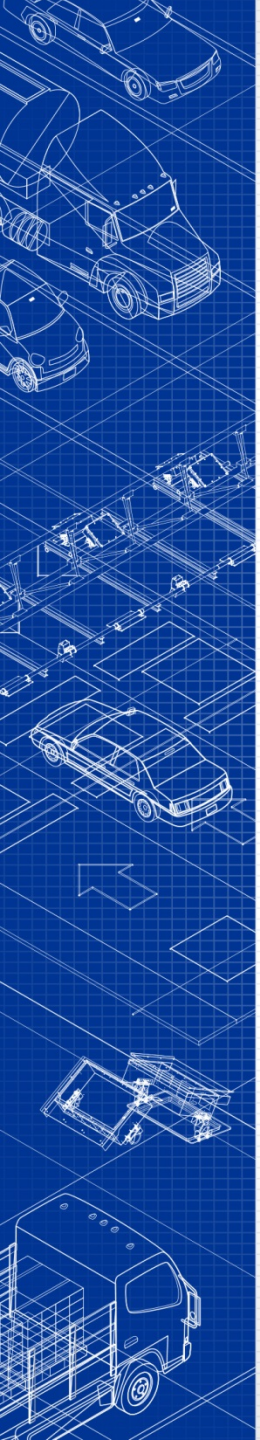


SCATS®

Sydney Coordinated Adaptive Traffic System

Trusted Transportation Solutions

The SCATS Adaptive Traffic System

- Originally developed by the Roads and Transport Authority (RTA) of New South Wales, Australia
- RTA is now Traffic for New South Wales (TfNSW), Australia
- Development began in the early 1970s
- Installed in Asia, Middle East, Europe, and USA
- More than 50,000 intersections worldwide
- System provides adaptive traffic control using SCATS (Sydney Coordinated Adaptive Traffic System) software
- Server and SCATS controllers (Trafficware controllers with SCATS TRAFF firmware)

SCATS Functions

- Adaptive signal control
- Monitoring
- Data collection

SCATS Adaptive Signal Control

- SCATS controls the three main traffic control variables independently
  - Stage times (splits)
  - Cycle length
  - Offsets
- Variables are controlled each cycle.
- Changes are moderated (damped) to provide efficient traffic control.

Monitoring and Control

- Adaptive operation monitoring – Communication is must!
- Monitoring of alarms, especially detector alarms – good detector operation is very important to SCATS!
- Controller time settings can be changed remotely
- Operation can be manually overridden with communications

Data Collection

- Detector counts collected to daily file (Traffic Reporter)
- Adaptive operation data collected to a daily file for analysis (Traffic Reporter and History Viewer)
- SCATS log captures system events (alarms, operator actions etc.) to a daily file

SCATS Modes

- Masterlink mode

  Traffic-adaptive coordination mode

- Flexilink mode

  Fixed-time coordination fallback mode

- Isolated mode

  Vehicle-actuated operation

- Master Isolated mode

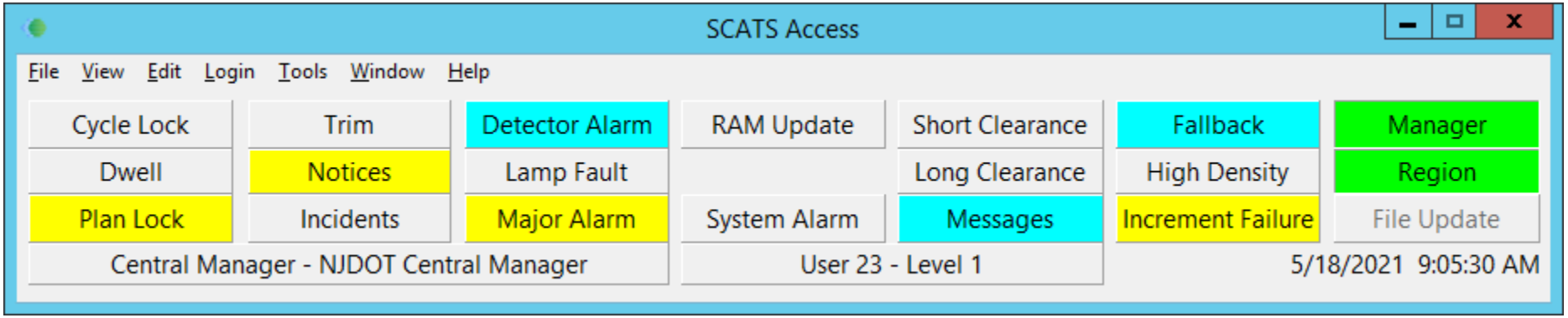
  Vehicle-actuated with SCATS calculated splits

- Flash

SCATS Operations – User Interface

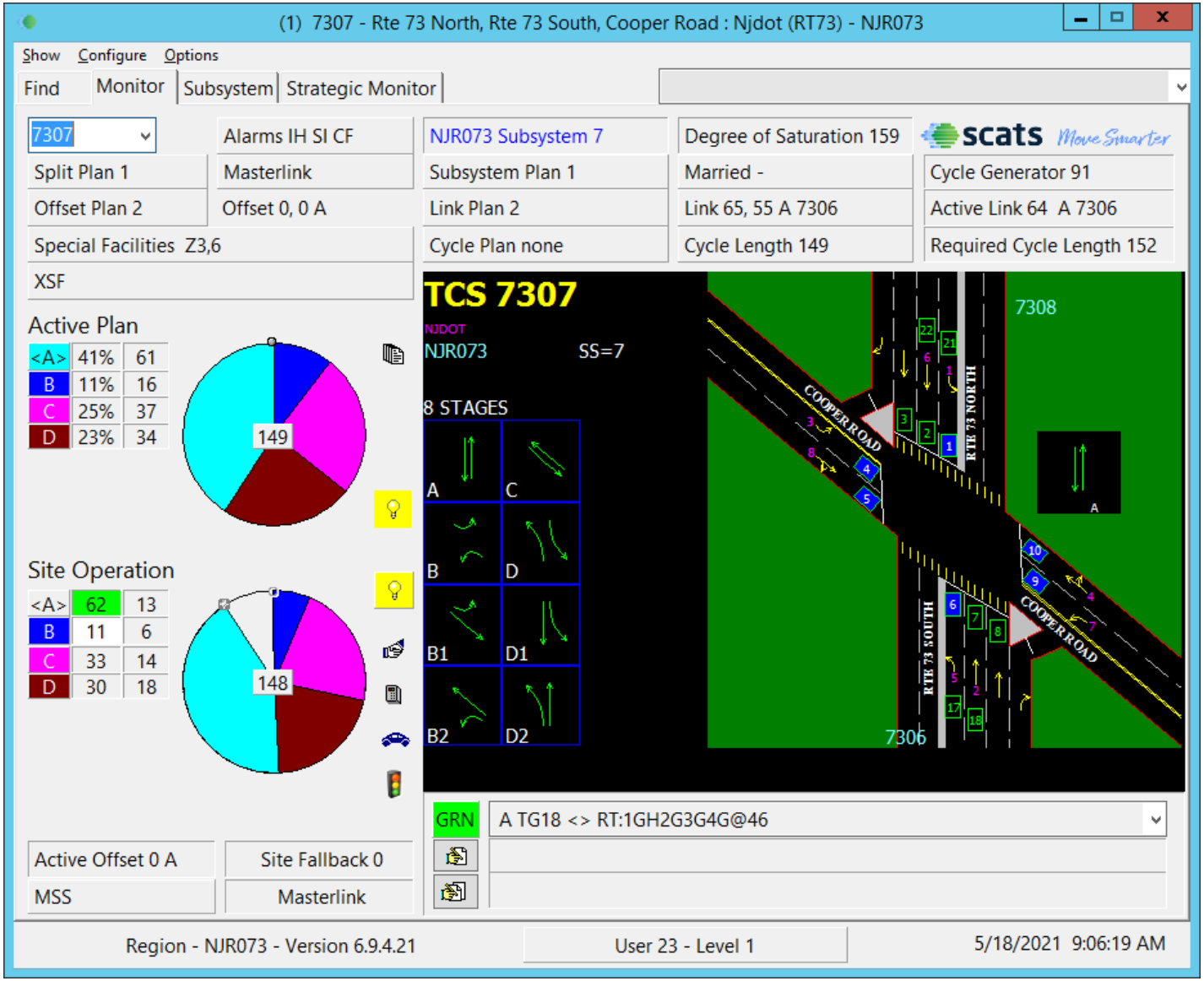
- SCATS does not need constant operator monitoring
- Fault and Congestion displays can be used periodically to check operation
- Windows-based point and click user interface
- Connection using TCP/IP (LAN or via Remote Access Service for dial-in)
- Function overlap, i.e., can proceed with other functions while waiting for response

SCATS Access Central Manager Window



- Overall status and alarm display
- Provides access to live Time Distance Display
- Provides access to route preemption, incident manager, and system status
- Provides security functions (log-in and password maintenance)

SCATS Access Monitor Window



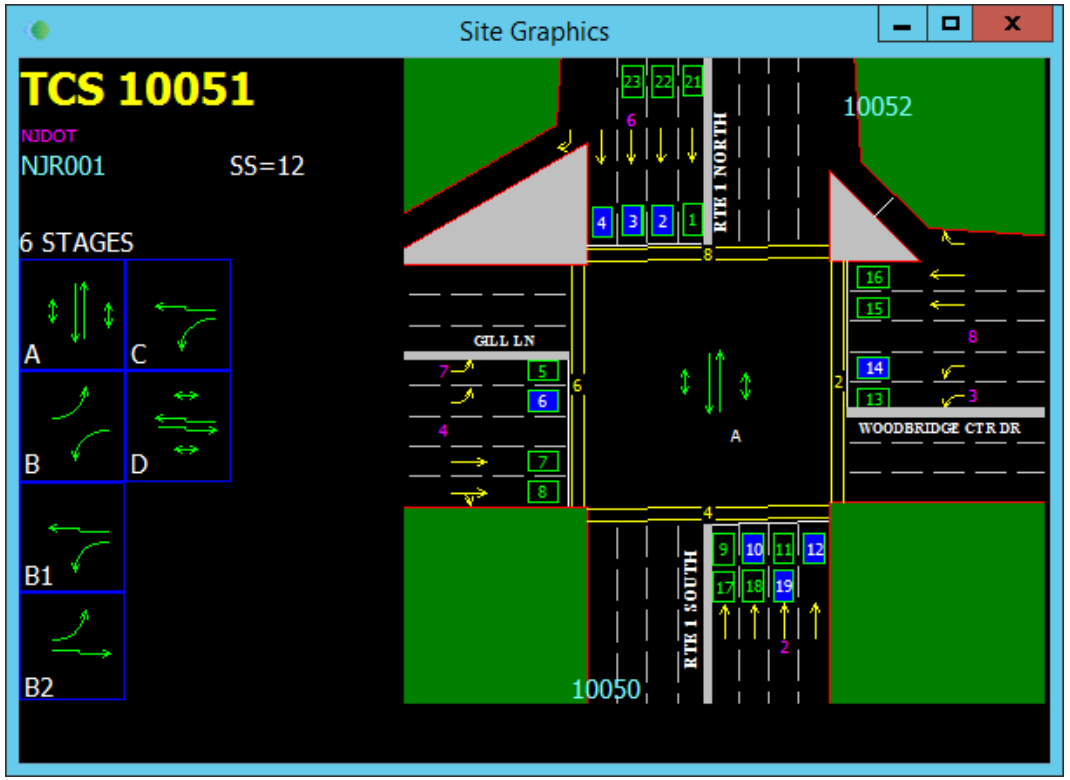
TRANSCORE

New corridor setup

- TransCore studies the existing timing directives and does field visits
- Based on the existing phasing, SCATS graphic is created for each intersection
- After DOT approval of the graphics, personality is developed based on the graphic and their preferences
- SCATS central data is setup based on the graphic and agency preferences
- Controllers are installed with SCATS TRAFF firmware and personalities. They are bench tested and approved for field install if no issues in testing
- Install and fine tune the corridor

SCATS intersection graphic

- Intersection graphic is very important
- First data in the new intersection setup
- Essential to show correct vehicle and pedestrian phases, SCATS stages, and detector numbers
- Used as basis to create controller personality and adaptive data



Questions/Discussion

End