

SMART TECHNOLOGIES FOR INTELLIGENT TRANSPORT

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GALILEO continues against US competition

EU Member States' unanimous agreement in late November 2007 to press on with the €3.4bn GALILEO satellite navigation project came amid evidence of strengthening US competition. Experts claim the rival GPS III system will have 500 times the transmitter power of the current array, dramatically enhancing resistance to jamming.

EU transport ministers have agreed that unused agricultural farm subsidy and administration funds can plug the financing gap caused by private-sector withdrawal from the delayed project. The plan is for the full 30-satellite GALILEO constellation to be built and launched by 2012, with work split into six segments and no single contractor allowed to lead on more than two.

On the commercial prospects, users (particularly businesses) will be more willing to pay for navigation than safety, the GNSS Supervisory Authority (GSA)'s Stefano Scarda said recently in Dublin, Ireland. Speaking at a Mapflow-hosted conference of the Active Road Management Assisted by Satellite (ARMAS) project, he said price sensitivity could make market segmentation possible.

'The location-based services (LBS) sector is

moving forward, but needs further stimulation', John Hanley of global IT services consultancy LogicaCMG told a recent AGILE project workshop in Turin, Italy. 'We must keep stressing social benefits, to gain political and legislative support.' Hybridisation remains a key concept, continued the coordinator of AGILE (Application of Galileo in the Location-Based Services Environment). 'Both existing GPS and the new GALILEO will ultimately be parts of a larger multiple GNSS system. Being able to use them in combination, along with eg EGNOS, will add value.'

The workshop demonstrated a pre-commercial EGNOS-based LBS application developed by AGILE partners. Using handheld devices, delegates navigated around Turin, combining friend finding with user-generated content and location-based advertising.

The new application includes the first European implementation of Secure User Plane Location (SUPL) protocol version 2.0. (SUPL employs user plane data bearers to transfer eg GPS-based assistance data, and carry positioning technology-related protocols between mobile terminals and the network).

Location-based personal mobility services are

widely expected to be the largest GALILEO mass market, in terms of user numbers and revenue opportunities. The GSA has recently released a new invitation to tender for a follow-up project, which is required to build on the success of AGILE.

* The two-year GSA-supported MENTORE (iMplemENtation of GNSS tracking and tracing Technologies FOR EU-regulated domains) project is planning five real-life pilot demonstrations of GNSS-based animal and food transportation tracking and product monitoring. It aims to support EU 'farm-to-table' food safety policies.

MENTORE is an EC FP6-supported project coordinated by Italian satellite services specialist Telespazio. The project disseminator is the European Union Road Federation (ERF).

www.gsa.europa.eu
www.gnsstracking.eu
www.galileo-in-lbs.com
www.logicacmg.com
www.esa.int/esaNA/SEM2YL26WD_index_0.html
www.telespazio.com
www.erf.be

Frankfurt widens NFC enablement

Frankfurt, Germany's Rhein-Main Verkehrsverbund (RMV) public transport authority is expanding deployment of its near-field communications (NFC) technology to enable passengers to use mobile phones to buy and store tickets, and check schedules.

By end-2007, the authority plans to have installed RFID tags at 700 bus, tram and train stops and the city's airport. The system combines passive 'ConTags', manufactured by NXP Semiconductors, with Nokia 6131 phones. When a phone reads a tag a special software programme, pre-downloaded via the internet with, opens on the phone's display screen. The passenger can then download an electronic ticket, and pay later for it using a credit or debit card and obtain up-to-date schedule information.

The decision to expand NFC capability follows a 92% positive vote by participants in a July-November 2007 test at 60 stations and stops. It represents an upgrade on a WAP-enabled mobile phone-based ticketing system, installed in 2006.

www.rmv.de
www.nokia.com
www.nxp.com



In-built touch screen will be the norm

All Volkswagens introduced after 2008 will come with in-built touch-screen controls for navigation, heating and air-conditioning, entertainment and navigation and trip-computer functions. VW aims to reduce the number of switches and buttons needed in vehicles, and the manufacturing complexity needed to provide it. The commands will be exclusive to VW brand models, with controls for radio and navigation systems

in its Touareg, Tiguan and Touran vehicles. Menu icons can be rotated in a carousel fashion in a similar way to the controls on the new Apple iPhone.

The company's premium Audi will develop its current existing system, which combines a central control knob and dedicated switches. Seat and Skoda models will continue to use standard switch-based controls.

www.volkswagen.com

TomTom to beat congestion in NL

Dutch navigation service provider TomTom has launched a premium, portable, high-definition (HD) congestion-beating traffic service for in-vehicle use in the Netherlands. The unit tracks mobile phones to gather raw, anonymous GSM signalling data, made available through a partnership between TomTom and mobile phone operator Vodafone and mixed with data from existing traffic sources.

Drivers will be able to see real-time images of traffic congestion and receive directions to avoid it. The company claims it will avoid the risk of out-of-date information being sent to conventional satellite navigation systems and



TomTom's HD traffic service in action in the Netherlands

misdirecting drivers. The service became available in The Netherlands in mid-November 2007. The company anticipates a UK launch in the first half of

2008, with other European countries following during the year. The unit costs €400, including a one-year subscription, renewable for €10 per month, to receive

updates over the mobile phone network via an in-built wireless modem.

The company sees the provision of real-time traffic information to portable devices as being crucial to its future growth. It expects increasing sales of online devices, particularly those using wireless networks.

TomTom is keen to hold its own against mobile handset makers such as Nokia, which are beginning to build GPS technology into phones. The company envisages navigation devices that receive real-time data on available parking spaces and direct drivers to the most convenient.

www.tomtom.com

Finns scan in-vehicle information gains

In-vehicle weather and road-condition warning services, and well-implemented route and service guidance, would improve traffic safety and reduce numbers of injury accidents, says a recent report. Finnish Technical Research Centre VTT quizzed Finnish and international expert sources via the internet, using the Delphi method to show that installing condition-warning systems in every Finnish passenger car could cut injury accidents by between 11% and 18% a year.

Installing route and service guidance, to reduce travel times and driver stress, would cut injury accidents by a further 0.5–2.5%. These percentages correspond to a reduction of between 87 and 137 accidents a year caused by weather and road conditions, and between 15 and 83 avoided by better route and service guidance.

The safety impacts of in-vehicle information systems, says the report, have been insufficiently studied worldwide. The benefits are, however, not

undisputable, it warns, as increasingly popular in-vehicle devices can distract drivers from their primary task.

But, overall, it recommends widespread implementation of weather and road condition warning service via a portable or in-vehicle device. Incident warning could be incorporated in a route guidance system. The study has also collated information on the relative importance of individual safety impacts. The most significant resulted from reductions in average speeds and trip lengths, and improved driving styles using the systems.

Receiving and processing warnings and informative messages had the greatest negative impacts. The project received support from the EC's Trans-European Transport Networks (TEN-T) programme, the Finnish Ministry of Transport and the Finnish Road Administration (Finrnra).

www.vtt.fi

PARTNER looks ahead

PARTNER project members hope to have a follow-on under way by Summer 2008, following their successful final 2007 conference on Sustainable Transport Options for City Visitors. Most have already agreed to take forward the INTEGRA concept (of complementary web portal and explanatory leaflets) beyond end-2007 project completion.

They have set up an INTEGRA Brand Management Board to control and promote use of the concept, and seek further European initiatives to exploit it. They have also developed a proposal for the January 2008 deadline for INTERREG (Interregional Cooperation Programme) IVC, which focuses on exchanges of knowledge and experience.

PARTNER set out to make it easier for visitors to travel to, from and around six cities in four European Atlantic Area countries, France, Ireland, Spain and the UK. If successful, INSTIGATE (Investing Sustainable Transport options linked to Interregional GATEways) project will involve a further 10 cities.

www.interreg4c.net
www.tr-ltd.com

The green light shines for EASYWAY

The EC has selected EASYWAY for proposed funding as a Trans-European Transport Networks (TEN-T) project for the multi-annual programme period 2007-2009. EASYWAY has qualified under the TEN-T cross-border priority for its cross-border emphasis.

It represents the follow-on of

the 2001-6 TEMPO (Trans-European intelligent transport systems PrOject), which has umbrellaed seven multinational traffic road transport information and management initiatives spanning national boundaries. With planned activities in 22 countries (20 of them EU Member States), it aims to optimise the capacity and efficiency

of existing and new road infrastructure,

It will focus heavily on using ITS to promote interoperability, security and reliability in road-based transport, with strong emphasis on freight and logistics. The EC is due to make a final funding decision in early 2008, after European Parliament scrutiny.

Germans win eSafety awards

Germany's Federal Ministry of Transport, Construction and Urban Affairs and its national motorists' club ADAC, are the first winners of the newly-instituted European eSafety Deployment Awards. The Ministry won in the Administration and Policy category, in recognition of its membership of the eSafety Steering Group, and its active participation in eSafety Forum working groups.

In June 2007 it hosted a successful deployment-oriented eSafety Conference in Berlin, which focused on human-machine interaction (HMI) and driver assistance systems (DAS), as well as on real-time traffic information (RTTI). ADAC's win in the Industry and Technology reflected its active promotion of

the pan-European eCall emergency alert concept.

ADAC research, presented at the June 2007 Berlin Conference, has validated the feasibility of cross-border eCall. Partnered by Continental (which recently acquired Siemens VDO Automotive) it has staged the first-ever cross-border field test of the concept, with 10 Opel Vectra vehicles on the road in Austria, Germany and Italy, and their drivers placing over 900 test calls from 450 pre-set locations.

The vehicles were equipped with prototype eCall units, based on Siemens VDO models, GPS/GSM antennae, an eCall button and the capability to measure mobile network coverage. Simulated public safety answering points (PSAPs) operated by

respective national automobile clubs ÖAMTC, ACI and ADAC received the emergency calls, and the ADAC Technical Centre in Landsberg analysed and evaluated the resulting data.

ADAC has also run tests on specific eSafety applications, eg navigation and lane-departure warning systems, and navigation systems, including crash tests. The winners received their awards at the 14 November 2007 eSafety Forum Implementation Road Maps Working Group's Deployment Workshop in Brussels, Belgium, from Ivan Hodac, Secretary-General of European automotive manufacturers association ACEA.

The Awards Evaluation Committee was chaired by Professor Risto Kulmala, of the

Finnish VTT Technical Research Centre, who is also Co-Chair of the eSafety Forum Implementation Road Maps Working Group. The Awards will now run annually.

* Three years after the launch of the European Road Safety Charter (ERSC), 12,000 lives are being saved every year on European roads, EC Vice-President Jacques Barrot said when he presented the ERSC Excellence in Road Safety Awards in Brussels in November 2007. We are, he continued, "halfway" towards the aim of saving 25,000 lives by 2010.

www.esafetysupport.org
www.adac.de
www.opel.com
www.conti-online.com

Intelligent parking monitors bay by bay

UK company Baywatch Parking, a subsidiary of Highlight Parking Systems (HPS), is developing technology that is designed to enable returning air travellers to locate their vehicles more easily in multi-storey airport car parks. It will combine automatic numberplate recognition (ANPR) cameras and display systems that respond to individualised tickets to guide drivers to the precise bay where they parked.

Meanwhile, HPS is installing its patented bay monitoring in the 3,800-space, short-term multi-storey car park at London Heathrow Airport's new Terminal Five, which is due to open in March 2008. This monitors each bay via a vehicle detection system, and automatically illuminates a



London Heathrow's new Terminal 5 (photo courtesy of BAA)

green ceiling-fixed light over bays that are vacant.

The system continuously interrogates the current status of each bay, and displays resulting real-time availability information, level-by-level, on networked signs. Apart

from saving motorists' time, (a study commissioned for the British Airports Authority (BAA) shows parking searches cut by 40%) the resulting reduction in CO₂ emissions equates in weight to two jumbo jets in a single year, creating

a healthier environment for users and employees. Terminal 5 is scheduled to handle 30 million passengers a year.

www.baa.com
www.highlightparking.co.uk

Thales to ticket Algiers metro

International electronics group Thales has won a contract from Siemens Transportation Systems for supplying the ticketing equipment for the first metro line in the Algerian capital of Algiers.

Thales will furnish operator Entreprise du Métro d'Alger

(EMA) with a fully-integrated system. This will combine magnetic stripe and contactless (type B-compatible) technology for the benefit of users of the ten stations along the 9km line which is due to open in 2009.

Thales will install entry and exit control gates, ticket issuing

equipment for offices and automatic vending machines. The system will be scalable for medium-term plans for extension and future multi-modal ticketing.

www.transportation.siemens.com
www.thalesgroup.com

Finnish mobile phone manufacturer Nokia plans to launch a new-style pedestrian-friendly mapping system during 2008. Its navigation service will show footpaths (eg through parks, and along bridges and tunnels), to encourage people to take up walking instead of relying on their cars.

www.nokia.com

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