Product Profile

DYNAC™ ES ATMS
ENTERPRISE SERVER

Integrated Traffic Management Solutions

- **Traffic Management**
- **Facilities Monitoring and Control**
- **Surveillance**
- **Security**
- **Emergency Management**

DYNAC™ ES ATMS combines mission-critical reliability and security with the latest software technology to provide a powerful, web-centric software solution for advanced transportation management applications.

With its fault tolerant design, DYNAC™ ES ATMS delivers real-time data needed to effectively manage all types of roadways, transportation centers, bridges and tunnels. Major ATMS features include:

- Traffic Monitoring
- Incident Detection
- Incident Response Management
- Video Management
- Advanced Travel Information
- Dynamic Message Sign Management
- Bridge and Tunnel Facilities Management
- HOV, HOT, and Reversible Roadway Management

DYNAC™ ES ATMS ensures optimal mobility throughout the transportation network during normal, planned, and unexpected traffic conditions.

From small-scale congestion detection to large-scale systems with hundreds of devices, DYNAC™ ES ATMS enables transportation center operators to meet the challenges of today's transportation management demands.

General Features

- Real-time monitoring and control
- GIS Map and schematic based GUI
- Integrated Incident Response Management with on-line decision support
- Seamless digital and analog video management
- WYSIWYG Electronic Sign control
- Historical data recording system
- Trending of real-time and historical traffic data
- Traffic and Equipment Maintenance Reports
- Alarm paging
- Multi-vendor and legacy equipment support

Architecture

- True client-server software using Java 2 Platform web based applications and standards based open architecture technologies
- ITS Architecture and NTCIP compliant
- DYNAC™ ES ATMS architecture uses proven three tier architecture (Client, Business, and Enterprise Information System) for dependency and functional isolation.
- DYNAC™ client applications run on any Java enabled computer. No special workstation software or hardware is required.
- Compatible with standard RDBMS products such as PostgreSQL, Oracle, Sybase and MS SQL Server

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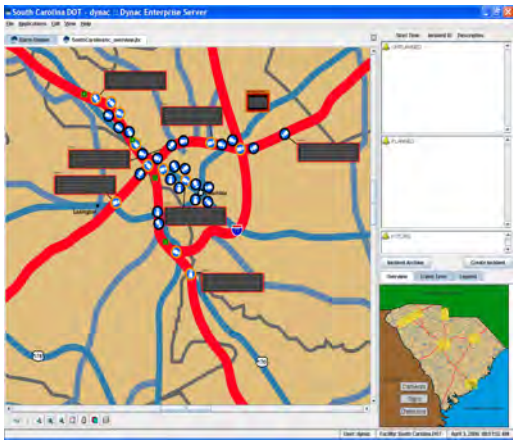
Scalability

- Standards-based design and simple configuration makes future expansion fast and easy.
- Object-oriented design allows for rapid development and integration of new functions and features.

Fault Tolerant Design

- Integrated failover software provides data replication and automatic failover to a redundant server.
- DYNAC™ ES ATMS supports the use of redundant networks for fault tolerant communications.

Vehicle and Incident Detection



DYNAC™ ES ATMS collects real-time traffic data including volume, occupancy and speed which enables operators to monitor traffic incidents, stopped vehicles and congestion. Traffic conditions are displayed on graphical maps at operator workstations providing a total traffic flow management and monitoring environment. Featuring:

- Automatic Incident detection
- Incident notification
- Stopped vehicle detection
- Ramp metering
- Color-coded traffic flow displays

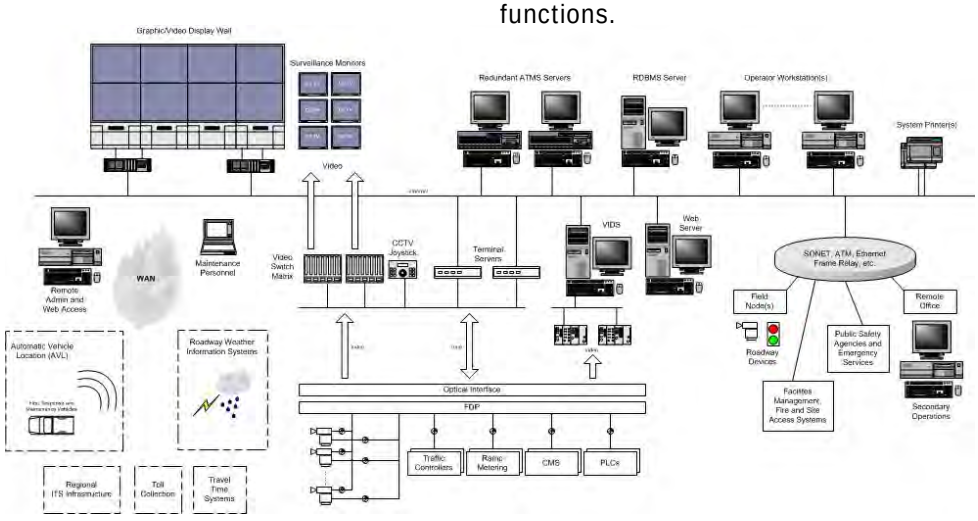
Incident Response

Effectiveness of any traffic management center can be measured by the speed and efficiency in responding appropriately to incidents. DYNAC™'s IRM (Incident Response Manager) enables rapid, consistent, and appropriate responses to incidents, and scheduled events. IRM ties traffic operations together and simplifies system use. Features:

- Real-time decision support
- Configurable incident categories enable operators to quickly characterize incidents.
- Map display of incident locations
- Integration with CCTV Manager enables operators to visually confirm incidents.
- Archiving of incident data for reporting or future retrieval or analysis

CCTV Management

From a single workstation, operators can securely monitor and control their facilities. The CCTV system is utilized for monitoring traffic conditions as well as security surveillance. Using the operator workstations, an operator can select any analog or digital camera in the system, switch the video to any display, and perform pan, tilt, zoom, and record functions.



Sample DYNAC™ ES ATMS Redundant System

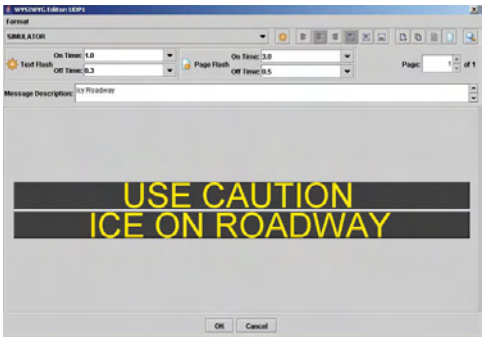
DYNAC™ ES ATMS provides graphical control of video display functions. Interface drivers for various CCTV equipment manufacturers, and other video switching systems are integral to the DYNAC™ product. Features:

- Seamless integration of analog and digital cameras
- Quick viewing of incidents and surveillance of facilities with manual or automated control
- Automatic user notification of video alarms
- Simultaneously controls multiple brands of cameras
- Video analytics software integration
- Broadcast of video external to the control center, such as TV media streams
- CCTV Camera integration into the Incident Response Manager application enables rapid incident response

Emergency Management

Through integration with AVL systems, DYNAC™ ES ATMS enables operators to track emergency vehicles and assist in emergency response dispatch determining the quickest route to destination.

An integrated workstation communication system permits operators to speak to other operators and external emergency management agencies such as Fire and Police without having to divert their attention from the console displays.



Weather Monitoring

The integration of RWIS (Roadway Weather Information Systems) with DYNAC™ allows operators to enhance the safety of motorists by warning of inclement weather. Features:

- Weather data collection, trending and storage
- Conditions presented on maps and graphic displays
- Automatic motorist advisory on ice conditions

Traveler Information Dissemination

DYNAC™ integrates easily with 511, and other systems to disseminate real-time traffic information to motorists. Information may be sent to common traffic control devices such as DMS and HAR or to 511 and advance traveler information websites.

Sign Management

DYNAC™ ES ATMS provides an interface to Dynamic Message signs allowing operators to control messages displayed and view the real-time status of each sign. Features:

- NTCIP and vendor specific protocol compliance
- WYSIWYG ("what you see is what you get") representation of message display
- User defined message library
- Free-format messaging
- User defined priority levels for message display
- Acceptable and unacceptable words dictionary

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Highway Advisory Radio

The DYNAC™ highway advisory radio (HAR) application provides an interface to control the broadcast of prerecorded HAR announcements and other traveler advisory data to the traveling public. HAR transmitters can be controlled directly or via HAR subsystem central controllers. Features:

- Prerecorded message broadcasting
- Monitoring of HAR transmitters
- HAR message scheduling via user friendly interface

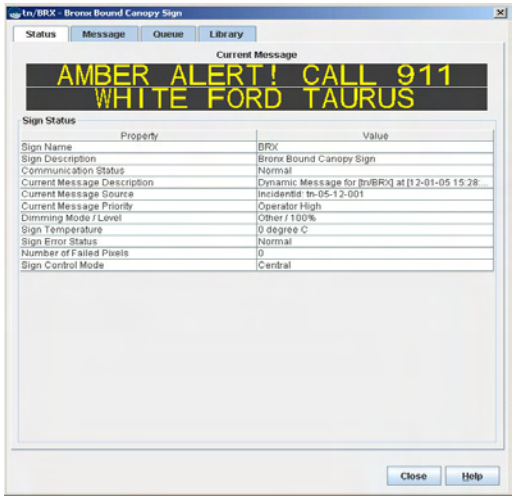
Regional Advisory Information

By adhering to NTCIP C2C standards, multi-jurisdictional coordination is supported by DYNAC™ ES ATMS links with regional agencies.

Amber Alert

When Transportation Authorities receive information from law officials about child abductions, it's crucial that information be quickly broadcasted. DYNAC™ ES ATMS enables Authorities to rapidly disseminate such information to motorists via DMS, HAR, Highway Advisory Telephone (HAT), 511, and travel related websites. Advisories can include details of abduction including make and model of car, license plate number and state, and description of child and suspect. Once information is distributed throughout the transportation system, motorists can then aid law enforcement authorities in a more rapid recovery of missing children. Features:

- Enables quick communication of Amber Alerts to motorists
- Allows travelers to aid law enforcement officials in locating missing children
- Facilitates quicker recovery of abducted individuals



Telephone (511)

Numerous states have adopted the 511 concept as a means of providing travel information to the motoring public via telephone. DYNAC™ can be integrated with an IVR (Interactive Voice Response) system, where incident data, construction information, special events, travel times and weather information are easily accessible to the public via touch-tone telephone.

Alerts

DYNAC™ ES ATMS transmits alert messages to e-mail addresses, mobile phones, and digital pagers, facilitating a quicker response to emergencies.

Web Access

All traffic information affecting the traveling public such as travel times, incidents, construction and weather can be uploaded to the web for public access. Motorists can then plan an alternate route or time to travel based on traffic data provided.

Web pages are tailored to provide maps, icons, traffic flow data, sign messages, weather information, and embedded video images or live feeds. All communication between the ATMS and the web server are unidirectional to prevent any intrusion from the Internet into the ATMS computers.