

Centracs MOE



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About Centracs MOE

Increasing traffic mobility is a dynamic and fluid challenge that is placing greater demands on transportation departments and agencies. Combined with requirements to verify and document Intelligent Transportation System (ITS) effectiveness, using traditional traffic measuring tools and periodic traffic studies only provide a snapshot of information, while being very expensive. In today's ITS-driven environment, agencies need the dynamic tools to help identify the factors impacting traffic and to provide the relevant and immediate information feedback, enabling confident and predictable signal coordination and timing adjustments as needed to enhance traffic flow.

The Centracs MOE module offers a set of seven innovative graphical-based report tools. These tools graphically combine and render detector and other data specific to traffic signal operation. Centracs MOE is designed to provide the tools for transportation agencies and municipalities to better understand and manage the many factors impacting traffic signal coordination.

▶ The Centracs MOE module offers seven different graphical diagrams or reports that provide engineers with:

- Meaningful presentations of traffic data
- Big-picture views of traffic signal and coordination behavior
- Tools to perform before and after evaluation of timing and coordination plan changes
- Tools to quickly identify problems with detection, timing and coordination plans and schedules



Centracs MOE Module

Centracs Measures of Effectiveness (MOE) module provides these new tools for measuring and assessing factors impacting traffic signal coordination, as well as to satisfy performance measures evaluations. The Centracs MOE module allows agencies the ability to break down the barriers that have prevented engineers from fully utilizing detector data and other information by providing time-stamped, high-density data, delivering all new levels of MOE capabilities. The Centracs MOE module, combined with the Cobalt and ASC/3 traffic controller software is capable of collecting and storing individual detector information at a frequency of 10 times per second. Centracs ATMS combines this information with other key data associated with signal operations and coordination to provide a set of graphical tools, enabling engineers to visually inspect and analyze the performance of the traffic timing and coordination plans to identify and diagnose problems and to assess before-and-after study results.

The Centracs MOE module's seven different graphical diagrams or reports are based on research from Purdue University and are designed specifically to help transportation agencies become more agile in monitoring and tuning crucial parameters affecting traffic signal coordination and progression.

As a result, the Centracs MOE module enables Centracs ATMs to be more than just a traffic monitoring and control system. The graphical reports each cover data collected over every cycle during a 24-hour period. The reports combine time-stamped stop-bar and advance detection data collected from signal controllers with cycle length, pattern change information, phase change information and other data to provide a complete, ongoing picture of traffic conditions rather than a snap shot provided by a traffic count study.

System Requirements

- ▶ **The collection and management of high-density MOE data requires considerable data storage capacity on the Centracs application server. Some basic requirements include:**
 - Centracs 1.5.7 or newer
 - ASC/3 controller software version 2.51.00 or newer
 - Advanced detection
- ▶ **Centracs application and database server memory and data storage requirements will depend on many factors including the number of signals, duration of data collection and archiving requirements.**

Reports

- Purdue Coordination Diagram
- Flow Rate
- Cycle Length
- Green Times
- Volume-to-Capacity
- Split Failures
- Percent Pedestrian Calls

