

# SunGuide Training and Overview

April 13, 2017



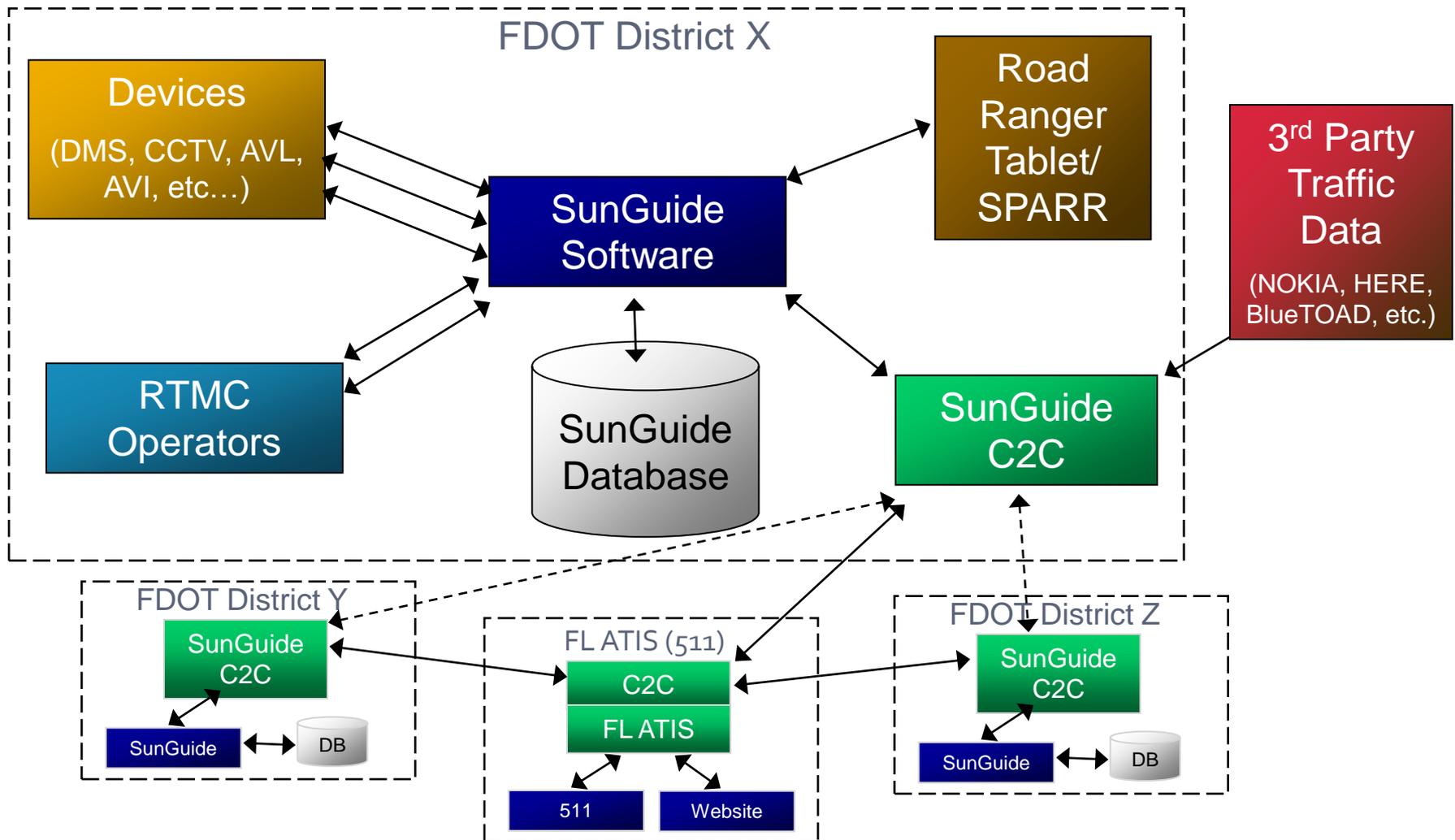
# Agenda

- Part 1: SunGuide Overview
- Part 2: Deploying SunGuide
- Part 3: SunGuide Management
- Part 4: Enhancements

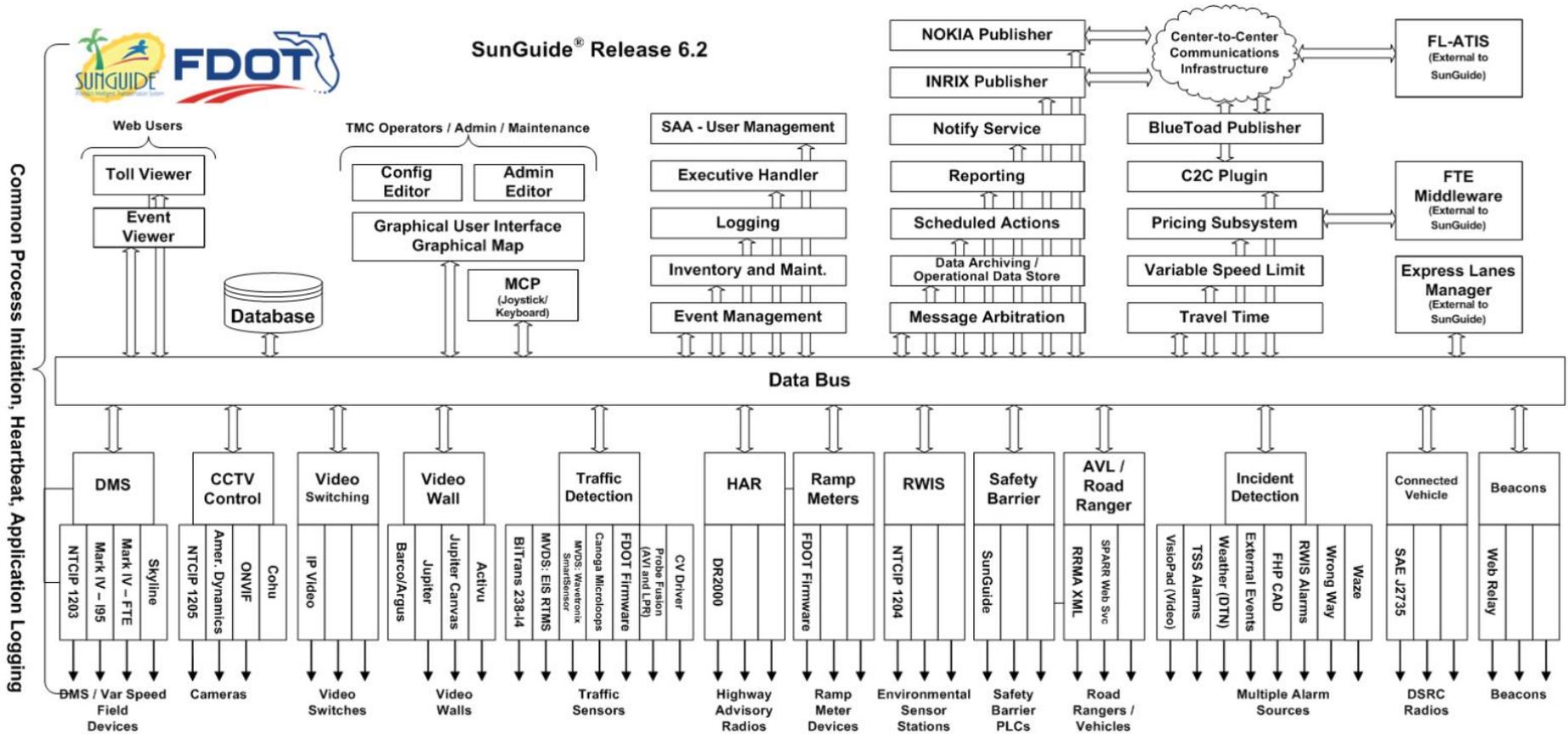
# Part 1: SunGuide Overview

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# SunGuide Architecture

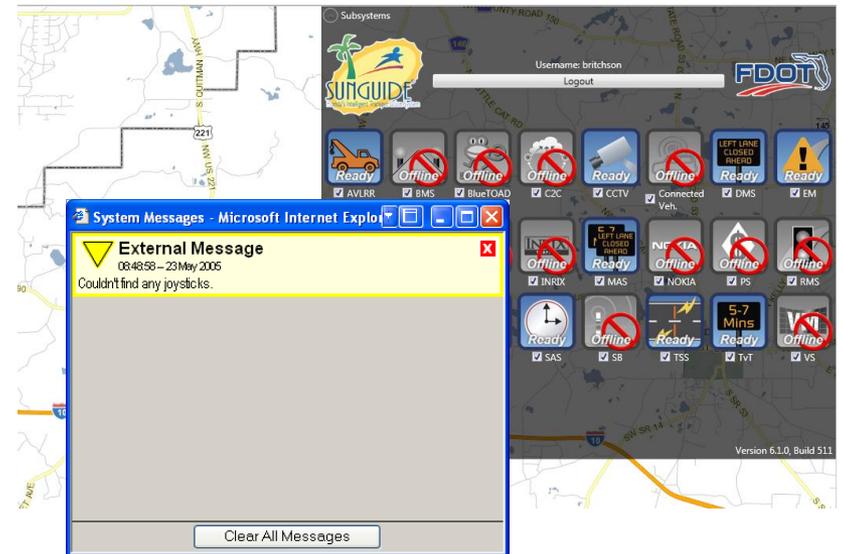
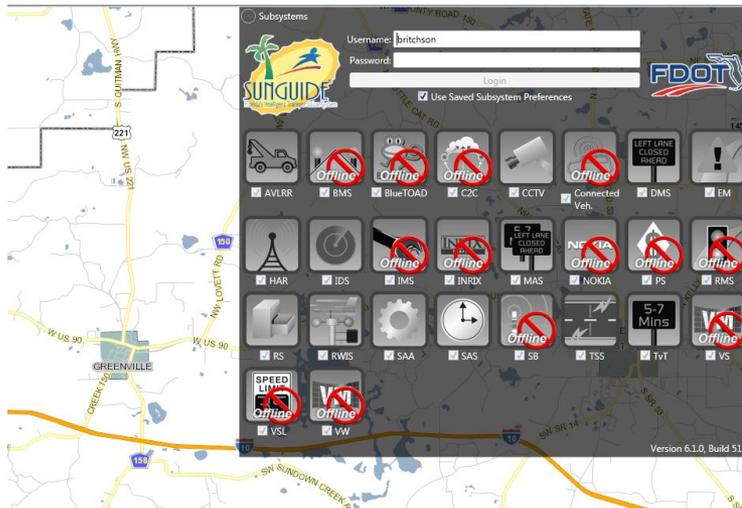


# SunGuide Software Architecture



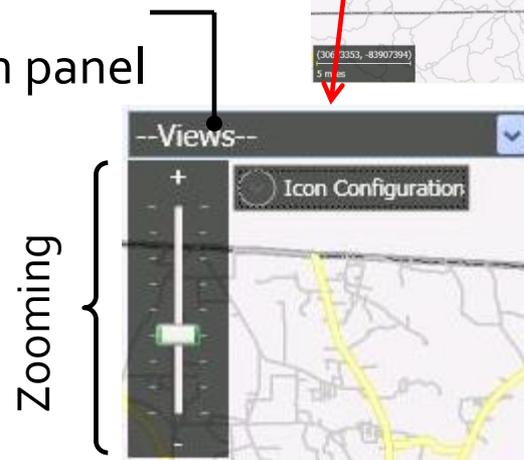
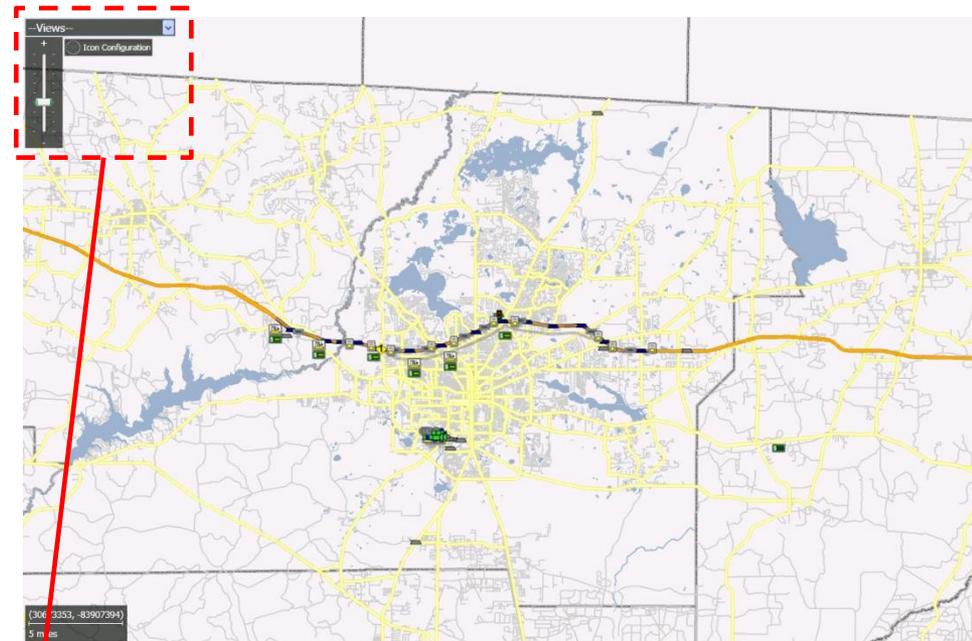
# Logging In

- Username and Password
  - Case Sensitive
  - Administrator creates/edits user accounts (via the Admin Editor)
- Subsystem Loading Progress Displayed
- Watch System Messages for Extra Information



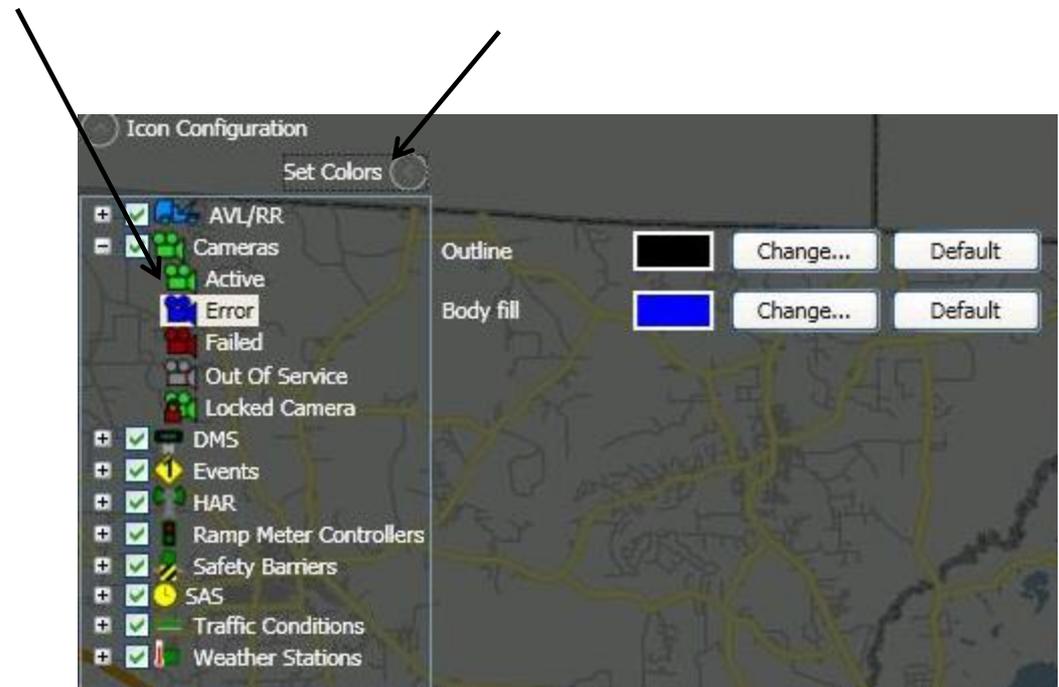
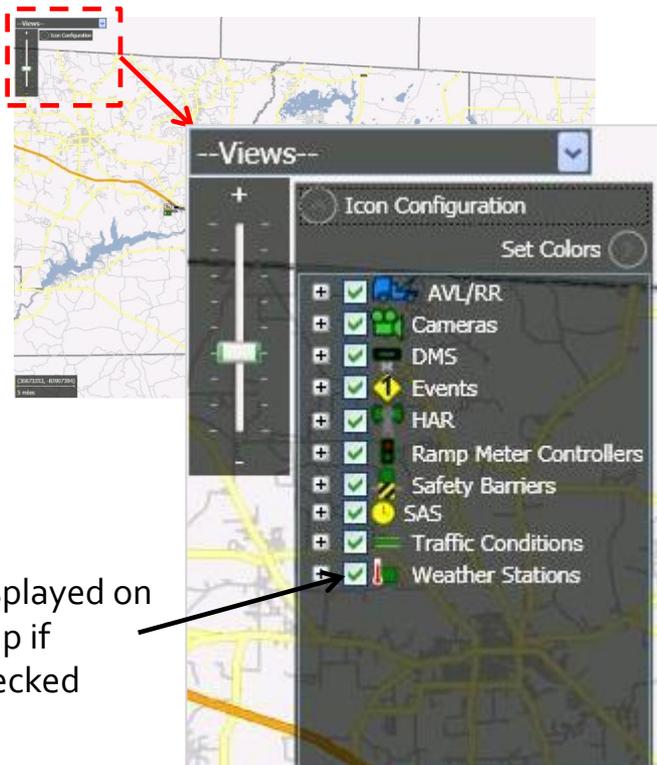
# Map: Managing Your View

- Zooming:
  - Zoom buttons in Navigation Panel
- Panning:
  - Click and drag map
- Jump to Views:
  - Cities
  - Districts
  - Areas of Interest
  - Drop down box in panel



# Map: Icon Configuration

- Icon Configuration is found at the top left corner of the map
- Selected icons are displayed on the map
- The color of icon states can be altered

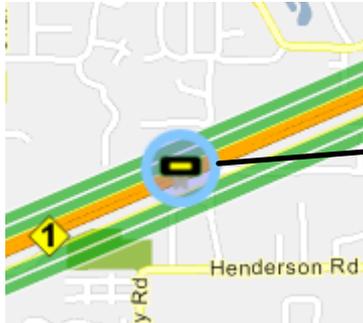


Displayed on  
map if  
checked

# Dynamic Message Signs (DMS)



# DMS: Map Display / Device Status



Device Messaging

Name	Roadway/Dir	Op Status	Queue State	No. Msgs	Last Sent	Current Message
VSL_I208_MM199	I-10 Eastbound	Active	Pending	5	6/27/2013 5:18:28 PM	TEST
VSL_I208_MM196	I-10 Eastbound	Active	Completed	5	6/28/2013 9:06:10 AM	TEST
VSL_I208_MM194	I-10 Eastbound	Active	Completed	5	6/28/2013 9:06:10 AM	TEST
Ledstar_Walkin	Springhill Road Northbound	Active	Completed	1	6/28/2013 10:25:35 AM	TEST
VSL-CM501-275	Springhill Road Northbound	Failed	Failed	1	N/A	

Status Queue Detailed Status

Current Message: TEST

Location: DMS Slab 3  
Roadway/Direction: Springhill Road Northbound

Op Status:	Active	Pixels:	Error
Brightness:	Auto (Level -1)	Lamps:	OK
Control Mode:	Central	Fans:	Error
Last Poll:	7/1/2013 9:25:37 AM	Power:	AC Line
Last Msg Sent:	6/28/2013 10:25:35 AM	Temperature:	OK
Last Comm Att:	7/1/2013 9:57:52 AM		



Status Queue Detailed Status

Current Message:

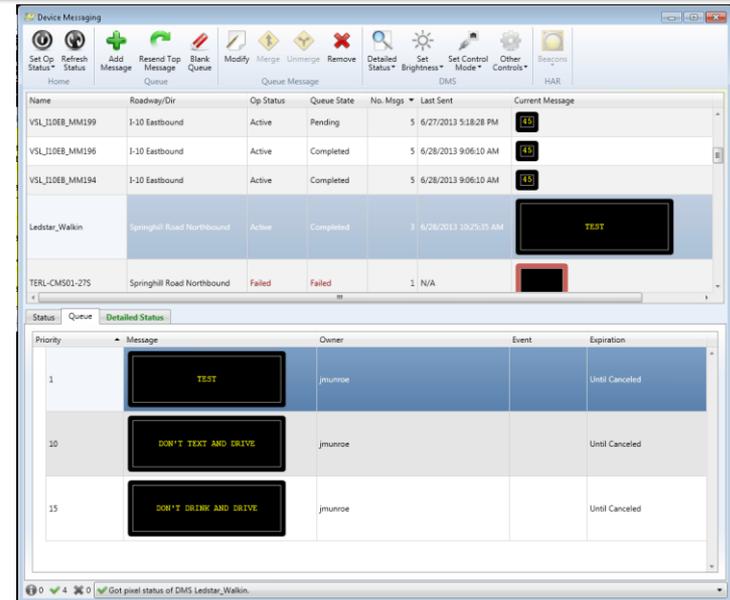
TEST

Location: DMS Slab 3  
Roadway/Direction: Springhill Road Northbound

Op Status:	Active	Pixels:	Error
Brightness:	Auto (Level -1)	Lamps:	OK
Control Mode:	Central	Fans:	Error
Last Poll:	7/1/2013 9:25:37 AM	Power:	AC Line
Last Msg Sent:	6/28/2013 10:25:35 AM	Temperature:	OK
Last Comm Att:	7/1/2013 9:57:52 AM		

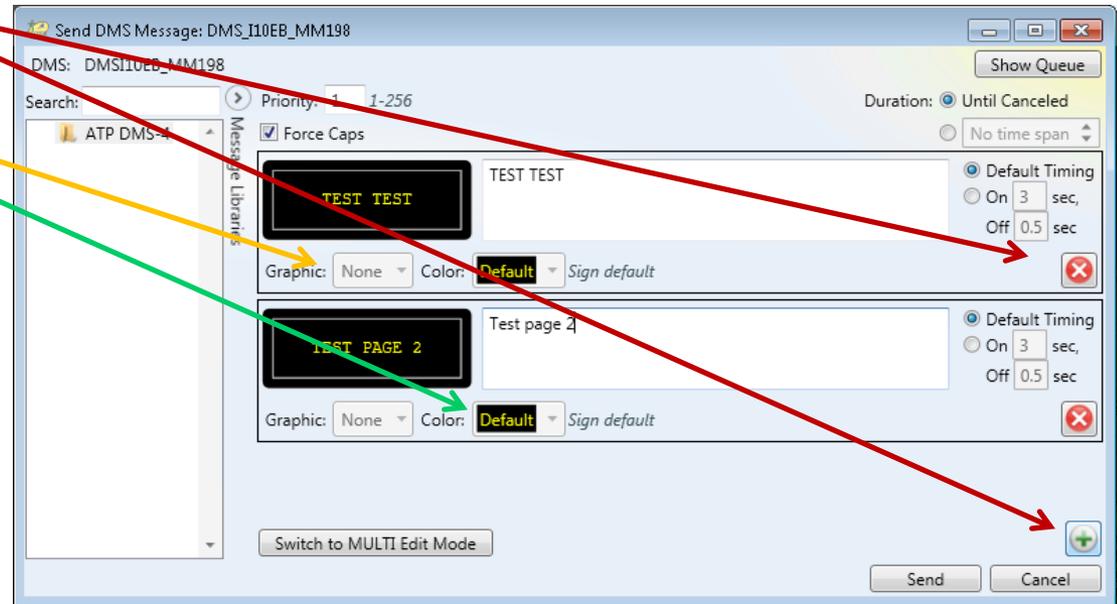
# DMS: Message Queue

- Message Queue
  - Select "View Queue" from the Short Status
  - Or, Select a DMS device from the Device Messaging Window and click on the "Queue" tab
- Shows list of messages currently queued



# DMS: Send Message

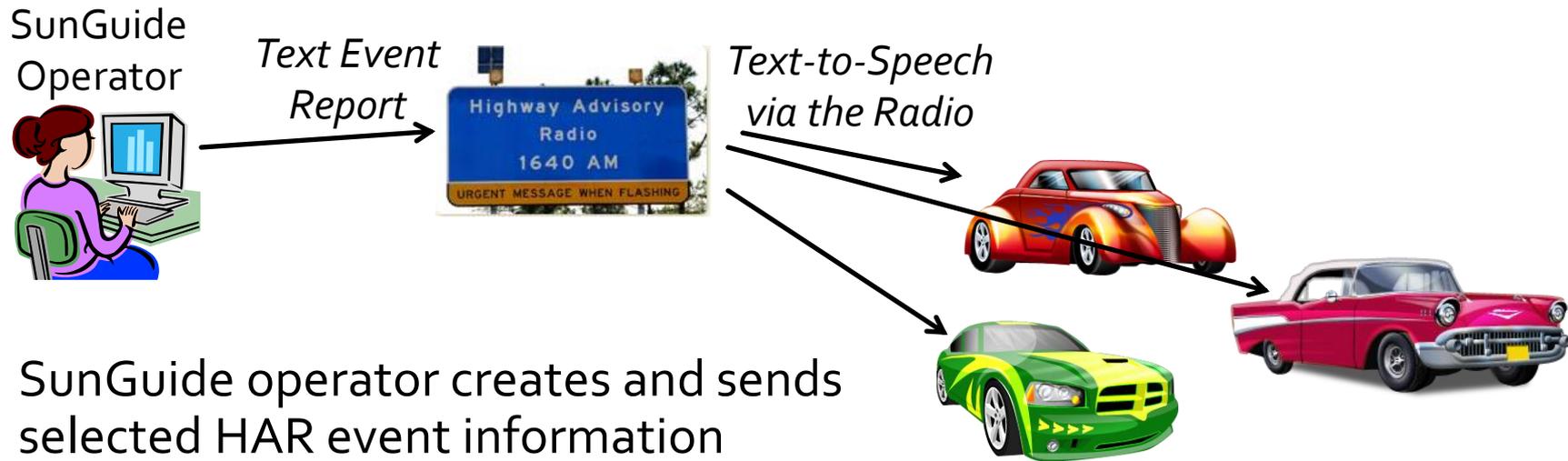
- Send message
  - From Short Status Window
  - Or, from “Add Message” button within the Device Messaging Window
- Ability to create messages with:
  - Multiple pages
  - Graphics
  - Custom Colors



# Highway Advisory Radio (HAR)



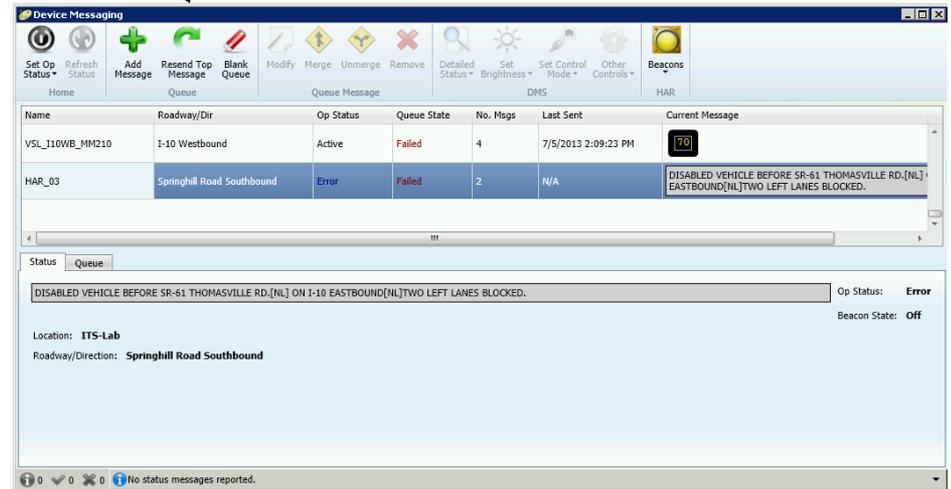
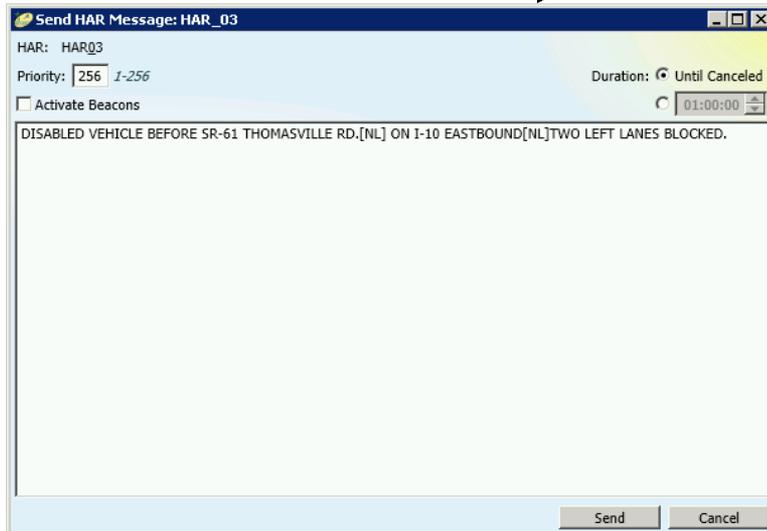
# How does HAR work?



- SunGuide operator creates and sends selected HAR event information
  - By selecting HAR
  - By generating a Response Plan
- Activated HAR translates text information to voice audio file and report over the radio
- Drivers hear traffic report on the radio

# HAR: Messaging

- Uses the same Device Messaging window used for DMS
  - Send HAR Message window differs

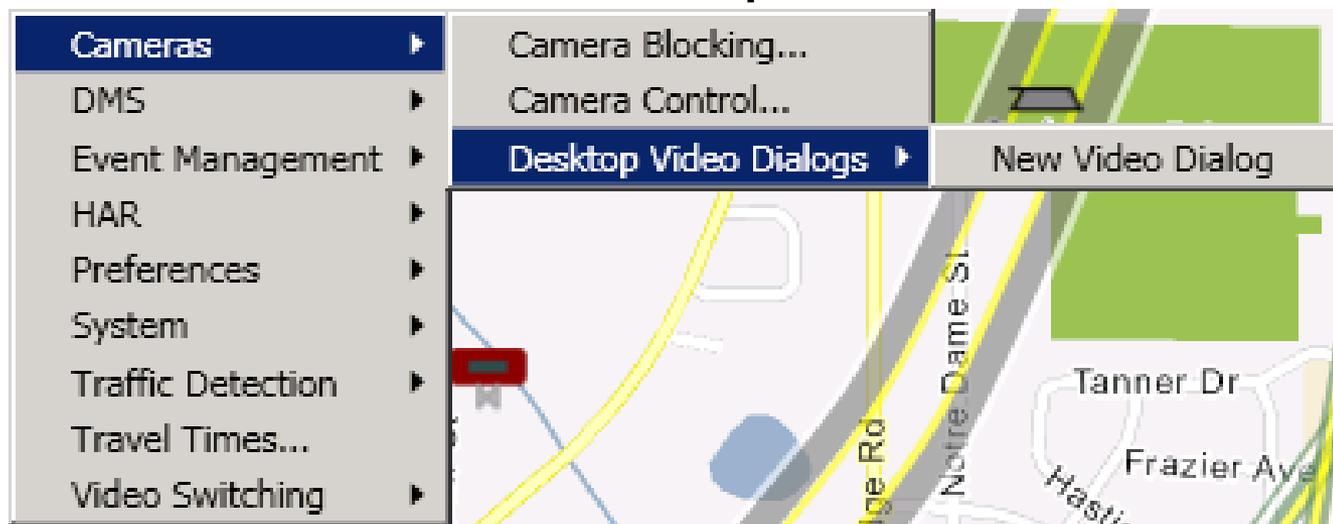


# Closed Circuit Television (CCTV)



# CCTV: Menus

- Main Video on Desktop (VoD) Menu



- Camera Specific Context Menu



# CCTV: Camera Controls

The image shows a software window titled "Desktop Video Wall 1\*" displaying a camera feed. The window has a menu bar with "New", "Options", "Layouts", and "Tours". Below the menu bar, it shows "[1/1] 005-Vicon-Impath-CertLab". The main area is a video feed of a dark room with a yellow sun icon in the center. A green padlock icon is in the top right corner. A context menu is open on the left side of the video feed, listing various actions. At the bottom of the video feed, there are numbered buttons (1-8) and a "Save Preset" button. On the right side, there are buttons for "Zoom", "W", "T", "AutoFocus: 73", "Focus", "F", and "N".

Lock Camera

Pan/Tilt

Right click

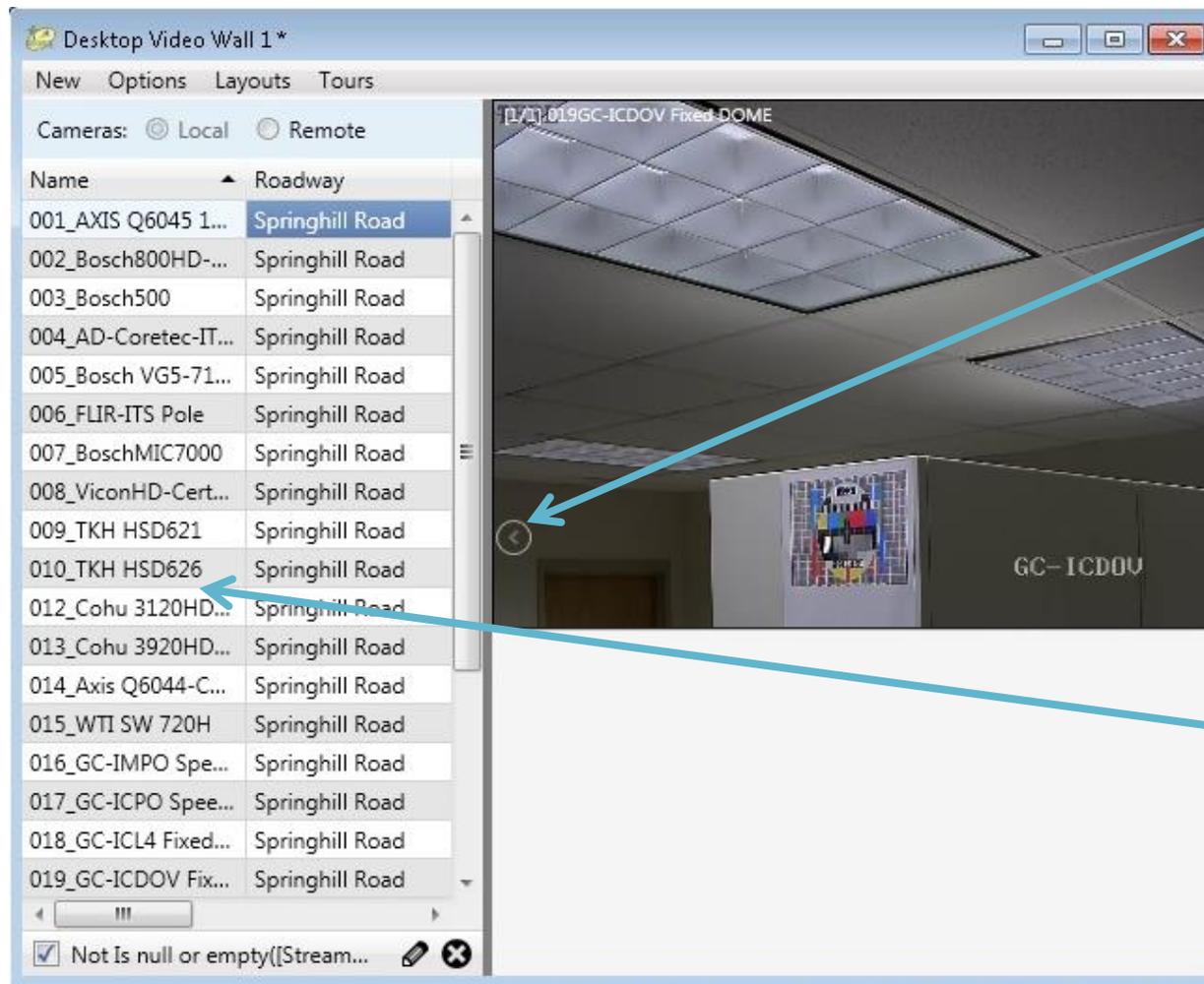
Zoom

Focus

Presets

- ✓ Stretch Video
- ✓ Show Label
- Pause Video**
- Pause Timer
- Cycle Next Camera
- Remove Current Camera
- Edit Tour...
- Camera Control...
- Close this Viewer

# CCTV: Camera Controls



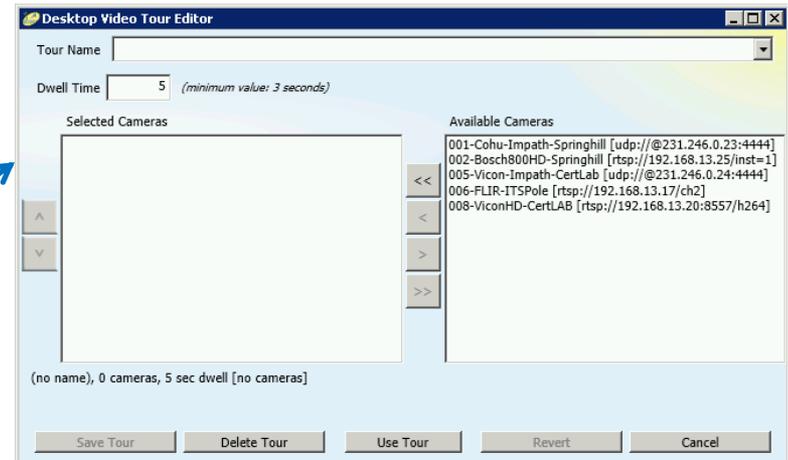
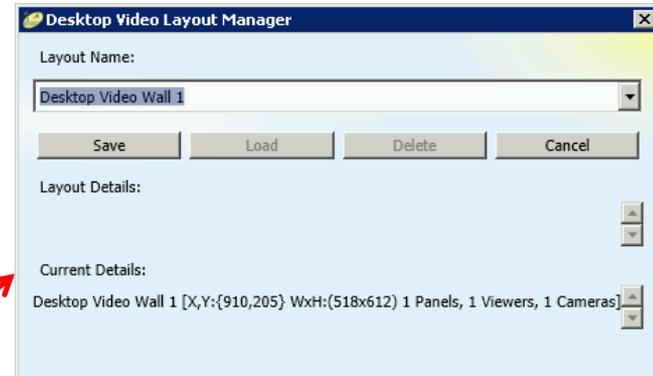
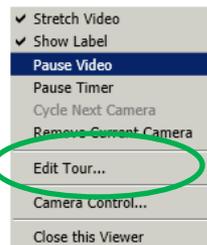
Expand List of Cameras

Drag and Drop Cameras from List

# CCTV: Window Menu Options



- New
  - Open a new Desktop View Wall window or video panel
- Options
  - Hide/Show Labels
  - Stretch/Unstretch Video
  - Play/Stop Video
- Layouts
  - Save/Load/Delete video layout
- Tours
  - Save/Delete/Use Video Tours
  - Also, right-click on video to select/edit tour

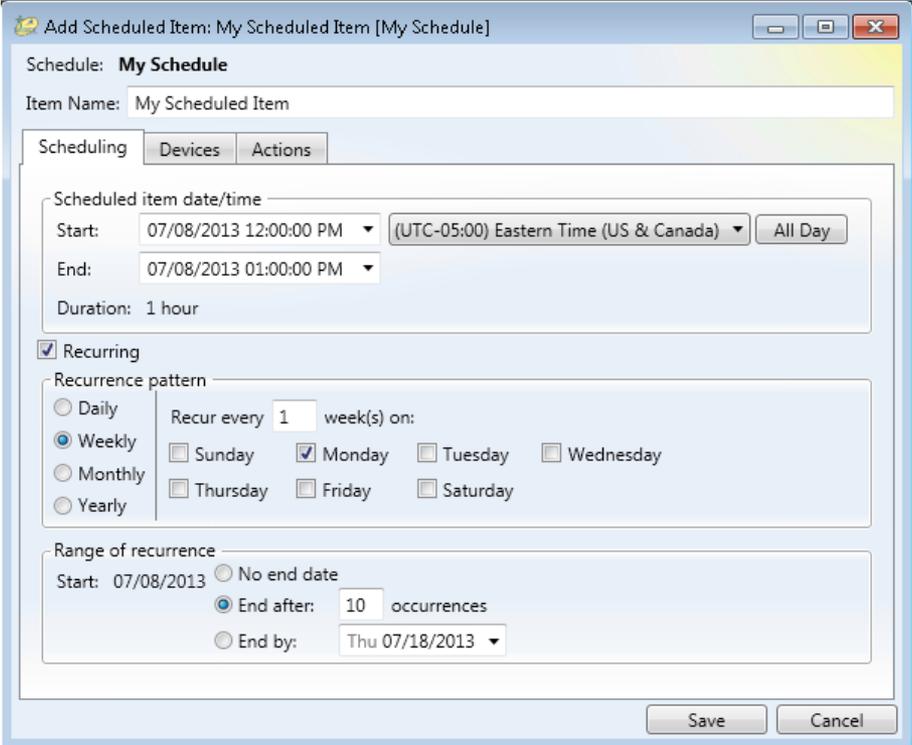


# Scheduled Actions Subsystem (SAS)



# Add New Item: Scheduling

- Within the “Add Scheduled Items” window
  - Name of the Item may be changed
- Within the “Scheduling” Tab
  - Time/length of the event
  - Recurrence pattern and frequency



The screenshot shows a dialog box titled "Add Scheduled Item: My Scheduled Item [My Schedule]". The "Schedule" is set to "My Schedule" and the "Item Name" is "My Scheduled Item". The "Scheduling" tab is active, showing the following options:

- Scheduled item date/time:** Start: 07/08/2013 12:00:00 PM, End: 07/08/2013 01:00:00 PM, Duration: 1 hour. Time zone: (UTC-05:00) Eastern Time (US & Canada).
- Recurring:** Checked. Recurrence pattern: Weekly. Recur every 1 week(s) on: Monday.
- Range of recurrence:** Start: 07/08/2013. End after: 10 occurrences.

Buttons for "Save" and "Cancel" are visible at the bottom right.

# Add New Item: Devices

- Specify devices to be used for an action
  - Select action type
- Once Action Type selected, window will be populated with associated devices
  - Use checkboxes to select devices

Screenshot of the 'Add New Item' dialog box. The 'Schedule' is 'test' and the 'Item Name' is 'New Scheduled Item'. The 'Action Type' dropdown menu is open, showing options: CCTV PTZ/Preset, DMS Messaging, DMS Group Messaging, Schedule Activation, Travel Time Devices, Travel Time Systemwide (highlighted), Reports, and Response Plans. A red arrow points from the text 'Select action type' to the 'Action Type' dropdown.

Screenshot of the 'Add New Item' dialog box, 'Devices' tab. The 'Action Type' is 'DMS Messaging'. A table lists associated devices with checkboxes for selection. A yellow arrow points from the text 'window will be populated with associated devices' to the table. Three green arrows point from the text 'Use checkboxes to select devices' to the checkboxes in the table.

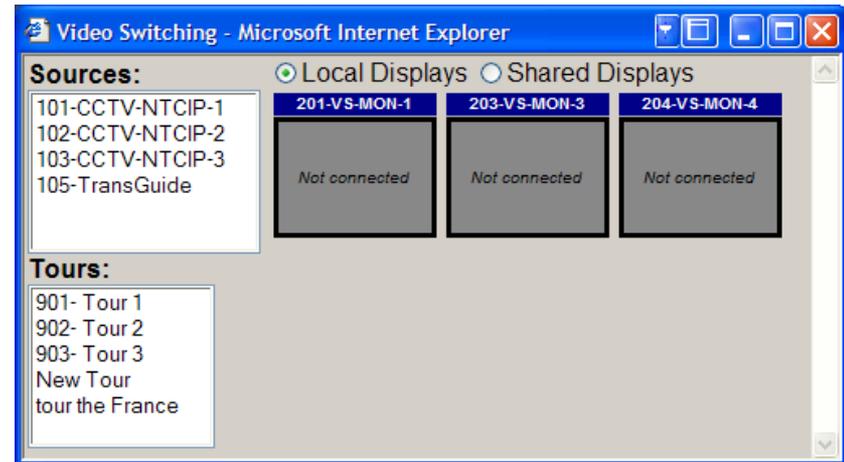
Name	Roadway / Direction
<input type="checkbox"/> Dialup	I-10 Eastbound
<input type="checkbox"/> DMS_I10EB_MM191	I-10 Eastbound
<input type="checkbox"/> DMS_I10EB_MM194	I-10 Eastbound
<input type="checkbox"/> DMS_I10EB_MM198	I-10 Eastbound
<input type="checkbox"/> DMS_I10EB_MM202	I-10 Eastbound
<input type="checkbox"/> DMS_I10EB_MM208	I-10 Eastbound
<input type="checkbox"/> DMS_I10EB_MM212	I-10 Eastbound

# Video Switching and Control

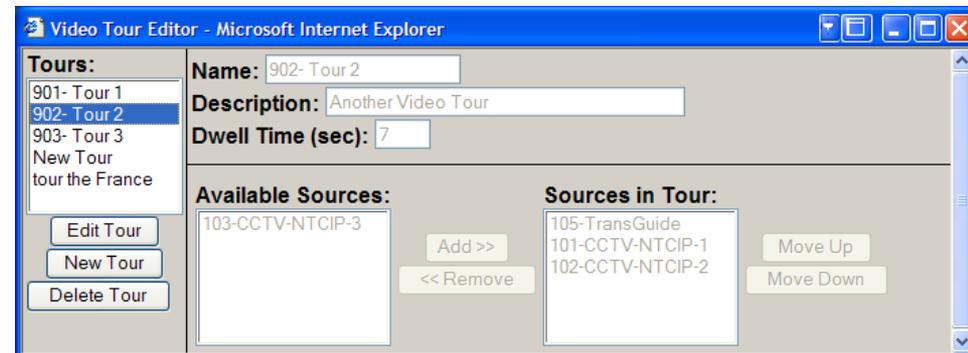


# Video Switching: GUI

- Displaying Video
  - Left click on either
    - Source
    - Tour
  - Left click on destination
  - Warning appears in System Messages if source and destination are not compatible



- Tours
  - Allows operators to cycle through cameras, but does not move camera positions
  - Set dwell time to display each source



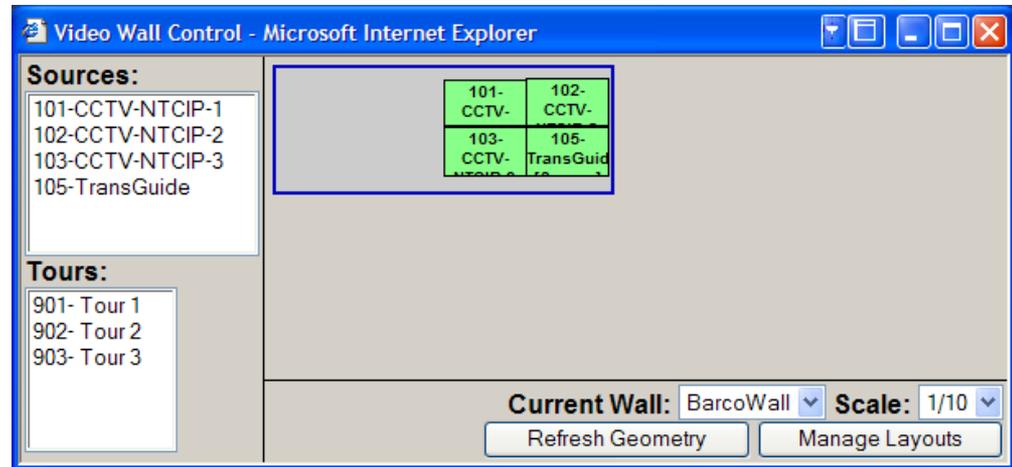
# American Dynamics Keyboard

- Manual Control Panel (MCP)
- Capabilities
  - Control CCTV devices (pan, tilt, zoom, focus, iris)
  - Switch video (monitors or video wall)
  - Display tours
- Device Naming
  - Numeric prefix required for cameras, monitors, and video wall viewers (example: 101-CCTV1)

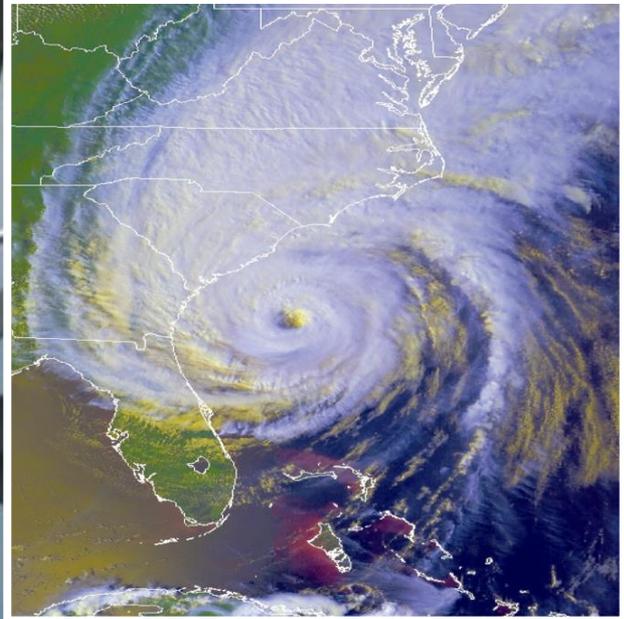


# Video Wall

- Wall Configuration
  - Barco software
- Displaying Video
  - Left click on either
    - Source
    - Tour
  - Left click on viewer
- Changing Layouts
  - Select current layout (if any) and deactivate it
  - Select new layout and activate it
  - Note: Layouts cannot be edited, only selected



# Roadway Weather Information System (RWIS)



# RWIS: Status

- Weather Conditions at RWIS Station

- Air

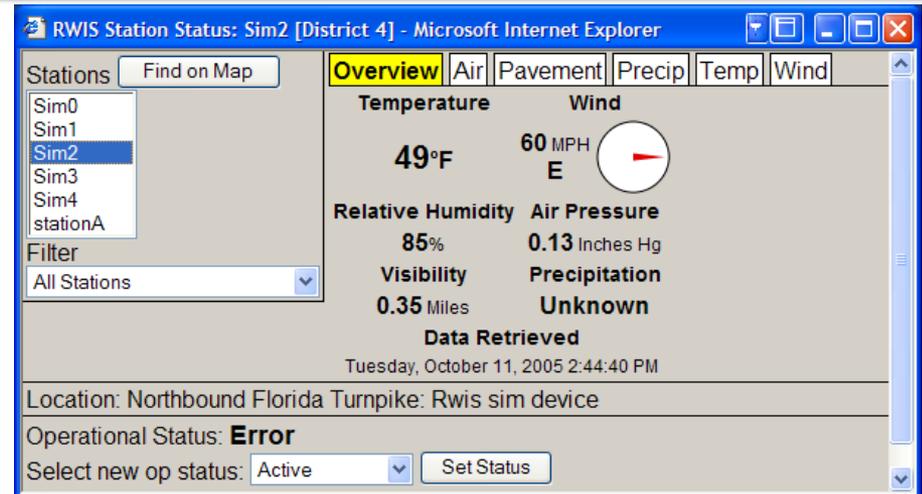
- Air Pressure
- Visibility
- Situation (clear, cloudy)

- Pavement

- Temperature
- Freezing Point
- Black Ice
- Surface Treatments

- Precipitation

- Precipitation Type
- Current Depth
- Accumulation Rate
- Humidity



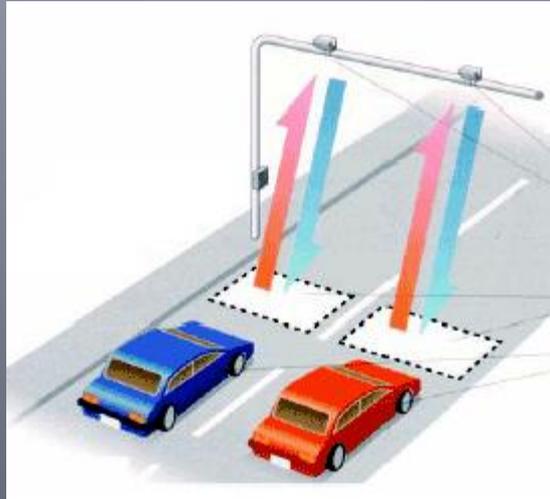
- Temperature

- Air temperature
- Dew point

- Wind

- Average Speed / Direction
- Current Speed / Direction
- 10 Minute Gust Speed / Direction

# Transportation Sensor Subsystem (TSS)

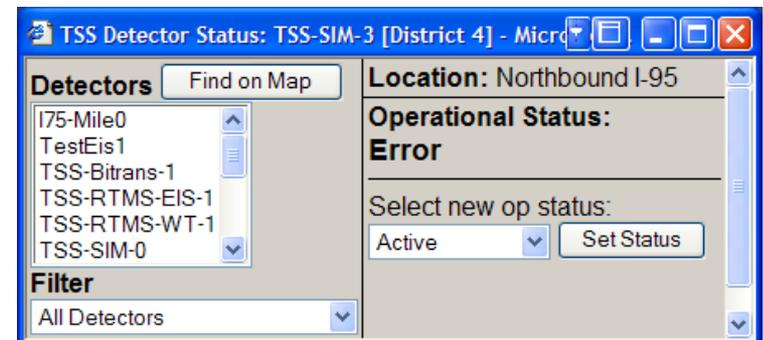
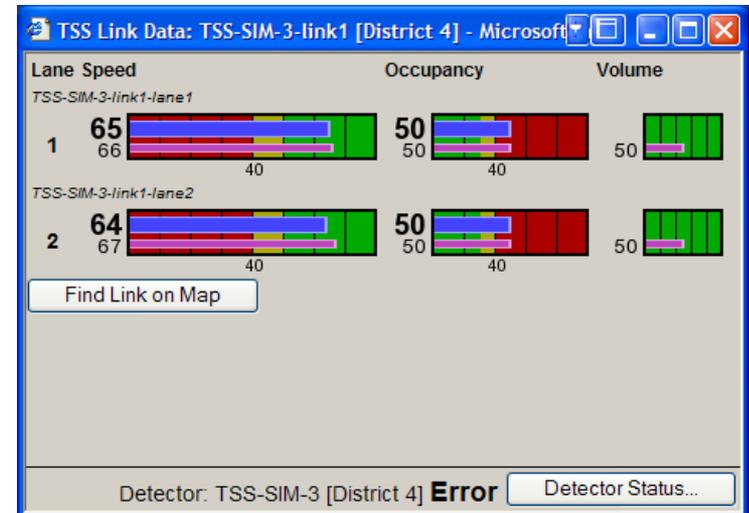


# TSS: Overview

- Detector Types
  - RTMS: Remote Traffic Microwave Sensor
  - MVDCS: Microwave Vehicle Detection System
  - Inductive Loops
  - User Interface does not differentiate between detector types
- Traffic Data
  - Speed and occupancy data down to the “lane” level
  - Generates “alarms” which indicate an abnormal traffic condition
- Data Organization
  - Lane: Individual detection zone (one point on freeway)
  - Link: Collection of lanes across freeway
  - Detector: Field unit which collects traffic data

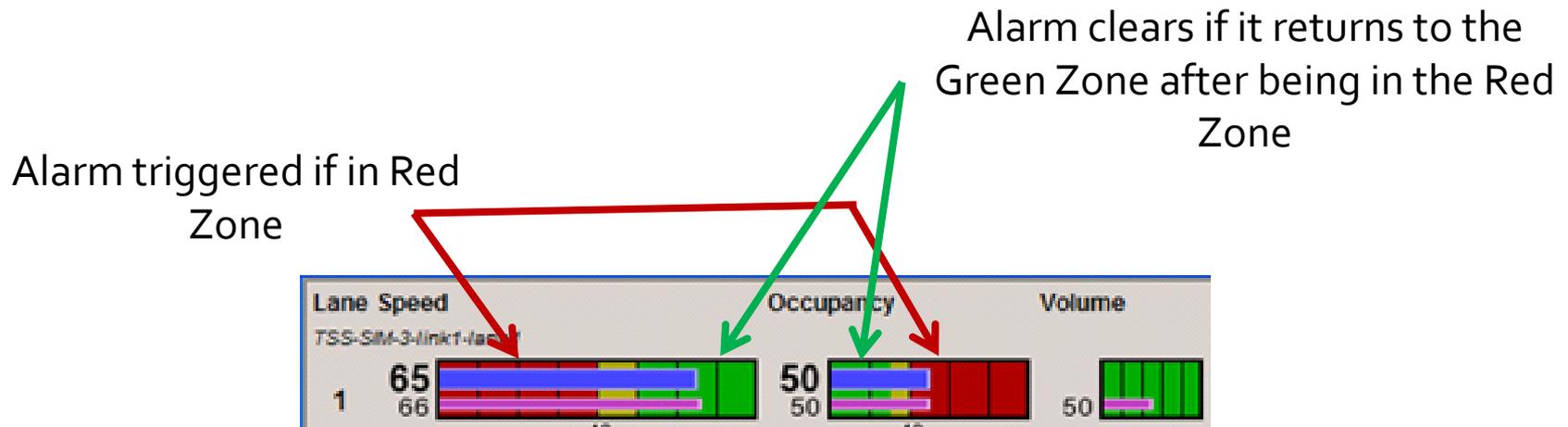
# TSS: Detailed Data

- Traffic Data (all lanes of link)
  - Lane Speed
    - Current average speed
    - Last reported speed
    - Current alarm threshold
  - Occupancy
    - Current average occupancy
    - Last reported occupancy
    - Current alarm threshold
  - Volume (if supported)
    - Last reported volume
- Detector Status
  - View and change operational status



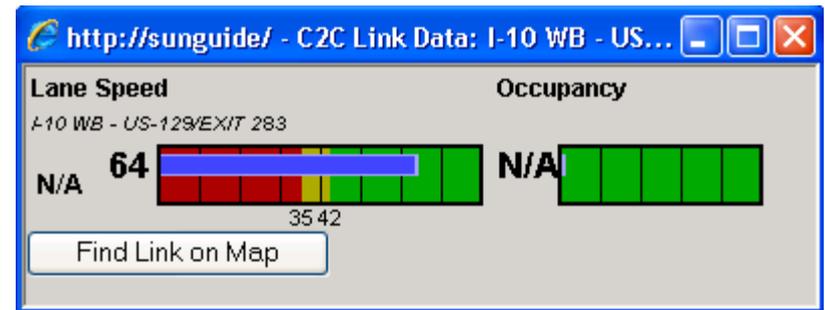
# TSS: Enhanced Alarm Functionality

- Enhanced Functionality
  - No alarm triggered if TSS reports no traffic (occupancy = 0)
  - If alarm is triggered, a “cleared” alarm will be triggered if speed is above a recovery level and occupancy is below a recovery level
  - If alarm is not handled by operator and traffic “recovers”, alarm will be removed
  - May be configured based only on Speed (District to decide)
  - No TSS alarms generated when sensor is first placed on line



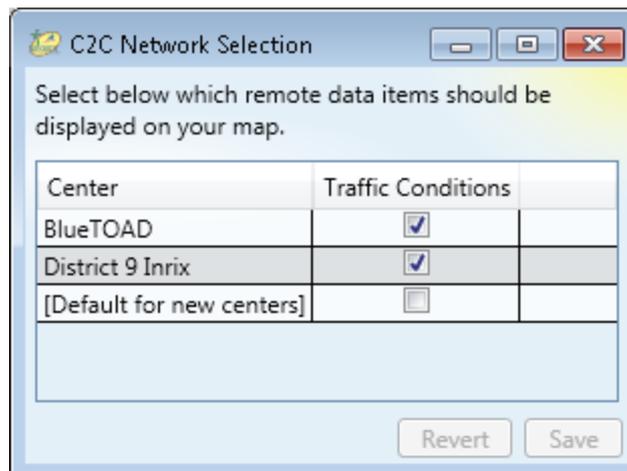
# TSS: Nokia / HERE Data

- Data includes average per lane speeds and link names only
- Does not include occupancy, volume, polled values, or device status



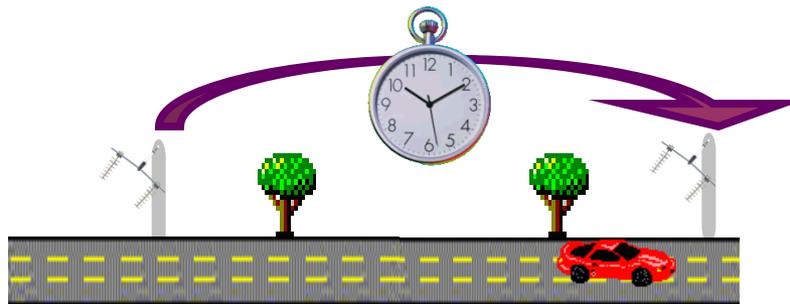
# TSS: BlueTOAD

- BlueTOAD (Bluetooth Travel-time Origination And Destination) detects anonymous MAC addresses through Bluetooth.
- The system calculates travel time through analysis of subsequent detections.
- Data received in SunGuide in a similar fashion to INRIX.



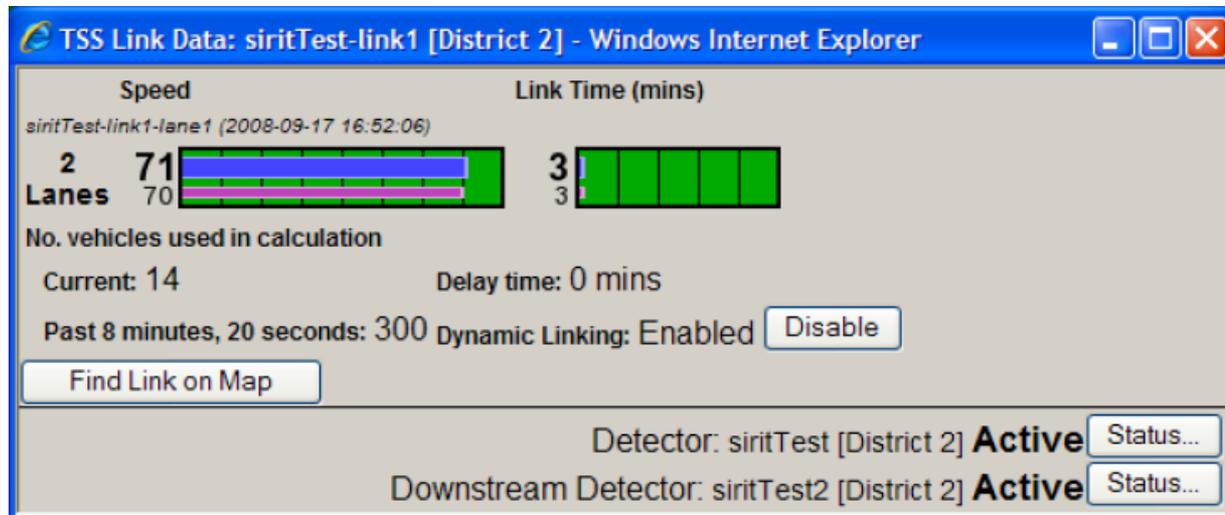
# AVI / LPR vs Point-Speed Detectors

- Automated Vehicle Identifiers (AVI) and License Plate Readers (LPR) are different than Point-Speed Detectors, such as Loop Detectors or Radar Roadside Detectors
- A single Point-Speed Detector typically provides average speeds, volumes, and occupancy
- A single AVI or LPR provides a tag/license plate read and a timestamp – need at least two contiguous detectors to calculate travel times / speeds



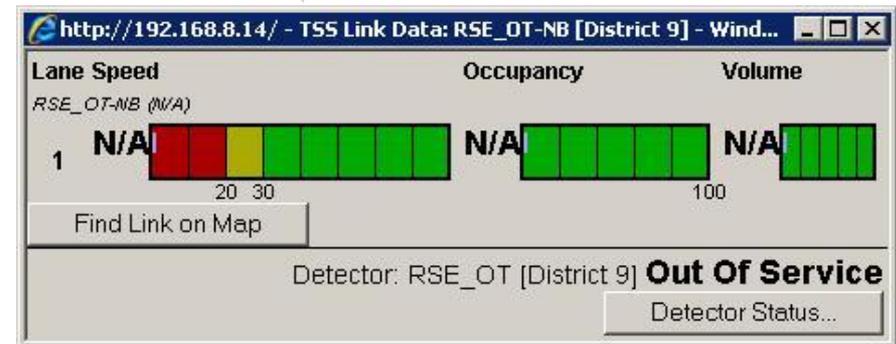
# AVI / LPR TSS Status

- Clicking on a TSS link for a AVI / LPR pair on the operator map launches the TSS status window
  - Smoothed and the last calculated speed and travel time
  - Delay time, as compared to free flow speeds (speed limit based)
  - Number of vehicles used in calculation
  - Detector status (active, offline, error, failed)



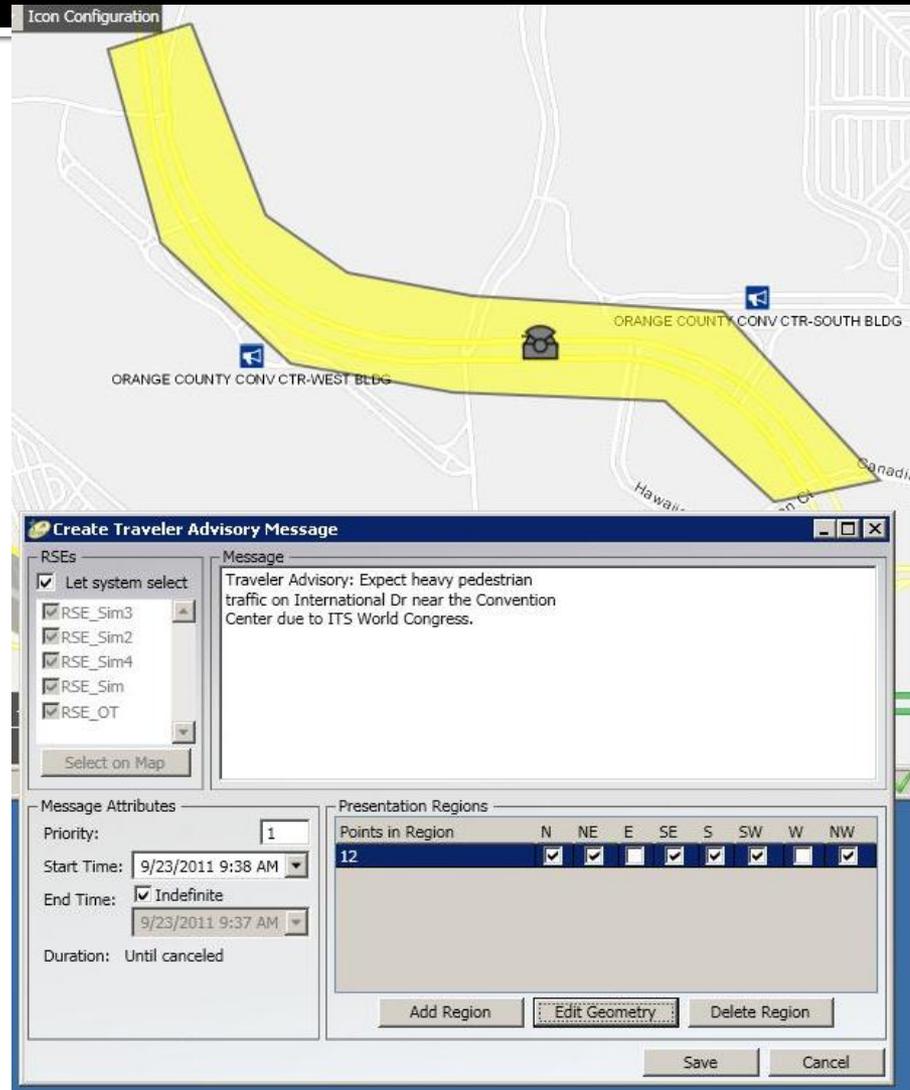
# CVS: RSE Status

- TSS Links
  - Map displays RSE icon and one or more TSS Links
  - TSS Links are direction-specific
  - TSS Links should visually indicate the number of lanes detected
  - Clicking TSS Link launches TSS Status window



# CVS: Adding/Editing TAM

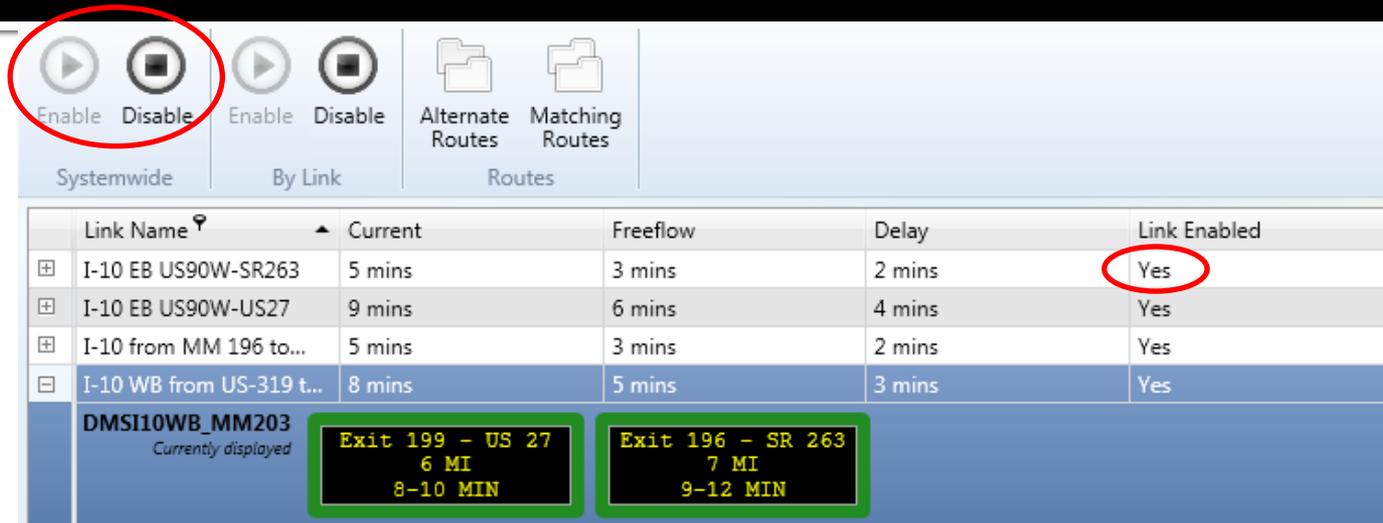
- To create Region
  - Click Add Region
  - Select direction of travel of vehicles to receive TAMs
- Click Edit Geometry
- Add points to form area where TAM should be reported
- Click Done and then Save



# Travel Times (TvT)



# Travel Times Status



Link Name	Current	Freeflow	Delay	Link Enabled
I-10 EB US90W-SR263	5 mins	3 mins	2 mins	Yes
I-10 EB US90W-US27	9 mins	6 mins	4 mins	Yes
I-10 from MM 196 to...	5 mins	3 mins	2 mins	Yes
I-10 WB from US-319 t...	8 mins	5 mins	3 mins	Yes

**DMSI10WB\_MM203**  
Currently displayed

Exit 199 - US 27  
6 MI  
8-10 MIN

Exit 196 - SR 263  
7 MI  
9-12 MIN

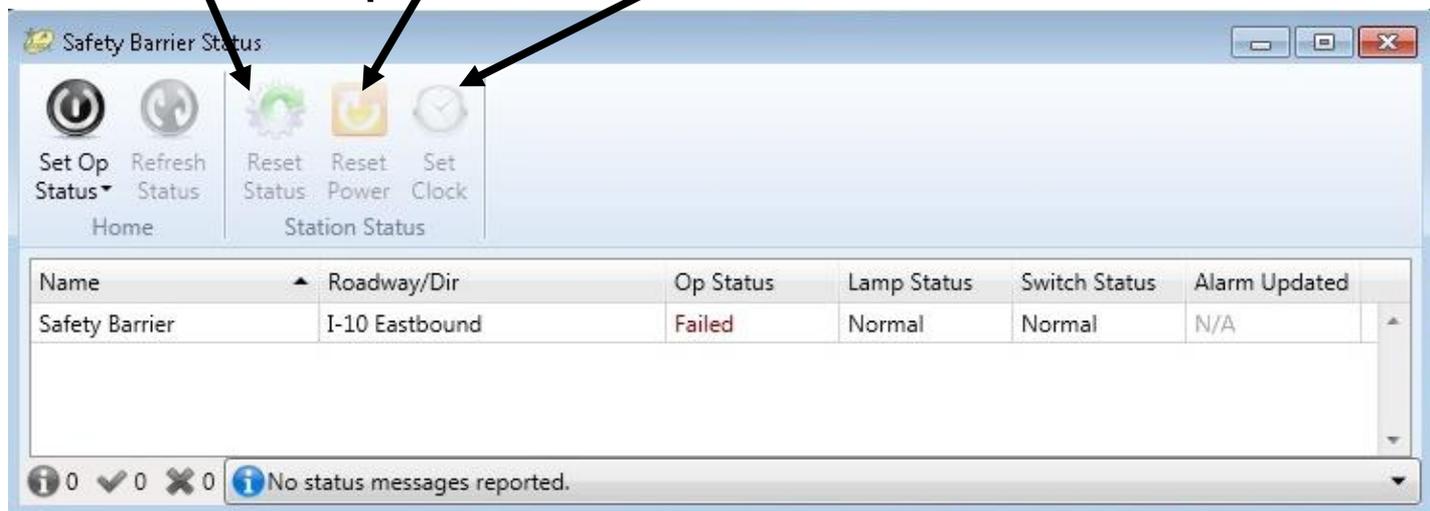
- Operator can enable/disable calculating travel times for any link by
  - Selecting the checkbox on the Left column
  - Clicking “Enable Links” or “Disable Links”
- Highlight on Map will center the operator map and highlight in white the TSS links that comprise the TvT link

# Safety Barriers



# Safety Barriers: Overview

- Monitors Vehicles Leaving Roadway
  - Alarm is generated if vehicle breaks barrier at roadside
  - Indicated on map by flashing SB icon
  - Reset status / power / clock from window



# Event Management GUI



# EM: Event List

- Display Options
  - Filter on event status, event owner, description, etc.
  - Sort events
- Events Grouped
  - Events with Lane Blockage
  - Events without Lane Blockage
  - Unconfirmed Events
  - Unresolved Events
  - Closed Events
    - After closing event, remains for one hour
  - Other Events
    - False Alarms, Voids
    - Remains for one hour

Sort by Clicking Column Headers

Search Events

Event ID	Filter	Op	Panel on Startup	Save Preferences	Printable List	Add Event
<b>Active Events with Travel Lane Blockage</b>						
1017	Broward on I-95 Southbound, At Griffin Rd	Blue DODGE TAG# FL-ABC 123	Accident	2 Left Lanes (of 4 Lanes) Blocked	RLStest SGB dashton	11/27/2007 11:30 11/29/2007 09:35
1028	Broward on I-95 Southbound, At Atlantic Blvd	CADILLAC TAG# LA-FL657	Accident	2 Center Lanes (of 5 Lanes) Blocked	B00 SGB dashton	11/28/2007 09:34 11/29/2007 09:34
1030	Broward on I-95 Northbound, At Commercial Blvd.		Accident	2 Left Lanes (of 3 Lanes) Blocked	SGB jboguslawski	11/28/2007 12:07 11/29/2007 12:22
1034	Broward on I-95 Northbound, At Broward Blvd		Accident	1 Left Lane (of 3 Lanes) Blocked	SGB jboguslawski	11/28/2007 16:14 11/29/2007 13:41
1044	Broward on I-595 Westbound, At Pine Island Rd		Accident	1 Left Lane (of 3 Lanes) Blocked	SGB jboguslawski	11/29/2007 08:32 11/29/2007 09:06
1045	Broward on Florida Turnpike Southbound, At I-595		Disabled Vehicle	2 Right Lanes (of 4 Lanes) Blocked	SGB jboguslawski	11/29/2007 09:09 11/29/2007 09:20
1046	Broward on I-95 Northbound, At Atlantic Blvd		Accident	1 Right Lane (of 5 Lanes) Blocked	B04 SGB master	11/29/2007 10:44 11/29/2007 10:59
<b>Active Events without Travel Lane Blockage</b>						
1006	Broward on I-95 Northbound, At 500	Black FORD TRUCKS	Amber Alert	No lane blocked	SGB jboguslawski	11/26/2007 18:15 11/28/2007 13:41

Events Grouped

# EM: Open/Edit Events

- Open/Edit an Event
  - By clicking on the event from the Event List
  - By clicking on the icon on the Map
- Organized by Categories
  - Administrative Details
  - Impact on Roadways
  - Reporting & Dispatch
  - Event Details
  - Comments
  - Event History
- Also lists timestamps when agencies were contacted, on scene, and departed

The screenshot displays the 'Event # 1017' form, organized into several sections:

- Administrative Details:** Operator: dashon; Date/Time Added: 11/27/2007 11:30; Status: Active; Status Last Updated: 11/27/2007 11:30. Includes a 'Contacts' section stating 'There are currently no contacts.'
- Impact on Roadways:** Event Location / Congestion: Broward on I-95 Southbound At Griffin Rd (No Congestion); Lane Blockage / DMS Assignment: 2 Left Lanes (of 4 Lanes) Blocked; Anticipated Clearance Time: [ ] minutes; Alternate Routes ID: N/A.
- Reporting & Dispatch:** Organization: SunGuide Broward TMC; Notifying Agency: Broward Road Ranger; Notifier Contact: 800 800; Vehicles Dispatched: RLStest; Procedural Error: There are currently no errors.
- Event Details:** FHP Incident #: [ ]; Event Type: Accident (with checkboxes for HAZMAT, Fire, Rollover); Nearest CCTV: N/A; Preset: 0; Timestamp: 11/29/2007 12:22; No CCTV: checked; Vehicles Involved: Blue DODGE TAG# FL-ABC 123; Link to Primary Event: N/A.

On the right side, there is a 'Notified by TMC' section with checkboxes for FHP, Palm Beach Road Ranger, Traffic Engineering, Broward Road Ranger, and Other Responders.

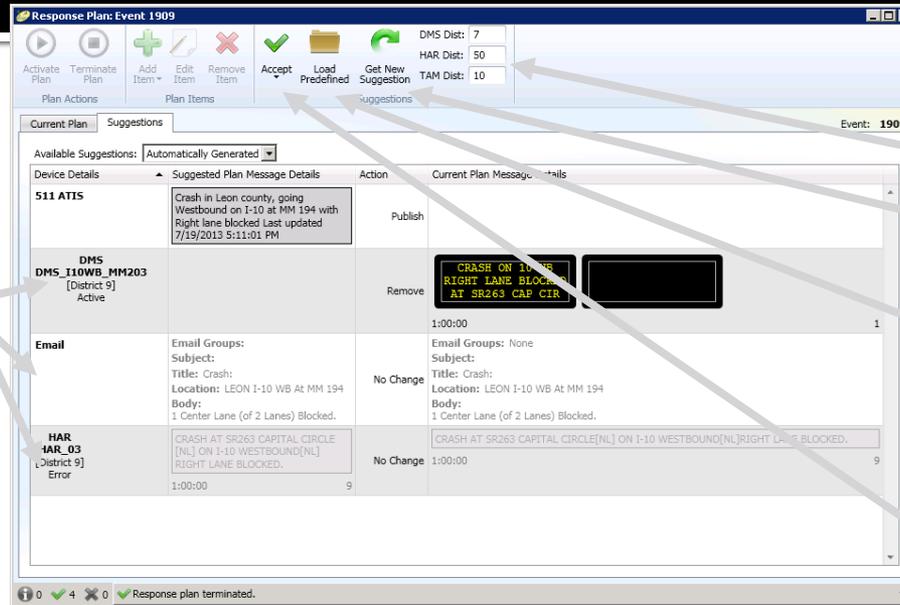
# Response Plans

ID	Event	Primary Vehicle	Event Type	Blockage	RR	Org	Operator	Date Added	Date Last Updated	
<b>Active Events with Travel Lane Blockage</b>										
1017	Broward on I-95 Southbound, At Griffin Rd	Blue DODGE TAG# FL-ABC 123	Accident	2 Left Lanes (of 4 Lanes) Blocked	RLStest	SGB TMC	dashton	11/27/2007 11:30	11/29/2007 09:35	Response Plan Nearest Camera Find On Map Audit
1028	Broward on I-95 Southbound, At Atlantic Blvd	CADILLAC TAG# LA-FL657	Accident	2 Center Lanes (of 5 Lanes) Blocked	B00	SGB TMC	dashton	11/28/2007 09:34	11/29/2007 09:34	Response Plan Nearest Camera Find On Map Audit
1030	Broward on I-95 Northbound, At Commercial Blvd.		Accident	2 Left Lanes (of 3 Lanes) Blocked		SGB TMC	jboguslawski	11/29/2007 12:07	11/29/2007 12:22	Response Plan Nearest Camera Find On Map Audit
1034	Broward on I-95 Northbound, At Broward Blvd		Accident	1 Left Lane (of 3 Lanes) Blocked		SGB TMC	jboguslawski	11/28/2007 16:14	11/29/2007 13:41	Response Plan Nearest Camera Find On Map Audit
1044	Broward on I-95 Westbound, At Pine Island Rd		Accident	1 Left Lane (of 3 Lanes) Blocked		SGB TMC	jboguslawski	11/29/2007 08:32	11/29/2007 09:08	Response Plan Nearest Camera Find On Map Audit
1045	Broward on Florida Turnpike Southbound, At I-95		Disabled Vehicle	2 Right Lanes (of 4 Lanes) Blocked		SGB TMC	jboguslawski	11/29/2007 09:09	11/29/2007 09:20	Response Plan Nearest Camera Find On Map Audit
1046	Broward on I-95 Northbound, At Atlantic Blvd		Accident	1 Right Lane (of 5 Lanes) Blocked	B04	SGB TMC	master	11/29/2007 10:44	11/29/2007 10:59	Response Plan Nearest Camera Find On Map Audit
<b>Active Events without Travel Lane Blockage</b>										
1006	Broward on I-95 Northbound 500	Black FORD TRUCKS	Amber Alert	No lane blocked		SGB TMC	jboguslawski	11/26/2007 18:15	11/28/2007 13:41	Response Plan Nearest Camera



# EM: Response Plan

## Selecting a Response Plan



Email to be sent  
DMS Messages  
HAR Messages

Modify  
search  
distance

View other  
plans

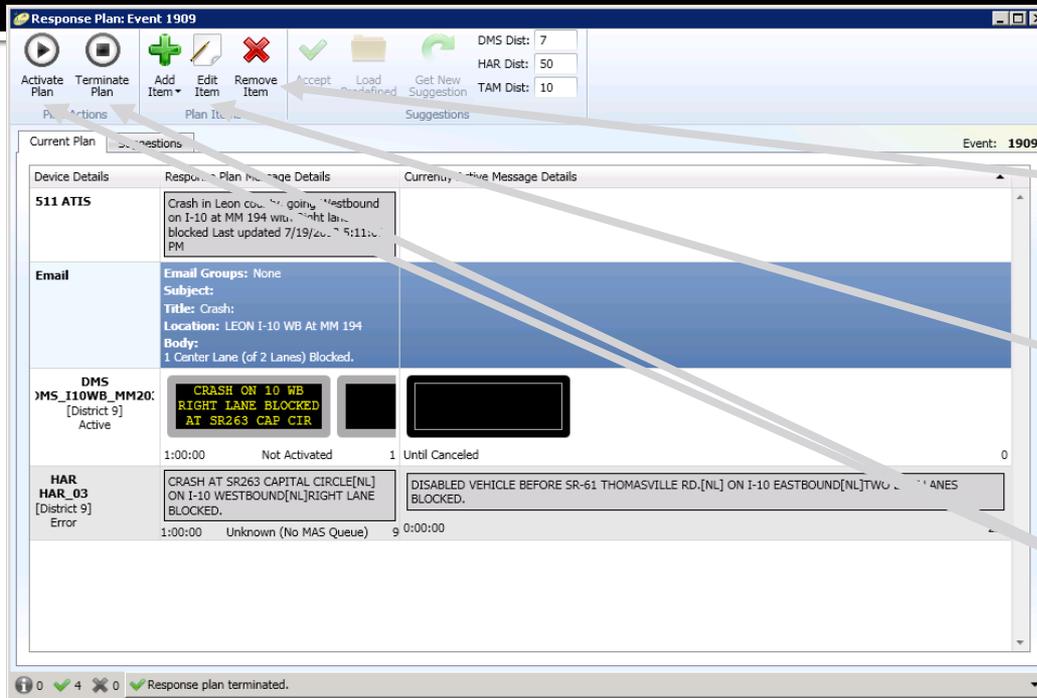
Set as Response

Get New  
Suggestion

- After clicking on "Save, Get Response", the window above appears
- Operator can modify the search distance, from the event location to the upstream DMS
  - Type in "HAR radius" and/or "DMS radius" and click "Get New Suggestion"
- Operator can view other plans
- Review the proposed email message, DMS messages, & HAR messages
- Click "Accept" once a Response Plan is determined

# EM: Response Plan

## Activate / Terminate Response Plan



Remove Email /  
DMS / HAR /  
511

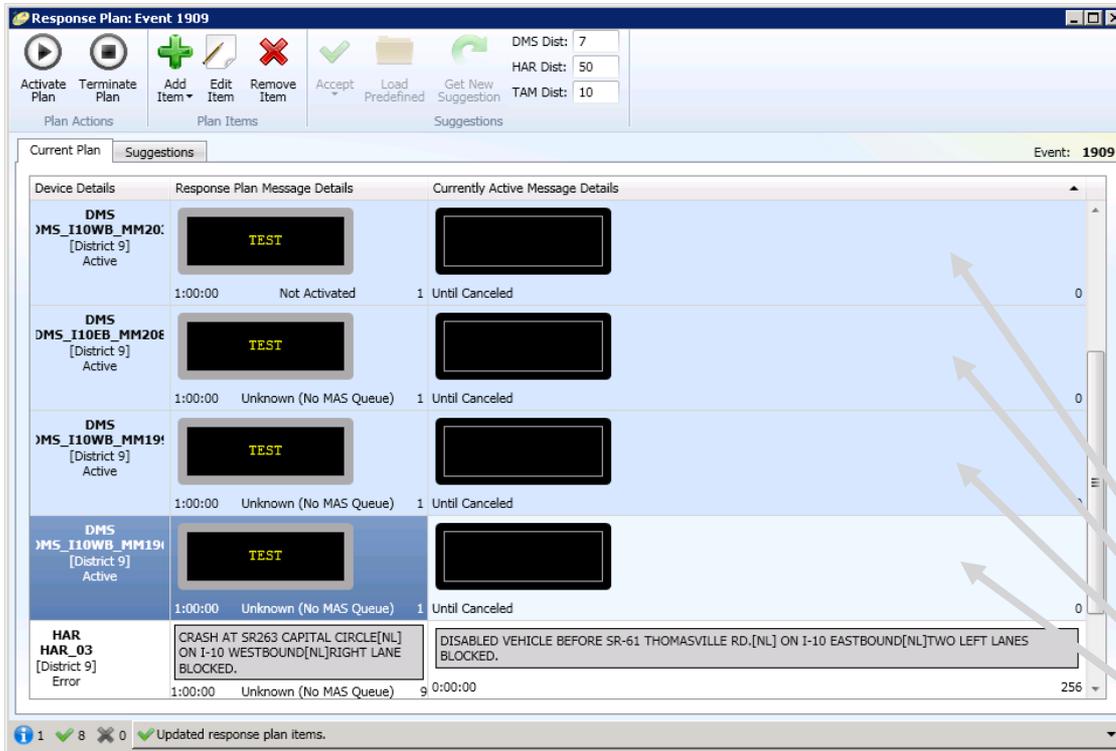
Modify Email  
Recipients /  
DMS / HAR

Activate /  
Terminate Plan

- After clicking on "Accept", the window above appears
- Click "Edit Item" or "Remove Item" to modify or remove email recipients, DMS, or HAR if needed/desired
- "Activate Plan" will initiate Response Plan
  - Upon activation, SunGuide will send emails and DMS messages
- "Terminate Plan" will remove messages from DMS

# EM: Response Plan

## DMS Groups: Editing Multiple DMS



- Hold Ctrl and left click all DMS that will be edited
- Click the "Edit Item" button and the Message Editor Window appears
- Modify the message in the Message Editor Window
- Click "Save", then "Activate Plan"

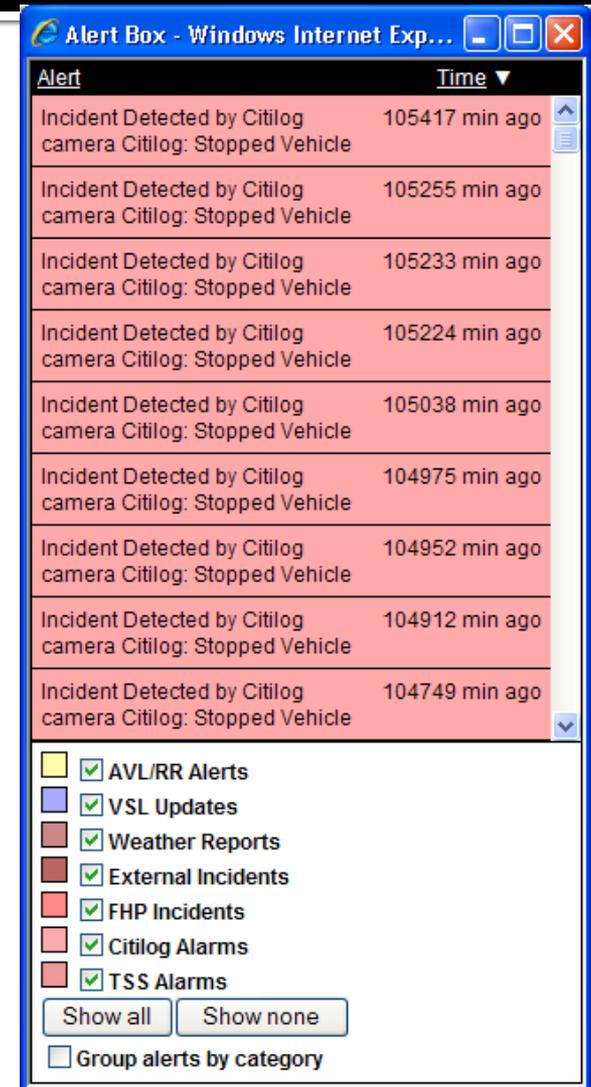
DMS Group

# Incident Detection Subsystem (IDS)



# Incident Detection Subsystem

- SunGuide will prompt operators of possible new events detected from external systems, such as weather systems or Citilog, or FHP CAD
- No events will be created/updated without operator intervention
- Upon detection, an alert will be reported in the alert box / window
  - Alerts listed on right side of Events List
  - Alert window can be opened from Operator Map, left click -> System -> System Alerts



The screenshot shows a window titled "Alert Box - Windows Internet Exp...". The window contains a table of alerts and a filter section below it.

Alert	Time
Incident Detected by Citilog camera Citilog: Stopped Vehicle	105417 min ago
Incident Detected by Citilog camera Citilog: Stopped Vehicle	105255 min ago
Incident Detected by Citilog camera Citilog: Stopped Vehicle	105233 min ago
Incident Detected by Citilog camera Citilog: Stopped Vehicle	105224 min ago
Incident Detected by Citilog camera Citilog: Stopped Vehicle	105038 min ago
Incident Detected by Citilog camera Citilog: Stopped Vehicle	104975 min ago
Incident Detected by Citilog camera Citilog: Stopped Vehicle	104952 min ago
Incident Detected by Citilog camera Citilog: Stopped Vehicle	104912 min ago
Incident Detected by Citilog camera Citilog: Stopped Vehicle	104749 min ago

Filter section:

- AVL/RR Alerts
- VSL Updates
- Weather Reports
- External Incidents
- FHP Incidents
- Citilog Alarms
- TSS Alarms

Buttons: Show all, Show none

Group alerts by category

# FHP Alerts: Handling Window

SunGuide Incident Detected - Windows Internet Explorer

**Type:** Fhp Incident  
**Device:** FHP ID ORCC07CAD7844857  
**Location:** I-4 LAKE MARY BLVD (Lat: 28578019, Lon: -81445110)  
**Time:** 06-19-2009 14:19  
**County:** Leon  
**Author:** CDT483-CAD  
**Event Type:** Accidents And Incidents [Crash]  
**Remarks:** roadway cleared  
**Urgency:** 10  
**Started:** 06-19-2009 14:15:00  
**Updated:** 06-19-2009 14:15:00  
**Trooper Arrival:** 06-19-2009 14:14:40  
**Trooper Dispatch:** 06-19-2009 14:01:36  
**Ended:**  
**Source:** ORCC

**Nearby Events (0.5 mi):** -- 0 events nearby --

**What would you like to do?**

- Create New Event
- Create Secondary Event
- Set Responder Arrival
- Dismiss as Already Detected
- Dismiss as False Alarm
- Associate to Existing Event
- Acknowledge, Take No Action

Cancel Next >

- When operator selects alert, handling window provides:
  - Information from FHP CAD
  - List of “nearby events” (distance configurable)
  - List of options

# FHP Alerts: Key FHP CAD Fields

**Event Location**

County:

Road:

Direction:

Reference Point:

Relationship To Exit:

Distance From Exit (ft):

0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

Mile Marker:

**Type:** Fhp Incident  
**Device:** FHP ID: ORCC07CAD7844857  
**Location:** I-4 LAKE MARY BLVD (Lat: 28578019, Lon: -81445110)  
**Time:** 06-19-2009 14:19  
**County:** Leon  
**Author:** CDT483-CAD  
**Event Type:** Accidents And Incidents [Crash]  
**Remarks:** roadway cleared  
**Urgency:** 10  
**Started:** 06-19-2009 14:15:00  
**Updated:** 06-19-2009 14:15:00  
**Trooper Arrival:** 06-19-2009 14:14:40  
**Trooper Dispatch:** 06-19-2009 14:01:36  
**Ended:**  
**Source:** ORCC

Notified by TMC	Responders	Notified	On Scene	Departed
<input type="checkbox"/>	FHP	6/19 14:19	6/19 14:14	
▶ Other Responders				

**Event Details** Save

FHP Incident #:

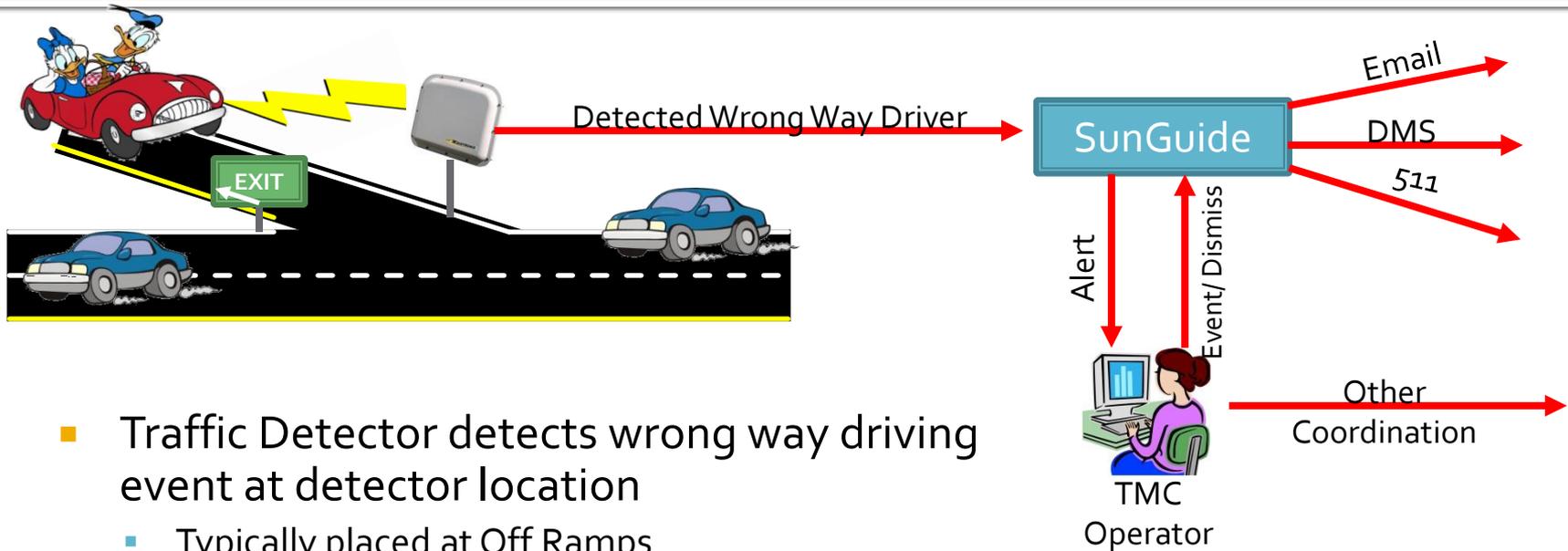
Event Type:   HAZMAT  Fire  Rollover Clone event

Nearest CCTV:  Preset:  Timestamp:   No CCTV

**Event History**

Date	Category	Details
6/19/2009 14:28:07	COMMENT	(Data) FHP Incident reported: FHP ID: ORCC07CAD7844857 County: leon Status: Update Source: ORCC FHP Event Type: accidentsAndIncidents Location: I-4 at LAKE MARY BLVD Author: CDT483-CAD Remarks: roadway cleared Urgency: 10 Desc: serious accident Start time: 06-19-2009 14:15:00 Update time: 06-19-2009 14:15:00 Trooper Arrival time: 06-19-2009 14:14:40 Trooper Dispatch time: 06-19-2009 14:01:36 End time: 06-19-2009 14:26:38
6/19/2009 14:28:07	FHP	New Event created based on FHP alert

# Wrong Way Driving: Concept



- Traffic Detector detects wrong way driving event at detector location
  - Typically placed at Off Ramps
- SunGuide receives alert
- Email and Operator Alerts are automatically generated
- Operator should confirm event
  - Create an event report and generate a response plan, or
  - Dismiss with possible cause

# Wrong Way Driving: Alerts

- Alerts appear in alert box and popup window
- Email alert sent to configured list of people



A configuration panel for alerts with a list of categories and checkboxes. The categories are: Weather Alerts, RWIS Alerts, External Incidents, FHP Incidents, Citilog Alarms, TSS Alarms, Safety Barrier Alerts, and Wrong Way Driver Alerts. The 'Wrong Way Driver Alerts' checkbox is highlighted with a red square. Below the list are 'Show all' and 'Show none' buttons, and a 'Group alerts by category' checkbox.

<input checked="" type="checkbox"/>	Weather Alerts
<input checked="" type="checkbox"/>	RWIS Alerts
<input checked="" type="checkbox"/>	External Incidents
<input checked="" type="checkbox"/>	FHP Incidents
<input checked="" type="checkbox"/>	Citilog Alarms
<input checked="" type="checkbox"/>	TSS Alarms
<input checked="" type="checkbox"/>	Safety Barrier Alerts
<input checked="" type="checkbox"/>	Wrong Way Driver Alerts

Show all Show none

Group alerts by category



A popup window titled 'Handle Alarm: wwd-635590885903151667'. It displays the following information: Alarm Type: Wrong Way Driver; Device: Wrong Way Device [WWD-408-05.9-WB]; Location: SR-408 Westbound; Detection Time: 2/9/2015 2:23 PM; Speed: 18.5. Below this information, it asks 'What would you like to do?' with two radio button options: 'Create New Event' and 'Dismiss as False Alarm'. 'Next >' and 'Cancel' buttons are at the bottom right.

Handle Alarm: wwd-635590885903151667

Alarm Type: Wrong Way Driver  
Device: Wrong Way Device [WWD-408-05.9-WB]  
Location: SR-408 Westbound  
Detection Time: 2/9/2015 2:23 PM  
Speed: 18.5

What would you like to do?

Create New Event  
 Dismiss as False Alarm

Next > Cancel

```
Wrong Way Driver Detected  
Detected Time: 1/19/2015 5:52:24 PM  
Location: SR-408 EB at MM 03.2  
Driver traveling wrong way on SR-408 Eastbound at 67.9MPH.
```

# Wrong Way Driving: Alerts

- All popup alerts need to be handled by an operator
  - Standard event report can be created, or
  - Alert can be dismissed

Handle Alarm: wwd-635590885903151667

Alarm Type: **Wrong Way Driver**  
Device: **Wrong Way Device [WWD-408-05.9-WB]**  
Location: **SR-408 Westbound**  
Detection Time: **2/9/2015 2:23 PM**  
Speed: **18.5**

What would you like to do?

Create New Event  
 Dismiss as False Alarm

Next > Cancel

*New EventType*

Event Type: Wrong Way Driver

## *New DMS / Email Message for RPG*

Email	Email Groups: Inte
	Subject:
	Title: Other:
	Location:
	Body:
	WRONG WAY
	DRIVER REPORTED
	USE CAUTION

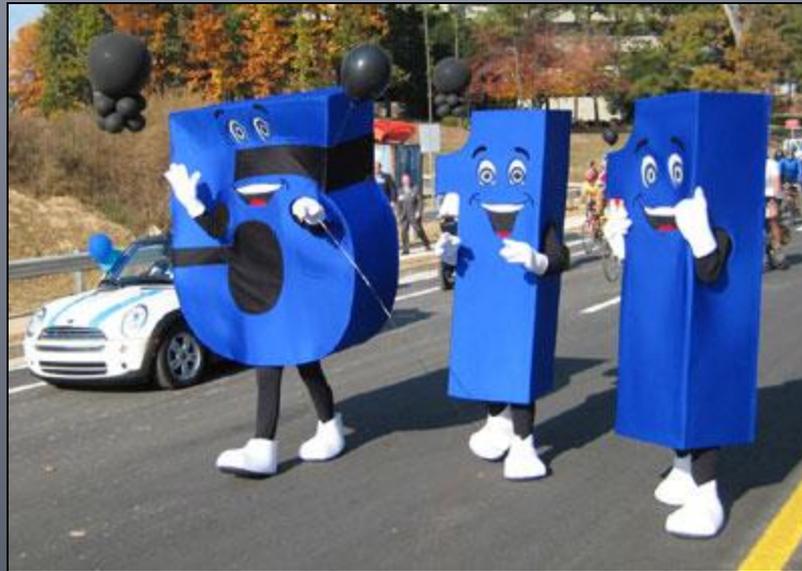
Handle Alarm: wwd-635590885903151667

**Dismiss as False Alarm:**

Why is this detection being rejected?

Congestion  
Median Work  
No Apparent Cause  
Off-Highway Other  
Off-Highway Vehicle  
Out of Our Jurisdiction  
Police Radar  
Police Traffic Stop  
Poor Video  
Rain on Lens  
Roadway Reflection

# 511 Floodgates



# 511 Floodgates: Status

Type	Description	English				Spanish			
		1	2	3	4	1	2	3	4
Statewide	<a href="#">Statewide (Florida)</a>								
Full Roadway	<a href="#">Beachline Expressway</a>								
Full Roadway	<a href="#">I-10</a>								
Full Roadway	<a href="#">Polk Parkway</a>								
Entity	<a href="#">Tallahassee Regional Airport</a>								
Location	<a href="#">Southeast</a>								
Location	<a href="#">Southeast/Broward County/I-95</a>								
Location	<a href="#">Southeast/Miami-Dade County/US 1</a>								

- From the green selection bar, select “Floodgate Status” or from “Center-to-Center” and then “Floodgate Messages” from the Context menu to list all active 511 floodgate messages
- Floodgates listed encompasses all floodgates in the FL ATIS system (accumulated from all districts)
- Upon selecting any of the Floodgates, the Floodgate Main entry window will open for the selected Floodgate
- *Note: Coordinate with district who posted the floodgate prior to updating*

# 511 Floodgates: Entry

Select Floodgate:  Statewide  Location  Full Roadway  Entity

Entity: Tallahassee Regional Airport

Floodgate number:  1  2  3  4

English  Spanish

### Tallahassee Regional Airport [Floodgate 3: English]

**Common Settings** Common settings apply to both English and Spanish messages  
Associated event and Comment will be logged, but not sent to C2C

Call Settings:  Allow barge-in  End call after message

Severity: Unknown

Associated event: None

Comment:

**511 Floodgate Message**

Message:    Clear Floodgate

Current recording length: 5 seconds

Text of message: Tallahassee Regional Airport is closed due to a coming hurricane.

**Web Site Text Banner**

Banner retrieved: 08-13-2008 17:14:28

Banner text: Tallahassee Regional Airport closed. Clear Banner

Save Delete

Expand Floodgate Store Floodgate Load From Store Manage Stored

- Operator selects Floodgate level, corresponding to the 511 menu level that will play back the floodgate
- Up to four floodgates can be recorded per language (English and Spanish) at a single level
- Both English and Spanish voice and banner messages must be posted
- District 2 (or other districts) will assist with Spanish, if needed

# Road Ranger Management



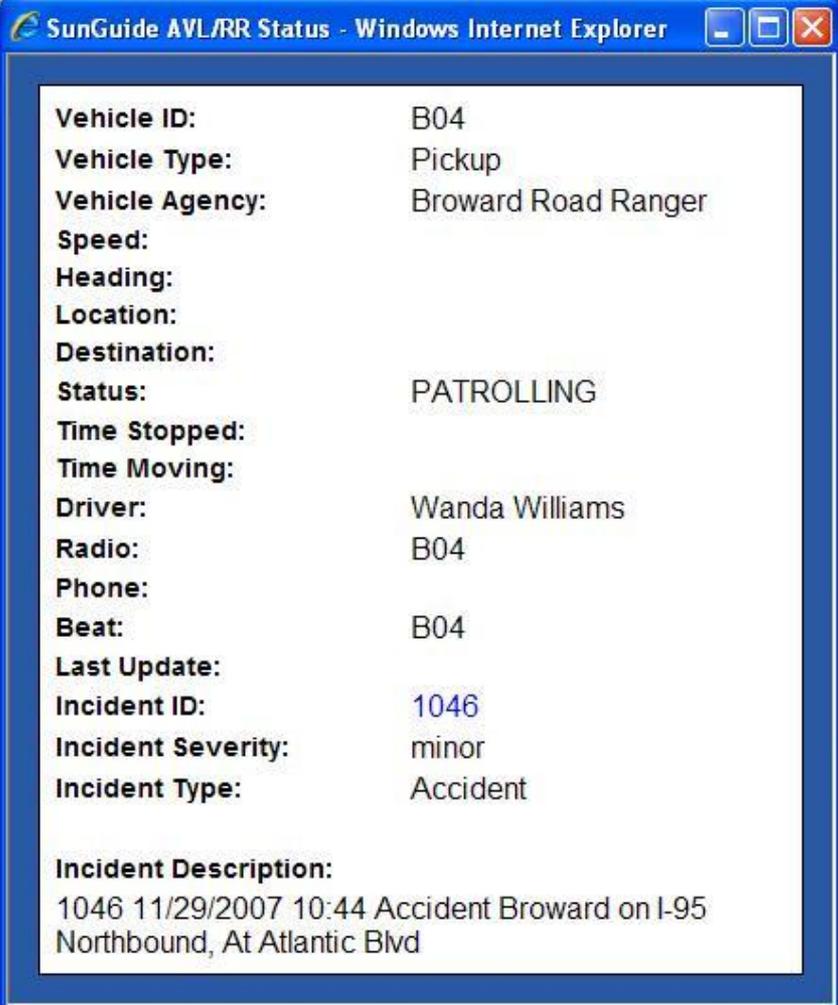
# EM: Road Ranger/SIRV

Vehicle	Avail	Status	Beat	Driver	Radio	Phone	Speed	Location	Tracks	Violation?
B00	ARRIVED		B01	Alceus Meus	B00	N/A or Unknown			Hidden	No
B01	PATROLLING								Hidden	No
B02	PATROLLING								Hidden	No
B03	PATROLLING		B02	Alceus Meus	B00				Hidden	No
B04	PATROLLING		B04	Wanda Williams	B04				Hidden	No
RLStest	PATROLLING			Brian					Hidden	No
TestSIRV	PATROLLING		B03	Andre Norisma	P51	N/A or Unknown			Hidden	No

- Vehicle ID
- Availability Status
  - Break, Departed, End Shift, Inspection, Meal, Patrolling, Service
- Beat ID
- RR Driver's Name
- Radio ID
- Phone Number (if any)
- Speed / Location of RR
- Tracks
  - Displays the last 5 to 20 positions of RR vehicle
- Violation
  - Indicates if RR has been stopped too long (2 to 3 minutes) or if outside "Geofence"
  - Stopped too long error only occurs if Patrolling
  - Geofence is the area of RR's beat where RR should be
  - Operator / supervisor must "approve" violations if any

# EM: Road Ranger/SIRV: RR Details Window

- Displays most current location, speed, dispatched event location / status / type / description, and configuration information
- Updates automatically while window is open
- Location / speed information only available if RR Tablet is used



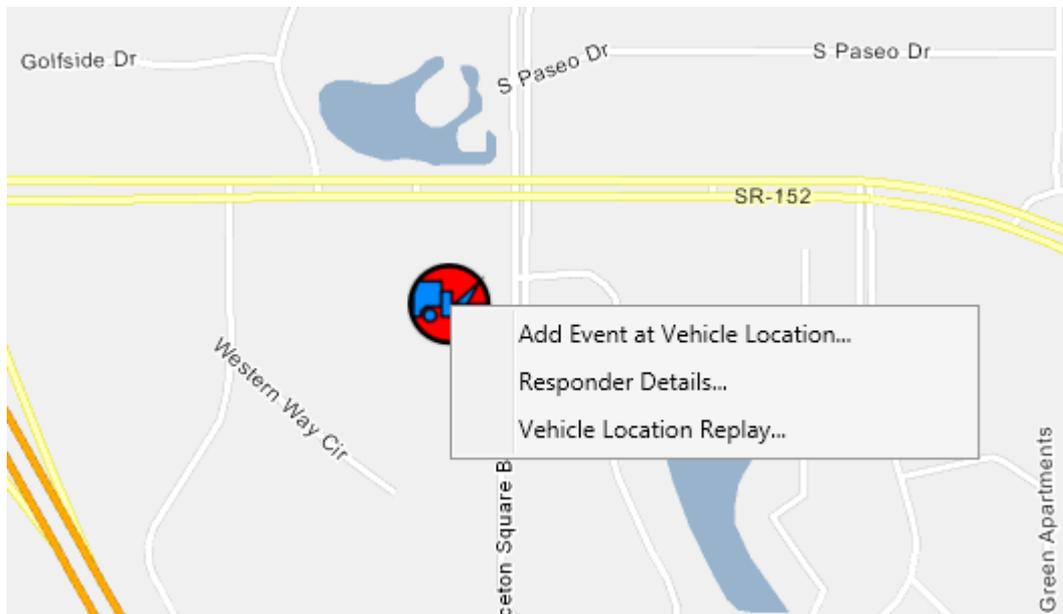
Screenshot of a Windows Internet Explorer window titled "SunGuide AVL/RR Status". The window displays the following information:

Vehicle ID:	B04
Vehicle Type:	Pickup
Vehicle Agency:	Broward Road Ranger
Speed:	
Heading:	
Location:	
Destination:	
Status:	PATROLLING
Time Stopped:	
Time Moving:	
Driver:	Wanda Williams
Radio:	B04
Phone:	
Beat:	B04
Last Update:	
Incident ID:	1046
Incident Severity:	minor
Incident Type:	Accident

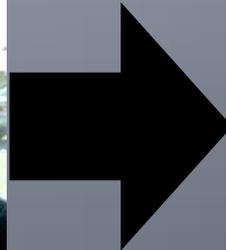
**Incident Description:**  
1046 11/29/2007 10:44 Accident Broward on I-95 Northbound, At Atlantic Blvd

# EM: Road Ranger/SIRV AVL Alerts

- Geofence and stop alerts display a red blinking circle around the RR vehicle which triggered the violation
- Geofence alerts are archived in the database and can be viewed using the Geofence Report

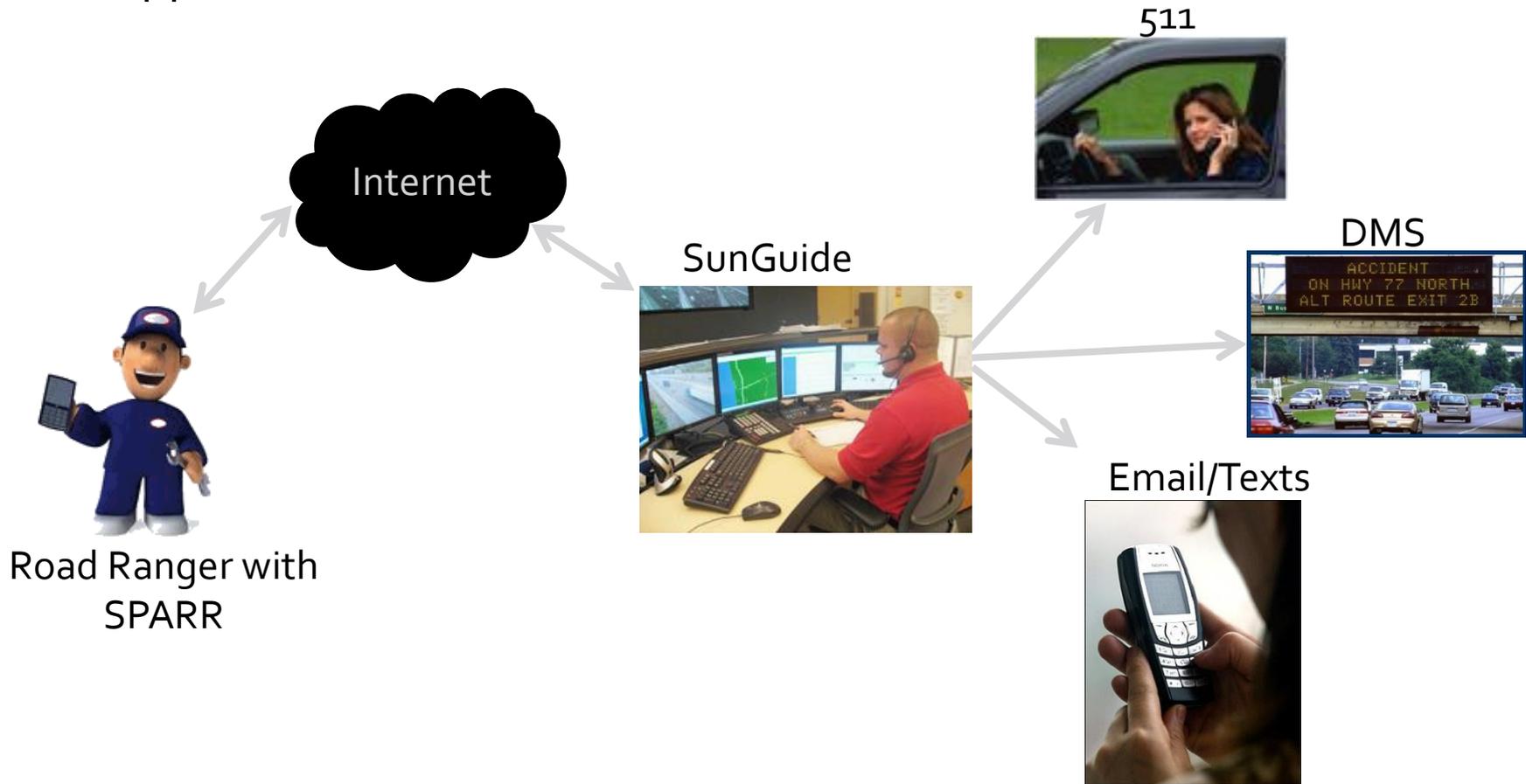


# Smart Phone Application for Road Rangers (SPARR)

A screenshot of a smartphone application interface. The status bar at the top shows the time as 10:45 AM and various icons. Below the status bar, the text "Online" is displayed. The main title of the app is "Smartphone App for Road Rangers". Below the title is a logo for "SUNGUIDE" featuring a palm tree and a sun. The login screen has two main sections: "Road Ranger Name" with a dropdown menu showing "KhueNgo (Khue Ngo)" and a "Password" section with a text input field. A "Log in" button is located at the bottom of the screen.

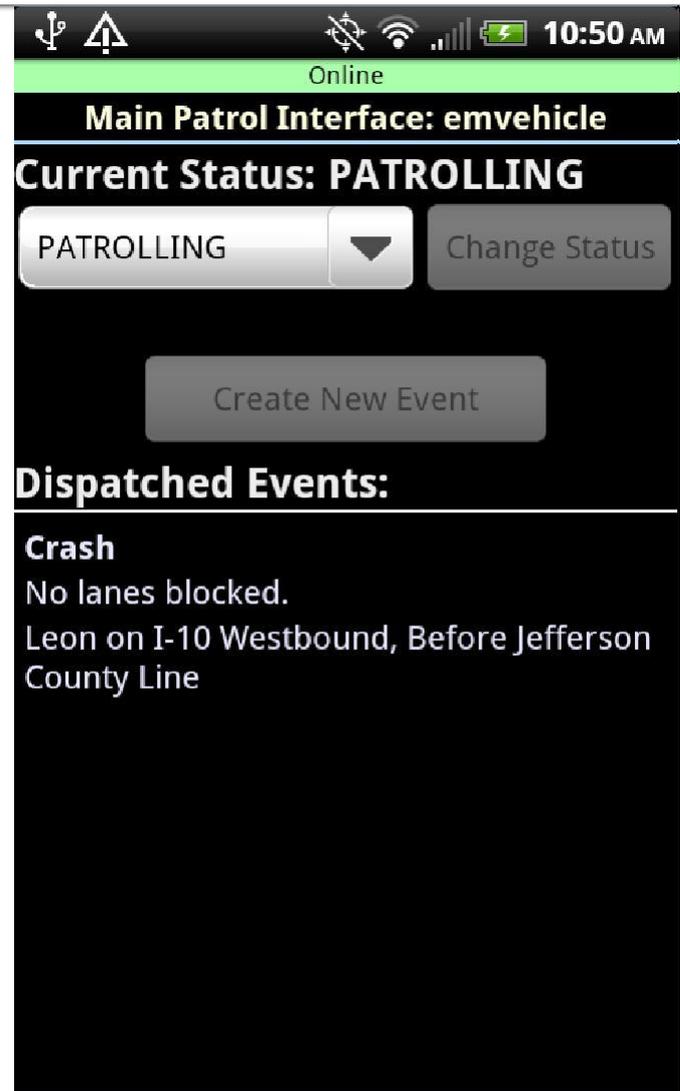
# SPARR: Overall Concept

- Purpose of SPARR is to allow Road Rangers to view and/or edit traffic events to/from SunGuide using a Smart Phone application



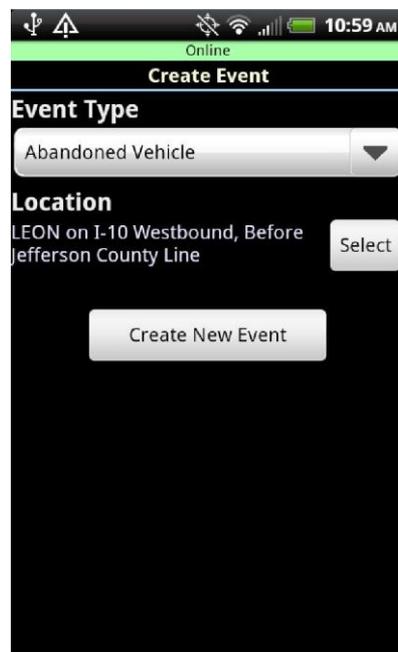
# SPARR

- Once patrol has started, events will be displayed if RTMC operator has dispatched to selected RR
- Can create new events
- Can change patrolling status



# SPARR

- When creating events, set event type and location
- After event is created, set "Arrive" (if RTMC dispatched) or "Depart"
- Add Services and Vehicles
- Lane blockage must be set by the RTMC operator



# SPARR

- Services can only be added, not removed
- Vehicle information can include any of the fields shown

The screenshot shows the top status bar with the time 10:54 AM and 'Online' indicator. Below the status bar is a green header with the text 'Online'. The main section is titled 'Services Performed' and contains a dropdown menu with 'Assist FHP' selected and an 'Add' button. Below this is a section titled 'Current Services:' which contains the text 'Abandoned'.

The screenshot shows the top status bar with the time 10:54 AM and 'Online' indicator. Below the status bar is a green header with the text 'Online'. The main section is titled 'Involved Vehicle' and contains several input fields: 'Make', 'Model', and 'Color' are dropdown menus; 'License Plate Tag' is a text input field; and 'License Plate State' is a dropdown menu. At the bottom of the section is an 'Add Vehicle' button.

# Reporting Subsystem

The screenshot shows a web browser window with the following content:

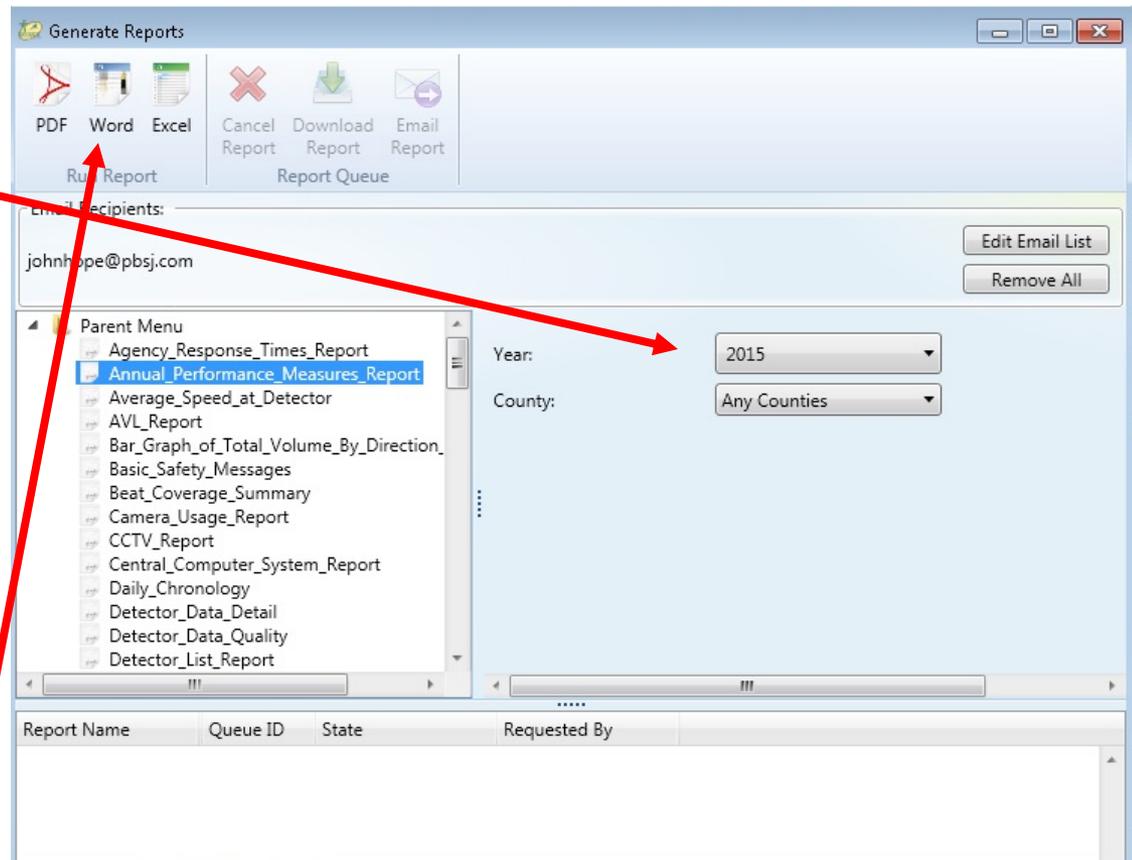
- Logos:** State of Florida Department of Transportation and SunGuide (Florida's Intelligent Transportation System).
- Section Header:** DMS Messages
- Metadata:**
  - Created On: 01/04/2010 16:22:53
  - Center: District 9
  - Filter Parameters Selected: [From Date Time]: 12/01/2009 06:00, [To Date Time]: 01/01/2010 09:00, [Using DMS]: DMS\_I10WB\_MM199
- DMS Name:** DMS\_I10WB\_MM199
- Table:**

<u>DATE CREATED</u>	<u>MESSAGE TEXT</u>	<u>OWNER</u>	<u>CURRENT TVT (min)</u>
12/02/2009 10:47:50			
12/02/2009 10:48:51	[pt30o0][i3]Exit 196 - SR 263[ni][i3]3 MI[n][i3]4-6 MIN[mp][pt30o0][i3]Exit 192 - Midway[ni][i3]7 MI[n][i3]9-12 MIN	tvtMain	
12/02/2009 13:24:50			
12/02/2009 13:37:51	[pt30o0][i3]Exit 196 - SR 263[ni][i3]3 MI[n][i3]4-6	tvtMain	

# Reporting Subsystem

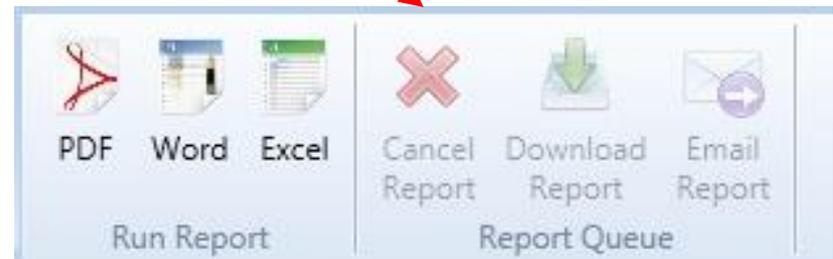
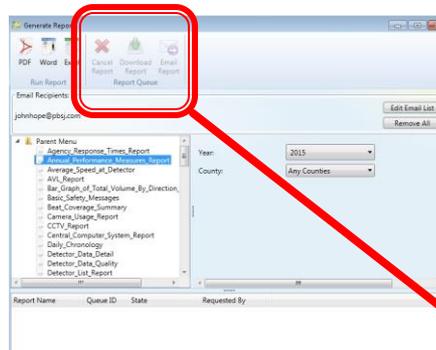
3. Enter in the desired filter parameters

4. Generate the report by clicking the button of the desired format



# Reporting Subsystem

- Report Queue Options
  - Cancel Report
  - Download Report
  - Email Report



# Part 2: Deploying SunGuide

---

# Deploying SunGuide

- FDOT Central Office (FDOT CO) Contract
  - No Licensing Cost
  - 50k Annual Maintenance Fee
  - Point of Contact:
    - Derek Vollmer
    - [Derek.Vollmer@dot.state.fl.us](mailto:Derek.Vollmer@dot.state.fl.us)
    - (850) 410-5615

# Deploying SunGuide

- Server Environment
  - Agency deploying SunGuide is responsible for server environment
    - Windows Server operating system
    - Supports SQL Server or Oracle Database
  - FDOT CO has a recommended server sizing document
    - Highly suggest to consult FDOT CO for exact sizing
  - FDOT CO does not provide server environment support

# Deploying SunGuide

- Request FDOT CO Deployment Support
  - Contract with Southwest Research Institute (SwRI)
    - Their support is included in Annual Maintenance Fee
  - SwRI will travel to agency and assist with installation

# Deploying SunGuide

- Request FDOT CO Operator/Admin Training
  - FDOT CO will provide staff to provide customized training for agency staff
    - Operator Training
    - Administrative Training

# Part 3: SunGuide Management

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# SunGuide Management

- SunGuide provides user management system
  - Similar to Active Directory, but Not tied into Activity Directory
  - Users and User Groups can be assigned access permissions
- Recommended User Groups
  - Operator
  - Supervisor
  - System Administrator

# SunGuide Management

- FDOT CO provides trouble ticketing system (Footprints)
  - Submit issue via online ticketing system
  - Sends emails to admin staff upon updates
  - SwRI will update ticket, email, and/or call designated point of contact to resolve issue
  - Users can also submit SunGuide-related questions via Footprints

# SunGuide Management

- Response Times
  - 1 hour response for major system issues
  - 2 to 4 hour response for intermediate issues
  - Next day response for minor issues

# SunGuide Management

- Software Updates
  - Agencies have access to all software updates and patches
  - Agencies will be contacted regarding software updates
  - Major Upgrades are available about twice per year

# Part 4: Enhancements

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# Enhancements

- Submit suggested software enhancements via Footprints
  - This is recommended for all Enhancements
- Concept of Operations
  - Recommended for major Enhancements
- SunGuide Software Users Group
  - FDOT CO-organized group intended to discuss detailed software enhancement ideas

# Enhancements

- Change Management Board
  - FDOT CO-organized group intended to approve software enhancements
  - Voting Members vs Non-Voting Members
    - Agency must make a significant contribution to SunGuide
    - Agency must be voted in as a voting member
  - Current Board Chairman:
    - Bryan Homayouni
    - [Bryan.Homayouni@CFXWay.com](mailto:Bryan.Homayouni@CFXWay.com)

# SunGuide Training and Overview

*Instructor*

John Hope, AECOM  
[John.Hope@aecom.com](mailto:John.Hope@aecom.com)

