

Change Management Board Meeting

Wednesday, August 17, 2016

Video Conference: CO-Burns Video Bridge 1

Audio Only: 850-414-3101

Do NOT Put On Hold Call is Being Recorded

GoToMeeting: https://global.gotomeeting.com/join/870398549





Welcome and Call for Quorum

Derek Vollmer, P.E., CMB Chairman







Time	Item	Lead
1:30 - 1:40	Welcome and Call for Quorum	Derek Vollmer
1:40 - 1:45	Previous Meeting Recap & Action Item Review	Derek Vollmer
1:45 – 1:55	ITS WAN Update	Randy Pierce & Frank Deasy
1:55 – 2:25	Vollmer Update (SunGuide, RITIS, System Engineering)	Derek Vollmer
2:25 – 2:55	District 5 Enhancements (vote)	John Hope
2:55 – 3:05	Break	
3:05 – 3:25	Gate Controller Subsystem (vote)	Tucker Brown
3:25 – 3:45	Ramp Meter NTCIP Driver(vote)	Tucker Brown







h	Time	ltem	Lead
I	3:45 - 4:00	Unconfirmed Lane Blockage (vote)	Mark Laird
	3:00 - 4:10	New CMB Chair Nomination and Vote	Derek Vollmer
	4:10 – 4:25	Open Discussion	Derek Vollmer
	4:25 – 4:30	Review Action Items	Derek Vollmer

CMB agenda, slides, and attachments posted here:

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



Previous Meetings Recap and Action Items Review

Derek Vollmer, P.E., CMB Chairman



Previous Meeting Action Items



- CO to look into getting C2C connection data into RITIS. (Open Action Item)
- CO to look into including arterial detectors feeding into the ramp metering algorithm. (Open Action Item)





ITS Telecommunications Update

Randy Pierce & Frank Deasy, P.E.





- ITS WAN District IP Re-allocation Effort
 - All Districts have been notified of their assigned CIDR blocks for the Next Generation Statewide ITS Network.
 - District 5 is actively migrating to assigned CIDR blocks and this step must be completed prior to statewide adoption.
 - District 6 and MDX are using their assigned CIDR blocks for new deployments
- Multicast (Re)Addressing
 - D3, D4, D5, MDX, TERL & D6 completed their multicast addressing
 - Remaining Districts should (re)address their multicast devices now to resolve any overlapping addresses
 - COT, D1, D7 & FTE are in progress
 - FHP RCC video sharing at Lake Worth
 - D2 not implemented at Layer 3 at this time; FTE employing multicast translation equipment April 2017 ETA
 - Multicast video can then be shared statewide
 - Goal is to have statewide video available at the State Emergency Operations Center





- Tallahassee Fiber Ring
 - Network is operational
 - Logical configuration of hardware is still in progress
 - Scheduled for late September
 - Is providing traffic camera video to State Emergency Operations Center, FDOT Operations room at Rhyne.
 - Enhances connectivity to ITS WAN for TERL and District 3





D5 RTMC Relocation/Turkey Lake/FTE Tolls Redundancy connections

- D5 fiber work is complete
- District 5 RTMC Relocation/Turkey Lake Redundancy Projects Projects have been rolled-up – planning ongoing, dependent upon funding
- FTE fiber allocation along SR-528 is Green Buffer 33, 34, 35, and 36 requires splicing at
 - Orlando South Tower site
 - FTE Master Hub 8.3
 - SR91 & 417 interchange
 - Seeking fiber allocation along SR-429 between Orlando West and I-4
 - Seeking fiber allocation from new RTMC to Orlando West.





- ITS WAN D5 to D7 Backbone Upgrade
 - Upgrade optical path from OC-48 SONET to 10Gig DWDM
 - Reallocate existing equipment to spares inventory
- FTE Tolls Middleware Application
 - FTE Tolls has requested a consolidated connection over the ITS WAN for all Districts
 - D4 has migrated onto the ITS WAN layer 3 connection
 - FTE Tolls connection to the ITS WAN redundancy at Turkey Lake is being designed
 - Southeast Fiber Re-route Project
 - Commercial Blvd fiber west to FTE mainline
 - FTE must review Commercial Avenue Tolling plaza and optics north to FTE Pompano.





- Florida Keys Microwave Project
 - Project awarded to CenturyLink / Nokia projected start Q1/2017
 - Working with FTE and MDX to complete fiber connections
 - ITS Central Office is deploying an upgrade of the unlicensed microwave system along Overseas Highway for ITS (cameras, DMS, and traffic counters)
 - Replacement system will use licensed RF spectrum
 - New system will be resistant to interference
 - Bandwidth for transporting video and other data traffic will be increased
 - System will implement an "express route" to provide G.8032 Ethernet Ring Protection Switching in the event of equipment failure or microwave fade





QUESTIONS?

Randy Pierce & Frank Deasy, P.E.

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Frank.Deasy@dot.state.fl.us



Vollmer Update

Derek Vollmer, P.E., FDOT

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Status of Upgrades



- City of Tallahassee (CoT) upgraded to 6.2
- D7 upgrade to 6.2
- D6 upgraded to 6.2
- CFX upgraded to 6.2
- District 4 upgraded to 6.2
- D5 tentative upgrade to 6.2 in September/October
- D1 waiting on SQL licenses
- FTE has a 6.2 test system
- D2 has a 6.2 test system





Hotfixes

• Release 6.2

Candidate Hotfix 1 – FPs 2569, 3504, 3524, 3540, 3574, 3597, 3599, 3604, 3605, 3606, 3616, 3633, 3634, 3635, 3636, 3637, 3641, 3643, 3644, 3646, 3658, 3663, 3687, 3696, 3701, 3702, 3730

Release 6.1

- Released Hotfixes 10, 11, 12, 13 for Footprints 3563, 3535, 3586, and 3633
- Candidate Hotfixes 14 and 15
 - GovComm radar driver and executive notifications



Waze Phase 2 Update



- D7, D4, and COT now using Waze phase 2
- Based on feedback, filters have been changed
 - Filtering out Vehicles Stopped on Shoulder. Even at reliability score 10, this was unmanageable.
 - Filtering out Debris on Roadway. Too difficult to verify using cameras, send Road Ranger to find small debris or debris already moved off to shoulder.
 - Filtering out alerts with no Sub-type
 - Filtering out construction Too many alerts with no active construction





Waze Phase 2 Update

Also getting a lot of crash alerts

- Please associate these to events when possible. Want data to help construct better filtering.
- No "Dismiss with no action" option
 - In case you want to see alerts on roadways with no EM locations





Waze Phase 2 Update

- Working on Roadway Segment Filtering
- Working on solution for TMCs that are not 24/7
- Associating Alerts to events changes ownership
- In the future, need to move to new ITS WAN allocated IP range
 - TERL needs to move to the IP range



Testing SunGuide



- Districts with test systems always catch issues we don't catch at the IV&V
- Districts with external software need to test with the new version before upgrading
- Central Office still responsible for the official documented testing
- Can provide IV&V test version to Districts with Test systems
- Provide access to IV&V portion of footprints
- Please send a request to me if you want to do early testing





Standalone Video Application

Under test

- Requires District on SunGuide version 6.2
- Requires video over the ITS WAN
- Successfully tested with District 6 and District 4



Standalone Video Application

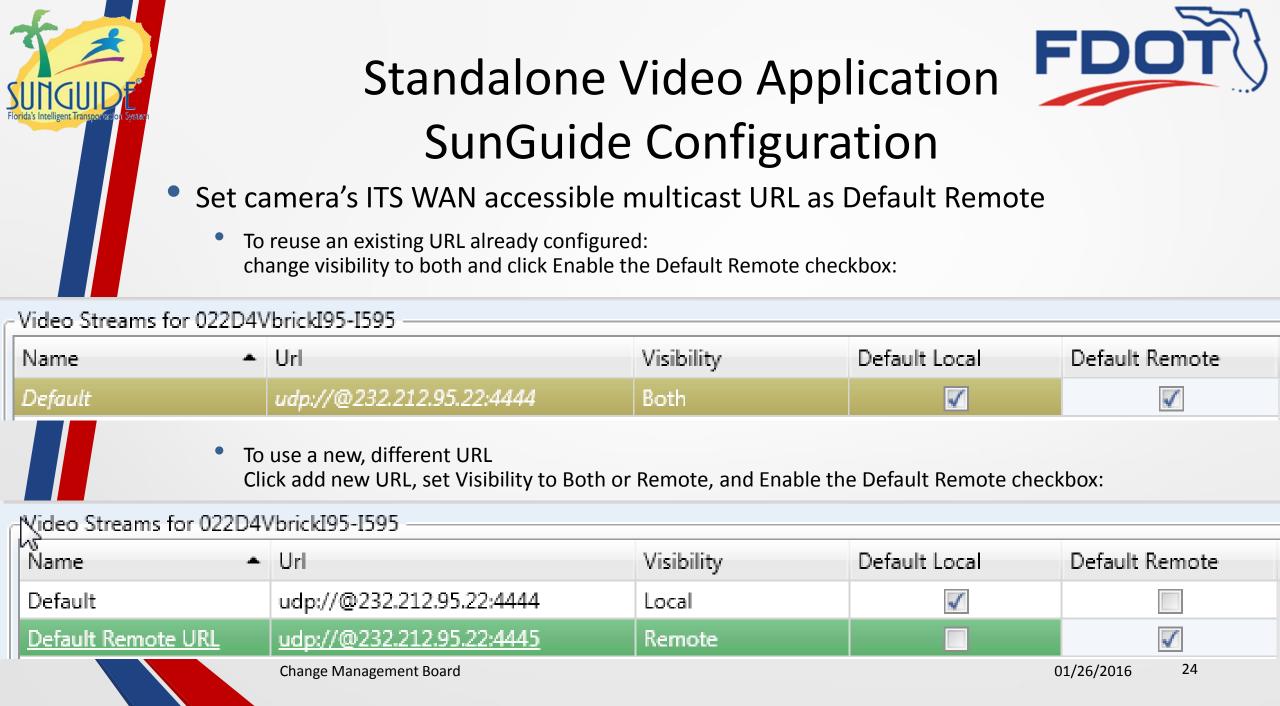
- RTSP will require access to the device on the devices RTSP port
 - Default for most devices is 554
 - Some manufacturers may change this, i.e. RTSP://<IpAddress>:<port>/other stuff
 - TCP protocol
- If you have any outbound filters, need to also allow multicast out.
- Troubleshooting RTSP streams with CoT





Standalone Video Application

 After successfully tested, please go ahead and start making SunGuide 6.2 configuration changes to allow the remote stream information to be passed via C2C.







JIRA

- Potential change from Footprints to JIRA
- Would have similar look/feel and information as Footprints
- Ran into issue producing reports for Invoices





Enhancements

- Don't forget to send me your prioritized list of enhancements
- We hope to schedule frequent yet shorter SUG meetings starting in September to flesh out concepts.



System Engineering



- Task work orders for Iteris
- System engineering training
 - A 101 course on the basics of system engineering
 - A 101 course focused on FDOT Local Agency Program Staff
 - A two day course for in-depth Florida focused training
- ConOps revamp
 - Modifications to the ConOps template with guidance
 - ConOps template for express lanes projects including guidance
- Expect to be contacted by Iteris for these tasks



System Engineering



- Issue with Scenarios not requiring SE documents
- If federal funds are involved for a "part" of an ITS project, then we need a SE analysis.
- If you have an operations and maintenance contract and want to use or may in the future use federal funds, you should do an SE analysis for the contract.
- This does not mean you need to do one for individual maintenance activities that occur under that contract.



2.3 SCENARIOS NOT REQUIRING SYSTEMS ENGINEERING DOCUMENTS

The following scenarios do not require a Project Risk Assessment and Regulatory Compliance Checklist or Systems Engineering Project Checklist:

- Routine operations and maintenance. This includes operating and maintaining any ITS elements or systems and "in-kind" equipment replacement with equipment listed on Florida's APL. This also includes purchase of monitors, renewing software licenses or adding staff for Traffic Management Center operations. This does not include new hardware or software being installed.
- Emergency operations. This includes replacing damaged ITS elements impacted by inclement weather or other causes and "in-kind" equipment replacement with equipment listed on Florida's APL. This does not include new hardware or software being installed.
- Infrastructure adjustments. This includes relocating existing ITS elements impacted by a roadway improvement project. This does not include new hardware or software being installed.



- 4. Traffic studies, plans and analyses. This includes ITS Master Plans, Deployment Plans, technology studies, whose output is only a document. This does not include new hardware or software being installed.
- Installation of an "isolated" traffic signal. This is a signal not connected to any type of external signal-control system, nor likely to be in the future because of its isolation.





ROADS

- <u>https://fldot.sharepoint.com/sites/FDOT-</u>
 <u>OIS/Projects/externalprojects/ITSP/ROADS/SitePages/Home.aspx</u>
- Application Inventory
- Report Inventory
- Goal of the project
 - Data management/governance environment (framework)
- Potential Pilot D5's Idea







• FDOT CBT training developed

- http://wbt.dot.state.fl.us/ois/RITIS/index.htm
- Additional Contract Issues





QUESTIONS?

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District 5-Proposed SunGuide Enhancements

John Hope, AECOM/FDOT D5

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SunGuide Enhancements



Make the System Messages Window's Alerts Configurable Per User / User Group (FP 3564)

Goal: Make the System Messages Window more useful

1. SwRI to evaluate all possible messages sent to the System Messages window.

2. FDOT to group the messages by type.

3. Each System Message Type configurable on a per user / user group level.



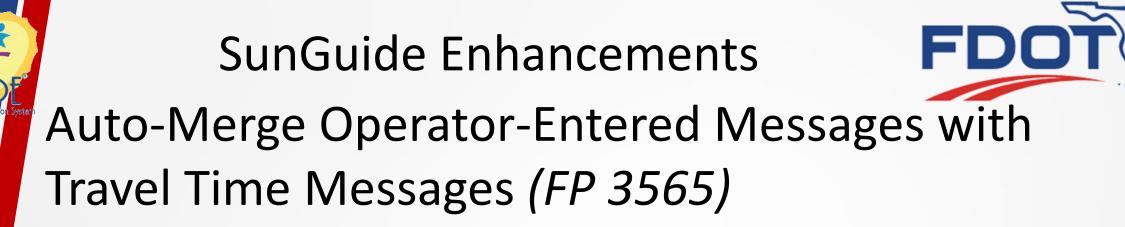
SunGuide Enhancements



Make DMS Travel Time Message Expiration Configurable (FP 3363)

Goal: Ensure old travel times are not reported on DMS

- Current implementation: Expires travel time messages in one hour (hardcoded)
- Proposed: Make expiration configurable per time of day Set shorter expiration time for peak hours
 Longer expiration time for off peak hours



Goal: Make operator management of DMS more efficient

1. Assign a preferred Travel Time page

Preferred
SR 408
7 MILES
7 MIN

2. If one-page operator-entered message added to queue, auto-merge.



Florida's Intelligent Transportation System

SunGuide Enhancements

Auto-Merge Operator-Entered Messages with Travel Time Messages (FP 3565)

Goal: Make operator management of DMS more efficient

3. If multi-page operator-entered message added to queue, don't merge.

US 441 5 MILES 5 MIN	SR 408 7 MILES 7 MIN		CRASH 3 MILES LEFT LANE BLOCKED	MERGE RIGHT
----------------------------	----------------------------	--	---------------------------------------	----------------

4. Show potential auto-merge in response plan, and add auto-merge selection.

Response Plan: Eve tivate Plan	nt 1909 Weight International Stress	Accept Load Ont New	DMS Dist: 7 HAR Dist: 50 FAM Dist: 10		
Plan Actions Current Plan Sugge Device Details	Plan Items stions	Suggestions.	Currently Active Message Dr	talk	Event: 1909
DMS MS_I10WB_MM20 [District 9] Active		S SR 408 7 MILES	US 441 5 MILES 5 MIN	SR 408 7 MILES 7 MIN	Auto-merge
ement Board		Activated	Until Canceled		08/1





Allow the Disabling Email (or other RPG elements) from Response Plans (FP 3180)

Goal: Make operator management of RPG more efficient

- If there are RPG elements not currently used, disable from RPG so operators do not have to remove
 - Email, DMS, HAR, TAM





Make Audio Alarming Selectable (FP 3004)

Goal: Make audio alarming more useful

- Only enable audio for highest priority items
 - Road Ranger Geofence Alarm
 - New Event Alarm
 - WWD Alarm
 - Incoming FHP CAD Events with Lane Blockage





Allow Multiple Default Messages if Travel Times Cannot be Generated (FP 3566)

Goal: Ensure default DMS message is appropriate for sign

FOR TRAVELER INFORMATION DIAL 511



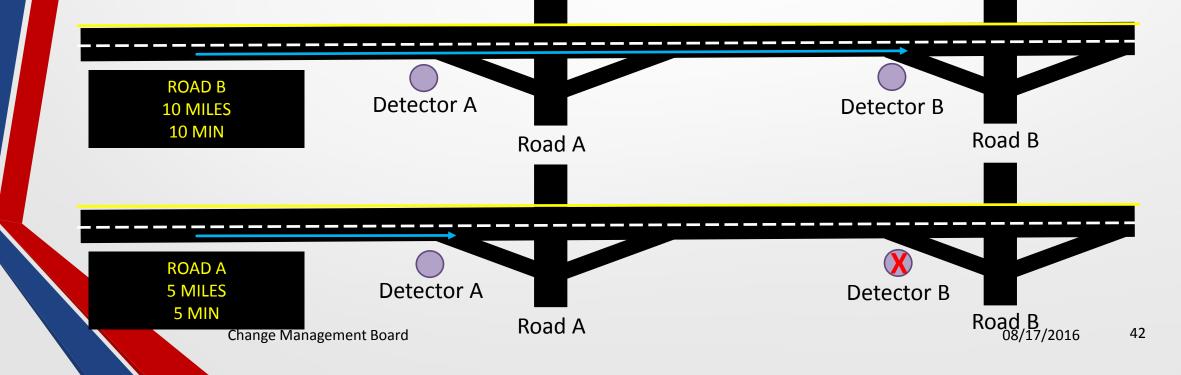
Create multiple DMS templates and associate with TvT message





Report Alternative Travel Time Destinations if Travel Times Cannot be Produced (FP 3567)

Goal: Ensure higher uptime of travel time information







Estimated Costs from SwRI

- 1. Make the System Messages Window's Alerts Config Per User / User Group (FP 3564): **\$15k**
- 2. Make DMS Travel Time Message Expiration Config (FP 3363): **\$3k**
- 3. Auto-Merge Operator-Entered Messages with Travel Time Messages (FP 3565): \$20k*
- 4. Allow the Disabling Email (and all other RPG items) from Response Plans (FP 3180): **\$5k**
- 5. Make Audio Alarming Selectable (FP 3004): **\$8k**
- 6. Allow Multiple Default Messages if Travel Times Cannot be Generated (FP 3566): **\$10k**
- 7. Report Alt Travel Time Destinations if Travel Times Cannot be Produced (FP 3567): **\$15k**

Total for All Enhancements: **\$76k**

* = Cost may be reduced with further technical discussions





QUESTIONS?

Derek Vollmer, P.E., FDOT

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John Hope, AECOM/FDOT D5

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Break – 10 min

http://ipadstopwatch.com/timer.html



Managed Lanes System (Gate Controller)

Tucker Brown, SwRI





Managed Lanes System

- TxDOT developed a Managed Lanes System (MLS) under the shared license
- The MLS subsystem has the following goals:
 - Manage opening and closing roadways and roadway segments
 - Manually verify operations of a managed roadway
 - Open and close Versilis gates or groups of gates
 - Send messages to one or more DMS queues



Managed Lanes System Controller Status

 Maintains status of the gate controllers for easy monitoring

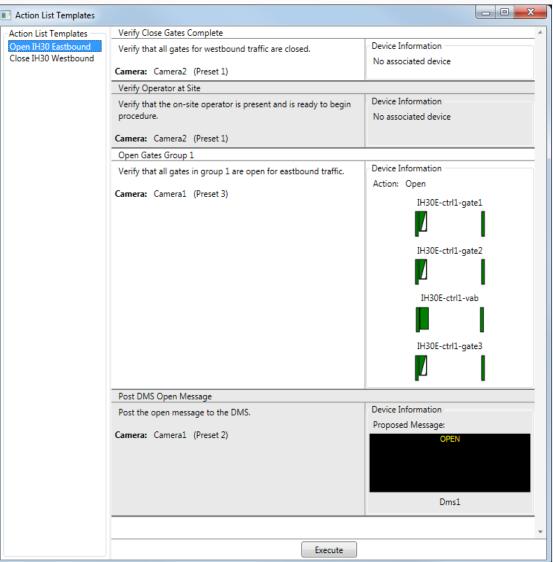
Dn			
Op Status	Last Poll	Last Control	Last Comm Attempt
Active			
Out of Service			
	Op Status Active	Op Status Last Poll Active	Op Status Last Poll Last Control Active



Managed Lanes System Action List Templates



 Allows users to define the steps necessary to open or close a segment





Managed Lanes System Segment Status



MLS Status	Y	
Managed Roads	Status	
IH30 Managed Lane Facility	Name Status Directi	ion
	 IH30-segment1 Closed East-W 	/est
	Name Status	
	IH30-segment1-ramp135 Closed	
	dms-IH30-135 IH30-ctrl1-gate1 IH30	0-ctrl1-gate2 IH30-ctrl1-VAB IH30-ctrl1-gate3
	Active Opened 0	Opening Closing Closed
	IH30-ctrl1-gate4 dms-IH30-137 OPEN	
	Failed OutOfService	
	 IH30-segment2 Open North-3 	South
	Name Status	
	 IH30-segment2-ramp245 Open 	
	IH30-ctrl2-gate1 IH30-ctrl2-VAB IH	H30-ctrl2-gate2
	Opened Opened	Opening
	IH30-segment2-ramp200 Open	
	dms-IH30-200 IH30-ctrl2-gate3	
	Failed Failed	

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Managed Lanes System Action List Status

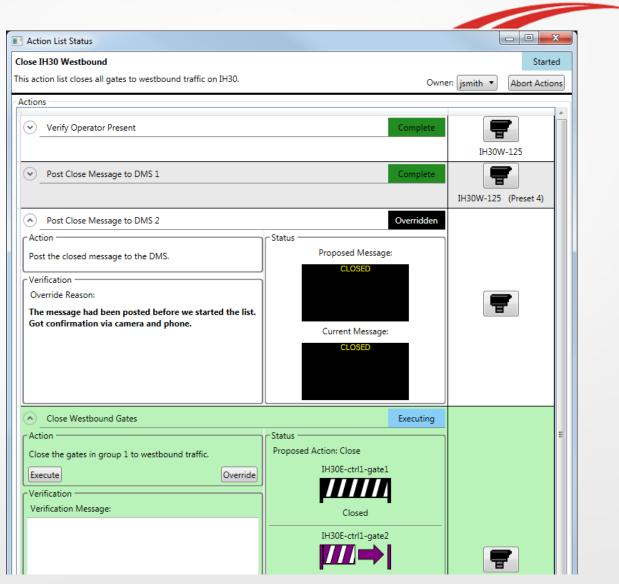
 Allows user to monitor the status on any action Lists

Active Action Lists	X
Filters Owner: All State: All	
Name Owner State	*
Open Gates for IH30 Eastbound jsmith Started	
Close Gates for IH30 Westbound jsmith Comple	ted
Open Gates for IH30 Westbound ajones Aborted	4
Open Gates for IH30 Westbound ajone	s Aborteo



Each step of the process is monitored and keeps track of the current steps that need to be taken

 User must complete step or override step (with documented reason) to proceed







Managed Lanes System Action List Log

 Maintains a history of what actions were taken by which user and any comments that may have been entered as part of the process

C,	Action List Logs					
	Time	Category	User	Description	*	
	2/19/2016 5:10:05 PM	Execute Action	jsmith	Action "Close gates" was executed.	=	
	2/19/2016 5:05:35 PM	Override Action	jsmith	Action "Post Message to DMS" was overridden.		
	2/19/2016 5:01:05 PM	Verify Action	jsmith	Action "Verify Operator Present" was verified.	_	
Ľ	0/10/0016 A.EO.OE DNA	V 11:11 1:11 C1111	rilling.	V 77.77 1.77 AGETT 11.100 /W1776 1.77 A	11	





Cost

- Port to SunGuide \$24,000
- Configuration Dialogs (instead of a text file) \$20,000
- Testing \$20,000
- Total cost \$64,000





QUESTIONS? (VOTE)

Derek Vollmer, P.E., FDOT

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NTCIP Ramp Meter Driver

Derek Vollmer

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Ramp Meter NTCIP Driver Scope

- Idea would be to map the existing SunGuide functions and configurations to NTCIP standard
- Many of the parameters are fuzzy logic specific and would not be sent to the NTCIP controller
- Relevant parameters would be sent based on the standard
 - Metering Mode
 - Metering Rate
 - Min/Max metering rate
 - Light timing
 - See Document sent out by Derek





Cost

New NTCIP Driver

- \$30k
- Estimated Delivery
 - Release 7.1





QUESTIONS? (VOTE)

Derek Vollmer, P.E., FDOT

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Unconfirmed Lane Blockages FP #3195

Mark Laird





Unconfirmed Lane Blockages

SunGuide provides a means to indicate when a lane blockage has been reported, but not yet confirmed:



- Unconfirmed blockages are not documented in the event chronology or FL-ATIS data
- Districts with the ability to quickly confirm blockages prefer not to report the unconfirmed blockages to 511
- Districts with areas where confirmation is not possible in a timely manner prefer to provide reported blockages to 511, even if not confirmed





Current Behavior

 Current behavior – unconfirmed blockages are not used in describing lane blockages in chronology and response plans, i.e.



is described as "NO LANES BLOCKED"





FP #3195

 District 6 requested that unconfirmed blockages be reported with the word "Reported" inserted before the normal lane blockage description. In that case,



will be described as "Reported Right Lane (of 5 Lanes) Blocked, Right Shoulder Blocked"



Additional Requirements

• FL-ATIS

- Some districts want unconfirmed blockages to be reported to FL-ATIS
 - There are areas where confirmation cannot occur in a timely manner
- Some districts do not want unconfirmed blockages to be reported to FL-ATIS
 - All blockages can be confirmed and these are used as placeholders until confirmed

Override

 It must be possible to implement a statewide directive to force publishing or prevent publishing of unconfirmed blockages to FL-ATIS



Proposed Implementation

- Implement the "Reported" prefix when blockages are unconfirmed, per FP #3195
- Provide a means to configure each district to default to publish or not publish unconfirmed blockages to FL-ATIS
- Provide a means for operators to override the default value
- Provide a means to configure the system to block operator overrides
- Prevent saving a combination of "X" and "?"







Cost

- Unconfirmed Lane Blockages Without 511
 - \$3.5k
- Unconfirmed Lane Blockages with 511
 - \$13,000 + changes on 511 side
- Estimated Delivery
 - Release 7.0





QUESTIONS? (VOTE)

Derek Vollmer, P.E., FDOT

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CMB Chair Nominations with Vote

Derek Vollmer

If needed, we can extend my duration

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Open Discussion

- Russell HERE/Inrix
- Russell 511 Travel Times Tab

Derek Vollmer, P.E., FDOT



Review Action Items

Derek Vollmer, P.E., FDOT