

TDA Drive-in Technology and Transportation Panel Traffic Operations and Safety (TOPS) Laboratory: An “Enabling Force” for WisDOT

May 23, 2012

Madison Club



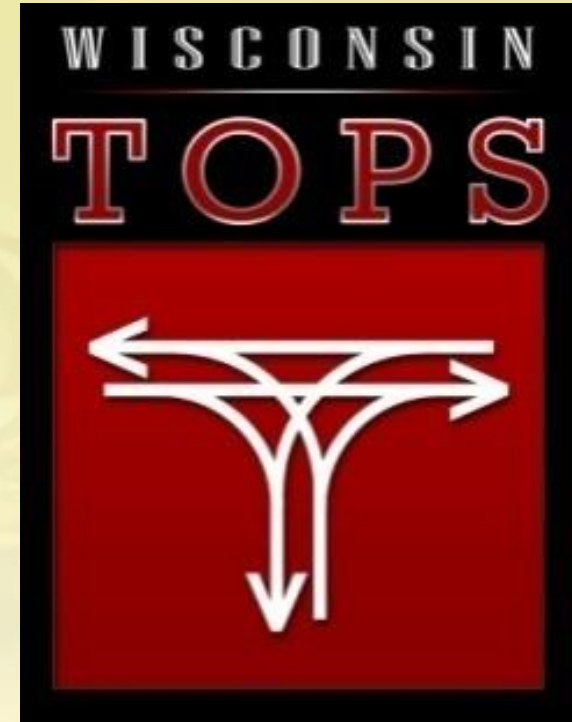
WISCONSIN TRAFFIC OPERATIONS AND SAFETY LABORATORY

DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING
UNIVERSITY OF WISCONSIN-MADISON



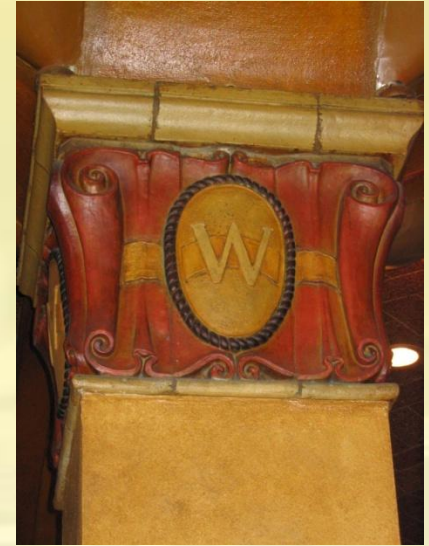
Overview

- Brief TOPS History
- Key Milestones and Achievements in Supporting WisDOT's Mission
- Emerging Technology and Issues
- Partnership Benefits to WisDOT and UW



TOPS History

- Started May 2003
- Co-Management Philosophy
- Mutually Beneficial Services, Program Support, and Research
- Work with variety of WisDOT bureaus
- ~ 80 Projects Complete, ~ 40 In Progress
- Other Research
 - Transportation Research Board of the National Academies
 - Other State DOTs
 - National Science Foundation – Pending



Key Milestones and Achievements

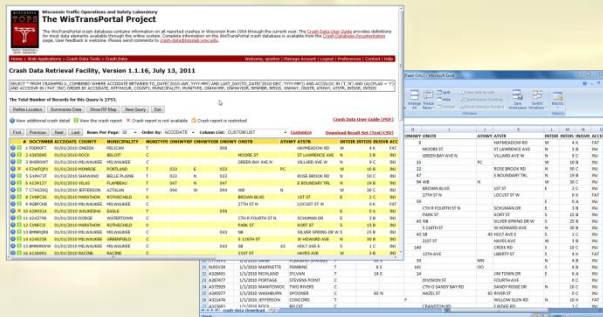
- 2005 - WisTransPortal Launches
- 2006 - VSPOC Traffic Data Analysis Tool
- 2006 - LINK Interagency Video Sharing
- 2008 - 511 Launches (www.511wi.gov)
- 2008 - FHWA Planning Award – Traffic Operations Infrastructure Plan
- 2008 - Lane Closure System
- 2009 - InterCAD
- 2010 - Traffic Incident Alerts
- 2010 - Wisconsin Driving Simulator
- 2011 - Twitter Alerts



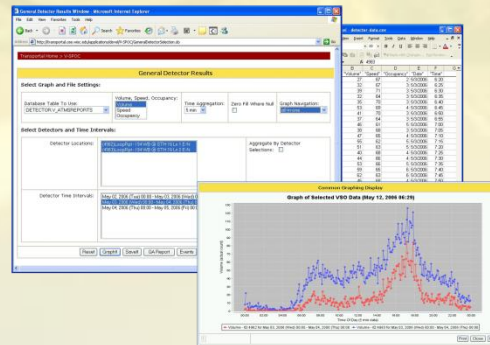
WisTransportal Data Hub

- Common IT Platform for:
 - Administration/Access
 - Database
 - Archiving
 - Mapping/Linear Referencing

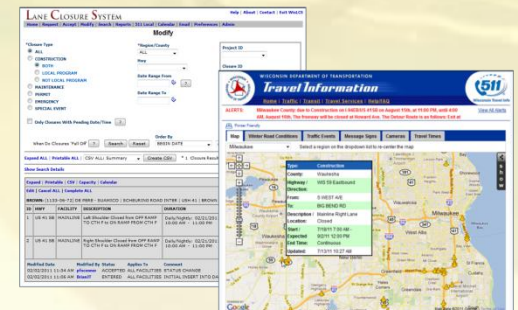
Crash Data Retrieval Facility



V-SPOC Traffic Detector Data



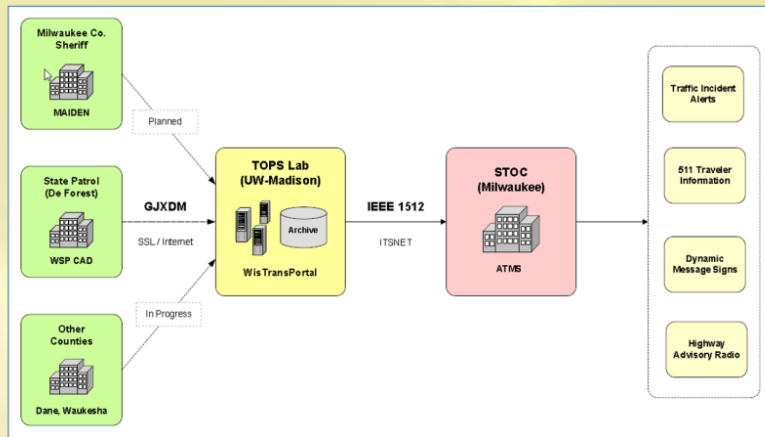
Wisconsin Lane Closure System



WisTransportal Data Hub

InterCAD Traffic Incident Data

Traffic Incident Alerts



**Wisconsin Traffic Operations and Safety Laboratory
TIA Traffic Incident Alert System**

Home > Applications > TIA Home > Incident Alerts

Incident Alert - Update Notification (2) Incident ID: 3084

Required fields are marked with an asterisk (*) - although some email lists, such as OSCW, override the location information requirements.

* Sent From: WisDOT State Traffic Operations Center

* Incident Type: Other

* Country: GRANT

* Nearest City: HAZEL GREEN

* Highway: WIS 25

* Direction: NB/EB

* Location Description: East/Landmark (Optional)

* Lanes Affected: All Lanes Blocked (Both Directions)

* Date Occurred: 6/20/2011 10:00:00 AM

* Time Occurred: 7:30 AM

* Expected Duration: Over 2 Hours

Handling Agency: Grant County Sheriff

Contact Name: []

Contact Phone: []

Alternate Route: []

Alternate Route Verified: []

Comments / Additional Text: This closure is intended to keep motorists from traveling into East Village, Illinois, where there is a water on the roadway. There is no water on the

* Send To:

☒ OSPD SW Region

☒ OSPD SE Region

☒ OSPD NE Region

☒ OSPD NW Region

☒ OSPD NW Region

☒ WSP DeForest

☒ WSP Waukesha

☒ WSP Fond du Lac

☒ WSP Wisconsin

☒ WSP Tomah

☒ WSP Eau Claire

☒ WSP Spencer

☒ Trunkline

☒ State

☒ IL/MIN Full Closure

☒ OSCW

☒ Milwaukee County

☒ WSP NEK is Bordering Counties

☒ Individual Email

Add Email Address

Continue to Confirmation Page 33

The WisTransportal Traffic Incident alert system is maintained by the Wisconsin Traffic Operations and Safety Laboratory in partnership with Wisconsin Department of Transportation. Send questions or comments to tlad@topslab.wisc.edu. Refer to the TIA Contact page for support staff contact information.

You are logged in as bsama (ADMIN). [Logout](#)

TIA Version: 1.2.2

LINK Freeway Traffic Video

Link Public Safety Information Service

Home > WisDOT Video > LINK > SW Region > Video

Welcome, sparker | Manage Account | Logout | Contact | Help

SW Region

Video

Events

Incidents

Maps

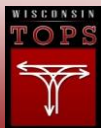
Multiview Page Layout: 1x3 | [Switch to the SingleView Page](#) | ☐ Use Alternate Port [?] | [Report a Problem or Send Feedback](#)

1 Dane County

2 Rock County

3 Tomah

Link is a Public Safety Information Site maintained by the Wisconsin Traffic Operations and Safety Laboratory in partnership with Wisconsin Department of Transportation. It is intended as a transportation information resource "linking" video and traffic data from the Department to agencies responsible for transportation safety and response. Send questions or comments to wisdotvideo@topslab.wisc.edu. Refer to the Link Contact page for support staff contact information.



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Emerging Technology and Issues



Driving Simulator



Driving research:
New simulator puts UW-Madison on the map



SAFETY LABORATORY

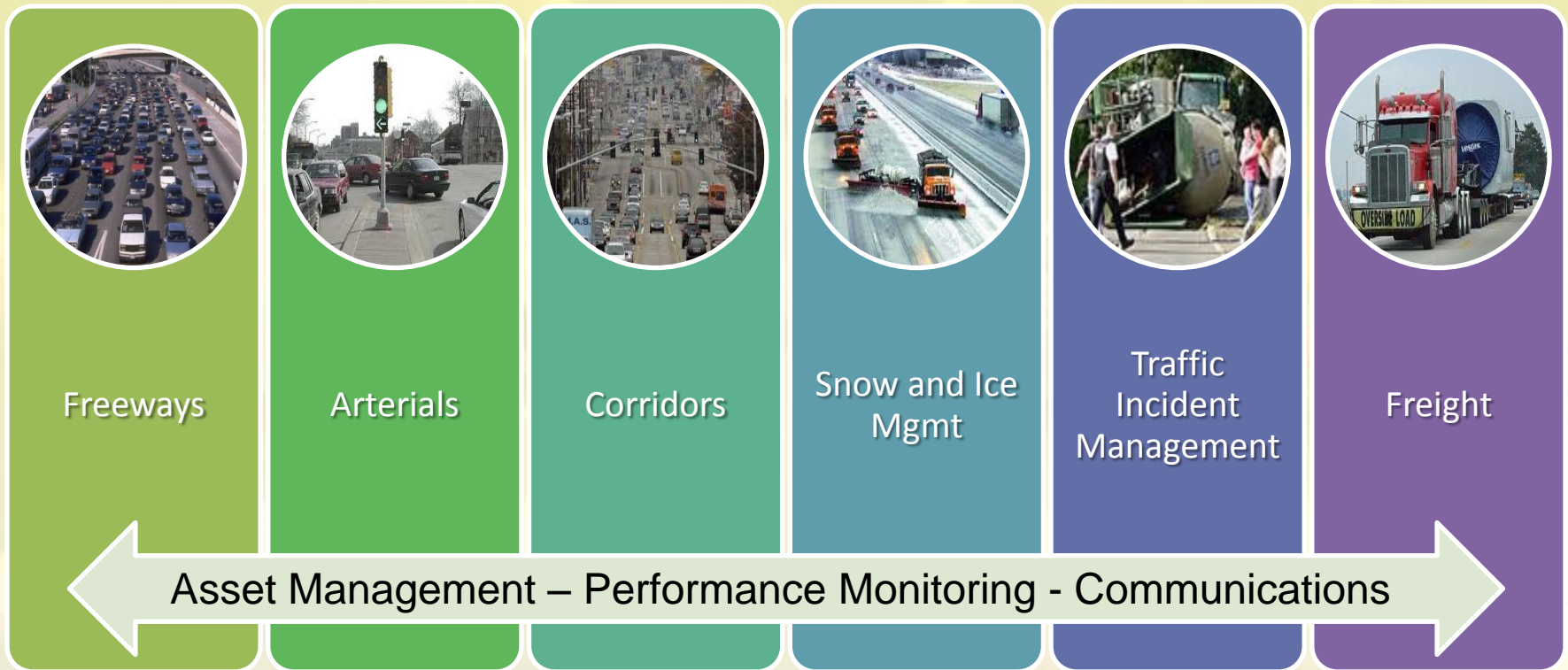
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Emerging Technology and Issues

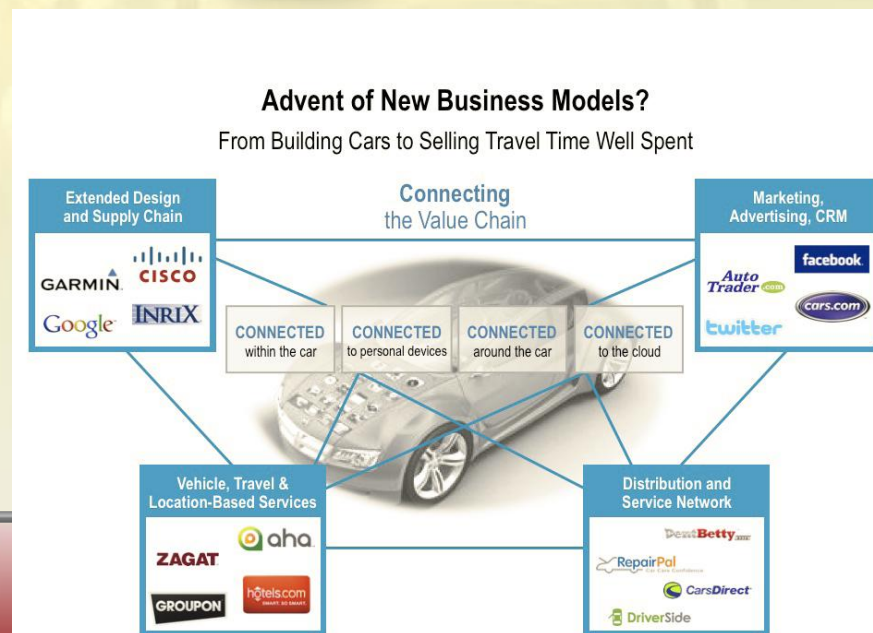
NextGen Highway Operations Software



Emerging Technologies and Issues

■ Traffic Detection and Monitoring

- Bluetooth and Wi-fi Monitoring
 - Urban Travel Times
 - Work Zone Delay and Diversion
 - Origin-Destination Studies
- Probe Data
 - Data from GPS and mobile phones
 - Private Sector driven
- Connected Vehicles
 - Auto Industry Driven
 - Government focus:
 - Policy and Standards
 - Vehicle to Roadside Communications



Partnership Benefits

WisDOT

- Tools to make job easier
- Better design and policy decisions
- Access to highly trained staff
- UW facilities and services
- Academic discounts
- Extremely low overhead
- Leverage federal funding and private sector partnerships
- Positive WisDOT publicity
- Rapid Prototyping/Innovation

TOPS

- Continuous access to transportation data
- Publication/Presentation Opportunities
- Student support
- Opportunities to publish
- Marketing tool to attract top students
- Integration of WisDOT standards into curriculum



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