SMOOTHING TRAFFIC FLOW IN LONDON

In November 2009, HRH The Duke of York opened the Surface Transport and Traffic Operations Centre (STTOC), the state of the art transport control centre that keeps London's roads moving. Located in South London, this centre and the teams who work there 7 days a week, 24 hours a day, every day of the year, make a huge difference to traffic flow in the capital. The STTOC houses three different control centres and enables them to work closely together. London Buses Command and Control Centre (CentreComm), London Streets Traffic Control Centre (LSTCC) and the Metropolitan Police Traffic Operation Control Centre (MetroComm) monitor, control and police all of the Capital's surface transport networks.

MITIGATING CONGESTION

Esmon George is the LSTCC Operations Manager and he showed our reporter round the high tech control room. Security to gain entry into the LSTCC is high as some of the information being gathered, particularly by the police, is of a sensitive nature, so this behind the scenes tour of the centre gave a fascinating insight into the way traffic is being controlled not seen by many. "With one of the most complex and unique road transport networks in the world, denial of road space can happen at any time, for any number of reasons," Esmon said. "Our teams work together to mitigate congestion – this can mean the rephasing of traffic lights or something more physical such as putting signage in place. On other occasions it is the police on the ground who are helping to ensure the minimum of disruption, sometimes by directing traffic, at others by closing a section of road and putting a diversion in place." In an average month there will be some 1000 unplanned incidents which have to be prioritised in terms of the amount of congestion that is caused.

On the main wall of the control room large screens have a running list of incidents that are happening on the road network. These are divided into severe, serious, moderate and minimum congestion. In addition there are around 750 major events per year in London, such as Notting Hill Carnival and the London Marathon, which all require special planning, diversions and road closures which need to be communicated to motorists and other road users. Esmon continued: "In the case of the Marathon this is now a long standing event and so we know what to expect with the planning of the route, so it is perhaps an easier event to our teams. With the 2012 Olympics getting ever closer, we are planning now to ensure that any disruption is planned and managed accordingly."

STATE OF THE ART TECHNOLOGY

At the forefront of technology being used to monitor the road network are traffic monitoring CCTV cameras. There are 1200 traffic cameras constantly being monitored at LSTCC. These include 20 cameras which use groundbreaking technology with image recognition to predict where congestion is likely to occur. These 20 cameras use a system known as IRID - Image Recognition and Incident Detection. Each camera has a set image parameter for the length of traffic queuing and time of traffic delays. When the parameters are met, an alert appears on a computer screen at the LSTCC so staff can investigate the cause and take any actions necessary. Esmon commented: "It is hoped that this new technology system will be added to additional cameras and help us further with keeping traffic moving." In addition, the experienced teams working in the centre can recognise where problems are beginning and make judgements of how to deal with the problem quickly. SCOOT (Split Cycle Offset Optimisation Technique) is an adaptive system that responds automatically to fluctuations in traffic flow and is another technology being used to help keep estimated journey times accurate. Not only is this important in reducing the frustration of being caught in a traffic jam, but it also means emissions from the vehicles sat in traffic are kept to a minimum.

SHARING TRAFFIC INFORMATION

The STTOC is not a public facing office. Information comes in to the Information Desks through emails and telephone calls from stakeholders such as utility companies, and through CentreComm, the bus companies via their 23000 drivers. The real time information is given to road users via regular 15 minute updates broadcast on DAB, Global Radio, BBC, LBC and also the information goes to TrafficLink and TrafficMaster. Updates of expected delays caused by roadworks for example are also given to the Metro on a weekly basis, as well as other newspapers. Information is on the TfL website too. The Information Desk telephones the news through meaning the traffic updates which are broadcast are live immediately, often within minutes of the problem happening. This helps the planning of journeys, saving emissions from traffic, as well as alleviating the frustration for drivers. The control centre works closely with all the boroughs as well as The Highways Agency and this means, for example, that overhead gantries can take messages to warn of congestion. In the event of a major problem, such as the snow earlier this year, the control centre kept drivers up to date with the latest situation.

IMPROVING JOURNEY TIMES

The teams are working in three shifts around the clock to keep London on the move. They may be relatively small in terms of numbers, but these are the people who keep the city flowing. TfL is committed to improving journey times and the continuing investment in the traffic information centre takes an important role in this aim.