SWARCO

McCAIN TRANSPARITY® ADAPTIVE

McCain *Transparity* Adaptive autonomously generates optimal signal timing parameters across an arterial network by adjusting cycle lengths, phase splits, and offsets based on prevailing traffic. McCain *Transparity* Adaptive provides a suite of synchronization strategies to improve operations and mobility. Whether implementing adaptive coordination parameters, invoking peer-to-peer synchronization, or triggering historically effective timing plans for peak periods, SWARCO McCain, Inc.'s assortment of operational strategies are effective for the unique roadways within your agency.

KEY BENEFITS

- Improve arterial performance
- Adjust to real-time traffic demand
- Reduce stops, delays, and travel time
- Boost intersection efficiency and mobility
- Minimize congestion and emissions
- Reduce signal timing engineering efforts and prolong timing effectiveness
- Program and maintain with ease
- Analyze arterial performance with high-resolution data reports

PRODUCT DESCRIPTION

McCain *Transparity* Adaptive, a component of McCain *Transparity* Traffic Management System (TMS) and McCain Omni eX® Intersection Control Software, utilizes real-time traffic information to optimize signal timing and reduce congestion and/or side street delay.

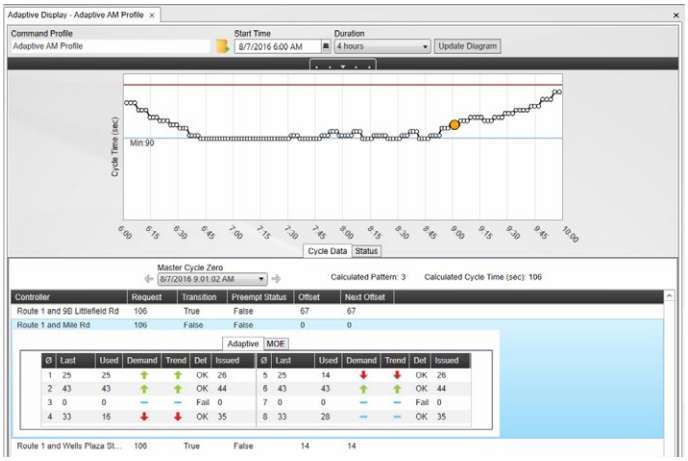
As each roadway presents unique challenges and characteristics, McCain *Transparity* Adaptive offers customizable adaptive strategies that can be used alone or in conjunction with one another for improved traffic flow.

Synchronization strategies include discrete activation criteria, multiple modes of operation and progression tactics, and weighting factors that empower users to assign preference to all considerations.

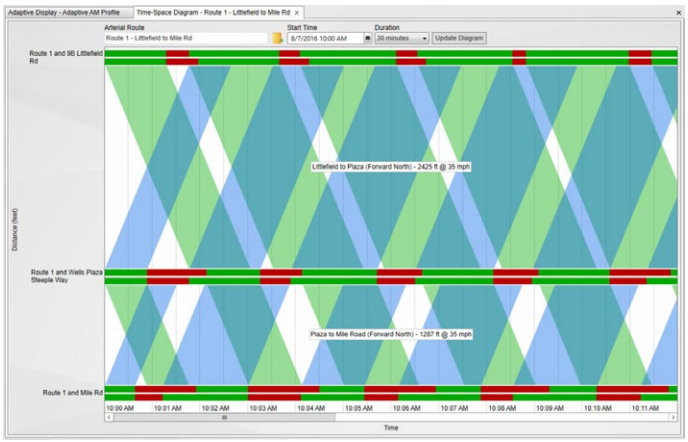
Track, analyze, and validate traffic flow improvements with internal reporting metrics.

McCAIN TRANSPARITY® ADAPTIVE

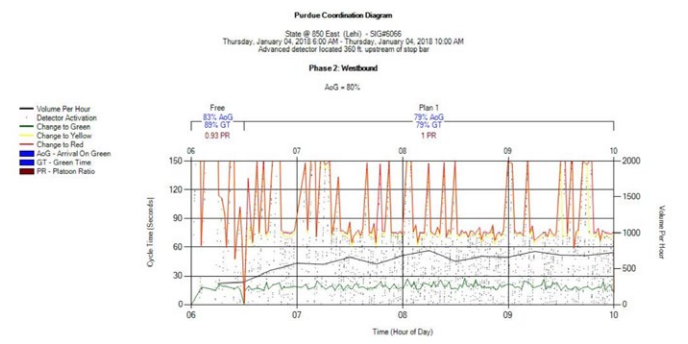
ADAPTIVE DISPLAY



TIME SPACE DIAGRAM



PURDUE COORDINATION DIAGRAM



HOW IT WORKS

Analyze Real-Time Traffic Conditions

Collect data from existing detection technology to identify demand trends including:

- Signal phase demand
- Arterial volume
- Directional volume
- Link speed

Calculate Optimal Signal Timing

Determine new signal timing parameters to meet changing demand. Impacted factors include:

- Fluid cycle length according to arterial volume
- Equitable distribution of phase splits
- Optimization of offsets with weighting factors for preferential, semi-preferential, and balanced direction of travel

Measure Performance

Validate and verify the effectiveness of adaptive operations by viewing real-time records of:

- Split utilization and phase demand
- Phase reason for termination
- Cycle length requests and changes
- Detector volume and occupancy reports

Enhance signal performance measures with high-resolution data reporting, that also provides:

- Arrivals on green versus red (approach volume)
- Green red occupancy ratio (Purdue phase termination)
- Platoon ratio/arrival type
- Phase wait time

SYSTEM SPECIFICATIONS

System Requirements

- McCain *Transparity* TMS[1]
- McCain Omni eX® controller software[1]

Detection Requirements

- Stop-bar detection[2]
- Advanced detection[3]
- Mid-block system detection[3]

Compatibility

- All industry standard detection types
- ATC 2070 or NEMA controllers
- McCain ATC FLeX® controller[1]
- All cabinet types including but not limited to, Caltrans 332, NEMA TS 1 and TS 2, ITS, and ATC cabinets
- Ethernet, serial, or wireless communication

[1]See separate product brochure
[2]Minimum requirement
[3]Ideal - not required

www.swarco.com/mccain