Video Analytics

SOUTHWEST RESEARCH INSTITUTE®

Active-Vision

Number of Vehicles 6

72 MPH ↓WEST

68 MPH ↓WEST

76 MPH ↑EAST

75 MPH ↑EAST

73 MPH ↓WEST

71 MPH ↑EAST

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Overview

For over 15 years, SwRI has leveraged computer vision and machine learning to develop advanced sensing algorithms supporting vehicle autonomy for military and commercial vehicles navigating on- and off-road terrain and traditional roadways. SwRI's Active-Vision uses these same perception techniques along with patent-pending technology for vehicle location to make existing traffic camera video streams into advanced traffic monitoring sensors.

Capabilities

Active-Vision provides advanced detection capabilities to analyze from your agency's existing camera network. The algorithms handle low-light conditions, camera obstruction, headlights shining directly into the camera lens, and other corner cases that can challenge other video analytics systems. The following existing and near-term capabilities enable transportation agencies to be consistently aware of roadway conditions in real time.

Features

Active-Vision™ is a camera-agnostic software system which provides real-time actionable insights based on traffic camera video feeds.

- Uses existing traffic camera infrastructure
- Auto-recalibration support eliminates need for presets

Capability	Description	ATMS Integrations	Capability	Description	ATMS Integrations
	Wrong-Way Driver Detected when present in a configured road lane.	• Events (Wrong-Way Driver) • Reporting		**Collisions/Stalled Vehicle** Detected when present in a configured road lane or shoulder.	• Events (Stalled Vehicle) • Reporting
	Traffic Speed Detected when vehicles are present.	• Traffic Sensors • Reporting		**Traffic Classification** Detected when vehicles are present.	• Traffic Sensors • Reporting
	Traffic Volume Detected when vehicles are present.	• Traffic Sensors • Reporting		**Debris** Existing vehicle tracking capability will be enhanced when section of road is being avoided by vehicles, indicating road obstruction. This detection method relies on reasonable traffic flow.	• Events (Road Debris) • Reporting
	Traffic Occupancy Detected when vehicles are present.	• Traffic Sensors • Reporting		**Congestion/Slow Traffic/ Queue** Existing speed detection capability will be enhanced to report slow traffic based on configured speed threshold.	• Events (Abnormal Congestion) • Reporting

We welcome your inquiries.
For more information, please contact:

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