



# THE *Intelligent*

Volume 20 • Issue 20 • October 15, 2009

## H I G H W A Y

GLOBAL ROAD TRANSPORT TECHNOLOGY UPDATE

### TOLLING

#### CS to renew Cofiroute's toll systems

Le Groupe CS ([www.c-s.fr](http://www.c-s.fr)) was chosen by highway networks provider Cofiroute ([www.cofiroute.com](http://www.cofiroute.com)) motorway to design a new generation of toll payment systems for its inter-urban network and the A86 motorway in France. The new system will not only develop and improve on all the payment schemes now in operation—manual tolling, credit card payment, and Liber<sup>T</sup> ETC—but will also include new features, such as travel time calculation from tag subscribers data and subscribers payment depending on real journey made. The value of the base contract for already quantified work is €52 million (US\$76 million).

The system-wide upgrade involves 350 toll lanes at 66 toll plazas on Cofiroute's 928km (577mi) of tollways in the central and western parts of France, including the A10, A11, A28, A71, A81 and A85 toll-roads—about an eighth of the national network of France. The tollways currently handle about 2.8 million transactions a day. With the emphasis on a new high volume open road toll system Cofiroute needs a major customer service center to market the ORT transponders, manage transactions, collect payments, manage accounts, and follow up on violations.

Cofiroute was begun as a fully investor owned toll road developer

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#### 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 needed lift after a dismal year. The upswing is also 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 expect a rise in light vehicle traffic, and better constancy in heavy vehicle traffic for the remainder of this 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 reports 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 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. Traffic 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.

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**CS to renew Cofiroute's toll systems**

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and operator, unlike many other tolling companies in Europe which started as state enterprises and were then privatized through the sale of stock. Cofiroute is part of the Vinci Group, a major French conglomerate whose central

work is construction. The Vinci Group say they are the world's largest concession company managing 2,800km (1,740mi) of tollways, including six bridges, 26 airports and 800k parking spaces, and a sports stadium. **TIH**

**Traffic upswing sustains European toll road operators**

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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 driv-

ers 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. **TIH**

**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.

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 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

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in white, blue, orange, green, yellow, and gray colors. Other IAG-compliant single protocol OBUs include water-proof, feedback, and exterior models.

TransCore's IAG Encompass 6 reader system has been engineered with an eye to the future for allow-

ing 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 for-

ward 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. **TIH**

## 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 multiproto-

col RFID tag suitable for electronic toll collection and traffic management applications where driver feedback is specified. This 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. **TIH**

## OPTIMIZATION

### Digital media innovation in Beijing Metro

During a special introduction event in Beijing, Digital Media Group (DMG; www.dmg.tv.com) unveiled more than US\$10 million worth of digital media innovation for the 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

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

Line 4 is outstanding by utilizing DMG's proprietary Passenger Information System 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. 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 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.

Trackside 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, information, 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. **TIA**

## 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 pro-

vide bus and train passengers with real time information wherever, whenever and however they need it. Our experience as a leading provider 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. **TIA**

## SAFETY

### Volvo Trucks offers "thinking" vehicles

Volvo Trucks ([www.volvo.com](http://www.volvo.com)) has disclosed several next-generation projects, including "thinking" trucks

that automatically handle some of the routine aspects of driving, communicate with other vehicles on the road

and, if necessary, step in automatically in critical situations.

Carl Johan Almqvist, traffic and product safety director at Volvo Trucks, said that tomorrow's safety solutions include an all-new generation

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of driver-assistance systems that build on dialogue between drivers, electronic functions, and the surrounding traffic environment, making the vehicle itself more or less automated depending on the circumstances.

Volvo's latest technological solutions in the field of active safety include Automated Queue Assistance, a function whereby the vehicle accelerates and brakes automatically at low speeds, for instance in slow-moving traffic tailbacks.

Volvo Trucks also made a major investment in an EU project entitled "Highly Automated Vehicles for Intelligent Transport" (HAVEit), that

is working on intelligent next-generation vehicles featuring advanced driver-assistance systems. HAVEit trucks feature E-horizon, which links to map databases to provide the driver with information about hills, curves, and junctions ahead on the route. The driveline is accordingly adapted so that progress is as efficient and economical as possible.

Volvo is involved in the international Safespot project and the Co-operative Vehicle Infrastructure Systems (CVIS) project. Safe-spot examines how tomorrow's cars and trucks can communicate with one another and with the surrounding infrastructure, and has defined and

tested various applications based primarily on the vehicle, such as safety in junctions, warning of frontal impact, warning of poor road surface, or detection of cyclists and pedestrians. The CVIS project focuses on infrastructure-based applications.

These applications encompass speed alerts, warnings of accidents on the road, and the creation of safety margins for emergency rescue vehicles, among others. The driver receives the information via a display screen or in the form of audio/visual signals in the vehicle cab. However, the information can also be transmitted via signs or flashing lights at the side of the road. **TTH**

## Device helps drivers see around corners

A device to see around corners and eliminate blind spots will help truck and bus drivers to maneuver more safely. Alpine's ([www.alpine.com](http://www.alpine.com)) Multi Camera technology is linked with a navigation database, offering the ability to see all aspects of the vehicle and its surroundings, eliminating dangerous blind spots when turning, parking, or changing lanes.

A front-mounted camera shows the view to the left and right as well

as straight ahead. The information is displayed on a screen in the cab. Cameras on the side of vehicle eliminate blind spots, which is a particular problem for left-hand drive trucks in the UK.

The array of cameras can be combined to provide a real-time "top view," giving the driver a view of the vehicle in its surroundings to enable him to park or maneuvering safely.

The technology works by processing multiple camera views together with road information from a navigation database. Complex processing ensures the information is presented in real-time, even for larger vehicles such as articulated trucks or buses.

The first prototypes have been tested on cars, but Alpine believes the safety aspect is much more relevant for larger commercial vehicles. Likely to be a factory fit, Alpine suggests that the technology could be on the road in less than three years. **TTH**

## Mobile phone operators sign up for eCall

eCall is one of the priorities of the Intelligent Car Initiative and the Intelligent Transport Systems Action Plan promoting the use of information and communication technologies (ICT) to achieve smarter, safer, and cleaner road transport. The mobile phone industry has now given full backing to eCall, Europe's in-car automatic emergency call system. Representatives of the industry's GSM Association ([www.gsmworld.com](http://www.gsmworld.com)) underlined their commitment to this life-saving technology by signing the EU's Memorandum of Under-

standing to implement eCall across Europe.

eCall automatically dials 112, Europe's single emergency number, when a car has a serious accident and sends its location to the nearest emergency service—even when passengers do not know or cannot provide their location. Rolling out eCall requires close cooperation between public authorities, car companies, and mobile phone operators, and could save up to 2,500 lives each year in the European Union (EU) when fully deployed and reduce the severity of injuries by 10 to 15%.

"Last month, the European Commission called on Europe's governments and telecoms and automotive industry to do more to put eCall on the road. I congratulate the mobile phone industry for answering so promptly. By backing Europe's in-car emergency call system, they have shown their social responsibility and openness to innovative applications of communications technology in daily life," said Viviane Reding, the EU's Telecoms Commissioner. "However, the roll-out of the pan-European eCall needs everyone's co-operation. Mobile phone operators have shown

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their commitment to eCall, joining car industry and the majority of EU countries. Six Member States have still not signed the eCall Memorandum of Understanding—Denmark, France, Ireland, Latvia, Malta, and the United Kingdom. They should now take their foot off the brake and speed up the introduction of a system that can save lives. Otherwise, the Commission will need to propose legislation next year.”

Spanning 219 countries, the GSM Association unites nearly 800 of the world’s mobile operators and more than 200 companies, including handset makers, software companies, equipment providers, internet companies, and media and entertainment organizations.

To fully deploy eCall, Europe’s car and telecoms industries and national administrations in all EU countries, must ensure that their emergency services, especially call cen-

ters, are equipped to handle eCalls. Although the technology is ready and common pan-EU standards have been agreed by industry and emergency services, the six countries listed above are still not ready to commit, mainly for cost concerns.

Fifteen EU countries (Austria, Cyprus, Czech Republic, Estonia, Finland, Germany, Greece, Italy, Lithuania, Portugal, Slovakia, Slovenia, Spain, the Netherlands, and Sweden) as well as 3 European Economic Area (EEA) countries (Iceland, Norway, and Switzerland) have agreed common arrangements for implementing eCall. Another 6 EU countries (Belgium, Bulgaria, Hungary, Luxembourg, Romania, and Poland) support eCall and are willing to sign the agreement. The European Parliament is also a strong supporter of the roll out of eCall in cars across Europe.

In August, the Commission called on EU countries and Europe’s car and telecoms industry to do more for the

start of eCall in Europe. The Commission outlined a strategy for speeding up the introduction of eCall in all new vehicles (of all brands and countries of origin) across Europe. The technology would be open to all, and would use the single European emergency number.

The Commission has funded eCall projects that make sure the technology works across borders (E-MERGE and GST-Rescue) and has further supported work on eCall through industry cooperation via the safety Initiative. In the last two years, the EU provided around €160 million (US\$236 million) for research into ICT for transport. Road accidents cost the EU economy more than €160 billion per year. Equipping all 230 million cars in the EU with eCall could save €26 billion (US\$38 billion) annually. The eCall system will also make it easier to manage road traffic congestion and to install services like satellite navigation in cars. **TTH**

## 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 project, 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 situation 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. **TTH**

## Toyota develops onboard short-range communications unit

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 dedi-

cated 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 vehicle-infrastructure communications

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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-responsive systems.

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

## CONNECTIVITY

### Integrated smartphones and infotainment systems

NAVTEQ (www.navteq.com), Nokia (www.nokia.com), and automotive systems and components specialist, Magneti Marelli (www.magnetimarelli.com), are demonstrating for the first time technology that seamlessly integrates smartphones into an in-vehicle infotainment system. Once connected the full range of smartphone features, services and applications are available through the high-resolution screens and audio systems embedded in the car. It also enables an information exchange between the smartphone and the car as well as information retrieval through GPS functionality.

Connectivity between the smartphone and the car may provide key information such as fuel levels and engine status and combined with GPS information from the smartphone or car, could enable location-based services. These services might include the nearest fuel station with the day's lowest prices or even offering an e-coupon for a free coffee if the driver chooses a particular station. In addition, ADAS (Advanced Driver Assistance System)-based safety features may also be supported, for example, to warn drivers to slow down for an upcoming sharp

bend. The integrated system mirrors the display of the smartphone on the larger screen and commands can be given either by voice, gesture, touch, or traditional in-car controls to enable ease of use.

"We are happy to be part of this new innovation and looking forward to the new opportunities this technology can bring," said Vesa Lairo, head of navigation development at, Nokia. "The infotainment system of a modern car is a natural extension for the capabilities of smartphones. Not only will it simplify the use of turn-by-turn voice guidance from Ovi Maps, but also provide a new and easy way of accessing other content on the smartphone, such as music and delivering

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automotive specific widgets from the OVI Store.”

“This collaboration offers Magneti Marelli the opportunity to make its know-how available for the integration of complex systems in the automotive field,” stated Giuseppe Rosso, CEO of Magneti Marelli Electronic Systems. “In this case, through specific management of the vehicle’s

infotematic node, Magneti Marelli enables communication between the car—and more precisely between certain functions and data concerning the car—and the new generation of smartphone devices. So, by combining the capabilities and functions of consumer devices with the added value of a “graded” automotive system embedded in the vehicle, the best possible system integration is provided, espe-

cially from the standpoint of ergonomics and safe use.”

Connection from the mobile device to the infotainment system is made either via Bluetooth or USB cable is a useful choice depending on the length of the journey. For a short distance the driver could leave the phone in a briefcase and connect wirelessly but for longer journeys the cable will help to extend smartphone battery life. **TH**

## Harman provides next-generation infotainment for Daimler

Harman International Industries (www.harman.com) was selected by Daimler (www.daimler.com) to provide the next-generation COMAND infotainment system for the new Mercedes-Benz S- and C-Class models. The system is multimedia driven, and

offers a sophisticated set of features including 3-D navigation, brilliant graphics, Internet access, and wired or wireless connectivity. A hard disk drive provides rich navigation data and will also accommodate the user’s personal entertainment files.

Harman delivered the first Becker audio system to Mercedes-Benz in 1949. This next-generation infotainment system will use Harman’s energy-saving GreenEdge technology to deliver exceptional performance without compromise while reducing weight and power consumption. **TH**

## NAVIGATION

### TomTom expands LIVE Services to Belgium and Portugal

TomTom (www.tomtom.com) will be 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 drivers know what’s ahead, allowing them to make the right decisions accordingly throughout their journey,” says Corinne Vigreux, Managing Director of TomTom. 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 travelling 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 [see separate release]. The LIVE Services bundle offers valuable services for motorists:

- Superior and award-winning TomTom High Definition Traffic™ service for the most accurate and current traffic information across borders in seven countries throughout Europe.

- 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: up-to-date fuel price information guides 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.

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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.

## NAVTEQ offers greater map coverage in India

NAVTEQ ([www.navteq.com](http://www.navteq.com)) has announced a significant expansion in its coverage for India, from more than 40 cities to 84 cities. According to NAVTEQ research, Indian travelers stop to ask for directions four times per journey, on average. "The most commonly provided response to a person in a vehicle who stops to ask for directions is turn-by-turn information," stated Aaron Dannenbring, NAVTEQ's vice president of Asia Pacific map and content products.

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

NAVTEQ's research shows that the most commonly sought information was how to reach a named city. The most commonly provided cues were POIs and landmarks such as banks, hospitals, cinemas, and places of worship. Street names were also used in providing directions.

The NAVTEQ map for India includes more than 1.4 million POIs in categories Indians identified as relevant for navigation. NAVTEQ also delivers 3D landmarks of popular

six-month subscription card is available for €59.95. A twelve-month subscription card is available for €99.95. **TH**

POIs to support easier direction references. According to Dannenbring, NAVTEQ now provides the broadest coverage in India of the high quality map data needed for turn-by-turn navigation.

NAVTEQ's expanded coverage in India coverage enables routing to tens of thousands of hamlets with comprehensive highway coverage that enables travellers to get to major population areas where NAVTEQ has more detailed coverage. **TH**

## Lockheed Martin's modernized GPS satellite begins operations

The last in a series of eight modernised GPS IIR (GPS IIR-M) satellites built by Lockheed Martin has been declared operational by the US Air Force for military and civilian navigation users worldwide. The satellite, known as GPS IIR-21(M), was launched successfully from Cape Canaveral Air Force Station on August 17th.

Lockheed Martin and its navigation payload provider, New Jersey-

based ITT, designed and built 21 IIR spacecraft and subsequently modernized eight of those spacecraft designated Block IIR-M.

Each IIR-M satellite includes a modernized antenna panel that provides increased signal power to receivers on the ground, two new military signals for improved accuracy, enhanced encryption, and anti-jamming capabilities for the military, and

a second civil signal that will provide users with an open access signal on a different frequency.

Lockheed Martin, along with ITT Corporation and General Dynamics, will produce the next generation of global positioning satellites, designated GPS III. This program will improve position, navigation and timing services for military and civil users, is in the Critical Design Review (CDR) phase, with the first GPS IIIA satellite expected to launch in 2014. **TH**

## GOVERNMENT WATCH

### 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 econo-

my 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 con-

sumer spending and helps keep a lid on prices.

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.

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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. **TH**

## Focus on Maryland, USA

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 Hagerstown 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 Maryland, USA,

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 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 environmental 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. **TH**

Business leaders fear this will damage the fragile economy and motoring organizations say it is a "tax on jobs."

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## Pay to park

The city of Nottingham, England has approved a pay to park scheme that will come active in April of

2012. Each parking space will cost starting at £253 (US\$420.4/€287.8) a year.

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A company offering 11 or more parking spaces will be expected to pay the parking space tax, although

employers can pass that cost onto employees. The parking tax is expected to raise about £14 million a year. Other major cities in the UK are

monitoring the scheme in Nottingham and express some interest. **TTH**

## Concerns halt flawed research

The International Sign Association (ISA; [www.signs.org](http://www.signs.org)) informed U.S. Department of Transportation (USDOT) that the on-premise sign industry is highly concerned about government research on digital signs. ISA is 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 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.” **TTH**

## 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.

### 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 than 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 a high-performance fuel cell system, in which gaseous hydrogen reacts with air (oxygen) at 700 bar to generate a current for an 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 considerable improvements in output, torque, operating range, reliability, starting characteristics, and comfort.

### SMSC launches its First True-Auto Ethernet Transceiver

SMSC ([www.smsc.com](http://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.

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### World Bank supports 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 Svaneti 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.


### 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 U.S. SIRIUS FM-5 is one of the most powerful communications satellites and is the first geostationary SIRIUS satellite, complementing the

SIRIUS fleet of three non-geostationary satellites.

### Audi shows electric e-tron

Audi has shown its performance sports car capabilities of being an all electric vehicle in the e-tron. There are four motors - two each at the front and rear axles - to drive the wheels.

The vehicle produces 230 kW (313 hp) and 4,500 Nm (3,319.03 lb-ft) of torque and the two-seater accelerates from 0 to 100 km/h (0 - 62.14 mph) in 4.8 seconds, and from 60 to 120 km/h (37.28 - 74.56 mph) in 4.1 seconds. The lithium-ion battery provides a truly useable energy content of 42.4 kilowatt hours to enable a range of approximately 248 kilometers, or 154 miles. The e-tron is able to distribute the powerful torque of its four electric motors to the wheels as required. 

## 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/>

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