065805") or ("20120089470") or ("20080114709") or ("10104189") or ("20090119013") or ("20130144785") or ("20180278701") or ("9978023") or ("8732023") or ("9600584") or ("20120185942") or ("9954975") or ("8781442") or ("20040064351") or ("7974714") or ("7424543") or ("9824371") or ("20170255703") or ("20140365472") or ("6622124") or ("8799220") or ("20140248852") or ("9571559") or ("7716077") or ("20080109473") or ("20060253581") or ("6311214") or ("9384345") or ("7765481") or ("20050078088") or ("9112700") or ("20120259722") or ("8849821") or ("8271336") or ("20170272316") or ("20050013462")).PN. or (("20160050203") or ("20180047072") or ("20100138297") or ("20090006418") or ("20070053513") or ("20120095844") or ("9258326") or ("20060095331") or ("20070136078") or ("20110145564") or ("20130214902") or ("20130024364") or ("8260262") or ("9680803") or ("6850252") or ("20070135980") or ("20120019379") or ("20160048863") or ("8639629") or ("8666804") or				

		("20100042931") or ("20100036868") or ("9253205") or ("20030220835") or ("20110213657") or ("20140289314") or ("20120278388") or ("20110040655") or ("20100138298") or ("8566726") or ("20100036852") or ("10083439") or ("9047619") or ("20140236848") or ("9578182") or ("20130014020") or ("20120311705") or ("9886599") or ("9514424") or ("20100134275") or ("20080167896") or ("20070135979") or ("8989955") or ("20190037049") or ("20090265552") or ("7528723") or ("7130807") or ("20070106721") or ("20150278363") or ("9070101") or ("20060253580") or ("20140222610") or ("7813822") or ("20100134299") or ("20140180914") or ("20150294377") or ("9251265") or ("7124101") or ("20060253579") or ("20120136856") or ("9680941") or ("20160307191") or ("20180308052") or ("8510220") or ("10172070") or ("20040247086") or ("8438499") or ("9173009") or ("9319471") or ("8200700") or ("20170228466") or ("20110018998") or ("20080010196") or ("9391985") or ("20080010191") or ("9781212") or ("20060253583") or ("20080010215") or ("9621661") or ("20080010190") or ("20040250083") or ("20130218765") or ("20180198788") or ("20070061487") or ("9179434") or ("20020118796") or ("10264138") or ("9955332") or ("20140176796") or ("7454462") or ("10021198") or ("8768838") or ("20140237626") or ("20080010192") or ("20100157061") or ("20140052478") or ("20160117697") or ("9519911") or ("20170201850") or ("9047483") or ("20170032231") or ("20100036877") or ("20160307217") or ("9836546") or ("9201885") or ("20160087933") or ("9071931") or ("9712486") or ("9569596") or ("20060253584") or ("20140019204") or ("7107322") or ("20120136780") or ("20080306826") or ("9838479") or ("20060253582") or ("9047484") or ("7822620") or ("20080303903") or ("9477820") or ("9396479") or ("20110307403") or ("20090132813")				

		or ("8463488") or ("8190129") or ("20150006582") or ("10051018") or ("20150156608") or ("20180198692")).PN. or (("20120271712") or ("8763140") or ("8713689") or ("8543665") or ("9159066") or ("9954907") or ("20020059425") or ("20050246415") or ("8489112") or ("20170230460") or ("7925708") or ("9317849") or ("20060253578") or ("20080195456") or ("20060253458") or ("8718797") or ("20170279971") or ("7613659") or ("8583511") or ("10033725") or ("10045327") or ("20130159033") or ("8762285") or ("20100036876") or ("20150347683") or ("8489067") or ("9595043") or ("20130137464") or ("9105039") or ("9569587") or ("8976008") or ("8572173") or ("10255614") or ("8145568") or ("20090177484") or ("20080040265") or ("20120173628") or ("20150074259") or ("20180309745") or ("20090002333") or ("7263551") or ("20180357248") or ("20160217258") or ("9386124") or ("9781170") or ("20160242143") or ("6990513") or ("20160277261") or ("20120284516") or ("20160103896") or ("20160063529") or ("20110028160") or ("20160105533") or ("20170078393") or ("20170063967") or ("20140303807") or ("20120149341") or ("9070127") or ("9990625") or ("20100217837") or ("9390151") or ("9911114") or ("20190121997") or ("8467766") or ("8073769") or ("20130064527") or ("20120019361") or ("20160330200") or ("8160959") or ("8855469") or ("8855601") or ("20180124564") or ("9171298") or ("20160164859") or ("9946782") or ("10180982") or ("20060230124") or ("20130246104") or ("20190132404") or ("9811820") or ("8787936") or ("20170063968") or ("20170046230") or ("9753746") or ("20140304167") or ("20040179689") or ("20180316761") or ("20100299763") or ("9602495") or ("10171950") or ("20130237204") or ("20100306318") or ("20060129458")				

		or ("20080126145") or ("8447510") or ("20110029362") or ("20120170726") or ("20060253330") or ("9697512") or ("20140289249") or ("20160117668") or ("20140200929") or ("20170223120") or ("9330388") or ("20120246039") or ("20080200154") or ("10217102") or ("7689822") or ("9124703") or ("20120214472") or ("20160117669") or ("20150150046") or ("20150088708") or ("8995815") or ("20170344703") or ("20140012733") or ("9330389") or ("20120265677") or ("20110252101") or ("7355506") or ("10140606") or ("10269202") or ("7747523") or ("20140067691") or ("20090186596") or ("20180324555") or ("9400980") or ("8862150") or ("9330390") or ("6578068")).PN. or (("20140052640") or ("9332126") or ("9633318") or ("8281372") or ("8121945") or ("20040257208") or ("20100042846") or ("9177315") or ("20120123924") or ("9208490") or ("20080133551") or ("8666035") or ("9143484") or ("9167550") or ("20140067690") or ("6434568") or ("20110195699") or ("20160189118") or ("8659417") or ("20180053157") or ("20130013501") or ("20180198874") or ("20180198688") or ("8929857") or ("20110029359") or ("9485314") or ("20060026017") or ("20110029364") or ("20110064209") or ("20160117674") or ("20030110503") or ("10121139") or ("9886696") or ("7415424") or ("7724878") or ("9630443") or ("20110153362") or ("20170277701") or ("20080010193") or ("9471914") or ("8166124") or ("20110029370") or ("20090177745") or ("20120203853") or ("20170308926") or ("5862325") or ("20110258258") or ("8549591") or ("9119033") or ("8781923") or ("20120005079") or ("20080201386") or ("20130282490") or ("10078694") or ("20090171910") or ("9870559") or ("8907763") or ("20080010204") or ("20110191117") or ("20090158136") or ("20120101835") or ("20120116959") or ("20160119332") or ("8117261") or ("20120005081") or				

		("20120109668") or ("20120005085") or ("20120109669") or ("20120129553") or ("20120005082") or ("20120005725") or ("20110321127") or ("8248237") or ("20120101831") or ("20120109674") or ("20120005078") or ("20140316903") or ("20120109671") or ("20120005092") or ("20120109670") or ("20120005083") or ("20170155605") or ("20120101836") or ("20120005089") or ("20120005077") or ("20120101833") or ("20120005084") or ("20120116790") or ("20120005090") or ("20120005087") or ("20120005088") or ("20120005080") or ("20120101834") or ("20120005091") or ("20120011058") or ("9854050") or ("20120005086") or ("20120109667") or ("20120101832") or ("20120005726") or ("20120109672") or ("20120109673") or ("8145199") or ("20060182055") or ("20090251282") or ("20120315877") or ("20040122735") or ("20130214901") or ("8374894") or ("20160275760") or ("8774788") or ("9503539") or ("7562051") or ("20120109882") or ("9607483") or ("7577620") or ("6496850") or ("20060206246") or ("20050004978") or ("9934537") or ("20150310497") or ("20110093340") or ("20120324547") or ("20120190386") or ("20090157255") or ("9697280") or ("8825007")).PN. or (("20090253406") or ("20160110717") or ("20020055924") or ("9451447") or ("20170200333") or ("20030058277") or ("20140364108") or ("20150222759") or ("20060265489") or ("20070198432") or ("20110264768") or ("8484241") or ("7966369") or ("20160246936") or ("20170149759") or ("7379891") or ("7577619") or ("20030028404") or ("20040258275") or ("20090253408") or ("8456293") or ("9668096") or ("7386517") or ("20140304601") or ("20060018441") or ("20140052623") or ("9928379") or ("20130065555") or ("7280975") or ("10069967") or				

		("20050111047") or ("20060129691") or ("7577575") or ("6671818") or ("10032010") or ("20180314816") or ("8761821") or ("9917826") or ("8525665") or ("9654923") or ("9934636") or ("20120188064") or ("20080268823") or ("6088717") or ("20160007083") or ("20100233993") or ("10102591") or ("20170064551") or ("20060136595") or ("6636242") or ("20120196571") or ("8929874") or ("9569643") or ("20090019061") or ("20140325030") or ("20080082448") or ("10142394") or ("20140024361") or ("20070255662") or ("9100454") or ("7031945") or ("20090253410") or ("9100925") or ("20160371476") or ("20090249460") or ("10142687") or ("20120258697") or ("10135972") or ("9171321") or ("7565328") or ("7617159") or ("20180234852") or ("6550057") or ("20070255652") or ("20040190750") or ("8577543") or ("8719909") or ("20160043985") or ("20060173781") or ("20100305807") or ("20130035114") or ("20160316031") or ("20180262476") or ("20080091613") or ("8842179") or ("20110162052") or ("10231125") or ("20080200153") or ("10142836") or ("7343350") or ("20160308813") or ("20060015904") or ("8316237") or ("20120209749") or ("9667581") or ("8887177") or ("20030040957") or ("8719592") or ("10230713") or ("8930458") or ("7444392") or ("20120084285") or ("8862092") or ("8644702") or ("20080200160") or ("20170171125") or ("7562028") or ("20140038564") or ("20020055366") or ("9130930") or ("20160021083") or ("20120317202") or ("9385984") or ("8326315") or ("20170046679") or ("20070229350") or ("20090228340") or ("7986806") or ("20030009385") or ("20070244811") or ("8407220") or ("20160099963") or ("7529713") or ("8769133") or ("9668133") or ("8909248") or ("6339832") or ("20090249443") or ("20060178973") or ("20100026495") or ("20080201310")).PN. or (("7289964") or ("7958081") or ("20120105632") or			

		("20140163809") or ("20060041505") or ("20110153375") or ("9286461") or ("6640244") or ("20060270421") or ("20150065177") or ("20040122730") or ("20120011367") or ("8069168") or ("20120221382") or ("20130254314") or ("20150163632") or ("20080201305") or ("20130061055") or ("7203665") or ("20020016816") or ("20130137376") or ("20130091564") or ("20060149843") or ("9058705") or ("8682400") or ("20120011366") or ("20160073252") or ("9514584") or ("9122851") or ("6601234") or ("20170034692") or ("6539396") or ("9099152") or ("10153901") or ("7377421") or ("7711605") or ("20150058214") or ("10255419") or ("9459622") or ("9307397") or ("20100287070") or ("6842906") or ("7930411") or ("20150244721") or ("9003488") or ("6542927") or ("9203840") or ("8340989") or ("20110282697") or ("20160036588") or ("20130179949") or ("20110208736") or ("20130121527") or ("20130167196") or ("20090156170") or ("6640249") or ("7069031") or ("20120205436") or ("20120191522") or ("20110021234") or ("8467768") or ("20080159181") or ("9930522") or ("20140317112") or ("20130218614") or ("20120089835") or ("20030097331") or ("20170164204") or ("5613012") or ("20100312833") or ("8069169") or ("9749457") or ("20180191740") or ("9030521") or ("20150185034") or ("8204273") or ("20170185277") or ("20120136793") or ("20130217361") or ("8423476") or ("20080201321") or ("20160353355") or ("9003499") or ("8495020") or ("20070112762") or ("20160165416") or ("9473909") or ("20120086552") or ("20130115972") or ("6757710") or ("20140019768") or ("10037421") or ("20100280948") or ("8671021") or ("20150133113") or ("20140125753") or ("9031536") or ("9686241") or ("7978076") or ("8983497") or ("7152045") or ("20150312732") or ("7194426") or ("9699646") or ("8527406") or				

		("20140258469") or ("6697824") or ("8615216") or ("20160300054") or ("20190051082") or ("20140338006") or ("20190034921") or ("6502213") or ("9838877") or ("20110276609") or ("6571282") or ("20130133048") or ("9916481") or ("6477665") or ("20140195425") or ("20030105725") or ("20150248664") or ("20170289341") or ("6332163") or ("20110030031") or ("20120126974") or ("20080201225") or ("20040093281") or ("8805270") or ("6434628") or ("20110191248")).PN. or (("9881152") or ("20090156181") or ("20180129511") or ("8489513") or ("20120005737") or ("9565552") or ("20120226536") or ("8433658") or ("20100157989") or ("20140317693") or ("20080207137") or ("9226151") or ("9635545") or ("20050073389") or ("20140337733") or ("6477580") or ("20150195279") or ("20130030828") or ("9781148") or ("20140258055") or ("20140323142") or ("20140081871") or ("6549949") or ("20150148078") or ("9576294") or ("7848765") or ("20180219976") or ("20180198841") or ("8350700") or ("6658586") or ("20120244883") or ("20160205546") or ("8457661") or ("20130104246") or ("20130297467") or ("9805213") or ("9848114") or ("6606660") or ("20100159898") or ("20140342711") or ("6154658") or ("20110289124") or ("20110191249") or ("9232491") or ("20100190474") or ("9237427") or ("8312168") or ("20080201283") or ("20110258156") or ("20110191250") or ("9767467") or ("20140162598") or ("8730040") or ("8149113") or ("20090141939") or ("20160105792") or ("20070255653") or ("20170228665") or ("6442748") or ("20090249497") or ("9576157") or ("8971957") or ("6529948") or ("20090247122") or ("7164413") or ("20110026898") or ("8938810") or ("20130016636") or ("20120222050") or ("20160300183") or ("8750841") or ("6640238") or ("20080096594") or ("10200504") or ("6345288") or ("6289382") or ("20120303476") or				

		("20110319051") or ("8302854") or ("8831677") or ("8761353") or ("20110289123") or ("8265612") or ("20140040981") or ("8249965") or ("8271004") or ("20100135472") or ("9230374") or ("9609003") or ("20020095454") or ("20130304576") or ("20140080428") or ("20160321445") or ("20170105086") or ("10042993") or ("20120216296") or ("20130295975") or ("20170215028") or ("20030069766") or ("8932368") or ("20080082421") or ("9299077") or ("7051086")).PN.				
S105	1,131	S103 and video	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/16 18:24
S106	681	S103 and video near10 (captur$3 or record$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/16 18:24
S107	681	S103 and video near10 (captur$3 or record$3)	US-PGPUB; USPAT; USOCR	AND	ON	2019/05/16 18:24
S108	547	S103 and video near10 (captur$3 or record$3) and vehicle	US-PGPUB; USPAT; USOCR	AND	ON	2019/05/16 18:25
S109	76	S103 and video near10 (captur$3 or record$3) and vehicle with access with code	US-PGPUB; USPAT; USOCR	AND	ON	2019/05/16 18:26
S110	311	(Emerging near2 Automotive) (Penilla near2 Angel) (Penilla near2 Albert)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/05/16 18:29
S111	0	S110 and (unique code unlock$3 vehicle key video).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	AND	ON	2019/05/16 18:29

			DERWENT; IBM_TDB			
S112	0	S110 and (unique code vehicle key video).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/16 18:30
S113	2	S110 and (code vehicle key video).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/16 18:30
S114	7	(unique code unlock$3 vehicle key video).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/16 18:31
S115	0	record with while with driving	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/16 18:33
S116	444	video with vehicle with time with access	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/16 18:34
S117	0	video with (user of driver) with time with access wtih vehicle	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/16 18:35
S118	0	video with (user of driver) with time with access with vehicle and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;			

			DERWENT; IBM_TDB			
S119	0	video with (user of driver) with time with enter$3 with vehicle and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/16 18:35
S120	0	captur$3 with (user of driver) with time with enter$3 with vehicle and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/16 18:36
S121	0	(captur$3 or record$3) with (user of driver) with (access$3 or enter$3) with vehicle and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/16 18:36
S122	1,004	(captur$3 or record$3) with (user or driver) with (access$3 or enter$3) with vehicle and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/16 18:36
S123	385	(captur$3 or record$3) near10 (user or driver) near10 (access$3 or enter$3) near10 vehicle and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/16 18:37
S124	296	(captur$3 or record$3) near10 (user or driver) near10 (access$3 or enter$3) near10 vehicle and @ad<"20110422"	US-PGPUB; USPAT	AND	ON	2019/05/16 18:37
S125	152	(video) near10 (user or driver) near10 (access$3 or enter$3) near10 vehicle and @ad<"20110422"	US-PGPUB; USPAT	AND	ON	2019/05/16 18:40
S129	13	(US-20180134254-$ or US-20110112969-$ or US-20140172727-$ or US-20100037057-$ or US-20110060480-$ or US-20140019280-$ or US-20050275543-$ or US-20110015953-$ or US-20100114616-$	US-PGPUB; USPAT	AND	ON	2019/05/17 12:16

		or US-20120040635-$ or US-20060007309-$).did. or (US-6850898-$ or US-6690302-$).did.				
S130	13	S129 and display	US-PGPUB; USPAT	AND	ON	2019/05/17 12:16
S131	9	"9663067".pn. or "15607418"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/29 13:37
S132	7	"9663067".pn. or "15607418"	US-PGPUB; USPAT	AND	ON	2019/05/29 13:37
S133	6	"15607418"	US-PGPUB; USPAT	AND	ON	2019/05/29 13:38
S134	1	"15854241"	US-PGPUB; USPAT	AND	ON	2019/05/29 13:56
S136	2,007	(("20170267214") or ("20170050617") or ("9663067") or ("20160318481") or ("9499129") or ("9365188") or ("9189900") or ("20180025328") or ("9928488") or ("9139091") or ("20180211231") or ("10282708") or ("20150203125") or ("20170270490") or ("9171268") or ("20160173568") or ("10286919") or ("9818088") or ("10218771") or ("10210487") or ("20180089912") or ("10225350") or ("20160198002") or ("20160359980") or ("9426225") or ("9697503") or ("9229905") or ("20160080500") or ("9288270") or ("20150304406") or ("9215274") or ("9104537") or ("20180059913") or ("10289288") or ("20180024725") or ("9229623") or ("9372607") or ("9916071") or ("20150210287") or ("9778831") or ("10286798") or ("9423937") or ("9348492") or ("20150178034") or ("20180060742") or ("20170103327") or ("9230440") or ("10181099") or ("9536197") or ("9467515") or ("20180037193") or ("20160214535") or ("10286842") or ("10286875") or ("9809196") or ("10223134") or ("9285944") or ("20160129883") or ("9648107") or ("20180251128") or ("20140201266") or ("9253251") or ("20180111494") or ("9371007") or	US-PGPUB; USPAT; USOCR	OR	OFF	2019/05/29 14:02

		("20170140757") or ("10274948") or ("20170120906") or ("10121148") or ("8989955") or ("9697733") or ("9083581") or ("8463488") or ("20160104486") or ("9493130") or ("9386447") or ("20140201213") or ("9615213") or ("9398169") or ("20170061965") or ("20180012497") or ("9672823") or ("10071643") or ("8615581") or ("20180061415") or ("20170200449") or ("9288337") or ("20140113619") or ("9106768") or ("20160086393") or ("8867575") or ("9802500") or ("8958773") or ("20170203767") or ("20150256684") or ("20160323731") or ("20170169648") or ("20150373206") or ("20140357222") or ("20150163366") or ("20160309018") or ("20140199961") or ("20130084847") or ("20140357221") or ("20160191715") or ("8818331") or ("20140199962") or ("9094538") or ("20180122245") or ("9581997") or ("20120254960") or ("8856322") or ("20170320398") or ("20120071140") or ("20170054571") or ("20170169712") or ("9032493") or ("8335502") or ("20060181411") or ("20180037125") or ("20170118037") or ("8612582") or ("20170272316") or ("9718370") or ("20140201064") or ("20120237908") or ("20160342156") or ("8346217") or ("7327258") or ("8745213") or ("8650290") or ("9406086") or ("9129230") or ("8788655")).PN. or (("8671143") or ("10126740") or ("20130048720") or ("20160375780") or ("10231125") or ("20160031338") or ("20130218931") or ("20160037303") or ("20180032535") or ("8624727") or ("20100131584") or ("10117066") or ("9130930") or ("20090031006") or ("9668133") or ("8073565") or ("20130183924") or ("20060022048") or ("8719592") or ("20120270567") or ("9579987") or ("9100793") or ("7528723") or ("20080167896") or ("8060389") or ("20140073357") or ("20140066100") or ("8930233") or ("8489669") or ("9180783") or ("8984059") or ("9712486") or				

		("8583915") or ("20160087933") or ("20190020985") or ("20120106801") or ("9955352") or ("20140136847") or ("8781169") or ("20020174010") or ("6853894") or ("20180308052") or ("8848608") or ("20120214442") or ("20120109692") or ("20070229350") or ("9373149") or ("8311858") or ("9754424") or ("8140358") or ("20160132053") or ("20120036552") or ("20090167524") or ("20160066189") or ("20140294180") or ("8731155") or ("20100026495") or ("20120209634") or ("8892451") or ("20140248852") or ("8989954") or ("8787936") or ("10102539") or ("8781442") or ("20110145564") or ("20130013347") or ("20150029987") or ("9434270") or ("20130013348") or ("20060182055") or ("20100235891") or ("20140019352") or ("9361606") or ("9680803") or ("20120086552") or ("9888363") or ("20130006769") or ("9346365") or ("7978076") or ("20160283923") or ("9112700") or ("20170200162") or ("9589266") or ("8350700") or ("20110145049") or ("9003500") or ("9451447") or ("20060123053") or ("20060129691") or ("20190080325") or ("10169760") or ("20090265552") or ("20150222708") or ("9578182") or ("20120086549") or ("9311656") or ("9185526") or ("20140364108") or ("7003289") or ("20140136414") or ("6615186") or ("8527013") or ("20180206124") or ("20110225417") or ("20040073440") or ("7502672") or ("20070179799") or ("8417258") or ("9258326") or ("9406228") or ("20170101025") or ("20150234636") or ("20110009107") or ("20100169432") or ("9996315") or ("9858595") or ("20120253852") or ("20190035171") or ("9824371") or ("20130316737") or ("20100138297") or ("20050136949") or ("20170048711") or ("20180047044") or ("9124650") or ("20120036442") or ("9930522") or ("20170359683") or ("20100138298") or ("20090288012") or ("10223691")).PN. or (("20190080307") or ("10204327") or			

		("8761821") or ("9545853") or ("20160292737") or ("9697525") or ("20150356497") or ("20140024361") or ("10217339") or ("20190005442") or ("8606314") or ("9305288") or ("20140337175") or ("20120101855") or ("20120259951") or ("8521857") or ("8787949") or ("20070118426") or ("20160048863") or ("20130096966") or ("9344522") or ("20170295258") or ("20120096490") or ("20150341787") or ("9253205") or ("10159098") or ("20120303425") or ("20180122162") or ("20070173266") or ("20120172012") or ("20070179800") or ("20080150683") or ("9635545") or ("10172070") or ("20090024943") or ("9864958") or ("20110145053") or ("20100152960") or ("20080148374") or ("10089598") or ("7366892") or ("9886599") or ("20130024371") or ("20140162595") or ("20120315877") or ("7917439") or ("20140033293") or ("20040185842") or ("20160258647") or ("9265450") or ("9760871") or ("10115087") or ("20030065805") or ("8805603") or ("8089339") or ("8645014") or ("20090144624") or ("20110170837") or ("20120036245") or ("10083439") or ("20180006829") or ("9307397") or ("20180025334") or ("20100134275") or ("20120209839") or ("20110060994") or ("7487112") or ("9699646") or ("8694366") or ("6389337") or ("20020101993") or ("20120032945") or ("8611919") or ("20080147410") or ("20110162052") or ("9450956") or ("20120096358") or ("9924305") or ("20100134299") or ("20170063967") or ("10153908") or ("20160099963") or ("8769133") or ("7930411") or ("9955332") or ("20170201850") or ("20090216569") or ("10009480") or ("8260262") or ("8510137") or ("20120244883") or ("20030220835") or ("20120095844") or ("9639843") or ("20180183610") or ("20160307191") or ("20120246039") or ("8510123") or ("20080027606") or ("9466061") or ("20080039995") or ("10255614") or ("9070243") or ("20150088708") or ("8613052") or ("8666804") or ("8725851") or				

		("20110196571") or ("9531696") or ("20140082506") or ("20120072244") or ("9179434") or ("20160205546") or ("20120089470") or ("20120072243") or ("20070191995") or ("20120019379") or ("8959190") or ("20120036440") or ("9002944") or ("9159066") or ("20150356569") or ("20170063968") or ("8224355") or ("20160050203") or ("9185068") or ("20090132813") or ("20120036220") or ("20080039019") or ("20140236848")).PN. or (("20160359850") or ("20160234341") or ("8930458") or ("20150138362") or ("20080021605") or ("20120042006") or ("20110021234") or ("9571559") or ("20120019361") or ("8156206") or ("20160353355") or ("20090164053") or ("7756616") or ("20050065779") or ("20120203557") or ("20090119013") or ("7480550") or ("8629755") or ("8190129") or ("20080040272") or ("9881268") or ("20090157513") or ("20110301839") or ("9781148") or ("20140196118") or ("20120317202") or ("9042876") or ("9509674") or ("20130325935") or ("9818094") or ("9596287") or ("20140333412") or ("10264138") or ("8929871") or ("9811836") or ("20190141607") or ("8799220") or ("20130133087") or ("20120253990") or ("8744745") or ("20130137464") or ("8731741") or ("9595043") or ("20160360400") or ("9038129") or ("20050060070") or ("20130024364") or ("20150095158") or ("20120202527") or ("9659301") or ("8918854") or ("9384491") or ("20160063529") or ("20120198328") or ("8386394") or ("20120240195") or ("20100202346") or ("9360874") or ("9584967") or ("20160044499") or ("8275672") or ("20090006418") or ("20080039020") or ("20180198788") or ("20140052478") or ("9565552") or ("20100004857") or ("20110166739") or ("20130217361") or ("20060095331") or ("20090172102") or ("20130325190") or ("20130157691") or ("8175886") or ("8392289") or ("7299007") or ("8370955") or ("20170070563") or				

		("8645226") or ("20110029359") or ("9391985") or ("8565820") or ("8547222") or ("20080006685") or ("9226151") or ("20160142871") or ("8509987") or ("8489112") or ("8538834") or ("9769611") or ("20100306318") or ("20120232965") or ("9140552") or ("20130115972") or ("8386115") or ("6895310") or ("8155817") or ("20170279971") or ("20070179706") or ("20110112717") or ("20190007203") or ("9105039") or ("20080033635") or ("9232046") or ("8983497") or ("9560031") or ("9875463") or ("20160105792") or ("9373241") or ("20110119733") or ("7613659") or ("20120129510") or ("20060136595") or ("20150026316") or ("20130205000") or ("9380120") or ("20150091741") or ("9781212") or ("20070179798") or ("20110029362") or ("20140040434") or ("20180129357") or ("20100061294") or ("9392452") or ("8126960") or ("20070173986") or ("8438079") or ("20110028160") or ("20100063889") or ("8081817") or ("20170228466")).PN. or (("20150121479") or ("20080221743") or ("20130205021") or ("9684926") or ("20150278363") or ("20020013815") or ("20180376323") or ("9251265") or ("20140195279") or ("9405310") or ("8718632") or ("20130144762") or ("10142784") or ("20170070361") or ("8090616") or ("20120221718") or ("9100454") or ("20110001638") or ("9322974") or ("20080214111") or ("9860709") or ("20160050201") or ("20070173992") or ("8897760") or ("20170241165") or ("20130035114") or ("8855794") or ("20120029964") or ("20160371895") or ("9836546") or ("9209652") or ("20180124564") or ("20120022944") or ("20130318444") or ("20160012431") or ("9519911") or ("10013815") or ("9779253") or ("7831347") or ("20130144785") or ("9766645") or ("8504180") or ("20140111304") or ("8892297") or ("20110029364") or ("9886696") or ("20090117921") or ("20100063867") or ("7936736") or ("20080027605") or				

		("20120116969") or ("9954975") or ("20160203349") or ("20130293378") or ("8385896") or ("20090203352") or ("20120135759") or ("8868036") or ("20110231280") or ("9838479") or ("20160027307") or ("20120046859") or ("8396604") or ("8103587") or ("20100305807") or ("8401522") or ("20160353244") or ("20190147513") or ("7937325") or ("7876239") or ("20130212262") or ("20120149341") or ("20100241595") or ("20120289217") or ("20100268402") or ("20160307217") or ("20120022930") or ("20130159033") or ("10030418") or ("20070200671") or ("8577543") or ("20120252430") or ("8626553") or ("8162208") or ("20090002333") or ("20170344044") or ("20110302630") or ("8212691") or ("20140195281") or ("20130137376") or ("9154826") or ("20140370869") or ("8768294") or ("20150179000") or ("9865099") or ("20120095812") or ("8560450") or ("20160117697") or ("8090359") or ("20160196451") or ("9730254") or ("8258919") or ("8966587") or ("20170230460") or ("20110153148") or ("8639629") or ("20160342169") or ("20110215900") or ("7319414") or ("20140172727") or ("20130073615") or ("8442695") or ("20120064923") or ("20110307403") or ("20140289314") or ("7961076") or ("20110029370") or ("10171460") or ("20180077527") or ("9977440") or ("20120254966") or ("7672879") or ("8738725") or ("8862393") or ("9396479") or ("9600841") or ("20180227713") or ("20170011425") or ("8671014") or ("20120173655")).PN. or (("9807091") or ("20140163809") or ("20140370863") or ("20100157061") or ("20020055924") or ("20190028865") or ("8369842") or ("20120214472") or ("20120324119") or ("8840016") or ("20110302014") or ("20120215403") or ("10242573") or ("7840322") or ("20100033342") or ("10292013") or ("20110300802") or ("20080275604") or ("9332126") or ("20160238272") or ("8032278") or				

		("8311513") or ("20120289147") or ("20100187303") or ("9161164") or ("20110248818") or ("8380630") or ("8498749") or ("20130061055") or ("20130238160") or ("8929857") or ("20040044454") or ("8862150") or ("8886393") or ("10177978") or ("20130246104") or ("9058705") or ("20130167035") or ("20180114189") or ("9070101") or ("20140114706") or ("8600564") or ("7120928") or ("8849698") or ("20160210602") or ("7734541") or ("8050815") or ("20070264968") or ("9124703") or ("20120072033") or ("20100257094") or ("20080059605") or ("9386124") or ("9208456") or ("7355506") or ("9203840") or ("20100205065") or ("20170103215") or ("8559968") or ("20120028607") or ("20080088438") or ("20170078393") or ("20080186166") or ("20020194502") or ("20130285855") or ("20110302019") or ("20180206100") or ("20170185120") or ("20140180914") or ("9116763") or ("8768838") or ("9390151") or ("9959694") or ("8774788") or ("20130275199") or ("20110060480") or ("20160103896") or ("20190037049") or ("20070171029") or ("9047484") or ("8566175") or ("20160105533") or ("10142394") or ("20180013621") or ("20130106572") or ("8868636") or ("20140317225") or ("6563910") or ("9167550") or ("20110282782") or ("20100228404") or ("20080021964") or ("10255419") or ("9003488") or ("8825007") or ("20160088100") or ("8374592") or ("8150439") or ("20170034692") or ("20160073252") or ("9483883") or ("10142836") or ("20110252071") or ("20100280956") or ("20140195283") or ("7551063") or ("9800464") or ("20110286638") or ("20150006582") or ("20100062746") or ("8270933") or ("20070250920") or ("20140308915") or ("20130117078") or ("9247434") or ("8744930") or ("20040192299") or ("9047728") or ("20020095651") or ("7864047") or ("7190960") or ("8671002") or ("20170064551") or				

		("20160100292") or ("20120095791") or ("8831970") or ("20170041315") or ("20110112969") or ("20100114734") or ("20160300281")).PN. or (("8188837") or ("20150244721") or ("20040203903") or ("9047483") or ("8401233") or ("20130275899") or ("9838255") or ("20180019998") or ("20120239452") or ("7684910") or ("20180234852") or ("20130167196") or ("20120136856") or ("20140195282") or ("20180293389") or ("8527549") or ("20040254881") or ("8116749") or ("20180316761") or ("20140019204") or ("20020007330") or ("9679322") or ("9874891") or ("8224747") or ("8606589") or ("20180132163") or ("7552467") or ("20130332000") or ("8145554") or ("8868427") or ("20110295988") or ("7685525") or ("20120095792") or ("20120129553") or ("20080088437") or ("20180247483") or ("20090259588") or ("20080027604") or ("9100925") or ("9299053") or ("20130218765") or ("9418205") or ("8587454") or ("20120253551") or ("9961502") or ("8682400") or ("9373261") or ("20060026017") or ("8068857") or ("9800463") or ("20120330769") or ("8902054") or ("20180027076") or ("8385913") or ("20110195699") or ("10038678") or ("20100330975") or ("8374894") or ("20180198688") or ("20090286513") or ("20130282490") or ("20040160304") or ("20190095050") or ("20130318217") or ("7496347") or ("20160026982") or ("10200935") or ("20150222759") or ("20130106569") or ("20030073406") or ("20100062758") or ("7433836") or ("20170324717") or ("20150179076") or ("20180167777") or ("20140337173") or ("20070279283") or ("20100136944") or ("7236799") or ("9519921") or ("20060105740") or ("20120019360") or ("7908051") or ("7518500") or ("20160248760") or ("20100004005") or ("20130159021") or ("20130040600") or ("20110144980") or ("20090174550") or ("6859212") or ("20050250440") or				

		("9342829") or ("9031583") or ("7532900") or ("20090024525") or ("20080171559") or ("9047634") or ("9614921") or ("8145199") or ("9455978") or ("20120326845") or ("8489067") or ("8751271") or ("9996697") or ("9251521") or ("8769270") or ("20090019061") or ("20040255297") or ("9396655") or ("20140195280") or ("20170357814") or ("20160196440") or ("20160203649") or ("9370029") or ("20060206246") or ("20070299565") or ("20150371215") or ("20090326991") or ("9654589") or ("9618353") or ("20170262908") or ("20080046280") or ("20140214516") or ("8572173") or ("9668096") or ("20150312233") or ("20110281562") or ("20160057120") or ("9785785")).PN. or (("20130065555") or ("20130198009") or ("20110093340") or ("9270663") or ("20110153375") or ("9854394") or ("20160374004") or ("20160086166") or ("8634857") or ("20170134350") or ("8600895") or ("20150204563") or ("20110125394") or ("7061367") or ("20140128001") or ("20130104246") or ("20080052348") or ("8510220") or ("20140298012") or ("20110121991") or ("20100216509") or ("20120231821") or ("20080004043") or ("8855601") or ("9805213") or ("9549388") or ("9264224") or ("9587958") or ("8347088") or ("20110173119") or ("20080010196") or ("9667726") or ("7596260") or ("20110282697") or ("9400990") or ("20030009385") or ("9412130") or ("20030149526") or ("10002466") or ("20140274157") or ("20120206255") or ("9129333") or ("9654937") or ("20150332386") or ("10032228") or ("20120052854") or ("20160023635") or ("20110214060") or ("9743276") or ("20120246005") or ("20130060387") or ("8929874") or ("8340989") or ("9420431") or ("20180357406") or ("8117261") or ("9867118") or ("20120173628") or ("20140316587") or ("2012021626O") or ("20120088524") or ("20110221568")				

		or ("9838877") or ("20120093141") or ("20150256975") or ("9614964") or ("20110045801") or ("9047649") or ("20180332014") or ("9918194") or ("8174381") or ("9164524") or ("20140380442") or ("9036509") or ("20110258258") or ("7283904") or ("20160353277") or ("20150254979") or ("10204357") or ("10142687") or ("20120046051") or ("9451405") or ("9866697") or ("20140258386") or ("10297097") or ("9183530") or ("20110246898") or ("8068037") or ("20040122730") or ("9978272") or ("20110051823") or ("20140051465") or ("20110307101") or ("8362927") or ("8849499") or ("8826154") or ("20170251339") or ("20160328967") or ("20120136780") or ("20120072723") or ("7616943") or ("9037159") or ("8571518") or ("20110313874") or ("9082237") or ("20180056179") or ("7966369") or ("20150073888") or ("20120206254") or ("20160007083") or ("20130262275") or ("9414194") or ("7883003") or ("20160227510") or ("20120190386") or ("9495872") or ("20140329545") or ("20080010215") or ("20100005025") or ("20010032182") or ("20110034183") or ("20010023414") or ("20080195456") or ("20120289253") or ("7840224") or ("8248237") or ("10219119") or ("20070185728") or ("20020073046") or ("20120242512")).PN. or (("20100097239") or ("20070264969") or ("8082065") or ("20050102074") or ("20170249702") or ("20130104251") or ("20130124635") or ("8112100") or ("20070061266") or ("20170076330") or ("8744412") or ("9654923") or ("20120209677") or ("20050070276") or ("7366702") or ("20110302092") or ("8751674") or ("20070273534") or ("8244468") or ("9439133") or ("20020186144") or ("20120254763") or ("9100813") or ("20110238476") or ("20080149705") or ("8368562") or ("20080010191") or ("20170013404") or ("20110282738") or ("8447510") or ("20090251282") or ("20080319665")				

		or ("7933834") or ("20010051876") or ("20130018705") or ("20140171058") or ("20180278751") or ("10269202") or ("8423476") or ("20130218614") or ("20110173542") or ("20100191652") or ("8761803") or ("9736618") or ("8296664") or ("20080177662") or ("20140058568") or ("20120139760") or ("8233919") or ("20180268153") or ("8190692") or ("7729532") or ("20120245986") or ("8719909") or ("8711010") or ("20120215725") or ("20120041675") or ("20130303126") or ("8489513") or ("8433658") or ("7119716") or ("20120078700") or ("20080014908") or ("20090249460") or ("9143934") or ("8610599") or ("20080126145") or ("7805377") or ("20170289810") or ("20080010190") or ("20110191249") or ("8694501") or ("20110191248") or ("6847892") or ("7949541") or ("20080306872") or ("20150088982") or ("8516377") or ("20130259313") or ("20110191250") or ("20070043614") or ("9743229") or ("8560609") or ("9451448") or ("7953615") or ("20070293958") or ("20070264974") or ("20120101637") or ("20090253406") or ("20030134648") or ("8564459") or ("20080010192") or ("20180084375") or ("20150172916") or ("20110269441") or ("20190036727") or ("20040192339") or ("9964981") or ("9171341") or ("9747626") or ("8624758") or ("8676182") or ("9918196") or ("20080045234") or ("20080306682") or ("9922345") or ("20110238475") or ("20120108230") or ("20130078979") or ("8284076") or ("20060258377") or ("20090253408") or ("20080046326") or ("9723131") or ("20120109384") or ("8489110") or ("20120260317") or ("7953671") or ("8321791") or ("8452648") or ("8626344") or ("20120084349") or ("20110106592") or ("20150057020") or ("20110224841") or ("8473152") or ("20100145861") or ("20140213344") or ("7587368") or ("8868767")).PN. or (("8725581") or ("20120084348") or ("9268545") or ("8457797") or ("8024073") or ("8650318") or				

		("20130227126") or ("20040217852") or ("20080189360") or ("20130273892") or ("9143923") or ("20140152422") or ("6856820") or ("20110054710") or ("9426191") or ("20140222684") or ("20180047072") or ("20120029946") or ("20180013873") or ("9064258") or ("8280009") or ("20050203673") or ("20050065678") or ("20160092962") or ("20170091820") or ("20170024682") or ("20170164204") or ("7538691") or ("20160029206") or ("20140342709") or ("20180034968") or ("20090253410") or ("9275071") or ("8255154") or ("8826155") or ("20130214902") or ("8650434") or ("20100299252") or ("20120084151") or ("9684924") or ("20100274656") or ("7203502") or ("8909248") or ("9460433") or ("20020035488") or ("20180367951") or ("7849031") or ("20160232598") or ("20090249443") or ("20120166576") or ("20060053056") or ("8254902") or ("20150163632") or ("7873710") or ("20190054874") or ("20090076966") or ("20120069131") or ("8676636") or ("20130191269") or ("8041660") or ("8396602") or ("8145568") or ("20130091564") or ("20090309709") or ("8467766") or ("20040203901") or ("20090287837") or ("8773251") or ("20180198841") or ("20120035839") or ("8938226") or ("20180041869") or ("8863256") or ("20110282762") or ("9878690") or ("20130237204") or ("20120109417") or ("20080270251") or ("20130030828") or ("7454462") or ("20060184456") or ("8200700") or ("9881152") or ("20160129882") or ("8666382") or ("20140199985") or ("8428782") or ("7562304") or ("10153901") or ("8560366") or ("20110153372") or ("8352575") or ("20150065177") or ("8588733") or ("20130304367") or ("8429545") or ("8498941") or ("9747729") or ("20120158589") or ("20100324986") or ("20110215921") or ("9609003") or ("20120016767") or ("20180004377") or ("20020118796") or ("20040247086") or ("9911114") or				

		("20150130630") or ("20080119983") or ("20120078727") or ("20090325566") or ("20110125363") or ("8045961") or ("20150025697") or ("9959554") or ("8473109") or ("8732073") or ("7528742") or ("20170255703") or ("20070061487") or ("20030177051") or ("20160036588") or ("7561069") or ("20080091613") or ("20110046801") or ("20070202844") or ("9294481") or ("10096038") or ("20130144976") or ("20110234427")).PN. or (("8112066") or ("7882032") or ("20130173027") or ("20020010679") or ("8073769") or ("20110251868") or ("20120023225") or ("20190108684") or ("8025226") or ("8073590") or ("20150249687") or ("8831994") or ("20120124496") or ("20110239116") or ("9600584") or ("20100185556") or ("20080201078") or ("20090177336") or ("8839224") or ("20120330838") or ("9064127") or ("7292723") or ("8115656") or ("7064681") or ("20030014521") or ("20020072974") or ("20110313922") or ("9173009") or ("20110151892") or ("8160959") or ("20040243664") or ("20080040265") or ("9256420") or ("8571937") or ("7957991") or ("8225380") or ("20030032409") or ("20160191474") or ("20110029190") or ("8824784") or ("20100299251") or ("20080306826") or ("8639785") or ("20100094996") or ("20110153762") or ("20120109882") or ("8509954") or ("20080042883") or ("20110246070") or ("20180191807") or ("8423239") or ("20160042342") or ("20140038564") or ("8401881") or ("20110246817") or ("20140120863") or ("7979316") or ("9667581") or ("20110145089") or ("20090163140") or ("20170206532") or ("9264846") or ("9269221") or ("9916481") or ("7424543") or ("7917253") or ("8484241") or ("20110111728") or ("20150073887") or ("20110054699") or ("20060239545") or ("9135612") or ("9031536") or ("20100299260") or ("20090247122") or ("20120044089") or ("8571791") or ("20110270707") or ("9317849") or ("20090051486") or				

		("20120056742") or ("10045327") or ("8463710") or ("8718797") or ("20070237096") or ("20070118599") or ("8626200") or ("20120221473") or ("9757644") or ("8345963") or ("9384345") or ("20060178973") or ("20060239546") or ("20070070213") or ("7504966") or ("20140039726") or ("20020059425") or ("20170256164") or ("9904892") or ("7116985") or ("20070030175") or ("20160242143") or ("20150026600") or ("8913728") or ("7991673") or ("10013705") or ("20120185942") or ("20160270025") or ("20110035594") or ("20160132401") or ("8645303") or ("20120130753") or ("20140365472") or ("20180191740") or ("20140222594") or ("8261256") or ("9642024") or ("8732023") or ("20100306154") or ("20080082448") or ("20160090055") or ("10069808") or ("20120259938") or ("20120126974") or ("20040064351") or ("8494991") or ("8032409") or ("8370445") or ("20160217258") or ("9888353")).PN. or (("20140214653") or ("20050246415") or ("8763140") or ("20120101881") or ("20050203892") or ("20080042882") or ("20050050017") or ("20080114709") or ("20120089410") or ("20140351357") or ("20170041813") or ("20170054594") or ("20150230277") or ("9701265") or ("20120259722") or ("9990625") or ("20140176796") or ("8713689") or ("20060253581") or ("20130212196") or ("8654971") or ("20150072654") or ("20090186596") or ("20160078281") or ("20140200929") or ("8396624") or ("8855830") or ("20100036868") or ("9552604") or ("20150264554") or ("20110004546") or ("9848081") or ("20060253894") or ("20090249497") or ("20120127308") or ("20180165593") or ("20060178918") or ("20110224838") or ("20040254985") or ("8121945") or ("7644023") or ("7765481") or ("20110040655") or ("20080133930") or ("20120265677") or ("7207041") or ("8849821") or ("6990513") or				

		("20010051907") or ("8730062") or ("20150269617") or ("7263551") or ("20110004514") or ("20120204032") or ("20190036947") or ("20080100475") or ("7482952") or ("8108076") or ("20180150762") or ("8730033") or ("6975997") or ("20030187925") or ("7409428") or ("20020019810") or ("20120011367") or ("20150294377") or ("9047619") or ("20180146088") or ("20080088428") or ("20120131004") or ("20140108151") or ("9990848") or ("20060059024") or ("8271336") or ("8886766") or ("20120293305") or ("10163273") or ("20100020728") or ("20160037295") or ("8932368") or ("20110016322") or ("8604750") or ("8209392") or ("9335179") or ("20130275875") or ("20140141718") or ("20120270560") or ("20120102114") or ("8688532") or ("20040203902") or ("8099195") or ("9264151") or ("7479900") or ("20170195847") or ("20090228340") or ("8423548") or ("20110213657") or ("8775535") or ("8508336") or ("20030034873") or ("8219558") or ("8390474") or ("20040260470") or ("20170215071") or ("20120239560") or ("9385984") or ("20150279130") or ("20180219976") or ("20160025506") or ("7620404") or ("20080010193") or ("9026471") or ("20140198687") or ("20100036852") or ("20080109473") or ("20150040118") or ("8296567") or ("20130278492") or ("9576157") or ("20160071325") or ("20080263169") or ("10032066") or ("9572033") or ("20100325036") or ("20100299313") or ("9635534") or ("20040257208") or ("20130061216")).PN. or (("20160308813") or ("8326315") or ("10200504") or ("20170227965") or ("8831627") or ("10140606") or ("20180191742") or ("20060270421") or ("7479901") or ("8370254") or ("20160117668") or ("20130191244") or ("9609621") or ("20120329483") or ("10037421") or ("20120084285") or ("20160043985") or ("10164985") or ("8818976") or ("20110046799") or ("20180374113") or ("20070165554")				

		or ("9934537") or ("20140179274") or ("6711474") or ("20060253580") or ("20080108370") or ("9251631") or ("9633039") or ("6754181") or ("20190058995") or ("20160117669") or ("20110029188") or ("20110191117") or ("20080081601") or ("20140062730") or ("8862129") or ("20120215648") or ("8594707") or ("9569596") or ("20090187300") or ("20130013501") or ("8644702") or ("20110260884") or ("20070150444") or ("20110275321") or ("20140237626") or ("9002018") or ("20110046798") or ("8659417") or ("20080200160") or ("9942705") or ("20110046800") or ("20100222073") or ("6606744") or ("8566726") or ("7834758") or ("20120185547") or ("7479899") or ("7080322") or ("20120011366") or ("8232899") or ("10096161") or ("20120202428") or ("9996838") or ("20160358092") or ("7142099") or ("20060230124") or ("20150294115") or ("20120179916") or ("20100228428") or ("9854050") or ("20180124240") or ("20060253579") or ("20190149534") or ("8494560") or ("8438499") or ("20180293589") or ("20040190767") or ("9183734") or ("20120142367") or ("20080268823") or ("8977284") or ("20150058250") or ("8412382") or ("8457686") or ("8306503") or ("20150148078") or ("9529998") or ("20130007456") or ("9633562") or ("9557889") or ("7181227") or ("8904179") or ("20080108324") or ("20070052586") or ("9367975") or ("20160300054") or ("8234125") or ("20060290533") or ("20080172285") or ("10235439") or ("20090209233") or ("20040254811") or ("20040249712") or ("9330389") or ("20080172292") or ("9697512") or ("9330388") or ("20150334545") or ("7716077") or ("7577619") or ("20130072234") or ("10142837") or ("20060265489") or ("7055101") or ("7848765") or ("20090030910") or ("20130014020") or ("20160358091") or ("8797138") or ("9773212") or ("20170149759") or ("7577575") or ("20110225047") or ("20160117674")				

		or ("9917826") or ("20120226536") or ("20100176919") or ("9842299") or ("9082303")).PN. or (("8407220") or ("20130124403") or ("20130124404") or ("20110202185") or ("20100107225") or ("20100042931") or ("8506649") or ("8531317") or ("10121139") or ("20110015802") or ("20120303476") or ("20140222610") or ("20120143639") or ("20100036877") or ("8280359") or ("9042873") or ("20140097795") or ("20160307201") or ("9811820") or ("8862055") or ("20090177523") or ("8265862") or ("9979776") or ("8615216") or ("9070127") or ("20130211623") or ("20150262439") or ("20120011028") or ("20110300840") or ("9396450") or ("20120258697") or ("10217102") or ("20110282748") or ("9596509") or ("20070106721") or ("7379891") or ("20170286669") or ("20080201310") or ("8194646") or ("8094647") or ("8750797") or ("20090119657") or ("6526335") or ("20040243430") or ("8126862") or ("8965416") or ("20160041559") or ("20170171125") or ("20140081871") or ("20100198724") or ("20090070148") or ("20110301951") or ("20160342644") or ("20130263227") or ("20140067691") or ("9105060") or ("8656035") or ("9330390") or ("20160171521") or ("20070026842") or ("20150310743") or ("8564455") or ("20120271660") or ("20130103422") or ("20120311705") or ("10002337") or ("8260274") or ("20040150508") or ("9609577") or ("9503539") or ("9400980") or ("20120123786") or ("20080318547") or ("20150002281") or ("20120317652") or ("10149092") or ("20130252585") or ("20110264527") or ("20040186813") or ("8301320") or ("7617159") or ("20100161167") or ("20080109370") or ("20110046792") or ("20120089835") or ("20140089021") or ("9208490") or ("9177315") or ("9542493") or ("9183572") or ("9954961") or ("20120058775") or ("9280684") or ("8433471") or				

		("20190124134") or ("20060253583") or ("20080200153") or ("7468659") or ("20110208736") or ("20100190474") or ("20170308926") or ("7958081") or ("6219669") or ("20070174467") or ("20160210799") or ("20130305323") or ("7149533") or ("20060253584") or ("6658586") or ("9026472") or ("20110276609") or ("9225701") or ("20170180304") or ("20150358074") or ("9904891") or ("20140052640") or ("7130807") or ("20080201305") or ("6571279") or ("9165137") or ("8396490") or ("20170310814") or ("20120030193") or ("20080095339") or ("9558604") or ("9510320") or ("20160119332") or ("20090119119") or ("8823502") or ("20160014250")).PN. or (("20140303807") or ("20120026017") or ("6442571") or ("20120089492") or ("20140067690") or ("20050110609") or ("20120226421") or ("10157422") or ("9171321") or ("20090109959") or ("8069169") or ("20180033226") or ("20130078954") or ("10079839") or ("20060248028") or ("20150149226") or ("20160321445") or ("10230713") or ("9180784") or ("8938810") or ("20180041876") or ("9092813") or ("20100076818") or ("9183563") or ("20120188064") or ("20180262476") or ("20150149283") or ("8416064") or ("7343350") or ("20110288721") or ("20100153207") or ("9013334") or ("9632506") or ("7869425") or ("20110293095") or ("5862325") or ("7113110") or ("9232491") or ("20060069749") or ("8650316") or ("20080010365") or ("9848114") or ("20160277382") or ("20140150120") or ("20180115620") or ("20050073389") or ("7656310") or ("20130191224") or ("8069168") or ("8611517") or ("8583511") or ("20100159869") or ("9221428") or ("20090206992") or ("20080270579") or ("20090109019") or ("20140340194") or ("20150287252") or ("20190051082") or ("9659499") or ("20020064149") or ("20070213047") or ("20100019920") or ("9607483") or ("8163035") or ("20100299763") or				

		("20080172274") or ("20120016769") or ("20190121956") or ("20090247132") or ("9916608") or ("8781923") or ("20030055689") or ("8529635") or ("20120057456") or ("20120092444") or ("9871874") or ("7123127") or ("7891004") or ("8078397") or ("20110133908") or ("20040254812") or ("20100106580") or ("20050004978") or ("9471914") or ("8750943") or ("9459622") or ("7484008") or ("20120059910") or ("20090243828") or ("10096054") or ("7076737") or ("8131458") or ("20140245014") or ("9870559") or ("8976008") or ("20190034832") or ("8799037") or ("20090157454") or ("9411524") or ("8611884") or ("20190122285") or ("20100036876") or ("20120265593") or ("20110294466") or ("20060221918") or ("8498618") or ("20130198036") or ("20140108726") or ("20110289124") or ("20160275760") or ("8478243") or ("20120129489") or ("20120196571") or ("20190116453") or ("20110077807") or ("20080021767") or ("8516076") or ("7031945") or ("9753746") or ("20020054174") or ("20100049603") or ("8775246") or ("8660538") or ("7529713") or ("9992322") or ("20060173781") or ("20170103758") or ("20130254314") or ("9569781")).PN. or (("9576294") or ("20070093243") or ("7546257") or ("20090099898") or ("20080201321") or ("20120221382") or ("20080201283") or ("20110258156") or ("8254881") or ("20110282796") or ("8890673") or ("20150185034") or ("20120215701") or ("9122851") or ("20160192321") or ("20110029182") or ("20150312882") or ("20120239417") or ("20120209842") or ("8456293") or ("10102521") or ("20090276300") or ("20120284516") or ("20140195456") or ("9165416") or ("20050289058") or ("20130215116") or ("20120005079") or ("20160316346") or ("20120101835") or ("20120116959") or ("20160344745") or ("20130204717") or ("20180198756") or				

		("20120092190") or ("20120016771") or ("20130016636") or ("20120016770") or ("20150006400") or ("20130179949") or ("20160294837") or ("9569643") or ("20180276909") or ("20060129458") or ("8650319") or ("20110153362") or ("8204487") or ("9564962") or ("20160300183") or ("9386507") or ("20060253582") or ("9767807") or ("8667082")).PN.				
S137	312	(Emerging near2 Automotive) (Penilla near2 Angel) (Penilla near2 Albert)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/05/29 14:06
S138	1,915	S136 not S137	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/29 14:06
S139	1,487	S138 and video	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/29 14:06
S140	1,487	S138 and video	US-PGPUB; USPAT	AND	ON	2019/05/29 14:07
S141	1,253	S138 and video and vehicle	US-PGPUB; USPAT	AND	ON	2019/05/29 14:08
S142	417	S138 and video and vehicle and access near2 code	US-PGPUB; USPAT	AND	ON	2019/05/29 14:08
S143	146	S138 and vehicle and video with time with access	US-PGPUB; USPAT	AND	ON	2019/05/29 14:09
S144	26	S138 and vehicle with video with time with access	US-PGPUB; USPAT	AND	ON	2019/05/29 14:09
S145	0	S137 and (unique code unlock$3 vehicle key video).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/29 14:10

S146	0	S137 and (unlock$3 vehicle key video).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/29 14:10
S147	5	S137 and (vehicle key video).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/29 14:10
S148	5	S137 and (vehicle key camera).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/29 14:11
S149	0	"16653958"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/12/04 14:55
S150	2	"15854241"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/12/04 14:55
S151	351	(Emerging near2 Automotive) (Penilla near2 Angel) (Penilla near2 Albert)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/12/04 15:00
S152	7	S151 and (unique code unlock$3 vehicle key).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/12/04 15:00

S157	130	"15854241" "15607418" "15344566" "15180306" "14303442" "14063638" "13842158" "14063638" "13452882"	US-PGPUB; USPAT	OR	ON	2019/12/04 15:08
S158	130	("15854241" "15607418" "15344566" "15180306" "14303442" "14063638" "13842158" "14063638" "13452882") and penilla	US-PGPUB; USPAT	OR	ON	2019/12/04 15:09
S159	7	S158 and (unique code unlock$3 vehicle key).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/12/04 15:10
S160	7	S158 and (unique code vehicle key).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/12/04 15:10
S163	4	"9663067".pn. "10407026".pn. "10442399".pn. "9189900".pn.	USPAT	OR	ON	2019/12/04 16:00
S164	608,840	340/5.61.ccls. B60R25/241 H04W4/44 B60L53/68 B60L53/14 B60L58/12 B60L53/665 B60L53/80 B60L53/30 B60L53/65 B60R25/2018 B60S5/06 G06Q10/02 G06Q10/20 G06Q20/18 G06Q20/32 G06Q20/3829 G06Q30/00 G06Q30/0643 G06Q30/0645 G06Q50/06 G07C9/00007 G07C9/00309 G07C9/00571 G07F15/005 H04L67/10 B60L2240/547 B60L2240/70 B60L2250/10 B60L2250/16 B60L2250/20 B60L2270/36 G07C2009/00412 G07C2009/00769 Y02T10/7005 Y02T10/7044 Y02T10/705 Y02T10/7072 Y02T10/7088 Y02T10/7291 Y02T90/121 Y02T90/124 Y02T90/128 Y02T90/14 Y02T90/16 Y02T90/163 Y02T90/169 Y04S30/14	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/12/04 16:45
S165	23	S164 and (vehicle near10 access$3 near10 unique) and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/12/04 16:47

S166	1,184	(("20180091930") or ("20170316621") or ("9710975") or ("8768565") or ("20160297398") or ("20140309842") or ("20130317693") or ("9373201") or ("20190025856") or ("20150161832") or ("20190075423") or ("10264399") or ("20190346840") or ("20140256304") or ("9736669") or ("7484008") or ("7891004") or ("20140143839") or ("20130204943") or ("8601595") or ("20180334138") or ("10377346") or ("20160114745") or ("8079118") or ("20120079149") or ("7904569") or ("20110029644") or ("10377345") or ("9055022") or ("20180326947") or ("20130204466") or ("9736656") or ("20080150683") or ("10154094") or ("20190166635") or ("10104547") or ("8089339") or ("9116786") or ("9396450") or ("20190279440") or ("20160140649") or ("20140279019") or ("20190082381") or ("20190318549") or ("20130198737") or ("7502672") or ("20130203400") or ("10383045") or ("20130309977") or ("9043073") or ("9299053") or ("20130205026") or ("20180190051") or ("8855575") or ("20130145482") or ("9134986") or ("20130218412") or ("20140270158") or ("10032319") or ("20130200991") or ("20180012427") or ("20130281023") or ("20130204493") or ("8949823") or ("20130205412") or ("20130132286") or ("20120221473") or ("20190259227") or ("9988058") or ("20170011572") or ("20180012425") or ("9418491") or ("20180012224") or ("10013828") or ("20150006035") or ("20180012279") or ("7003289") or ("20160203661") or ("9008906") or ("20140294180") or ("20160248740") or ("20190359173") or ("20160086397") or ("9762559") or ("8781442") or ("10384644") or ("20160185222") or ("20130204484") or ("20160217635") or ("10065653") or ("9081653") or ("20180009446") or ("9276736") or ("9112700") or ("20190259229") or ("20160344747") or ("20180273049") or ("20140309862") or ("20160196745") or ("20130227648") or ("10384643")	US-PGPUB; USPAT; USOCR	OR	OFF	2019/12/04 16:49

		or ("20160103980") or ("20190228383") or ("20180012426") or ("20180012273") or ("20150264627") or ("9417834") or ("9865110") or ("20160347325") or ("20170093643") or ("20150186094") or ("6853894") or ("10020995") or ("20190222484") or ("9818151") or ("20190241155") or ("10015720") or ("9635518") or ("20130282238") or ("20190344663") or ("9129336") or ("10388081") or ("20140310788") or ("20160093216") or ("20170228945") or ("9173100") or ("20180154867") or ("20190098530")).PN. or (("9756549") or ("7904219") or ("10074223") or ("20180357898") or ("20170332273") or ("20050102074") or ("20190020985") or ("9224249") or ("10304261") or ("20170099295") or ("9083581") or ("10142881") or ("20160086391") or ("20150264626") or ("20140310031") or ("20190124468") or ("20180108194") or ("20190311452") or ("10354460") or ("20180012004") or ("20170272905") or ("10308218") or ("20140066053") or ("20150029987") or ("20160049014") or ("20190009788") or ("10269246") or ("20180013211") or ("10300924") or ("10117066") or ("20160247377") or ("20180204399") or ("20140270172") or ("9276737") or ("10332327") or ("20140309813") or ("20140156110") or ("9781110") or ("20170127230") or ("20150032291") or ("9003500") or ("6389337") or ("20170297512") or ("20100235891") or ("20140129053") or ("10212543") or ("20110118934") or ("20190026796") or ("20190088036") or ("8055403") or ("10057265") or ("20150133108") or ("9706354") or ("20120053759") or ("20140156111") or ("8527135") or ("20180374126") or ("20130219039") or ("8918232") or ("20140199965") or ("20040217852") or ("9420405") or ("10266131") or ("20180014241") or ("20140129113") or ("20170078472") or ("20180012424") or ("7597250") or ("9946906") or ("9290153") or ("6615186") or ("10104525") or				

		("20130198802") or ("20140129301") or ("9020697") or ("20190215670") or ("20160070527") or ("10419984") or ("20140200740") or ("20180368030") or ("8880239") or ("20150063329") or ("20140309870") or ("20060219776") or ("6856820") or ("20150232065") or ("9082239") or ("20140096217") or ("20160264132") or ("20060157563") or ("20080228346") or ("20190205115") or ("9807547") or ("20160266886") or ("9545930") or ("20180317067") or ("20180012048") or ("20130191253") or ("20130290522") or ("20160225203") or ("20160255575") or ("20160059865") or ("20080015748") or ("20140309863") or ("9701305") or ("9306924") or ("9277486") or ("10171967") or ("9710983") or ("10096176") or ("20030231550") or ("8989954") or ("20150296441") or ("20190279509") or ("20080082221") or ("20170308365") or ("7548491") or ("9088572") or ("9123186") or ("6895310") or ("20140309806") or ("9338170") or ("9033226") or ("9888363") or ("20160366539") or ("20120030470") or ("8779947") or ("9235941") or ("20140309886")).PN. or (("20140247158") or ("9401087") or ("20130265178") or ("8805349") or ("20120282906") or ("20180373268") or ("20180069929") or ("8690050") or ("20170201517") or ("20150188961") or ("20190176752") or ("20130073406") or ("20150222708") or ("20140066132") or ("10291710") or ("20060161315") or ("8909153") or ("20190228168") or ("8413887") or ("20170262863") or ("9451447") or ("20190090174") or ("20190274015") or ("20180197349") or ("8787936") or ("20090024525") or ("20180338001") or ("20180376357") or ("20140309891") or ("20110235627") or ("10405215") or ("20170076279") or ("20150222553") or ("9867050") or ("20160241645") or ("9838480") or ("20140364108") or ("9883209") or ("20180308015") or ("20180375939") or ("10210689") or ("10078924") or ("20150242808") or ("20190349794")				

		or ("20190075109") or ("9424547") or ("20140121890") or ("20150206045") or ("8848608") or ("9179311") or ("8305936") or ("9418489") or ("8205788") or ("20130147616") or ("20110281562") or ("20100153207") or ("20140309880") or ("8371503") or ("20140310610") or ("20190299802") or ("20160195404") or ("8744745") or ("20130271273") or ("20140310739") or ("9990783") or ("20170077976") or ("8638202") or ("20150100197") or ("20110301839") or ("8761821") or ("20190027043") or ("20140248860") or ("20160205419") or ("20100228405") or ("20120225639") or ("20150341757") or ("8922356") or ("20180091508") or ("9646439") or ("20120071140") or ("20150199855") or ("20150242768") or ("20150365981") or ("9918345") or ("20130206835") or ("9098957") or ("20170236343") or ("9576474") or ("20180201226") or ("9560470") or ("20110313593") or ("8594616") or ("20130204721") or ("9445442") or ("10084498") or ("9699587") or ("20140328248") or ("20070079012") or ("20170208632") or ("20180279391") or ("20150319551") or ("20120302265") or ("9408043") or ("7427024") or ("20130191231") or ("8335502") or ("20140067195") or ("20190066409") or ("20140269466") or ("20120213205") or ("20140310594") or ("9402174") or ("9756684") or ("20110021234") or ("20160353355") or ("8640944") or ("20140307724") or ("9142072") or ("8622286") or ("10172070") or ("20120244883") or ("20180212967") or ("20170075701") or ("20140235209") or ("9674756") or ("9185641") or ("10015257") or ("10147253")).PN. or (("20180035245") or ("20150223273") or ("10464530") or ("20160203520") or ("9786102") or ("9420401") or ("20150334506") or ("9536361") or ("20150023183") or ("9432828") or ("20140303837") or ("20160295487") or ("20140309877") or ("20170178035") or ("20190306149")			

		or ("20170318612") or ("20110001638") or ("20140031010") or ("20190122449") or ("9078200") or ("20150229604") or ("9955493") or ("20090170434") or ("20120086549") or ("8579189") or ("8613390") or ("8484707") or ("20130211623") or ("20130237174") or ("9349112") or ("9251631") or ("8212691") or ("20190171208") or ("8750832") or ("20090089069") or ("10407026") or ("9311656") or ("20170232888") or ("8718797") or ("10023117") or ("20190141607") or ("20170267214") or ("20140277828") or ("20160370202") or ("20170106834") or ("9584470") or ("9682683") or ("20180335523") or ("8213861") or ("20130151065") or ("20140306817") or ("8336042") or ("9747729") or ("20180024725") or ("9894526") or ("20170225690") or ("9916071") or ("20180034919") or ("20170318520") or ("20160360557") or ("9513133") or ("9305411") or ("20190190703") or ("9521606") or ("9878690") or ("20160129882") or ("10033819") or ("10049514") or ("20160292737") or ("20150116100") or ("8737913") or ("20190265868") or ("20030034873") or ("20020049535") or ("8731155") or ("9858595") or ("20160185358") or ("9189900") or ("8903385") or ("20190092280") or ("20180134254") or ("20150026312") or ("20040259545") or ("20160295414") or ("20100115505") or ("20190303809") or ("9227595") or ("6609103") or ("20080319665") or ("20120164989") or ("9911258") or ("8116749") or ("7133659") or ("9586596") or ("20190174276") or ("20080043692") or ("20090167524") or ("10442399") or ("20140097937") or ("20140380505") or ("9949303") or ("20140307655") or ("9984561") or ("20100062746") or ("9604651") or ("9713063") or ("20190266897") or ("20120028607") or ("20160098876") or ("20180091608") or ("20150095156") or ("20150242809") or ("9229903") or ("20070299565") or ("20020101993") or ("9247434") or				

		("8311858") or ("20140067152") or ("20080318547") or ("8731741") or ("20070174467") or ("9924305") or ("9099000") or ("20170094583") or ("20190182634") or ("20130271275") or ("9794011") or ("20150134968") or ("20140206392") or ("20100062758")).PN. or (("8719592") or ("9386447") or ("9819777") or ("9626857") or ("8385913") or ("20180033226") or ("20180276674") or ("20180059913") or ("7079832") or ("20160071333") or ("9373205") or ("20140380296") or ("20180007521") or ("20080102796") or ("9363646") or ("20120282908") or ("20190215370") or ("20180101833") or ("20150381297") or ("20130096966") or ("10289288") or ("20120051272") or ("20140282747") or ("9307297") or ("20070118426") or ("8140358") or ("20150345965") or ("20090164053") or ("20140129047") or ("9081944") or ("20180260740") or ("20060211446") or ("20070100514") or ("20170135060") or ("10244365") or ("10143030") or ("7616943") or ("7774231") or ("9264846") or ("20120209634") or ("20140309874") or ("20160132053") or ("20170345241") or ("8666437") or ("20190068434") or ("20170070253") or ("20170324817") or ("20130130639") or ("9130930") or ("20140380442") or ("20070173266") or ("20090069051") or ("20100063867") or ("10129816") or ("20160284143") or ("20080014908") or ("20160099927") or ("9420431") or ("8670897") or ("8190221") or ("20120231821") or ("9275503") or ("9800664") or ("20040030601") or ("10038464") or ("8521216") or ("9367968") or ("20050136949") or ("9778831") or ("9635006") or ("8565838") or ("20160309018") or ("20170171832") or ("9082238") or ("20140227980") or ("20130084847") or ("9565712") or ("20190287080") or ("9754424") or ("20060105740") or ("20050085226") or ("10410251") or ("20170263063") or ("8606314") or ("9668133") or ("20180336745") or				

		("20120231766") or ("8417258") or ("20140213238") or ("10108901") or ("8326522") or ("9663067") or ("8705527") or ("8892451") or ("20090248302") or ("20190096243") or ("20180132058") or ("20080103685") or ("9955240") or ("20150145645") or ("8660538") or ("20190259093") or ("8380259") or ("20140024342") or ("8754766") or ("20170050617") or ("20080040272") or ("20170300803") or ("20130295888") or ("9990781") or ("20180077712") or ("20090073946") or ("9184777") or ("9538338") or ("20170316533") or ("7496347") or ("20110165896") or ("20180365645") or ("20150120416") or ("20120172012") or ("9949267") or ("20170272316") or ("20080039019") or ("20180115809") or ("10002479") or ("8239076") or ("20060026017") or ("7299007") or ("20140141718") or ("20180091985")).PN. or (("20090248222") or ("20190092282") or ("20120096490") or ("9984522") or ("9031710") or ("20130231052") or ("10415528") or ("20150193726") or ("20080039020") or ("20160197776") or ("8863256") or ("8639283") or ("8509987") or ("9209977") or ("9445447") or ("10387826") or ("20180338241") or ("7228211") or ("20140378055") or ("20100159894") or ("20140142783") or ("20150210287") or ("10085135") or ("20040073440") or ("9014910") or ("10231125") or ("8996876") or ("20070213887") or ("20100312419") or ("20160381717") or ("9860709") or ("20160241999") or ("20120109417") or ("9313661") or ("6622124") or ("9634892") or ("10068402") or ("20100063889") or ("10210487") or ("20110112717") or ("20190188925") or ("20150234636") or ("20100159869") or ("20150341862") or ("20150071216") or ("20080215878") or ("20130013348") or ("9654937") or ("8841987") or ("8090359") or ("20120089522") or ("20190003439") or ("20100228404") or ("8880240") or ("20170171730") or				

		("20160143004") or ("20030220835") or ("8682294") or ("8787949") or ("20150195364") or ("20160133072") or ("20150021113") or ("20170251339") or ("9998892") or ("20160019775") or ("20190230401") or ("20090150023") or ("9094800") or ("20140278837") or ("20120331301") or ("20140379169") or ("10264140") or ("8868289") or ("20170032593") or ("20190356552") or ("8606503") or ("20150239408") or ("20090170537") or ("20130282227") or ("20060179452") or ("8370955") or ("20160029195") or ("10179591") or ("20090172102") or ("20160140776") or ("20160358394") or ("9365188") or ("20080032738") or ("20070264968") or ("20160318481") or ("20120054028") or ("20130013347") or ("10414357") or ("9996315") or ("20190351783") or ("6584403") or ("9738255") or ("20140364153") or ("10375630") or ("20180005337") or ("20180009416") or ("20110125363") or ("20180352583") or ("20180260822") or ("8694366") or ("20170291614") or ("8369842") or ("9495866") or ("20170021760") or ("20160337849") or ("20170197584") or ("20160255503") or ("20170353988") or ("20030065805") or ("20160127899") or ("9108579") or ("8385896") or ("8121628") or ("20140323092") or ("9261365") or ("7917285") or ("20180089912") or ("9392452") or ("9036509") or ("20110003578") or ("10200887") or ("9241235") or ("20190268744") or ("10492034")).PN. or (("20160049033") or ("8750943") or ("20110302014") or ("20170332274") or ("8423239") or ("20070252689") or ("8090616") or ("20150264554") or ("9609513") or ("20110004401") or ("20120096358") or ("9398397") or ("20130103404") or ("9499129") or ("20090144624") or ("20110170837") or ("8027789") or ("9233655") or ("20110300802") or ("20140303807") or ("20140310075") or ("20120078441") or ("9607449") or ("20100061294") or ("9902368") or				

		("20090070861") or ("20150206206") or ("20160065646") or ("20110133908") or ("9743451") or ("20140274013") or ("20130275761") or ("9179296") or ("20160300413") or ("20190268722") or ("20120135711") or ("8457686") or ("8776189") or ("7366892") or ("20130274953") or ("8880047") or ("20040185842") or ("20170086241") or ("20160036957") or ("20070171854") or ("10086796") or ("7155199") or ("20160023636") or ("20180218613") or ("20150054647") or ("20190173951") or ("20120089470") or ("7844247") or ("9503968") or ("9566903") or ("20160012728") or ("20040117195") or ("8611919") or ("20080288315") or ("20110119733") or ("9428127") or ("20190069225") or ("9473920") or ("20180109997") or ("20140033293") or ("10172076") or ("20150244534") or ("20150148989") or ("7936736") or ("20180009414") or ("20150356497") or ("9348492") or ("7761232") or ("20180063882") or ("20190005442") or ("20140282470") or ("20080148374") or ("9251693") or ("20140266635") or ("20180229689") or ("9183835") or ("9225718") or ("20180211231") or ("20130197915") or ("9318017") or ("20130133087") or ("20160278087") or ("8559968") or ("20170265022") or ("20170324667") or ("20110276399") or ("20140195102") or ("9159322") or ("20140293829") or ("20140087760") or ("20160210670") or ("7487112") or ("20150213401") or ("9826464") or ("9586559") or ("20130197907") or ("20190158353") or ("20180285832") or ("20130275199") or ("10282708") or ("20150319681") or ("20190174011") or ("20120142367") or ("20080200209") or ("20140306833") or ("9754431") or ("10089598") or ("20180319368") or ("8416064") or ("20140215491") or ("9171470") or ("20140169564") or ("20120221188") or ("9654980") or ("6771981") or ("20190034915") or ("9607280") or ("9807577") or ("20090163140") or ("10264425") or				

		("9892439") or ("10021669") or ("9480066") or ("20140012496")).PN. or (("9300152") or ("9277370") or ("20160071082") or ("20150382319") or ("9729707") or ("9473904") or ("20190141023") or ("7970446") or ("20020169539") or ("20150319511") or ("7797170") or ("20180041943") or ("9842442") or ("9218700") or ("10383059") or ("9924452") or ("9378601") or ("10103996") or ("20120095844") or ("20140152254") or ("20190297472") or ("20190255963") or ("10304045") or ("9161164") or ("10229601") or ("9038129") or ("20160055116") or ("20140370863") or ("8326282") or ("7346374") or ("20020186144") or ("20080211641") or ("8269618") or ("9656633") or ("20160366711") or ("20180144369") or ("20170034774") or ("8836489") or ("20190092283") or ("20170094524") or ("8849698") or ("9635534") or ("10405152") or ("20150227923") or ("10231273") or ("20180376305") or ("20110102189") or ("10055901") or ("20110302019") or ("9767065") or ("9716927") or ("10389552") or ("7936256") or ("20130295889") or ("20150341787") or ("20170257750") or ("20040010358") or ("20150264017") or ("20160144826") or ("20050017068") or ("20180262891") or ("7762470") or ("20180109399") or ("20150170427") or ("20090318163") or ("9439071") or ("9510158") or ("20120303203") or ("10249123") or ("20150334545") or ("20190103030") or ("20170011425") or ("20180302751") or ("20160088052") or ("20180014351") or ("10434985") or ("20190166494") or ("20100202346") or ("20160300417") or ("20170270490") or ("20150116103") or ("9252951") or ("9467179") or ("8180280") or ("20130281017") or ("20170048080") or ("20080171559") or ("20130191269") or ("20140309885") or ("20140066135") or ("20050040951") or ("20150279130") or ("9818088") or ("7912625") or				

		("9064258") or ("20170215021") or ("9406176") or ("10277684") or ("6973324") or ("20160191704") or ("20030130001") or ("20060206246") or ("10433243") or ("8666804") or ("8547212") or ("8374592") or ("20180075287") or ("20190138819") or ("10178229") or ("20180063324") or ("20140309789") or ("20160012431") or ("20130160060") or ("20140309864") or ("20080056210") or ("10019621") or ("20190188651") or ("10342067") or ("9131376") or ("9084197") or ("20170210341") or ("9681301") or ("20040110472") or ("20150116078") or ("9767655") or ("20170238346") or ("9367975") or ("10405357") or ("20040093289") or ("20170048711")).PN. or (("10354533") or ("20040218609") or ("9558604") or ("10343695") or ("20120289295") or ("20160210799") or ("7394761") or ("20050240343") or ("20160156720") or ("8738214") or ("9912754") or ("20150071052") or ("7917439") or ("20160197782") or ("20190130750") or ("20190205468") or ("20190349732") or ("9439240") or ("20120088462") or ("20190143996") or ("20160007169") or ("20160082839") or ("9787855") or ("20170176192") or ("20170094523") or ("9652913") or ("6526335") or ("20160358391") or ("20170238154") or ("9872154") or ("20190090109") or ("20150244876") or ("20060208066") or ("9168895") or ("20190354634") or ("20110291823") or ("20160026659") or ("20130282283") or ("20190126935") or ("20180074813") or ("9215590") or ("6711474") or ("20190156591") or ("8253549") or ("20110148658") or ("20070264974") or ("10455421") or ("8014752") or ("8442558") or ("20030093187") or ("7672665") or ("20180012433") or ("9326088") or ("9002536") or ("20060217109") or ("20150215954") or ("9225782") or ("20050159184") or ("20070032225") or ("20100251349") or ("10187751") or ("10382921") or ("20130102295") or ("9755851") or				

		("20160153793") or ("10380577") or ("20180342115") or ("20180376306") or ("20170366976") or ("20190281052") or ("20190057217") or ("20130281021") or ("20140309934") or ("10493996") or ("20180220309") or ("20130301584") or ("7349722") or ("20160012653") or ("9767627") or ("20190092279") or ("20180255508") or ("9031498") or ("20180034976") or ("20180324291") or ("9697733") or ("20170067747") or ("20150029041") or ("10349285") or ("20180137538") or ("20160180608") or ("20170036511") or ("20160323386") or ("20140067403") or ("9251521") or ("20110260884") or ("20190220265") or ("20150175127") or ("9338731") or ("20010018639") or ("20080268866") or ("20150024781") or ("8660735") or ("6240365") or ("9864958") or ("20040203919") or ("20190132395") or ("9820124") or ("20180007628") or ("20070139168") or ("9679562") or ("20190188934") or ("6965816") or ("20160100292") or ("9888440") or ("10489449") or ("20120202520") or ("10231123") or ("20190356738") or ("20190347695") or ("9084118") or ("20080147410") or ("20180013858") or ("20150310743") or ("9581997") or ("7146191") or ("20170164192") or ("20180077211") or ("6947760")).PN. or (("8514825") or ("10360760") or ("20140273955") or ("20130238184") or ("9185433") or ("9963106") or ("20190087864") or ("20030013438") or ("8390474") or ("9164160") or ("20150187147") or ("7355509") or ("20180158256") or ("20170195953") or ("6154658") or ("20190251759") or ("7266435") or ("9495872") or ("8117049") or ("10219139") or ("20180240169") or ("20170366616") or ("20160366285")).PN.				
S167	2	S166 and (vehicle near10 access$3 near10 unique) and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	AND	ON	2019/12/04 16:49

			DERWENT; IBM_TDB			
S168	3	"8768565".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/12/04 16:50
S169	11	S166 and (vehicle with access$3 with unique) and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/12/04 16:52
S170	53	rental near10 car with restriction and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 12:18
S171	0	rental near10 car with restrict with mobile with phone and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 12:20
S172	3	rental near10 car with restrict$3 with mobile and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 12:20
S173	2	rental near10 car and restrict$3 with mobile with usage and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 12:35
S174	0	rental near10 car and restrict$3 with infotainment and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	AND	ON	2020/04/27 12:41

			DERWENT; IBM_TDB			
S175	0	rental near10 car and limit with infotainment and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 12:42
S176	6	car and limit with infotainment and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 12:42
S177	157	rental near10 car with (limit or restrict$3) and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 12:44
S178	11	(limit or restrict$3) near15 infotainment near15 driving and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 13:00
S179	0	rental near10 car with (limit or restrict$3) with location with notif$4 and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 14:14
S180	11	rental near10 car with restriction with location and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 14:17
S181	0	rental near10 car with restrict with location and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	AND	ON	2020/04/27 14:17

			DERWENT; IBM_TDB			
S182	90	rental near10 car with (restrict$3 or limit$3) with (location or goegraphic$3) and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 14:18
S183	58	rental near10 car with track$3 with (location or goegraphic$3) and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 14:20
S184	0	rental near10 car with track$3 with (location or goegraphic$3) with (bound or zone) and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 14:21
S185	0	rental near10 car with reporr with reservation with end$3 and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 14:41
S186	7	rental near10 car with report$3 with reservation with end$3 and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 14:41
S187	2	rental near10 car with set with limit with speed and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 14:53
S188	5	vehicle with display with geographic$2 with violation and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	AND	ON	2020/04/27 14:54

			DERWENT; IBM_TDB			
S189	3	"20090062971".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 15:01
S190	0	rental near10 car with notify with trunk and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 15:55
S191	0	rental near10 car with report with trunk and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 15:55
S192	1	rental near10 car and report with trunk and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 15:55
S193	115	rental near10 car and control with trunk and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 15:56
S194	1	"16653958"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 16:48
S195	37	(US-20020064258-$ | US-20020085043-$ | US-20020133273-$ | US-20030137277-$ | US-20030153278-$ | US-20030205619-$ | US-20030234325-$ | US-20040046506-$ | US-20040064235-$ |	US-PGPUB; USPAT	AND	ON	2020/04/27 17:54

		US-20040092253-$ | US-20040093155-$ | US-20040265671-$ | US-20050021190-$ | US-20050044245-$ | US-20050231119-$ | US-20060125620-$ | US-20060182241-$ | US-20060282381-$ | US-20060287783-$ | US-20070068714-$ | US-20070126395-$ | US-20070282495-$ | US-20080039979-$ | US-20080039989-$ | US-20080040129-$ | US-20080040223-$ | US-20080040295-$ | US-20080052145-$ | US-20080086411-$ | US-20080097904-$ | US-20080155008-$ | US-20080180027-$ | US-20080203973-$ | US-20080228613-$ | US-20080281663-$ | US-20080294283-$ | US-20080312782-$).DID.				
S196	41	(US-20090011639-$ | US-20090021213-$ | US-20090021385-$ | US-20090030712-$ | US-20090043519-$ | US-20090058355-$ | US-20090066287-$ | US-20090076913-$ | US-20090082957-$ | US-20090091291-$ | US-20090092864-$ | US-20090144001-$ | US-20090157289-$ | US-20090164473-$ | US-20090174365-$ | US-20090177580-$ | US-20090210357-$ | US-20090287578-$ | US-20090312903-$ | US-20090313032-$ | US-20090313033-$ | US-20090313034-$ | US-20090313098-$ | US-20090313104-$ | US-20090313174-$ | US-20100013434-$ | US-20100017045-$ | US-20100017249-$ | US-20100049396-$ | US-20100049533-$ | US-20100049610-$ | US-20100049639-$ | US-20100049737-$ | US-20100057306-$ | US-20100112843-$ | US-20100141206-$ | US-20100161481-$ | US-20100161482-$ | US-20100169008-$ | US-20100198508-$ | US-20100280956-$).DID.	US-PGPUB; USPAT	AND	ON	2020/04/27 17:54
S197	41	(US-0233077-$ | US-20100198513-$ | US-20100211340-$ | US-20100211643-$ | US-20100222939-$ | US-20100268426-$ | US-20100304349-$ | US-20110032110-$ |	US-PGPUB; USPAT	AND	ON	2020/04/27 17:55

		US-20110074350-$ | US-20110074351-$ | US-20110077809-$ | US-20110106329-$ | US-20110112969-$ | US-20110130885-$ | US-20110187521-$ | US-20110191265-$ | US-20110193522-$ | US-20110202218-$ | US-20110246252-$ | US-20110279083-$ | US-20110309929-$ | US-20120233077-$ | US-20120013300-$ | US-20120019204-$ | US-20120025765-$ | US-20120028680-$ | US-20120041624-$ | US-20120053754-$ | US-20120074903-$ | US-20120105197-$ | US-20120123670-$ | US-20120136743-$ | US-20120136802-$ | US-20120158244-$ | US-20120179323-$ | US-20120218128-$ | US-20120229056-$ | US-20120229085-$ | US-20120232965-$ | US-20120262002-$ | US-20120268068-$).DID.				
S198	42	(US-20120268076-$ | US-20120268242-$ | US-20120280654-$ | US-20120296512-$ | US-20120303397-$ | US-20120306445-$ | US-20120310713-$ | US-20120316671-$ | US-20130002876-$ | US-20130020139-$ | US-20130021162-$ | US-20130037339-$ | US-20130099892-$ | US-20130103236-$ | US-20130110296-$ | US-20130110632-$ | US-20130110653-$ | US-20130127247-$ | US-20130135093-$ | US-20130144520-$ | US-20130145065-$ | US-20130179057-$ | US-20130204466-$ | US-20130241720-$ | US-20130253746-$ | US-20130280018-$ | US-20130300554-$ | US-20130317693-$ | US-20130317694-$ | US-20130328387-$ | US-20130338820-$ | US-20130342363-$ | US-20140002015-$ | US-20140019280-$ | US-20140021908-$ | US-20140042968-$ | US-20140047107-$ | US-20140066049-$ | US-20140089016-$ | US-20140106726-$ | US-20140118107-$ | US-20140120829-$).DID.	US-PGPUB; USPAT	AND	ON	2020/04/27 17:55

S199	22	(US-20140125355-$ | US-20140142783-$ | US-20140163771-$ | US-20140163774-$ | US-20140164559-$ | US-20140172192-$ | US-20140172265-$ | US-20140172727-$ | US-20140179353-$ | US-20140200742-$ | US-20140203077-$ | US-20140207333-$ | US-20140214261-$ | US-20140214321-$ | US-20140218189-$ | US-20140232331-$ | US-20140236414-$ | US-20140236463-$ | US-20140253018-$ | US-20140277936-$ | US-20140278089-$ | US-20140300739-$).DID.	US-PGPUB; USPAT	AND	ON	2020/04/27 17:55
S200	35	(US-3690397-$ | US-3799063-$ | US-3867682-$ | US-4052655-$ | US-4102273-$ | US-4132174-$ | US-4162445-$ | US-4309644-$ | US-4347472-$ | US-4383210-$ | US-4389608-$ | US-4405891-$ | US-4433278-$ | US-4450400-$ | US-4532418-$ | US-4789047-$ | US-4815840-$ | US-5049802-$ | US-5121112-$ | US-5132666-$ | US-5184058-$ | US-5202617-$ | US-5297664-$ | US-5306999-$ | US-5315227-$ | US-5327066-$ | US-5343970-$ | US-5422624-$ | US-5434781-$ | US-5441122-$ | US-5449995-$ | US-5487002-$ | US-5488283-$ | US-5492190-$ | US-5548200-$).DID.	US-PGPUB; USPAT	AND	ON	2020/04/27 17:56
S201	42	(US-5549443-$ | US-5555502-$ | US-5563491-$ | US-5585205-$ | US-5594318-$ | US-5595271-$ | US-5596258-$ | US-5612606-$ | US-5627752-$ | US-5636145-$ | US-5642270-$ | US-5666102-$ | US-5691695-$ | US-5694019-$ | US-5701706-$ | US-5736833-$ | US-5760569-$ | US-5778326-$ | US-5790976-$ | US-5892598-$ | US-5916285-$ | US-5974136-$ | US-5998963-$ | US-6014597-$ | US-6049745-$ | US-6067008-$ | US-6081205-$ | US-6085131-$ | US-6151539-$ | US-6175789-$ | US-6225776-$ | US-6234932-$ | US-6236333-$ | US-6252380-$ | US-6301531-$ | US-6307349-$ | US-6330497-$ | US-6330499-$ | US-	US-PGPUB; USPAT	AND	ON	2020/04/27 17:56

		6370475-$ | US-6373380-$ | US-6416209-$ | US-6434465-$).DID.				
S202	41	(US-6456041-$ | US-6466658-$ | US-6480767-$ | US-6487477-$ | US-6498454-$ | US-6511192-$ | US-6586866-$ | US-6614204-$ | US-6629024-$ | US-6727809-$ | US-6741036-$ | US-6765495-$ | US-6789733-$ | US-6794849-$ | US-6850898-$ | US-6915869-$ | US-6922629-$ | US-6937140-$ | US-6940254-$ | US-7013205-$ | US-7039389-$ | US-7084781-$ | US-7201384-$ | US-7269416-$ | US-7289611-$ | US-7376497-$ | US-7379541-$ | US-7402978-$ | US-7532965-$ | US-7565396-$ | US-7630802-$ | US-7650210-$ | US-7674536-$ | US-7683771-$ | US-7693609-$ | US-7698078-$ | US-7740092-$ | US-7751945-$ | US-7778746-$ | US-7796052-$ | US-7850351-$).DID.	US-PGPUB; USPAT	AND	ON	2020/04/27 17:57
S203	41	(US-7869576-$ | US-7885893-$ | US-7949435-$ | US-7956570-$ | US-7979198-$ | US-7986126-$ | US-7991665-$ | US-8006793-$ | US-8027843-$ | US-8036788-$ | US-8054048-$ | US-8072318-$ | US-8103391-$ | US-8256553-$ | US-8262268-$ | US-8265816-$ | US-8266075-$ | US-8294420-$ | US-8333492-$ | US-8336664-$ | US-8350526-$ | US-8366371-$ | US-8392065-$ | US-8405347-$ | US-8482255-$ | US-8483775-$ | US-8483907-$ | US-8490005-$ | US-8508188-$ | US-8521599-$ | US-8527135-$ | US-8527146-$ | US-8552686-$ | US-8589019-$ | US-8624719-$ | US-8630741-$ | US-8635091-$ | US-8643329-$ | US-8660734-$ | US-8686864-$ | US-8694328-$).DID.	US-PGPUB; USPAT	AND	ON	2020/04/27 17:57
S204	14	(US-8706394-$ | US-8713121-$ | US-8717170-$ | US-8725551-$ | US-8751065-$ | US-8751271-$ | US-8760432-$ | US-8799037-$ | US-8816845-$ | US-8818622-$ | US-8818725-$ | US-8819414-$ | US-8825222-$ | US-8836281-$).DID.	US-PGPUB; USPAT	AND	ON	2020/04/27 17:57

S205	356	S195 S196 S197 S198 S199 S200 S201 S202 S203 S204	US-PGPUB; USPAT	OR	ON	2020/04/27 17:58
S206	3	"20090062971".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 18:00
S207	7	S205 and @ad<"20110422" and (lock$3 or unlock$3) near15 door and car near15 (rental or sharing)	US-PGPUB; USPAT	OR	ON	2020/04/27 18:01
S208	376	(Emerging near2 Automotive) (Penilla near2 Angel) (Penilla near2 Albert)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/04/27 18:02
S209	8	S208 and (unique code unlock$3 vehicle key).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 18:02
S210	4	S208 and (unique restriction (unlock$3 or lock$3) vehicle key).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 18:03
S211	242	user near15 (limit$3 or restric$t3)near15 operation near15 vehicle and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/10/14 17:32
S212	242	user near15 (limit$3 or restric$t3) near15 operation near15 vehicle and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/10/14 17:32

S213	4	administrator near15 (limit$3 or restric$t3) near15 operation near15 vehicle and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/10/14 17:33
S214	86	vehicle near10 sharing and (limit$3 or restric$t3) near15 operation near15 vehicle and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/10/14 17:34
S215	2	"20030206102".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/10/14 18:45
S216	0	"20030206102".pn. and restict$3 with speed	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/10/14 19:22
S217	0	"20030206102".pn. and restict$3 same speed	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/10/14 19:22
S218	0	"20030206102".pn. and limit with speed	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/10/14 19:22
S219	1	"20030206102".pn. and speed	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/10/14 19:23

S220	2	"20030206102".pn. and restriction	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/10/14 19:23
S221	406	(Emerging near2 Automotive) (Penilla near2 Angel) (Penilla near2 Albert)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/10/14 19:41
S222	4	S221 and (unique restriction (unlock$3 or lock$3) vehicle key).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/10/14 19:41
S223	433	(Emerging near2 Automotive) (Penilla near2 Angel) (Penilla near2 Albert)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/04/05 16:50
S224	0	S223 and (unique restriction (unlock$3 or lock$3) vehicle key camera).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/04/05 16:50
S225	0	S223 and (unique restriction vehicle key camera).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/04/05 16:50
S226	520	(Emerging near3 Automotive) (Penilla near3 Angel) (Penilla near3 Albert)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/04/05 16:51

S227	0	S226 and (unique restriction vehicle key camera).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/04/05 16:52
S228	5	S226 and (key restriction vehicle key camera).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/04/05 16:52
S229	26	(key restriction vehicle key camera).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/04/05 17:05
S230	6	(key restriction vehicle key camera record$3).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/04/05 17:06
S235	376	(("20200361335") or ("20200047714") or ("20180134254") or ("20170267214") or ("10407026") or ("10442399") or ("20210028928") or ("20170374550") or ("10645578") or ("20160055699") or ("20180293827") or ("20190164367") or ("20210076208") or ("10924924") or ("20160318481") or ("9499129") or ("20130185559") or ("8880881") or ("20130182845") or ("20140040621") or ("20190232919") or ("8494165") or ("9365188") or ("20170050617") or ("20190197806") or ("9189900") or ("8874913") or ("9663067") or ("10412581") or ("20160088465") or ("10115256") or ("20180234843") or ("10676066") or ("10064039") or ("20180070201") or ("9848284") or ("10643414") or ("11004061") or ("20200402334") or ("20200250652") or ("10262484") or ("20130185124") or ("20170068947") or	US-PGPUB; USPAT; USOCR	OR	OFF	2021/06/10 14:38

		("20170236352") or ("20100106644") or ("20140200929") or ("20140006194") or ("9047601") or ("9384613") or ("20150325057") or ("20110154041") or ("20110313922") or ("9824504") or ("20150072654") or ("20150278800") or ("10600046") or ("10194017") or ("20200358760") or ("9572033") or ("8112066") or ("8849247") or ("20180130033") or ("20120237908") or ("20190370699") or ("20130290522") or ("20130024383") or ("9525999") or ("20170104865") or ("8862129") or ("20200100108") or ("20130252585") or ("20120289195") or ("20170080896") or ("20130042314") or ("8752154") or ("8594668") or ("20200086828") or ("20100304716") or ("20150334097") or ("10074224") or ("10037636") or ("20170076520") or ("20200052905") or ("20180108191") or ("20170132861") or ("20160307380") or ("20170345239") or ("9602328") or ("20200349787") or ("20190139337") or ("20180108192") or ("20180248999") or ("8955081") or ("20130343542") or ("10919496") or ("20190363881") or ("10230834") or ("20190152435") or ("9953479") or ("10469534") or ("20140049366") or ("20140007193") or ("20140189834") or ("10891814") or ("9183380") or ("9378359") or ("9286471") or ("20170148023") or ("20140007214") or ("20140007222") or ("20130298208") or ("8869235") or ("20190238592") or ("20140007182") or ("10142420") or ("20140007048") or ("10325260") or ("9529996") or ("20140007183") or ("10044757") or ("20140006772") or ("9934502") or ("20140007192") or ("20170063994") or ("9785920") or ("20160099972") or ("20160362085") or ("9137262")).PN. or (("8410898") or ("8886925") or ("9707928") or ("20190258781") or ("20160086175") or ("20140006347") or ("20120330769") or ("20160068135") or ("9283931") or ("20100297946") or ("10402546") or ("9875589") or ("20190166635") or			

		("20130151111") or ("8588413") or ("9143529") or ("10063595") or ("10595352") or ("20200258335") or ("10200371") or ("8391719") or ("20120253552") or ("20210027270") or ("9143530") or ("20150148989") or ("20200349786") or ("10218702") or ("20170249794") or ("20150358821") or ("20180154865") or ("9565538") or ("20190066425") or ("9428127") or ("20170134382") or ("20180218356") or ("10764752") or ("20130185208") or ("20200025854") or ("20170366521") or ("20130005370") or ("10942242") or ("20200021435") or ("9607293") or ("10484349") or ("9079494") or ("20200280855") or ("10094901") or ("10810569") or ("20170132534") or ("9988016") or ("20200021434") or ("20200351660") or ("20170132533") or ("20150312404") or ("20190041485") or ("10507796") or ("9560499") or ("20150074773") or ("20130344859") or ("20200021436") or ("10277597") or ("10591573") or ("10114102") or ("9936387") or ("20190082047") or ("20190287080") or ("20090215476") or ("20120136732") or ("10939296") or ("9986084") or ("20160155112") or ("20200244450") or ("10924271") or ("20170302785") or ("10412088") or ("10367814") or ("20170132860") or ("9691115") or ("9805534") or ("20170142585") or ("20090132813") or ("20180352583") or ("20140335823") or ("9955352") or ("20160300417") or ("20060101266") or ("20130185152") or ("9264431") or ("20160119360") or ("20170208467") or ("20090216678") or ("20160180618") or ("20140080471") or ("9876774") or ("10249123") or ("8905303") or ("20200285752") or ("9614858") or ("10708771") or ("9131356") or ("8548452") or ("20210158639") or ("9800716") or ("20110215921") or ("8646060") or ("9253633") or ("20190200218") or ("8190129") or ("20160057118") or ("20110047383") or ("9866382") or ("20140325608") or ("20170302449") or ("8768306") or ("20190371104") or				

		("9129283") or ("20130159715") or ("8380990") or ("20140177839") or ("8045961") or ("10284369") or ("20090070263") or ("20090164784") or ("8738916") or ("7489781") or ("10567302") or ("20160021238") or ("10045215") or ("20160368454") or ("20180124233")).PN. or (("10939295") or ("20150215775") or ("7849313") or ("10231273") or ("20180234240") or ("10984416") or ("20210044976") or ("20200302436") or ("8498618") or ("10785026") or ("20180062996") or ("20210006652") or ("8320943") or ("20140022920") or ("20120019379") or ("10657242") or ("8868683") or ("20170001649") or ("10523565") or ("20210047864") or ("9942751") or ("20110246606") or ("8260262") or ("20110293095") or ("10308217") or ("20080257952") or ("20200233949") or ("9783205") or ("10696274") or ("10755509") or ("9369286") or ("9638537") or ("20120202428") or ("20140189840") or ("9699820") or ("20180330559") or ("20190311561") or ("20180343565") or ("20160344559") or ("20160353505") or ("20140095692") or ("9882726") or ("20170353468") or ("20160205238") or ("20120019361") or ("20200279269") or ("20130061055") or ("20150149042") or ("20190349470") or ("20130171978") or ("20150149766") or ("10589720") or ("20180260554") or ("20150222612") or ("20170287247") or ("9009243") or ("20070266250") or ("10154130") or ("20180206124") or ("20160066189") or ("9358940") or ("10419936") or ("9438572") or ("20210122335") or ("20150168175") or ("9685012") or ("20200329345") or ("9288666") or ("20170234691") or ("8725831") or ("20150141043") or ("20200090441") or ("8862055") or ("10853466") or ("20200106877") or ("11019195") or ("20170279957") or ("20160055695") or ("20190253892") or ("20150262439") or ("20200045027") or ("20150177010") or ("20210123407") or ("20140325609")				

		or ("20210090378") or ("20140079217") or ("20160216130") or ("10021565") or ("9772196") or ("20090081989") or ("20150241231") or ("10692313") or ("10484345") or ("20150168174") or ("9729520") or ("9175967") or ("20200097960") or ("20170127275") or ("20150319144") or ("20140022050") or ("8782766") or ("20170148018") or ("8831224") or ("8918846") or ("10033530") or ("20150131797") or ("10440169") or ("9237446") or ("20150046339") or ("20090192912") or ("20170250974") or ("10510073") or ("8933776") or ("20150262170") or ("20130246558") or ("20160316367") or ("8086688") or ("10032240")).PN.				
S236	35	S235 and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 14:38
S237	0	S235 and @ad<"20110422" and vehicle near10 sharing	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 14:40
S238	12	S235 and @ad<"20110422" and vehicle	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 14:40
S239	3	"9189000".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 14:44
S240	3	"9189900".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	AND	ON	2021/06/10 14:45

			DERWENT; IBM_TDB			
S241	439	(Emerging near2 Automotive) (Penilla near2 Angel) (Penilla near2 Albert)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/06/10 14:52
S242	6	S241 and (electronic key vehicle second mobile).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 14:52
S243	172	(("10407026") or ("20200047714") or ("20170267214") or ("20180134254") or ("10442399") or ("20170050617") or ("20160318481") or ("9499129") or ("9663067") or ("9189900") or ("9365188") or ("20190287080") or ("20180025328") or ("9928488") or ("9139091") or ("20180211231") or ("10282708") or ("20200186590") or ("9171268") or ("10225350") or ("20160173568") or ("10652312") or ("10218771") or ("20190190980") or ("20160359980") or ("20190263424") or ("20160198002") or ("20190188651") or ("11017360") or ("9426225") or ("20190199800") or ("20170270490") or ("10554759") or ("10210487") or ("9818088") or ("20180089912") or ("20150203125") or ("20160080500") or ("10286919") or ("9288270") or ("20150304406") or ("9215274") or ("9229905") or ("9697503") or ("9104537") or ("20210048945") or ("9229623") or ("20190265884") or ("10824330") or ("10286798") or ("20180059913") or ("20150178034") or ("9423937") or ("10289288") or ("20200249822") or ("9372607") or ("20190265868") or ("20180024725") or ("20190196851") or ("10572123") or ("9916071") or ("20150210287") or ("9778831") or ("20210114482") or ("20140309891") or ("9348492") or ("20180060742") or ("10821850") or ("20190392107") or	US-PGPUB; USPAT; USOCR	OR	OFF	2021/06/10 14:54

		("9467515") or ("9123186") or ("20170099295") or ("9230440") or ("9082239") or ("20140310788") or ("20140309813") or ("20160247377") or ("20170075701") or ("9545930") or ("20180037193") or ("20170103327") or ("20140310594") or ("20160214535") or ("20140310031") or ("20160086391") or ("20140309806") or ("10286842") or ("10181099") or ("20140310610") or ("9536197") or ("10286875") or ("20140309862") or ("9235941") or ("10223134") or ("9285944") or ("20160205419") or ("20140309863") or ("20160059865") or ("9883209") or ("20140309886") or ("20140309880") or ("20160129883") or ("20140310739") or ("9020697") or ("9809196") or ("9290153") or ("20140309870") or ("20150232065") or ("20160070527") or ("20180009416") or ("9902368") or ("20140143839") or ("20160114745") or ("20190279440") or ("9783162") or ("10131322") or ("20170352215") or ("9870665") or ("11025598") or ("20180009417") or ("20190054899") or ("20170174180") or ("20150363986") or ("9563998") or ("20200134932") or ("10414377") or ("10515489") or ("9994229") or ("9646439") or ("20170316621")).PN. or (("9116786") or ("20140309866") or ("20140309865") or ("20160086393") or ("20180091930") or ("20160325755") or ("20160318467") or ("20140309934") or ("20130204466") or ("20160246526") or ("9142072") or ("20170232888") or ("9536361") or ("20170249095") or ("20130145482") or ("9865113") or ("9008906") or ("20140310075") or ("20140309885") or ("10059342") or ("20160318524") or ("20170352214") or ("20170067747") or ("20150186094") or ("20140309804") or ("20180374126") or ("20160082839") or ("10023117") or ("20140309867") or ("20140307724") or ("9417834") or ("9892584") or ("20160103980") or ("20140309864") or ("20190222484")				

		or ("20170093643") or ("20190259229") or ("20130204943") or ("10600265") or ("9378601") or ("20130218412") or ("10020995")).PN.				
S244	0	S243 and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 14:55
S245	149	"13452882"	US-PGPUB; USPAT	AND	ON	2021/06/10 14:56
S246	149	"13452882" and penilla	US-PGPUB; USPAT	AND	ON	2021/06/10 14:56
S247	57	S243 and @ad<"20150327"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 14:58
S248	1	"16987919"	US-PGPUB; USPAT	AND	ON	2021/06/10 15:02
S249	17	"14063638"	US-PGPUB; USPAT	AND	ON	2021/06/10 15:08
S250	12	S243 and @ad<"20131025"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 15:10
S251	9	first near5 device near10 authoriz$3 near10 second near5 device near10 access$3 near10 vehicle and @ad<"20131025"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 15:20
S252	36	first near5 device near10 authoriz$3 near10 second near5 device near10 vehicle and @ad<"20131025"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 15:27

S253	0	"20110112969".pn. and receiv$3 with from with vehicle @ad<"20131025"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 15:42
S254	2	"20110112969".pn. and receiv$3 with vehicle @ad<"20131025"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 15:43
S255	78	authoriz$3 near10 second near10 (user or device) near10 (access$3 or unlock$3 or operat$3) near10 vehicle @ad<"20131025"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 15:53
S256	198	(authoriz$3 or permit$4) near10 second near10 (user or device) near10 (access$3 or unlock$3 or operat$3) near10 vehicle @ad<"20131025"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 15:53
S257	2	"20130179005".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 16:18
S258	3	"9229905".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 16:25
S259	66	"13842158"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 16:27

S260	3	"9123035".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 16:32
S261	17	"14063638"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 16:32
S262	150	"13452882"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 16:33
S263	20	"10442399".pn. "10407026".pn. "9663067".pn. "9499129".pn. "9365188".pn. "9189900".pn. "9229905".pn. "9123035".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/06/10 16:44
S264	8	"10442399".pn. "10407026".pn. "9663067".pn. "9499129".pn. "9365188".pn. "9189900".pn. "9229905".pn. "9123035".pn.	USPAT	OR	ON	2021/06/10 16:44

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S126	79,560	340/005.610 B60R25/241 H04W4/44 B60L11/1816 B60L11/1822 B60L11/1844 B60L11/1846 B60L11/1848 B60L11/1861 B60R25/2018 B60S5/06 G06Q10/02 G06Q10/20 G06Q20/18 G06Q20/32 G06Q20/3829 G06Q30/00 G06Q30/0643 G06Q30/0645 G06Q50/06 G07C9/00007 G07C9/00309 G07C9/00571 G07F15/005 H04L67/10 H04W4/046 B60L11/1824 B60L2230/10 B60L2230/40 B60L2240/547 B60L2240/70 B60L2250/10 B60L2250/16 B60L2250/20 B60L2270/36 G07C2009/00412 G07C2009/00769	US-PGPUB; USPAT	OR	ON	2019/05/16 18:32

		Y02T10/7005 Y02T10/7044 Y02T10/705 Y02T10/7072 Y02T10/7088 Y02T10/7291 Y02T90/121 Y02T90/124 Y02T90/128 Y02T90/14 Y02T90/16 Y02T90/163 Y02T90/169 Y04S30/14				
S127	0	S126 and (unique code unlock$3 vehicle key video).clm.	US-PGPUB; USPAT	AND	ON	2019/05/16 18:32
S128	7	(unique code unlock$3 vehicle key video).clm.	US-PGPUB; USPAT	AND	ON	2019/05/16 18:32
S231	105,203	340/5.61.ccls. B60R25/241 H04W4/44 B60L53/68 B60L53/14 B60L58/12 B60L53/665 B60L53/80 B60L53/30 B60L53/65 B60R25/2018 B60S5/06 G06Q10/02 G06Q10/20 G06Q20/18 G06Q20/32 G06Q20/3829 G06Q30/00 G06Q30/0643 G06Q30/0645 G06Q50/06 G07C9/00007 G07C9/00309 G07C9/00571 G07F15/005 H04L67/10 B60L2240/547 B60L2240/70 B60L2250/10 B60L2250/16 B60L2250/20 B60L2270/36 G07C2009/00412 G07C2009/00769 Y02T10/7005 Y02T10/7044 Y02T10/705 Y02T10/7072 Y02T10/7088 Y02T10/7291 Y02T90/121 Y02T90/124 Y02T90/128 Y02T90/14 Y02T90/16 Y02T90/163 Y02T90/169 Y04S30/14	US-PGPUB; USPAT	OR	ON	2021/04/05 16:59
S232	442	(Emerging near3 Automotive) (Penilla near3 Angel) (Penilla near3 Albert)	US-PGPUB; USPAT	OR	ON	2021/04/05 16:59
S233	5	S232 and (key restriction vehicle key camera).clm.	US-PGPUB; USPAT	AND	ON	2021/04/05 17:00
S234	7	S231 and (key restriction vehicle key camera).clm.	US-PGPUB; USPAT	AND	ON	2021/04/05 17:05

6/11/2021 6:30:41 PM
C:\Users\zwu1\Documents\EAST\Workspaces\16987919 (Vehicle and cloud system for sharing E-keys to access and use vehicles).wsp

Bibliographic Data

Application No: 16/987,919

Foreign Priority claimed: ○ Yes ◉ No

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

Verified and Acknowledged: /ZHEN Y WU/ (Examiner's Signature) | (Initials)

Title: DIGITAL CAR KEYS AND SHARING OF DIGITAL CAR KEYS USING MOBILE DEVICES

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
08/07/2020	340	2685	VOLTP018.5.C5.6
RULE			

APPLICANTS

Emerging Automotive, LLC, Los Altos, CA,

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Albert S. Penilla, Sunnyvale, CA, UNITED STATES

CONTINUING DATA

This application is a CON of 16653958 10/15/2019

16653958 is a CON of 15854241 12/26/2017 PAT 10442399

15854241 is a CON of 15607418 05/26/2017 PAT 10407026

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FOREIGN APPLICATIONS

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				Application Number	16/987,919
				Filing Date	August 7, 2020
				First Named Inventor	Angel Penilla
				Art Unit	2859
				Examiner Name	
				Attorney Docket Number	VOLTP018.5.C5.6

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				Examiner Name	
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				Art Unit	2859
				Examiner Name	
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				Examiner Name	
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				Attorney Docket Number	VOLTP018.5.C5.6

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				Art Unit	2859
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				Attorney Docket Number	VOLTP018.5.C5.6

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Substitute for form 1449/PTO **INFORMATION DISCLOSURE STATEMENT BY APPLICANT** *(Use as many sheets as necessary)*				***Complete if Known***	
				Application Number	16/987,919
				Filing Date	August 7, 2020
				First Named Inventor	Angel Penilla
				Art Unit	2859
				Examiner Name	
				Attorney Docket Number	VOLTP018.5.C5.6

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				Filing Date	August 7, 2020
				First Named Inventor	Angel Penilla
				Art Unit	2859
				Examiner Name	
				Attorney Docket Number	VOLTP018.5.C5.6

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Substitute for form 1449/PTO **INFORMATION DISCLOSURE STATEMENT BY APPLICANT** *(Use as many sheets as necessary)*				***Complete if Known***	
				Application Number	16/987,919
				Filing Date	August 7, 2020
				First Named Inventor	Angel Penilla
				Art Unit	2859
				Examiner Name	
				Attorney Docket Number	VOLTP018.5.C5.6

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/ZHEN Y WU/ 06/11/2021

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Courtesy Reminder for
Application Serial No: 16/987,919

Attorney Docket No: VOLTP018.5.C5.6
Customer Number: 25920
Date of Electronic Notification: 07/14/2021

This is a courtesy reminder that new correspondence is available for this application. If you have not done so already, please review the correspondence. The official date of notification of the outgoing correspondence will be indicated on the form PTOL-90 accompanying the correspondence.

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PTO/SB/06 (09-11)
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 16/987,919	Filing Date 08/07/2020	☐ To be Mailed

ENTITY: ☐ LARGE ☑ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) 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 $50 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $230 =	
☐ 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

AMENDMENT	10/14/2021	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 14	Minus	** 20	= 0		x $50 =	0
	Independent (37 CFR 1.16(h))	* 2	Minus	*** 3	= 0		x $240 =	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

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=		x $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ 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.	LIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	/JASON B EADDY/
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".	
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.	

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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

Electronic Acknowledgement Receipt

EFS ID:	44036609
Application Number:	16987919
International Application Number:	
Confirmation Number:	1086
Title of Invention:	DIGITAL CAR KEYS AND SHARING OF DIGITAL CAR KEYS USING MOBILE DEVICES
First Named Inventor/Applicant Name:	Angel A. Penilla
Customer Number:	25920
Filer:	Albert S. Penilla
Filer Authorized By:	
Attorney Docket Number:	VOLTP018.5.C5.6
Receipt Date:	14-OCT-2021
Filing Date:	07-AUG-2020
Time Stamp:	22:28:30
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	Amendment/Req. Reconsideration-After Non-Final Reject	VOLTP0185C5_6_Amendment_Efiled.pdf	40874 d07f30264f4edf236014d75a82907890693b4575	no	7
Warnings:					

Information:	
Total Files Size (in bytes):	40874

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.

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of: Angel A. Penilla Application No: 16/987,919 Filed: August 7, 2020 VEHICLES AND CLOUD SYSTEMS FOR SHARING E-KEYS TO ACCESS AND USE VEHICLES	Group Art Unit: 2685 Examiner: Wu, Zhen Y. Atty. Docket No: VOLTP018.5.C5.6 Date: October 14, 2021 Confirmation No.: 1086

CERTIFICATE OF E-Filing
I hereby certify that this correspondence is being transmitted to the United States Patent and Trademark Office via electronic filing with EFS-Web on **Oct. 14, 2021.**

/Albert Penilla/

Signed: _____
Albert Penilla

AMENDMENT

Honorable Commissioner for Patents
Alexandria VA 22313-1450

This paper is in response to the Office action dated July 14, 2021. The date for response extends to October 14, 2021.

Amendments to the claims are reflected in the listing of claims which begin on page 2 of this paper.

Remarks/Arguments begin on page 10 of this paper.

EA_KIA-006884
IPR2024-00981
Emerging Auto EX2024

IN THE CLAIMS

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

Listing of Claims:

1.-5. (Canceled)

6. (**Currently amended**) A method for sharing an electronic key (e-key) to use a vehicle, comprising:

sending, from a first mobile device to a second mobile device, a message to provide access to the vehicle via the e-key, the message includes an access code that **[[that]]** identifies authentication for the vehicle and identifies a level of access for use of the vehicle;

receiving, by the first mobile device, confirmation from the second mobile device that the e-key was created using the authentication and the level of access; and

sending verification of the e-key to the second mobile device, and responsive to the verification the second mobile device is configured to register the e-key with a server to activate the e-key to use the vehicle with the level of access granted by the first mobile device;

wherein the first mobile device is paired with the vehicle by processing a pairing transaction between the first mobile device and the vehicle and registering an administrator e-key with the server, the server including one or more servers, and wherein the server or one or more servers include an automaker server that stores a database for authenticating e-keys to vehicles.

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7. (Original) The method of claim 6, wherein the authentication for the vehicle includes encryption data for the vehicle, the encryption data for the vehicle is provided by the first mobile device, the first mobile device being paired with the vehicle with an administrator e-key, and wherein the access code is generated at the first mobile device, the first mobile device being paired with the vehicle with an administrator e-key.

8. (Original) The method of claim 6, wherein the message to provide access to the vehicle is generated by the first mobile device without server involvement by the server, and the server is used for said registering and activation of the e-key to be used by the second mobile device.

9. (Original) The method of claim 6, further comprising,

accessing an application on the first mobile device to select sharing of the e-key and identification of a recipient of the e-key, the recipient associated with the second mobile device, wherein the first mobile device is paired with the vehicle with an administrator e-key before sending the message to share the e-key with the second mobile device.

10. (Cancel)

11. (Original) The method of claim 6, wherein the e-key, once registered and activated, is configured for use by the second mobile device with electronics and software of the vehicle, and wherein wireless communication between the second mobile device and the vehicle enable use of the e-key to unlock and start the

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vehicle in accordance with said level of access.

12. (Original) The method of claim 11, wherein said wireless communication includes one of WiFi communication, or Bluetooth communication, or near field communication (NFC), or a cellular communication, or radio communication.

13. (Original) The method of claim 6, wherein the first and second mobile devices are one of a smartphone, or a smartwatch, or smart glasses, or a computer, or a digital assistant.

14. (Original) The method of claim 6, wherein the message sent by the first mobile device is via a message notification, or an email address, or a phone number, or a text number, or a message address, or a notification, or a link, or a web address, or a social network address, or a combination of two or more thereof.

15. (Original) The method of claim 6, wherein the level of access defines a privilege of use for the vehicle as set via the first mobile device for use by a user of the second mobile device, the privileges define one of a geographic restriction for where the vehicle is allowed to be used, or a speed restriction, or an occupancy restriction, or a time frame of use restriction, or a time of day use restriction, or a time expiration of use restriction, or a combination of two or more thereof.

16. (Original) The method of claim 6, further comprising,

sending, by the first mobile device, revocation message to disable the e-key shared with the second mobile device.

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Emerging Auto EX2024

17. (Original) The method of claim 6, further comprising:

binding the e-key to the second mobile device once the e-key is registered and activated for use via the second mobile device, and wherein e-key of the second mobile device when activated, enables access of the vehicle via a near field communication (NFC) transmission between the second mobile device and the vehicle.

18. (Original) A method for using an electronic key (e-key) with a vehicle, comprising:

initiating, by a mobile device, a wireless connection with communication circuitry of the vehicle for initiating pairing of the mobile device with the vehicle, the mobile device is configured to use an access code obtained from a server to establish the wireless connection with the vehicle for pairing;

receiving, by the mobile device, encrypted information from the vehicle, the encrypted information is decrypted using data from the access code, wherein a confirmation of the decryption of the information is sent by the mobile device to the vehicle for pairing the mobile device and the vehicle using the e-key; and

communicating, by the mobile device with a server data confirming the pairing to cause registration of the e-key and activation of the e-key, wherein the activation of the e-key enables use of the e-key to unlock and start the vehicle.

19. (Original) The method of claim 18, wherein wireless communication between the mobile device and the vehicle uses a protocol including one of a WiFi communication, or a Bluetooth communication, or a near field communication (NFC), or a cellular communication, or a radio communication.

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20. (Original) The method of claim 18, wherein the mobile device is one of a smartphone, or a smartwatch, or smart glasses, or a computer, or a digital assistant.

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REMARKS

This paper is in response to the Office action of September 14, 2021. The due date for response extends to October 14, 2021. No new matter was introduced by way of this amendment. Reconsideration is requested.

Objections

Claim 6 was amended to remove one iteration of "that."

Rejection under Section 103

Claims 1-9 and 11-17 were rejected under 35 USC 103 over Nashimoto in view of Zaid. This rejection is respectfully traversed.

Without agreement and solely to advance prosecution of the allowed subject matter, the Applicant has canceled the rejected claims.

Allowed claims

Claim 10 was indicated to be allowed and has been amended into claim 6. Claims 18-20 were indicated to be allowable as-filed.

In light of these amendments, the Applicant submits that the claims are in condition for allowance. A notice of allowance is respectfully requested.

If the Examiner has any questions concerning the present amendment, the Examiner is kindly requested to contact the undersigned at (408) 749-6903.

If any other fees are due in connection with filing this amendment, the Commissioner is also authorized to charge Deposit Account No. 50-0805 (Order No VOLTP018.5.C5.6).

Respectfully submitted,
PENILLA IP, APC

/Albert Penilla/

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IPR2024-00981
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Doc Code: DIST.E.FILE **Document Description: Electronic Terminal Disclaimer - Filed**	PTO/SB/26 U.S. Patent and Trademark Office Department of Commerce

Electronic Petition Request	**TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING REJECTION OVER A "PRIOR" PATENT**
Application Number	16987919
Filing Date	07-Aug-2020
First Named Inventor	Angel Penilla
Attorney Docket Number	VOLTP018.5.C5.6
Title of Invention	DIGITAL CAR KEYS AND SHARING OF DIGITAL CAR KEYS USING MOBILE DEVICES

☒ Filing of terminal disclaimer does not obviate requirement for response under 37 CFR 1.111 to outstanding Office Action

☒ This electronic Terminal Disclaimer is not being used for a Joint Research Agreement.

Owner	Percent Interest
Emerging Automotive, LLC	100%

The owner(s) with percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of prior patent number(s)

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as the term of said prior patent is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the prior patent are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term of the prior patent, "as the term of said prior patent is presently shortened by any terminal disclaimer," in the event that said prior patent later:
- expires for failure to pay a maintenance fee;
- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

(●) Terminal disclaimer fee under 37 CFR 1.20(d) is included with Electronic Terminal Disclaimer request. ( ) I certify, in accordance with 37 CFR 1.4(d)(4), that the terminal disclaimer fee under 37 CFR 1.20(d) required for this terminal disclaimer has already been paid in the above-identified application.	
Applicant claims the following fee status: (●) Small Entity ( ) Micro Entity ( ) Regular Undiscounted I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.	
THIS PORTION MUST BE COMPLETED BY THE SIGNATORY OR SIGNATORIES I certify, in accordance with 37 CFR 1.4(d)(4) that I am: (●) An attorney or agent registered to practice before the Patent and Trademark Office who is of record in this application Registration Number 39487 ( ) A sole inventor ( ) A joint inventor; I certify that I am authorized to sign this submission on behalf of all of the inventors as evidenced by the power of attorney in the application ( ) A joint inventor; all of whom are signing this request	
Signature	/Albert Penilla/
Name	Albert Penilla

*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).
Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

Electronic Patent Application Fee Transmittal

Application Number:	16987919
Filing Date:	07-Aug-2020
Title of Invention:	DIGITAL CAR KEYS AND SHARING OF DIGITAL CAR KEYS USING MOBILE DEVICES
First Named Inventor/Applicant Name:	Angel A. Penilla
Filer:	Albert S. Penilla
Attorney Docket Number:	VOLTP018.5.C5.6

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
STATUTORY OR TERMINAL DISCLAIMER	2814	1	170	170
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**170**

Doc Code: DISQ.E.FILE
Document Description: Electronic Terminal Disclaimer – Approved

Application No.: 16987919

Filing Date: 07-Aug-2020

Applicant/Patent under Reexamination: Penilla

Electronic Terminal Disclaimer filed on November 22, 2021

☒ APPROVED

This patent is subject to a terminal disclaimer

☐ DISAPPROVED

Approved/Disapproved by: Electronic Terminal Disclaimer automatically approved by EFS-Web

U.S. Patent and Trademark Office

Electronic Acknowledgement Receipt	
EFS ID:	44344551
Application Number:	16987919
International Application Number:	
Confirmation Number:	1086
Title of Invention:	DIGITAL CAR KEYS AND SHARING OF DIGITAL CAR KEYS USING MOBILE DEVICES
First Named Inventor/Applicant Name:	Angel A. Penilla
Customer Number:	25920
Filer:	Albert S. Penilla
Filer Authorized By:	
Attorney Docket Number:	VOLTP018.5.C5.6
Receipt Date:	22-NOV-2021
Filing Date:	07-AUG-2020
Time Stamp:	17:02:40
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$170
RAM confirmation Number	E2021ALH02364323
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Terminal Disclaimer-Filed (Electronic)	eTerminal-Disclaimer.pdf	41648 73c425dd9216b36b6e7040ec4bb8d27dd3caae1d	no	2
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	37873 abb25826765a47213209aa5e55039cfcc0f2932a	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	79521		

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

25920 7590 12/07/2021

PENILLA IP, APC - PATENT LAW
1200 PACIFIC AVENUE
SUITE 250
SANTA CRUZ, CA 95060

EXAMINER
WU, ZHEN Y

ART UNIT	PAPER NUMBER
2685	

DATE MAILED: 12/07/2021

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/987,919	08/07/2020	Angel A. Penilla	VOLTP018.5.C5.6	1086

TITLE OF INVENTION: DIGITAL CAR KEYS AND SHARING OF DIGITAL CAR KEYS USING MOBILE DEVICES

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$600	$0.00	$0.00	$600	03/07/2022

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: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

EA_KIA-006898
IPR2024-00981
Emerging Auto EX2024

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (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)

25920 7590 12/07/2021
PENILLA IP, APC - PATENT LAW
1200 PACIFIC AVENUE
SUITE 250
SANTA CRUZ, CA 95060

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 transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/987,919	08/07/2020	Angel A. Penilla	VOLTP018.5.C5.6	1086

TITLE OF INVENTION: DIGITAL CAR KEYS AND SHARING OF DIGITAL CAR KEYS USING MOBILE DEVICES

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$600	$0.00	$0.00	$600	03/07/2022

EXAMINER	ART UNIT	CLASS-SUBCLASS
WU, ZHEN Y	2685	340-005610

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 03-09 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 _____
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 must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). 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. Fees submitted: ❑Issue Fee ❑Publication Fee (if required) ❑Advance Order - # of Copies _____

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

❑ Electronic Payment via EFS-Web ❑ Enclosed check ❑ Non-electronic payment by credit card (Attach form PTO-2038)

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

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. _____

PTOL-85 Part B (08-18) Approved for use through 01/31/2020 OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

EA_KIA-006899
IPR2024-00981
Emerging Auto EX2024

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/987,919	08/07/2020	Angel A. Penilla	VOLTP018.5.C5.6	1086

25920 7590 12/07/2021

PENILLA IP, APC - PATENT LAW
1200 PACIFIC AVENUE
SUITE 250
SANTA CRUZ, CA 95060

EXAMINER	
WU, ZHEN Y	

ART UNIT	PAPER NUMBER
2685	

DATE MAILED: 12/07/2021

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.

PTOL-85 (Rev. 02/11)

EA_KIA-006900
IPR2024-00981
Emerging Auto EX2024

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 30 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.** 16/987,919	**Applicant(s)** Penilla et al.	
	Examiner ZHEN Y WU	**Art Unit** 2685	**AIA (FITF) 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 10/14/2021.
   ☐ 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 6-9 and 11-20 . 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)
2. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____.
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.
4. ☑ Interview Summary (PTO-413), Paper No./Mail Date. _____.
5. ☐ Examiner's Amendment/Comment
6. ☑ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/ZHEN Y WU/
Primary Examiner, Art Unit 2685

EA_KIA-006902
IPR2024-00981
Emerging Auto EX2024

Allowable Subject Matter

The following is an examiner's statement of reasons for allowance: claims 6-9 and 11-20 are indicated to be allowable as the closet prior arts by Nishimoto (Pub. No.: US 2013/0179005 A1) and Zaid (Pub. No.: US 2011/0112969 A1) doe not teach or fairly suggest the applicant's claimed invention. The distinguishing elements of the claim "wherein the first mobile device is paired with the vehicle by processing a pairing transaction between the first mobile device and the vehicle and registering an administrator e-key with the server, the server including one or more servers, and wherein the server or one or more servers include an automaker server that stores a database for authenticating e-keys to vehicles." as recited in claim 6 and "initiating, by a mobile device, a wireless connection with communication circuitry of the vehicle for initiating pairing of the mobile device with the vehicle, the mobile device is configured to use an access code obtained from a server to establish the wireless connection with the vehicle for pairing; receiving, by the mobile device, encrypted information from the vehicle, the encrypted information is decrypted using data from the access code, wherein a confirmation of the decryption of the information is sent by the mobile device to the vehicle for pairing the mobile device and the vehicle using the e-key" as recited in claim 18 are allowable subject matter. The various claimed limitations mentioned in the claims are not taught or suggested by the prior art taken either singly or in combination, with emphasize that it is each claim, taken as a whole, including the interrelationships and interconnections between various

claimed elements make them allowable over the prior art of record.

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 submissions should be clearly labeled "Comments on Statement of Reasons for Allowance.".

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ZHEN Y WU whose telephone number is (571)272-5711. The examiner can normally be reached Monday-Friday, 10AM-6PM, EST.

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, Hai Phan can be reached on 5712726338. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of published or unpublished applications may be obtained from Patent Center. Unpublished application information in Patent Center is available to registered users. To file and manage patent

submissions in Patent Center, visit: https://patentcenter.uspto.gov. Visit https://www.uspto.gov/patents/apply/patent-center for more information about Patent Center and https://www.uspto.gov/patents/docx for information about filing in DOCX format. For additional questions, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ZHEN Y WU/
Primary Examiner, Art Unit 2685

Examiner-Initiated Interview Summary	**Application No.** 16/987,919	**Applicant(s)** Penilla et al.		
	Examiner ZHEN Y WU	**Art Unit** 2685	**AIA (First Inventor to File) Status** No	**Page** 1 of 1

All Participants (applicant, applicants representative, PTO personnel)	**Title**	**Type**
ZHEN Y WU	Primary Examiner	Telephonic
Albert Penilla	Attorney of Record	

Date of Interview: 22 November 2021

Issues Discussed:

Non-statutory Double Patenting

Examiner requested for a terminal disclaimer to overcome the non-statutory double patenting. Mr. Penilla will review and file the TD accordingly.

/ZHEN Y WU/ Primary Examiner, Art Unit 2685	

Applicant is reminded that a complete written statement as to the substance of the interview must be made of record in the application file. It is the applicants responsibility to provide the written statement, unless the interview was initiated by the Examiner and the Examiner has indicated that a written summary will be provided. See MPEP 713.04
Please further see:
MPEP 713.04
Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews, paragraph (b)
37 CFR § 1.2 Business to be transacted in writing

Applicant recordation instructions: It is not necessary for applicant to provide a separate record of the substance of interview.

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

EA_KIA-006906
IPR2024-00981
Emerging Auto EX2024

Notice of References Cited	Application/Control No. 16/987,919	Applicant(s)/Patent Under Reexamination Penilla et al.	
	Examiner ZHEN Y WU	Art Unit 2685	Page 1 of 3

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*	B	US-6690302-B1	02-2004	Inomata; Jin	G08B25/016	340/426.2
*	C	US-6850898-B1	02-2005	Murakami; Hiroshi	B60L53/305	705/13
*	D	US-20050038573-A1	02-2005	Goudy, Roy Wesley	B60R16/0231	701/1
*	E	US-20050275543-A1	12-2005	Hisano, Atsushi	G08B25/08	340/573.1
*	F	US-20060007309-A1	01-2006	Machinist; Robert B.	G08G1/146	348/143
*	G	US-20070213887-A1	09-2007	Woodings; Ryan W.	G01S5/0027	701/1
*	H	US-20080072284-A1	03-2008	Horvitz; Eric	G06F30/00	726/2
*	I	US-20090062971-A1	03-2009	Rottig; Andree	G01C21/20	701/2
*	J	US-20100037057-A1	02-2010	Shim; Hyong	G06F21/606	713/171
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*		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.

EA_KIA-006907
IPR2024-00981
Emerging Auto EX2024

Notice of References Cited	Application/Control No. 16/987,919	Applicant(s)/Patent Under Reexamination Penilla et al.	
	Examiner ZHEN Y WU	Art Unit 2685	Page 2 of 3

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*	B	US-20110112969-A1	05-2011	Zaid; Sam	G06Q50/30	705/50
*	C	US-20120040635-A1	02-2012	Boucher; Joseph N.	H04W4/90	455/404.2
*	D	US-20120105197-A1	05-2012	Kobres; Erick	G06Q10/02	340/5.72
*	E	US-20120159156-A1	06-2012	Barham; Paul	G06F21/604	713/156
*	F	US-20130179005-A1	07-2013	NISHIMOTO; Keigo	B60R25/24	701/2
*	G	US-20140019280-A1	01-2014	Medeiros; Sandra W.	G06Q40/08	705/26.1
*	H	US-20140172727-A1	06-2014	Abhyanker; Raj V.	G06Q30/0645	705/307
*	I	US-20140270172-A1	09-2014	Peirce; Kenneth L.	H04L9/083	380/270
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FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
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NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
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Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

EA_KIA-006908
IPR2024-00981
Emerging Auto EX2024

Notice of References Cited	Application/Control No. 16/987,919	Applicant(s)/Patent Under Reexamination Penilla et al.	
	Examiner ZHEN Y WU	Art Unit 2685	Page 3 of 3

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-10562492-B2	02-2020	Joao; Raymond Anthony	B64D45/0031	1/1
*	B	US-10730481-B2	08-2020	Burgkhardt; Dennis	B60R25/241	1/1
*	C	US-10800379-B2	10-2020	Chin; Kyuhwan	H04W12/069	1/1
*	D	US-11006275-B1	05-2021	Lee; Jeongtae	H04W12/069	1/1
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FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
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	S					
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NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
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EA_KIA-006909
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Emerging Auto EX2024

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/987,919	Penilla et al.
	Examiner	**Art Unit**
	ZHEN Y WU	2685

CPC							
Symbol						**Type**	**Version**
B60L	/	53	/	65		F	2019-02-01
B60R	/	25	/	2018		I	2013-01-01
G07C	/	9	/	00571		I	2013-01-01
G06Q	/	20	/	32		I	2013-01-01
G06Q	/	20	/	3829		I	2013-01-01
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G06Q	/	30	/	00		I	2013-01-01
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NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	14	
/ZHEN Y WU/ Primary Examiner, Art Unit 2685	03 November 2021	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	6	1

U.S. Patent and Trademark Office — Part of Paper No.: 20211103

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Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/987,919	Penilla et al.
	Examiner	**Art Unit**
	ZHEN Y WU	2685

CPC							
Symbol						**Type**	**Version**
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CPC Combination Sets								
Symbol					**Type**	**Set**	**Ranking**	**Version**
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NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	14	
/ZHEN Y WU/ Primary Examiner, Art Unit 2685	03 November 2021	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	6	1

U.S. Patent and Trademark Office — Part of Paper No.: 20211103

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IPR2024-00981
Emerging Auto EX2024

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/987,919	Penilla et al.
	Examiner	**Art Unit**
	ZHEN Y WU	2685

INTERNATIONAL CLASSIFICATION					
CLAIMED					
G05B	/	19	/	00	

NON-CLAIMED					
	/		/		

US ORIGINAL CLASSIFICATION	
CLASS	**SUBCLASS**
340	5.61

CROSS REFERENCES(S)						
CLASS	**SUBCLASS (ONE SUBCLASS PER BLOCK)**					

NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 14	
/ZHEN Y WU/ Primary Examiner, Art Unit 2685 (Primary Examiner)	03 November 2021 (Date)	O.G. Print Claim(s) 6	O.G. Print Figure 1

U.S. Patent and Trademark Office — Part of Paper No.: 20211103

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IPR2024-00981
Emerging Auto EX2024

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/987,919	Penilla et al.
	Examiner	**Art Unit**
	ZHEN Y WU	2685

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIMS

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	6	10	16												
2	7	11	17												
3	8	12	18												
4	9	13	19												
5	11	14	20												
6	12														
7	13														
8	14														
9	15														

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	14	
/ZHEN Y WU/ Primary Examiner, Art Unit 2685	03 November 2021	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	6	1

U.S. Patent and Trademark Office — Part of Paper No.: 20211103

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IPR2024-00981
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Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/987,919	Penilla et al.
	Examiner	**Art Unit**
	ZHEN Y WU	2685

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

CLAIMS

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
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EA_KIA-006914

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Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/987,919	Penilla et al.
	Examiner	Art Unit
	ZHEN Y WU	2685

CPC - Searched*		
Symbol	**Date**	**Examiner**
B60L 53/65,53/68, 53/665 , 53/80 ,2250/20, 2270/36 , 2240/547 , 2240/70 , 2250/10 , 2250/16	07/09/2021	ZYW
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Y02T 10/70, 10/7072, 10/72, 90/12 , 90/14 , 90/16, 90/167	07/09/2021	ZYW
H04W 4/44	07/09/2021	ZYW
G07C 9/20	07/09/2021	ZYW
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G06Q 10/02, 10/20, 20/18 , 20/32 , 20/3829 , 30/00 , 30/0643,30/0645 , 50/06	07/09/2021	ZYW
G07C 9/00309 , 9/00571	07/09/2021	ZYW
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CPC Combination Sets - Searched*		
Symbol	**Date**	**Examiner**

US Classification - Searched*			
Class	**Subclass**	**Date**	**Examiner**
340	5.61	07/09/2021	ZYW

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

/ZHEN Y WU/ Primary Examiner, Art Unit 2685	

EA_KIA-006915
IPR2024-00981
Emerging Auto EX2024

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/987,919	Penilla et al.
	Examiner	Art Unit
	ZHEN Y WU	2685

Search Notes		
Search Notes	**Date**	**Examiner**
All CPC and USPC classifications listed were searched in combination with keywords in EAST	07/09/2021	ZYW
Inventor, assignee and double patenting searches	07/09/2021	ZYW
NPL searches (eg. Google, Google scholar, IP.com)	07/09/2021	ZYW
Updated searches	11/23/2021	ZYW

Interference Search			
US Class/CPC Symbol	**US Subclass/CPC Group**	**Date**	**Examiner**
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340	5.61	11/23/2021	ZYW

/ZHEN Y WU/ Primary Examiner, Art Unit 2685	

EA_KIA-006916
IPR2024-00981
Emerging Auto EX2024

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
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L2	1	L1 and (electronic key pair$3 decrypt$3 regist$6 activat$3).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/11/23 14:41
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		US-20120232965-$ | US-20120262002-$ | US-20120268068-$ | US-20120268076-$ | US-20120268242-$ | US-20120280654-$ | US-20120296512-$ | US-20120303397-$ | US-20120306445-$ | US-20120310713-$ | US-20120316671-$ | US-20130002876-$ | US-20130020139-$ | US-20130021162-$ | US-20130037339-$ | US-20130099892-$ | US-20130103236-$ | US-20130110296-$ | US-20130110632-$ | US-20130110653-$ | US-20130127247-$ | US-20130135093-$ | US-20130144520-$ | US-20130145065-$ | US-20130179057-$ | US-20130204466-$ | US-20130241720-$ | US-20130253746-$ | US-20130280018-$ | US-20130300554-$ | US-20130317693-$ | US-20130317694-$ | US-20130328387-$ | US-20130338820-$ | US-20130342363-$ | US-20140002015-$ | US-20140019280-$ | US-20140021908-$ | US-20140042968-$).DID.				
S3	188	(US-20140047107-$ | US-20140066049-$ | US-20140089016-$ | US-20140106726-$ | US-20140118107-$ | US-20140120829-$ | US-20140125355-$ | US-20140142783-$ | US-20140163771-$ | US-20140163774-$ | US-20140164559-$ | US-20140172192-$ | US-20140172265-$ | US-20140172727-$ | US-20140179353-$ | US-20140200742-$ | US-20140203077-$ | US-20140207333-$ | US-20140214261-$ | US-20140214321-$ | US-20140218189-$ | US-20140232331-$ | US-20140236414-$ | US-20140236463-$ | US-20140253018-$ | US-20140277936-$ | US-20140278089-$ | US-20140300739-$ | US-3690397-$ | US-3799063-$ | US-3867682-$ | US-4052655-$ | US-4102273-$ | US-4132174-$ | US-4162445-$ | US-4309644-$ | US-4347472-$ | US-4383210-$ | US-4389608-$ | US-4405891-$ | US-4433278-$ | US-	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/02 23:49

		4450400-$ | US-4532418-$ | US- 4789047-$ | US-4815840-$ | US- 5049802-$ | US-5121112-$ | US- 5132666-$ | US-5184058-$ | US- 5202617-$ | US-5297664-$ | US- 5306999-$ | US-5315227-$ | US- 5327066-$ | US-5343970-$ | US- 5422624-$ | US-5434781-$ | US- 5441122-$ | US-5449995-$ | US- 5487002-$ | US-5488283-$ | US- 5492190-$ | US-5548200-$ | US- 5549443-$ | US-5555502-$ | US- 5563491-$ | US-5585205-$ | US- 5594318-$ | US-5595271-$ | US- 5596258-$ | US-5612606-$ | US- 5627752-$ | US-5636145-$ | US- 5642270-$ | US-5666102-$ | US- 5691695-$ | US-5694019-$ | US- 5701706-$ | US-5736833-$ | US- 5760569-$ | US-5778326-$ | US- 5790976-$ | US-5892598-$ | US- 5916285-$ | US-5974136-$ | US- 5998963-$ | US-6014597-$ | US- 6049745-$ | US-6067008-$ | US- 6081205-$ | US-6085131-$ | US- 6151539-$ | US-6175789-$ | US- 6225776-$ | US-6234932-$ | US- 6236333-$ | US-6252380-$ | US- 6301531-$ | US-6307349-$ | US- 6330497-$ | US-6330499-$ | US- 6370475-$ | US-6373380-$ | US- 6416209-$ | US-6434465-$ | US- 6456041-$ | US-6466658-$ | US- 6480767-$ | US-6487477-$ | US- 6498454-$ | US-6511192-$ | US- 6586866-$ | US-6614204-$ | US- 6629024-$ | US-6727809-$ | US- 6741036-$ | US-6765495-$ | US- 6789733-$ | US-6794849-$ | US- 6850898-$ | US-6915869-$ | US- 6922629-$ | US-6937140-$ | US- 6940254-$ | US-7013205-$ | US- 7039389-$ | US-7084781-$ | US- 7201384-$ | US-7269416-$ | US- 7289611-$ | US-7376497-$ | US- 7379541-$ | US-7402978-$ | US- 7532965-$ | US-7565396-$ | US- 7630802-$ | US-7650210-$ | US- 7674536-$ | US-7683771-$ | US- 7693609-$ | US-7698078-$ | US- 7740092-$ | US-7751945-$ | US- 7778746-$ | US-7796052-$ | US- 7850351-$ | US-7869576-$ | US-			

		7885893-$ | US-7949435-$ | US-7956570-$ | US-7979198-$ | US-7986126-$ | US-7991665-$ | US-8006793-$ | US-8027843-$ | US-8036788-$ | US-8054048-$ | US-8072318-$ | US-8103391-$ | US-8256553-$ | US-8262268-$ | US-8265816-$ | US-8266075-$ | US-8294420-$ | US-8333492-$ | US-8336664-$ | US-8350526-$ | US-8366371-$ | US-8392065-$ | US-8405347-$ | US-8482255-$ | US-8483775-$ | US-8483907-$ | US-8490005-$ | US-8508188-$ | US-8521599-$ | US-8527135-$ | US-8527146-$ | US-8552686-$ | US-8589019-$ | US-8624719-$ | US-8630741-$ | US-8635091-$ | US-8643329-$ | US-8660734-$ | US-8686864-$ | US-8694328-$ | US-8706394-$).DID.				
S4	13	(US-8713121-$ | US-8717170-$ | US-8725551-$ | US-8751065-$ | US-8751271-$ | US-8760432-$ | US-8799037-$ | US-8816845-$ | US-8818622-$ | US-8818725-$ | US-8819414-$ | US-8825222-$ | US-8836281-$).DID.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/02 23:49
S5	357	S2 or S3 or S4	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/02 23:49
S6	4	S5 and (vehicle near2 sharing)	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/02 23:50
S7	43	S5 and (vehicle or car) near3 (sharing or rental)	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/02 23:51
S8	1	"15824662"	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 10:49
S9	283	(Emerging near2 Automotive) (Penilla near2 Angel) (Penilla near2 Albert)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/01/03 13:43
S11	5	S9 and (unique code unlock$3 vehicle key).clm.	US-PGPUB; USPAT; USOCR;	AND	ON	2019/01/03 13:44

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
S12	11	"14063638"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/03 13:51
S13	4	S9 and (unique code unlock$3 vehicle key decrypt$3).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/03 14:07
S14	3	S9 and (unique code unlock$3 vehicle key decrypt$3 period).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/03 14:10
S15	3	S9 and (unique code vehicle key decrypt$3 period).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/03 14:15
S16	2	S9 and (unique code vehicle key screen server).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/03 14:17
S17	2	"15607418" "15344566" "15180306" "14303442" "14063638" "13842158" "14063638" "13452882"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/03 14:24
S18	102	"15607418" "15344566" "15180306" "14303442" "14063638" "13842158" "14063638" "13452882"	US-PGPUB; USPAT; USOCR; FPRS; EPO;	OR	ON	2019/01/03 14:24

			JPO; DERWENT; IBM_TDB			
S19	101	"15607418" "15344566" "15180306" "14303442" "14063638" "13842158" "14063638" "13452882"	US-PGPUB; USPAT; USOCR	OR	ON	2019/01/03 14:24
S20	50	"15607418" "15344566" "15180306" "14303442" "14063638" "13842158" "14063638" "13452882"	US-PGPUB	OR	ON	2019/01/03 14:24
S21	7	S9 and (access code vehicle key screen server).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/03 14:27
S22	34	"607418".ap. "344566".ap. "180306".ap. "303442".ap. "063638".ap. "842158".ap. "063638".ap. "452882".ap.	US-PGPUB	OR	ON	2019/01/03 14:47
S23	86	"607418".ap. "344566".ap. "180306".ap. "303442".ap. "063638".ap. "842158".ap. "063638".ap. "452882".ap.	US-PGPUB; USPAT; USOCR	OR	ON	2019/01/03 14:47
S24	0	S23 and (vehicle unlock$3 server mobile access code key screen).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 14:49
S25	3	S23 and (vehicle unlock$3 server access code key screen).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 14:51
S26	3	S23 and (vehicle unlock$3 server access code key screen computer).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 14:52
S27	8	"9663067".pn. "9499129".pn. "9365188".pn. "9189900".pn. "9229905".pn. "9189990".pn. "9123035".pn. "20170267214".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2019/01/03 15:06
S28	2	S27 and (vehicle unlock$3 server access code key screen computer).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 15:08
S29	2	S27 and (vehicle unlock$3 server access code key screen start$3).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 15:09
S30	1	S27 and (vehicle account access code encrypt$3 decrypt$3 key period).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 15:19

S31	1	"20170267214".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2019/01/03 15:21
S32	2	S27 and (vehicle account access code decrypt$3 key period).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 15:23
S33	2	S27 and (vehicle account (encrypt$3 or decrypt$3) access code period server).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 15:27
S34	0	S27 and (brand).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 15:28
S35	0	S9 and (vehicle access code brand).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 15:28
S36	2	"9499129".pn. "9189900".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2019/01/03 15:34
S37	2	S36 and location	US-PGPUB; USPAT; USOCR	OR	ON	2019/01/03 15:48
S38	0	S36 and (location).clm.	US-PGPUB; USPAT; USOCR	OR	ON	2019/01/03 15:49
S39	0	S36 and (another).clm.	US-PGPUB; USPAT; USOCR	OR	ON	2019/01/03 15:50
S40	1	S36 and (owner).clm.	US-PGPUB; USPAT; USOCR	OR	ON	2019/01/03 15:50
S41	0	S36 and (session).clm.	US-PGPUB; USPAT; USOCR	OR	ON	2019/01/03 15:51
S42	2	"9633067".pn. or "20170267214".pn.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 15:54
S43	1	S42 and (notification).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 15:54
S44	1	S42 and (location or geolocation).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 15:57
S45	0	S42 and (area).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 15:57

S46	0	S42 and ((door or truck) operation).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 15:58
S47	0	S42 and (another).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 15:58
S48	0	S42 and (notification intended).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 15:58
S49	0	S42 and (confirm).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 15:59
S50	0	S42 and (receipt).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 15:59
S51	0	S42 and (wireless).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 15:59
S52	0	S42 and (brand).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 16:00
S53	0	S42 and (camera).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 16:00
S54	0	S42 and (video).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 16:00
S55	1	"9365188".pn.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 16:05
S56	3	S27 and (vehicle unlock$3 server access key screen start$3).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 16:07
S57	3	"9229905".pn. "9189990".pn. "9123035".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2019/01/03 16:10
S58	11	"14063638"	US-PGPUB; USPAT; USOCR	OR	ON	2019/01/03 16:11
S59	13	"063638".ap.	US-PGPUB; USPAT; USOCR	OR	ON	2019/01/03 16:11
S60	7	"9663067".pn. "9499129".pn. "9365188".pn. "9189900".pn. "9229905".pn. "9189900".pn. "9123035".pn. "20170267214".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2019/01/03 16:11

S61	3	"9229905".pn. "9189900".pn. "9123035".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2019/01/03 16:12
S62	2	S60 and (vehicle unlock$3 server access code key screen start$3).clm.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 16:13
S63	0	"2004022287".pn.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 16:19
S64	1	"20040222877".pn.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 16:19
S65	1	"20100037057".pn.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 16:19
S66	1	"20030160692".pn.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/03 16:21
S67	16	(car or vehicle) near2 (rental or sharing) with remote near10 unlock	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/03 16:32
S68	3	"20110060480".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/03 16:36
S69	784	car near2 rental with account	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/04 13:22
S70	6	(US-20180134254-$ or US-20110112969-$ or US-20140172727-$ or US-20100037057-$ or US-20110060480-$).did. or (US-6850898-$).did.	US-PGPUB; USPAT	AND	ON	2019/01/04 13:36
S71	4	S70 and notification	US-PGPUB; USPAT; USOCR; FPRS; EPO;	AND	ON	2019/01/04 13:36

			JPO; DERWENT; IBM_TDB			
S72	3	S70 and notif$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/04 13:37
S73	156	(US-0233077-$ | US-20020064258-$ | US-20020085043-$ | US-20020133273-$ | US-20030137277-$ | US-20030153278-$ | US-20030205619-$ | US-20030234325-$ | US-20040046506-$ | US-20040064235-$ | US-20040092253-$ | US-20040093155-$ | US-20040265671-$ | US-20050021190-$ | US-20050044245-$ | US-20050231119-$ | US-20060125620-$ | US-20060182241-$ | US-20060282381-$ | US-20060287783-$ | US-20070068714-$ | US-20070126395-$ | US-20070282495-$ | US-20080039979-$ | US-20080039989-$ | US-20080040129-$ | US-20080040223-$ | US-20080040295-$ | US-20080052145-$ | US-20080086411-$ | US-20080097904-$ | US-20080155008-$ | US-20080180027-$ | US-20080203973-$ | US-20080228613-$ | US-20080281663-$ | US-20080294283-$ | US-20080312782-$ | US-20090011639-$ | US-20090021213-$ | US-20090021385-$ | US-20090030712-$ | US-20090043519-$ | US-20090058355-$ | US-20090066287-$ | US-20090076913-$ | US-20090082957-$ | US-20090091291-$ | US-20090092864-$ | US-20090144001-$ | US-20090157289-$ | US-20090164473-$ | US-20090174365-$ | US-20090177580-$ | US-20090210357-$ | US-20090287578-$ | US-20090312903-$ | US-20090313032-$ | US-20090313033-$ | US-20090313034-$ | US-20090313098-$ | US-20090313104-$ | US-20090313174-$ | US-	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/04 13:41

		20100013434-$ | US-20100017045-$ | US-20100017249-$ | US-20100049396-$ | US-20100049533-$ | US-20100049610-$ | US-20100049639-$ | US-20100049737-$ | US-20100057306-$ | US-20100112843-$ | US-20100141206-$ | US-20100161481-$ | US-20100161482-$ | US-20100169008-$ | US-20100198508-$ | US-20100198513-$ | US-20100211340-$ | US-20100211643-$ | US-20100222939-$ | US-20100268426-$ | US-20100280956-$ | US-20100304349-$ | US-20110032110-$ | US-20110074350-$ | US-20110074351-$ | US-20110077809-$ | US-20110106329-$ | US-20110112969-$ | US-20110130885-$ | US-20110187521-$ | US-20110191265-$ | US-20110193522-$ | US-20110202218-$ | US-20110246252-$ | US-20110279083-$ | US-20110309929-$ | US-20120233077-$ | US-20120013300-$ | US-20120019204-$ | US-20120025765-$ | US-20120028680-$ | US-20120041624-$ | US-20120053754-$ | US-20120074903-$ | US-20120105197-$ | US-20120123670-$ | US-20120136743-$ | US-20120136802-$ | US-20120158244-$ | US-20120179323-$ | US-20120218128-$ | US-20120229056-$ | US-20120229085-$ | US-20120232965-$ | US-20120262002-$ | US-20120268068-$ | US-20120268076-$ | US-20120268242-$ | US-20120280654-$ | US-20120296512-$ | US-20120303397-$ | US-20120306445-$ | US-20120310713-$ | US-20120316671-$ | US-20130002876-$ | US-20130020139-$ | US-20130021162-$ | US-20130037339-$ | US-20130099892-$ | US-20130103236-$ | US-20130110296-$ | US-20130110632-$ | US-20130110653-$ | US-20130127247-$ | US-20130135093-$ | US-20130144520-$ | US-20130145065-$ | US-20130179057-$ | US-20130204466-$ | US-20130241720-$ |			

		US-20130253746-$ | US-20130280018-$ | US-20130300554-$ | US-20130317693-$ | US-20130317694-$ | US-20130328387-$ | US-20130338820-$ | US-20130342363-$ | US-20140002015-$ | US-20140019280-$ | US-20140021908-$ | US-20140042968-$).DID.				
S74	188	(US-20140047107-$ | US-20140066049-$ | US-20140089016-$ | US-20140106726-$ | US-20140118107-$ | US-20140120829-$ | US-20140125355-$ | US-20140142783-$ | US-20140163771-$ | US-20140163774-$ | US-20140164559-$ | US-20140172192-$ | US-20140172265-$ | US-20140172727-$ | US-20140179353-$ | US-20140200742-$ | US-20140203077-$ | US-20140207333-$ | US-20140214261-$ | US-20140214321-$ | US-20140218189-$ | US-20140232331-$ | US-20140236414-$ | US-20140236463-$ | US-20140253018-$ | US-20140277936-$ | US-20140278089-$ | US-20140300739-$ | US-3690397-$ | US-3799063-$ | US-3867682-$ | US-4052655-$ | US-4102273-$ | US-4132174-$ | US-4162445-$ | US-4309644-$ | US-4347472-$ | US-4383210-$ | US-4389608-$ | US-4405891-$ | US-4433278-$ | US-4450400-$ | US-4532418-$ | US-4789047-$ | US-4815840-$ | US-5049802-$ | US-5121112-$ | US-5132666-$ | US-5184058-$ | US-5202617-$ | US-5297664-$ | US-5306999-$ | US-5315227-$ | US-5327066-$ | US-5343970-$ | US-5422624-$ | US-5434781-$ | US-5441122-$ | US-5449995-$ | US-5487002-$ | US-5488283-$ | US-5492190-$ | US-5548200-$ | US-5549443-$ | US-5555502-$ | US-5563491-$ | US-5585205-$ | US-5594318-$ | US-5595271-$ | US-5596258-$ | US-5612606-$ | US-5627752-$ | US-5636145-$ | US-5642270-$ | US-5666102-$ | US-5691695-$ | US-5694019-$ | US-	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/04 13:41

		5701706-$ | US-5736833-$ | US- 5760569-$ | US-5778326-$ | US- 5790976-$ | US-5892598-$ | US- 5916285-$ | US-5974136-$ | US- 5998963-$ | US-6014597-$ | US- 6049745-$ | US-6067008-$ | US- 6081205-$ | US-6085131-$ | US- 6151539-$ | US-6175789-$ | US- 6225776-$ | US-6234932-$ | US- 6236333-$ | US-6252380-$ | US- 6301531-$ | US-6307349-$ | US- 6330497-$ | US-6330499-$ | US- 6370475-$ | US-6373380-$ | US- 6416209-$ | US-6434465-$ | US- 6456041-$ | US-6466658-$ | US- 6480767-$ | US-6487477-$ | US- 6498454-$ | US-6511192-$ | US- 6586866-$ | US-6614204-$ | US- 6629024-$ | US-6727809-$ | US- 6741036-$ | US-6765495-$ | US- 6789733-$ | US-6794849-$ | US- 6850898-$ | US-6915869-$ | US- 6922629-$ | US-6937140-$ | US- 6940254-$ | US-7013205-$ | US- 7039389-$ | US-7084781-$ | US- 7201384-$ | US-7269416-$ | US- 7289611-$ | US-7376497-$ | US- 7379541-$ | US-7402978-$ | US- 7532965-$ | US-7565396-$ | US- 7630802-$ | US-7650210-$ | US- 7674536-$ | US-7683771-$ | US- 7693609-$ | US-7698078-$ | US- 7740092-$ | US-7751945-$ | US- 7778746-$ | US-7796052-$ | US- 7850351-$ | US-7869576-$ | US- 7885893-$ | US-7949435-$ | US- 7956570-$ | US-7979198-$ | US- 7986126-$ | US-7991665-$ | US- 8006793-$ | US-8027843-$ | US- 8036788-$ | US-8054048-$ | US- 8072318-$ | US-8103391-$ | US- 8256553-$ | US-8262268-$ | US- 8265816-$ | US-8266075-$ | US- 8294420-$ | US-8333492-$ | US- 8336664-$ | US-8350526-$ | US- 8366371-$ | US-8392065-$ | US- 8405347-$ | US-8482255-$ | US- 8483775-$ | US-8483907-$ | US- 8490005-$ | US-8508188-$ | US- 8521599-$ | US-8527135-$ | US- 8527146-$ | US-8552686-$ | US- 8589019-$ | US-8624719-$ | US- 8630741-$ | US-8635091-$ | US-			

		8643329-$ | US-8660734-$ | US-8686864-$ | US-8694328-$ | US-8706394-$).DID.				
S75	13	(US-8713121-$ | US-8717170-$ | US-8725551-$ | US-8751065-$ | US-8751271-$ | US-8760432-$ | US-8799037-$ | US-8816845-$ | US-8818622-$ | US-8818725-$ | US-8819414-$ | US-8825222-$ | US-8836281-$).DID.	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/04 13:41
S76	357	S73 or S74 or S75	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/04 13:41
S77	87	S76 and notification	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/04 13:41
S78	1	S76 and notification with unlock$3	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/04 13:41
S79	0	report with vehicel with usage with user with account	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/04 14:02
S80	1	report with vehicle with usage with user with account	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/04 14:02
S81	13	(car or vehicle) near5 (rental or sharing) with report with usage	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/04 14:03
S82	6	(car or vehicle) near5 (rental or sharing) same report with usage with user	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/04 14:06
S83	362	vehicle with usage with monitoring and unlock$3	US-PGPUB; USPAT;	AND	ON	2019/01/04 14:07

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S84	132	vehicle with usage with monitoring and unlock$3 and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/04 14:08
S85	5	monitor$23 with renter with activit$3 and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/04 14:13
S86	1,696	monitor$23 with vehicle with activit$3 and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/04 14:13
S87	154	S76 and account	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/04 14:14
S88	154	S76 and account	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/04 14:14
S89	4	S76 and account with (car or vehicle) near5 (rental or sharing)	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/04 14:15
S90	2	(car or vehicle) near5 (rental or sharing) with notif$3 with unlock	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/04 14:17
S91	61	notify with vehicle with door with unlock$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/04 14:39

S92	27	notify with vehicle with door with unlock$3 and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/04 14:39
S93	107	vehicle near5 (activit$3) near5 log and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/01/04 14:43
S94	51	vehicle near5 (activit$3) near5 log and door and @ad<"20110422"	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/04 14:44
S95	12	notif$3 with vehicle with door near2 unlocked and @ad<"20110422"	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/04 14:48
S96	542,442	340/005.610 B60R25/241 H04W4/44 B60L11/1816 B60L11/1822 B60L11/1844 B60L11/1846 B60L11/1848 B60L11/1861 B60R25/2018 B60S5/06 G06Q10/02 G06Q10/20 G06Q20/18 G06Q20/32 G06Q20/3829 G06Q30/00 G06Q30/0643 G06Q30/0645 G06Q50/06 G07C9/00007 G07C9/00309 G07C9/00571 G07F15/005 H04L67/10 H04W4/046 B60L11/1824 B60L2230/10 B60L2230/40 B60L2240/547 B60L2240/70 B60L2250/10 B60L2250/16 B60L2250/20 B60L2270/36 G07C2009/00412 G07C2009/00769 Y02T10/7005 Y02T10/7044 Y02T10/705 Y02T10/7072 Y02T10/7088 Y02T10/7291 Y02T90/121 Y02T90/124 Y02T90/128 Y02T90/14 Y02T90/16 Y02T90/163 Y02T90/169 Y04S30/14	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/01/04 17:08
S97	2,938	S96 and (vehicle or car) near3 (sharing or rental)	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/04 17:09
S98	959	S96 and (vehicle or car) near3 (sharing or rental) and @ad<"20110422"	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/04 17:09

S99	58	S96 and (vehicle or car) near3 (sharing or rental) with access and @ad<"20110422"	US-PGPUB; USPAT; USOCR	AND	ON	2019/01/04 17:10
S100	9	"9663067".pn. or "15607418"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/16 17:59
S101	7	"9663067".pn. or "15607418"	US-PGPUB; USPAT	AND	ON	2019/05/16 17:59
S102	1	"15854241"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/16 18:18
S103	1,144	(("20140201266") or ("9253251") or ("20140201213") or ("20120106801") or ("8781169") or ("20130117078") or ("8831970") or ("10126740") or ("20160342156") or ("20140201064") or ("9406086") or ("8346217") or ("20080014917") or ("8489598") or ("8160304") or ("8447067") or ("20110019001") or ("20120214442") or ("20130048720") or ("9129230") or ("8457449") or ("20100293106") or ("20080019569") or ("20090286572") or ("8073565") or ("7536034") or ("8671143") or ("9100793") or ("20160078281") or ("20100241595") or ("20130218931") or ("20100045816") or ("20160037303") or ("8489669") or ("8538064") or ("20100131584") or ("20180032535") or ("8930233") or ("20090031006") or ("20120237908") or ("8060389") or ("20140066100") or ("8984059") or ("10032066") or ("8380630") or ("8520900") or ("7760905") or ("20110066658") or ("20070192872") or ("7174031") or ("20060022048") or ("20070250920") or ("20070276841") or ("9959694") or ("20070276928") or ("20120270567") or ("7792325") or ("20140073357") or ("20070274561") or ("7552467") or ("20090259588") or ("20110026777") or ("20050213790")	US-PGPUB; USPAT; USOCR	OR	OFF	2019/05/16 18:23

		or ("20130159021") or ("20130263227") or ("20180247483") or ("7406214") or ("9225701") or ("8081817") or ("8600895") or ("6947571") or ("9955352") or ("20080306872") or ("7805377") or ("7587368") or ("9124650") or ("20110225417") or ("20160066189") or ("20020010679") or ("20090287837") or ("8615581") or ("20140222684") or ("20180206124") or ("8498941") or ("7596260") or ("20020174010") or ("20160210602") or ("20110286638") or ("8401233") or ("20130183924") or ("8624727") or ("20050070276") or ("8094647") or ("20120069131") or ("8194646") or ("5867494") or ("5999525") or ("7869425") or ("20080095339") or ("20090109959") or ("8856322") or ("9589266") or ("9386447") or ("6909708") or ("20170200162") or ("20020064149") or ("6754181") or ("9183572") or ("20190080325") or ("10169760") or ("7120928") or ("8612582") or ("20160086108") or ("7145898") or ("7292723") or ("9954961") or ("20040012613") or ("20180115620") or ("20020194502") or ("7729532") or ("8788655") or ("20120253852") or ("9361606") or ("20110145049") or ("8745213") or ("20160283923") or ("6731625") or ("6335927") or ("8401522") or ("20160086166") or ("8521857") or ("9344522") or ("20120036552")).PN. or (("20110060994") or ("9185526") or ("20090299857") or ("9615213") or ("8650290") or ("9373149") or ("20060239545") or ("20130144976") or ("20070070213") or ("20060239546") or ("20160140614") or ("8345963") or ("9342829") or ("8824784") or ("20090288012") or ("20120092444") or ("10002337") or ("20150371215") or ("20160309018") or ("8613052") or ("20130024371") or ("20130084847") or ("20040186813") or ("8768294") or ("9531696") or ("9871874") or ("20130215116") or ("20140196118") or ("20060248028") or ("20040190767") or ("20130040600") or ("20140113619")				

		or ("20170359683") or ("9083581") or ("20120086549") or ("20140136414") or ("20180056179") or ("9311656") or ("20170203767") or ("20120036442") or ("20120216260") or ("20120209677") or ("20100030578") or ("20140308915") or ("20120240195") or ("20060248027") or ("20160359850") or ("20190108684") or ("20120056742") or ("20060245622") or ("20110313893") or ("20130066750") or ("20140082506") or ("20140213344") or ("9509674") or ("20140019352") or ("8629755") or ("20120124496") or ("20170070563") or ("20160071325") or ("20170054571") or ("20020013815") or ("20190109912") or ("20080006685") or ("9757644") or ("20090024943") or ("8527013") or ("10277689") or ("9398169") or ("20120123786") or ("10096161") or ("8571937") or ("20150095158") or ("20110145053") or ("8583915") or ("8825535") or ("20140222594") or ("20110252071") or ("8527549") or ("20140136847") or ("10102539") or ("8769297") or ("20110009107") or ("9002944") or ("20120078700") or ("20170118037") or ("8868036") or ("20130316737") or ("20140214653") or ("20050283438") or ("20170070361") or ("20080059605") or ("9760871") or ("20140333412") or ("10148774") or ("9858595") or ("8958773") or ("9922345") or ("20120036245") or ("10115087") or ("10204327") or ("10223691") or ("20140357222") or ("8510123") or ("20150234636") or ("10164985") or ("20120215648") or ("10009480") or ("20180025334") or ("20140111304") or ("20160323731") or ("20150373206") or ("20150163366") or ("8417258") or ("20180278700") or ("20090216569") or ("9996315") or ("8510137") or ("8560366") or ("20190080307") or ("8347088") or ("20110251868") or ("20160292737") or ("20140199962") or ("20020072974") or ("8256665") or ("20140337175") or ("7805338")).PN.				

		or (("9094538") or ("20090157513") or ("8818331") or ("20050136949") or ("20100141779") or ("20110062229") or ("20060181411") or ("8645303") or ("5867495") or ("9740988") or ("9185068") or ("8826154") or ("20120036220") or ("7957991") or ("20120032945") or ("8897760") or ("20100306154") or ("20110248818") or ("8606314") or ("20050033855") or ("20120131004") or ("20060178918") or ("8311513") or ("20190121956") or ("8599277") or ("8296664") or ("7917439") or ("20100135643") or ("20120202527") or ("20120303425") or ("20040128514") or ("9106768") or ("20120036440") or ("20150256684") or ("20160294837") or ("20070061266") or ("9864958") or ("20130096966") or ("8818976") or ("9860709") or ("9288337") or ("7327258") or ("20130104251") or ("20020156704") or ("8867575") or ("7837094") or ("20170295258") or ("9542493") or ("20140199961") or ("8321791") or ("20160142871") or ("20070118426") or ("7562304") or ("8516377") or ("20160191715") or ("20140357221") or ("20120096490") or ("20160234341") or ("8032409") or ("8826155") or ("8126862") or ("7683940") or ("20120215701") or ("20120089410") or ("8694366") or ("20080292137") or ("20060279628") or ("20020131076") or ("7487112") or ("20030233278") or ("20120096358") or ("20110170837") or ("20090144624") or ("8429545") or ("20040260470") or ("20140162595") or ("20070173266") or ("9042876") or ("9183560") or ("20080033635") or ("20150356569") or ("20180047044") or ("20070109266") or ("20140294180") or ("6563910") or ("7628320") or ("8126960") or ("20080010365") or ("6650761") or ("6606744") or ("6609103") or ("8611919") or ("20150269617") or ("10121148") or ("10013705") or ("20100241501") or ("20030065805") or ("20120089470") or ("20080114709") or ("10104189") or ("20090119013") or ("20130144785")				

		or ("20180278701") or ("9978023") or ("8732023") or ("9600584") or ("20120185942") or ("9954975") or ("8781442") or ("20040064351") or ("7974714") or ("7424543") or ("9824371") or ("20170255703") or ("20140365472") or ("6622124") or ("8799220") or ("20140248852") or ("9571559") or ("7716077") or ("20080109473") or ("20060253581") or ("6311214") or ("9384345") or ("7765481") or ("20050078088") or ("9112700") or ("20120259722") or ("8849821") or ("8271336") or ("20170272316") or ("20050013462")).PN. or (("20160050203") or ("20180047072") or ("20100138297") or ("20090006418") or ("20070053513") or ("20120095844") or ("9258326") or ("20060095331") or ("20070136078") or ("20110145564") or ("20130214902") or ("20130024364") or ("8260262") or ("9680803") or ("6850252") or ("20070135980") or ("20120019379") or ("20160048863") or ("8639629") or ("8666804") or ("20100042931") or ("20100036868") or ("9253205") or ("20030220835") or ("20110213657") or ("20140289314") or ("20120278388") or ("20110040655") or ("20100138298") or ("8566726") or ("20100036852") or ("10083439") or ("9047619") or ("20140236848") or ("9578182") or ("20130014020") or ("20120311705") or ("9886599") or ("9514424") or ("20100134275") or ("20080167896") or ("20070135979") or ("8989955") or ("20190037049") or ("20090265552") or ("7528723") or ("7130807") or ("20070106721") or ("20150278363") or ("9070101") or ("20060253580") or ("20140222610") or ("7813822") or ("20100134299") or ("20140180914") or ("20150294377") or ("9251265") or ("7124101") or ("20060253579") or ("20120136856") or ("9680941") or ("20160307191") or ("20180308052") or ("8510220") or ("10172070") or ("20040247086") or ("8438499") or ("9173009") or ("9319471") or ("8200700") or ("20170228466") or				

		("20110018998") or ("20080010196") or ("9391985") or ("20080010191") or ("9781212") or ("20060253583") or ("20080010215") or ("9621661") or ("20080010190") or ("20040250083") or ("20130218765") or ("20180198788") or ("20070061487") or ("9179434") or ("20020118796") or ("10264138") or ("9955332") or ("20140176796") or ("7454462") or ("10021198") or ("8768838") or ("20140237626") or ("20080010192") or ("20100157061") or ("20140052478") or ("20160117697") or ("9519911") or ("20170201850") or ("9047483") or ("20170032231") or ("20100036877") or ("20160307217") or ("9836546") or ("9201885") or ("20160087933") or ("9071931") or ("9712486") or ("9569596") or ("20060253584") or ("20140019204") or ("7107322") or ("20120136780") or ("20080306826") or ("9838479") or ("20060253582") or ("9047484") or ("7822620") or ("20080303903") or ("9477820") or ("9396479") or ("20110307403") or ("20090132813") or ("8463488") or ("8190129") or ("20150006582") or ("10051018") or ("20150156608") or ("20180198692")).PN. or ((("20120271712") or ("8763140") or ("8713689") or ("8543665") or ("9159066") or ("9954907") or ("20020059425") or ("20050246415") or ("8489112") or ("20170230460") or ("7925708") or ("9317849") or ("20060253578") or ("20080195456") or ("20060253458") or ("8718797") or ("20170279971") or ("7613659") or ("8583511") or ("10033725") or ("10045327") or ("20130159033") or ("8762285") or ("20100036876") or ("20150347683") or ("8489067") or ("9595043") or ("20130137464") or ("9105039") or ("9569587") or ("8976008") or ("8572173") or ("10255614") or ("8145568") or ("20090177484") or ("20080040265") or ("20120173628") or ("20150074259") or ("20180309745") or ("20090002333") or ("7263551") or ("20180357248") or ("20160217258")				

		or ("9386124") or ("9781170") or ("20160242143") or ("6990513") or ("20160277261") or ("20120284516") or ("20160103896") or ("20160063529") or ("20110028160") or ("20160105533") or ("20170078393") or ("20170063967") or ("20140303807") or ("20120149341") or ("9070127") or ("9990625") or ("20100217837") or ("9390151") or ("9911114") or ("20190121997") or ("8467766") or ("8073769") or ("20130064527") or ("20120019361") or ("20160330200") or ("8160959") or ("8855469") or ("8855601") or ("20180124564") or ("9171298") or ("20160164859") or ("9946782") or ("10180982") or ("20060230124") or ("20130246104") or ("20190132404") or ("9811820") or ("8787936") or ("20170063968") or ("20170046230") or ("9753746") or ("20140304167") or ("20040179689") or ("20180316761") or ("20100299763") or ("9602495") or ("10171950") or ("20130237204") or ("20100306318") or ("20060129458") or ("20080126145") or ("8447510") or ("20110029362") or ("20120170726") or ("20060253330") or ("9697512") or ("20140289249") or ("20160117668") or ("20140200929") or ("20170223120") or ("9330388") or ("20120246039") or ("20080200154") or ("10217102") or ("7689822") or ("9124703") or ("20120214472") or ("20160117669") or ("20150150046") or ("20150088708") or ("8995815") or ("20170344703") or ("20140012733") or ("9330389") or ("20120265677") or ("20110252101") or ("7355506") or ("10140606") or ("10269202") or ("7747523") or ("20140067691") or ("20090186596") or ("20180324555") or ("9400980") or ("8862150") or ("9330390") or ("6578068")).PN. or (("20140052640") or ("9332126") or ("9633318") or ("8281372") or ("8121945") or ("20040257208") or ("20100042846") or ("9177315") or ("20120123924") or ("9208490") or ("20080133551") or ("8666035") or ("9143484") or ("9167550") or				

		("20140067690") or ("6434568") or ("20110195699") or ("20160189118") or ("8659417") or ("20180053157") or ("20130013501") or ("20180198874") or ("20180198688") or ("8929857") or ("20110029359") or ("9485314") or ("20060026017") or ("20110029364") or ("20110064209") or ("20160117674") or ("20030110503") or ("10121139") or ("9886696") or ("7415424") or ("7724878") or ("9630443") or ("20110153362") or ("20170277701") or ("20080010193") or ("9471914") or ("8166124") or ("20110029370") or ("20090177745") or ("20120203853") or ("20170308926") or ("5862325") or ("20110258258") or ("8549591") or ("9119033") or ("8781923") or ("20120005079") or ("20080201386") or ("20130282490") or ("10078694") or ("20090171910") or ("9870559") or ("8907763") or ("20080010204") or ("20110191117") or ("20090158136") or ("20120101835") or ("20120116959") or ("20160119332") or ("8117261") or ("20120005081") or ("20120109668") or ("20120005085") or ("20120109669") or ("20120129553") or ("20120005082") or ("20120005725") or ("20110321127") or ("8248237") or ("20120101831") or ("20120109674") or ("20120005078") or ("20140316903") or ("20120109671") or ("20120005092") or ("20120109670") or ("20120005083") or ("20170155605") or ("20120101836") or ("20120005089") or ("20120005077") or ("20120101833") or ("20120005084") or ("20120116790") or ("20120005090") or ("20120005087") or ("20120005088") or ("20120005080") or ("20120101834") or ("20120005091") or ("20120011058") or ("9854050") or ("20120005086") or ("20120109667") or ("20120101832") or ("20120005726") or ("20120109672") or ("20120109673") or ("8145199") or ("20060182055") or ("20090251282") or ("20120315877") or				

		("20040122735") or ("20130214901") or ("8374894") or ("20160275760") or ("8774788") or ("9503539") or ("7562051") or ("20120109882") or ("9607483") or ("7577620") or ("6496850") or ("20060206246") or ("20050004978") or ("9934537") or ("20150310497") or ("20110093340") or ("20120324547") or ("20120190386") or ("20090157255") or ("9697280") or ("8825007")).PN. or (("20090253406") or ("20160110717") or ("20020055924") or ("9451447") or ("20170200333") or ("20030058277") or ("20140364108") or ("20150222759") or ("20060265489") or ("20070198432") or ("20110264768") or ("8484241") or ("7966369") or ("20160246936") or ("20170149759") or ("7379891") or ("7577619") or ("20030028404") or ("20040258275") or ("20090253408") or ("8456293") or ("9668096") or ("7386517") or ("20140304601") or ("20060018441") or ("20140052623") or ("9928379") or ("20130065555") or ("7280975") or ("10069967") or ("20050111047") or ("20060129691") or ("7577575") or ("6671818") or ("10032010") or ("20180314816") or ("8761821") or ("9917826") or ("8525665") or ("9654923") or ("9934636") or ("20120188064") or ("20080268823") or ("6088717") or ("20160007083") or ("20100233993") or ("10102591") or ("20170064551") or ("20060136595") or ("6636242") or ("20120196571") or ("8929874") or ("9569643") or ("20090019061") or ("20140325030") or ("20080082448") or ("10142394") or ("20140024361") or ("20070255662") or ("9100454") or ("7031945") or ("20090253410") or ("9100925") or ("20160371476") or ("20090249460") or ("10142687") or ("20120258697") or ("10135972") or ("9171321") or ("7565328") or ("7617159") or ("20180234852") or ("6550057") or ("20070255652") or ("20040190750") or ("8577543") or ("8719909") or ("20160043985") or ("20060173781") or ("20100305807") or ("20130035114") or				

		("20160316031") or ("20180262476") or ("20080091613") or ("8842179") or ("20110162052") or ("10231125") or ("20080200153") or ("10142836") or ("7343350") or ("20160308813") or ("20060015904") or ("8316237") or ("20120209749") or ("9667581") or ("8887177") or ("20030040957") or ("8719592") or ("10230713") or ("8930458") or ("7444392") or ("20120084285") or ("8862092") or ("8644702") or ("20080200160") or ("20170171125") or ("7562028") or ("20140038564") or ("20020055366") or ("9130930") or ("20160021083") or ("20120317202") or ("9385984") or ("8326315") or ("20170046679") or ("20070229350") or ("20090228340") or ("7986806") or ("20030009385") or ("20070244811") or ("8407220") or ("20160099963") or ("7529713") or ("8769133") or ("9668133") or ("8909248") or ("6339832") or ("20090249443") or ("20060178973") or ("20100026495") or ("20080201310")).PN. or (("7289964") or ("7958081") or ("20120105632") or ("20140163809") or ("20060041505") or ("20110153375") or ("9286461") or ("6640244") or ("20060270421") or ("20150065177") or ("20040122730") or ("20120011367") or ("8069168") or ("20120221382") or ("20130254314") or ("20150163632") or ("20080201305") or ("20130061055") or ("7203665") or ("20020016816") or ("20130137376") or ("20130091564") or ("20060149843") or ("9058705") or ("8682400") or ("20120011366") or ("20160073252") or ("9514584") or ("9122851") or ("6601234") or ("20170034692") or ("6539396") or ("9099152") or ("10153901") or ("7377421") or ("7711605") or ("20150058214") or ("10255419") or ("9459622") or ("9307397") or ("20100287070") or ("6842906") or ("7930411") or ("20150244721") or ("9003488") or ("6542927") or ("9203840") or ("8340989") or ("20110282697") or ("20160036588") or ("20130179949") or ("20110208736") or ("20130121527")				

		or ("20130167196") or ("20090156170") or ("6640249") or ("7069031") or ("20120205436") or ("20120191522") or ("20110021234") or ("8467768") or ("20080159181") or ("9930522") or ("20140317112") or ("20130218614") or ("20120089835") or ("20030097331") or ("20170164204") or ("5613012") or ("20100312833") or ("8069169") or ("9749457") or ("20180191740") or ("9030521") or ("20150185034") or ("8204273") or ("20170185277") or ("20120136793") or ("20130217361") or ("8423476") or ("20080201321") or ("20160353355") or ("9003499") or ("8495020") or ("20070112762") or ("20160165416") or ("9473909") or ("20120086552") or ("20130115972") or ("6757710") or ("20140019768") or ("10037421") or ("20100280948") or ("8671021") or ("20150133113") or ("20140125753") or ("9031536") or ("9686241") or ("7978076") or ("8983497") or ("7152045") or ("20150312732") or ("7194426") or ("9699646") or ("8527406") or ("20140258469") or ("6697824") or ("8615216") or ("20160300054") or ("20190051082") or ("20140338006") or ("20190034921") or ("6502213") or ("9838877") or ("20110276609") or ("6571282") or ("20130133048") or ("9916481") or ("6477665") or ("20140195425") or ("20030105725") or ("20150248664") or ("20170289341") or ("6332163") or ("20110030031") or ("20120126974") or ("20080201225") or ("20040093281") or ("8805270") or ("6434628") or ("20110191248")).PN. or (("9881152") or ("20090156181") or ("20180129511") or ("8489513") or ("20120005737") or ("9565552") or ("20120226536") or ("8433658") or ("20100157989") or ("20140317693") or ("20080207137") or ("9226151") or ("9635545") or ("20050073389") or ("20140337733") or ("6477580") or ("20150195279") or ("20130030828") or ("9781148") or ("20140258055") or ("20140323142") or ("20140081871") or ("6549949") or ("20150148078") or				

		("9576294") or ("7848765") or ("20180219976") or ("20180198841") or ("8350700") or ("6658586") or ("20120244883") or ("20160205546") or ("8457661") or ("20130104246") or ("20130297467") or ("9805213") or ("9848114") or ("6606660") or ("20100159898") or ("20140342711") or ("6154658") or ("20110289124") or ("20110191249") or ("9232491") or ("20100190474") or ("9237427") or ("8312168") or ("20080201283") or ("20110258156") or ("20110191250") or ("9767467") or ("20140162598") or ("8730040") or ("8149113") or ("20090141939") or ("20160105792") or ("20070255653") or ("20170228665") or ("6442748") or ("20090249497") or ("9576157") or ("8971957") or ("6529948") or ("20090247122") or ("7164413") or ("20110026898") or ("8938810") or ("20130016636") or ("20120222050") or ("20160300183") or ("8750841") or ("6640238") or ("20080096594") or ("10200504") or ("6345288") or ("6289382") or ("20120303476") or ("20110319051") or ("8302854") or ("8831677") or ("8761353") or ("20110289123") or ("8265612") or ("20140040981") or ("8249965") or ("8271004") or ("20100135472") or ("9230374") or ("9609003") or ("20020095454") or ("20130304576") or ("20140080428") or ("20160321445") or ("20170105086") or ("10042993") or ("20120216296") or ("20130295975") or ("20170215028") or ("20030069766") or ("8932368") or ("20080082421") or ("9299077") or ("7051086")).PN.				
S105	1,131	S103 and video	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/16 18:24
S106	681	S103 and video near10 (captur$3 or record$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO;	AND	ON	2019/05/16 18:24

			JPO; DERWENT; IBM_TDB			
S107	681	S103 and video near10 (captur$3 or record$3)	US-PGPUB; USPAT; USOCR	AND	ON	2019/05/16 18:24
S108	547	S103 and video near10 (captur$3 or record$3) and vehicle	US-PGPUB; USPAT; USOCR	AND	ON	2019/05/16 18:25
S109	76	S103 and video near10 (captur$3 or record$3) and vehicle with access with code	US-PGPUB; USPAT; USOCR	AND	ON	2019/05/16 18:26
S110	311	(Emerging near2 Automotive) (Penilla near2 Angel) (Penilla near2 Albert)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/05/16 18:29
S111	0	S110 and (unique code unlock$3 vehicle key video).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/16 18:29
S112	0	S110 and (unique code vehicle key video).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/16 18:30
S113	2	S110 and (code vehicle key video).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/16 18:30
S114	7	(unique code unlock$3 vehicle key video).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/16 18:31
S115	0	record with while with driving	US-PGPUB; USPAT;	AND	ON	2019/05/16 18:33

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S116	444	video with vehicle with time with access	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/16 18:34
S117	0	video with (user of driver) with time with access wtih vehicle	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/16 18:35
S118	0	video with (user of driver) with time with access with vehicle and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/16 18:35
S119	0	video with (user of driver) with time with enter$3 with vehicle and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/16 18:35
S120	0	captur$3 with (user of driver) with time with enter$3 with vehicle and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/16 18:36
S121	0	(captur$3 or record$3) with (user of driver) with (access$3 or enter$3) with vehicle and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/16 18:36
S122	1,004	(captur$3 or record$3) with (user or driver) with (access$3 or enter$3) with vehicle and @ad<"20110422"	US-PGPUB; USPAT; USOCR;	AND	ON	2019/05/16 18:36

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
S123	385	(captur$3 or record$3) near10 (user or driver) near10 (access$3 or enter$3) near10 vehicle and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/16 18:37
S124	296	(captur$3 or record$3) near10 (user or driver) near10 (access$3 or enter$3) near10 vehicle and @ad<"20110422"	US-PGPUB; USPAT	AND	ON	2019/05/16 18:37
S125	152	(video) near10 (user or driver) near10 (access$3 or enter$3) near10 vehicle and @ad<"20110422"	US-PGPUB; USPAT	AND	ON	2019/05/16 18:40
S129	13	(US-20180134254-$ or US-20110112969-$ or US-20140172727-$ or US-20100037057-$ or US-20110060480-$ or US-20140019280-$ or US-20050275543-$ or US-20110015953-$ or US-20100114616-$ or US-20120040635-$ or US-20060007309-$).did. or (US-6850898-$ or US-6690302-$).did.	US-PGPUB; USPAT	AND	ON	2019/05/17 12:16
S130	13	S129 and display	US-PGPUB; USPAT	AND	ON	2019/05/17 12:16
S131	9	"9663067".pn. or "15607418"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/29 13:37
S132	7	"9663067".pn. or "15607418"	US-PGPUB; USPAT	AND	ON	2019/05/29 13:37
S133	6	"15607418"	US-PGPUB; USPAT	AND	ON	2019/05/29 13:38
S134	1	"15854241"	US-PGPUB; USPAT	AND	ON	2019/05/29 13:56
S136	2,007	(("20170267214") or ("20170050617") or ("9663067") or ("20160318481") or ("9499129") or ("9365188") or ("9189900") or ("20180025328") or ("9928488") or ("9139091") or ("20180211231") or ("10282708") or ("20150203125") or ("20170270490")	US-PGPUB; USPAT; USOCR	OR	OFF	2019/05/29 14:02

		or ("9171268") or ("20160173568") or ("10286919") or ("9818088") or ("10218771") or ("10210487") or ("20180089912") or ("10225350") or ("20160198002") or ("20160359980") or ("9426225") or ("9697503") or ("9229905") or ("20160080500") or ("9288270") or ("20150304406") or ("9215274") or ("9104537") or ("20180059913") or ("10289288") or ("20180024725") or ("9229623") or ("9372607") or ("9916071") or ("20150210287") or ("9778831") or ("10286798") or ("9423937") or ("9348492") or ("20150178034") or ("20180060742") or ("20170103327") or ("9230440") or ("10181099") or ("9536197") or ("9467515") or ("20180037193") or ("20160214535") or ("10286842") or ("10286875") or ("9809196") or ("10223134") or ("9285944") or ("20160129883") or ("9648107") or ("20180251128") or ("20140201266") or ("9253251") or ("20180111494") or ("9371007") or ("20170140757") or ("10274948") or ("20170120906") or ("10121148") or ("8989955") or ("9697733") or ("9083581") or ("8463488") or ("20160104486") or ("9493130") or ("9386447") or ("20140201213") or ("9615213") or ("9398169") or ("20170061965") or ("20180012497") or ("9672823") or ("10071643") or ("8615581") or ("20180061415") or ("20170200449") or ("9288337") or ("20140113619") or ("9106768") or ("20160086393") or ("8867575") or ("9802500") or ("8958773") or ("20170203767") or ("20150256684") or ("20160323731") or ("20170169648") or ("20150373206") or ("20140357222") or ("20150163366") or ("20160309018") or ("20140199961") or ("20130084847") or ("20140357221") or ("20160191715") or ("8818331") or ("20140199962") or ("9094538") or ("20180122245") or ("9581997") or ("20120254960") or ("8856322") or ("20170320398") or ("20120071140") or ("20170054571") or ("20170169712") or ("9032493") or				

		("8335502") or ("20060181411") or ("20180037125") or ("20170118037") or ("8612582") or ("20170272316") or ("9718370") or ("20140201064") or ("20120237908") or ("20160342156") or ("8346217") or ("7327258") or ("8745213") or ("8650290") or ("9406086") or ("9129230") or ("8788655")).PN. or (("8671143") or ("10126740") or ("20130048720") or ("20160375780") or ("10231125") or ("20160031338") or ("20130218931") or ("20160037303") or ("20180032535") or ("8624727") or ("20100131584") or ("10117066") or ("9130930") or ("20090031006") or ("9668133") or ("8073565") or ("20130183924") or ("20060022048") or ("8719592") or ("20120270567") or ("9579987") or ("9100793") or ("7528723") or ("20080167896") or ("8060389") or ("20140073357") or ("20140066100") or ("8930233") or ("8489669") or ("9180783") or ("8984059") or ("9712486") or ("8583915") or ("20160087933") or ("20190020985") or ("20120106801") or ("9955352") or ("20140136847") or ("8781169") or ("20020174010") or ("6853894") or ("20180308052") or ("8848608") or ("20120214442") or ("20120109692") or ("20070229350") or ("9373149") or ("8311858") or ("9754424") or ("8140358") or ("20160132053") or ("20120036552") or ("20090167524") or ("20160066189") or ("20140294180") or ("8731155") or ("20100026495") or ("20120209634") or ("8892451") or ("20140248852") or ("8989954") or ("8787936") or ("10102539") or ("8781442") or ("20110145564") or ("20130013347") or ("20150029987") or ("9434270") or ("20130013348") or ("20060182055") or ("20100235891") or ("20140019352") or ("9361606") or ("9680803") or ("20120086552") or ("9888363") or ("20130006769") or ("9346365") or ("7978076") or ("20160283923") or ("9112700") or ("20170200162") or ("9589266") or ("8350700") or ("20110145049") or ("9003500") or ("9451447") or				

		("20060123053") or ("20060129691") or ("20190080325") or ("10169760") or ("20090265552") or ("20150222708") or ("9578182") or ("20120086549") or ("9311656") or ("9185526") or ("20140364108") or ("7003289") or ("20140136414") or ("6615186") or ("8527013") or ("20180206124") or ("20110225417") or ("20040073440") or ("7502672") or ("20070179799") or ("8417258") or ("9258326") or ("9406228") or ("20170101025") or ("20150234636") or ("20110009107") or ("20100169432") or ("9996315") or ("9858595") or ("20120253852") or ("20190035171") or ("9824371") or ("20130316737") or ("20100138297") or ("20050136949") or ("20170048711") or ("20180047044") or ("9124650") or ("20120036442") or ("9930522") or ("20170359683") or ("20100138298") or ("20090288012") or ("10223691")).PN. or (("20190080307") or ("10204327") or ("8761821") or ("9545853") or ("20160292737") or ("9697525") or ("20150356497") or ("20140024361") or ("10217339") or ("20190005442") or ("8606314") or ("9305288") or ("20140337175") or ("20120101855") or ("20120259951") or ("8521857") or ("8787949") or ("20070118426") or ("20160048863") or ("20130096966") or ("9344522") or ("20170295258") or ("20120096490") or ("20150341787") or ("9253205") or ("10159098") or ("20120303425") or ("20180122162") or ("20070173266") or ("20120172012") or ("20070179800") or ("20080150683") or ("9635545") or ("10172070") or ("20090024943") or ("9864958") or ("20110145053") or ("20100152960") or ("20080148374") or ("10089598") or ("7366892") or ("9886599") or ("20130024371") or ("20140162595") or ("20120315877") or ("7917439") or ("20140033293") or ("20040185842") or ("20160258647") or ("9265450") or ("9760871") or ("10115087") or ("20030065805") or ("8805603") or ("8089339") or ("8645014") or ("20090144624") or				

		("20110170837") or ("20120036245") or ("10083439") or ("20180006829") or ("9307397") or ("20180025334") or ("20100134275") or ("20120209839") or ("20110060994") or ("7487112") or ("9699646") or ("8694366") or ("6389337") or ("20020101993") or ("20120032945") or ("8611919") or ("20080147410") or ("20110162052") or ("9450956") or ("20120096358") or ("9924305") or ("20100134299") or ("20170063967") or ("10153908") or ("20160099963") or ("8769133") or ("7930411") or ("9955332") or ("20170201850") or ("20090216569") or ("10009480") or ("8260262") or ("8510137") or ("20120244883") or ("20030220835") or ("20120095844") or ("9639843") or ("20180183610") or ("20160307191") or ("20120246039") or ("8510123") or ("20080027606") or ("9466061") or ("20080039995") or ("10255614") or ("9070243") or ("20150088708") or ("8613052") or ("8666804") or ("8725851") or ("20110196571") or ("9531696") or ("20140082506") or ("20120072244") or ("9179434") or ("20160205546") or ("20120089470") or ("20120072243") or ("20070191995") or ("20120019379") or ("8959190") or ("20120036440") or ("9002944") or ("9159066") or ("20150356569") or ("20170063968") or ("8224355") or ("20160050203") or ("9185068") or ("20090132813") or ("20120036220") or ("20080039019") or ("20140236848")).PN. or (("20160359850") or ("20160234341") or ("8930458") or ("20150138362") or ("20080021605") or ("20120042006") or ("20110021234") or ("9571559") or ("20120019361") or ("8156206") or ("20160353355") or ("20090164053") or ("7756616") or ("20050065779") or ("20120203557") or ("20090119013") or ("7480550") or ("8629755") or ("8190129") or ("20080040272") or ("9881268") or ("20090157513") or ("20110301839") or ("9781148") or ("20140196118") or ("20120317202") or ("9042876") or ("9509674") or ("20130325935") or ("9818094") or				

		("9596287") or ("20140333412") or ("10264138") or ("8929871") or ("9811836") or ("20190141607") or ("8799220") or ("20130133087") or ("20120253990") or ("8744745") or ("20130137464") or ("8731741") or ("9595043") or ("20160360400") or ("9038129") or ("20050060070") or ("20130024364") or ("20150095158") or ("20120202527") or ("9659301") or ("8918854") or ("9384491") or ("20160063529") or ("20120198328") or ("8386394") or ("20120240195") or ("20100202346") or ("9360874") or ("9584967") or ("20160044499") or ("8275672") or ("20090006418") or ("20080039020") or ("20180198788") or ("20140052478") or ("9565552") or ("20100004857") or ("20110166739") or ("20130217361") or ("20060095331") or ("20090172102") or ("20130325190") or ("20130157691") or ("8175886") or ("8392289") or ("7299007") or ("8370955") or ("20170070563") or ("8645226") or ("20110029359") or ("9391985") or ("8565820") or ("8547222") or ("20080006685") or ("9226151") or ("20160142871") or ("8509987") or ("8489112") or ("8538834") or ("9769611") or ("20100306318") or ("20120232965") or ("9140552") or ("20130115972") or ("8386115") or ("6895310") or ("8155817") or ("20170279971") or ("20070179706") or ("20110112717") or ("20190007203") or ("9105039") or ("20080033635") or ("9232046") or ("8983497") or ("9560031") or ("9875463") or ("20160105792") or ("9373241") or ("20110119733") or ("7613659") or ("20120129510") or ("20060136595") or ("20150026316") or ("20130205000") or ("9380120") or ("20150091741") or ("9781212") or ("20070179798") or ("20110029362") or ("20140040434") or ("20180129357") or ("20100061294") or ("9392452") or ("8126960") or ("20070173986") or ("8438079") or ("20110028160") or ("20100063889") or ("8081817") or ("20170228466")).PN. or				

		(("20150121479") or ("20080221743") or ("20130205021") or ("9684926") or ("20150278363") or ("20020013815") or ("20180376323") or ("9251265") or ("20140195279") or ("9405310") or ("8718632") or ("20130144762") or ("10142784") or ("20170070361") or ("8090616") or ("20120221718") or ("9100454") or ("20110001638") or ("9322974") or ("20080214111") or ("9860709") or ("20160050201") or ("20070173992") or ("8897760") or ("20170241165") or ("20130035114") or ("8855794") or ("20120029964") or ("20160371895") or ("9836546") or ("9209652") or ("20180124564") or ("20120022944") or ("20130318444") or ("20160012431") or ("9519911") or ("10013815") or ("9779253") or ("7831347") or ("20130144785") or ("9766645") or ("8504180") or ("20140111304") or ("8892297") or ("20110029364") or ("9886696") or ("20090117921") or ("20100063867") or ("7936736") or ("20080027605") or ("20120116969") or ("9954975") or ("20160203349") or ("20130293378") or ("8385896") or ("20090203352") or ("20120135759") or ("8868036") or ("20110231280") or ("9838479") or ("20160027307") or ("20120046859") or ("8396604") or ("8103587") or ("20100305807") or ("8401522") or ("20160353244") or ("20190147513") or ("7937325") or ("7876239") or ("20130212262") or ("20120149341") or ("20100241595") or ("20120289217") or ("20100268402") or ("20160307217") or ("20120022930") or ("20130159033") or ("10030418") or ("20070200671") or ("8577543") or ("20120252430") or ("8626553") or ("8162208") or ("20090002333") or ("20170344044") or ("20110302630") or ("8212691") or ("20140195281") or ("20130137376") or ("9154826") or ("20140370869") or ("8768294") or ("20150179000") or ("9865099") or ("20120095812") or ("8560450") or ("20160117697") or ("8090359") or ("20160196451") or ("9730254") or ("8258919") or ("8966587") or ("20170230460") or				

		("20110153148") or ("8639629") or ("20160342169") or ("20110215900") or ("7319414") or ("20140172727") or ("20130073615") or ("8442695") or ("20120064923") or ("20110307403") or ("20140289314") or ("7961076") or ("20110029370") or ("10171460") or ("20180077527") or ("9977440") or ("20120254966") or ("7672879") or ("8738725") or ("8862393") or ("9396479") or ("9600841") or ("20180227713") or ("20170011425") or ("8671014") or ("20120173655")).PN. or (("9807091") or ("20140163809") or ("20140370863") or ("20100157061") or ("20020055924") or ("20190028865") or ("8369842") or ("20120214472") or ("20120324119") or ("8840016") or ("20110302014") or ("20120215403") or ("10242573") or ("7840322") or ("20100033342") or ("10292013") or ("20110300802") or ("20080275604") or ("9332126") or ("20160238272") or ("8032278") or ("8311513") or ("20120289147") or ("20100187303") or ("9161164") or ("20110248818") or ("8380630") or ("8498749") or ("20130061055") or ("20130238160") or ("8929857") or ("20040044454") or ("8862150") or ("8886393") or ("10177978") or ("20130246104") or ("9058705") or ("20130167035") or ("20180114189") or ("9070101") or ("20140114706") or ("8600564") or ("7120928") or ("8849698") or ("20160210602") or ("7734541") or ("8050815") or ("20070264968") or ("9124703") or ("20120072033") or ("20100257094") or ("20080059605") or ("9386124") or ("9208456") or ("7355506") or ("9203840") or ("20100205065") or ("20170103215") or ("8559968") or ("20120028607") or ("20080088438") or ("20170078393") or ("20080186166") or ("20020194502") or ("20130285855") or ("20110302019") or ("20180206100") or ("20170185120") or ("20140180914") or ("9116763") or ("8768838") or ("9390151") or ("9959694") or ("8774788") or				

		("20130275199") or ("20110060480") or ("20160103896") or ("20190037049") or ("20070171029") or ("9047484") or ("8566175") or ("20160105533") or ("10142394") or ("20180013621") or ("20130106572") or ("8868636") or ("20140317225") or ("6563910") or ("9167550") or ("20110282782") or ("20100228404") or ("20080021964") or ("10255419") or ("9003488") or ("8825007") or ("20160088100") or ("8374592") or ("8150439") or ("20170034692") or ("20160073252") or ("9483883") or ("10142836") or ("20110252071") or ("20100280956") or ("20140195283") or ("7551063") or ("9800464") or ("20110286638") or ("20150006582") or ("20100062746") or ("8270933") or ("20070250920") or ("20140308915") or ("20130117078") or ("9247434") or ("8744930") or ("20040192299") or ("9047728") or ("20020095651") or ("7864047") or ("7190960") or ("8671002") or ("20170064551") or ("20160100292") or ("20120095791") or ("8831970") or ("20170041315") or ("20110112969") or ("20100114734") or ("20160300281")).PN. or (("8188837") or ("20150244721") or ("20040203903") or ("9047483") or ("8401233") or ("20130275899") or ("9838255") or ("20180019998") or ("20120239452") or ("7684910") or ("20180234852") or ("20130167196") or ("20120136856") or ("20140195282") or ("20180293389") or ("8527549") or ("20040254881") or ("8116749") or ("20180316761") or ("20140019204") or ("20020007330") or ("9679322") or ("9874891") or ("8224747") or ("8606589") or ("20180132163") or ("7552467") or ("20130332000") or ("8145554") or ("8868427") or ("20110295988") or ("7685525") or ("20120095792") or ("20120129553") or ("20080088437") or ("20180247483") or ("20090259588") or ("20080027604") or ("9100925") or ("9299053") or ("20130218765") or ("9418205") or ("8587454") or ("20120253551") or ("9961502") or ("8682400") or				

		("9373261") or ("20060026017") or ("8068857") or ("9800463") or ("20120330769") or ("8902054") or ("20180027076") or ("8385913") or ("20110195699") or ("10038678") or ("20100330975") or ("8374894") or ("20180198688") or ("20090286513") or ("20130282490") or ("20040160304") or ("20190095050") or ("20130318217") or ("7496347") or ("20160026982") or ("10200935") or ("20150222759") or ("20130106569") or ("20030073406") or ("20100062758") or ("7433836") or ("20170324717") or ("20150179076") or ("20180167777") or ("20140337173") or ("20070279283") or ("20100136944") or ("7236799") or ("9519921") or ("20060105740") or ("20120019360") or ("7908051") or ("7518500") or ("20160248760") or ("20100004005") or ("20130159021") or ("20130040600") or ("20110144980") or ("20090174550") or ("6859212") or ("20050250440") or ("9342829") or ("9031583") or ("7532900") or ("20090024525") or ("20080171559") or ("9047634") or ("9614921") or ("8145199") or ("9455978") or ("20120326845") or ("8489067") or ("8751271") or ("9996697") or ("9251521") or ("8769270") or ("20090019061") or ("20040255297") or ("9396655") or ("20140195280") or ("20170357814") or ("20160196440") or ("20160203649") or ("9370029") or ("20060206246") or ("20070299565") or ("20150371215") or ("20090326991") or ("9654589") or ("9618353") or ("20170262908") or ("20080046280") or ("20140214516") or ("8572173") or ("9668096") or ("20150312233") or ("20110281562") or ("20160057120") or ("9785785")).PN. or (("20130065555") or ("20130198009") or ("20110093340") or ("9270663") or ("20110153375") or ("9854394") or ("20160374004") or ("20160086166") or ("8634857") or ("20170134350") or ("8600895") or ("20150204563") or ("20110125394") or ("7061367") or				

		("20140128001") or ("20130104246") or ("20080052348") or ("8510220") or ("20140298012") or ("20110121991") or ("20100216509") or ("20120231821") or ("20080004043") or ("8855601") or ("9805213") or ("9549388") or ("9264224") or ("9587958") or ("8347088") or ("20110173119") or ("20080010196") or ("9667726") or ("7596260") or ("20110282697") or ("9400990") or ("20030009385") or ("9412130") or ("20030149526") or ("10002466") or ("20140274157") or ("20120206255") or ("9129333") or ("9654937") or ("20150332386") or ("10032228") or ("20120052854") or ("20160023635") or ("20110214060") or ("9743276") or ("20120246005") or ("20130060387") or ("8929874") or ("8340989") or ("9420431") or ("20180357406") or ("8117261") or ("9867118") or ("20120173628") or ("20140316587") or ("20120216260") or ("20120088524") or ("20110221568") or ("9838877") or ("20120093141") or ("20150256975") or ("9614964") or ("20110045801") or ("9047649") or ("20180332014") or ("9918194") or ("8174381") or ("9164524") or ("20140380442") or ("9036509") or ("20110258258") or ("7283904") or ("20160353277") or ("20150254979") or ("10204357") or ("10142687") or ("20120046051") or ("9451405") or ("9866697") or ("20140258386") or ("10297097") or ("9183530") or ("20110246898") or ("8068037") or ("20040122730") or ("9978272") or ("20110051823") or ("20140051465") or ("20110307101") or ("8362927") or ("8849499") or ("8826154") or ("20170251339") or ("20160328967") or ("20120136780") or ("20120072723") or ("7616943") or ("9037159") or ("8571518") or ("20110313874") or ("9082237") or ("20180056179") or ("7966369") or ("20150073888") or ("20120206254") or ("20160007083") or ("20130262275") or ("9414194") or ("7883003") or ("20160227510") or ("20120190386") or ("9495872") or				

		("20140329545") or ("20080010215") or ("20100005025") or ("20010032182") or ("20110034183") or ("20010023414") or ("20080195456") or ("20120289253") or ("7840224") or ("8248237") or ("10219119") or ("20070185728") or ("20020073046") or ("20120242512")).PN. or (("20100097239") or ("20070264969") or ("8082065") or ("20050102074") or ("20170249702") or ("20130104251") or ("20130124635") or ("8112100") or ("20070061266") or ("20170076330") or ("8744412") or ("9654923") or ("20120209677") or ("20050070276") or ("7366702") or ("20110302092") or ("8751674") or ("20070273534") or ("8244468") or ("9439133") or ("20020186144") or ("20120254763") or ("9100813") or ("20110238476") or ("20080149705") or ("8368562") or ("20080010191") or ("20170013404") or ("20110282738") or ("8447510") or ("20090251282") or ("20080319665") or ("7933834") or ("20010051876") or ("20130018705") or ("20140171058") or ("20180278751") or ("10269202") or ("8423476") or ("20130218614") or ("20110173542") or ("20100191652") or ("8761803") or ("9736618") or ("8296664") or ("20080177662") or ("20140058568") or ("20120139760") or ("8233919") or ("20180268153") or ("8190692") or ("7729532") or ("20120245986") or ("8719909") or ("8711010") or ("20120215725") or ("20120041675") or ("20130303126") or ("8489513") or ("8433658") or ("7119716") or ("20120078700") or ("20080014908") or ("20090249460") or ("9143934") or ("8610599") or ("20080126145") or ("7805377") or ("20170289810") or ("20080010190") or ("20110191249") or ("8694501") or ("20110191248") or ("6847892") or ("7949541") or ("20080306872") or ("20150088982") or ("8516377") or ("20130259313") or ("20110191250") or ("20070043614") or ("9743229") or ("8560609") or ("9451448") or ("7953615") or ("20070293958") or ("20070264974") or ("20120101637")			

		or ("20090253406") or ("20030134648") or ("8564459") or ("20080010192") or ("20180084375") or ("20150172916") or ("20110269441") or ("20190036727") or ("20040192339") or ("9964981") or ("9171341") or ("9747626") or ("8624758") or ("8676182") or ("9918196") or ("20080045234") or ("20080306682") or ("9922345") or ("20110238475") or ("20120108230") or ("20130078979") or ("8284076") or ("20060258377") or ("20090253408") or ("20080046326") or ("9723131") or ("20120109384") or ("8489110") or ("20120260317") or ("7953671") or ("8321791") or ("8452648") or ("8626344") or ("20120084349") or ("20110106592") or ("20150057020") or ("20110224841") or ("8473152") or ("20100145861") or ("20140213344") or ("7587368") or ("8868767")).PN. or (("8725581") or ("20120084348") or ("9268545") or ("8457797") or ("8024073") or ("8650318") or ("20130227126") or ("20040217852") or ("20080189360") or ("20130273892") or ("9143923") or ("20140152422") or ("6856820") or ("20110054710") or ("9426191") or ("20140222684") or ("20180047072") or ("20120029946") or ("20180013873") or ("9064258") or ("8280009") or ("20050203673") or ("20050065678") or ("20160092962") or ("20170091820") or ("20170024682") or ("20170164204") or ("7538691") or ("20160029206") or ("20140342709") or ("20180034968") or ("20090253410") or ("9275071") or ("8255154") or ("8826155") or ("20130214902") or ("8650434") or ("20100299252") or ("20120084151") or ("9684924") or ("20100274656") or ("7203502") or ("8909248") or ("9460433") or ("20020035488") or ("20180367951") or ("7849031") or ("20160232598") or ("20090249443") or ("20120166576") or ("20060053056") or ("8254902") or ("20150163632") or ("7873710") or ("20190054874") or ("20090076966") or ("20120069131") or ("8676636") or				

		("20130191269") or ("8041660") or ("8396602") or ("8145568") or ("20130091564") or ("20090309709") or ("8467766") or ("20040203901") or ("20090287837") or ("8773251") or ("20180198841") or ("20120035839") or ("8938226") or ("20180041869") or ("8863256") or ("20110282762") or ("9878690") or ("20130237204") or ("20120109417") or ("20080270251") or ("20130030828") or ("7454462") or ("20060184456") or ("8200700") or ("9881152") or ("20160129882") or ("8666382") or ("20140199985") or ("8428782") or ("7562304") or ("10153901") or ("8560366") or ("20110153372") or ("8352575") or ("20150065177") or ("8588733") or ("20130304367") or ("8429545") or ("8498941") or ("9747729") or ("20120158589") or ("20100324986") or ("20110215921") or ("9609003") or ("20120016767") or ("20180004377") or ("20020118796") or ("20040247086") or ("9911114") or ("20150130630") or ("20080119983") or ("20120078727") or ("20090325566") or ("20110125363") or ("8045961") or ("20150025697") or ("9959554") or ("8473109") or ("8732073") or ("7528742") or ("20170255703") or ("20070061487") or ("20030177051") or ("20160036588") or ("7561069") or ("20080091613") or ("20110046801") or ("20070202844") or ("9294481") or ("10096038") or ("20130144976") or ("20110234427")).PN. or (("8112066") or ("7882032") or ("20130173027") or ("20020010679") or ("8073769") or ("20110251868") or ("20120023225") or ("20190108684") or ("8025226") or ("8073590") or ("20150249687") or ("8831994") or ("20120124496") or ("20110239116") or ("9600584") or ("20100185556") or ("20080201078") or ("20090177336") or ("8839224") or ("20120330838") or ("9064127") or ("7292723") or ("8115656") or ("7064681") or ("20030014521") or ("20020072974") or ("20110313922") or ("9173009") or ("20110151892") or ("8160959") or ("20040243664") or				

		("20080040265") or ("9256420") or ("8571937") or ("7957991") or ("8225380") or ("20030032409") or ("20160191474") or ("20110029190") or ("8824784") or ("20100299251") or ("20080306826") or ("8639785") or ("20100094996") or ("20110153762") or ("20120109882") or ("8509954") or ("20080042883") or ("20110246070") or ("20180191807") or ("8423239") or ("20160042342") or ("20140038564") or ("8401881") or ("20110246817") or ("20140120863") or ("7979316") or ("9667581") or ("20110145089") or ("20090163140") or ("20170206532") or ("9264846") or ("9269221") or ("9916481") or ("7424543") or ("7917253") or ("8484241") or ("20110111728") or ("20150073887") or ("20110054699") or ("20060239545") or ("9135612") or ("9031536") or ("20100299260") or ("20090247122") or ("20120044089") or ("8571791") or ("20110270707") or ("9317849") or ("20090051486") or ("20120056742") or ("10045327") or ("8463710") or ("8718797") or ("20070237096") or ("20070118599") or ("8626200") or ("20120221473") or ("9757644") or ("8345963") or ("9384345") or ("20060178973") or ("20060239546") or ("20070070213") or ("7504966") or ("20140039726") or ("20020059425") or ("20170256164") or ("9904892") or ("7116985") or ("20070030175") or ("20160242143") or ("20150026600") or ("8913728") or ("7991673") or ("10013705") or ("20120185942") or ("20160270025") or ("20110035594") or ("20160132401") or ("8645303") or ("20120130753") or ("20140365472") or ("20180191740") or ("20140222594") or ("8261256") or ("9642024") or ("8732023") or ("20100306154") or ("20080082448") or ("20160090055") or ("10069808") or ("20120259938") or ("20120126974") or ("20040064351") or ("8494991") or ("8032409") or ("8370445") or ("20160217258") or ("9888353")).PN. or (("20140214653") or ("20050246415") or ("8763140") or				

		("20120101881") or ("20050203892") or ("20080042882") or ("20050050017") or ("20080114709") or ("20120089410") or ("20140351357") or ("20170041813") or ("20170054594") or ("20150230277") or ("9701265") or ("20120259722") or ("9990625") or ("20140176796") or ("8713689") or ("20060253581") or ("20130212196") or ("8654971") or ("20150072654") or ("20090186596") or ("20160078281") or ("20140200929") or ("8396624") or ("8855830") or ("20100036868") or ("9552604") or ("20150264554") or ("20110004546") or ("9848081") or ("20060253894") or ("20090249497") or ("20120127308") or ("20180165593") or ("20060178918") or ("20110224838") or ("20040254985") or ("8121945") or ("7644023") or ("7765481") or ("20110040655") or ("20080133930") or ("20120265677") or ("7207041") or ("8849821") or ("6990513") or ("20010051907") or ("8730062") or ("20150269617") or ("7263551") or ("20110004514") or ("20120204032") or ("20190036947") or ("20080100475") or ("7482952") or ("8108076") or ("20180150762") or ("8730033") or ("6975997") or ("20030187925") or ("7409428") or ("20020019810") or ("20120011367") or ("20150294377") or ("9047619") or ("20180146088") or ("20080088428") or ("20120131004") or ("20140108151") or ("9990848") or ("20060059024") or ("8271336") or ("8886766") or ("20120293305") or ("10163273") or ("20100020728") or ("20160037295") or ("8932368") or ("20110016322") or ("8604750") or ("8209392") or ("9335179") or ("20130275875") or ("20140141718") or ("20120270560") or ("20120102114") or ("8688532") or ("20040203902") or ("8099195") or ("9264151") or ("7479900") or ("20170195847") or ("20090228340") or ("8423548") or ("20110213657") or ("8775535") or ("8508336") or ("20030034873") or ("8219558") or				

		("8390474") or ("20040260470") or ("20170215071") or ("20120239560") or ("9385984") or ("20150279130") or ("20180219976") or ("20160025506") or ("7620404") or ("20080010193") or ("9026471") or ("20140198687") or ("20100036852") or ("20080109473") or ("20150040118") or ("8296567") or ("20130278492") or ("9576157") or ("20160071325") or ("20080263169") or ("10032066") or ("9572033") or ("20100325036") or ("20100299313") or ("9635534") or ("20040257208") or ("20130061216")).PN. or (("20160308813") or ("8326315") or ("10200504") or ("20170227965") or ("8831627") or ("10140606") or ("20180191742") or ("20060270421") or ("7479901") or ("8370254") or ("20160117668") or ("20130191244") or ("9609621") or ("20120329483") or ("10037421") or ("20120084285") or ("20160043985") or ("10164985") or ("8818976") or ("20110046799") or ("20180374113") or ("20070165554") or ("9934537") or ("20140179274") or ("6711474") or ("20060253580") or ("20080108370") or ("9251631") or ("9633039") or ("6754181") or ("20190058995") or ("20160117669") or ("20110029188") or ("20110191117") or ("20080081601") or ("20140062730") or ("8862129") or ("20120215648") or ("8594707") or ("9569596") or ("20090187300") or ("20130013501") or ("8644702") or ("20110260884") or ("20070150444") or ("20110275321") or ("20140237626") or ("9002018") or ("20110046798") or ("8659417") or ("20080200160") or ("9942705") or ("20110046800") or ("20100222073") or ("6606744") or ("8566726") or ("7834758") or ("20120185547") or ("7479899") or ("7080322") or ("20120011366") or ("8232899") or ("10096161") or ("20120202428") or ("9996838") or ("20160358092") or ("7142099") or ("20060230124") or ("20150294115") or ("20120179916") or ("20100228428") or ("9854050") or ("20180124240") or ("20060253579") or ("20190149534") or ("8494560") or				

		("8438499") or ("20180293589") or ("20040190767") or ("9183734") or ("20120142367") or ("20080268823") or ("8977284") or ("20150058250") or ("8412382") or ("8457686") or ("8306503") or ("20150148078") or ("9529998") or ("20130007456") or ("9633562") or ("9557889") or ("7181227") or ("8904179") or ("20080108324") or ("20070052586") or ("9367975") or ("20160300054") or ("8234125") or ("20060290533") or ("20080172285") or ("10235439") or ("20090209233") or ("20040254811") or ("20040249712") or ("9330389") or ("20080172292") or ("9697512") or ("9330388") or ("20150334545") or ("7716077") or ("7577619") or ("20130072234") or ("10142837") or ("20060265489") or ("7055101") or ("7848765") or ("20090030910") or ("20130014020") or ("20160358091") or ("8797138") or ("9773212") or ("20170149759") or ("7577575") or ("20110225047") or ("20160117674") or ("9917826") or ("20120226536") or ("20100176919") or ("9842299") or ("9082303")).PN. or (("8407220") or ("20130124403") or ("20130124404") or ("20110202185") or ("20100107225") or ("20100042931") or ("8506649") or ("8531317") or ("10121139") or ("20110015802") or ("20120303476") or ("20140222610") or ("20120143639") or ("20100036877") or ("8280359") or ("9042873") or ("20140097795") or ("20160307201") or ("9811820") or ("8862055") or ("20090177523") or ("8265862") or ("9979776") or ("8615216") or ("9070127") or ("20130211623") or ("20150262439") or ("20120011028") or ("20110300840") or ("9396450") or ("20120258697") or ("10217102") or ("20110282748") or ("9596509") or ("20070106721") or ("7379891") or ("20170286669") or ("20080201310") or ("8194646") or ("8094647") or ("8750797") or ("20090119657") or ("6526335") or ("20040243430") or ("8126862") or ("8965416") or ("20160041559") or ("20170171125")				

		or ("20140081871") or ("20100198724") or ("20090070148") or ("20110301951") or ("20160342644") or ("20130263227") or ("20140067691") or ("9105060") or ("8656035") or ("9330390") or ("20160171521") or ("20070026842") or ("20150310743") or ("8564455") or ("20120271660") or ("20130103422") or ("20120311705") or ("10002337") or ("8260274") or ("20040150508") or ("9609577") or ("9503539") or ("9400980") or ("20120123786") or ("20080318547") or ("20150002281") or ("20120317652") or ("10149092") or ("20130252585") or ("20110264527") or ("20040186813") or ("8301320") or ("7617159") or ("20100161167") or ("20080109370") or ("20110046792") or ("20120089835") or ("20140089021") or ("9208490") or ("9177315") or ("9542493") or ("9183572") or ("9954961") or ("20120058775") or ("9280684") or ("8433471") or ("20190124134") or ("20060253583") or ("20080200153") or ("7468659") or ("20110208736") or ("20100190474") or ("20170308926") or ("7958081") or ("6219669") or ("20070174467") or ("20160210799") or ("20130305323") or ("7149533") or ("20060253584") or ("6658586") or ("9026472") or ("20110276609") or ("9225701") or ("20170180304") or ("20150358074") or ("9904891") or ("20140052640") or ("7130807") or ("20080201305") or ("6571279") or ("9165137") or ("8396490") or ("20170310814") or ("20120030193") or ("20080095339") or ("9558604") or ("9510320") or ("20160119332") or ("20090119119") or ("8823502") or ("20160014250")).PN. or (("20140303807") or ("20120026017") or ("6442571") or ("20120089492") or ("20140067690") or ("20050110609") or ("20120226421") or ("10157422") or ("9171321") or ("20090109959") or ("8069169") or ("20180033226") or ("20130078954") or ("10079839") or ("20060248028") or ("20150149226") or ("20160321445") or ("10230713")				

		or ("9180784") or ("8938810") or ("20180041876") or ("9092813") or ("20100076818") or ("9183563") or ("20120188064") or ("20180262476") or ("20150149283") or ("8416064") or ("7343350") or ("20110288721") or ("20100153207") or ("9013334") or ("9632506") or ("7869425") or ("20110293095") or ("5862325") or ("7113110") or ("9232491") or ("20060069749") or ("8650316") or ("20080010365") or ("9848114") or ("20160277382") or ("20140150120") or ("20180115620") or ("20050073389") or ("7656310") or ("20130191224") or ("8069168") or ("8611517") or ("8583511") or ("20100159869") or ("9221428") or ("20090206992") or ("20080270579") or ("20090109019") or ("20140340194") or ("20150287252") or ("20190051082") or ("9659499") or ("20020064149") or ("20070213047") or ("20100019920") or ("9607483") or ("8163035") or ("20100299763") or ("20080172274") or ("20120016769") or ("20190121956") or ("20090247132") or ("9916608") or ("8781923") or ("20030055689") or ("8529635") or ("20120057456") or ("20120092444") or ("9871874") or ("7123127") or ("7891004") or ("8078397") or ("20110133908") or ("20040254812") or ("20100106580") or ("20050004978") or ("9471914") or ("8750943") or ("9459622") or ("7484008") or ("20120059910") or ("20090243828") or ("10096054") or ("7076737") or ("8131458") or ("20140245014") or ("9870559") or ("8976008") or ("20190034832") or ("8799037") or ("20090157454") or ("9411524") or ("8611884") or ("20190122285") or ("20100036876") or ("20120265593") or ("20110294466") or ("20060221918") or ("8498618") or ("20130198036") or ("20140108726") or ("20110289124") or ("20160275760") or ("8478243") or ("20120129489") or ("20120196571") or ("20190116453") or ("20110077807") or ("20080021767") or ("8516076") or ("7031945") or				

		("9753746") or ("20020054174") or ("20100049603") or ("8775246") or ("8660538") or ("7529713") or ("9992322") or ("20060173781") or ("20170103758") or ("20130254314") or ("9569781")).PN. or (("9576294") or ("20070093243") or ("7546257") or ("20090099898") or ("20080201321") or ("20120221382") or ("20080201283") or ("20110258156") or ("8254881") or ("20110282796") or ("8890673") or ("20150185034") or ("20120215701") or ("9122851") or ("20160192321") or ("20110029182") or ("20150312882") or ("20120239417") or ("20120209842") or ("8456293") or ("10102521") or ("20090276300") or ("20120284516") or ("20140195456") or ("9165416") or ("20050289058") or ("20130215116") or ("20120005079") or ("20160316346") or ("20120101835") or ("20120116959") or ("20160344745") or ("20130204717") or ("20180198756") or ("20120092190") or ("20120016771") or ("20130016636") or ("20120016770") or ("20150006400") or ("20130179949") or ("20160294837") or ("9569643") or ("20180276909") or ("20060129458") or ("8650319") or ("20110153362") or ("8204487") or ("9564962") or ("20160300183") or ("9386507") or ("20060253582") or ("9767807") or ("8667082")).PN.				
S137	312	(Emerging near2 Automotive) (Penilla near2 Angel) (Penilla near2 Albert)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/05/29 14:06
S138	1,915	S136 not S137	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/29 14:06

S139	1,487	S138 and video	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/29 14:06
S140	1,487	S138 and video	US-PGPUB; USPAT	AND	ON	2019/05/29 14:07
S141	1,253	S138 and video and vehicle	US-PGPUB; USPAT	AND	ON	2019/05/29 14:08
S142	417	S138 and video and vehicle and access near2 code	US-PGPUB; USPAT	AND	ON	2019/05/29 14:08
S143	146	S138 and vehicle and video with time with access	US-PGPUB; USPAT	AND	ON	2019/05/29 14:09
S144	26	S138 and vehicle with video with time with access	US-PGPUB; USPAT	AND	ON	2019/05/29 14:09
S145	0	S137 and (unique code unlock$3 vehicle key video).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/29 14:10
S146	0	S137 and (unlock$3 vehicle key video).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/29 14:10
S147	5	S137 and (vehicle key video).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/29 14:10
S148	5	S137 and (vehicle key camera).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/05/29 14:11
S149	0	"16653958"	US-PGPUB; USPAT; USOCR;	AND	ON	2019/12/04 14:55

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
S150	2	"15854241"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/12/04 14:55
S151	351	(Emerging near2 Automotive) (Penilla near2 Angel) (Penilla near2 Albert)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/12/04 15:00
S152	7	S151 and (unique code unlock$3 vehicle key).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/12/04 15:00
S157	130	"15854241" "15607418" "15344566" "15180306" "14303442" "14063638" "13842158" "14063638" "13452882"	US-PGPUB; USPAT	OR	ON	2019/12/04 15:08
S158	130	("15854241" "15607418" "15344566" "15180306" "14303442" "14063638" "13842158" "14063638" "13452882") and penilla	US-PGPUB; USPAT	OR	ON	2019/12/04 15:09
S159	7	S158 and (unique code unlock$3 vehicle key).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/12/04 15:10
S160	7	S158 and (unique code vehicle key).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/12/04 15:10
S163	4	"9663067".pn. "10407026".pn. "10442399".pn. "9189900".pn.	USPAT	OR	ON	2019/12/04 16:00

S164	608,840	340/5.61.ccls. B60R25/241 H04W4/44 B60L53/68 B60L53/14 B60L58/12 B60L53/665 B60L53/80 B60L53/30 B60L53/65 B60R25/2018 B60S5/06 G06Q10/02 G06Q10/20 G06Q20/18 G06Q20/32 G06Q20/3829 G06Q30/00 G06Q30/0643 G06Q30/0645 G06Q50/06 G07C9/00007 G07C9/00309 G07C9/00571 G07F15/005 H04L67/10 B60L2240/547 B60L2240/70 B60L2250/10 B60L2250/16 B60L2250/20 B60L2270/36 G07C2009/00412 G07C2009/00769 Y02T10/7005 Y02T10/7044 Y02T10/705 Y02T10/7072 Y02T10/7088 Y02T10/7291 Y02T90/121 Y02T90/124 Y02T90/128 Y02T90/14 Y02T90/16 Y02T90/163 Y02T90/169 Y04S30/14	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/12/04 16:45
S165	23	S164 and (vehicle near10 access$3 near10 unique) and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/12/04 16:47
S166	1,184	(("20180091930") or ("20170316621") or ("9710975") or ("8768565") or ("20160297398") or ("20140309842") or ("20130317693") or ("9373201") or ("20190025856") or ("20150161832") or ("20190075423") or ("10264399") or ("20190346840") or ("20140256304") or ("9736669") or ("7484008") or ("7891004") or ("20140143839") or ("20130204943") or ("8601595") or ("20180334138") or ("10377346") or ("20160114745") or ("8079118") or ("20120079149") or ("7904569") or ("20110029644") or ("10377345") or ("9055022") or ("20180326947") or ("20130204466") or ("9736656") or ("20080150683") or ("10154094") or ("20190166635") or ("10104547") or ("8089339") or ("9116786") or ("9396450") or ("20190279440") or ("20160140649") or ("20140279019") or ("20190082381") or ("20190318549") or ("20130198737") or ("7502672") or ("20130203400") or ("10383045") or ("20130309977") or ("9043073") or	US-PGPUB; USPAT; USOCR	OR	OFF	2019/12/04 16:49

		("9299053") or ("20130205026") or ("20180190051") or ("8855575") or ("20130145482") or ("9134986") or ("20130218412") or ("20140270158") or ("10032319") or ("20130200991") or ("20180012427") or ("20130281023") or ("20130204493") or ("8949823") or ("20130205412") or ("20130132286") or ("20120221473") or ("20190259227") or ("9988058") or ("20170011572") or ("20180012425") or ("9418491") or ("20180012224") or ("10013828") or ("20150006035") or ("20180012279") or ("7003289") or ("20160203661") or ("9008906") or ("20140294180") or ("20160248740") or ("20190359173") or ("20160086397") or ("9762559") or ("8781442") or ("10384644") or ("20160185222") or ("20130204484") or ("20160217635") or ("10065653") or ("9081653") or ("20180009446") or ("9276736") or ("9112700") or ("20190259229") or ("20160344747") or ("20180273049") or ("20140309862") or ("20160196745") or ("20130227648") or ("10384643") or ("20160103980") or ("20190228383") or ("20180012426") or ("20180012273") or ("20150264627") or ("9417834") or ("9865110") or ("20160347325") or ("20170093643") or ("20150186094") or ("6853894") or ("10020995") or ("20190222484") or ("9818151") or ("20190241155") or ("10015720") or ("9635518") or ("20130282238") or ("20190344663") or ("9129336") or ("10388081") or ("20140310788") or ("20160093216") or ("20170228945") or ("9173100") or ("20180154867") or ("20190098530")).PN. or (("9756549") or ("7904219") or ("10074223") or ("20180357898") or ("20170332273") or ("20050102074") or ("20190020985") or ("9224249") or ("10304261") or ("20170099295") or ("9083581") or ("10142881") or ("20160086391") or ("20150264626") or ("20140310031") or ("20190124468") or ("20180108194") or ("20190311452") or ("10354460") or ("20180012004") or				

		("20170272905") or ("10308218") or ("20140066053") or ("20150029987") or ("20160049014") or ("20190009788") or ("10269246") or ("20180013211") or ("10300924") or ("10117066") or ("20160247377") or ("20180204399") or ("20140270172") or ("9276737") or ("10332327") or ("20140309813") or ("20140156110") or ("9781110") or ("20170127230") or ("20150032291") or ("9003500") or ("6389337") or ("20170297512") or ("20100235891") or ("20140129053") or ("10212543") or ("20110118934") or ("20190026796") or ("20190088036") or ("8055403") or ("10057265") or ("20150133108") or ("9706354") or ("20120053759") or ("20140156111") or ("8527135") or ("20180374126") or ("20130219039") or ("8918232") or ("20140199965") or ("20040217852") or ("9420405") or ("10266131") or ("20180014241") or ("20140129113") or ("20170078472") or ("20180012424") or ("7597250") or ("9946906") or ("9290153") or ("6615186") or ("10104525") or ("20130198802") or ("20140129301") or ("9020697") or ("20190215670") or ("20160070527") or ("10419984") or ("20140200740") or ("20180368030") or ("8880239") or ("20150063329") or ("20140309870") or ("20060219776") or ("6856820") or ("20150232065") or ("9082239") or ("20140096217") or ("20160264132") or ("20060157563") or ("20080228346") or ("20190205115") or ("9807547") or ("20160266886") or ("9545930") or ("20180317067") or ("20180012048") or ("20130191253") or ("20130290522") or ("20160225203") or ("20160255575") or ("20160059865") or ("20080015748") or ("20140309863") or ("9701305") or ("9306924") or ("9277486") or ("10171967") or ("9710983") or ("10096176") or ("20030231550") or ("8989954") or ("20150296441") or ("20190279509") or ("20080082221") or ("20170308365") or ("7548491") or ("9088572") or ("9123186") or ("6895310") or ("20140309806") or				

		("9338170") or ("9033226") or ("9888363") or ("20160366539") or ("20120030470") or ("8779947") or ("9235941") or ("20140309886")).PN. or (("20140247158") or ("9401087") or ("20130265178") or ("8805349") or ("20120282906") or ("20180373268") or ("20180069929") or ("8690050") or ("20170201517") or ("20150188961") or ("20190176752") or ("20130073406") or ("20150222708") or ("20140066132") or ("10291710") or ("20060161315") or ("8909153") or ("20190228168") or ("8413887") or ("20170262863") or ("9451447") or ("20190090174") or ("20190274015") or ("20180197349") or ("8787936") or ("20090024525") or ("20180338001") or ("20180376357") or ("20140309891") or ("20110235627") or ("10405215") or ("20170076279") or ("20150222553") or ("9867050") or ("20160241645") or ("9838480") or ("20140364108") or ("9883209") or ("20180308015") or ("20180375939") or ("10210689") or ("10078924") or ("20150242808") or ("20190349794") or ("20190075109") or ("9424547") or ("20140121890") or ("20150206045") or ("8848608") or ("9179311") or ("8305936") or ("9418489") or ("8205788") or ("20130147616") or ("20110281562") or ("20100153207") or ("20140309880") or ("8371503") or ("20140310610") or ("20190299802") or ("20160195404") or ("8744745") or ("20130271273") or ("20140310739") or ("9990783") or ("20170077976") or ("8638202") or ("20150100197") or ("20110301839") or ("8761821") or ("20190027043") or ("20140248860") or ("20160205419") or ("20100228405") or ("20120225639") or ("20150341757") or ("8922356") or ("20180091508") or ("9646439") or ("20120071140") or ("20150199855") or ("20150242768") or ("20150365981") or ("9918345") or ("20130206835") or ("9098957") or ("20170236343") or ("9576474") or ("20180201226") or ("9560470") or ("20110313593") or ("8594616") or ("20130204721") or ("9445442") or				

		("10084498") or ("9699587") or ("20140328248") or ("20070079012") or ("20170208632") or ("20180279391") or ("20150319551") or ("20120302265") or ("9408043") or ("7427024") or ("20130191231") or ("8335502") or ("20140067195") or ("20190066409") or ("20140269466") or ("20120213205") or ("20140310594") or ("9402174") or ("9756684") or ("20110021234") or ("20160353355") or ("8640944") or ("20140307724") or ("9142072") or ("8622286") or ("10172070") or ("20120244883") or ("20180212967") or ("20170075701") or ("20140235209") or ("9674756") or ("9185641") or ("10015257") or ("10147253")).PN. or (("20180035245") or ("20150223273") or ("10464530") or ("20160203520") or ("9786102") or ("9420401") or ("20150334506") or ("9536361") or ("20150023183") or ("9432828") or ("20140303837") or ("20160295487") or ("20140309877") or ("20170178035") or ("20190306149") or ("20170318612") or ("20110001638") or ("20140031010") or ("20190122449") or ("9078200") or ("20150229604") or ("9955493") or ("20090170434") or ("20120086549") or ("8579189") or ("8613390") or ("8484707") or ("20130211623") or ("20130237174") or ("9349112") or ("9251631") or ("8212691") or ("20190171208") or ("8750832") or ("20090089069") or ("10407026") or ("9311656") or ("20170232888") or ("8718797") or ("10023117") or ("20190141607") or ("20170267214") or ("20140277828") or ("20160370202") or ("20170106834") or ("9584470") or ("9682683") or ("20180335523") or ("8213861") or ("20130151065") or ("20140306817") or ("8336042") or ("9747729") or ("20180024725") or ("9894526") or ("20170225690") or ("9916071") or ("20180034919") or ("20170318520") or ("20160360557") or ("9513133") or ("9305411") or ("20190190703") or ("9521606") or ("9878690") or				

		("20160129882") or ("10033819") or ("10049514") or ("20160292737") or ("20150116100") or ("8737913") or ("20190265868") or ("20030034873") or ("20020049535") or ("8731155") or ("9858595") or ("20160185358") or ("9189900") or ("8903385") or ("20190092280") or ("20180134254") or ("20150026312") or ("20040259545") or ("20160295414") or ("20100115505") or ("20190303809") or ("9227595") or ("6609103") or ("20080319665") or ("20120164989") or ("9911258") or ("8116749") or ("7133659") or ("9586596") or ("20190174276") or ("20080043692") or ("20090167524") or ("10442399") or ("20140097937") or ("20140380505") or ("9949303") or ("20140307655") or ("9984561") or ("20100062746") or ("9604651") or ("9713063") or ("20190266897") or ("20120028607") or ("20160098876") or ("20180091608") or ("20150095156") or ("20150242809") or ("9229903") or ("20070299565") or ("20020101993") or ("9247434") or ("8311858") or ("20140067152") or ("20080318547") or ("8731741") or ("20070174467") or ("9924305") or ("9099000") or ("20170094583") or ("20190182634") or ("20130271275") or ("9794011") or ("20150134968") or ("20140206392") or ("20100062758")).PN. or (("8719592") or ("9386447") or ("9819777") or ("9626857") or ("8385913") or ("20180033226") or ("20180276674") or ("20180059913") or ("7079832") or ("20160071333") or ("9373205") or ("20140380296") or ("20180007521") or ("20080102796") or ("9363646") or ("20120282908") or ("20190215370") or ("20180101833") or ("20150381297") or ("20130096966") or ("10289288") or ("20120051272") or ("20140282747") or ("9307297") or ("20070118426") or ("8140358") or ("20150345965") or ("20090164053") or ("20140129047") or ("9081944") or ("20180260740") or ("20060211446") or ("20070100514") or ("20170135060") or ("10244365") or				

		("10143030") or ("7616943") or ("7774231") or ("9264846") or ("20120209634") or ("20140309874") or ("20160132053") or ("20170345241") or ("8666437") or ("20190068434") or ("20170070253") or ("20170324817") or ("20130130639") or ("9130930") or ("20140380442") or ("20070173266") or ("20090069051") or ("20100063867") or ("10129816") or ("20160284143") or ("20080014908") or ("20160099927") or ("9420431") or ("8670897") or ("8190221") or ("20120231821") or ("9275503") or ("9800664") or ("20040030601") or ("10038464") or ("8521216") or ("9367968") or ("20050136949") or ("9778831") or ("9635006") or ("8565838") or ("20160309018") or ("20170171832") or ("9082238") or ("20140227980") or ("20130084847") or ("9565712") or ("20190287080") or ("9754424") or ("20060105740") or ("20050085226") or ("10410251") or ("20170263063") or ("8606314") or ("9668133") or ("20180336745") or ("20120231766") or ("8417258") or ("20140213238") or ("10108901") or ("8326522") or ("9663067") or ("8705527") or ("8892451") or ("20090248302") or ("20190096243") or ("20180132058") or ("20080103685") or ("9955240") or ("20150145645") or ("8660538") or ("20190259093") or ("8380259") or ("20140024342") or ("8754766") or ("20170050617") or ("20080040272") or ("20170300803") or ("20130295888") or ("9990781") or ("20180077712") or ("20090073946") or ("9184777") or ("9538338") or ("20170316533") or ("7496347") or ("20110165896") or ("20180365645") or ("20150120416") or ("20120172012") or ("9949267") or ("20170272316") or ("20080039019") or ("20180115809") or ("10002479") or ("8239076") or ("20060026017") or ("7299007") or ("20140141718") or ("20180091985")).PN. or (("20090248222") or ("20190092282") or ("20120096490") or ("9984522") or				

		("9031710") or ("20130231052") or ("10415528") or ("20150193726") or ("20080039020") or ("20160197776") or ("8863256") or ("8639283") or ("8509987") or ("9209977") or ("9445447") or ("10387826") or ("20180338241") or ("7228211") or ("20140378055") or ("20100159894") or ("20140142783") or ("20150210287") or ("10085135") or ("20040073440") or ("9014910") or ("10231125") or ("8996876") or ("20070213887") or ("20100312419") or ("20160381717") or ("9860709") or ("20160241999") or ("20120109417") or ("9313661") or ("6622124") or ("9634892") or ("10068402") or ("20100063889") or ("10210487") or ("20110112717") or ("20190188925") or ("20150234636") or ("20100159869") or ("20150341862") or ("20150071216") or ("20080215878") or ("20130013348") or ("9654937") or ("8841987") or ("8090359") or ("20120089522") or ("20190003439") or ("20100228404") or ("8880240") or ("20170171730") or ("20160143004") or ("20030220835") or ("8682294") or ("8787949") or ("20150195364") or ("20160133072") or ("20150021113") or ("20170251339") or ("9998892") or ("20160019775") or ("20190230401") or ("20090150023") or ("9094800") or ("20140278837") or ("20120331301") or ("20140379169") or ("10264140") or ("8868289") or ("20170032593") or ("20190356552") or ("8606503") or ("20150239408") or ("20090170537") or ("20130282227") or ("20060179452") or ("8370955") or ("20160029195") or ("10179591") or ("20090172102") or ("20160140776") or ("20160358394") or ("9365188") or ("20080032738") or ("20070264968") or ("20160318481") or ("20120054028") or ("20130013347") or ("10414357") or ("9996315") or ("20190351783") or ("6584403") or ("9738255") or ("20140364153") or ("10375630") or ("20180005337") or ("20180009416") or ("20110125363") or ("20180352583") or				

		("20180260822") or ("8694366") or ("20170291614") or ("8369842") or ("9495866") or ("20170021760") or ("20160337849") or ("20170197584") or ("20160255503") or ("20170353988") or ("20030065805") or ("20160127899") or ("9108579") or ("8385896") or ("8121628") or ("20140323092") or ("9261365") or ("7917285") or ("20180089912") or ("9392452") or ("9036509") or ("20110003578") or ("10200887") or ("9241235") or ("20190268744") or ("10492034")).PN. or (("20160049033") or ("8750943") or ("20110302014") or ("20170332274") or ("8423239") or ("20070252689") or ("8090616") or ("20150264554") or ("9609513") or ("20110004401") or ("20120096358") or ("9398397") or ("20130103404") or ("9499129") or ("20090144624") or ("20110170837") or ("8027789") or ("9233655") or ("20110300802") or ("20140303807") or ("20140310075") or ("20120078441") or ("9607449") or ("20100061294") or ("9902368") or ("20090070861") or ("20150206206") or ("20160065646") or ("20110133908") or ("9743451") or ("20140274013") or ("20130275761") or ("9179296") or ("20160300413") or ("20190268722") or ("20120135711") or ("8457686") or ("8776189") or ("7366892") or ("20130274953") or ("8880047") or ("20040185842") or ("20170086241") or ("20160036957") or ("20070171854") or ("10086796") or ("7155199") or ("20160023636") or ("20180218613") or ("20150054647") or ("20190173951") or ("20120089470") or ("7844247") or ("9503968") or ("9566903") or ("20160012728") or ("20040117195") or ("8611919") or ("20080288315") or ("20110119733") or ("9428127") or ("20190069225") or ("9473920") or ("20180109997") or ("20140033293") or ("10172076") or ("20150244534") or ("20150148989") or ("7936736") or ("20180009414") or ("20150356497") or ("9348492") or ("7761232") or ("20180063882") or ("20190005442")				

		or ("20140282470") or ("20080148374") or ("9251693") or ("20140266635") or ("20180229689") or ("9183835") or ("9225718") or ("20180211231") or ("20130197915") or ("9318017") or ("20130133087") or ("20160278087") or ("8559968") or ("20170265022") or ("20170324667") or ("20110276399") or ("20140195102") or ("9159322") or ("20140293829") or ("20140087760") or ("20160210670") or ("7487112") or ("20150213401") or ("9826464") or ("9586559") or ("20130197907") or ("20190158353") or ("20180285832") or ("20130275199") or ("10282708") or ("20150319681") or ("20190174011") or ("20120142367") or ("20080200209") or ("20140306833") or ("9754431") or ("10089598") or ("20180319368") or ("8416064") or ("20140215491") or ("9171470") or ("20140169564") or ("20120221188") or ("9654980") or ("6771981") or ("20190034915") or ("9607280") or ("9807577") or ("20090163140") or ("10264425") or ("9892439") or ("10021669") or ("9480066") or ("20140012496")).PN. or (("9300152") or ("9277370") or ("20160071082") or ("20150382319") or ("9729707") or ("9473904") or ("20190141023") or ("7970446") or ("20020169539") or ("20150319511") or ("7797170") or ("20180041943") or ("9842442") or ("9218700") or ("10383059") or ("9924452") or ("9378601") or ("10103996") or ("20120095844") or ("20140152254") or ("20190297472") or ("20190255963") or ("10304045") or ("9161164") or ("10229601") or ("9038129") or ("20160055116") or ("20140370863") or ("8326282") or ("7346374") or ("20020186144") or ("20080211641") or ("8269618") or ("9656633") or ("20160366711") or ("20180144369") or ("20170034774") or ("8836489") or ("20190092283") or ("20170094524") or ("8849698") or ("9635534") or ("10405152") or ("20150227923") or ("10231273") or ("20180376305") or ("20110102189")				

		or ("10055901") or ("20110302019") or ("9767065") or ("9716927") or ("10389552") or ("7936256") or ("20130295889") or ("20150341787") or ("20170257750") or ("20040010358") or ("20150264017") or ("20160144826") or ("20050017068") or ("20180262891") or ("7762470") or ("20180109399") or ("20150170427") or ("20090318163") or ("9439071") or ("9510158") or ("20120303203") or ("10249123") or ("20150334545") or ("20190103030") or ("20170011425") or ("20180302751") or ("20160088052") or ("20180014351") or ("10434985") or ("20190166494") or ("20100202346") or ("20160300417") or ("20170270490") or ("20150116103") or ("9252951") or ("9467179") or ("8180280") or ("20130281017") or ("20170048080") or ("20080171559") or ("20130191269") or ("20140309885") or ("20140066135") or ("20050040951") or ("20150279130") or ("9818088") or ("7912625") or ("9064258") or ("20170215021") or ("9406176") or ("10277684") or ("6973324") or ("20160191704") or ("20030130001") or ("20060206246") or ("10433243") or ("8666804") or ("8547212") or ("8374592") or ("20180075287") or ("20190138819") or ("10178229") or ("20180063324") or ("20140309789") or ("20160012431") or ("20130160060") or ("20140309864") or ("20080056210") or ("10019621") or ("20190188651") or ("10342067") or ("9131376") or ("9084197") or ("20170210341") or ("9681301") or ("20040110472") or ("20150116078") or ("9767655") or ("20170238346") or ("9367975") or ("10405357") or ("20040093289") or ("20170048711")).PN. or (("10354533") or ("20040218609") or ("9558604") or ("10343695") or ("20120289295") or ("20160210799") or ("7394761") or ("20050240343") or ("20160156720") or ("8738214") or ("9912754") or ("20150071052") or				

		("7917439") or ("20160197782") or ("20190130750") or ("20190205468") or ("20190349732") or ("9439240") or ("20120088462") or ("20190143996") or ("20160007169") or ("20160082839") or ("9787855") or ("20170176192") or ("20170094523") or ("9652913") or ("6526335") or ("20160358391") or ("20170238154") or ("9872154") or ("20190090109") or ("20150244876") or ("20060208066") or ("9168895") or ("20190354634") or ("20110291823") or ("20160026659") or ("20130282283") or ("20190126935") or ("20180074813") or ("9215590") or ("6711474") or ("20190156591") or ("8253549") or ("20110148658") or ("20070264974") or ("10455421") or ("8014752") or ("8442558") or ("20030093187") or ("7672665") or ("20180012433") or ("9326088") or ("9002536") or ("20060217109") or ("20150215954") or ("9225782") or ("20050159184") or ("20070032225") or ("20100251349") or ("10187751") or ("10382921") or ("20130102295") or ("9755851") or ("20160153793") or ("10380577") or ("20180342115") or ("20180376306") or ("20170366976") or ("20190281052") or ("20190057217") or ("20130281021") or ("20140309934") or ("10493996") or ("20180220309") or ("20130301584") or ("7349722") or ("20160012653") or ("9767627") or ("20190092279") or ("20180255508") or ("9031498") or ("20180034976") or ("20180324291") or ("9697733") or ("20170067747") or ("20150029041") or ("10349285") or ("20180137538") or ("20160180608") or ("20170036511") or ("20160323386") or ("20140067403") or ("9251521") or ("20110260884") or ("20190220265") or ("20150175127") or ("9338731") or ("20010018639") or ("20080268866") or ("20150024781") or ("8660735") or ("6240365") or ("9864958") or ("20040203919") or ("20190132395") or ("9820124") or ("20180007628") or ("20070139168") or ("9679562") or ("20190188934") or ("6965816") or ("20160100292") or				

		("9888440") or ("10489449") or ("20120202520") or ("10231123") or ("20190356738") or ("20190347695") or ("9084118") or ("20080147410") or ("20180013858") or ("20150310743") or ("9581997") or ("7146191") or ("20170164192") or ("20180077211") or ("6947760")).PN. or (("8514825") or ("10360760") or ("20140273955") or ("20130238184") or ("9185433") or ("9963106") or ("20190087864") or ("20030013438") or ("8390474") or ("9164160") or ("20150187147") or ("7355509") or ("20180158256") or ("20170195953") or ("6154658") or ("20190251759") or ("7266435") or ("9495872") or ("8117049") or ("10219139") or ("20180240169") or ("20170366616") or ("20160366285")).PN.				
S167	2	S166 and (vehicle near10 access$3 near10 unique) and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/12/04 16:49
S168	3	"8768565".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/12/04 16:50
S169	11	S166 and (vehicle with access$3 with unique) and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2019/12/04 16:52
S170	53	rental near10 car with restriction and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 12:18
S171	0	rental near10 car with restrict with mobile with phone and @ad<"20110422"	US-PGPUB; USPAT; USOCR;	AND	ON	2020/04/27 12:20

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
S172	3	rental near10 car with restrict$3 with mobile and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 12:20
S173	2	rental near10 car and restrict$3 with mobile with usage and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 12:35
S174	0	rental near10 car and restrict$3 with infotainment and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 12:41
S175	0	rental near10 car and limit with infotainment and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 12:42
S176	6	car and limit with infotainment and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 12:42
S177	157	rental near10 car with (limit or restrict$3) and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 12:44
S178	11	(limit or restrict$3) near15 infotainment near15 driving and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO;	AND	ON	2020/04/27 13:00

			JPO; DERWENT; IBM_TDB			
S179	0	rental near10 car with (limit or restrict$3) with location with notif$4 and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 14:14
S180	11	rental near10 car with restriction with location and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 14:17
S181	0	rental near10 car with restrict with location and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 14:17
S182	90	rental near10 car with (restrict$3 or limit$3) with (location or goegraphic$3) and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 14:18
S183	58	rental near10 car with track$3 with (location or goegraphic$3) and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 14:20
S184	0	rental near10 car with track$3 with (location or goegraphic$3) with (bound or zone) and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 14:21
S185	0	rental near10 car with reporr with reservation with end$3 and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	AND	ON	2020/04/27 14:41

			DERWENT; IBM_TDB			
S186	7	rental near10 car with report$3 with reservation with end$3 and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 14:41
S187	2	rental near10 car with set with limit with speed and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 14:53
S188	5	vehicle with display with geographic$2 with violation and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 14:54
S189	3	"20090062971".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 15:01
S190	0	rental near10 car with notify with trunk and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 15:55
S191	0	rental near10 car with report with trunk and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 15:55
S192	1	rental near10 car and report with trunk and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	AND	ON	2020/04/27 15:55

			DERWENT; IBM_TDB			
S193	115	rental near10 car and control with trunk and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 15:56
S194	1	"16653958"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 16:48
S195	37	(US-20020064258-$ | US-20020085043-$ | US-20020133273-$ | US-20030137277-$ | US-20030153278-$ | US-20030205619-$ | US-20030234325-$ | US-20040046506-$ | US-20040064235-$ | US-20040092253-$ | US-20040093155-$ | US-20040265671-$ | US-20050021190-$ | US-20050044245-$ | US-20050231119-$ | US-20060125620-$ | US-20060182241-$ | US-20060282381-$ | US-20060287783-$ | US-20070068714-$ | US-20070126395-$ | US-20070282495-$ | US-20080039979-$ | US-20080039989-$ | US-20080040129-$ | US-20080040223-$ | US-20080040295-$ | US-20080052145-$ | US-20080086411-$ | US-20080097904-$ | US-20080155008-$ | US-20080180027-$ | US-20080203973-$ | US-20080228613-$ | US-20080281663-$ | US-20080294283-$ | US-20080312782-$).DID.	US-PGPUB; USPAT	AND	ON	2020/04/27 17:54
S196	41	(US-20090011639-$ | US-20090021213-$ | US-20090021385-$ | US-20090030712-$ | US-20090043519-$ | US-20090058355-$ | US-20090066287-$ | US-20090076913-$ | US-20090082957-$ | US-20090091291-$ | US-20090092864-$ | US-20090144001-$ | US-20090157289-$ | US-20090164473-$ | US-20090174365-$ |	US-PGPUB; USPAT	AND	ON	2020/04/27 17:54

		US-20090177580-$ | US-20090210357-$ | US-20090287578-$ | US-20090312903-$ | US-20090313032-$ | US-20090313033-$ | US-20090313034-$ | US-20090313098-$ | US-20090313104-$ | US-20090313174-$ | US-20100013434-$ | US-20100017045-$ | US-20100017249-$ | US-20100049396-$ | US-20100049533-$ | US-20100049610-$ | US-20100049639-$ | US-20100049737-$ | US-20100057306-$ | US-20100112843-$ | US-20100141206-$ | US-20100161481-$ | US-20100161482-$ | US-20100169008-$ | US-20100198508-$ | US-20100280956-$).DID.				
S197	41	(US-0233077-$ | US-20100198513-$ | US-20100211340-$ | US-20100211643-$ | US-20100222939-$ | US-20100268426-$ | US-20100304349-$ | US-20110032110-$ | US-20110074350-$ | US-20110074351-$ | US-20110077809-$ | US-20110106329-$ | US-20110112969-$ | US-20110130885-$ | US-20110187521-$ | US-20110191265-$ | US-20110193522-$ | US-20110202218-$ | US-20110246252-$ | US-20110279083-$ | US-20110309929-$ | US-20120233077-$ | US-20120013300-$ | US-20120019204-$ | US-20120025765-$ | US-20120028680-$ | US-20120041624-$ | US-20120053754-$ | US-20120074903-$ | US-20120105197-$ | US-20120123670-$ | US-20120136743-$ | US-20120136802-$ | US-20120158244-$ | US-20120179323-$ | US-20120218128-$ | US-20120229056-$ | US-20120229085-$ | US-20120232965-$ | US-20120262002-$ | US-20120268068-$).DID.	US-PGPUB; USPAT	AND	ON	2020/04/27 17:55
S198	42	(US-20120268076-$ | US-20120268242-$ | US-20120280654-$ | US-20120296512-$ | US-20120303397-$ | US-20120306445-$ | US-20120310713-$ | US-20120316671-$ | US-20130002876-$ |	US-PGPUB; USPAT	AND	ON	2020/04/27 17:55

		US-20130020139-$ | US-20130021162-$ | US-20130037339-$ | US-20130099892-$ | US-20130103236-$ | US-20130110296-$ | US-20130110632-$ | US-20130110653-$ | US-20130127247-$ | US-20130135093-$ | US-20130144520-$ | US-20130145065-$ | US-20130179057-$ | US-20130204466-$ | US-20130241720-$ | US-20130253746-$ | US-20130280018-$ | US-20130300554-$ | US-20130317693-$ | US-20130317694-$ | US-20130328387-$ | US-20130338820-$ | US-20130342363-$ | US-20140002015-$ | US-20140019280-$ | US-20140021908-$ | US-20140042968-$ | US-20140047107-$ | US-20140066049-$ | US-20140089016-$ | US-20140106726-$ | US-20140118107-$ | US-20140120829-$).DID.				
S199	22	(US-20140125355-$ | US-20140142783-$ | US-20140163771-$ | US-20140163774-$ | US-20140164559-$ | US-20140172192-$ | US-20140172265-$ | US-20140172727-$ | US-20140179353-$ | US-20140200742-$ | US-20140203077-$ | US-20140207333-$ | US-20140214261-$ | US-20140214321-$ | US-20140218189-$ | US-20140232331-$ | US-20140236414-$ | US-20140236463-$ | US-20140253018-$ | US-20140277936-$ | US-20140278089-$ | US-20140300739-$).DID.	US-PGPUB; USPAT	AND	ON	2020/04/27 17:55
S200	35	(US-3690397-$ | US-3799063-$ | US-3867682-$ | US-4052655-$ | US-4102273-$ | US-4132174-$ | US-4162445-$ | US-4309644-$ | US-4347472-$ | US-4383210-$ | US-4389608-$ | US-4405891-$ | US-4433278-$ | US-4450400-$ | US-4532418-$ | US-4789047-$ | US-4815840-$ | US-5049802-$ | US-5121112-$ | US-5132666-$ | US-5184058-$ | US-5202617-$ | US-5297664-$ | US-5306999-$ | US-5315227-$ | US-5327066-$ | US-5343970-$ | US-5422624-$ | US-	US-PGPUB; USPAT	AND	ON	2020/04/27 17:56

		5434781-$ | US-5441122-$ | US-5449995-$ | US-5487002-$ | US-5488283-$ | US-5492190-$ | US-5548200-$).DID.				
S201	42	(US-5549443-$ | US-5555502-$ | US-5563491-$ | US-5585205-$ | US-5594318-$ | US-5595271-$ | US-5596258-$ | US-5612606-$ | US-5627752-$ | US-5636145-$ | US-5642270-$ | US-5666102-$ | US-5691695-$ | US-5694019-$ | US-5701706-$ | US-5736833-$ | US-5760569-$ | US-5778326-$ | US-5790976-$ | US-5892598-$ | US-5916285-$ | US-5974136-$ | US-5998963-$ | US-6014597-$ | US-6049745-$ | US-6067008-$ | US-6081205-$ | US-6085131-$ | US-6151539-$ | US-6175789-$ | US-6225776-$ | US-6234932-$ | US-6236333-$ | US-6252380-$ | US-6301531-$ | US-6307349-$ | US-6330497-$ | US-6330499-$ | US-6370475-$ | US-6373380-$ | US-6416209-$ | US-6434465-$).DID.	US-PGPUB; USPAT	AND	ON	2020/04/27 17:56
S202	41	(US-6456041-$ | US-6466658-$ | US-6480767-$ | US-6487477-$ | US-6498454-$ | US-6511192-$ | US-6586866-$ | US-6614204-$ | US-6629024-$ | US-6727809-$ | US-6741036-$ | US-6765495-$ | US-6789733-$ | US-6794849-$ | US-6850898-$ | US-6915869-$ | US-6922629-$ | US-6937140-$ | US-6940254-$ | US-7013205-$ | US-7039389-$ | US-7084781-$ | US-7201384-$ | US-7269416-$ | US-7289611-$ | US-7376497-$ | US-7379541-$ | US-7402978-$ | US-7532965-$ | US-7565396-$ | US-7630802-$ | US-7650210-$ | US-7674536-$ | US-7683771-$ | US-7693609-$ | US-7698078-$ | US-7740092-$ | US-7751945-$ | US-7778746-$ | US-7796052-$ | US-7850351-$).DID.	US-PGPUB; USPAT	AND	ON	2020/04/27 17:57
S203	41	(US-7869576-$ | US-7885893-$ | US-7949435-$ | US-7956570-$ | US-7979198-$ | US-7986126-$ | US-7991665-$ | US-8006793-$ | US-8027843-$ | US-8036788-$ | US-	US-PGPUB; USPAT	AND	ON	2020/04/27 17:57

		8054048-$ | US-8072318-$ | US-8103391-$ | US-8256553-$ | US-8262268-$ | US-8265816-$ | US-8266075-$ | US-8294420-$ | US-8333492-$ | US-8336664-$ | US-8350526-$ | US-8366371-$ | US-8392065-$ | US-8405347-$ | US-8482255-$ | US-8483775-$ | US-8483907-$ | US-8490005-$ | US-8508188-$ | US-8521599-$ | US-8527135-$ | US-8527146-$ | US-8552686-$ | US-8589019-$ | US-8624719-$ | US-8630741-$ | US-8635091-$ | US-8643329-$ | US-8660734-$ | US-8686864-$ | US-8694328-$).DID.				
S204	14	(US-8706394-$ | US-8713121-$ | US-8717170-$ | US-8725551-$ | US-8751065-$ | US-8751271-$ | US-8760432-$ | US-8799037-$ | US-8816845-$ | US-8818622-$ | US-8818725-$ | US-8819414-$ | US-8825222-$ | US-8836281-$).DID.	US-PGPUB; USPAT	AND	ON	2020/04/27 17:57
S205	356	S195 S196 S197 S198 S199 S200 S201 S202 S203 S204	US-PGPUB; USPAT	OR	ON	2020/04/27 17:58
S206	3	"20090062971".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 18:00
S207	7	S205 and @ad<"20110422" and (lock$3 or unlock$3) near15 door and car near15 (rental or sharing)	US-PGPUB; USPAT	OR	ON	2020/04/27 18:01
S208	376	(Emerging near2 Automotive) (Penilla near2 Angel) (Penilla near2 Albert)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/04/27 18:02
S209	8	S208 and (unique code unlock$3 vehicle key).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 18:02

S210	4	S208 and (unique restriction (unlock$3 or lock$3) vehicle key).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/04/27 18:03
S211	242	user near15 (limit$3 or restric$t3)near15 operation near15 vehicle and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/10/14 17:32
S212	242	user near15 (limit$3 or restric$t3) near15 operation near15 vehicle and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/10/14 17:32
S213	4	administrator near15 (limit$3 or restric$t3) near15 operation near15 vehicle and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/10/14 17:33
S214	86	vehicle near10 sharing and (limit$3 or restric$t3) near15 operation near15 vehicle and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/10/14 17:34
S215	2	"20030206102".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/10/14 18:45
S216	0	"20030206102".pn. and restict$3 with speed	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/10/14 19:22

S217	0	"20030206102".pn. and restict$3 same speed	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/10/14 19:22
S218	0	"20030206102".pn. and limit with speed	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/10/14 19:22
S219	1	"20030206102".pn. and speed	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/10/14 19:23
S220	2	"20030206102".pn. and restriction	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/10/14 19:23
S221	406	(Emerging near2 Automotive) (Penilla near2 Angel) (Penilla near2 Albert)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2020/10/14 19:41
S222	4	S221 and (unique restriction (unlock$3 or lock$3) vehicle key).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2020/10/14 19:41
S223	433	(Emerging near2 Automotive) (Penilla near2 Angel) (Penilla near2 Albert)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/04/05 16:50

S224	0	S223 and (unique restriction (unlock$3 or lock$3) vehicle key camera).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/04/05 16:50
S225	0	S223 and (unique restriction vehicle key camera).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/04/05 16:50
S226	520	(Emerging near3 Automotive) (Penilla near3 Angel) (Penilla near3 Albert)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/04/05 16:51
S227	0	S226 and (unique restriction vehicle key camera).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/04/05 16:52
S228	5	S226 and (key restriction vehicle key camera).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/04/05 16:52
S229	26	(key restriction vehicle key camera).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/04/05 17:05
S230	6	(key restriction vehicle key camera record$3).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/04/05 17:06

S235	376	(("20200361335") or ("20200047714") or ("20180134254") or ("20170267214") or ("10407026") or ("10442399") or ("20210028928") or ("20170374550") or ("10645578") or ("20160055699") or ("20180293827") or ("20190164367") or ("20210076208") or ("10924924") or ("20160318481") or ("9499129") or ("20130185559") or ("8880881") or ("20130182845") or ("20140040621") or ("20190232919") or ("8494165") or ("9365188") or ("20170050617") or ("20190197806") or ("9189900") or ("8874913") or ("9663067") or ("10412581") or ("20160088465") or ("10115256") or ("20180234843") or ("10676066") or ("10064039") or ("20180070201") or ("9848284") or ("10643414") or ("11004061") or ("20200402334") or ("20200250652") or ("10262484") or ("20130185124") or ("20170068947") or ("20170236352") or ("20100106644") or ("20140200929") or ("20140006194") or ("9047601") or ("9384613") or ("20150325057") or ("20110154041") or ("20110313922") or ("9824504") or ("20150072654") or ("20150278800") or ("10600046") or ("10194017") or ("20200358760") or ("9572033") or ("8112066") or ("8849247") or ("20180130033") or ("20120237908") or ("20190370699") or ("20130290522") or ("20130024383") or ("9525999") or ("20170104865") or ("8862129") or ("20200100108") or ("20130252585") or ("20120289195") or ("20170080896") or ("20130042314") or ("8752154") or ("8594668") or ("20200086828") or ("20100304716") or ("20150334097") or ("10074224") or ("10037636") or ("20170076520") or ("20200052905") or ("20180108191") or ("20170132861") or ("20160307380") or ("20170345239") or ("9602328") or ("20200349787") or ("20190139337") or ("20180108192") or ("20180248999") or ("8955081") or ("20130343542") or ("10919496") or ("20190363881") or ("10230834") or	US-PGPUB; USPAT; USOCR	OR	OFF	2021/06/10 14:38

		("20190152435") or ("9953479") or ("10469534") or ("20140049366") or ("20140007193") or ("20140189834") or ("10891814") or ("9183380") or ("9378359") or ("9286471") or ("20170148023") or ("20140007214") or ("20140007222") or ("20130298208") or ("8869235") or ("20190238592") or ("20140007182") or ("10142420") or ("20140007048") or ("10325260") or ("9529996") or ("20140007183") or ("10044757") or ("20140006772") or ("9934502") or ("20140007192") or ("20170063994") or ("9785920") or ("20160099972") or ("20160362085") or ("9137262")).PN. or (("8410898") or ("8886925") or ("9707928") or ("20190258781") or ("20160086175") or ("20140006347") or ("20120330769") or ("20160068135") or ("9283931") or ("20100297946") or ("10402546") or ("9875589") or ("20190166635") or ("20130151111") or ("8588413") or ("9143529") or ("10063595") or ("10595352") or ("20200258335") or ("10200371") or ("8391719") or ("20120253552") or ("20210027270") or ("9143530") or ("20150148989") or ("20200349786") or ("10218702") or ("20170249794") or ("20150358821") or ("20180154865") or ("9565538") or ("20190066425") or ("9428127") or ("20170134382") or ("20180218356") or ("10764752") or ("20130185208") or ("20200025854") or ("20170366521") or ("20130005370") or ("10942242") or ("20200021435") or ("9607293") or ("10484349") or ("9079494") or ("20200280855") or ("10094901") or ("10810569") or ("20170132534") or ("9988016") or ("20200021434") or ("20200351660") or ("20170132533") or ("20150312404") or ("20190041485") or ("10507796") or ("9560499") or ("20150074773") or ("20130344859") or ("20200021436") or ("10277597") or ("10591573") or ("10114102") or ("9936387") or ("20190082047") or ("20190287080") or ("20090215476") or ("20120136732") or ("10939296") or ("9986084") or ("20160155112") or				

		("20200244450") or ("10924271") or ("20170302785") or ("10412088") or ("10367814") or ("20170132860") or ("9691115") or ("9805534") or ("20170142585") or ("20090132813") or ("20180352583") or ("20140335823") or ("9955352") or ("20160300417") or ("20060101266") or ("20130185152") or ("9264431") or ("20160119360") or ("20170208467") or ("20090216678") or ("20160180618") or ("20140080471") or ("9876774") or ("10249123") or ("8905303") or ("20200285752") or ("9614858") or ("10708771") or ("9131356") or ("8548452") or ("20210158639") or ("9800716") or ("20110215921") or ("8646060") or ("9253633") or ("20190200218") or ("8190129") or ("20160057118") or ("20110047383") or ("9866382") or ("20140325608") or ("20170302449") or ("8768306") or ("20190371104") or ("9129283") or ("20130159715") or ("8380990") or ("20140177839") or ("8045961") or ("10284369") or ("20090070263") or ("20090164784") or ("8738916") or ("7489781") or ("10567302") or ("20160021238") or ("10045215") or ("20160368454") or ("20180124233")).PN. or (("10939295") or ("20150215775") or ("7849313") or ("10231273") or ("20180234240") or ("10984416") or ("20210044976") or ("20200302436") or ("8498618") or ("10785026") or ("20180062996") or ("20210006652") or ("8320943") or ("20140022920") or ("20120019379") or ("10657242") or ("8868683") or ("20170001649") or ("10523565") or ("20210047864") or ("9942751") or ("20110246606") or ("8260262") or ("20110293095") or ("10308217") or ("20080257952") or ("20200233949") or ("9783205") or ("10696274") or ("10755509") or ("9369286") or ("9638537") or ("20120202428") or ("20140189840") or ("9699820") or ("20180330559") or ("20190311561") or ("20180343565") or ("20160344559") or ("20160353505") or ("20140095692") or ("9882726") or ("20170353468") or				

		("20160205238") or ("20120019361") or ("20200279269") or ("20130061055") or ("20150149042") or ("20190349470") or ("20130171978") or ("20150149766") or ("10589720") or ("20180260554") or ("20150222612") or ("20170287247") or ("9009243") or ("20070266250") or ("10154130") or ("20180206124") or ("20160066189") or ("9358940") or ("10419936") or ("9438572") or ("20210122335") or ("20150168175") or ("9685012") or ("20200329345") or ("9288666") or ("20170234691") or ("8725831") or ("20150141043") or ("20200090441") or ("8862055") or ("10853466") or ("20200106877") or ("11019195") or ("20170279957") or ("20160055695") or ("20190253892") or ("20150262439") or ("20200045027") or ("20150177010") or ("20210123407") or ("20140325609") or ("20210090378") or ("20140079217") or ("20160216130") or ("10021565") or ("9772196") or ("20090081989") or ("20150241231") or ("10692313") or ("10484345") or ("20150168174") or ("9729520") or ("9175967") or ("20200097960") or ("20170127275") or ("20150319144") or ("20140022050") or ("8782766") or ("20170148018") or ("8831224") or ("8918846") or ("10033530") or ("20150131797") or ("10440169") or ("9237446") or ("20150046339") or ("20090192912") or ("20170250974") or ("10510073") or ("8933776") or ("20150262170") or ("20130246558") or ("20160316367") or ("8086688") or ("10032240")).PN.				
S236	35	S235 and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 14:38
S237	0	S235 and @ad<"20110422" and vehicle near10 sharing	US-PGPUB; USPAT; USOCR; FPRS; EPO;	AND	ON	2021/06/10 14:40

			JPO; DERWENT; IBM_TDB			
S238	12	S235 and @ad<"20110422" and vehicle	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 14:40
S239	3	"9189000".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 14:44
S240	3	"9189900".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 14:45
S241	439	(Emerging near2 Automotive) (Penilla near2 Angel) (Penilla near2 Albert)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/06/10 14:52
S242	6	S241 and (electronic key vehicle second mobile).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 14:52
S243	172	(("10407026") or ("20200047714") or ("20170267214") or ("20180134254") or ("10442399") or ("20170050617") or ("20160318481") or ("9499129") or ("9663067") or ("9189900") or ("9365188") or ("20190287080") or ("20180025328") or ("9928488") or ("9139091") or ("20180211231") or ("10282708") or ("20200186590") or ("9171268") or ("10225350") or ("20160173568") or ("10652312") or ("10218771") or ("20190190980") or	US-PGPUB; USPAT; USOCR	OR	OFF	2021/06/10 14:54

		("20160359980") or ("20190263424") or ("20160198002") or ("20190188651") or ("11017360") or ("9426225") or ("20190199800") or ("20170270490") or ("10554759") or ("10210487") or ("9818088") or ("20180089912") or ("20150203125") or ("20160080500") or ("10286919") or ("9288270") or ("20150304406") or ("9215274") or ("9229905") or ("9697503") or ("9104537") or ("20210048945") or ("9229623") or ("20190265884") or ("10824330") or ("10286798") or ("20180059913") or ("20150178034") or ("9423937") or ("10289288") or ("20200249822") or ("9372607") or ("20190265868") or ("20180024725") or ("20190196851") or ("10572123") or ("9916071") or ("20150210287") or ("9778831") or ("20210114482") or ("20140309891") or ("9348492") or ("20180060742") or ("10821850") or ("20190392107") or ("9467515") or ("9123186") or ("20170099295") or ("9230440") or ("9082239") or ("20140310788") or ("20140309813") or ("20160247377") or ("20170075701") or ("9545930") or ("20180037193") or ("20170103327") or ("20140310594") or ("20160214535") or ("20140310031") or ("20160086391") or ("20140309806") or ("10286842") or ("10181099") or ("20140310610") or ("9536197") or ("10286875") or ("20140309862") or ("9235941") or ("10223134") or ("9285944") or ("20160205419") or ("20140309863") or ("20160059865") or ("9883209") or ("20140309886") or ("20140309880") or ("20160129883") or ("20140310739") or ("9020697") or ("9809196") or ("9290153") or ("20140309870") or ("20150232065") or ("20160070527") or ("20180009416") or ("9902368") or ("20140143839") or ("20160114745") or ("20190279440") or ("9783162") or ("10131322") or ("20170352215") or ("9870665") or ("11025598") or ("20180009417") or ("20190054899") or ("20170174180") or ("20150363986") or ("9563998") or				

		("20200134932") or ("10414377") or ("10515489") or ("9994229") or ("9646439") or ("20170316621")).PN. or (("9116786") or ("20140309866") or ("20140309865") or ("20160086393") or ("20180091930") or ("20160325755") or ("20160318467") or ("20140309934") or ("20130204466") or ("20160246526") or ("9142072") or ("20170232888") or ("9536361") or ("20170249095") or ("20130145482") or ("9865113") or ("9008906") or ("20140310075") or ("20140309885") or ("10059342") or ("20160318524") or ("20170352214") or ("20170067747") or ("20150186094") or ("20140309804") or ("20180374126") or ("20160082839") or ("10023117") or ("20140309867") or ("20140307724") or ("9417834") or ("9892584") or ("20160103980") or ("20140309864") or ("20190222484") or ("20170093643") or ("20190259229") or ("20130204943") or ("10600265") or ("9378601") or ("20130218412") or ("10020995")).PN.				
S244	0	S243 and @ad<"20110422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 14:55
S245	149	"13452882"	US-PGPUB; USPAT	AND	ON	2021/06/10 14:56
S246	149	"13452882" and penilla	US-PGPUB; USPAT	AND	ON	2021/06/10 14:56
S247	57	S243 and @ad<"20150327"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 14:58
S248	1	"16987919"	US-PGPUB; USPAT	AND	ON	2021/06/10 15:02
S249	17	"14063638"	US-PGPUB; USPAT	AND	ON	2021/06/10 15:08

S250	12	S243 and @ad<"20131025"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 15:10
S251	9	first near5 device near10 authoriz$3 near10 second near5 device near10 access$3 near10 vehicle and @ad<"20131025"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 15:20
S252	36	first near5 device near10 authoriz$3 near10 second near5 device near10 vehicle and @ad<"20131025"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 15:27
S253	0	"20110112969".pn. and receiv$3 with from with vehicle @ad<"20131025"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 15:42
S254	2	"20110112969".pn. and receiv$3 with vehicle @ad<"20131025"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 15:43
S255	78	authoriz$3 near10 second near10 (user or device) near10 (access$3 or unlock$3 or operat$3) near10 vehicle @ad<"20131025"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 15:53
S256	198	(authoriz$3 or permit$4) near10 second near10 (user or device) near10 (access$3 or unlock$3 or operat$3) near10 vehicle @ad<"20131025"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 15:53

S257	2	"20130179005".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 16:18
S258	3	"9229905".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 16:25
S259	66	"13842158"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 16:27
S260	3	"9123035".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 16:32
S261	17	"14063638"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 16:32
S262	150	"13452882"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/10 16:33
S263	20	"10442399".pn. "10407026".pn. "9663067".pn. "9499129".pn. "9365188".pn. "9189900".pn. "9229905".pn. "9123035".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/06/10 16:44

S264	8	"10442399".pn. "10407026".pn. "9663067".pn. "9499129".pn. "9365188".pn. "9189900".pn. "9229905".pn. "9123035".pn.	USPAT	OR	ON	2021/06/10 16:44
S265	2	"20130179005".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/11 15:23
S266	28	("2013/0179005").URPN.	USPAT	AND	ON	2021/06/11 15:32
S267	184	(("20200361335") or ("20190182669") or ("10771975") or ("20180134254") or ("20200047714") or ("20170267214") or ("10407026") or ("10442399") or ("20160036788") or ("20170236353") or ("9600949") or ("10142843") or ("20190363881") or ("10200371") or ("20200402334") or ("20170050617") or ("10218702") or ("20170134382") or ("9663067") or ("20170132534") or ("20200134932") or ("20200244450") or ("20200021434") or ("10412088") or ("10277597") or ("20170132533") or ("20170316621") or ("20200021435") or ("20170132860") or ("10515489") or ("20200021436") or ("10924271") or ("20160318481") or ("9189900") or ("9499129") or ("20160036814") or ("20190197806") or ("20180062996") or ("20160036594") or ("20170366521") or ("20140270172") or ("10523565") or ("9894066") or ("9455839") or ("9875589") or ("9865113") or ("10484349") or ("20170236352") or ("9276737") or ("20160035163") or ("20190135229") or ("10262484") or ("20200062217") or ("20180270232") or ("9996999") or ("10486646") or ("9870665") or ("10759389") or ("10581850") or ("9365188") or ("20070200671") or ("20160140649") or ("20140169564") or ("20170200324") or ("7961076") or ("20200052905") or ("9218700") or ("20170352210") or ("20170352214") or ("20190166635") or ("20130252585") or ("9865112") or	US-PGPUB; USPAT; USOCR	OR	OFF	2021/06/11 16:28

		("8862129") or ("10733645") or ("20180234843") or ("20200104891") or ("20200320598") or ("10595352") or ("20090265552") or ("20150072654") or ("10412581") or ("20170352215") or ("9572033") or ("9680803") or ("20200120500") or ("20110145564") or ("10375082") or ("10959092") or ("20210076208") or ("20190319965") or ("20180009416") or ("10826885") or ("20090132813") or ("20210058384") or ("10592872") or ("20160116510") or ("20180190051") or ("20190259229") or ("20170011572") or ("9902368") or ("10360364") or ("20170372055") or ("10600265") or ("10102510") or ("20190286806") or ("11017069") or ("20190043022") or ("20150148989") or ("9428127") or ("10013828") or ("10924924") or ("20200193749") or ("9688247") or ("20130297100") or ("20170195339") or ("20120221473") or ("9569403") or ("20180106871") or ("20160344747") or ("10094885") or ("9521548") or ("20160261411") or ("9642005") or ("20080217400") or ("20180108194") or ("20200079322") or ("10505738") or ("9865110") or ("10579998")).PN. or (("20130308778") or ("20140282877") or ("20160099927") or ("10657242") or ("20200119924") or ("20190080540") or ("20130311768") or ("20190182672") or ("9432361") or ("20150161832") or ("10332327") or ("20140049366") or ("20160248740") or ("20140309842") or ("9635006") or ("10965465") or ("20170164192") or ("20200127826") or ("20170092030") or ("20130185559") or ("20130311382") or ("20160297398") or ("20100138298") or ("20200233949") or ("20130182845") or ("9710975") or ("20200028836") or ("20200242599") or ("10270587") or ("20130317693") or ("10659444") or ("20200314076") or ("20180154867") or ("8880881") or ("8494165") or ("8768565") or ("10826882") or ("10231123") or ("10538220") or ("8874913") or ("9373201") or ("20210158639") or ("20190241155")				

		or ("20140270158") or ("8410898") or ("20170257345") or ("9842447") or ("9762559") or ("20200010049") or ("10308218") or ("20180130017") or ("20130061055") or ("10981541") or ("20200285726") or ("9384613")).PN.				
S268	33	S267 and @ad<"20131025"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/11 16:28
S269	439	(Emerging near2 Automotive) (Penilla near2 Angel) (Penilla near2 Albert)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/06/11 16:54
S270	6	S269 and ((electronic key vehicle second mobile).clm. or (electronic key pair$3 decrypt$3 regist$6 activat$3).clm.)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/11 16:54
S271	8	"10442399".pn. "10407026".pn. "9663067".pn. "9499129".pn. "9365188".pn. "9189900".pn. "9229905".pn. "9123035".pn.	USPAT	OR	ON	2021/06/11 16:55
S272	8	S271 and shar$3	USPAT	OR	ON	2021/06/11 16:55
S273	2	S271 and shar$3.clm.	USPAT	OR	ON	2021/06/11 16:56
S274	550,013	340/5.61.clm. B60L53/65 H04W4/44 B60L53/68 B60L53/665 B60L53/80 G07C9/20 B60R25/2018 B60R25/241 G06Q10/02 G06Q10/20 G06Q20/18 G06Q20/32 G06Q20/3829 G06Q30/00 G06Q30/0643 G06Q30/0645 G06Q50/06 G07C9/00309 G07C9/00571 G07F15/005 H04L67/10 B60L2240/547 B60L2240/70 B60L2250/10 B60L2250/16 B60L2250/20 B60L2270/36 G07C2009/00412 G07C2009/00769 Y02T10/70 Y02T10/7072 Y02T10/72 Y02T90/12 Y02T90/14 Y02T90/16 Y02T90/167 Y04S30/14	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/06/11 17:08

S275	2	S274 and register$3 with activat$3 with vehicle near10 key and @ad<"20131025"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/06/11 17:22
S276	3	"20020064258".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/06/11 18:09
S277	173	"3690397".pn. "3799063".pn. "3867682".pn. "4052655".pn. "4102273".pn. "4132174".pn. "4162445".pn. "4309644".pn. "4347472".pn. "4383210".pn. "4389608".pn. "4405891".pn. "4433278".pn. "4450400".pn. "4532418".pn. "4789047".pn. "4815840".pn. "5049802".pn. "5121112".pn. "5132666".pn. "5184058".pn. "5202617".pn. "5297664".pn. "5306999".pn. "5315227".pn. "5327066".pn. "5343970".pn. "5422624".pn. "5434781".pn. "5441122".pn. "5449995".pn. "5487002".pn. "5488283".pn. "5492190".pn. "5548200".pn. "5549443".pn. "5555502".pn. "5563491".pn. "5585205".pn. "5594318".pn. "5595271".pn. "5596251".pn. "5612606".pn. "5627752".pn. "5636145".pn. "5642270".pn. "5666102".pn. "5691695".pn. "5694019".pn. "5701706".pn. "5736833".pn. "5760569".pn. "5778326".pn. "5790976".pn. "5892598".pn. "5916285".pn. "5974136".pn. "5998963".pn. "6014597".pn. "6049745".pn. "6067008".pn. "6081205".pn. "6085131".pn. "6151539".pn. "6175789".pn. "6225776".pn. "6234932".pn. "6236333".pn. "6252380".pn. "6301531".pn. "6307349".pn. "6330497".pn. "6330499".pn. "6370475".pn. "6373380".pn. "6416209".pn.	US-PGPUB; USPAT	OR	ON	2021/06/11 18:10

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S292	99	"20020064258".pn. "20020085043".pn. "20020133273".pn.	US-PGPUB	OR	ON	2021/06/11 18:27

		"20030137277".pn. "20030153278".pn. "20030205619".pn. "20030234325".pn. "20040046506".pn. "20040064235".pn. "20040092253".pn. "20040093155".pn. "20040265671".pn. "20050021190".pn. "20050044245".pn. "20050231119".pn. "20060125620".pn. "20060182241".pn. "20060282381".pn. "20060287783".pn. "20070068714".pn. "20070126395".pn. "20070282495".pn. "20080039979".pn. "20080039989".pn. "20080040129".pn. "20080040223".pn. "20080040295".pn. "20080052145".pn. "20080086411".pn. "20080097904".pn. "20080155008".pn. "20080180027".pn. "20080203973".pn. "20080228613".pn. "20080281663".pn. "20080294283".pn. "20080312782".pn. "20090011639".pn. "20090021213".pn. "20090021385".pn. "20090030712".pn. "20090043519".pn. "20090058355".pn. "20090066287".pn. "20090076913".pn. "20090082957".pn. "20090091291".pn. "20090092864".pn. "20090144001".pn. "20090144001".pn. "20090157289".pn. "20090164473".pn. "20090174365".pn. "20090177580".pn. "20090210357".pn. "20090287578".pn.				

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S294	84	"20120013300".pn. "20120019204".pn. "20120025765".pn. "20120028680".pn. "20120041624".pn. "20120053754".pn. "20120074903".pn. "20120105197".pn.	US-PGPUB	OR	ON	2021/06/11 18:28

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S295	52	(S277 or S292 or S294) and vehicle near10 shar$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/11 18:29
S296	6	S274 and (S277 or S292 or S294) and vehicle near10 shar$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/11 18:29
S297	22	S274 and (S277 or S292 or S294) and vehicle	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/06/11 18:30
S298	8	"10442399".pn. "10407026".pn. "9663067".pn. "9499129".pn. "9365188".pn. "9189900".pn. "9229905".pn. "9123035".pn.	USPAT	OR	ON	2021/11/03 14:52
S299	6	S298 and access near10 code and e$key	USPAT	OR	ON	2021/11/03 14:52

S300	3	S298 and (access near10 code and e$key).clm.	USPAT	OR	ON	2021/11/03 14:53
S301	454	(Emerging near2 Automotive) (Penilla near2 Angel) (Penilla near2 Albert)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/11/03 15:27
S302	7	S301 and ((electronic key vehicle second mobile).clm. or (electronic key pair$3 decrypt$3 regist$6 activat$3).clm.)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/11/03 15:27
S303	1	S301 and (electronic key pair$3 decrypt$3 regist$6 activat$3).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2021/11/03 15:29
S308	8	"9189900".PN. "10442399".PN. "9663067".PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2021/11/19 13:33
S309	3	"9189900".PN. "10442399".PN. "9663067".PN.	US-PGPUB; USPAT	OR	ON	2021/11/19 13:33

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S126	79,560	340/005.610 B60R25/241 H04W4/44 B60L11/1816 B60L11/1822 B60L11/1844 B60L11/1846 B60L11/1848 B60L11/1861 B60R25/2018 B60S5/06 G06Q10/02 G06Q10/20 G06Q20/18 G06Q20/32 G06Q20/3829 G06Q30/00 G06Q30/0643 G06Q30/0645 G06Q50/06 G07C9/00007 G07C9/00309 G07C9/00571 G07F15/005 H04L67/10 H04W4/046 B60L11/1824 B60L2230/10 B60L2230/40 B60L2240/547 B60L2240/70 B60L2250/10 B60L2250/16 B60L2250/20 B60L2270/36	US-PGPUB; USPAT	OR	ON	2019/05/16 18:32

		G07C2009/00412 G07C2009/00769 Y02T10/7005 Y02T10/7044 Y02T10/705 Y02T10/7072 Y02T10/7088 Y02T10/7291 Y02T90/121 Y02T90/124 Y02T90/128 Y02T90/14 Y02T90/16 Y02T90/163 Y02T90/169 Y04S30/14				
S127	0	S126 and (unique code unlock$3 vehicle key video).clm.	US-PGPUB; USPAT	AND	ON	2019/05/16 18:32
S128	7	(unique code unlock$3 vehicle key video).clm.	US-PGPUB; USPAT	AND	ON	2019/05/16 18:32
S231	105,203	340/5.61.ccls. B60R25/241 H04W4/44 B60L53/68 B60L53/14 B60L58/12 B60L53/665 B60L53/80 B60L53/30 B60L53/65 B60R25/2018 B60S5/06 G06Q10/02 G06Q10/20 G06Q20/18 G06Q20/32 G06Q20/3829 G06Q30/00 G06Q30/0643 G06Q30/0645 G06Q50/06 G07C9/00007 G07C9/00309 G07C9/00571 G07F15/005 H04L67/10 B60L2240/547 B60L2240/70 B60L2250/10 B60L2250/16 B60L2250/20 B60L2270/36 G07C2009/00412 G07C2009/00769 Y02T10/7005 Y02T10/7044 Y02T10/705 Y02T10/7072 Y02T10/7088 Y02T10/7291 Y02T90/121 Y02T90/124 Y02T90/128 Y02T90/14 Y02T90/16 Y02T90/163 Y02T90/169 Y04S30/14	US-PGPUB; USPAT	OR	ON	2021/04/05 16:59
S232	442	(Emerging near3 Automotive) (Penilla near3 Angel) (Penilla near3 Albert)	US-PGPUB; USPAT	OR	ON	2021/04/05 16:59
S233	5	S232 and (key restriction vehicle key camera).clm.	US-PGPUB; USPAT	AND	ON	2021/04/05 17:00
S234	7	S231 and (key restriction vehicle key camera).clm.	US-PGPUB; USPAT	AND	ON	2021/04/05 17:05
S304	109,664	340/5.61.clm. B60L53/65 H04W4/44 B60L53/68 B60L53/665 B60L53/80 G07C9/20 B60R25/2018 B60R25/241 G06Q10/02 G06Q10/20 G06Q20/18 G06Q20/32 G06Q20/3829 G06Q30/00 G06Q30/0643 G06Q30/0645 G06Q50/06 G07C9/00309 G07C9/00571 G07F15/005 H04L67/10 B60L2240/547 B60L2240/70 B60L2250/10 B60L2250/16 B60L2250/20 B60L2270/36 G07C2009/00412 G07C2009/00769 Y02T10/70 Y02T10/7072	US-PGPUB; USPAT	OR	ON	2021/11/03 15:41

		Y02T10/72 Y02T90/12 Y02T90/14 Y02T90/16 Y02T90/167 Y04S30/14				
S305	374	(Emerging near2 Automotive) (Penilla near2 Angel) (Penilla near2 Albert)	US-PGPUB; USPAT	OR	ON	2021/11/03 15:41
S306	64	S304 and ((electronic key vehicle second mobile).clm. or (electronic key pair$3 decrypt$3 regist$6 activat$3).clm.)	US-PGPUB; USPAT	AND	ON	2021/11/03 15:42
S307	7	S305 and ((electronic key vehicle second mobile).clm. or (electronic key pair$3 decrypt$3 regist$6 activat$3).clm.)	US-PGPUB; USPAT	AND	ON	2021/11/03 15:42

11/23/2021 2:42:39 PM
C:\Users\zwu1\Documents\EAST\Workspaces\16987919 (Vehicle and cloud system for sharing E-keys to access and use vehicles).wsp

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Courtesy Reminder for
Application Serial No: 16/987,919

Attorney Docket No: VOLTP018.5.C5.6
Customer Number: 25920
Date of Electronic Notification: 12/07/2021

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efrain@penillaip.com

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Best Available Copy

PART B - FEE(S) TRANSMITTAL

PTO/SB/31 (08-18)
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Albert S. Penilla	(Typed or printed name)
/Albert Penilla/	(Signature)
March 7, 2022	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/987,919	08/07/2020	Angel A. Penilla	VOLTP018.5.C5.6	1086

TITLE OF INVENTION: DIGITAL CAR KEYS AND SHARING OF DIGITAL CAR KEYS USING MOBILE DEVICES

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$600	$0.00	$0.00	$600	03/07/2022

EXAMINER	ART UNIT	CLASS-SUBCLASS
WU, ZHEN Y	2685	340-005610

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 03-09 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 _____
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 must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: Emerging Automotive, LLC

(B) RESIDENCE: (CITY and STATE OR COUNTRY): Los Altos, CA

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

4a. Fees submitted: ☒ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies _____

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

☐ Electronic Payment via EFS-Web ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. 50-0805

(order VOLTP18.5.C5.6)

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 /Albert Penilla/ Date March 7, 2022

Typed or printed name Albert S. Penilla Registration No. 39,487

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IPR2024-00981
Emerging Auto EX2024

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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/987,919	04/19/2022	11305666	VOLTP018.5.C5.6	1086

25920 7590 03/30/2022

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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 Patents Stakeholder Experience (OPSE), Stakeholder Support Division (SSD) at (571)-272-4200.

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