E N T E R P R I S E

State of Practice for Automated Incident Detection

Introduction

Traffic Management Center (TMC) operators need to be alerted of roadway incidents (e.g., crashes, stalled vehicles, slowed or stopped traffic) in a timely manner to initiate response efforts and manage the resulting traffic implications.

Commercially available products can provide automated incident detection functionality with alerts to TMC operators. This can include cameras equipped with analytics with automated detection capabilities or systems that can be connected to existing agency equipment to perform automated incident detection at a network level.

This ENTERPRISE Pooled Fund project is researching the state of practice for commercially available automated incident detection systems. The research is focusing on commercially available products and tools that detect multiple types of common roadway incident types (e.g., crashes, stalled vehicles, debris in the road, slow or stopped traffic) and provide alerts to TMC operators. The objectives are to understand the state of practice for commercially available automated incident detection systems and to define common user needs for agency use of these systems.

Project Contacts

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Project Approach

This research will be completed with two primary tasks.

Industry Scan: This task will conduct an industry scan to research commercially available systems for use by transportation agencies to detect traffic-related incidents and provide alerts to operators. This task will:

- Identify vendors offering automated incident detection system products and organize vendor demonstrations to educate ENTERPRISE members on the functionality and uses of commercially available automated incident detection systems.

- Conduct an online search to gather available resources that have documented or evaluated incident detection systems, including the previous ENTERPRISE project *Next Generation Traffic Data and Incident Detection from Video* that evaluated video analytics systems in detecting incidents such as stalled vehicles, crashes, debris in the roadway, and slow or stopped traffic.

Common User Needs: This task will involve working with ENTERPRISE members to define common user needs for automated incident detection systems from the perspective of TMC operators. User needs for automated incident detection systems will be gathered during am interactive webinar with ENTERPRISE agency staff (TMC operators and Board members). Information will also be gathered from selected agencies using automated incident detection systems, to document the effectiveness and usefulness of such systems.

The outcome of this task is expected to inform agencies of current system capabilities and provide a framework of user needs that may translate to requirements as agencies procure automated incident detection systems.