Streets Ahead

The magazine of Siemens Mobility, Traffic Solutions  |  September 2010

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Welcome to Streets Ahead, the magazine of Siemens Mobility, Traffic Solutions.

In our last edition, we spoke of the uncertainties presented by the election of a new Government. A few months on and priorities are indeed becoming clearer, but eyes remain firmly focused on the calendar and the 20th October in particular - the date for the Chancellor’s spending review announcement. Whatever the detail though, it is clear we will see further cuts in both capital expenditure and revenue budgets.

Which points to the need for doing things differently and challenging the norm. Our cover story (and the subject of one of our papers at JCT) looks at the reality of using UG405 and wireless comms in place of potentially expensive fixed comms for real-time Urban Traffic Control. Below, we also reflect on the gaining momentum of retrofit programmes with many hundreds of inefficient and expensive incandescent signals being replaced with low power Siemens LED variants.

And on page 7, we provide an update on the exciting developments with our SafeZone average speed system, the trial of which has generated much media interest.

We hope you find this latest edition of Streets Ahead both varied and interesting and look forward to seeing you at JCT in September, our User Groups in October or any one of the events listed on the back page.

Matthew Vincent, Deputy Sales and Marketing Director.

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Our GREEN AGENDA marches on

The Siemens LED retrofit portfolio has been extended to allow Peek Elite incandescent traffic signals to be upgraded to low power Siemens CLS LED technology. Offering carbon and energy savings of up to 75%, the newly developed retrofit option follows the success of Siemens Helios retrofit technology and enables even more existing incandescent signals to be upgraded to modern LEDs, whilst maximising the re-use of existing roadside infrastructure.

Major savings
Across Medway, part of the Thames Gateway area, major refurbishment is already underway to significantly reduce energy and communications costs. Aimed at reducing carbon emissions and power consumption, the project involves replacing over 600 signal heads with new Siemens retrofit technology at sites in Rainham, Rochester, Gillingham and Chatham. At the same time, communications equipment is also being upgraded with the deployment of new UG405 outstation transmission units (OTUs) from Siemens.

According to Alan Hawker, Medway’s traffic signal engineer, the unitary authority plans a major shift towards Extra Low Voltage (ELV) technology over the next year. ‘ELV from Siemens will make a significant contribution not just in reduced power consumption but also ongoing maintenance. We have even looked at how much time is taken up travelling with a vehicle to replace a lamp or attend a lamp failure – this is a green issue too’, he said.

Maximising energy savings
Throughout Greater Manchester, newly developed retrofit equipment is also being installed by Siemens. The project involves upgrading Siemens’ pedestrian controllers to enable the replacement of incandescent lamps in around 600 signal heads at 120 pedestrian crossings with LED technology across all ten districts of Greater Manchester.

To secure efficiencies through collaboration in service improvement and procurement, one of the authority’s aims was to maximise the number of incandescent lamps replaced for a fixed budget before the end of the year. According to John Rice, Greater Manchester Strategic Transport Manager, ‘Low-power retrofit technology helps Manchester save additional energy and costs from reduced lamp replacement and maintenance visits’. 

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Advanced wireless trial for UTC

A trial is currently being conducted in Southampton by Siemens and the City’s authority to establish the suitability of using 3G networks as a communication option for SCOOT UTC. The trial and its initial findings are the subject of a paper being delivered at JCT by Keith Manston, Head of Product Management at Siemens.

Recent advances within the UTMC arena – the introduction of the UG405 UTMC protocol and SCOOT MC3 in particular – now enable SCOOT to be more tolerant of time delays in communications between the UTC and connected outstations.

According to Martin Wylie, Traffic Signals Engineer at Southampton City Council, the introduction of MC3 and UG405 by Siemens has helped significantly reduce the SCOOT system’s reliance on accurate data transmission and therefore increases the number of potential communication options. Faced with refurbishing the UTC communications infrastructure, Southampton is now considering 3G wireless, with the aim of minimizing capital expenditure on new equipment and the annual communication related revenue expenditure.

However, the suitability of 3G for this application is not yet proven so the trial is being undertaken to explore its reliability and suitability for UTC. To avoid traffic disruption resulting from communication issues, the trial location is fitted with a UTMC OTU running MOVA, but is also linked to the instation via a 3G connection - effectively shadowing the function of the UTMC OTU. The system architecture is relatively simple. The local link to the cell base station is provided by a 3G router and pole top antenna, with an existing leased line, currently used for VMS, providing the connection between the UTC outstations and instation at the ROMANSE centre.

Results so far are positive with periods of excellent, almost error free operation. There have, however, been occasional losses of communication and the causes of these are currently under investigation, with a second trial site planned to further expand our findings. As further results are gathered it is anticipated that the causes of the dropouts will be identified and a detailed report on progress will be given at the Siemens User Group meetings in October.

It is anticipated that 3G could reduce the asset value in Southampton by up to 70% and that the communications costs could be reduced by 65% - leading to an estimated payback period for the invested sum of just under four years. Subsequent deployment costs would also be reduced as no leased or private circuits are required.

The trial continues!

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3G represents the latest widely available wireless solution and potentially offers a competitive option for UTC communications. 3G networks are specifically designed to carry large amounts of data, chopping data streams into individual packets and sending them only when needed. Packets are coded and sent on any of the available 3G frequency channels, making maximum usage of the wider bandwidth. These advances mean that 3G can support higher data rates, with much lower latency and round trip times.
New projects

Sitting pretty and safely in Scunthorpe

Extending the company’s portfolio of sustainable products and solutions, Siemens’ first ELV traffic controller built into a bench has been installed as part of the Market Place redevelopment scheme (pictured right) in the market town of Crowle, Scunthorpe in North Lincolnshire. In addition to enhancing the streetscape, Siemens’ innovative new ELV bench controller provides all the carbon and power savings, reduced costs and improved safety associated with ELV technology.

According to the architect firm Bauman Lyons, the Siemens bench controller was selected to help reduce visually intrusive clutter in the market square and due to tight site constraints, both spatial and conservation.

‘The development creates a simple high quality open space that can once again be used by the residents of Crowle as a place to meet and hold events – returning the heart of the town to its residents rather than the passing traffic’, said a spokesman.

In addition to altering the road layout to open up space for future development within the centre of the town, a significant amount of parking, traffic and street clutter has been removed from the market square. The bench controller’s pleasing design and use of simple high quality materials with discrete features aims to complement the varied attractive buildings that surround the square for many years to come.

County extends traffic monitoring

Gloucestershire County Council (GCC) is expanding its CCTV traffic monitoring network across key intersections with the addition of further cameras and an integrated software solution from Siemens. The newly-developed software allows CCTV cameras from different suppliers to be viewed through a single UTMC compliant control environment.

GCC has previously deployed Siemens Telscan CCTV cameras at a number of intersections across the county. As part of the contract, Siemens will supply a further 19 Telscan cameras. A key factor in winning the order was the provision of a fully integrated UTMC compliant solution allowing not only Siemens’ own cameras but also the cameras of a third party to be viewed through Siemens Comet, the County’s chosen Common Database for traffic management and information gathering.

With the benefit of fully-weatherproof Pan/Tilt/Zoom CCTV cameras each location can be viewed and controlled from a computer within the traffic office, and as the cameras are IP addressable, they can also be accessed remotely from other offices or a remote location by appropriately authorised persons.

According to John Whittaker, Deputy Traffic Manager for GCC, the existing cameras supplied by Siemens have performed well and the benefits arising from being able to remotely assess the cause of traffic delays has been clear. ‘Gloucestershire has decided to extend the camera network to allow the traffic engineers to quickly adapt traffic management strategies to ease the flow’, he said.

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Extensive new deal in Scotland

An extensive, long-term maintenance contract has recently been awarded by two local authorities in Scotland to Siemens, demonstrating our unrivalled capacity to maintain traffic control equipment on the UK road network. The contract also extends a lasting relationship with both Glasgow City Council and West Dunbartonshire Council.

Representing one of the most significant contracts of its kind, Siemens will maintain roadside traffic control and information equipment at over 900 sites within Glasgow City, West Dunbartonshire and other adjacent authority areas.

Commencing in July 2010 for a minimum period of three years, and with a possible extension of two years, the contract will potentially last beyond the Glasgow 2014 Commonwealth Games.

Commenting on the award of the new contract on behalf of Glasgow City Council, Hamilton Purdie, Group Manager Traffic Systems said that the decision to select Siemens was based on a competitive combination of quality, cost and service. ‘These factors included the overall price, proven competence and capability, and a range of works and services necessary to support the Councils’ traffic control operation including equipment assembly, installation, configuration and civil engineering works.’

Commenting on the excellent working relationship with the local Siemens team, Hamilton Purdie added: ‘to date Siemens has provided a high level of service and support both in terms of the effective delivery of the contract requirements and the general development work in relation to traffic management and the use of intelligent traffic systems’.

As part of the contract, Siemens will maintain traffic signals, variable message signs, car park guidance signs, warning signs, CCTV cameras and outstation transmission units for the operation of urban traffic control and network data gathering. With roadside equipment at a total of 475 junctions and 426 pedestrian crossings, the contract includes enhanced fault monitoring to all sites and includes interfacing Glasgow’s Fault Management Systems to the PDA system used by Siemens.

PFI begins in Birmingham

Work has started on Birmingham City Council’s (BCC) £2.7 billion highways PFI to upgrade and maintain the city’s road network for the next 25 years including major improvements to traffic signals and management systems by Siemens. The project forms part of a long-term partnership between BCC and leading UK public service provider Amey.

According to Sales and Marketing Director Tom MacMorran, the commencement of the contract signals a highly significant step towards enhancing the city’s future road network and improving safety for the travelling public in the region. ‘As work on the city’s 2,500km of roads increases, Siemens will have a major part to play in support of this important partnership between Amey and

Birmingham City Council. The company is committed to the development of sustainable solutions, and with both proven and emerging technologies is well placed to deliver the required improvements to the city’s traffic technology,’ he said.

The project includes the replacement of 600 traffic signal controllers with the latest technology within the next five years including traffic equipment beyond economic repair, damaged by road traffic collisions and vandalised. In addition to responding to faults, engineers from Siemens will provide routine maintenance at over 1,000 sites including regular inspections and electrical testing.

Also included within this extensive contract is the maintenance of traffic signals, variable message signs, car park guidance signs, warning signs, automatic number plate recognition cameras and outstation transmission units for the operation of urban traffic control and network data gathering.

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Bucking the trend for Britain

Despite the current economic climate and difficult trading conditions, Siemens is flying the flag for British manufacturing with major export orders for the supply of traffic signal equipment assembled at our award-winning factory in Poole.

The latest order for traffic controllers is destined for various customers around China. In the past few years more than 2,000 Siemens signal controllers have been delivered to the region.

Reinforcing Siemens’ ability to compete on the world stage and provide best value in overseas markets, the continued export of equipment for overseas traffic control includes around 50% of all PCB production at the company’s manufacturing base.

From Columbia and Cyprus to Dubai and the Republic of Ireland, international business continues to grow and such success is having a positive impact on the company’s robust performance and the factory.

According to Operations Director, Gary Winstanley, continued business improvement and growth over the past two years has also resulted in the factory being short-listed in four categories for the 2010 Best Factory Awards. The award programme is run by Cranfield School of Management.

In recent years, the factory has gained BSI accreditation for environmental management. Winning prestigious industry awards for excellence from the British Quality Foundation, ASLEC and HEMSA also highlights the company’s recent achievements in the UK and commitment towards continuous improvement.

Investment in South Africa by the Nelson Mandela Bay Municipality resulted in major orders for signal controllers and associated traffic equipment for a project to upgrade the area’s traffic technology infrastructure in time for this year’s World Cup competition.
SafeZone trial starts outside school

A six month trial of SafeZone, Siemens’ new average speed enforcement solution, started this month outside Springdale First School in Poole. Using our new Sicore ANPR camera system, SafeZone will measure the average speed of vehicles travelling past the school, with the aim of improving road safety in the area.

The trial also includes the installation of new eye-catching road signs that incorporate a ‘slow down’ message designed by Springdale pupil Eryn Young, aged seven. The children at the school also received new hi-visibility duffle bags from Siemens emblazoned with the SafeZone symbol.

Ruth Leach, Headteacher, Springdale First School, said: ‘The safety of children at Springdale is of paramount importance and the school is eager to promote safe, healthy travel. Some parents and children have raised concerns over the speed of vehicles on Springdale Road. We are keen to support any initiative which may enhance safety and will be interested to learn of the outcome of the trial.’

Siemens is testing the viability of this solution to reduce vehicle speeds in urban areas and improve road safety. Springdale Road is an ideal location for the trial as recent surveys have identified up to 98 vehicles travelling past the school gates at speeds above 40mph in each hour before and after school.

Cllr Mike White, Cabinet Portfolio Holder for Transportation, Borough of Poole said: ‘We fully support initiatives to improve road safety and we look forward to the results of this trial to see how effective it proves. Road safety is a priority in Poole and we would like to thank Siemens for funding the trial.’ The trial has gained the support of the local community including the school, parents, local residents, the Borough of Poole council, Dorset County Council and Dorset Road Safe (formerly Dorset Safety Camera Partnership).

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Siemens is pleased to announce its become corporate sponsors of Brake, the Road Safety Charity. Brake aims to prevent death and injury on UK’s roads through the education of road users and by campaigning for road safety improvements. Brake also provides care for people who are bereaved or affected by serious injury in road crashes through support services. Commenting on the sponsorship, Matthew Vincent, Deputy Sales and Marketing Director, stated, ‘We’re proud to support Brake and its aim to make roads safer. With six lives lost on the UK’s roads every day - we are particularly keen to share our learnings of how technology may be used to improve road safety and address that chilling statistic.’

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The Siemens User Group meetings are taking place next month, so if you have not already booked your place(s), now’s the time. The agenda for this year has changed slightly to reflect the changing environment in which Siemens systems and equipment are being used. We hope that this will allow the meetings to continue to provide a good forum for discussions and sharing of good practice, allowing you all to attend for both days.

The meetings will take place on Tuesday 19 and Wednesday 20 October and will held at the Wessex Hotel, in Bournemouth, Dorset.

The outline agenda for the meetings is as follows:

**DAY 1: TRAFFIC MANAGEMENT AND CONTROL**
- Comet
- SCOOT
- OTUs
- Elektra / Siesign VMS

**DAY 2: ON STREET AND SERVICE**
- RMS
- Field Services
- Fault Management
- Controllers and associated equipment

As in previous years, colleagues from our sales & marketing, engineering and training departments will be attending on each day to answer any queries that you may have.

Follow us on Twitter!

We’ve just launched a Twitter account which will keep you up to date with all our activities on a regular basis. From our latest product updates to our charitable activities, we’ll be ‘tweeting’ news from across the business within a couple of weeks. Follow us at http://twitter.com/Siemens_Traffic (@Siemens_Traffic) for all the latest news!

What is Twitter? Twitter is a form of micro-blogging that restricts updates - or ‘tweets’ - to a maximum of 140 characters.