

<b>CLIENT</b>	Theodore P. Cummings, Esq. The Law Offices of Theodore P. Cummings, LLC 1600 Scripps Center 312 Walnut Street Cincinnati, OH 45202
<b>CASE</b>	2010-00380 Underdash Communication Device
<b>REQUEST DATE</b>	April 7, 2010
<b>REQUEST</b>	Patent Search
<b>POINTS OF FOCUS</b>	<p>Publications or communications that describe, disclose or teach, in general, as stated in client's search request of April 7, 2010 the following...</p> <p>A system for communicating the status of a vehicle to a fuel center and a customer is provided. An under-dash communication device is connected to the vehicle's computer system and communicates with the fuel center via a communications multi-network... The logic engine can then provide influential messages to the customer, such as reminders to get the oil changed or information on MPG or discounts or co-branding offers.</p> <p>The system can be used outside of the fuel center environment, such as to identify country club members as they approach the country club's secure entrance, or for vehicles in a supply chain.</p> <p>Communications multi-network: at least one mesh communication network and at least one star communication network connected to a logic engine that organizes, routes and manages data to be communicated on the different communication networks that make up the multi-network...</p> <p>This search located seven (7) <a href="#">Tier One</a> patent references, five (5) <a href="#">Tier Two</a> patent references and four (4) <a href="#">Non-patent</a> references that either speak directly or indirectly to the points of focus of which the following may be of interest...</p> <p><a href="#">US20090149163A1</a> METHOD AND SYSTEM FOR PROVIDING VEHICLE-DIRECTED SERVICES</p> <p><a href="#">US20040090346A1</a> System and method of providing location and time related information to a vehicle</p> <p><a href="#">US20090248237A1</a> METHODS AND SYSTEMS FOR USER CONFIGURABLE EMBEDDED TELEMATICS SERVICE ARCHITECTURE</p> <p><a href="#">Real-time vehicle performance monitoring using wireless networking</a></p> <p><a href="#">Vehicle Telematics: A Literature Review</a></p>
<b>RESULTS</b>	
<b>NOTES</b>	<ol style="list-style-type: none"><li>1. <i>Tier One references teach or speak to many of the elements listed in the points of focus and may touch on novelty.</i></li><li>2. <i>Tier Two references teach or speak to a few of the elements listed in the points of focus and, when combined, may touch on obviousness.</i></li><li>3. <i>Legal Status is <b>bold</b> and italicized if other than pending or active.</i></li></ol>
<b>DISCLAIMER</b>	<p><i>This search represents a thorough and continuous effort to locate the most appropriate references given the information provided by the client and the budget placed on this project. This is not a guarantee that every potential reference has been located. Furthermore, the information contained herein has been obtained from data sources believed to be reliable. Gilman Research Services, LLC disclaims all warranties as to the accuracy, completeness or adequacy of such information. No opinion, unless clearly stated, regarding freedom to operate, patentability or otherwise of the invention is expressed or implied other than the comments stated herein.</i></p>

**RESOURCES**

<b>PATENT LITERATURE</b>	
<i>USPTO</i>	US Full Text, US Published Patent Applications
<i>Class/Subclass</i>	<b>340/439,870.01; 360/005; 701/1.7; 702/001; 705/004,400;</b>
<i>Lexis-Nexis</i>	US Full Text, US Published Patent Applications, PCT Applications, Abstracts of Japan
<i>Delphion</i>	US Full Text, US Published Patent Applications, PCT Applications, Abstracts of Japan
<b>NONPATENT LITERATURE</b>	
<i>Lexis-Nexis</i>	General News, Industry News, Encyclopedia of Associations, Company News, Information Week, Technology Decisions, Commercial Carrier Journal, Bulk Transporter
<i>Dialog</i>	Dissertation Abstracts (35), Conference Paper Index (77), Inside Conferences (65), New Product Announcements (621)
<i>Internet Search Engines</i>	Google, Google Scholar, Google Books, Taus, All The Web, Open Directory Project
<i>e-Resources</i>	IBM Technical Disclosure Bulletin, IP.com, Research Disclosure, Social Science Research Network Electronic Library, IEEE Xplore, Internet Archive's – Wayback Machine, ACM Digital Library, Cite Seer. IST Scientific Literature Digital Library, MIT Technology Review, Geek.com, HalfBakery.com, Shouldexist.com, SlashDot, IE-Compendex Plus, Technology Review, Insurance & Technology, Informa Finance and Insurance, Reinsurance Magazine, Technology Decisions
<i>Usenet Newsgroups, Forums, BLOGS</i>	Google Newsgroups, Yahoo Groups, Eng-Tips Forum
<i>Company Sites</i>	General Motors Corp, Ford Global Technologies, Lockheed Martin Corp, Automotive Technologies Inc, IBM, Reynolds and Reynolds Holdings Inc, NetworkCar, Telematics Research Group, Injury Sciences, Collision Safety Institute, Crash Port, Quality Planning Corporation, ISO Properties, Vetronix Corp, Safety Intelligence Corp, DriveCam, PrimFacie Inc, CarChip Corp
<i>Inventors, Individuals of Interest</i>	Not Applicable
<i>Trade Groups, Assoc. &amp; Conferences (Online)</i>	Not Applicable
<i>Academia, Journals (Online)</i>	Not Applicable
<i>Hand Library Search, Hardcopy Text</i>	Not Applicable

**SEARCH STRATEGY**

<b>SEARCH TERMS</b>	Vehicle telematics	Motor vehicle event data recorder (MVEDR)	Voyage data recorder (VDR)
	Monitor	Black box	Distress event
	Report	Onboard	Communicate
	Proximity	Vehicle communication units (VCU)	Maintenance
	Prompt	System	Event
	Alert	Inform	Initiate
<b>SEARCH STRINGS</b>	telemat! w/p (vehicle or truck or car or automobile) and (profile w/5 (access! or update or create or rules or preferenc!)) 243	telemat! w/p (vehicle or truck or car or automobile) and (profile w/5 (access! or update or create or rules or preferenc!)) and ((transm! or communic!) w/5 (offers or messag! or alert! or inform!))	telemat! w/s (vehicle or truck or car or automobile) and (profile w/3 (access! or update or create or rules or preferenc!)) and ((transm! or communic!) w/5 (offers or messag! or alert! or inform!)) and (maintenance or performance or assistance) FT 121

**Patent References - Tier One**

**[US20090248237A1](#) 2009-10-01 METHODS AND SYSTEMS FOR USER CONFIGURABLE EMBEDDED TELEMATICS SERVICE ARCHITECTURE (en)**

Inventors: Gerhard A. Koepf, Boulder, COLORADO ;  
Robert M. Yandrofki, Denver, COLORADO ;  
Jonathan M. Cooper, Denver, COLORADO  
Application/Filing Date:  
2008-03-31

English Abstract:

The present invention provides a configurable embedded telematics system comprising: a server suite providing automotive telematics services to a plurality of authorized service users via a global network, the server suite including a user management utility, an application server, a vehicle interface module server, a telematics database, and a user configuration utility; and a vehicle interface module including an operations controller, an on-board resource and an on-board application comprising an event monitor module, a data logging module, and a user configuration module.

---

**[US20040010358A1](#) 2004-01-15 Vehicle personalization through web portal (en)**

Inventors: Christopher L. Oesterling, Troy;  
Thomas A. Gawlik, Rochester Hills  
Applicants/Assignees: General Motors Corporation  
Application/Filing Date:  
2002-07-12

English Abstract:

The present invention provides a method and system of personalizing settings for a telematics unit in a mobile vehicle. At least one user preference is received at a call center via a web portal interface, and is sent from the call center to the telematics unit. A vehicle function is activated based on the user preference. Another aspect of the invention provides a computer usable medium that includes program code to personalize settings for a telematics unit in a mobile vehicle.

---

**[US20040093155A1](#) 2004-05-13 System and method for providing vehicle context information (en)**

Inventors: Craig John Simonds, Dearborn;  
John Loring Yester, Bloomfield Hills;  
Krishnaswamy Venkatesh Prasad, Ann Arbor  
Applicants/Assignees: SIMONDS CRAIG JOHN ;  
YESTER JOHN LORING ;  
PRASAD KRISHNASWAMY VENKATESH  
Application/Filing Date:  
2003-10-29

English Abstract:

An infotainment system is provided which efficiently manages and provides for the availability of information onboard a vehicle. The infotainment system includes an infogas agent for acquiring information from an external source. The infotainment system further includes a context-based delivery system for delivering context-based information. The context-based information includes a vehicle context advisor for monitoring and storing information relative to vehicle devices and services available on the vehicle. The context advisor further includes a personalization context advisor for monitoring and storing personalization information made available to devices and services onboard the vehicle. The context advisor further includes an environmental context advisor for monitoring and storing environmental information made available to devices and services onboard the vehicle.

---

**[US20040090121A1](#) 2004-05-13 Context-based service delivery system and method (en)**

Inventors: Craig John Simonds, Dearborn;  
John Loring Yester, Bloomfield Hills;  
Krishnaswamy Venkatesh Prasad, Ann Arbor  
Applicants/Assignees: SIMONDS CRAIG JOHN ;  
YESTER JOHN LORING ;  
PRASAD KRISHNASWAMY VENKATESH  
Application/Filing Date:  
2003-10-29

English Abstract:

An infotainment system is provided which efficiently manages and provides for the availability of information onboard a vehicle. The infotainment system includes an infogas agent for acquiring information from an external source. The infotainment system further includes a context-based delivery system for delivering context-based information. The context-based information includes a vehicle context advisor for monitoring and storing information relative to vehicle devices and services available on the vehicle. The context advisor further includes a personalization context advisor for monitoring and storing personalization information made available to devices and services onboard the vehicle. The context advisor further includes an environmental context advisor for monitoring and storing environmental information made available to devices and services onboard the vehicle.

---

**[US20040090346A1](#) 2004-05-13 System and method of providing location and time related information to a vehicle (en)**

Inventors: Craig John Simonds, Dearborn;  
John Loring Yester, Bloomfield Hills;  
Krishnaswamy Venkatesh Prasad, Ann Arbor  
Applicants/Assignees: SIMONDS CRAIG JOHN ;  
YESTER JOHN LORING ;  
PRASAD KRISHNASWAMY VENKATESH  
Application/Filing Date:  
2003-10-29

English Abstract:

An infotainment system is provided which efficiently manages and provides for the availability of information onboard a vehicle. The infotainment system includes an infogas agent for acquiring information from an external source. The infotainment system further includes a context-based delivery system for delivering context-based information. The context-based information includes a vehicle context advisor for monitoring and storing information relative to vehicle devices and services available on the vehicle. The context advisor further includes a personalization context advisor for monitoring and storing personalization information made available to devices and services onboard the vehicle. The context advisor further includes an environmental context advisor for monitoring and storing environmental information made available to devices and services onboard the vehicle.

and the vehicle location. The service corresponding to the service request is configured based on the vehicle delivery-enabling information. The configured service is sent to the vehicle.

---

---

**[US7548815B2](#) 2009-06-16 Method and system for programmable mobile vehicle hotspots (en)**

Inventors: Gary A. Watkins, Royal Oak, MICHIGAN;

Thomas P. Grau, Rochester, MICHIGAN

Applicants/Assignees: General Motors Corporation , Detroit, MICHIGAN

Application/Filing Date:

2004-05-24

English Abstract:

The present invention provides a method of operating a telematics device within a mobile vehicle communication system. The method includes generating at least one personal route profile, comparing predetermined GPS hotspots to the personal route profiles, detecting real-time traffic updates associated with the predetermined GPS hotspots, identifying GPS hotspots corresponding to the personal route profile and based on the real-time traffic updates, and providing information relating to selected identified GPS hotspots based on the real-time traffic updates. The personal route profile may be generated from a user interface. The predetermined GPS hotspots may be created based on user interface input. The selected GPS hotspots may include all identified GPS hotspots within a predetermined geographic area of the personal route profile. The selected GPS hotspots may include GPS hotspots in the forward path of a vehicle including the telematics device.

---

**[US20090149163A1](#) 2009-06-11 METHOD AND SYSTEM FOR PROVIDING VEHICLE-DIRECTED SERVICES (en)**

Inventors: Edward P. Chrumka, Grosse Pointe Park, MICHIGAN

Application/Filing Date:

2009-02-09

English Abstract:

The present invention provides a method, system, and computer usable medium for directing service in a vehicle. A service request is received at a service management application from the vehicle. A vehicle location is also received. Vehicle delivery-enabling information is determined based on the service request

**Patent References - Tier Two**

**US20100030586A1 2010-02-04 SYSTEMS & METHODS OF CALCULATING AND PRESENTING AUTOMOBILE DRIVING RISKS (en)**

Inventors: WARREN TAYLOR, Alpharetta, GEORGIA;  
Ash Hassib, Alpharetta, GEORGIA;  
Bill Madison, Alpharetta, GEORGIA  
Applicants/Assignees: CHOICEPOINT SERVICES, INC  
Application/Filing Date:  
2009-07-31

English Abstract:  
Systems and methods of calculating and presenting automobile driving risks are provided. In accordance with some embodiments, a method of obtaining driving performance data to provide one or more driving performance risk scores derived from received data is provided. The method can generally comprise receiving an initial data set into a memory, the initial data set comprising telematic data that includes driving performance data; transforming at least a part of the initial data set into a production data set such that the transformation augments certain data elements in the initial data set into predetermined states; storing the production data set into a centralized data repository; and receiving one or more data inquiries from one or more interested parties and in response to the one or more data inquiries providing a driving performance risk score based on data stored in the centralized data repository, wherein the driving performance risk score indicates a level of insurance risk. Other aspects, embodiments, and features are claimed and described.

---

**US6970703B2 2005-11-29 Integrated personal communications system and method (en)**

Inventors: Axel Fuchs, Park Ridge, ILLINOIS;  
David J. Wheatley, North Barrington, United Kingdom of Great Britain and Northern Ireland;  
William S. Hede, Lake in the Hills, ILLINOIS;  
James A. Van Bosch, Crystal Lake, ILLINOIS;  
Robert F. D'Avello, Lake Zurich, ILLINOIS  
Applicants/Assignees: Motorola, Inc. , Schaumburg, ILLINOIS  
Application/Filing Date:  
2002-01-23

English Abstract:  
An apparatus and method of integrating a personal communications system (102) includes a telematics device (106) coupled to a vehicle (107), where the telematics device (106) can exchange data with at least one vehicle system (139, 140) and where telematics device (106) includes a service providing entity (126). A remote device (104) having a service requesting entity (156) can access and exchange data with the telematics device (106) utilizing the service requesting entity (156) to interact with at least one vehicle system (139, 140) and utilize and exchange data with service providing entity (126). A selection is made between a first wireless network protocol (110) and a second wireless network protocol (112) in order to access telematics device (106).

---

**US7031724B2 2006-04-18 Location-based services for a telematics service subscriber (en)**

Inventors: Steven J. Ross, Burlingame, CALIFORNIA ;  
Jane F. Macfarlane, Oakland, CALIFORNIA ;  
Julie A. Rybicki, Burlingame, CALIFORNIA  
Applicants/Assignees: General Motors Corporation , Detroit, MICHIGAN  
Application/Filing Date:  
2003-03-12

English Abstract:  
The present invention includes a method and system for providing location-based services to a telematics service subscriber. A message notice is sent to the telematics service subscriber and a request for messages is received. A determination is made as to whether at least one message includes a location information attachment, and then at least one telematics service is provided based on the determination. Another aspect of the invention is a computer usable medium used to provide the location-based services.

---

**US20090150167A1 2009-06-11 METHOD FOR ORGANIZING DATA PRESENTED TO A USER IN A VEHICLE (en)**

Inventors: Russell A. Patenaude, Macomb Township, MICHIGAN;  
Anthony J. Sumcad, Southfield, MICHIGAN  
Applicants/Assignees: GENERAL MOTORS CORPORATION , DETROIT, MICHIGAN  
Application/Filing Date:  
2007-12-07

English Abstract:  
A method for organizing data presented to a user in a vehicle includes monitoring, at a call center, a routine of the user. Monitoring takes into account a then-current day, a then-current time of day, a then-current vehicle location, and a point of interest associated with the routine. At least one point of interest parameter, a time of day parameter, a day parameter, and a vehicle location boundary is generated based on the user's routine. The method further includes recognizing that the user is outside the vehicle location boundary on a day associated with the day parameter and at a time associated with the time of day parameter. The call center generates at least one datum based on the at least one point of interest parameter and a then-current location of the vehicle, and transmits the at least one datum to a telematics unit operatively disposed in the vehicle.

---

**[US20060206610A1](#), 2006-09-14 Method, system and apparatus for location-aware content push service and location-based dynamic attachment (en)**

Inventors: Yibei Ling, Belle Mead, NEW JERSEY;  
Wai Chen, Parsippany, NEW JERSEY;  
Onur Altintas, Kawasaki, Japan  
Applicants/Assignees: LING YIBEI ;  
CHEN WAI ;  
ALTINTAS ONUR  
Application/Filing Date:  
2005-03-09

English Abstract:

A method and system for providing location-aware and location-based content services. The system preferably comprises an overlay service network that includes a plurality of information gateway servers. A mobile client uses the servers in the overlay service network to request and receive information. The particular server used by the mobile client is selected based on the geo-location of the mobile client. The method comprises partitioning a geographic area into a plurality of sub-areas and associating resources to the sub-areas based on the location of mobile units within a sub-area.

---

### **Non-patent References -**

#### **In-Vehicle ITS in the US: Current Status**

White III, C.C.  
Realizing the Full Potential of ITS Mobility, Safety and Availability. Record of the 8th Annual Conference on US-Japan Cooperation in Transportation

The objective of my presentation is to inform you about in-vehicle ITS technology. After a brief description of related research at the University of Michigan to establish a context for the remainder of the presentation, I will provide some information about the size and growth of the US ITS market and then will shift to in-vehicle products and services. I will first focus on the private passenger vehicle and then will move to the commercial vehicle, predominantly trucks and trucking fleets. In the interest of time, I will not be able to discuss in-vehicle systems in transit vehicles, an area of growing and exciting ITS deployment in the US. Let me apologize in advance for this omission.

---

#### **UML specification of on road assistance scenario**

Koch, N.  
Sensoria: Software Engineering for Service-Oriented Overlay Computers  
August 27, 2007

##### Executive Summary

This report summarises and describes the main building blocks of the Automotive Case Study defined within the scope of the SENSORIA project. The document includes the specification of the automotive architecture and the *On Road Assistance* scenario (also called *On Road Repair* or *Low Oil Level* scenario). The specification language UML 2.0 is selected for modelling the application. The UML 2.0 is extended using the extension mechanisms provided by the UML and resulting in the SENSORIA UML profile [3], in order to provide to the models service-oriented architecture (SOA) specific semantics. The extension defines stereotypes for specific structural and behavioural aspects of service-oriented computing. It includes concepts like *service*, *service interface*, *service provider* and *requester* for the specification of the structure of a SOA and *send*, *receive*, and *compensate* for the specification of orchestration of services.

---

#### **Real-time vehicle performance monitoring using wireless networking**

Jenkins, W. and Lewis, R. and Lazarou, G. and Picone, J. and Rowland, Z.  
Communications, Internet, and Information Technology  
375--380  
2004

##### ABSTRACT

A cornerstone of next generation intelligent transportation systems (ITS) is a seamless integration of in-vehicle

networking with existing wireless telephony infrastructure. Remote access to on-board diagnostics and performance data is a crucial requirement for ITS. In this paper, we present an extensible vehicle performance monitoring system that exploits data transmission capabilities of GSM, and is based on existing in-vehicle automotive standards.

Though many systems currently integrate position tracking and wireless networking to allow for remote position tracking, few systems provide the capability to monitor vehicle performance over the web. Our design is based on a popular new standard for wireless communications — GSM/GPRS. An in-vehicle standard for diagnostic information, OBD-II, is used to gather performance data. We also exploit GPS technology to provide vehicle location. Data is integrated and transmitted to a web server using Apache's Tomcat extensions to provide Internet access via a vehicle tracking web site. The overall system has been in use for several months on a trial basis at Mississippi State, and will soon be tracking the entire campus bus system. The data collected from this pilot study will form the basis for a research initiative in prediction and optimization of vehicle performance.

---

#### **Vehicle Telematics: A Literature Review**

Cassias, I. and Kun, A.L.  
Technical Report ECE.P54.2007.9  
October 30, 2007

Vehicle telematics is the use of computing, sensing and telecommunication technologies to provide services in an automotive environment. Vehicle telematics service categories include navigation, remote diagnostics, fleet management, safety, information access, context awareness and mobile commerce. Supporting these services requires unique hardware and software architectures. Additionally, issues such as privacy, data security and human factors design must be considered in the implementation of vehicle telematics services. The following sections summarize current work and research in the field of vehicle telematics

---