



## NAVIGATION

### uLocate launches mobile traffic service nationwide

uLocate Communications, Inc. (www.ulocate.com), a leading North American publisher of location-based mobile services, announces the availability of a next generation mobile traffic application under the Traffic.com brand.

Traffic.com is the largest provider of traffic-related data in the U.S. with coverage in 124 major metropolitan areas, providing fastest and shortest routes to commuters based on real-time traffic and incident data and traffic patterns. Joining Traffic.com's comprehensive data with uLocate's expertise in location-enabled mobile application development and award-winning WHERE platform provides commuters with a traffic service that helps them reduce time spent driving, the company says.

"Traffic.com is the number one traffic-only website in the U.S., helping commuters save time and frustration in their daily lives" said Jeff Mize, executive vice president of sales at NAVTEQ."

The Traffic.com application's advanced features and functionality includes:

- MyTraffic personalized drives that are synced with the Traffic.com website to allow users to create customized routes.
- Unique JamFactor calculations to quickly inform drivers of the severity of traffic delays using real-

time data as well as historical speed flow.

- Real-time, color-coded traffic flow moving maps that can be panned or zoomed to quickly view area traffic congestion or set to GPS mode to move along with commuters built on the NAVTEQ MapTP platform.
- Comprehensive incident data that includes accidents, construction, events, weather, and congestion.
- The ability to save favorite roads and road segments for quick access through the traffic dashboard.
- Top traffic hotspots by city or selected roads.
- Mass transit data from local transportation departments.
- Location-enabled discount offers from relevant and trusted merchants enabled through NAVTEQ's LocationPoint advertising platform.

Traffic.com's data comes from GPS probe devices, commercial and government partners, center staff members, and a proprietary network of 1,000 digital traffic sensors, creating the most comprehensive traffic data available. Sensor networks update real time speed and volume information every few minutes and incident information is updated continuously throughout the day by local traffic operations staff. Initially launching on the iPhone and iPod Touch, the Traffic.com app will be available for BlackBerry, Android, and Palm in the near future. **ITS**

### TomTom expands LIVE Services to Belgium and Portugal

TomTom (www.tomtom.com) is making its LIVE Services offering, including real-time HD Traffic information, available in Belgium and Portugal this autumn. Next to real-time traffic updates on primary and secondary roads in seven European countries, drivers will receive timely safety camera alerts to enhance road safety and avoid fines. Furthermore they will be able to navigate to millions of locations through Local Search with Google and receive up-to-date weather reports. Guidance on the cheapest fuel price en route or in the area will also become available to Belgian customers. LIVE Services are constantly updated and work seamlessly across borders to ensure drivers always find the best way.

"LIVE Services are critical to improve people's daily drives. Real-time routing information ensures

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## TomTom expands LIVE Services to Belgium and Portugal

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drivers know what's ahead, allowing them to make the right decisions accordingly throughout their journey," says Corinne Vigreux, Managing Director of TomTom. "With the introduction of LIVE Services in Belgium and Portugal, over 65% of our customer base can now get access to our detailed HD Traffic service."

The Belgian and Portuguese LIVE Services content can be used at no additional cost by all current TomTom users with a connected device and a LIVE subscription. This means drivers always get the fastest and most realistic route, the company says, including the latest traffic delays via HD Traffic, when traveling abroad and when driving in, or through, multiple countries in Europe.

TomTom LIVE Services are available with all TomTom's connected devices currently available, including the new TomTom GO x50 LIVE series. The LIVE Services bundle offers the following services for motorists:

- TomTom High Definition Traffic service for accurate and current traffic information across borders in seven countries throughout Europe.

### Virtual maps for the blind

The blind and visually impaired often rely on others to provide cues and information on navigating through their environments. The problem remains that relying on others doesn't give the visually impaired the tools to venture out on their own, says Dr. Orly Lahav of Tel Aviv University's (www.telavivuniv.org) School of Education and Porter School for Environmental Studies.

To give navigational "sight" to the blind, Dr. Lahav invented a new software tool to help the blind navigate through unfamiliar places. It is con-

nected to an existing joystick—a 3-D haptic or touching device—that interfaces with the user through the sense of touch. People can feel tension beneath their fingertips as a physical sensation through the joystick as they navigate around a virtual environment which they cannot see, only feel: the joystick stiffens when the user meets a virtual wall or barrier. The software can also be programmed to emit sounds—a cappuccino machine firing up in a virtual café, or phones ringing when the explorer walks by a reception desk.

• TomTom Safety Alerts warn users about fixed and mobile safety cameras ahead while real-time safety camera reporting and sharing mean users can keep each other informed about mobile safety cameras.

• TomTom Fuel Prices gives up-to-date fuel price information to guide users to the cheapest fuel stations along their routes or in their area.

• TomTom unlocks the power of online Local Search with Google allowing users to navigate to millions of locations at the tap of the screen. LIVE Services content will be available in Belgium and Portugal this autumn. A monthly, flat-fee LIVE Services subscription is available for €9.95 (US\$14.64), with no hidden costs.

A subscription for LIVE Services can be purchased via TomTom HOME and a free trial period comes with all connected devices. Pre-paid LIVE Services cards can also be purchased from leading retail stores. A six-month subscription card is available for €59.95. A twelve-month subscription card costs €99.95. **ITS**

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Exploring 3D virtual worlds based on maps of real-world environments, the blind are able to “feel out” streets, sidewalks, and hallways with the joystick as they move the cursor like a white cane on the computer screen that they will never see. Before going out alone, the new solution gives them the control, confidence, and ability to explore new streets making unknown spaces familiar. It allows people who can’t see to make mental maps in their mind.

Dr. Lahav’s software takes physical information from the world and digitizes it for transfer to a computer, with which the user interacts using a mechanical device. Her hope is that the blind will be able to explore the

virtual environment of a new neighborhood in the comfort of their homes before venturing out into the real world. “This tool lets the blind ‘touch’ and ‘hear’ virtual objects and deepens their sense of space, distance, and perspective,” says Dr. Lahav. “They can ‘feel’ intersections, buildings, paths, and obstacles with the joystick, and even navigate inside a shopping mall or a museum like the Louvre in a virtual environment before they go out to explore on their own.”

The tool transmits textures to the fingers and can distinguish among surfaces like tiled floors, asphalt, sidewalks, and grass. In theory, any unknown space, indoors or outdoors, can be virtually pre-explored, says Dr. Lahav. The territory just needs

to be mapped first—and with existing applications like GIS (geography information system), the information is already there.

The tool, called the BlindAid, was unveiled at the “Virtual Rehabilitation 2009 International Conference,” where Dr. Lahav demonstrated case studies of people using the tool at the Carroll Center for the Blind, a rehabilitation center in Newton, Massachusetts. There, a partially blind woman first explored the virtual environment of the center—as well as the campus and 10 other sites, including a four-story building. After just three or four sessions, the woman was able to effectively navigate and explore real-world target sites wearing a blindfold. **ITS**

## TOLLING

### TransCore broadens portfolio

U.S. toll authorities are updating their technology with a more versatile range of products. Through TransCore’s (www.transcore.com) research and development to support these procurements, TransCore introduces three new radio frequency identification (RFID) transponders, including the Interagency Group (IAG) protocol standard onboard unit, the nationally interoperable eZGo Anywhere onboard unit with feedback LEDs and audio buzzer, and the eZGo Anywhere HOT/ HOV onboard unit, which provides motorists the ability to choose among operational occupant nomination modes with the push of a button. Also announced is the multiprotocol Encompass 6 reader that is adaptable to future deployments of 5.9 GHz technology.

“TransCore’s history of R & D has long catered to our customers’ priorities so they can get the specific technology capabilities and performance they require,” explained John Simler, president of TransCore’s Intelligent Transport

ation Systems Group. “The technology developed to support these individual contract efforts is now available to the industry at large. There is no other manufacturer of toll collection products that can match the breadth of our transportation-based RFID products.”

Designed to meet the Interagency Group performance requirements to support its 25 member agencies throughout the Northeast the Interagency Group Standard On-Board Unit or OBU is a high-speed, high-performance RFID tag suitable for electronic toll collection and traffic management applications. This new OBU is fully interoperable with all existing IAG equipment, so the extensive array of IAG deployed readers will read these new OBUs without any modifications. The transponder is a read/write unit that supports adding and editing data to its onboard memory at high speeds in real-time.

IAG Standard OBUs support factory programming of fixed data fields

that are locked at the factory and cannot be reprogrammed. Agency read-only data fields are programmed by the agency using password protected programming equipment. IAG Standard OBU cases are constructed of highly durable, impact resistant, molded plastic and are available in white, blue, orange, green, yellow, and gray colors. Other IAG-compliant single protocol OBUs include waterproof, feedback, and exterior models.

TransCore’s IAG Encompass 6 reader system has been engineered with an eye to the future for allowing an effortless 5.9 GHz technology upgrade if 5.9 GHz technology is someday adopted by toll authorities. This new, future-proof capability provides peace of mind that an investment today will be “switch ready” to a 5.9GHz technology platform. This allows toll authorities to move forward with technology deployments while protecting their lane controller and other software investments by being adaptable to 5.9 GHz platform as it takes shape over the next decade and the USDOT five-year test plan is completed. **ITS**

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## eZGo Anywhere Product Line Expansion

Market driven innovation has produced multiprotocol technology that allows a variety of technology, including all presently available ones, to co-exist for both toll authorities and toll patrons. First introduced in December 2008, the multiprotocol eZGo Anywhere tags offer national interoperability, allowing a motorist to use just one tag as they move from state to state or from one toll region to the next, since it is programmable with the primary protocols utilized by toll authorities today (IAG, Title 21, eGO, SeGo, and ATA).

As more and more municipalities and states add electronic toll systems to highways, bridges, tunnels, and convert HOV lanes to HOT lanes, having a transponder that can go “anywhere” the vehicle goes is a significant benefit for both drivers and commercial transportation companies. The two new onboard units support varying requirements for driver feedback or versatile modes of operation.

TransCore’s eZGo Anywhere Feedback Onboard Unit is a high speed, high performance multiprotocol RFID tag suitable for electronic toll collection and traffic management

applications where driver feedback is specified. It is a read/write OBU that supports adding and editing data to the transponder at high speeds in real time. In normal road tolling applications, the LEDs and buzzer are used for driver feedback such as: valid tag; low balance; invalid tag, and lost or stolen tag.

eZGo Anywhere Feedback OBU enables advanced security techniques that ensure a tag’s authenticity while preventing data corruption and/or alteration. In addition, tag cloning, spoofing, copying, or duplicating is prevented. All eZGo Anywhere OBUs support factory programming of fixed data fields that are locked at the factory and cannot be reprogrammed. Agency programmed fixed data fields can optionally be locked by the agency after programming using password protected programming equipment. eZGo Anywhere OBU cases are constructed of durable, impact resistant, molded plastic and are available in six colors.

eZGo Anywhere HOT/HOV (high occupancy toll/high occupancy vehicle) Onboard Unit feature a switch that, when pressed, causes the

OBU to transition from one nomination mode to another. LEDs and an audible buzzer alert the driver of the OBU operating mode, for example shifting from “single occupancy vehicle” to “double occupancy vehicle”, “bus,” etc. The OBU is capable of storing up to 15 nomination modes, and the number of required modes can be customized. In regular tolling applications, the LEDs and buzzer are used for driver feedback such as valid tag, low balance, invalid tag, and lost or stolen tag. eZGo Anywhere HOT/HOV OBU is a high-speed, high performance, multiprotocol RFID tag suitable for electronic toll collection and traffic management applications where driver feedback is specified. It is a read/write OBU that supports adding and editing data to the tag at high speeds in real time. In conjunction with TransCore readers, the eZGo Anywhere HOT/HOV OBU enables advanced security techniques that ensure an OBU’s authenticity while preventing data corruption and/or alteration. In addition, tag cloning, spoofing, copying, or duplicating is prevented. **ITS**

## Traffic upswing sustains European toll road operators

Positive developments in traffic patterns on European toll roads, which complement what is hoped to be a real start to the economy recovery is anticipated to give toll operators a badly needed lift after a dismal year. The upswing is also hoped to relieve pressure on refinancing.

Analysts say traffic has bottomed out and now, the only thing in question is the actual pace of the rebound. The connection between light traffic and economic progress is going to be a significant benefit for toll operators. Operators saw traffic drop by 1.0-

4.5% in 2008, but now expect a rise in light vehicle traffic, and better constancy in heavy vehicle traffic for the remainder of the year. After a difficult first quarter, many companies delivered optimistic updates in the second quarter.

Companies such as Abertis, Cintra, Brisa, and APRR rely on the funds garnered from tolls from commercial vehicles and recreational travelers, making the toll operators’ income susceptible to the economy. Toll operator success can also be a prime indicator of economic well-being too.

Portugal’s Brisa said it saw a ‘sharp recovery’ in second quarter traffic of 5.6% and Italy’s Atlantia saw a 0.9% increase for the months of July and August. French APRR and Vinci indicated an upturn in light vehicle traffic while Spain’s Abertis said the pace of traffic decline was slowing. “In the case of Atlantia, we expect that a 1% increase in traffic in 2010 would result in a 2.5% increase in its EPS,” said Barclays Capital analyst Susanna Invernizzi.

The positive news for toll operators could be noteworthy because even a seemingly minor decline in

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traffic took shares in most European toll road operators down some 50% from their early 2008 levels.

With heavy vehicle (cargo) traffic correlated to GDP growth, the economic recovery is seen as vital for the revitalization of many toll roads that rely on trucks and containers, such as Germany's A-model roads. Traf-

fic analysts indicate that evidence is mounting that GDP growth is now becoming a key factor in determining light-vehicle (consumer) traffic as well, which has traditionally been tied to oil prices.

While analysts note a correlation between light traffic volume and unemployment rates, they also point to the fact that much of the existing

traffic is supported by service sector professionals largely untouched by the economic downturn. Most drivers who use toll roads do so because they need to get to work quickly or because their company covers their costs, and will continue to pay tolls as long as they can afford them and have a job. **ITS**

## Telvent to implement first open road system in New Hampshire

Telvent (www.telvent.com) reports it was awarded a contract by the New Hampshire Department of Transportation (NHDOT) to implement an open road tolling (ORT) system at the Hampton Mainline Toll Plaza in New Hampshire. This contract allows Telvent to strengthen its position in the US toll market, as a technological leader in electronic toll collection systems. This contract is valued at approximately US\$2.2 million. The project aims to improve traffic conditions during the peak tourism seasons while maintaining NHDOT's ability to accurately and reliably collect toll revenue. It will also enhance the efficiency and accuracy of toll

operations, increasing NHDOT's toll processing capacity, reducing travel time, and minimizing drivers' and workers' inconvenience.

Telvent will implement a dedicated two-by-two lane open road tolling or ORT system in one of New Hampshire's busiest toll plazas located on Interstate 95. The toll management system will enable the Bureau of Turnpikes to track vehicles through the ORT zones and charge them appropriate toll fares through their E-ZPass account, and also capture toll violators. Telvent will implement a powerful remote operations and maintenance system to facilitate, through integrated video imaging, real

time sensor data and transaction information, event alerts, notifications, and historic playback features, guaranteeing high availability and a 24/7 optimum performance.

Manuel Sanchez, Telvent's chairman and CEO, said: "SmartMobility is Telvent's answer to the challenge of improving mobility and security within urban environments thus maintaining its commitment to provide a more sustainable model. As a result of the ETC technology implementation, vehicles will be able to drive through at free flow speeds, reducing delays and GHG emissions, thus improving air quality at the region. Additionally, this first ORT system will serve as a model for other NHDOT toll plazas and other New England toll agencies." **ITS**

## OPTIMIZATION

### Constellation Software to buy Continental AG business

Software and services provider Constellation Software Inc. (www.cssoftware.com) announces that its wholly-owned subsidiary Trapeze Software Inc. (www.trapezegrup.com) signed an asset purchase agreement to acquire the Public Transit, or PT, solutions business of Continental Automotive AG (www.conti-online.com).

The Toronto, Canada-based company believes this acquisition to rep-

resent a great opportunity for the public transit business to become part of an organization that has historically invested in the sector. Continental - Public Transit is a provider of solutions for public urban passenger transport, and its division develops, produces, and integrates intelligent transportation systems including operation control systems, on-board computers, and passenger information displays. For the fiscal year 2008,

Public Transit's net revenue, less third party costs generated from servicing and supporting existing clients, was nearly US\$25 million.

Upon the successful closure of the transaction, the PT division will be renamed Trapeze ITS. As a separate entity of Trapeze Software, Trapeze ITS' main office will be located in Neuhausen, Switzerland with other offices across Europe including United Kingdom, Germany, and Poland. Their North American operations will be headquartered in Cedar Rapids, Iowa. **ITS**

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## European Commission publishes railway safety and interoperability report

The European Commission (EU) published a report on the implementation of the Community rail safety and interoperability directives which, together with legislation on market access, form the legal framework for a truly integrated European Railway Area. The Commission is satisfied with the quality of harmonization of technical requirements but finds that the speed of implementation of harmonized rules is slow. This is also due to the long life cycle of some parts of the rail systems, such as infrastructure and rolling stock

Vice-President Antonio Tajani, the commissioner responsible for transport, said, "The European Railway Agency and the National Safety Authorities have only been established a few years ago, but they have already proved to be instrumental in building an integrated European Railway Area. It is my intention to strengthen the role of the agency even further."

The publication of this progress report coincides with the holding of a Railway Safety Conference organized by the European Commission (IP/09/1283 ). The communi-

cation describes the stage reached so far in implementing the Railway Safety Directive and in achieving interoperability of the European rail system since the first report adopted by the Commission in November 2006. This Communication follows a study commissioned by the European Commission analyzing the degree of implementation of rail interoperability and safety legislation and progress in the field, and carried out a public consultation. The results of the consultation are summarized in the annex to the report.

The progress in railway safety and interoperability that the Community regulatory framework has made possible has promoted in turn a further development of the internal rail market, helping new businesses to establish themselves, cutting entry costs and, ultimately, promoting the competitiveness of rail vis-à-vis other modes of transport. As for rail safety, statistics indicate that the railway system in the Community is safe and the organizational changes introduced under Community law not only had no negative impact on safety.

From a market perspective, country-specific safety requirements still impose significant entry barriers. These relate mainly to the cost and the duration of the homologation procedures involved at national level, their disparity across Europe and their lack of transparency or predictability. Substantial progress in this field is expected, stemming on one hand from the harmonization of safety certificates for railway undertakings and the introduction of Common Safety Methods, and on the other from the amended interoperability directive, which will now impose cross-acceptance of national rules when authorizing the placing into service of rail vehicles.

Because of the long lifetime of rail infrastructure and rolling stock and the need to keep investment costs for the sector at an acceptable level, radical changes towards harmonized solutions are not possible. This is why the Commission intends to concentrate efforts on implementing those technical specifications that will deliver significant benefits in the short- and medium-term, such as telematics applications in signaling, freight, and passenger transport. **ITS**

## Digital media innovation in Beijing Metro

During a special introduction event in Beijing, Digital Media Group (DMG; [www.dmg.tv](http://www.dmg.tv)) unveiled more than US\$10 million worth of digital media innovation for the much anticipated Beijing Metro Line 4. In 2005, the Hong Kong MTR Corporation Limited (MTR) signed a concession agreement with the Beijing Municipal Government for the operational rights of Line 4. Since then, DMG has worked in cooperation with MTR to design and develop the Metro line's digital

media capabilities, investing more than US\$10 million into the subway infrastructure.

This marks the first time that such digital media capabilities have been embedded into a Metro line from its first conception. DMG is the sole digital media provider for Line 4, and has exclusive advertising rights for the next ten years. Line 4 is set to begin operations later this month, and will be the newest and most advanced subway line in the country. With a total length of 28.2 km, including 24 differ-

ent stations, Line 4 will be one of the most important lines in Beijing.

From a technology standpoint, Line 4 is outstanding. Utilizing DMG's proprietary Passenger Information System (PIS) technology, each station will be able to forecast the arrival time of the next train down to the second. At the launch event, DMG unveiled new forms of digital media never before seen in China. Innovative ring-shaped displays that will be placed in the entrance of major station lobbies are one example. These displays consist of five 42" LCD screens arranged

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in the shape of a circle. Unlike regular display screens, the ring-shaped displays utilize customized software that enables them to play unique video footage that creates the effect of a graphic linkage between the five screens. This graphic linkage allows the pictures on the ring-shaped displays to be more dynamic than those on typical screens.

Track-side High Definition display screens are another highlight of the new Line 4, which are much more

eye-catching than the traditional static light boxes. These 103" High-Definition screens are the industry's largest, and will be placed on the wall opposite the entrance doors where commuters wait by the track. These two examples of new digital media are among the total 2,588 display screens that have been installed in-train and on the platforms of Line 4.

Digital Media Group is China's leading operator of digital media inside subway systems. The company delivers quality entertainment, informa-

tion, advertising, and its proprietary Passenger Information System (PIS) to over 15 million passengers a day through 35,000 digital screens across 32 subway/high-speed train lines and bus shelters. DMG also operates Beijing Lines 1 and 2, which provide access to China's richest cultural districts such as Tiananmen Square and the Forbidden City, as well as major business and financial districts. DMG will also operate Beijing Line 4 for the next ten years starting in October 2009. **ITS**

## Real time info comes to Wellington

The Greater Wellington (New Zealand) Regional Council ([www.gw.govt.nz](http://www.gw.govt.nz)) and specialist supplier ACIS ([www.acis.uk.com](http://www.acis.uk.com)) have signed a contract for the provision of a public transport real time information system that will enable bus and train passengers to find out what time their ride will actually arrive. Passengers will be able to find out what's happening by going online or texting with their mobile phone or looking at electronic displays at the main bus and train stops round the region.

"The new system will give reliable information to commuters and ease a great deal of the frustration that people currently experience when the bus or train is late", said Greater Wellington chair Fran Wilde. "At present people can find out only the scheduled

time, not the real time, so this will be a huge advance."

A real time passenger information system tracks the precise position of buses and trains using satellite positioning technology (GPS) and feeds this information back to the central system, which can then be accessed publicly. Greater Wellington and ACIS will work closely with KiwiRail and a range of bus operators to bring real time information to the region's public transport network.

Dan Sandhu, ACIS Chief Executive Officer, said he was delighted ACIS would be part of such a major development in Wellington public transport. "The new system will provide bus and train passengers with real time information wherever, whenever and however they need it. Our experience as a leading provid-

er of intelligent transport systems is that successful real time information systems build passenger confidence, encourage more people to use public transport, and support the development of high quality public transport networks."

The anticipated timeline for the system includes a pilot phase, to be carried out on a selected bus route in Wellington City starting later this year. The system is expected to begin operating for bus services about this time next year and will be progressively rolled out round the region. The trains will then follow. Information will be displayed at as many as 250 major bus stops and train stations. People will also be able to get real time information for all stops and stations through "txtBUS" and "txtTRAIN" and on the Metlink website. **ITS**

## SAFETY

### ATSSA approves U.S. Senate ALERT bill

The American Traffic Safety Services Association (ATSSA; [www.atsa.com](http://www.atsa.com)) applauds the introduction of S.1536, the Avoiding Life-Endangering and Reckless Texting (ALERT) by Drivers Act of 2009, and points out that

multiple other distractions remain at the hands of motorists that cause roadway departures, head-on collisions, and median crossovers that result in severe crashes, injuries, and deaths. Many times these driver-distracted

crashes involve innocent, unsuspecting motorists or pedestrians.

"A cross-median or cross-centerline crash often results in severe injury or death to an unsuspecting driver in the opposite lane. We can reduce these terrible outcomes with modern roadway safety devices such as median barrier, rumble strips and rumble stripes, clearer

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roadway delineation, and channelization of traffic,” said Roger A. Wentz, President and CEO of ATSSA. The association, which is comprised of business and public officials whose expertise is roadway safety, urges a special focus on roadway work zones.

“Roadway work zones create a whole different set of distractions for motorists and require their full time and attention when driving through them,” added Wentz. “What many people may not realize is that four out of five work zone fatalities are

motorists, not the workers themselves. It’s in the motorists’ best interest to be safe and aware in work zones.”

ATSSA advises motorists to slow down to posted speed limits in roadway work zones and avoid in-vehicle distractions of any kind, keep a safe distance between vehicles, obey the directions of work zone workers, and always expect the unexpected.

ATSSA members are committed to reducing the number of roadway fatalities and injuries through the development of innovative products

and services. ATSSA is the nation’s leader in roadway safety issues, with a heavy emphasis on work zone safety, pavement markings, signage, and traffic control safety devices. The association’s goal is to move the nation “Toward Zero Deaths” on America’s roadways through the authorization of the next federal highway bill. Since 1969, ATSSA has represented companies and individuals in the traffic control and roadway safety industry. **ITS**

## Detection system developed by VTT Technical Research of Finland

VTT Technical Research Centre of Finland ([www.vtt.fi](http://www.vtt.fi)) developed a Vulnerable Road User (VRU) system to warn drivers. The system detects pedestrian, bicycles, or animals and sends a warning message to drivers about living objects in a dangerous traffic environment such as a motorway exit. The system is part of a cooperative traffic safety system, developed by the SAFESPOT proj-

ect, which facilitates communication between vehicles and the traffic infrastructure .

This is probably the first roadside sensing system that detects living objects using thermal imaging technology interfaced as part of a cooperative intelligent traffic safety system. The advantage is that an expensive thermal camera is not needed in the vehicle; a warning of a risky situa-

tion can be transmitted to each passing vehicle.

Identification is based on a thermal vision system that uses image analysis (speed, size, shape, and temperature information) to detect humans and other animals. The system is integrated into a sensor fusion module which sends data to a local dynamic maps database modelling the driving environment. The system is being tested on a motorway in Turin, Italy. **ITS**

## Next-generation onboard short-range communications unit improved

Toyota Motor Corporation (TMC; [www.toyota.com](http://www.toyota.com)) develops a next-generation onboard DSRC (dedicated short-range communications) unit intended to increase traffic safety by providing drivers real-time, close-vicinity traffic information. Toyota Motor plans to offer the DSRC unit in Japan on a new vehicle model. The navigation-system-linked dedicated short-range communications or DSRC unit, through the use of intelligent transportation systems technologies, including Japan’s electronic toll collection framework, receives a wide range of traffic information via vehi-

cle-infrastructure communications and provides it to highway drivers in visual form and through voice guidance. It alerts drivers to obstacles they cannot see on the road ahead around curves, such as stopped vehicles and stopped-up traffic. It also alerts drivers to merging vehicles.

Toyota’s plan to offer the DSRC unit on a production vehicle represents the practical application of an ITS vehicle-infrastructure cooperative system that was developed through joint private-public sector research (from February 2005), verified in tests on the Tokyo Metropolitan Expressway (from May 2007),

and demonstrated as part of the ITS-Safety 2010 project conducted last fiscal year.

Development of ITS vehicle-infrastructure cooperative systems that support safe driving, along with development and application of autonomous onboard safety devices, represents part of TMC’s efforts to make driving safer. These efforts are based on TMC’s “Integrated Safety Management Concept”, which aims to provide optimal driving support through a combination of integrated onboard technologies and infrastructure-respondent systems.

Through such activities, TMC is reinforcing a wide range of traffic safety measures, including the

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Next-generation onboard short-range communications unit improved of safer vehicles and technologies, while also participating in the development of traffic environments and conducting traffic safety awareness activities, as part of its efforts to eliminate traffic fatalities and accidents toward the achievement of sustainable mobility.

#### System setup

A roadside DSRC device sends traffic information and other information to help increase driving safety to the onboard DSRC unit; the unit then passes on the information to the driver through the navigation system in

written, graphic or other image form or through voice guidance.

Types of information provided include:

- 1) Information regarding obstacles ahead
  - Information concerning difficult-to-see obstacles such as stopped vehicles or traffic congestion beyond curves is provided through the navigation system, before the vehicle enters the curve.
- 2) Information on merging vehicles
  - Information concerning the presence of merging vehicles is provided through the navigation system, when

approaching areas in which merging vehicles are hard to see.

3) Information concerning conditions ahead

- Information concerning traffic conditions is provided through the navigation system, at tunnels and other areas that are frequently congested.
- Information concerning traffic ahead is provided audibly according to current position and direction of travel.

4) Sign information

- The DSRC unit provides information on present location, highway entrances and exits, and simplified presentation of highway signs. **ITS**

## GOVERNMENT WATCH

### Focus on Maryland

Maryland is not unlike any other state within the U.S. that has experienced turbulent times in terms of its infrastructure planning and execution. Maryland has been impacted by economic woes and questions about what to do with its infrastructure. The Maryland State Highway Administration has a US\$4 billion proposal under consideration to add toll lanes on the interstate between upper Montgomery County and the city of Frederick. Opponents of a plan to widen the I-270 corridor between Shady Grove and Frederick in Maryland are pleading with transportation officials to consider a rail option instead. Ben Ross, the president of the Action Committee for Transit, thinks that is the wrong way to go.

“If we put that money into transit, we can have the Red Line to Germantown, we can have MARC running all day to Fredrick with trains every 15 minutes in rush hour, we can have MARC to Hager-

stown in rush hour and we can have two new rail lines in Montgomery County.”

Ross’ organization asserts that state transportation planners have not analyzed or reviewed the rail option, so volunteers like David Greene are handing out 10,000 leaflets to riders on the metro system, talking about their plan and asking riders to contact their local planners and lawmakers.

“A rail system, using available land,” Greene says, “would cost much less than the proposed US\$4-billion toll lanes.”

With improvements and coordination, Greene says commuters would “suddenly have a wonderful transit system going eventually up to Hagerstown.”

In addition to the debate over the proposed toll scheme, the controversy surrounding Maryland’s Intercountry Connector road project continues to brew while Maryland roads officials are billing it as “one of America’s greenest highways.”

Officials say the roadway will sort out filthy rain water before it runs from blacktop into natural waterways, and help deer and other wildlife cross securely under six lanes of interchange by means of specifically-engineered culverts. “We realize we can’t completely alleviate all the concerns, but we want people to understand we take this very seriously,” said project spokeswoman Fran Counihan. Mike Baker, the project’s environmental construction manager, said cooling and filtering rain water after it runs off the highway is a “huge focal point” of the project. Baker also noted that the project encompasses an underground filtration and cooling system in its especially ecologically susceptible areas. Baker stated the ICC is one of the most wide-ranging systems tried on a United States highway.

With maps and posters, state officials tried to drive home work to mend harm to wetlands, woodlands, wildlife, and air quality as the 18.8-mile highway is built between Gaithersburg and Laurel. Critics of the ICC chalk it up as a bonafide mess. “It’s an environmental disaster,” said Arnie Gordon, president of the Norbeck  
*(continued on page 10)*

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Meadows Civic Association, which includes residents 100 feet from the ICC route.

The environmental effects of the east-west highway have been

the major stumbling block during 50 years of community debate, political squabbling, and legal challenges. When Maryland officials came out victorious in a federal lawsuit that opposed the plan on environ-

mental grounds in 2007, which permitted construction to begin, they showcased US\$370 million worth of construction plans and renovation efforts as evidence of their environmental pledge. **ITS**

## Concerns halt flawed research

The International Sign Association (ISA; [www.signs.org](http://www.signs.org)) informed U.S. Department of Transportation (USDOT) Secretary Ray LaHood that the on-premise sign industry is highly concerned about government research on digital signs. ISA has been joined by the United States Sign Council (USSC; [www.ussc.org](http://www.ussc.org)) in this effort, demonstrating a united front by the on-premise sign industry in the face of

what it perceives as a threat from the federal government.

ISA contends that the research being conducted by the Federal Highway Administration (FHWA) is biased against digital signs, uninformed as to the differences between digital billboards and on-premise EMCs, and exclusionary in leaving the on-premise sign industry entirely out of the process.

ISA President and CEO Lori Anderson asked Secretary LaHood to “act immediately to address these concerns—if not by removing on-premise EMCs entirely from the research, then at least by including the on-premise industry in the FHWA deliberations, so that the process of this project is fair, fully informed, and respected by everyone who will be affected by its results.” **ITS**

## Cash for Clunkers program “wildly successful”?

The Cash for Clunkers program came to a close with almost 700,000 clunkers taken off U.S. roads and replaced by more fuel efficient vehicles. Rebate applications worth nearly US\$2.9 billion were submitted by deadline, coming in below the US\$3 billion provided by Congress to run the program. Cars made in America topped the most-purchased list, from the Ford Focus to the Toyota Corolla to the Honda Civic.

“American consumers and workers were the clear winners thanks to the cash for clunkers program,” said U.S. Transportation Secretary Ray

LaHood. “Manufacturing plants have added shifts and recalled workers. Moribund showrooms were brought back to life and consumers bought fuel efficient cars that will save them money and improve the environment.”

According to a preliminary analysis by the White House Council of Economic Advisers, the program will:

- Boost economic growth in the third quarter of 2009 by 0.3-0.4 percentage points at an annual rate thanks to increased auto sales in July and August.
- Sustain the increase in GDP in the fourth quarter because of

increased auto production to replace depleted inventories.

- Create or save 42,000 jobs in the second half of 2009. Those jobs are expected to remain well after the program’s close.

The program provides good news for the environment. That is because 84% of consumers traded in trucks and 59% purchased passenger cars. The average fuel economy of the vehicles traded in was 15.8 miles per gallon and the average fuel economy of vehicles purchased is 24.9 mpg. – a 58% improvement. **ITS**

## Statistical insight

The oil market continues to be dominated and defined by the apprehension between optimism over the perceived recovery of the global economy and weak global consumption of crude oil and other liquid fuels on the other.

European consumer prices fell less than economists forecast in the late summer, as the global economy seemingly began to recover from its most earnest crash in six decades. Inflation may gain momentum as the global economy emerges, stoking

demand and driving up the cost of crude oil and other commodities. The European Central Bank has warned that the recovery may face obstacles as rising unemployment curbs consumer spending and helps keep a lid on prices.

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Consumer prices in Italy, the euro region's third-largest economy, unexpectedly increased 0.2% in August from a year earlier, the Italian Statistics Institute in Rome said. Economists forecast a 0.1% drop, according to the median forecast of 15 projections in a Bloomberg survey. Italian retail sales unexpectedly fell 0.4% in June from May, according to a separate report.

The British economy shrank by a smaller than expected 0.7% in the second quarter, after statisticians revised up their estimates for the manufacturing, energy, wholesale,

and motor vehicles sectors. The Office for National Statistics said that took the annual drop up to 5.5%, still the sharpest fall since records began in 1955.

There are indications that oil consumption could be recovering outside of the Organization for Economic Cooperation and Development (OECD). However, this has been somewhat offset by an erosion of compliance with production cuts announced by the Organization of the Petroleum Exporting Countries (OPEC).

The rising level of global oil inventories when combined with

weak current consumption indicates overall weakness in the oil market. For example, U.S. commercial crude oil and petroleum product stocks have increased for five straight quarters for the first time since 1979-1980, and they are projected to increase again in the third quarter of this year. As a result, the future level of oil prices will largely depend upon the timing and pace of the global economic recovery and the resultant impact on global oil consumption that would tend to erode surplus stocks. **ITS**

## NEWS BRIEFS

### Toyota testing breathalyzer unit

While Toyota Motor Corp. ([www.toyota.com](http://www.toyota.com)) says it has no immediate plans to test the breathalyzer technology on passenger vehicles, the company began road tests last week of a breathalyzer that is mounted on the instrument panel and locks a truck's

ignition if it detects the driver has had too much to drink. The goal is to give transportation and delivery companies better control of their fleets. Toyota's breathalyzer, developed jointly with its truck subsidiary, Hino Motors Ltd., is about the size of

a cell phone and combines an alcohol detection sensor and digital camera. As the driver blows into the sensor, a camera photographs the test-taker's face. The dispatcher can check the photo to make sure the test-taker was indeed the authorized driver. **ITS**

### Mercedes launches first series-produced fuel cell car

Mercedes-Benz is launching its first series-produced fuel cell car on the road: the new B Class F-CELL. The environmentally friendly electric car has better a performance similar to a 2.0-liter gasoline car and is fully suited for everyday driving. The zero-emission drive system consumes the equivalent of 3.3 liters of diesel per 100 kilometers in the NEDC (New European Driving Cycle). Production of the B Class F-CELL will commence in late 2009 with a small quantity. The first of around 200 vehicles will be delivered to customers in Europe and the USA at the beginning of next year.

The vehicle's technological heart is the new generation of the compact, high-performance fuel cell system, in which gaseous hydrogen reacts with atmospheric oxygen at 700 bar to generate a current for the electric motor. The fuel cell system of the B Class F-CELL has a very good cold-start capability even at temperatures as low as minus 25 degrees Celsius. The drive system was completely newly developed versus the F-CELL A-Class presented in 2004, with Mercedes-Benz engineers achieving consider-

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## CALENDAR

### Telematics Munich 2009

November 10-11, 2009

Munich, Germany

<http://www.telematicsupdate.com/munich/>

### Navigation & Location USA

December 1-2, 2009

San Jose, California, USA

<http://www.telematicsupdate.com/navusa2008/>

### The Future of Air Transport

December 2-3, 2009

London, England

<http://www.marketforce.eu.com/airtransport/>

### TRB 89<sup>th</sup> Annual Meeting

January 10-14, 2010

Washington, D.C., USA

<http://www.trb.org/AnnualMeeting/default.asp>

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able improvements in output, torque, operating range, reliability, starting

characteristics, and comfort. The B-Class F-CELL now offers driving pleasure and day-to-day suitabili-

ty at Mercedes level – without local emissions. **ITS**

## SMSC launches its First TrueAuto Ethernet Transceiver

SMSC (www.smsc.com), a semiconductor company that provides Smart Mixed-Signal Connectivity solutions, launches the LAN88710 MII/RMII 10/100 Ethernet Transceiver, its second TrueAuto Ethernet solution. This device is designed to meet the high reliability standards required by automotive applications such as

on-board diagnostics or fast software download interfaces for central gateway and telematics modules, navigation systems, radio head units, and connectivity devices. The LAN88710 transceiver offers increased access speed for diagnostics and software downloads over traditionally slower speed interfaces typically used to

connect to the vehicle today. When used within today's complex vehicle electrical systems, which are packed full with user content, the LAN88710 transceiver can help diagnose issues faster and lower software maintenance time so repairs are completed more quickly and cost less. **ITS**

## World Bank supports economic development with highway improvement project

The World Bank Board of Executive Directors approves a US\$147 million loan for the Third East-West Highway Project (TEWHIP) for Georgia, a country in the Caucasus region of Eurasia.. This is the third in a series of investments aimed at improving the

E60 Highway, Georgia's key transport corridor. The project will upgrade the E60 highway between Sveneti and Ruisi to a four-lane divided highway. It will also assist the government in implementing reforms in the transport sector, including strengthening of the

Roads Department, improving private sector participation in road maintenance and operations, road safety, and engineering education. As a result of the three year project, road transport costs will be reduced, and access, ease of transit, and road safety along the central part of Georgia's East-West corridor improved. **ITS**

## SIRIUS FM-5 satellite now in service

SIRIUS XM Radio says that the newest addition to the SIRIUS XM satellite fleet, SIRIUS FM-5, launched into service on the SIRIUS network and is now fully operational. FM-5 was launched from the Baikonur Cosmodrome in Kazakhstan aboard an International Launch Services (ILS) Proton. All post-launch testing was completed successfully, and the new satellite is now providing improved signal penetration and reception to millions of SIRIUS subscribers across the US. SIRIUS FM-5 is one of the world's most powerful communications satellites and is the first geostationary SIRIUS satellite, complementing the SIRIUS fleet of three non-geostationary satellites. **ITS**

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