Perspectives from

A Community of
Transportation Professionals

Active Traffic Signal Management Workshop
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A Community of Transportation Professionals

Engineers • Planners • Administrators
Strategic Direction of ITE

A Goal for Quality of Life

The public will experience an improved quality of life through an efficient transportation system that serves all users.
Strategic Direction of ITE

Applicable Objectives:

• Increase member understanding of transportation engineering and planning techniques that implement solutions to provide an efficient transportation system that meets the needs of all users.

• Increase the integration and application of accessible, multi-modal transportation policies and applications.
Strategic Direction of ITE

Goal for the Profession

The transportation profession will be recognized for technical excellence in meeting transportation needs of communities.

Applicable Objective:

Increase the professional capacity to meet the demand for advancing technical knowledge, training and global information exchange.
Every Day Counts – To urgently identify and deploy innovation. [In this case adaptive control.]

Active Signal Management – Process to routinely incorporate performance feedback from historical or real-time information to improve signal operations for the road user.
Benefits of Every Day Counts and Active Signal Management

• Active Signal Management- Active service delivery model that can include projects.
• The impetus for critically looking at agency goals and objectives.
• An opportunity for technical creativity to improve system performance.
• Can change our approach to signal control.
This has led to the question: Do we know why we are doing what we’re doing?

**Answers:**

- This is the way we have always done it. It works fine.
- To many other priorities, at least the signals ‘work’.
- Kind of works, it works…okay…
- We’ll ask our consultant to take a quick look.
- Signals need to work better, but what do I do?

Should we consider a new approach to responding?
ITE’s Role: Outreach and professional development to increase capability toward technical excellence.

Created traffic signal program management series for practitioners:

- Establishing Mission, Values, Goals and Objectives
- Organizational Management
- Performance Management
- Maintenance Management

Available at ITE Conferences and NTOC Talking Operations
Connections
Every Day Counts – Active Signal Management – ITE Role

Supports and creates tools for traffic signal management and operations:

• National Transportation Operations Coalition
  [ www.ntoctalks.com ]
• Traffic Signal Operations Self Assessment
• Webinar and workshop training for professional development
  [PDHs/CEUs provided to support continuing licensure and certification requirements.]
Supports and creates tools for traffic signal management and operations (cont’d):

- ITE Technical Conference, March 4-7, 2012, Pasadena

  Themed conference focused on active management, transportation operations, performance management and traffic signal systems.
Every Day Counts – Active Signal Management – ITE Role

Supports and creates tools for traffic signal management and operations (cont’d):

- ITE Community [ community.ite.org ]

- Specific communities of interest:
  Traffic Engineering Council   M&O/ITS Council
  Public Agency Council
  Intelligent Traffic Signal Operations Committee
City of Gahanna

ACS Lite Pre-Deployment Testing

Challenges from being a testing location applicable to new locations:

• **Existing Equipment** - The system was installed at 9 intersections along a major street. Existing closed loop system, semi-actuated control, and fiber interconnect.

• **Detection** - ACS Lite requires full detection for optimum performance. Many locations have detection only for side streets and turning movements. Anticipate additional costs for detection.
City of Gahanna
ACS Lite Pre-Deployment Testing

- **Financial Planning** – Careful estimate of deployment cost is necessary and often underestimated. Maintenance issues on a unique system can be an additional drain on resources if not budgeted early on.
- **Maintenance** - Gahanna uses a local electric contractor for routine maintenance. Repair of signals was problematic with a system different from the other City signal systems.
City of Pickerington
ACS Lite Implementation

How it is different:

- **Simplified operations and maintenance**: Provides significant operational data that helps with troubleshooting
- **Increased efficiency on corridor**: Performance pushes traffic through to next closed loop system
- **Road user complaints reduced and in different locations**: Much easier to address
- **Increased awareness of system operations**: System managed from a laptop with Internet access
City of Pickerington ACS Lite
Implementation

Lessons learned:

• **Proactive vs. not reactive with signalized corridors**: Support regular traffic counting and retiming as part of a program.

• **Have a long-term plan for improvements**: Make sure line item in the regional TIP for signal infrastructure and timing improvements for possible federal funding support.

• **Detection and communications vitally important**: Core requirements of an adaptive system.
City of Pickerington
ACS Lite Implementation

Agency leadership perspective:

• Helps clear out traffic during peak periods. The phase adjustments from cycle to cycle are usually in the 5 second range.

• Occasionally glitches in the software given that it is still fairly new and not widely used. This can be problematic with software updates. It is more complicated, so more time spent monitoring system.

• Our system is for 8 signals on SR 256. The cost was $338,000, which included controller upgrades and conversion to LED bulbs [both desired anyway].