

Request for Information

Date: July 22, 2011

Project: To determine methods for effectively and efficiently sharing Closed Circuit Television (CCTV) traffic camera video with media partners, first responders, other stakeholders, and the public.

Issuing Agency: Michigan Department of Transportation
Van Wagoner Building
425 West Ottawa Street
P.O. Box 30050
Lansing, MI 48909

Introduction

Requests for Information (RFIs) are being solicited by the Michigan Department of Transportation (MDOT) for a low-cost or no-cost solution to replace the existing means by which MDOT shares traffic monitoring video feeds with its various media partners, first responders, stakeholders, and the public. At this time, MDOT is not able to commit funding to update the means by which video is shared with the media. However, MDOT is interested in identifying potential options that may be available, as well as their associated costs, so that such options may be considered in the future.

MDOT values working with its media partners to disseminate information to motorists traveling on Michigan roadways. In fact, a final report commissioned by MDOT, *Strategies for Improving Traveler Information*, issued in January 2011 by Cambridge Systematics, Inc., found that over 37% of the roughly 700 Michigan residents surveyed obtain traffic information from watching television traffic reports. Of those who watch television traffic reports, 90% said they find the reports useful and 80% said that they diverted their planned route based on the information received. MDOT hopes to maintain or increase the video-sharing capabilities with media partners, and find a cost-effective way to provide this service.

Background

Streaming video obtained from CCTV cameras strategically located near state trunklines (Interstates, US and M routes) allows MDOT to monitor traffic flow and congestion, detect events hindering traffic flow, aid in maintenance response, monitor construction zones, and pinpoint exact incident locations. MDOT shares this video with the media through a variety of arrangements made over the past several years. MDOT also shares video views with motorists, first responders, and other stakeholders through its Mi Drive Web site (www.michigan.gov/drive) via cached video snapshots every 2-4 seconds supplied by

TrafficLand.com. By the end of 2011, MDOT will own and operate more than 300 CCTV cameras, which could be available to share with various media stations across the state.

Control room operators at MDOT's Transportation Operations Centers (TOCs), monitor traffic conditions and work with media stations to present real-time traffic broadcasts and broadcast streaming video.

- The Michigan Intelligent Transportation Systems Center (MITSC), located in Detroit, has the largest number of CCTV cameras and the densest CCTV-camera coverage area in the state. MITSC currently operates 232 cameras in the Detroit metro area.
- The West Michigan Transportation Operations Center (WMTOC), located in Grand Rapids, currently operates 26 cameras throughout West Michigan, with an additional 31 cameras to be operational by the end of 2011.
- The Statewide Transportation Operations Center (STOC), located in Lansing, began operations on May 23, 2011. STOC will operate cameras throughout the state in areas not already covered by the two other TOCs, including a number of rural locations. It is anticipated that STOC will be the primary operator of more than 20 cameras by the end of 2011.

Advances in technology and communications are requiring MDOT to reevaluate the methods previously used to distribute video to the media. Historically, MDOT has transferred analog video to media partners physically through switches in the computer room of an MDOT TOC, where the video was centrally processed. In some cases, video has been converted from digital to analog in order to support communication channels already in place. However, for reasons listed below, it is going to become necessary to adjust these distribution methods:

- MDOT is currently installing and implementing a number of CCTV cameras in more rural areas, with additional deployments planned in future years. The video from some of these cameras will not be processed in a central location. A significant number of cameras will be connected via the Internet "cloud", either on broadband or cellular connections. These cameras essentially have no centralized point for video processing.
- Video processing and distribution equipment takes up space in the computer and server rooms of the TOCs, and also costs money on a routine basis to operate and maintain. While the total number of media stations that will eventually be interested in streaming video from MDOT is currently unknown, space in these rooms is already limited, and there may not be adequate space for new partners in the future.
- MDOT has been replacing analog feeds with digital feeds for several years, and is approaching a point where all video sources will soon be digital and IP-based. It is no longer efficient to convert most, and soon all, video feeds from digital to analog for broadcasting purposes.
- With the increased emphasis on providing real-time traffic information to motorists via television, radio, and mobile devices, there has also been an increased interest in obtaining multiple video feeds. However, the current distribution methods do not allow for a large number of simultaneous video feeds.
- MDOT is planning to start transmitting video over to the State of Michigan (SOM) network. Therefore, current and future video distribution will require a solution that

For these reasons, MDOT plans to host a summit to discuss video sharing with all media partners with an interest in becoming involved in the next generation of traffic monitoring video sharing with MDOT. MDOT may ask one or more companies that submit responses to present concepts at the summit to the interested media partners. MDOT also may present the content of the responses for discussion purposes at the summit. Furthermore, MDOT may distribute copies of responses at the summit for informational purposes. MDOT anticipates hosting a summit meeting sometime in the second half of 2011.

Anticipated Features of a Video Sharing Solution

MDOT and the TOCs across the state share several common needs regarding video sharing with the media:

- MDOT must have the ability to disseminate video to the general public, first responders, the media, and related partner agencies, including:
 - Broadcast-quality video feeds for live news reports.
 - Web quality video feeds for media Web sites and/or broadcast on a video wall.
- MDOT must have the ability to share one or many video streams simultaneously to one or many partner agencies simultaneously.
- Video must be available 24 hours per day, 7 days per week.
- TOC operators must be able to easily block and unblock video feeds for certain sensitive situations, or as requested by law enforcement agencies.
- Transfer of video should not rely on analog methods.
- All video transmission must adhere to SOM DTMB Enterprise Security requirements.

Instructions for Responses

Respondents should submit a Letter of Interest (LOI), stating their interest in working with MDOT to develop methods for handling, processing, and sharing of traffic monitoring camera video with media and other stakeholders. At a minimum, the LOI should:

- Provide contact information for the Respondent.
- Describe costs associated with sharing digital video with media, for one stream, as well as multiple simultaneous streams.
- Describe formats that would enable media partners to obtain video.
- List potential technology applications/software platforms for control room operators to easily block and unblock video to various entities.
- Share known best practices for video distribution from similar and dissimilar market segments.
- Provide practical examples and models of successful video sharing among one entity originating the video and sharing the video with multiple entities.
- Document innovative strategies to reduce or eliminate costs for all parties involved.
- Describe in detail enhanced solutions for digital video handling, including:

- Details as how to successfully transition to a fully digital process with little or no down time.
- Methods for providing broadcast-quality output to media partners.
- Provide diagrams, flow charts, videos, animations, documents, or other materials that are easy to understand and could be used to educate a number of participants about potential low-cost video sharing solutions.
- Provide a preliminary development and implementation schedule of the potential video sharing solutions.
- Explore any potential public-private partnerships that may increase efficiency, provide additional levels of service, and/or decrease costs for all parties involved.
- Provide solutions that allow for video distribution to an increased number of media partners, up to the total number of media outlets that currently exist throughout the state.
- List initial and recurring costs, if any, associated with an optimal video sharing solution.

This is not a competitive request. MDOT reserves the right to begin discussions with any, all, or none of the Respondents. MDOT may or may not, at its discretion, issue one or more Requests for Proposal (RFPs) related to this subject at a future date.

MDOT recognizes that some of the information contained in these responses may be confidential. Portions of the LOI marked as confidential will not be made publicly available except as required by law. MDOT will not return the LOI to the Respondent.

MDOT requests that Respondents provide five bound paper copies of the LOI to the MDOT Project Manager. In addition, MDOT also requests one electronic copy of the LOI, to be sent to the MDOT Project Manager via e-mail. Electronic copies must be in PDF format and must not exceed 5MB in size. **The LOI should not exceed a total of 10 pages in length.**

All copies of the LOI should be sent to the MDOT Project Manager at:

Michigan Department of Transportation
 Project Manager: Lee Nederveld
 Van Wagoner Building
 425 West Ottawa Street
 P.O. Box 30050
 Lansing, MI 48909
 NederveldL@michigan.gov

The due date for submittal of a LOI is August 22, 2011 at 3:00 p.m. Eastern Daylight Time.

Respondents may e-mail the MDOT Project Manager, Lee Nederveld, at NederveldL@michigan.gov for additional information.