



SIEMENS

Hosted UTC

with SCOOT adaptive control

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The successful management of traffic in the 21st century places many demands upon the service provider. With traffic volumes continuing to grow faster than the capacity of the road network, traffic congestion continues to be an ever-present problem in towns and cities around the world. Traffic managers increasingly need to manage their assets effectively – at all times and from anywhere.

Hosted UTC

With the shift to IP based communications, the previous communication based constraint for the UTC central system to be located near on-street infrastructure is removed, allowing Siemens Hosted UTC with access from anywhere to become a reality.

UTC Features

The Siemens Hosted UTC system can be operated as a stand-alone system or as part of a larger Stratos (UTMC) system, providing a new intuitive user experience and extended features, including strategic management and additional traffic control and the monitoring of sub-systems.

The system's flexibility allows engineers to control and monitor traffic over a wide area, combining traditional traffic control with a host of additional functions to best achieve maximum efficiency.

Siemens Hosted UTC offers the following features to the traffic engineer to make maximum use of installed technology:

- Fixed Time Control
- SCOOT adaptive control
- Public transport priority
- UTM links to outstations and other systems
- Emergency vehicle green waves
- Traffic flow monitoring
- Queue and congestion detection
- Tidal flow control
- Pollution monitoring

SCOOT Real Time Adaptive Control

SCOOT is a popular and effective optional feature of the UTC system and uses UG405 communication protocols to deliver real time second by second, centrally coordinated, adaptive control.

First introduced in 1983, SCOOT has been continuously developed to meet the needs of traffic managers around the world. The most recent developments introduced in SCOOT MMX implement new features directly aimed at the multi-modal nature of today's traffic signal installations and the need to optimise networks for all users.

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SCOOT Concepts

SCOOT monitors traffic flow in real-time to optimise traffic signal operation and adjusts signal timings to match prevailing conditions.

The SCOOT algorithm continuously adapts three key traffic control parameters in the SCOOT controlled area – the amount of green for each approach (Split), the time between adjacent signals (Offset) and the time allowed for all approaches to a signalled intersection (Cycle time) to minimise wasted green time at intersections and reduce stops and delays through the synchronisation of adjacent traffic signal installations.

Following the introduction of SCOOT-based systems, 'before and after' studies have shown substantial reductions, both in journey times and delays.

Public Transport Priority

Public transport priority is crucial in maintaining the effectiveness of buses and light rail systems as viable alternatives to the private car. Siemens Hosted UTC provides effective priority through SCOOT, allowing public transport vehicles to adhere to their schedule whilst minimising the disruption to other vehicles.

Pedestrian Optimisation

Where there are large numbers of pedestrians waiting to cross, the green man invitation period, and hence the overall time available to pedestrians to cross, can be varied by SCOOT. This can be managed by time of day or automatically by monitoring the frequency of push-button detections.

Low Flow Operation

Further new developments to reduce cycle time during quiet periods and introduce sub-regions have also been added to SCOOT. Under low flow conditions, SCOOT is now able to accommodate the lower demand for side roads and the corresponding reduction in cycle time which can be achieved for optimum operation whilst maintaining coordination.

SCOOT Continuous Development

SCOOT continues to be developed and enhanced to take into account the ever-changing traffic environment, including new sensor technologies with the latest versions integrated into the Siemens Hosted UTC solution.

Reduce Total Cost of Ownership

Hosted UTC is a fully cloud based solution, meaning there is no need for dedicated servers or client machines, which in turn means no capital cost, depreciation of assets or ongoing hardware maintenance costs.

Resilient & Safe

Hosted UTC uses the very latest in information technology infrastructure to deliver a highly resilient and secure system. Automated system monitoring constantly checks the performance of the system, ensuring disk space, processor and memory load are all within normal operating parameters. Automated alerts to the support team prevent problems before they even occur.

Siemens takes care of your data with regular automatic backups. In the unlikely event of a server failure, Siemens will quickly get your system back up and running with no need to wait for an engineer to visit your premises.

Flexible Deployment Options

In addition to Hosted UTC, local deployments of UTC with SCOOT are still available if required.

No Surprises - it's Siemens

Utilising the latest version of the SCOOT adaptive control algorithm, Siemens UTC has been proven in over 100 towns and cities around the world as effective in reducing congestion and maximising the efficiency of the road network.

Siemens Mobility Traffic Solutions

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