



Metropolitan Area Transportation
Operations Coordination

Item #10

Briefing on the Washington Metropolitan Area Transportation Operations Coordination (MATOC) Program

Presentation to the Transportation Planning Board

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January 19, 2011



"Working together to reduce incident-related travel delays through improved coordination, cooperation, and information-sharing."

Today's Presentation

- A Look at a MATOC Incident
 - MATOC Perspective
 - The End User Perspective
 - Overview
 - Front Line Operator Perspective



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About MATOC

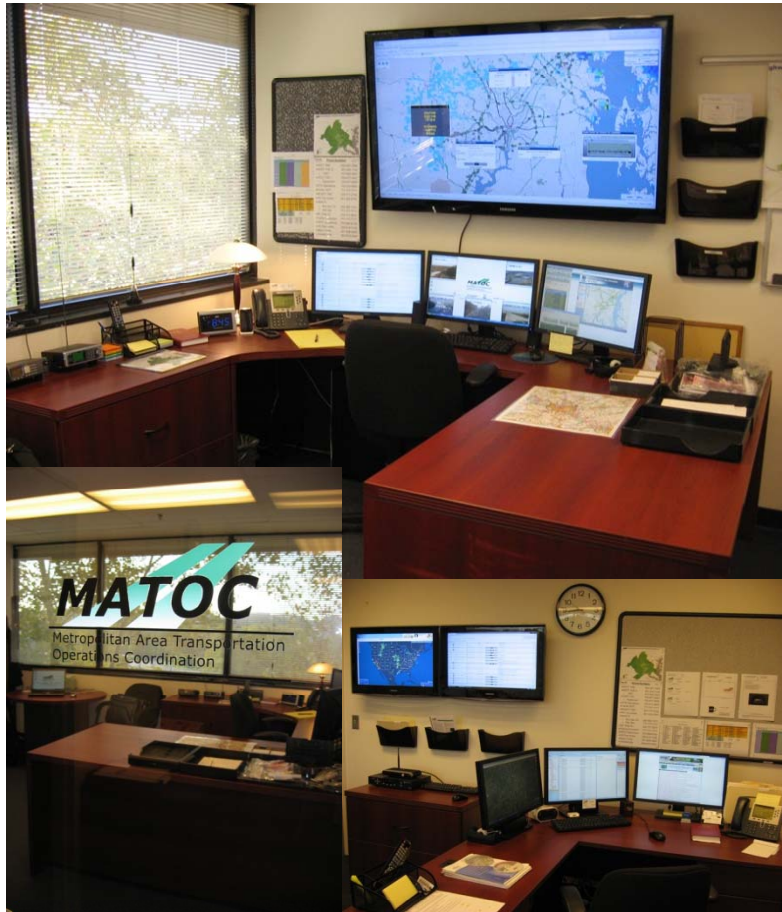
- Established in 2008, MATOC is a joint program of the District of Columbia, Maryland, and Virginia DOTs and the Washington Metropolitan Area Transit Authority (WMATA)
 - Mission: regional situational awareness of transportation conditions and incidents
 - Goals: improve traveler safety and reduce transportation delays
- MATOC activities include:
 - Monitoring and communicating reliable information during major incidents
 - Enabling operating agencies and the traveling public to make effective, coordinated and timely decisions
 - Maintaining a web-based transportation information system
 - Facilitating standard operating procedures among transportation agencies





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MATOC Operations



Hours of Operation

- Monday-Friday
 - 4:30am-8:00pm
- After hours: On-Call Schedule

Staff

- 1 Facilitator, 2 Operators

Day-to-Day Duties

- Monitor several public and private feeds
- Maintain Situational Awareness of significant incidents affecting the region's transportation network.
- Recommend actions to mitigate delays
- Develop and maintain relationships amongst affected stakeholders



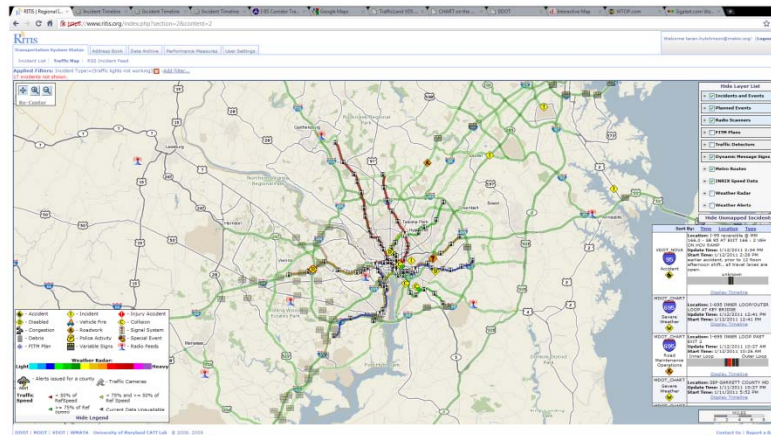


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Incident Detection



Traffic Cameras
- DOT
- Traffican



RITIS - Regional Integrated Transportation Information System



Media Broadcasts
- Radio
- Television



Scanners
- Public Safety
- Media/Agency
Traffic Spotters



Incoming Messaging Feeds
- Agency
- Emergency
- Media
- Social Media



Criteria for MATOC Incidents

- **Lane Closure & Delays** – 50% closure for 30 minutes and/or a 4 mile delay (freeway)
- **Incident Type/Severity** – Injury Accident, Multi-Vehicle Accident, Tractor Trailer Accident, Vehicle Fire, Mass Causality Incident, Transit/Bus Incidents, Roadwork (unplanned/planned), etc.
- **Location/Direction** – Affected Stakeholders, parallel routes, opposing stream, alternate modes
- **Time of Day** – Peak/Non-Peak



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MATOC Situational Awareness Alerts

- Developed and paged out for regional incidents
 - Confirmation/follow up with host & affected agencies
 - Updated every 30 min or as situation changes
 - Incident close out notification
- Sent to:
 - Transportation Operations Centers
 - State/District DOTs
 - WMATA/Metrobus
 - MWAA/Dulles Toll Road
 - Local Traffic Management Centers
 - Local Transit Agencies
 - Emergency Management Agencies: VDEM, HSEMA, FEMA
 - Commuter Bus Services: MTA, Martz, Eyre, Dillon's, **PRTC/OmniRide**

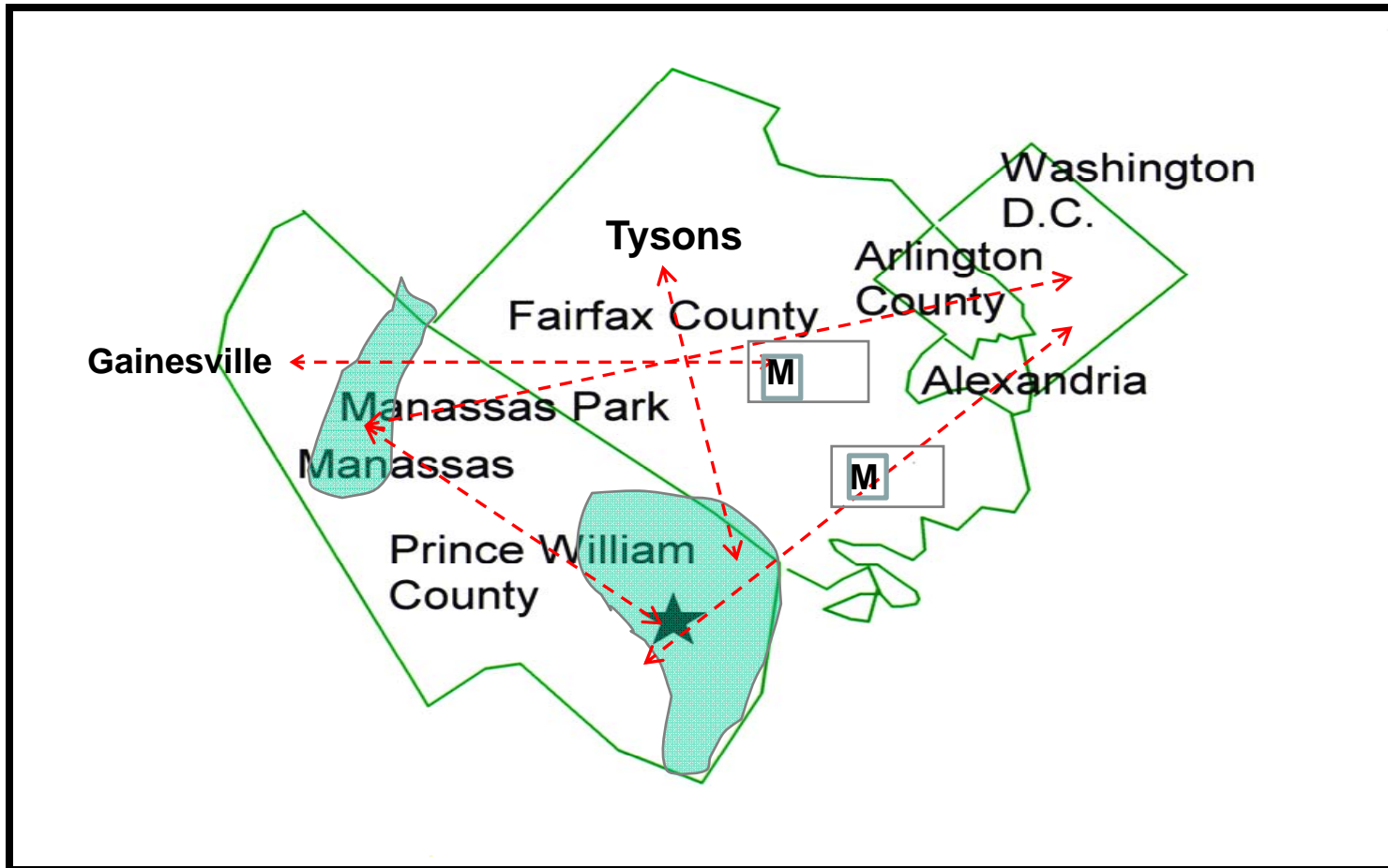


The End User Perspective on MATOC Information

- How is MATOC-generated information used by an individual transportation agency?
- How does MATOC-generated information advise transit operations?
- What benefits is an individual agency receiving from MATOC, and what more can be done?
- PRTC/OmniRide
 - Eric Marx, Director of Planning & Operations
 - Doris Chism, Director of Customer Service & Dispatch

- Suburban public transit agency
 - Providing express bus (OmniRide), local bus (OmniLink), commuter rail (VRE), ride-matching (OmniMatch)
 - Member Jurisdictions – Prince William, Stafford, and Spotsylvania Counties and the Cities of Manassas, Manassas Park, and Fredericksburg
 - Only Prince William, Manassas, and Manassas Park receive bus service
- Bus services:
 - Commuters to/from DC, Pentagon, Arlington and Tysons Corner
 - >200 scheduled bus trips per day via HOV Lanes
 - Peak direction & reverse commute to/from Franconia/Springfield and West Falls Church Metrorail
 - Local flex-routes within eastern Prince William & Manassas
 - 133 buses serving 19 routes
 - 13,000 daily bus riders

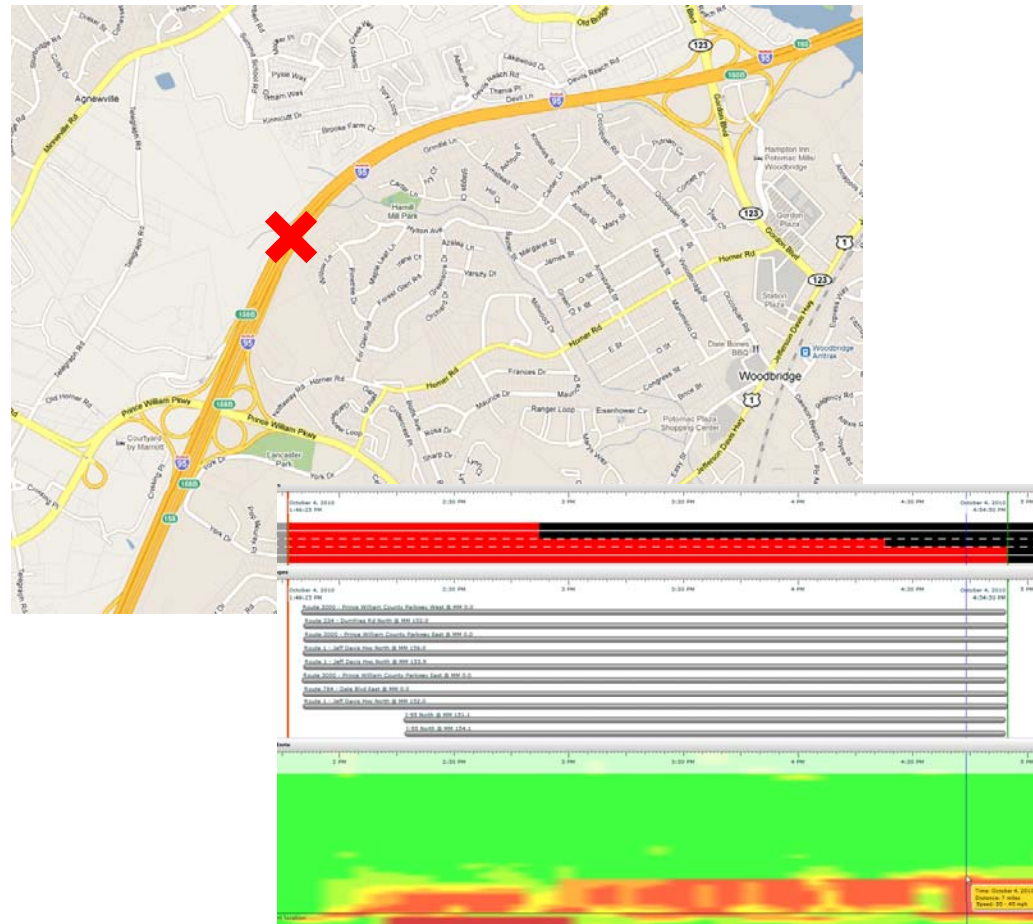




- Commuter service is primary beneficiary of MATOC “event” notifications
- Timely notification crucial to mitigate negative impacts/maintain OTP
 - PM particularly volatile due to 25 mile “deadhead” to starting locations
- When alert received we quickly assess potential impact and implement changes as warranted/possible, given limited resources
- Notifications need to be accurate, frequently updated, related to our service
 - Dispatchers have many inputs, simultaneous issues, etc.
 - Before MATOC we did not receive enough information to make informed decisions - we determined the impact to our service based on past experiences with similar events. Hit or miss at best.
- MATOC is helping us make informed decisions under less than ideal conditions
 - Quick notifications
 - Live person to clarify, investigate

Example Incident October 4, 2010 – PM Rush

- I-95 Northbound
 - N. of Exit 158, Prince William Pkwy
- Multi-Vehicle Accident
 - State Trooper struck
- Northbound lanes closed
 - Traffic diverted to US-1
- Required two medevac helicopters
 - Southbound HOV lanes closed for landings
- Incident Duration
 - 1:46 pm – 4:55 pm (3 hrs 9 mins)
- MATOC Notifications
 - First alert at 2:01 pm, final update at 4:53 pm
 - MATOC transmitted a total of 7 situational awareness alerts for this incident over its duration



October 4, 2010 – PM Rush

- When we were first notified
- Why incident was so critical to our operations
- What we did to mitigate impact
- How early and frequent notification/communications helped limit the incident's impact to the minor problems we experienced

Chronology of PRTC Dispatch Actions October 4, 2010 – PM Rush

- 2:05 pm - Dispatch noted all lanes closed on I-95 Northbound due to the incident
- 4:20 pm – Manassas commuter route bus delayed during deadhead due to traffic congestion; covered route on time by using strategic [spare] bus
- 4:46 pm – Dispatch noted all lanes re-opened
- 4:50 pm – Riders’ Express alert sent to notify passengers of possible delays
- 5:05 pm – Prince William Metro Direct trip was missed due to traffic congestion; no strategic bus available

- Desired enhancements
 - More targeted notifications
 - Track upcoming significant events, notify accordingly, serve as central contact
 - Regional emergency information coordinator/facilitator
- Example showed how MATOC has helped
- MATOC plays critical role since operators are *dedicated* to monitoring traffic/transit
 - Not diverted by other functions
 - Not just one of multiple roles



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Questions

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MATOC Situational Awareness Alert

Sent: Monday, October 04, 2010

MATOC Stakeholders, For your situational awareness

Location: I-95 Northbound, North of Exit 158, Prince William County, VA

Incident: Multi-Vehicle Accident

2:01pm Accident blocks all travel lanes, traffic is getting by on the left shoulder. Emergency crews are on scene. Delays are approximately 1 mile and growing.

2:13pm UPDATE #1: Accident involves 3 vehicles, including a state trooper. All northbound lanes are closed. Medivac is on scene. Delays are approximately 4 miles.

2:33pm UPDATE #2: All northbound lanes remain CLOSED. 2nd Medivac unit has landed. Delays are approximately 4 miles. Traffic is self-diverting off prior to the Prince William Parkway, using US-1 as an alternate route. Southbound HOV lanes are closed while medivac remains on scene.

2:58pm UPDATE #3: Medivacs have departed. Traffic is getting by in one left lane. The center and right lanes will remain closed for reconstruction. Northbound delays are approximately 4 miles. Southbound HOV lanes have reopened.

3:24pm UPDATE #4: Traffic continues to get by in one left lane. Northbound delays are approximately 6 miles. Per VDOT, the two right lanes will remain closed for approximately 2 more hours.

4:25pm UPDATE #5: Traffic is now getting by in the left and center lanes. The right lane and shoulder remain closed for recovery and cleanup operations. Delays begin at Exit 152 (Dumfries Road), approximately 6 miles. Delays are also reported on US-1 Northbound, between Dumfries and the Occoquan River due to the bailout traffic.

4:53pm FINAL UPDATE: All travel lanes are now open. Remaining northbound delays are 7 miles.

Sent to:

- Transportation Operations Centers
 - State/District DOTs
 - WMATA/Metrobus
 - MWAA/Dulles Toll Road
- Local Traffic Management Centers
- Local Transit Agencies
- Emergency Management Agencies
 - VDEM, HSEMA, FEMA
- Commuter Bus Services
 - MTA/Martz/Eyre/Dillon's
 - PRTC/OmniRide