

CMS Pro™

CMS Pro™ is a Congestion Management Solution that provides an organization with the tools necessary to properly document the static and dynamic aspects of their transportation system with areas where deficient levels of service conditions exist on constrained roads or other facilities where the feasibility of implementing the needed capacity improvements is uncertain.

The ultimate goal of CMS Pro™ is to evaluate and document traffic weaving patterns on control access facilities and delays at signaled intersections. The solution involves an application of a custom decision-support system which merges with a transportation network, travel demand, traffic volume, and queuing models to generate anticipated travel delay. The system involves the collection of real-time travel delay data at peak hours, time of day, season or year for travel in both directions. The application of CMS Pro™ custom decision-support system merges a transportation network, traffic volume, forecast travel demand and querying models to generate a solution that can be displayed visually on a generated GIS map.

The solution documents cumulative travel time from intersection to intersection on an arterial facility or from entry and exit ramp on a controlled access facility. CMS Pro™ provides a direct interface to download collected GPS data to generate strip maps documenting speed statistics and various static elements of a transportation network. CMS Pro™ provides tools to simulate (TSM) Transportation Systems Management and (TDM) Transportation Demand Management activities. These typically include operational improvements such as lengthening or adding turn lanes at intersections and monitoring and adjusting signal timing to improve traffic flow and access management.

Travel delay data is summarized on strip maps that generally depict a 2000 ft. section of a given corridor allowing the user to select from a certain season and the option to set the timing for peak periods of the day to compute travel delay and cumulative travel time. The system also generates out-puts for travel demand forecasting, inputs for signal optimization and corridor development.

Advantages To Using A GIS-based Solution:

- * The GIS approach facilitates very accurate distance and travel time computation on a true street network by using their respective latitude and longitude coordinates in real space, providing for very precise calculations. GIS makes it possible for planning models to be much more accurate.
- * Since the system is map-based, the level of network detail incorporated is very high. All road attributes are overt and can be included in time-distance calculations. By utilizing the database functionality inherent to this data format, the user can also specify complex impact variable attributes.
- * GIS provides a visual environment for the analysis. This graphical presentation is a reflective component of any alternative. All facets of the analysis take place in a visual and interactive environment, from preparing the input data to analyzing the alternatives relates problem formation and solution in a powerful way. Data preparation is greatly facilitated and the database and visualization capabilities offers a powerful methodology for error checking.
- * This method of data presentation facilitates user understanding and comprehension, whereby decision-making is enhanced. The visual environment provides a means of conveying highly technical information to the non-practitioner in a very straightforward and understandable manner.

For the user, this approach provides a graphical verification that is both intuitive and useful. The ability to graphically view alternatives allows decision-makers to determine when an error in calculation or assumptions yields an alternative that "looks wrong" or "is wrong". And, of course, if direct or indirect impact variables change, editing the underlying database can change the solution.

The proprietary heuristic used by DBSysgraph is complex and robust. It ties in seamlessly with TripGen for impact analysis and with FHWA TNM for identifying decibel contours and other implementation processes. Allow DBS to implement CMS Pro™ as your Congestion Management Solution.

Congestion management systems are required for implementation by MPOs in accordance with Sections 23 and 49, United States Code, for the purpose of identifying solutions to traffic congestion that do not involve adding capacity through roadway expansion. Congestion management systems are intended to identify and implement strategies that provide the most efficient use of existing and future transportation facilities where congestion is occurring or is expected to occur. In support of these strategies CMS' are also required to provide data on roadway performance (e.g., level of service) to be used when developing the TIP, in accordance with the Intermodal Surface Transportation Efficiency Act (ISTEA). The goal of each of these efforts is to identify strategies tailored to improve mobility and to minimize the traffic impacts generated by development within the affected corridors.

Key Benefits and Features:

- * Provides a linear representation of the roadway including inset maps pointing the road geometry and thumbnail maps pointing the location of the section in the transportation network
- * Capability to create a features inventory
- * Ability to generate speed statistic maps based on time of day, peak hours, season or year
- * Built-in internet tools for displaying real-time maps on the web

DBS offers all-inclusive consulting and implementation services to assist in data acquisition, data conversion, application development, systems management and ongoing database development and management. Allow DBS to customize and implement **CMS Pro™ Congestion Management Solution** to fulfill your current needs while allowing for future expansion without unnecessary costs.

Other DBSysgraph products that integrate with and compliment **CMS Pro™** functionality are:

PaveManager™ (Pavement Conditions Evaluation Solution)

CorridorTrak™ (Alternatives Evaluation Solution)

OrderTrak™ (Work Order Management Solution)

TSIMS™ (Traffic Signal Inventory Solution)

SSIMS™ (Sign/Stripe Inventory Solution)