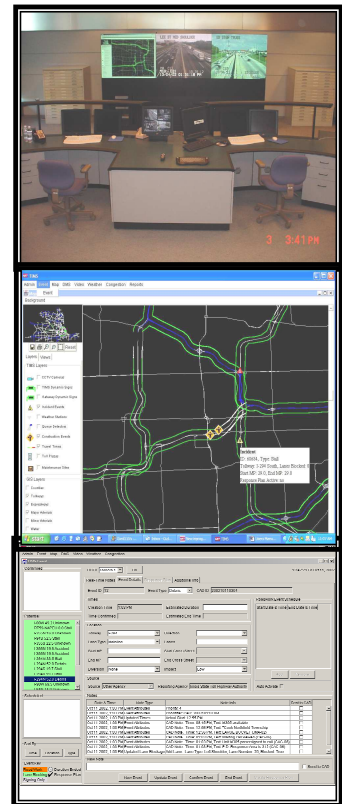# Illinois State Toll Highway Authority Traffic and Incident Management System

The Illinois State Toll Highway Authority (ISTHA) has established an ongoing goal of providing its patrons the safest and most comfortable ride when using its facilities. As part of his effort, the Authority implemented an Intelligent Transportation System (ITS) called Traffic and Incident Management System (TIMS). This system provides improved traffic information to motorists, faster and more accurate incident response and more efficient use of ISTHA's valuable resources. The TIMS supports these goals through strategically defined systems integration.

The TIMS integrated existing ISTHA systems related to incident management, system surveillance, road weather information and device control. One of the highlights of the system is the two-way interface with the Tollways maintenance and State Police dispatch system. This interface is the first of its kind with full two-way integration and an ATMS design that was specifically developed to handle the insertion of Computer Aided Dispatch (CAD) events. The system features three Unix based servers and eight Windows 2000 workstations. The software was developed using CORBA for inter-process communications and external communications with the GCM Gateway. The user interfaces are built on platform independent JAVA. The system also includes the following core components:

- Advanced JLOOX Map display with all traffic and events dynamically displayed and user settable layering
- The most sophisticated automated DMS response system in the country

    - Automated sign selection and content   - Event and response plan scheduling
    - Adjustable response plan matrix   - Automatic updates

- Automated CCTV selection and integrated CCTV control
- The system computes travel times with a new algorithm based on individual toll tag reads in real time from the IPASS automatic toll collection system. The travel time data is displayed on the system map, used to provide congestion messages on the DMS, and is disseminated to the Gary-Chicago-Milwaukee (GCM) Gateway.
- Full two way interface to ISTHA's law enforcement and maintenance Computer Aided Dispatch (CAD) system, including the integration of CAD notes into the TIMS event
- Interface to a queue detection system, including dynamic map updates and live data
- Interface to road weather information system, including dynamic map updates and live data
- Full two way Interface to the GCM Gateway

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