



*Paving Intelligence into
Safety, Security & Mobility*

MediaRoad™

Video-based Automatic Incident Detection (AID) solution
for data collection and detection of roadway traffic incidents

Citilog's MediaRoad™ is an outdoor video-based Automatic Incident Detection (AID) system. It provides AID and traffic data in real time on roadways (highways, expressways, etc.) through video image processing to enable truly automated surveillance for increased and more rapid re-sponses that improve road safety, security and mobility. MediaRoad allows fast automatic and real time incident detection with triggered alarms and on-screen highlighting (audible and visual) of incidents within a few short seconds after the occurrence.



MediaRoad™ enables a much more rapid response than traditional monitoring methods minimizing the negative impact of the incident and helping to prevent the risk of secondary incidents by enabling warnings to upcoming drivers.

It provides a number of functionalities such as the detection of disabled vehicles, accidents, congestion warnings and more, and is able to grade priorities to avoid multiple alarms for the same incident. This software-based system uses existing video signals from any Closed Circuit Television (CCTV) analog or IP camera, thus requiring no new hardware or infrastructure additions.

MediaRoad™ provides permanent digital recording alongside timed and dated files permitting rapid identification of the incident. It includes a database for video clips of incidents. The digital video database of incident sequences provides a true account and record of road incidents.

These sequences are immediately available to traffic center operators to enable deeper analysis (such as to note recurring events, safety planning, etc.). Equipment running MediaRoad™ software is assembled from standard industrial components (PC, boards, frame grabbers, etc.) thus ensuring duration, reliability and an evolution of products at minimal cost. MediaRoad processes analog video as well as IP encoded video streams.

System setup and modification of monitoring areas is performed with a few mouse clicks thanks to the friendly graphical user interface (GUI). The system allows configuration with multiple sets of parameters for each lane. Alarms can be inhibited on one or several traffic lanes or across a group of cameras.

MediaRoad™ is flexible and adaptable to changing environmental conditions (night or day, sun or rain) to maximize traffic monitoring capabilities. It also processes images from color or black and white cameras.



KEY CAPABILITIES

- Automate traffic monitoring operations with real-time intelligent Automatic Incident Detection
- Complete on-screen audible and visual alarms for incidents within a few seconds of the occurrence of an incident
- Seamless integration into existing infrastructure of Closed Circuit Television (CCTV) cameras: analog, digital / IP, etc.
- Improves road safety, security and mobility thus enabling improved homeland security and reduced environmental impacts from traffic congestion and delays

KEY BENEFITS

- Reduce the negative economic, social and environmental impact from traffic incidents
- Improve infrastructure efficiency
- Improve Traffic Operations Center efficiency
- Reduce incident detection times thus, reducing response times and improving safety, security and mobility



Several independent research findings point to the need for an intelligent AID solution like MediaRoad. There is a growing dramatic worldwide increase in traffic accidents with more than a million injuries and fatalities annually on roadways. There are nearly one billion vehicles on roadways, contributing to negative impacts on safety, security, mobility and the environment. This extensive growth requires new and advanced road and traffic management solutions all around the world to minimize the stress being placed on infrastructure and management personnel. MediaRoad provides the intelligent AID solution necessary to meet growing safety, security, environmental and mobility concerns facing traffic operators around the world.

MediaRoad's user interface helps automate and simplify traffic management on roadways for traffic operations centers. The supervisory and clip management interface provides a global view of all cameras being monitored and automatically pops up the appropriate camera when an incident occurs, with the incident highlighted.

Maintenance tools enable identification of malfunctioning cameras and access to remote maintenance features. A Log Manager displays messages generated by the system and stores actions performed by operators, administrators and external systems.

MediaRoad provides a cost-effective, easy-to-integrate solution to migrate traditional traffic monitoring to intelligent and proactive AID.



DETECTION HIGHLIGHTS

- Trajectory and tracking-based stopped vehicles detection
- Discriminates fluid traffic from congested traffic for enhanced stopped vehicles alarm notification and management
- Threshold-based traffic slow-down and congestion detection
- New H.264 streaming video and recording capability and dual streaming for enhanced video quality
- Traffic data includes vehicle count, speed and travel time for each lane of traffic
- Advanced traffic measures include classifying by length and occupancy
- Levels of Service (customizable)

Technical Specifications

Equipment

- For cost efficiency and upgradability, Citilog exclusively uses standard "off-the-shelf" hardware for its equipment: analyzers and servers
- Up to 16 video inputs per analyzer (depending on options and video mode)
- Usable with any camera and most video sources: analog (PAL, NTSC), digitally encoded (IP cameras, IP encoders), IR, color/BW
- H.264 streaming video and recording capability

Architecture

- Easy integration with any CCTV architecture
- Equipment can be deployed centrally (TMC) and/or locally (roadside cabinet)
- All Citilog products are compatible and can be easily integrated in the same GUI
- Standard redundant architecture for enhanced system efficiency and availability

Communications

- Standard Software Developer's Kit
- TCP/IP Client-Server
- ActiveX
- Open collectors
- Serial
- Wireless
- Fully accessible SQL database



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