Better transport through technology

April 2009 Newsletter

News from ITS United Kingdom

Welcome to new Members Cambridgeshire County Council (www.cambridgeshire.gov.uk)

Thank you: to Detica for hosting the Women in ITS Interest Group on the day when the G20 protests were taking place around the corner, and to Foundation Members DfT for hosting the southern leg of our ITS Action Plan discussions.

ITS United Kingdom Calendar

Wednesday 29 April  Enforcement Interest Group, ACPO, Manchester
Wednesday 6 May  CVHS Interest Group, MIRA, Nuneaton
Wednesday 27 May  Passenger Information Interest Group, Detica, London, WC2

News from Members

Traffex09... New Product Launches – Envitia have Leading UTMC System on Show at Traffex

Two of Envitia’s users (York and Kent) were also exhibiting their CULTAS systems on the Department for Transport stand at Traffex.
Envitia (previously TENET Technology) is a high end software development company that specialises in UTMC compliant traffic integration and resilient but simple to use solutions. As a leading ITS provider supplying UTMC services to over 25 local authorities, they continue to innovate. They launched two exciting innovations at Traffex:

- the Universal UTMC Adapter which enables you to connect to on-street equipment that can only support serial line communications.
- a strategic collaboration between Parkeon and Envitia which introduces a real time bus location solution using data directly from the Parkeon Electronic Ticketing Machine.

Envitia have all the experience and all the tools to help make a road network more efficient, from UTMC parking guidance solutions to fully compliant UTMC traffic control rooms, but there’s always room for improvement. They are ITS Engineer-led, therefore can share their experience about getting the real benefits from ITS and UTMC.

Traffic Delays Minimised by Siemens for Major New Store

With an additional 5,000 vehicles inbound on the approach road to the new IKEA store in Southampton on the opening day alone and 25,000 visitors on each of the first 4 days of trading, traffic demand was not surprisingly at its peak in February. Thanks to pre-
planning and the overall effectiveness of the existing management systems supplied and integrated by Siemens, traffic delays were kept to a minimum. Over many years, Southampton ROMANSE has developed Siemens Comet and UTC systems with over 8,000 traffic management strategies to control the City’s network. The ROMANSE control room staff in liaison with a traffic management team from IKEA successfully managed the local traffic to avoid any major issues for the opening. According to Martin Wylie, Traffic Signals Engineer, Southampton ROMANSE, the new IKEA store in Southampton City Centre is extremely important to the City and its economy and therefore the expeditious movement of those visiting the City is a key priority. Praising the teams at Siemens for their efforts in delivering the associated works, Martin said: “I would especially like to thank Siemens and their respective operatives who combined to deliver the traffic signal works on four junctions on our West Quay Rd, all in time for the store opening. I would also like to thank Siemens for the delivery and installation of two large variable message car park guidance signs for the new IKEA car park.” All of the work was undertaken in a timely and professional manner even when prevailing weather conditions were less than desirable for working on the highway, he added. As part of the new IKEA store opening, Siemens made modifications to four existing junctions and installed two variable message car park guidance signs to display details of available spaces in the new IKEA store car park.

**Steam Car Exceeds Expectation at Testing…**
The British Steam car team has successfully carried out two test runs ahead of its bid to break the century-old world land speed record for steam-powered vehicles. The 25ft-long British Steam Car reached speeds of over 80mph on tarmac at the Ministry of Defence’s Thorney Island facility in Emsworth, Hampshire. Test driver Don Wales - the nephew of the late speed ace Donald Campbell and grandson of Sir Malcolm Campbell - then deployed the supercar’s parachute to help bring it to a halt. Mr Wales said: “It was absolutely fantastic and put paid to all the frustrations of the last few months. I enjoyed every moment of it as I went along. The car is just so powerful; you can get to feel the immense force and power of it. It was just itching to get away at the top.” We reached nearly 60mph on the first test before I applied the
parachute. All systems worked perfectly, it was a really good test. The second test run went even better and we clocked a speed in excess of 80mph. The car really did handle beautifully. After that run I feel more confident about breaking the record. The team has worked really hard over the winter and the last 10 years, and this test puts even more faith into the team." The team hopes to break a 103-year-old record by improving on the 127mph reached by American Fred Marriott driving a Stanley steam car in 1906 at the Daytona Beach Road Course. It is the longest officially-recognised land speed record but the British team hopes to overhaul it by reaching a target velocity of 170mph with their car. Weighing three tons, the sleek British Steam Car is made from a mixture of lightweight carbon-fibre composite and aluminium wrapped around a steel space frame chassis. It is fitted with 12 boilers containing nearly two miles of tubing. Demineralised water is pumped into the boilers at up to 50 litres a minute and the burners produce three megawatts of heat. Steam is superheated to 400 degrees Celsius which is injected into the turbine at more than twice the speed of sound, according to a team spokesman. Today's successful run followed disappointment earlier this month when a test-launch had to be aborted because of technical difficulties involving impurities feeding into the water system. The team's director Lynne Angel burst into tears after seeing Mr Wales power the supercar up the tarmac with steam belching from its back. She said: "It was fantastic to see. She just roared up the runway and deployed her parachute with a great big whoosh. It proves that it works and we are going to break the world land speed record in steam." On board to give Mr Wales luck during the run was a St Christopher pendant handed down to him by his grandfather Sir Malcolm Campbell, and a sovereign coin inscribed "to Daddy, love Jean". Malcolm Campbell and Donald Campbell were the original speed-kings, achieving over 20 land and water speed records. Project manager Matt Candy said: "Today marked the first time the car has started in superheated steam and gave both the start team and the turnaround team the chance to get some valuable practice before we go out but other than that we are good to go and hope to come back with the record." Today was the final time the car was being tested publicly before it is shipped out to the US for the record attempt. It will depart from Portsmouth next month. You can see a video of one of today's runs over on the Videos page. For further details please contact Rebecca Nicholls or Chris Wall on 01452 260063 or email; rebecca@eventspr.co.uk

PS: There was also a White Willow Duck on Board!!

The Power of the Traffic Cameras Service during Severe Weather

Highways Agency Services Delivered by WSP

WSP’s Intelligent Transport Systems team manages the delivery, maintenance and support of England’s TCS on behalf of the Highways Agency. The TCS was designed and implemented by WSP and our supply chain. The system sits on the back of the Highways Agency’s existing CCTV system and provides a means of disseminating still images and streaming video from cameras via various media, including internet and TV.

**KEY USERS**

Since its inception, the popularity of the system continues to go from strength to strength. The TCS has over 3000 registered users from a wide variety of the Highways Agency’s own staff and operational partners.

Key users include:

- HA operational personnel
- Emergency services
- Media groups providing traffic information to the public via websites and travel news broadcasts.

**USAGE STATISTICS FEB 2009**
• 4 out of 5 most viewed cameras were in the South East.
• Use peaked on 5th and 6th February, up 40% on average.
• WSP increased user capacity by 40% to allow access during this critical time

CLIENT SATISFACTION
The Highways Agency’s website (www.highways.gov.uk/trafficinfo), which carries live information on the motorways and major A-roads, including images supplied by the Traffic Cameras Service, received a month’s worth of visitors in less than a day on Monday 2 February. At its peak the site was getting around 100,000 visits per hour (compared to 500,000 per month) and it kept running throughout the exceptionally busy period. “We were very pleased that as road users turned to us in their hundreds of thousands during these extreme weather conditions we were able to give them the information they needed to plan their journeys across England.”- Highways Agency Director of Information, Denise Plumpton

The Traffic Cameras Service is an operational service that is invaluable to users in control rooms etc to enable them to see exactly what is happening on the Agency’s network. I am very pleased to say that we were able to meet this demand and took immediate steps to increase capacity to ensure we continued to meet it.”- Services Development Manager for the Highways Agency, Ian Sweeting

INTERACTION: Major New Project Won by TRL
If poorly designed or used inappropriately, in-vehicle technologies (IVT) have the potential to compromise safety, but little is known about how drivers use IVT. TRL has recently been awarded the INTERACTION project, working with research organisations across Europe to gain a better understanding of drivers’ interactions with IVT. The consortium gathers 10 European partners (ERT-INRETS, as coordinators, CDV, CTAG, FACTUM, ISEC, INTEMPORA, SWOV, TRL, and VTT) from 8 countries and also two Australian institutes (MUARC and GI).

There is several key safety issues linked with in-vehicle technology use:
• Risk of distraction
• Over-reliance on technology
• Understand ability of systems
• Awareness of system limitations
• Controllability of the systems
• Negative behavioural adaptation
• Workload

The project will focus on technologies already available in the European market and identify patterns of use of these systems. It will also analyse their effects on a driver’s behaviour and skills in normal and emergency situations and highlight individual and cultural differences that influence the nature of driver interactions with IVT and their consequences. The research will focus on real world driving in instrumented vehicles as well as driving under experimental conditions. It is anticipated that at the end of the project, recommendations will be made as to the design and refinement of IVT technologies in terms of ergonomics, usability and safety; the design of appropriate instructions and training for drivers who will use them; and for the customisation of systems to make them compatible with driver and driving characteristics in the country in which the systems are deployed. The project, which is jointly funded by the EU and Department for Transport, will run for 42-months.
Siemens Extends Traffic Control in China

Two Siemens PC SCOOT systems have recently been installed in the Chinese cities of Nanjing and Wuhan, and more equipment has been supplied to Chengdu and Dalian. In Nanjing, located in the Yangtze River Delta, 95 junctions will be managed and controlled by PC SCOOT and in Wuhan, capital of the Hubei province, 426 junctions will be monitored. The Wuhan contract represents one of the company’s largest overseas orders in recent years and forms part of a prestigious World Bank project, including the provision of a new Urban Traffic Control (UTC) system with PC SCOOT and the supply and installation of more than 400 signal controllers and 1,000 detector units over a period of 18 months. According to Peter Gorton, Siemens’ General Sales Manager, cities in China are among the most progressive in all Asia, building infrastructure for the future to deal with growing populations and increased levels of road and pedestrian traffic. “Supporting this continued development, our systems and equipment will help both cities manage the additional traffic more effectively,” he said. PC SCOOT offers users numerous benefits, including ease of use, simple installation and migration, and reduced equipment and maintenance costs, all operating on a PC. The advanced features reduce maintenance requirements and provide more opportunities for implementing a range of traffic control solutions. PC SCOOT includes all the major features of the Siemens UTC/SCOOT system, monitoring traffic in real-time, it optimises traffic signal operation and adjusts the signal timings to match prevailing conditions, thus increasing network efficiency.

VIPERWIM

Traffic monitoring in the form of High Speed Weigh-In-Motion (WIM) is coming of age; the enabling technologies have become robust enough to allow for the deployment of sophisticated integrated systems with a high degree of confidence that expectations will be met and in some cases exceeded. Building upon Applied Traffic’s success over many years the company has been busy developing the next generation WIM classifier system incorporating the knowledge and experience gained from a number of successful projects culminating in the VOSA VIPER WIM/ANPR pre-selection enforcement systems, that will take High Speed WIM to the next level. Three years ago Applied Traffic set up a dedicated design team to carry out research and development in partnership with Reading University, with a remit of developing the next generation of Traffic Monitoring Instrumentation Systems. The extremely well qualified, young and enthusiastic team introduced a modern up to date approach combined with the existing knowledge of decades of experience within the company. The motivation behind the design philosophy focused upon a number of areas for improvement that include the operator interface, data memory, interconnectivity, system security, accuracy and cost. Over this period Applied Traffic have designed and
developed a totally new WIM hardware platform, the new sensor interface hardware has significantly improved resolution and accuracy, we have revolutionised the operator interface, developed sophisticated learning algorithms, increased the memory up to 2 Giga Byte capacity, added full networking capabilities, implemented multi layer security, improved the system clock to GPS accuracy, about 1 second in a million years, integrated independent lane specific temperature linearization with intelligent compensation and produced this remarkable system at a very competitive price.

SECURITY
The importance of data and system security can not be underestimated especially with the networking of remote systems. In order to protect the system there is added multi level security access in the form of an electronic key and password protection. The electronic key is in the form of a USB Dongle configured with the access rights specific to the individual's access level permissions. The level of available access rights can be set from very basic viewing of real time traffic with no file interrogation, editing or saving allowed and no access to communications settings, through various levels to full Administrator rights. Each person with access permission regardless of the level of access rights has a personal password. In order to gain access to the system both the electronic key and a valid password are required. Over the last 18 months this has progressed from the prototype stage and beta testing of pre-production units over a wide range of conditions on various road types, traffic patterns and volumes ranging from 30MPH urban to Motorway sites to the production and launch of the product. Even prior to its launch the interest in this new product has been phenomenal, as a company Applied Traffic are extremely proud of what has been achieved and the possibilities that this new product has to offer. Oh and also the system is value engineered to be extremely competitive in these cost conscious times.

TRL Research Alert
PPR389 Update of the safety checklist for the assessment of In-Vehicle Information Systems: a scoping study by S Cynk, D Basacik (Price £30, code 2X)

For more information about any of the items in this Newsletter, Contact mailbox@its-uk.org.uk

News from Members for inclusion in the May issue should be sent to rlouis@its-uk.org.uk