

Client

Illinois Department of Transportation

Location

State of Illinois

Services

- Detailed Design
- Application Software
- Systems Integration
- Design/Build Control Center
- Training
- Documentation
- Support

Date

Feb 1998 – Present

Key Personnel

Gordon Paesani

Contract Value

\$5,000,000

IDOT Traffic System Center (TSC)

Scope of Services

In January of 1998, The Illinois Department of Transportation awarded Delcan a contract to provide detailed design and integration services for an upgrade to the Control Room for the Traffic System Center. This project used the user requirements, system requirements, open system profile, and high level design completed by Delcan in a previous Needs Assessment Study.



Project Description

A critical requirement of the design of the Upgraded TSC Computer System was to preserve the existing ATIS component. A major ramp metering effort included replacement of the existing mechanical ramp metering controllers with a software solution. This included a central controller for the existing 105 ramp meters, providing expansion capabilities for an additional 200 meters, providing an automatic switchover to a second redundant system. This solution was part of a front end processor. The major components of the Central System are:

- Data Acquisition, normalization and Failure Management
- Travel Time computations
- Congestion Zone computations
- Central ramp metering control
- A central ramp metering algorithm
- Dynamic Message Sign Control
- Archiving and report generation
- Connection to the GCM Gateway
- Logic to view real time operation of each ramp meter
- Logic to view traffic detectors in real time
- Design and Build of a new Control Center.

Results

The initial system was completed in July of 2001. Since that date several enhancements have been added to the system including integration with an external DMS control system. Delcan continues to maintain the system to this day.