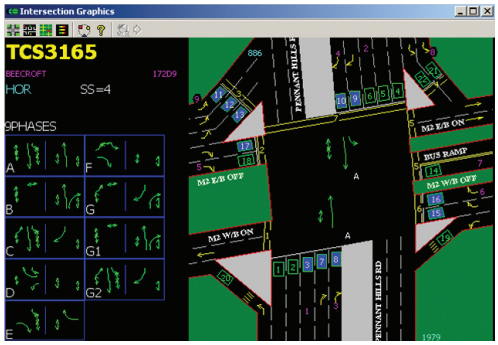
ATC

Moving Traffic

SCATS™



The Sydney Coordinated Adaptive Traffic System (SCATS) is a computer based area wide traffic management system. It is a complete system that includes hardware, software, and a unique control philosophy

The system operates in real-time, adjusting signal timing, splits, cycle lengths and offsets in response to variations in traffic demand and system capacity as they occur. SCATS takes a "helicopter" view of a city traffic network managing the entire traffic network, constantly looking at the overall traffic conditions not just single intersections.

Rather than changing individual intersections in isolation, SCATS manages groups of intersections called 'subsystems' Each subsystem consists of a grouping of intersections relatively close to each other and will contain just one 'critical' intersection.

SCATS aims to divide the traffic on major roads into 'platoons' (groups of vehicles), and to allow sufficient time for each platoon of vehicles to gain maximum utilisation of the available green time relative to the need to manage competing needs of cross traffic flows.

SCATS has the unique advantage of being designed and developed by the Roads and Traffic Authority of NSW (RTA) in Australia by traffic engineers who are also an end user of the application. The RTA carries out software development, in house. New enhancements and concepts can be evaluated in a real time, live environment, ensuring that these initiatives are fully tested where it really matters, on the road.

With the latest version of SCATS both old and new users are getting the benefit of a traffic system with a long history of continuous enhancements now taking advantage of new technologies to further improve the system.

SCATS versions are generally released on a yearly basis making the most effective use of modern technology. Traditionally all new versions of SCATS are backward compatible ensuring that SCATS signal controllers of any vintage will continue to operate with the latest software.

SCATS is government owned, marketed and installed by Aldridge Traffic Controllers (ATC) around the world (outside of Australia, New Zealand and Singapore) with a co-operative effort between both agencies for training and optimisation.

SCATS is not just an application for the coordination of traffic, it is a traffic engineers tool which delivers value and reliability in assisting in moving traffic in many cities across the world with advanced features for incident management, control and reporting.

SCATS

Sydney Coordinated Adaptive Traffic System

The traffic control system designed by traffic engineers for traffic engineers

SCATS SYSTEM CONFIGURATION

- Master link: Adaptive Traffic Control
- Fixed Time: Uses preset plans to provide time of day traffic plans
- Flexilink: SCATS fallback system
- Dial Up; Sites not on SCATS can be dialled up
- Isolated: Sites can be monitored by SCATS with no coordination
- 250 intersections managed by each regional computer
- 64 regional computers in one system
- 100 users can connect to a SCATS system at the same time
- SCATS is scalable and can be easily expanded

SCATS ACCESS

- Intersection and regional graphics can be displayed
- Site and regional data all displayed on one screen,
- Setting up priority routes for emergency and VIP vehicles
- Alarm management
- Faulty lamps status at each site in the network
- Faulty detectors are readily identified and alarms displayed
- Time distance diagrams can be displayed, in real time
- View site data, splits, offsets, cycle length
- View link plans, system plans, dwells, trims, and DS
- Interrogate local controller data and view fault log

SCATS FEATURES

- **Incident Manager:** Operator introduction of preset plans for managing the additional traffic generated by special event finishes such as sporting events
- **Route Pre-emption:** Provides a “green wave” for emergency and VIP vehicles. Can be operator initiated to pre-planned routes or in conjunction with emergency services
- **Time Distance Displays:** SCATS provides time distance information graphically in real time
- **Unusual Congestion Monitor.** A control room application which reviews current congestion levels, compares those levels with an historical database and provides alarm indicators to control room staff that congestion is “unusual” and should be reviewed

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- **SMS Server:** This application allows operators to setup a system of SMS alerts for the immediate reporting of alarms or faults to maintenance staff
- **SCATS Map** showing all connected sites with various overlays displaying items such as coordinated green at sites, sites with detector alarms, sites off line, sites with major alarms etc all user defined.
- **Traffic Reporter** for detector data at any site either live or historical. The program can provide traffic volume counts for every lane at each intersection in the system
- **Event Reporter** for recording all events that occur in the system including staff log in data, dwells, trims etc.

- **SCATS Alert:** Provides alarms for users, visually and audibly when a nominated event is detected.
- **Alarm Analyser:** Reports on a specific fault over an extended period. It produces a detailed tabulated summary that includes alarms by duration, site and time
- **Communications Monitor:** Used to evaluate the communications between intersections and their SCATS regions. A detailed summary is produced that includes communications and adaptive uptime
- **History Reader:** Allows a user to view the phase sequence and phase time at any intersection after the event.
- **Event Generator**: Allows alarms to be raised from non-SCATS devices

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- **Fallback systems.** In the event of power, communications or regional computer failure. SCATS has inbuilt historical data that is automatically activated to provide coordination.
- **Dial in Dial out (DIDO)** feature used to monitor remote sites. For major alarms the intersection will immediately communicate with the SCATS central manager requesting on site support. Sites can be remotely monitored.
- **Access security.** SCATS has a key level system which allows for authorised users to access the system at user defined levels.
- **ITS port activation:** The ITS port allows operational data to be exchanged with other third party applications

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5 Averill St Rhodes NSW 2138 Sydney, Australia
Tel: +61 2 9736 9999 Fax: +61 2 9736 9990
www.atc4.com.au