ACS Lite

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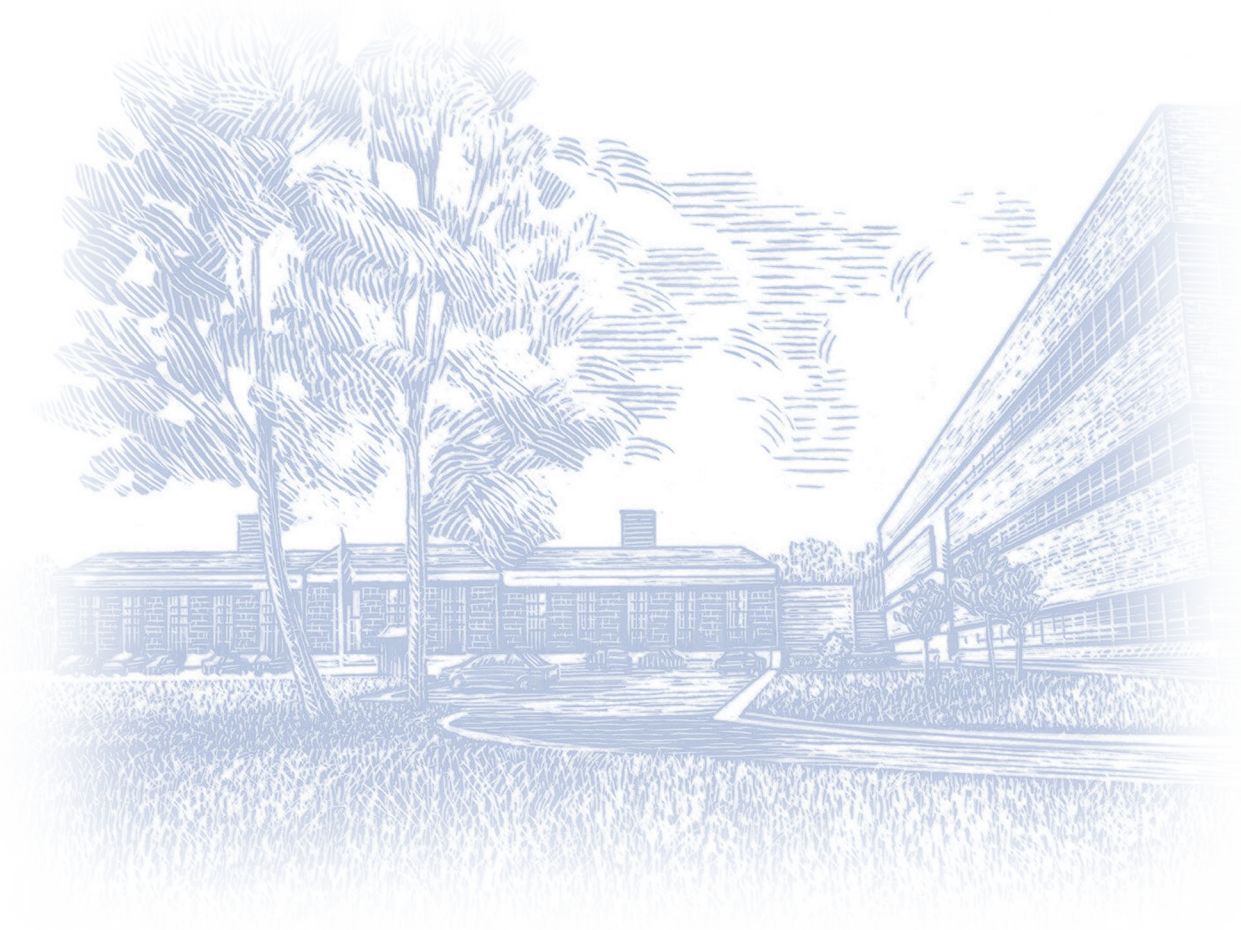

U.S. Department of Transportation
Federal Highway Administration

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A significant portion of traffic delays in metropolitan areas are caused by poor traffic signal timing. ACS Lite, a reduced-scale version of the Federal Highway Administration's (FHWA) Adaptive Control Software (ACS), offers small and medium-size communities a low-cost traffic control system that operates in real time, adjusting signal timing to accommodate changing traffic patterns and ease traffic congestion. ACS Lite can be used with new signals or to retrofit existing traffic signals. It is designed for closed-loop systems, providing cycle-by-cycle control.

ACS Lite was developed by FHWA, in partnership with Siemens, Purdue University, and the University of Arizona.

How Does It Work?

The ACS Lite software continuously monitors traffic signals and the flow of traffic, and adjusts signal timing accordingly. These adjustments can be made on a user-specified time frame. ACS Lite can be used in closed-loop systems, with no need for a central computer system, since the software resides on a field-hardened CPU and is located at a local traffic signal controller cabinet. The software can be deployed using as few as two traffic detectors on a roadway. Once deployed, the system is ready to go and does not require periodic calibration.

Benefits

The benefits of using ACS Lite include:

- Helps ease traffic congestion.
- Widely deployable.
- Low cost design.
- Works with closed-loop systems.
- Operates in real time.
- Does not require calibration.

Real-World Use

ACS Lite has been demonstrated in Gahanna, Ohio; Houston, Texas; and Bradenton, Florida. The last field test is planned for El Cajon, California. All of the test sites showed improvement in traffic flow.

How Can I Obtain ACS Lite?

ACS Lite is available from the following vendors: Eagle, Econolite, McCain, Peek, and Siemens. The software was designed to work with these brands of traffic signal systems. A locality currently using a Peek system should contact Peek, for example, while one using Eagle should contact Eagle, and so forth. For contact information, see list at the end of this brochure.

Contacts

For more information about ACS Lite, contact **Raj Ghaman**, Travel Management Team Leader in FHWA's Office of Operations Research & Development, 202-493-3270 (e-mail: raj.ghaman@dot.gov).

To obtain a copy of ACS Lite, contact one of the following vendors:

Eagle
Mark Hudgins, 512-837-8429 (e-mail: mark.hudgins@itssiemens.com)

Econolite
Gary Duncan, 714-630-3700 (e-mail: gduncan@econolite.com)

McCain
Steve Brown, 760-784-8582 (e-mail: sbrown@mccaintraffic.com)

Peek
Peter Ragsdale, 562-923-9600, ext. 177 (e-mail: pragsdale@quixotecorp.com)

Siemens
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