



Change Management Board Meeting

Wednesday, August 15 2012

Video Conference: CO- Burns Video Bridge 1

Audio: 850 - 410 - 5667



Welcome and Call for Quorum

Javier Rodriguez, CMB Chairman



Agenda



| Time | Item | Lead |
|-------------|---|------------------|
| 1:30 – 1:35 | Welcome and Call for Quorum | Javier Rodriguez |
| 1:35 – 1:40 | Previous Meeting Recap and Action Item Review | Javier Rodriguez |
| 1:40 – 1:50 | ITS WAN update | Frank Deasy |
| 1:50 – 2:00 | SSUG Update | John Hope |
| 2:00 – 2:20 | SunGuide GUI Enhancement <i>(vote)</i> | Tucker Brown |
| 2:20 – 2:40 | SunGuide Permissions | Tucker Brown |
| 2:40 – 3:00 | HAR Enhancement | John Hope |
| 3:00 – 3:10 | Break | |



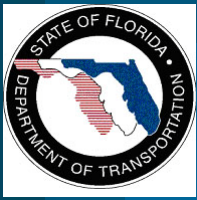
Agenda



| Time | Item | Lead |
|-------------|--|------------------|
| 3:10 – 3:25 | Providing data to RITIS | Arun K |
| 3:25 – 3:45 | TSS and Travel Time Modifications <i>(vote)</i> | Clay Packard |
| 3:45 – 3:55 | Add Vehicle Year to SunGuide EM <i>(vote)</i> | Tucker Brown |
| 3:55 – 4:05 | Add Arterial Turn Lanes to SunGuide EM <i>(vote)</i> | Tucker Brown |
| 4:05 – 4:15 | Find on Map for IDS Alerts <i>(vote)</i> | Tucker Brown |
| 4:15 – 4:25 | Top Priority SunGuide Item by District | Arun K |
| 4:25 – 4:30 | Action Items Review | Javier Rodriguez |

CMB agenda, slides, and attachments posted here:

http://www.dot.state.fl.us/trafficoperations/ITS/Projects_Deploy/CMB.shtm



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Previous Meetings Recap and Action Items Review

Javier Rodriguez



May 2012 Action Items



1. CO to propose ONVIF voting item at future CMB meeting.
2. CO to discuss device grouping for partitioning for permissions at future CMB meeting.
3. CO to propose GUI overhaul with cost / schedule at future CMB meeting.

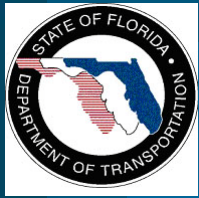


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ITS Telecommunications Update

**Randy Pierce &
Frank Deasy**



ITS WAN Update



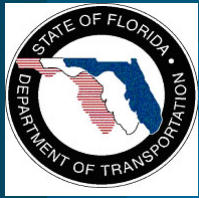
- **Connecting D7**
 - ITS WAN equipment being installed
 - UniCast connectivity is operational to District 7
 - MultiCast connectivity will be implemented to District 7 after the RNC
- **Connecting D1**
 - ITS WAN equipment being installed
 - Connectivity is pending circuit breaker delivery to regen sites
- **Connecting D3 RTMCs Tallahassee**
 - Tallahassee RTMC fiber connection in process



ITS WAN Update



- **FTE RTMC Pompano**
 - FTE switch configuration and connection to ITS WAN in process
- **FHP CAD**
 - Available to Districts connected to ITS WAN
- **MultiCast Re-Addressing**
 - Districts should re-address now to enable Statewide MultiCasting
 - VAS can then receive MultiCast video without the need for further re-addressing
- **FL-ATIS & VAS**
 - Replacing dedicated circuits with ITS WAN connectivity



ITS WAN Update



- **ITS WAN**
 - Connectivity available in Districts 2, 3 Pensacola, 4, 5 and 6
 - Connectivity established in District 7
 - Connectivity available soon in District 1
 - Connectivity in process at FTE Pompano



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SSUG Update

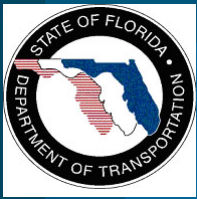
John Hope



SSUG Update Major Topics



- **SSUG Charter Document**
- **Weighted Average Based on Volume**
- **New SunGuide Project Website / Forums**
- **Adding another Tier to User Permissions**
- **C2C Reliability / AVL-RR Mobile Device Reconnection**
- **SunGuide R6.0 GUI Discussion**
- **ODS – TvT report/data usage**



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SunGuide GUI Enhancement (vote)

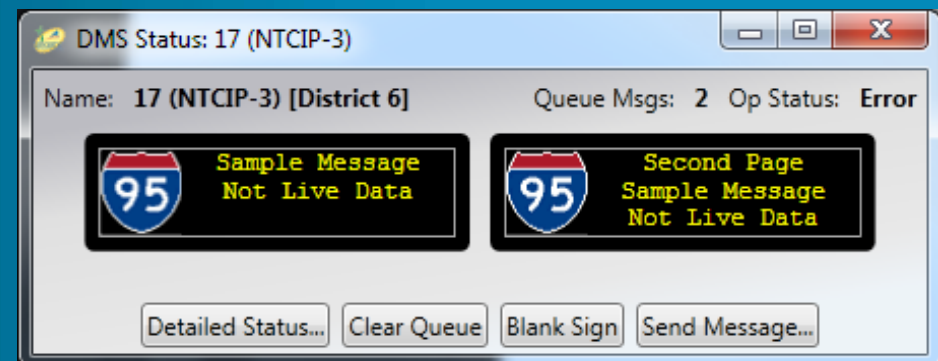
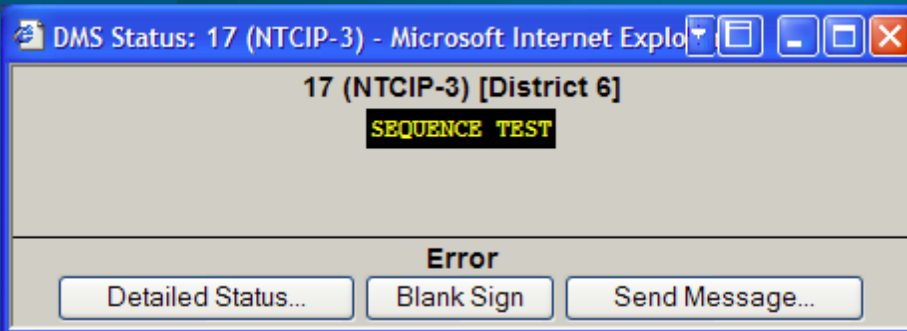
Tucker Brown



GUI Enhancement



- Versions 5.0 and 5.1 introduced a conversion to WPF
 - Current dialogs use HTML and JavaScript





GUI – New Concepts



- Ribbons (where appropriate)
- Context Menus

Response Plan: Event 42445

DMS Dist: 7
HAR Dist: 15

Plan Actions: Activate Plan, Terminate Plan
Plan Items: Add Item..., Edit..., Remove
Suggestions: Accept Suggestions, Load Predefined..., Get New Suggestion

Event: 42445

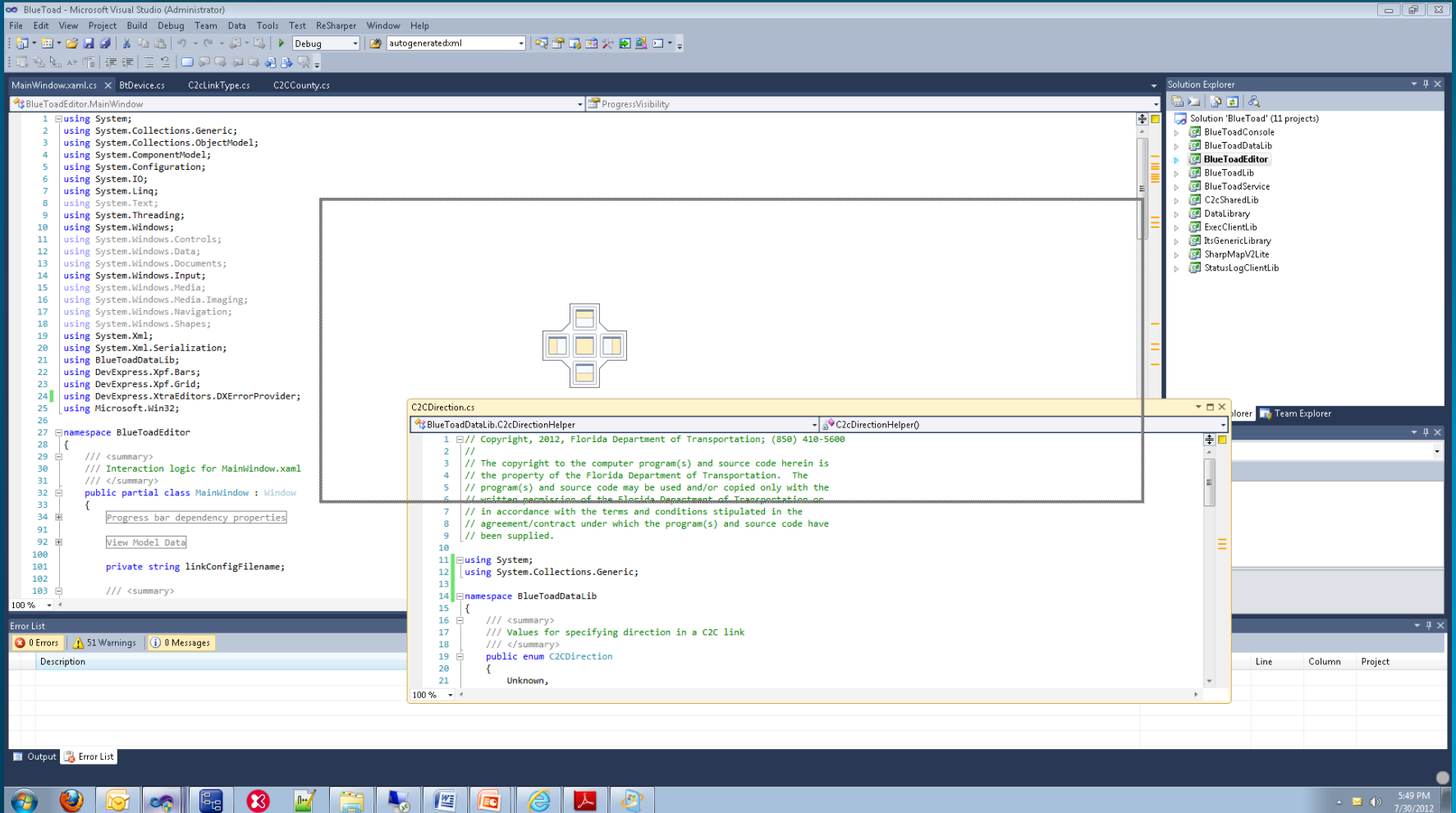
| Name | Plan Message | Displayed Message |
|--------------------------------------|----------------------------------|-------------------------|
| DMS 295S10 [District 2] Active | | |
| | Until Canceled Sign Error 10 | Until Canceled 42445 10 |
| DMS 95S09 [District 2] Active | | |
| | Until Canceled Success 10 | Until Canceled 42445 10 |
| DMS 95S07 [District 2] Active | | |
| | Until Canceled Lower Priority 10 | Until Canceled 42445 10 |



GUI – New Concepts



- Docking, Tabs based on User Preferences

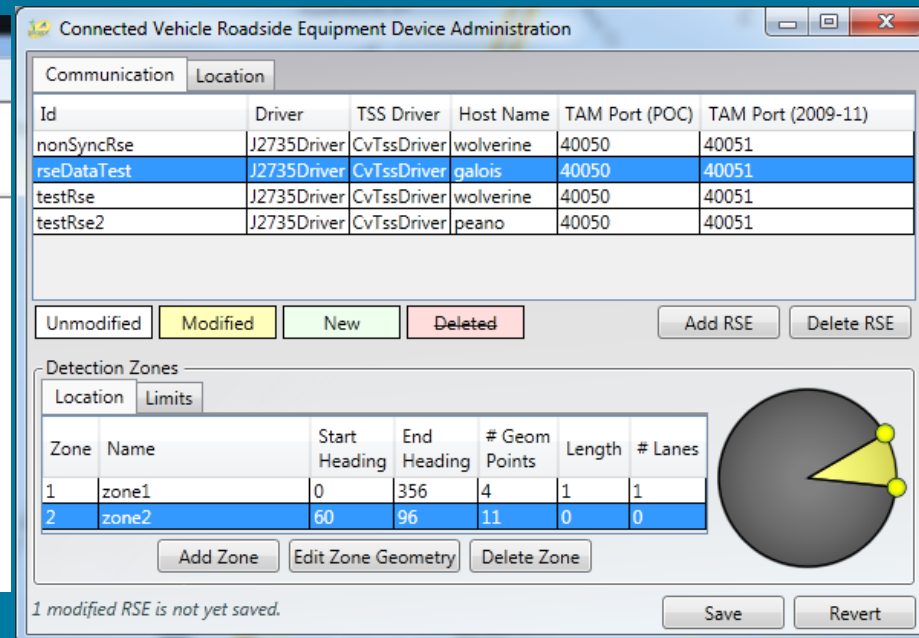
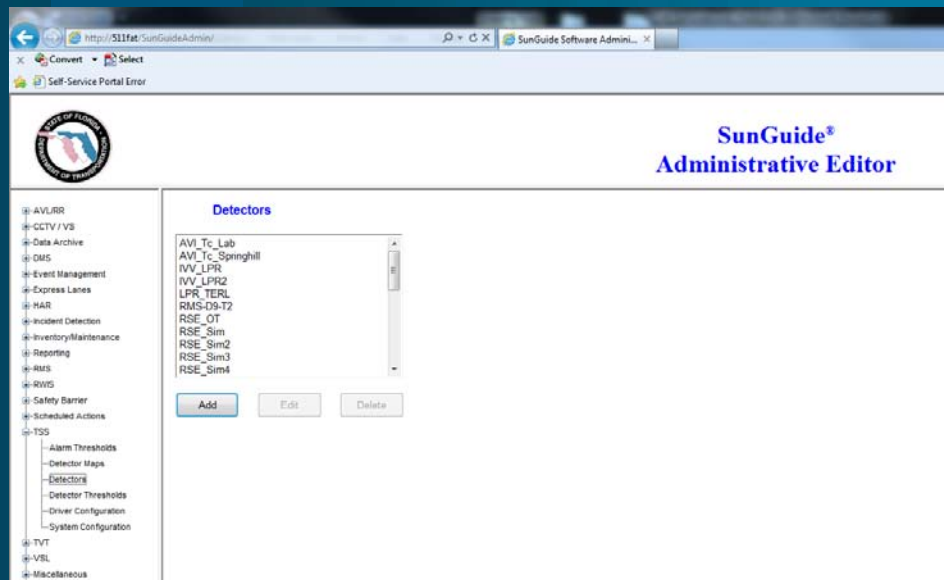




GUI Enhancement - Admin



- Move all Admin Editor functionality to the map
 - User level permissions for Admin functions
 - Multiple users
 - Multi-edit and Save





GUI Enhancement



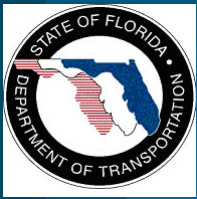
- **Removes the dependencies on Internet Explorer**
 - More control on dialog focus
 - More control of dialog refreshes
- **Maintains current features**
 - Automatic Updating (checked on startup)
 - Browser based installation (no media required)
- **Opportunity to redesign or consolidate dialogs**
 - Ex) 6.0 will have a combined MAS/DMS dialogs
- **Multiple Design Reviews for District input**
 - ~180 dialogs
- **Estimate: 425k**



GUI Enhancement



Vote



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User Permissions

Tucker Brown



TxDOT Model - SAA

- **Software Administration Application**
- **Subsystems use SAA to:**
 - **Validate username/password**
 - **Retrieve users permissions**
- **Device level permissions**
 - **Set of user permissions apply to a single set of devices**
 - **Does not support multiple sets of permissions for a single device type**
 - **Ex) Can not have read permission on all DMS and write permission on a select group of DMSs**



Implementation Option 1

- Single permission for read only permission for a device type
- Rest of permissions set would apply to a single set of devices
 - Ex) An operator could see status on all DMS but only modify the message on a particular set of signs
- Write permission would imply a read permission
 - C2C usage for remote operator restriction
- Estimate: 125k



Implementation Option 2

- **Multiple permission sets per user**
 - Can apply a custom set of permissions for an operator to a particular device or group of devices
- **Pros:**
 - Best level of control over operator permissions
- **Cons:**
 - Very complex implementation
 - Complex Administrative task
- **Estimate: 250k**



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HAR Enhancements

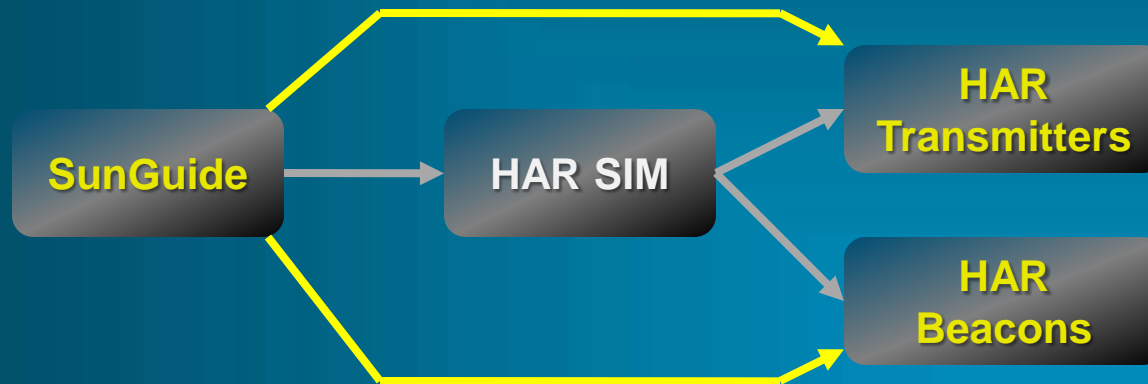
John Hope



HAR Proposed Enhancements



- Direct Connection with the HAR Transmitters/Beacons

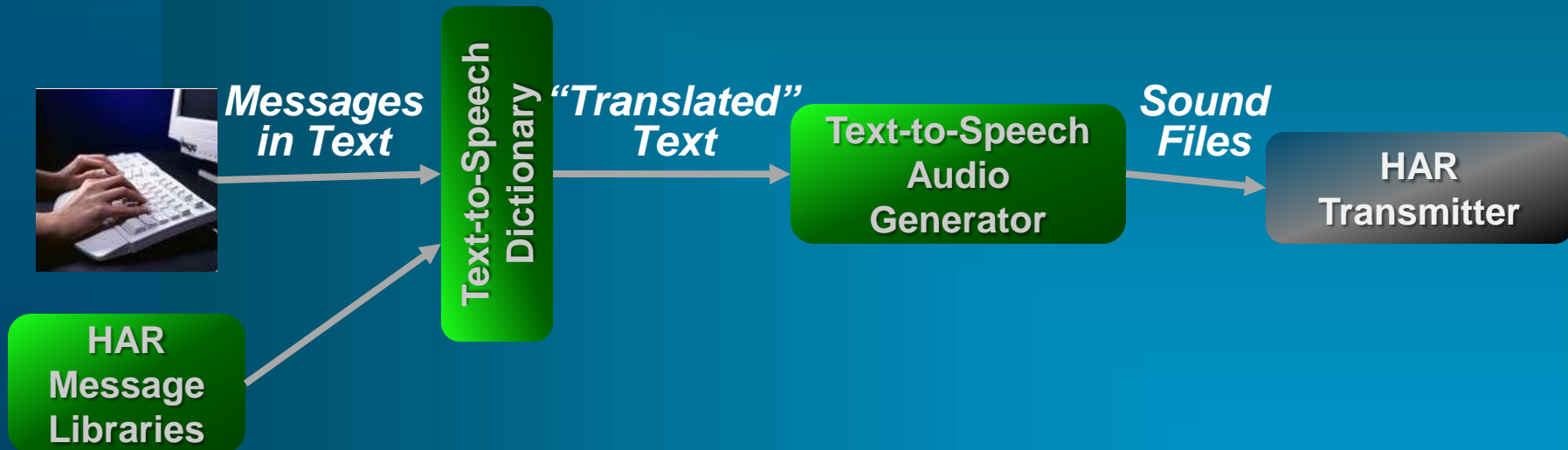


→ *Current Data Path*
→ *Proposed Data Path*



HAR Proposed Enhancements

- HAR Message Libraries
- HAR Text-to-Speech Dictionary
- Text-To-Speech Audio File Generator



 **New Component**
 **Existing Component**



HAR Proposed Enhancements



- WPF Operator Map Control and Monitoring
- WPF Operator Map Configuration

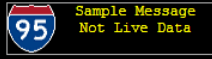
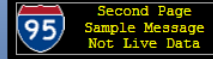
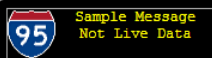
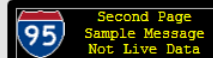
Similar to New DMS Windows

| Name | Event Categories | Routes | Items | Current Message |
|--------|-------------------------|-------------|--------------|-----------------|
| Plan 1 | Abandoned Vehicle, A... | I-95 NB, SB | 2 DMS, 1 HAR | |
| Plan 2 | Congestion | I-295 EB | 3 DMS | |
| Plan 3 | Congestion | I-295 EB | 3 DMS | |
| Plan 4 | Congestion | I-295 EB | 4 DMS | |
| Plan 5 | Congestion | I-295 EB | 5 DMS | |

Unmodified Modified New Deleted

Selected Plan
Plan Name: Plan 1

Event Matching Plan Items

| Name | Plan Message |
|-------------------------|--|
| DMS 295S10 [District 2] |   |
| DMS 95S09 [District 2] |   |

Save Cancel



HAR Proposed Enhancements



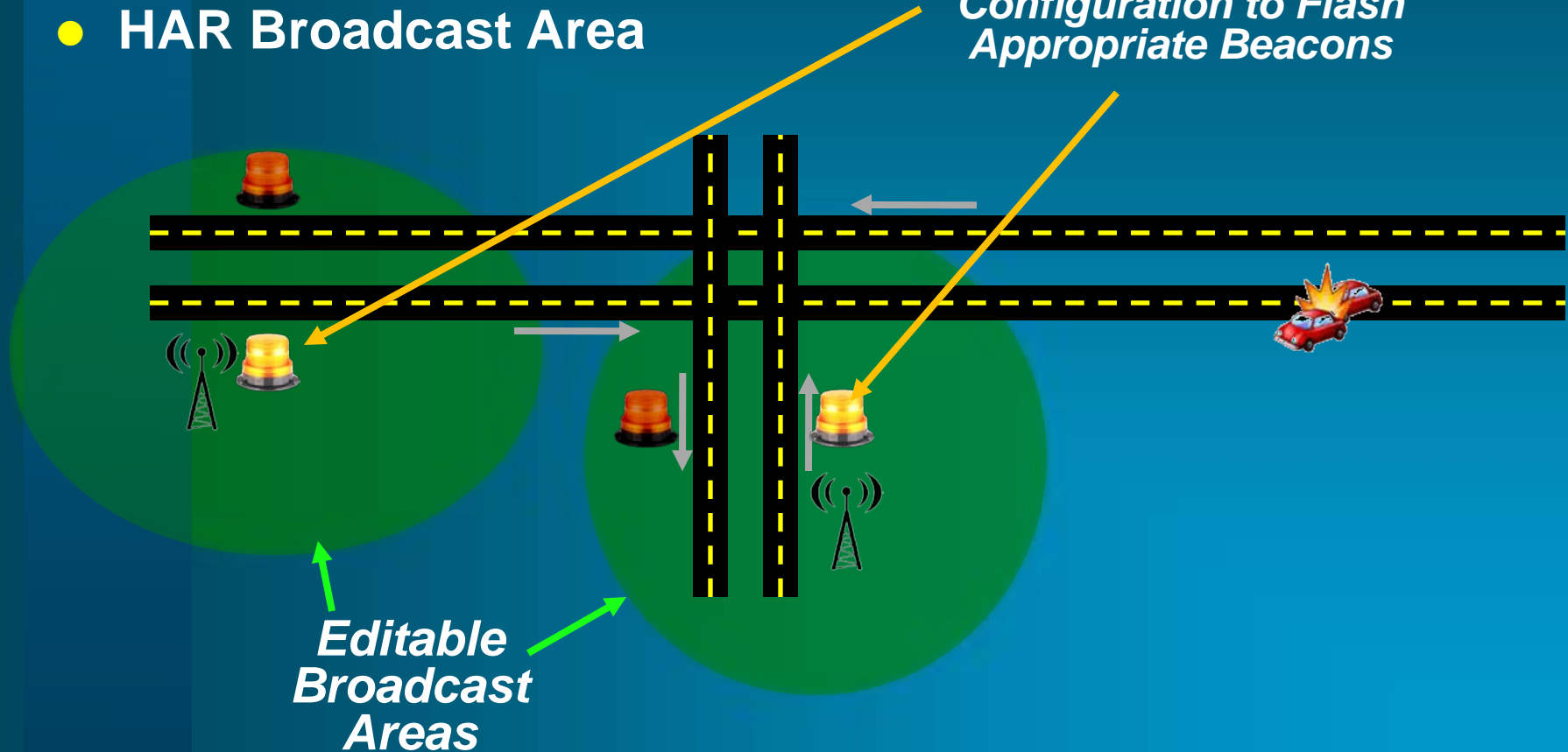
- HAR Message Management



HAR Proposed Enhancements

- HAR Sequencing
- HAR Broadcast Area

Sequencing Configuration to Flash Appropriate Beacons





HAR Proposed Enhancements



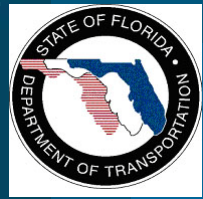
- Expanded HAR RPG Message Template
- HAR RPG Multiple Edit

The screenshot shows the 'Response Plan Editor' window for Event ID: 1216. It displays a table of 'Selected Plan Items' with columns for equipment type, ID, center, owner, duration, and priority. The items include DMS equipment (DMS_10EB_MM194, DMS_10EB_MM198, DMS_10EB_MM202) and HAR equipment (TERL Test HAR). Annotations include a blue oval around the HAR description 'INCIDENT AT [LANDMARK NAME] ON I-10 EASTBOUND. ALL LANES CLOSED.' and a red circle around the 'Group edit' checkbox in the right-hand column. A red arrow points from the text 'Expand "Edit Group" to include HAR' to this checkbox. At the bottom, a red circle highlights the 'Edit Group' button, with a red arrow pointing from the text 'Include as much detail as reported in the SAE Description' to the HAR description field.

| Equipment ID | Duration | SAE Description | Actions |
|--|------------------------------------|---|--|
| DMS_10EB_MM194 Center: District 9 Owner: dms | Until Cancelled Priority: 11 | TEST 1 TEST 1 TEST 1 | Edit Remove <input checked="" type="checkbox"/> Group edit |
| DMS_10EB_MM198 Center: District 9 Owner: dms | Until Cancelled Priority: 7 | TEST 2 TEST 2 TEST 2 | Edit Remove <input checked="" type="checkbox"/> Group edit |
| DMS_10EB_MM202 Center: District 9 Owner: dms | Until Cancelled Priority: 4 | TEST 3 TEST 3 TEST 3 | Edit Remove <input type="checkbox"/> Group edit |
| TERL Test HAR Center: District 1 Owner: har | Until Cancelled Priority: 8 | INCIDENT AT [LANDMARK NAME] ON I-10 EASTBOUND. ALL LANES CLOSED. | Edit Remove |
| Subject: Police Activity: Location: LEON I-10 EB Beyond Exit 203 SR146-Miccosukee | Email Groups: | All Lanes (of 2 Lanes) Blocked | Edit Remove |
| 511 ATIS | | Police Activity in Leon county, going Eastbound on I-10 beyond MM 207 with all lanes blocked Last updated 12/10/2008 4:52:58 PM | Remove |

Include as much detail as reported in the SAE Description

Expand "Edit Group" to include HAR



HAR Enhancements Summary of Benefits



- Easier system configuration (bypassing proprietary proxy driver)
- Vendor software not needed for standard operations
- Expanded HAR capabilities and features to better meet operational needs

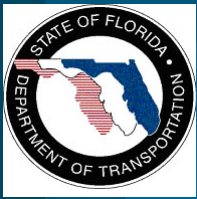


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10 Minute Break

Everyone

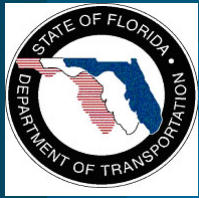


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Providing data to RITIS

Arun Krishnamurthy



Providing Data to RITIS



- RITIS, product of University of Maryland, will be FDOT's new Central Data Warehouse.
- RITIS will be available to use by end of Sept, 2012.
- RITIS will obtain data from FDOT using SunGuide software via:
 - Center-to-Center
 - Nightly FTP data transmission



Providing data via Center-to-Center



- TERL will set-up C2C infrastructure.
- All districts send data to TERC
- TERC sends data to UMD / RITIS
- TMCs on ITS WAN will send data through the ITS network. Others via internet.

- Action Item:
 - CO will coordinate to configure connection with each TMC.
 - Schedule ?



Providing data using FTP

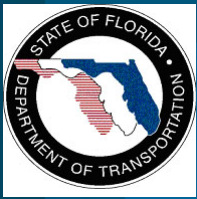
- **SwRI is modifying the Data Archive in SunGuide.**
- **Once TMCs deploy this new release, SunGuide can be configured to send traffic and incident data to UMD FTP site.**
- **Action item:**
 - **Release 5.1.1 will be available mid Sept.**
 - **We recommend districts to deploy as soon as possible so RITIS can be populated with their information.**



Loading Archived Data

- Loaded archived traffic data from STEWARD
- If district desires additional data be added, please let me know

| District # | Traffic Data Availability Dates |
|------------|---|
| District 1 | 07/01/2011 - 07/02/2012 |
| District 2 | 2008, 01/01/2009 - 07/07/2009, 2010, 2011, 01/01/2012 - 07/02/2012 |
| District 3 | 05/01/2011 - 05/10/2011, 06/01/2011 - 07/02/2012 |
| District 4 | 2010, 2011, 01/01/2012 - 07/02/2012 |
| District 5 | 03/2008 - 09/2008, 04/2009 - 12/2009, 2010, 01/2011, 03/2011 - 12/2011, 01/01/2012 - 07/02/2012 |
| District 6 | 2008 (partial), 2009, 2010, 2011, 01/01/2012 - 07/02/2012 |
| District 7 | 2009-2010 (partial), 2011, 01/01/2012 - 07/02/2012 |
| Turnpike | No data |



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TSS and Travel Time Modifications (vote)

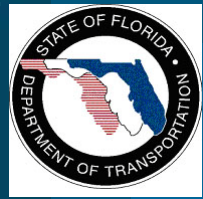
Clay Packard



Background



- **TxDOT enhanced TSS and Travel Times**
 - Additional device support
 - Support wrong-way alerts
 - Consistently interpret no-traffic conditions
 - Allow travel time messages with no time units
example: “15” instead of “15 MINS”
- **FDOT users desire additional related enhancement**
 - Reduce and suppress excessive TSS Alarms



Additional Device Support



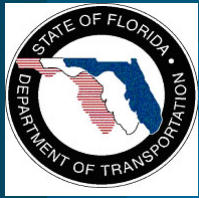
- Added device support to TSS in 6.0
- Added EIS G4 support w/ classification
- Added Wavetronix HD support w/ classification
- Added TTI's AWAM Bluetooth to Probe Fusion Driver (more expensive than specifically removing)



Wrong Way Reporting



- **Wavetronix HD device detects wrong way drivers**
 - **Device firmware update required ???**
- **Device sends negative speed when a vehicle is detected going wrong way.**
- **Negative speed is reported throughout SunGuide**
- **Wrong Way Alerts are raised to the operator**



No Traffic Conditions

- Some devices report no traffic as -1
- Negative values are used by wrong way scenario
- SunGuide will not report no traffic values
 - Speed value will be optional
 - No traffic will report without speeds
 - Speed will be excluded
 - Volume = 0
 - Occupancy = 0



Travel Times without Units

- TVT appends calculations with configured units
`<distUnits>MI</distUnits>`
`<spdUnits>MPH</spdUnits>`
`<minUnits>MIN</minUnits>`
- TVT uses default values if not configured

**TRAVEL TIME
TO I-95 15-18 MIN**

- Omit units from TVT message if **NONE** is used
- Potential Use for template-specific units that differ:

**TVT (MIN)
I-95: 15-18
I-4: 23-26**

**TRAVEL TIME
I-95: 15-18 MINUTES
TURNPIKE: 23-26 MINS**



Volume Weighted Averaging

- Many users reported excessive TSS Alarms
 - Overnight, no/low traffic, seems to be false alarm
- Alarms triggered by rolling lane speed averages
 - = Average speed over several poll cycles
 - @ speeds exceeding alarm thresholds
- Large impact from low volume or no traffic
 - Rolling average is brought down
 - Operational Data is impacted
 - TSS Alarms
 - TVT, VSL, FL-ATIS
 - Un-representative data is archived



Volume Weighted Averaging

- Volume weighted average addresses low volume
- Current method:

$SUM(speeds) / Count(speeds)$

$= 0 + 0 + 20 + 76 + 75 / 5$

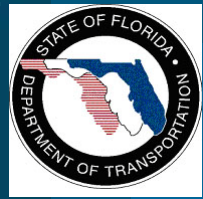
- Volume Weighted average:

$SUM(speeds \times their\ volume)$

$/ SUM(volumes\ included)$

$= (0 \times 0 + 0 \times 0 + 20 \times 1 + 76 \times 3 + 75 \times 7)$

$/ SUM(0+0+1+3+7)$



Volume Threshold for Alarms

- Remaining TSS Alerts were analyzed
- Another Alarm producing scenario was identified:
 - Extremely Low Volume
- Added a Volume Threshold
 - If volume < 3 , do not trigger TSS Alarm condition



Vol. Weighted Avg. - Analysis



- Real data was processed with calculation
- Alarm generation was simulated
 - District 5 configuration values
 - 1 week of District 5 TSS data

| Parameter | Value |
|---|-------|
| Poll Cycle Interval | 20 |
| Number of Poll Cycles per Rolling Average | 6 |
| Volume Threshold | 3 |
| Speed Threshold | 35 |
| Speed Recovery | 55 |
| Occupancy Threshold | 10 |
| Occupancy Recovery | 5 |



Vol. Weighted Avg. - Analysis

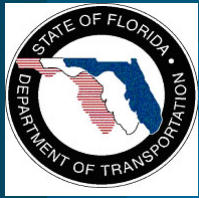
| Link Name | Control | VW only | VW plus VF |
|---------------------------------|---------------|---------------|--------------|
| I-4 Just W of Saxon | 518 | 171 | 6 |
| I95-I4 | 493 | 288 | 15 |
| SR 528 @ I-95 | 491 | 344 | 4 |
| I-4 West of 417 | 425 | 82 | 3 |
| SR 528 E of Friday Rd | 408 | 402 | 5 |
| SR 528 @ Friday Rd | 402 | 386 | 12 |
| I-4 West of SR 436 | 399 | 30 | 8 |
| SR 528 W of I-95 | 391 | 225 | 7 |
| SR 528 @ Satellite Blvd | 384 | 295 | 6 |
| I-95 NB @ MM 248.9 | 378 | 243 | 11 |
| Top 10 D5 links | 4289 | 2466 | 77 |
| Total D5 (all 326 links) | 20,706 | 11,925 | 2,030 |



Impacts



- **Impacts**
 - Link averaging by TSS – not by TSS clients
 - C2C Plug-ins (ex. FL-ATIS) and Data Archive consumers must support missing/null speed value
 - TSS Report templates will need to be updated
 - GUI: interpreting and displaying no traffic conditions?



Benefits



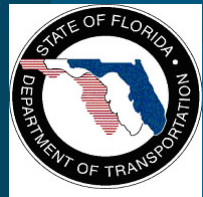
- **Benefits**
 - **Additional choice/competition of TSS devices**
 - **Removed significant TSS data quality defect resulting from low volume or no traffic**
 - **Reduced false-alert handling burden on operators**
 - **Wrong way notification (critical/severe event)**
 - **More consistent/efficient data processing**



Discussion



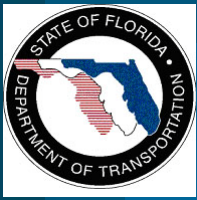
- Questions for Users:
 - How should GUI handle no traffic?
- Questions from Users...?



TSS and Travel Time Mods.



Vote



Change Management Board



**Add “Vehicle Year” to Involved Vehicles
(FP 2223) (vote)**

Tucker Brown



Vehicle Year



- Available to set in the event
- Use in template for Response Plans

| Color | Make | Model | Tag | State | Match | |
|----------------------------------|----------------------------------|----------------------------------|----------------------|----------------------------------|-------|---|
| Brown | ACURA | MDX | TAG123 | FL | | <input type="button" value="Modify"/> <input type="button" value="Delete"/> |
| <input type="text" value="N/A"/> | <input type="text" value="N/A"/> | <input type="text" value="N/A"/> | <input type="text"/> | <input type="text" value="N/A"/> | | <input type="button" value="Add"/> |

- Estimate: 5 days
- Release: 6.0



Vehicle Year



Vote



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Add turn lanes to available lane configuration

(FP 722) (vote)

Tucker Brown

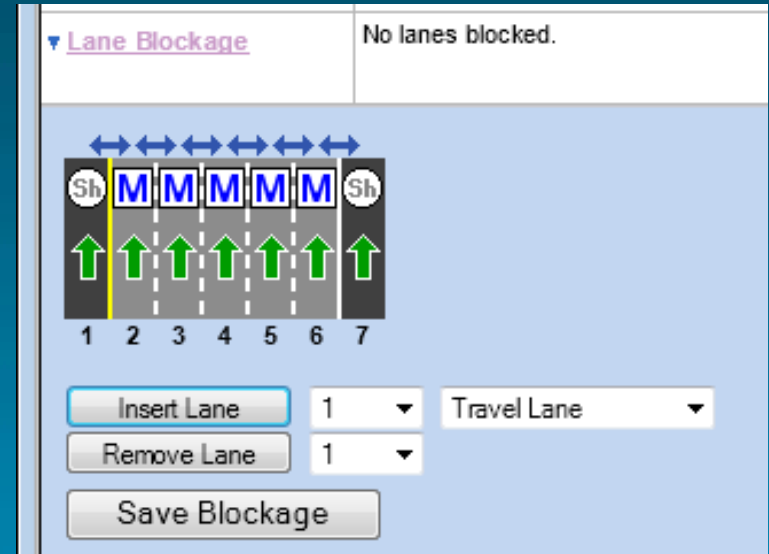


Turn Lane



- GUI
- SAE Codes
- Admin Editor
- Database
 - Views, Table, Models
- Blockage Descriptions
- Performance Measures
- ATIS and Event Severity
- Event Blockage Description in FLATIS
- Response Plan

- Estimate: 2-4 weeks
- Release: 6.1

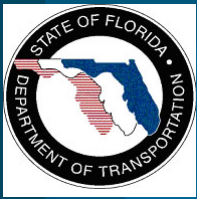




Turn Lane



Vote



Change Management Board



**Find on Map for IDS alerts
(FP 1715) (vote)**

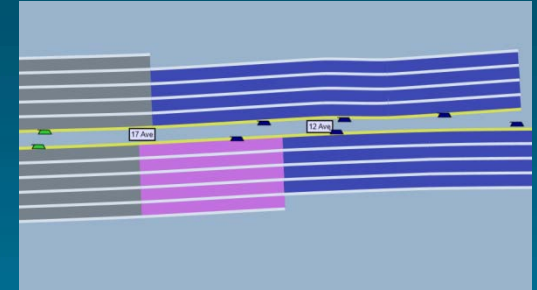
Tucker Brown



Find on Map



- 5 Types
 - External (lat, lon)
 - TSS (link/lane based)
 - VisioPad (device based)
 - FHP (lat/lon)
 - Weather (area based, no lat/lon)



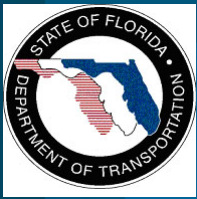
- Highlight the nearest EM location, device, or link
- Estimate: 3 days
- Release: 6.0



Find on Map



Vote



Change Management Board



Top Priority SunGuide Item by District

Arun Krishnamurthy



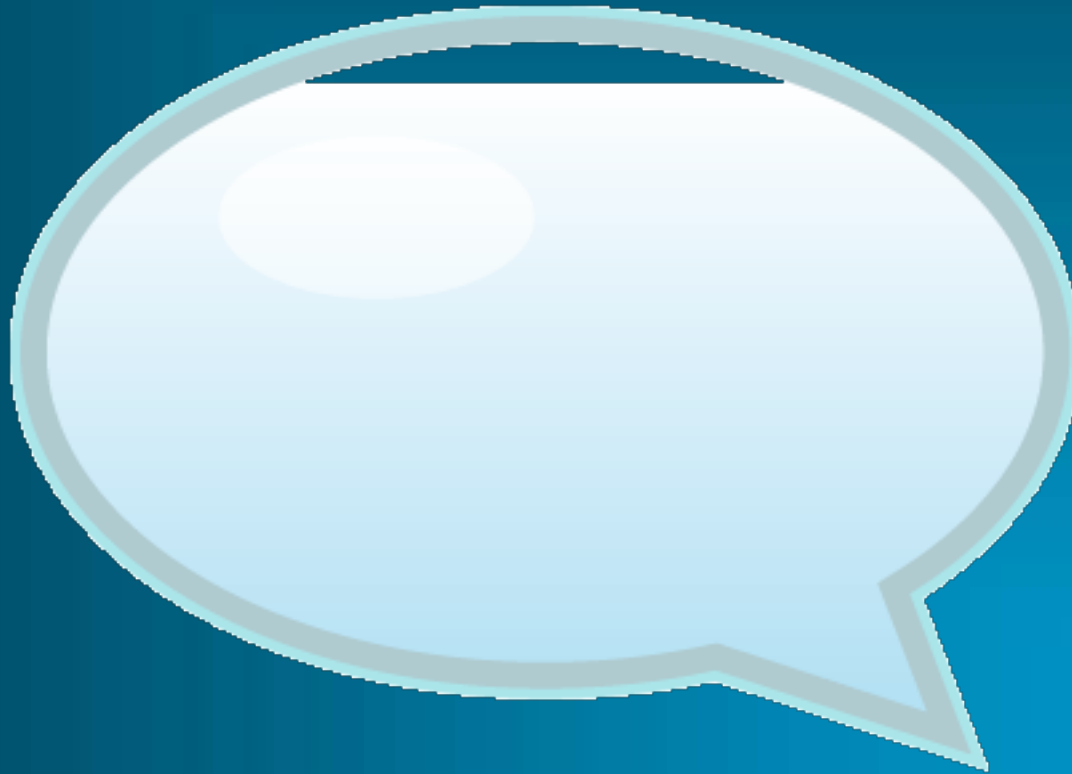
Last Meeting Recap

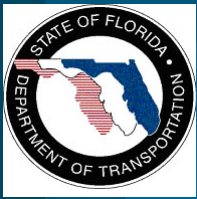


| District # | Issue | Update |
|------------|--------------------------------|---|
| District 1 | Floodgate / text to speech | Being investigated |
| District 2 | BlueTOAD in SunGuide | Available in R5.1.1 (Courtesy District 4) |
| District 4 | SunGuide Permissions | Discussed in CMB today |
| District 6 | SunGuide website / hotfix list | Done |
| Turnpike | Miles ahead on DMS | Done |



Comments





Change Management Board



Action Items Review

Javier Rodriguez