MediaTunnel™

Video-based Automatic Incident Detection (AID) and traffic
data collection solution specifically designed for tunnels

Citilog's MediaTunnel is a video-based Automatic Incident Detection (AID) solution specifically designed for traffic management in tunnels. It provides real-time incident detection, traffic data collection and video surveillance capabilities.
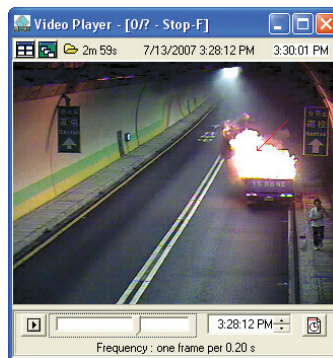
MediaTunnel is a modular and flexible system that delivers real-time incident identification far surpassing traditional monitoring means and results. This enables Traffic Operations Centers to more rapidly respond to incidents to minimize negative impacts on human and resource loss and ensure safety, security and enhanced mobility.

With 15 years of field experience, Citilog's solutions enable state, county and city resource managers to limit the losses from road traffic incidents, crimes or unauthorized access, by providing real time automated incident detection enabling the possibility to deploy corrective measures more rapidly to minimize negative impacts from escalations to incidents. MediaTunnel also provides the added benefit of aiding states, counties and cities in their quest to reduce pollutant emissions, by ensuring faster recovery from an incident to get traffic flowing again.

To enable rapid identification and notification of an incident, MediaTunnel provides traffic operators with an alarm (audible and visual) within a few seconds after an incident occurs, even before the consequences of an incident can be noticed by traditional monitoring. MediaTunnel provides a wide monitoring area for all directions and traffic lanes within camera view. The software-based system uses existing video signals from any Closed Circuit Television (CCTV), fixed, Pan-Tilt-Zoom (PTZ), analog, IP and any other camera, thus requiring no new hardware or infrastructure additions. Operating in tunnels for oncoming, moving away or mixed traffic, MediaTunnel also enables traffic measurements per lane (speed, occupancy rate, counts, travel time, etc.). Thresholds are also capable of being set, allowing Traffic Operations Centers great flexibility in creating monitoring variables.

System setup is performed with a few mouse clicks thanks to the friendly graphical user interface (GUI), allowing for quick and easy setup and modification of areas to be monitored. Such advanced options enable seamless integration into existing infrastructure allowing Traffic Operations Centers to get MediaTunnel up and running with minimal time or technical constraints.

A supervisory and incident video clip management interface provides a global view of all cameras being monitored and when an incident occurs automatically pops up the related camera with the incident highlighted for rapid identification.
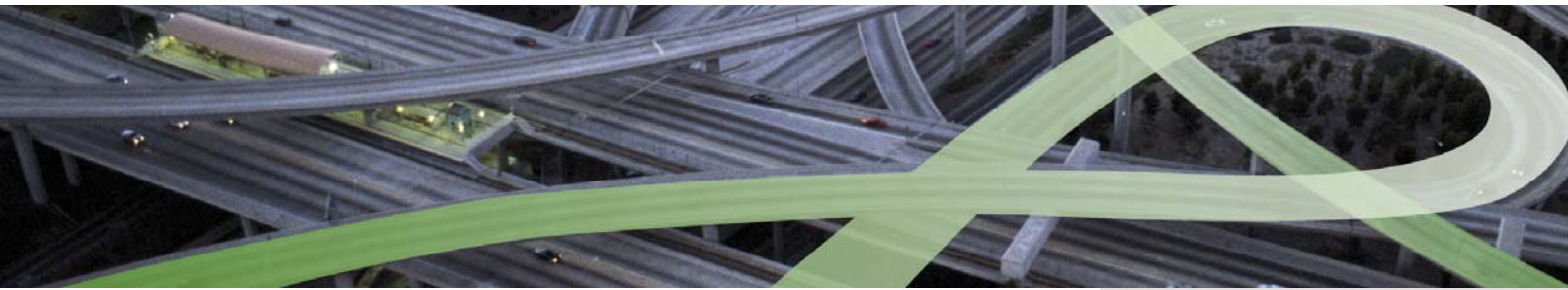
KEY CAPABILITIES

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

KEY BENEFITS

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

MediaTunnel provides permanent digital recording alongside timed and dated files to permit rapid identification of the incident. It includes a database for video clips of incidents. The digital video database of video clips provides a true account and record of road incidents. These video clips are immediately available to Traffic Center operators to enable implementation of faster and more appropriate incident response plans as well as deeper analysis (such as for recurring events, safety planning, etc.).

Maintenance tools enable identification of malfunctioning cameras and enable remote maintenance. A Log Manager allows visualizing of messages generated by the system and the storing of actions performed by operators, administrators and external systems.

MediaTunnel's advanced capabilities allow a user several convenient features: identify the camera featuring an alarm; display in real time the video clips associated with the current alarm; display the live image of any camera; display the system alarms; and display traffic data. MediaTunnel provides a cost-effective, easy-to-integrate solution to migrate traditional traffic monitoring to intelligent and proactive AID.

MediaTunnel provides the intelligent AID solution necessary to meet any growing safety, security, environmental and mobility challenges facing traffic operators around the world.

DETECTION HIGHLIGHTS

- Trajectory and tracking-based stopped vehicles detection.
- Loss of visibility (such as smoke or fire) detection.
- Detection of pedestrians in tunnels.
- Debris or other undesirable items in tunnels.
- Discriminates fluid traffic and congested traffic for enhanced stopped vehicles management.
- Threshold-based traffic slow-down and congestion detection.
- Wrong-way driving.
- Traffic data includes vehicle count, speed and travel time for each lane of traffic.
- Levels of Service (customizable).

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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.

Latest Hardware specifications available upon request.

Communications

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

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