



Change Management Board Meeting



Welcome and Introductions

Steve Corbin, CMB Chairman



Change Management Board



Time	Item	Lead	Supporting Materials	
8:30 – 8:35	Welcome and Introductions	Corbin		
8:35 – 8:45	Previous Meeting Recap and Action Item Review	Corbin	August 14, 2007 Meeting Notes	
8:45 – 8:55	CMB Process Revision <i>(Vote)</i>	Corbin	<i>Change Management Process for the Deployment of ITS in the State of Florida</i>	
8:55 – 9:35	SunGuide™ Footprints Issue Review	Issue No. 257	CMB.ppt	
		Issue No. 300		
9:35 – 9:45	SITSA Modification – I-95 Express <i>(Vote)</i>	Chang	CMB.ppt	
9:45 – 10:00	SunGuide™ Software Supported Environment	Deployment, Configuration, and Operation in a Clustered Environment	Chang	<i>Overview of Deployment, Configuration, and Operation of SunGuide™ in a Clustered Environment using Windows Server 2003</i>
10:00 – 10:15	BREAK			



Change Management Board



Time	Item	Lead	Supporting Materials	
10:15 – 10:35	SunGuide™ Software Release 4.0	Requirements to Support FL ATIS (<i>Vote</i>)	Chang	Ballot
10:35 – 10:45	DMS Messaging for Multiple Lane Blockage Events		Corbin	CMB.ppt
10:45-11:05	Rules for Combining Types of Messages	Incident &TvT	Corbin	CMB.ppt
		Incident & Congestion		
		Incident & Incident		
		Incident & Other		
11:05-11:30	VS GUI Modification – Virtual Video Wall		Heller	CMB.ppt
11:30- 11:45	Closing and Action Item Review		Corbin	



Change Management Board



Previous Meeting Recap and Action Item Review



Previous Meeting Recap & Action Item Review



ACTION ITEMS

- Steve Corbin will distribute the *CMB charter* with comments to CMB for review by August 17.
- James Bitting will distribute comments regarding District 2's Travel time Enhancement by August 24.
- SwRI will send out questions for input regarding Footprint #101.
- Tahira Faquir will update the SITSA memo to include Rule 940 procedure.
- Tahira Faquir will send out stakeholders' information to districts and send out remainder to districts for update.
- The issue of SunGuide with clustering will be voted in October CMB. Trey will ask districts to provide update of their servers' environment.
- Steve Corbin will find funding for SwRI to provide report of SunGuide with clustering.
- Steve Corbin will invite Conny from TTI to next ITS WGM
- Steve Corbin will distribute the study from Canada regarding the DMS with graphics to address lane closures.



Change Management Board



CMB Process Revisions

Steve Corbin



Change Management Board



Review SunGuide™ Footprints issues

Robert Heller



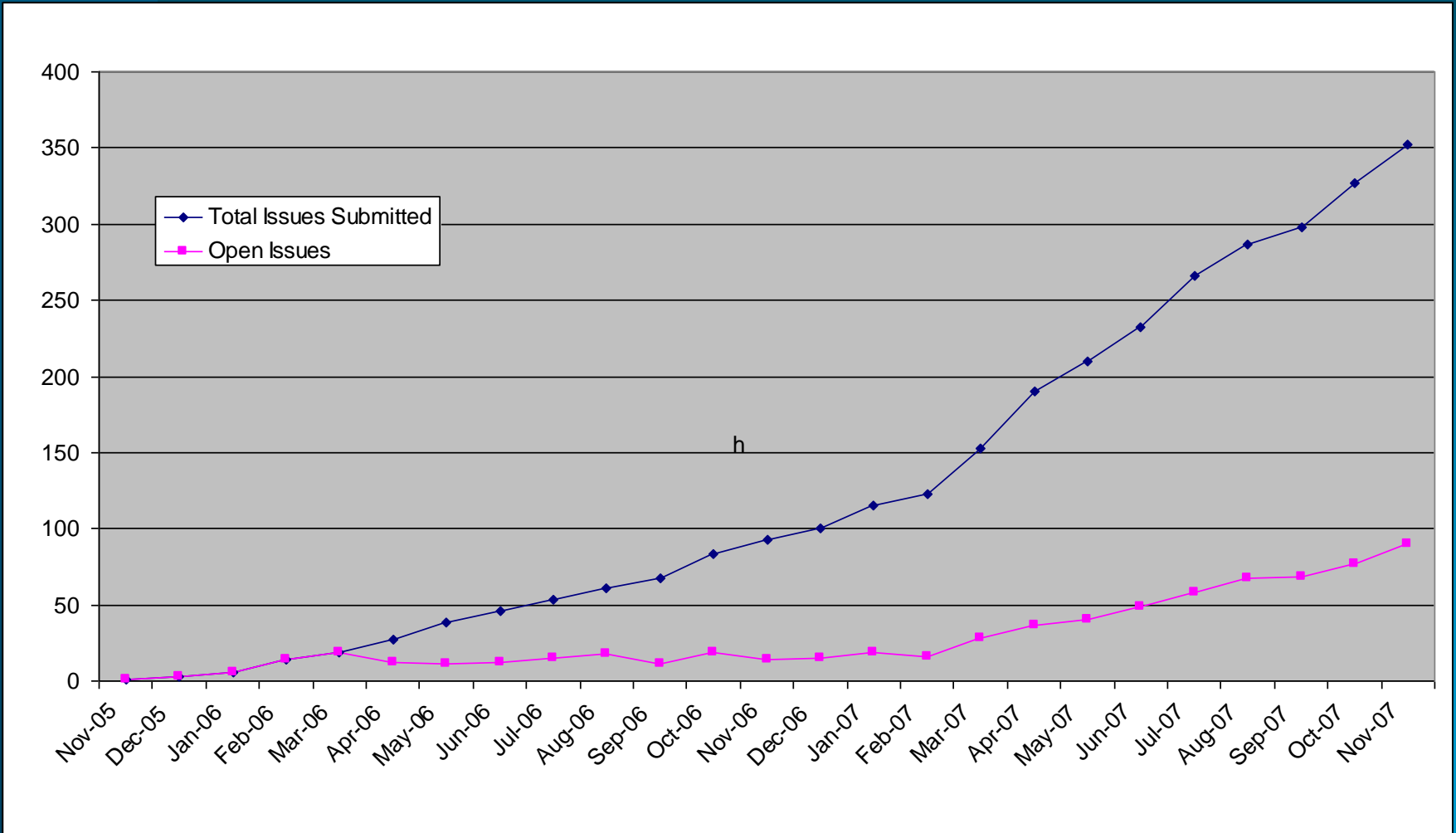
Footprints Issues Status



	New	Open	Closed	Total
Nov-07	25	90	262	352
Oct-07	29	77	250	327
Sep-07	11	68	230	298
Aug-07	21	67	220	287
Jul-07	34	58	208	266
Jun-07	22	49	183	232
May-07	20	40	170	210
Apr-07	37	37	153	190
Mar-07	30	28	125	153
Feb-07	8	16	107	123
Jan-07	15	19	96	115



All Open Issues





Old Footprints Issues



Issue Number	Date Submitted	Status	Last Edit Date	Title
<u>51</u>	6/6/2006	SwRI Addressing	7/9/2007	TVT messages with multiple destinations but missing data
<u>101</u>	11/30/2006	More Information Requested	8/7/2007	Detectors reporting 0-0-0 for both no vehicles (empty roadway), and stopped vehicles (congestion)
<u>102</u>	11/30/2006	SwRI Reviewing	12/11/2006	Allow 'failed' devices to still periodically poll
<u>107</u>	12/22/2006	SwRI Reviewing	6/1/2007	MCP / Joystick issue
<u>116</u>	1/18/2007	SwRI Reviewing	1/22/2007	Improvement to Admin Editor device pages
<u>148</u>	3/20/2007	SwRI Reviewing	3/20/2007	Data Archive / TSS logs have inconsistent timestamps
<u>174</u>	4/5/2007	SwRI Reviewing	4/11/2007	CCTV Status does not start as active
<u>176</u>	4/5/2007	SwRI Reviewing	4/6/2007	Databus does not stop gracefully
<u>177</u>	4/5/2007	SwRI Reviewing	4/6/2007	C2C Client Service does not stop gracefully
<u>183</u>	4/11/2007	Needs FDOT Approval	6/11/2007	Admin Editor/IM/Deveice Templates/Road Closed Template
<u>185</u>	4/12/2007	SwRI Reviewing	6/1/2007	CCTV or MCP drops leading zeros
<u>186</u>	4/13/2007	More Information Requested	6/13/2007	NIML Detector Recommended Configuration
<u>189</u>	4/19/2007	Issue Submitted	4/24/2007	Cannot Edit Message Database
<u>196</u>	4/24/2007	SwRI Reviewing	6/1/2007	MCP stops switching video
<u>206</u>	5/4/2007	More Information Requested	7/16/2007	Script Error using Device Linking Editor
<u>214</u>	5/16/2007	Needs FDOT Approval	5/30/2007	Running SunGuide GUI without opening the map
<u>215</u>	5/17/2007	SwRI Reviewing	7/13/2007	Video switching of VBrick stream on iMPath decoder
<u>216</u>	5/17/2007	Needs FDOT Approval	6/11/2007	Allow events to specify multiple directions



Old Footprints Issues (cont)



Issue Number	Date Submitted	Status	Last Edit Date	Title
<u>217</u>	5/17/2007	Needs FDOT Approval	6/11/2007	Add "Diversion" capability to Event Management
<u>222</u>	6/4/2007	Needs FDOT Approval	6/7/2007	Need character limitation increased from 30 to 50
<u>225</u>	6/13/2007	SwRI Addressing	8/30/2007	SAS Subsystem Requires Restart
<u>232</u>	6/27/2007	SwRI Reviewing	7/20/2007	Admin Editor manufacturer pick lists
<u>233</u>	6/27/2007	SwRI Reviewing	7/20/2007	SunGuide Keeps Connections to CCTV Cameras Open when not in use
<u>252</u>	7/3/2007	SwRI Reviewing	7/11/2007	Not able to move camera's in an angle
<u>255</u>	7/11/2007	SwRI Reviewing	8/13/2007	Enormous Icons on Map
<u>256</u>	7/13/2007	More Information Requested	7/17/2007	Device Sequencing JS Error
<u>257</u>	7/16/2007	Needs FDOT Approval	10/22/2007	Response Plan
<u>258</u>	7/16/2007	SwRI Addressing	8/21/2007	Preferences lost
<u>259</u>	7/16/2007	SwRI Reviewing	10/19/2007	Response Plans not Terminating
<u>260</u>	7/18/2007	SwRI Reviewing	10/19/2007	Queue behavior with unapproved words and response plans
<u>266</u>	7/20/2007	Needs FDOT Approval	8/23/2007	DMS Temp Error
<u>267</u>	7/20/2007	SwRI Addressing	7/23/2007	Response plans not generated for d5
<u>270</u>	7/24/2007	SwRI Reviewing	7/24/2007	Wavetronix HD working in SunGuide
<u>271</u>	7/24/2007	Issue Submitted	9/19/2007	DMS Message activation using "Detailed DMS Status" dialog
<u>272</u>	7/25/2007	SwRI Reviewing	7/25/2007	CCTV reports "no driver exists" if started after driver
<u>274</u>	7/29/2007	SwRI Reviewing	8/22/2007	Cameras spinning uncontrolled



New Footprints Issues



Issue Number	Date Submitted	Status	Last Edit Date	Title
<u>282</u>	8/2/2007	SwRI Addressing	8/10/2007	C2C WebServer configuration
<u>283</u>	8/6/2007	Request	8/6/2007	CCTV Auto Focus
<u>285</u>	8/8/2007	Request	8/8/2007	LAT/LON syntax consistency in Admin Editor
<u>286</u>	8/9/2007	Needs FDOT Approval	9/11/2007	SAS Subsystem: Admin editor permission to allow/deny Terminate Plan
<u>287</u>	8/9/2007	Request	8/9/2007	Camera-by-Camera Setting
<u>290</u>	8/12/2007	More Information Requested	8/22/2007	Presets not working on all cameras
<u>291</u>	8/14/2007	More Information Requested	10/2/2007	TSS detector status issue in D4 after patch 5
<u>294</u>	8/24/2007	SwRI Addressing	10/2/2007	TSS Detectors going in and out of service every 30 seconds in D6
<u>295</u>	8/27/2007	Issue Submitted	8/27/2007	TvT needs to be restarted for new template
<u>300</u>	8/30/2007	Needs FDOT Approval	9/9/2007	SAS Subsystem
<u>304</u>	9/10/2007	Needs FDOT Approval	9/10/2007	Arrival Timestamp for AVL/RR Interface
<u>305</u>	9/11/2007	Issue Submitted	10/5/2007	Admin Editor should check input strings for legality
<u>306</u>	9/18/2007	Issue Submitted	9/18/2007	DMS unable to post messages without vendor software clearing error buffer
<u>307</u>	9/19/2007	Request	9/19/2007	Cannot Delete DMS sign from Admin Editor
<u>312</u>	10/2/2007	SwRI Reviewing	10/2/2007	DMS signs not working after dimmer circuit breaker flips until polled by vendor software (CCS)
<u>313</u>	10/2/2007	More Information Requested	10/2/2007	Detector 95NB015.0 doesn't work in SunGuide



New Footprints Issues (cont)



Issue Number	Date Submitted	Status	Last Edit Date	Title
<u>315</u>	10/2/2007	SwRI Reviewing	10/2/2007	DMS signs on dialup don't all work at the same time
<u>316</u>	10/2/2007	SwRI Reviewing	10/2/2007	Video Switching waits on broken camera. Seems to affect all tours.
<u>317</u>	10/2/2007	More Information Requested	10/15/2007	DMS GUI should show the communication with the signs to aid in understanding why DMS signs are failing
<u>318</u>	10/2/2007	More Information Requested	10/9/2007	Dwell time inaccurate in tours
<u>323</u>	10/10/2007	SwRI Reviewing	10/19/2007	Incident Management fails to flush hour old closed events from cache
<u>324</u>	10/11/2007	Request	10/11/2007	DMS not being selected
<u>326</u>	10/15/2007	Request	10/15/2007	Video switching gui doesn't retrieve status of existing switched connections
<u>329</u>	10/17/2007	SwRI Reviewing	11/19/2007	FL511 Website loses data
<u>331</u>	10/18/2007	Issue Submitted	10/19/2007	State Roads on Map / Map Generator
<u>332</u>	10/19/2007	Issue Submitted	10/19/2007	RMS lane dialog shows updating data without updating timestamps
<u>334</u>	10/23/2007	SwRI Addressing	11/7/2007	TSS RTMS Driver Intermittent Errors
<u>335</u>	10/24/2007	More Information Requested	10/30/2007	Incident Lane Configuration Blanking
<u>339</u>	10/30/2007	Request	10/30/2007	Add "remind" message box in SunGuide
<u>340</u>	10/31/2007	Request	10/31/2007	Travel Times are not correct on Signs
<u>341</u>	11/1/2007	SwRI Reviewing	11/2/2007	VSL Plans having problems / Unable to put manual message on VSL
<u>342</u>	11/6/2007	Request	11/6/2007	Data Archive exits immediately after being started



New Footprints Issues (cont)



Issue Number	Date Submitted	Status	Last Edit Date	Title
<u>346</u>	11/8/2007	Request	11/8/2007	Export Data from Oracle
<u>347</u>	11/9/2007	Request	11/9/2007	DMS become unresponsive to GUI
<u>348</u>	11/9/2007	Request	11/9/2007	Problems adding thresholds to detectors
<u>349</u>	11/12/2007	Request	11/13/2007	Server Error in '/SunGuideAdmin'
<u>353</u>	11/15/2007	SwRI Addressing	11/15/2007	Microloop Driver grabs Oldest Data
<u>356</u>	11/16/2007	Request	11/16/2007	Unable to delete primary Sequence Libraries
<u>357</u>	11/17/2007	Request	11/17/2007	Change behavior of "Blank Sign" button on DMS Detailed Status screen
<u>358</u>	11/19/2007	Request	11/19/2007	Unable to delete or make changes to Camera in Admin editor
<u>360</u>	11/21/2007	Request	11/21/2007	DMS fails to retrieve data after reconfiguring dms sign to type vsI
<u>361</u>	11/27/2007	Request	11/27/2007	Sunguide showing false Pixel errors on Signs
<u>363</u>	11/28/2007	Request	11/28/2007	TVT Subsystem locks up frequently on activation of travel times
<u>364</u>	11/30/2007	Request	11/30/2007	Admin Editor text field widening in order to view all the text in field
<u>365</u>	11/30/2007	Request	11/30/2007	Map Detectors in Admin Editor



Footprints Issue 257



- Issue submitted by District 6
 - “SunGuide generates the wrong response plan for the accident occurring on SR 112 EB, at NW 27th Ave (DMS#103 should not have been picked up).”
- Response plan generation
 - Response plan generation based on device sequence file which includes DMS and non-DMS nodes
 - Response plan generation always returns at least one node (DMS)
 - If Event created upstream of all nodes, response plan will contain the closest downstream node



Footprints Issue 275 Attachment



SunGuide Operator Map [to662mf] - Microsoft Internet Explorer

Event Data: 56081 - Microsoft Internet Explorer

Basic Information

Event Name: Event# 80630 Severity: 1: Minor

Event Description: Accident EastBound SR-112 At NW 27 AVE

Owner: to662mf

Source: Other If Other, Description:

Expected Duration: : (hh:mm)

Confirm Scene Cleared Delay Cleared Close Event

False Alarm

Location

Latitude: 25812170 Longitude: -80240352 Milepost: 0

Location Description:

Roadway: SR-112 Direction: Eastbound

Cross Street: NW 27 AVE Landmark:

Event is located At the cross street.

Lane Configuration

Lane Type: [S] [M] [M] [M] [S]

Blocked: [Up Arrow] [Down Arrow] [Up Arrow] [Down Arrow]

Add Lane Remove Lane

Find on Map Release Ownership Save Event Save, Get Response

Suggested Resp...

Event# 80630

Available suggestions: Automatically Generated

103 [District 6]

Duration: Indefinite Priority:

2 Owner: IM System

LEFT LANE BLOKED AT NW 27 AVE

Make this the Response Plan

Add all items to Response Plan

Add only new items to Response Plan

Set as Response

Search distance: DMS: 7 HAR: 25

Get New Suggestion

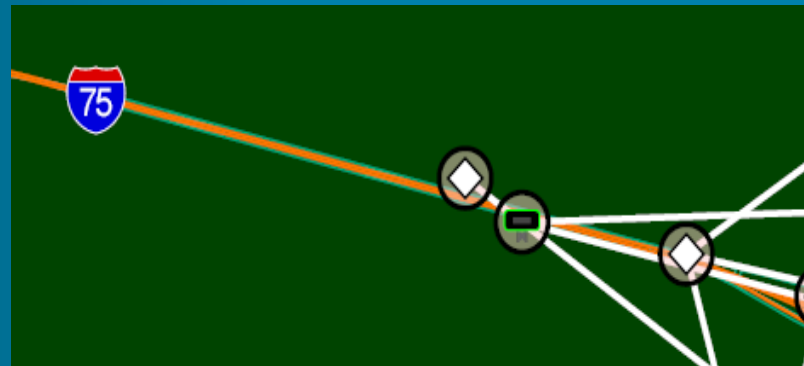
View Selected Devices



FP 257: Possible Solutions



- Operator can delete the downstream sign from response plan
- Use device sequencing editor to add a node upstream (very close to) the last DMS





Footprints Issue 300



- In District Six we need to post a safety message on the DMS from 10 AM to 10 PM for 10 minutes of every hour.

SunGuideSM
Administrative Editor

Add Sequence:

Device type:

Item	Item Type	Duration	Item Configuration	
1	<input type="text" value="Preset"/>	<input type="text" value="00:00:00"/>	Preset Number: <input type="text" value="1"/>	Update Cancel

Add camera action:

- SAS was designed to be extensible; can be extended to support DMS schedules & sequences



Footprints Issue 300



- Currently sequences are supported directly by DMS subsystem

DMS Sequence Libraries - Windows Internet Explorer

Selected Library:
[Base Libraries - SafetyMessages](#)

Sublibraries

Sequences

ClicktorTicket

Selected Sequence:
Days of the week (Active/Inactive)
Sun Mon Tue Wed Thu Fri Sat

Starts: 12/09/2007 12:08
Sequence will run until termina
Sequence may be activated

DMS Sequence Editor - Windows Internet Explorer

Sequence Name: ClicktorTicket
In Library: - SafetyMessages

Days of the Week to Run
Select which days this sequence should place messages on signs:
 Sun Mon Tue Wed Thu Fri Sat

Dates to Run
Select the date and time for the sequence to begin placing messages on signs:
Dec (12) - 9 - 2007 12 (Noon) : 08 Now
Select the date after which the sequence will no longer place messages on signs:
 Continue until terminated
 Jan (1) - 1 -

Sequence Items

10:00 AllSigns
11:00 AllSigns
12:00 AllSigns
13:00 AllSigns
14:00 AllSigns
15:00 AllSigns
16:00 AllSigns
17:00 AllSigns

Selected Item:
CLICK IT OR TICKET
Priority: 256
Start: 10 (10 AM) : 00
End: 10 (10 AM) : 10
(Messages may not be displayed for more than 12 hours and may not last across the start time of the sequence.)



Change Management Board



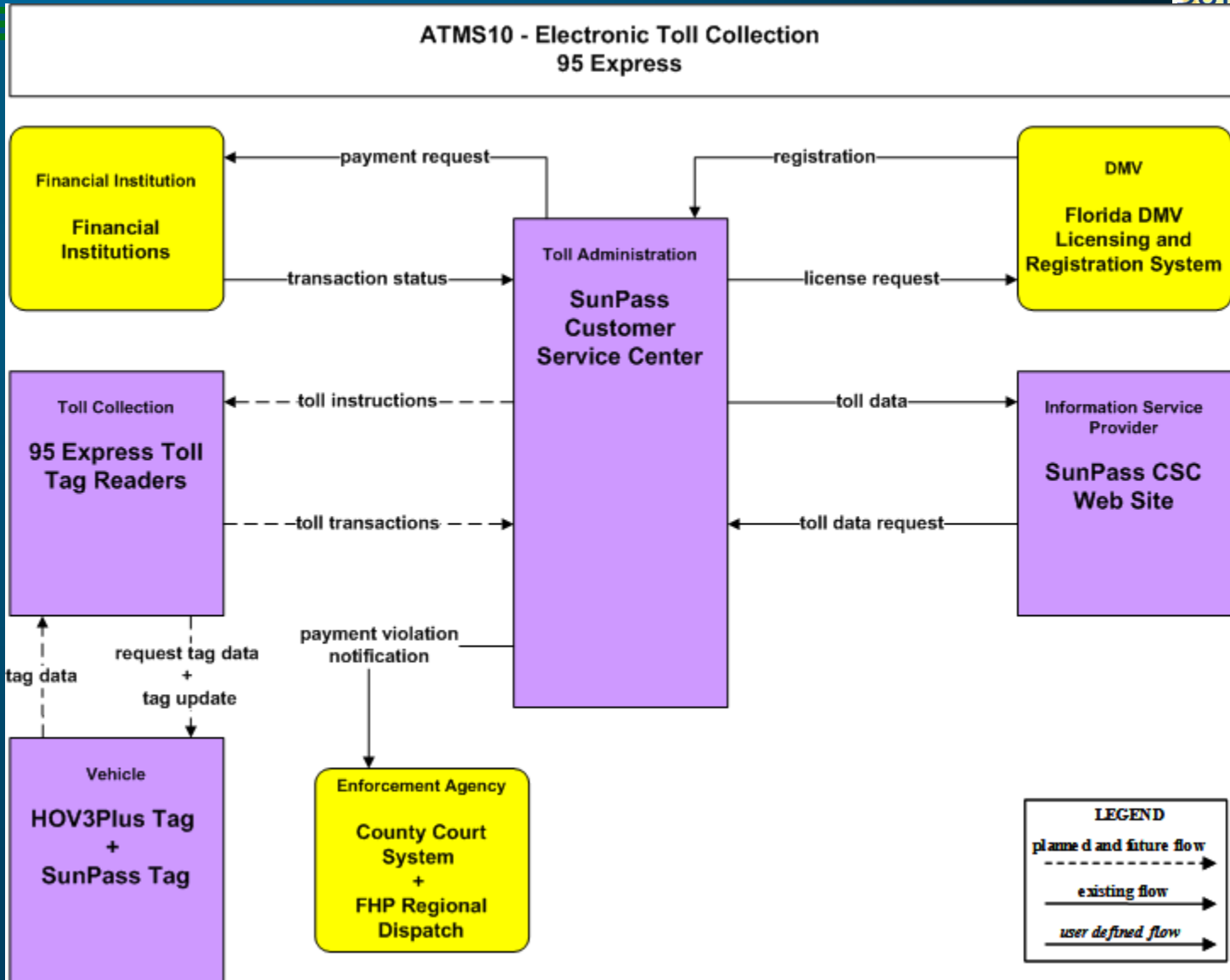
SITSA Modification – I-95 Express



SITSA Modification – I-95 Express

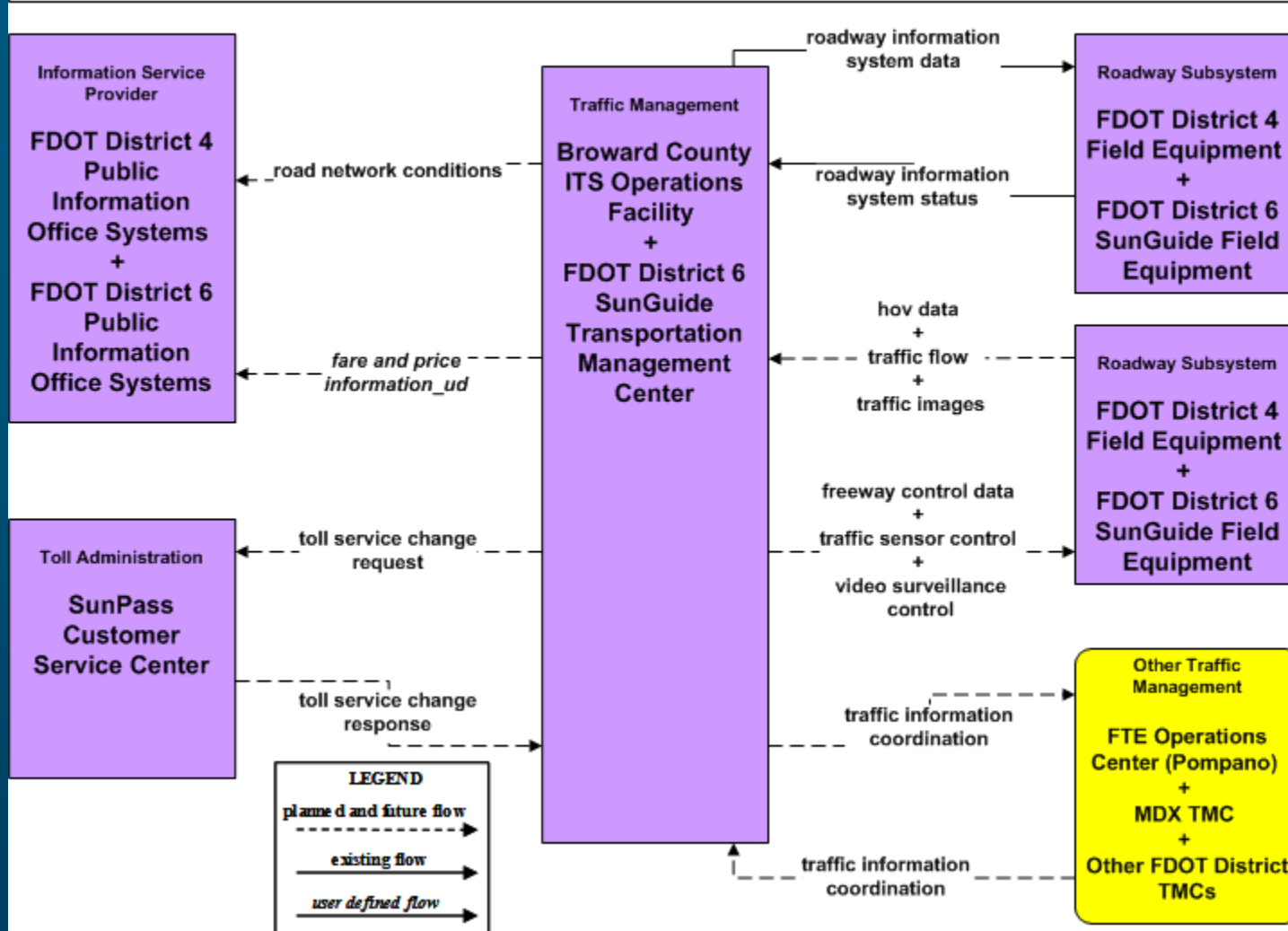


- The following customized market package diagrams identify services, elements and interfaces to put the 95 Express project into the Regional ITS Architecture.
- This was submitted to FHWA for their review and approval in October 2007. Official approval is still pending.



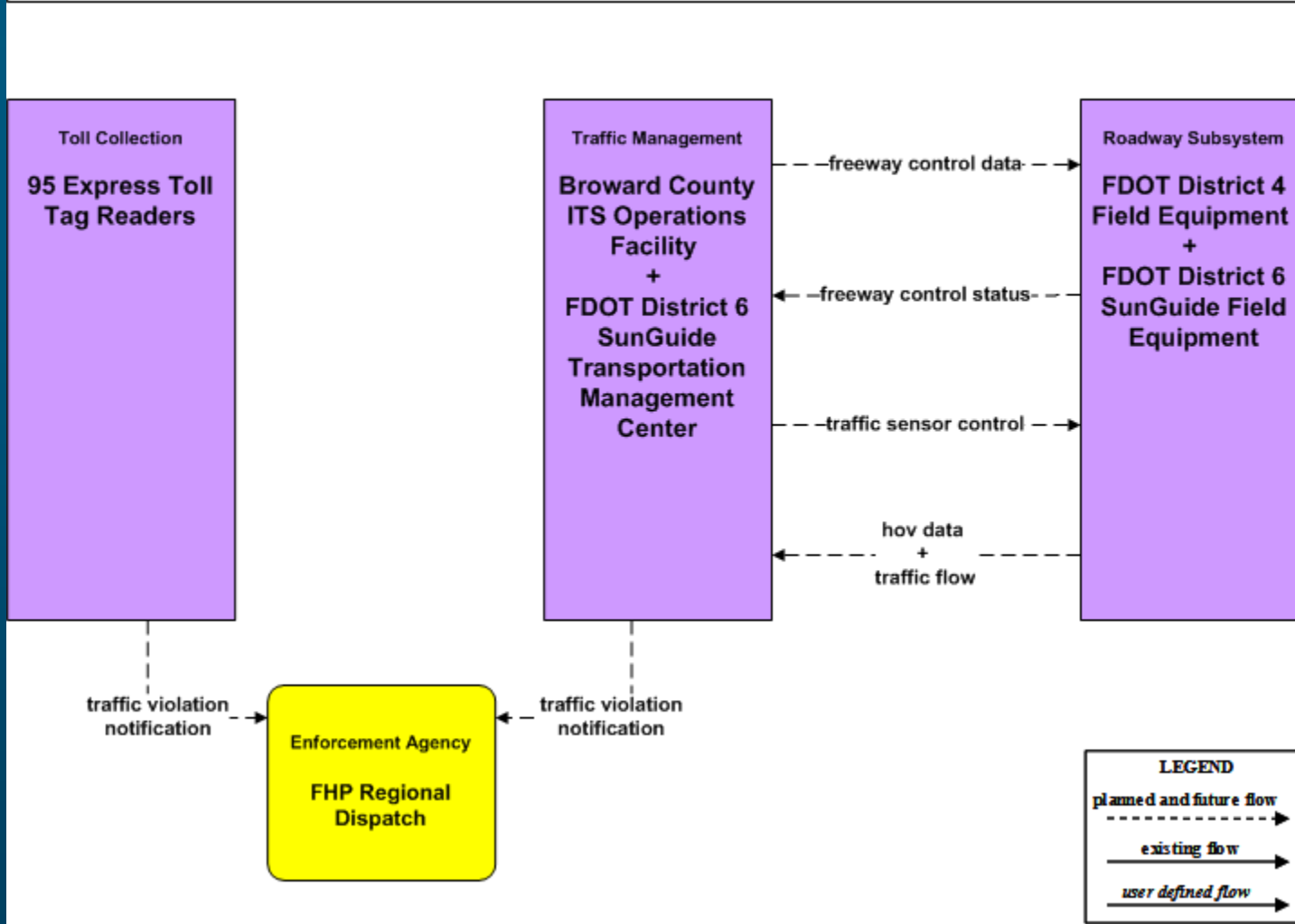


ATMS09 - Traffic Forecast and Demand Management 95 Express (Field Operations) (1 of 2)



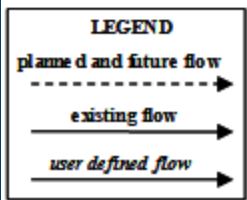
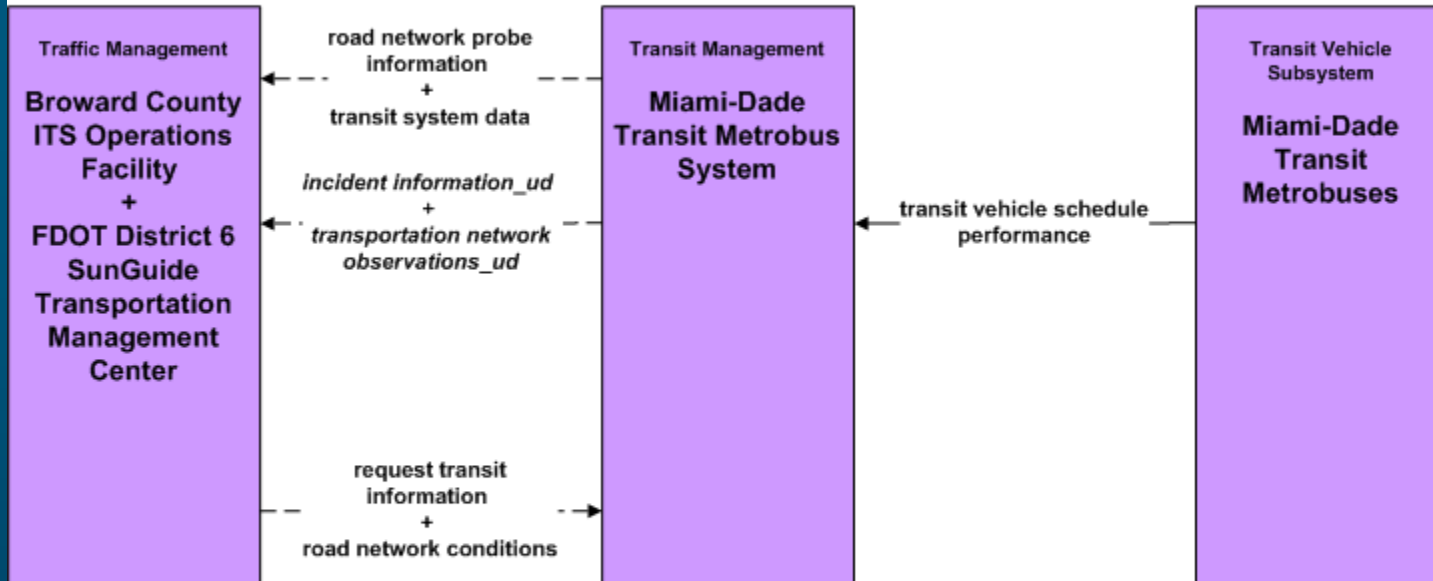


ATMS09 – Traffic Forecast and Demand Management 95 Express (Violations) (2 of 2)



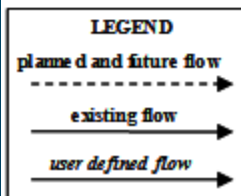
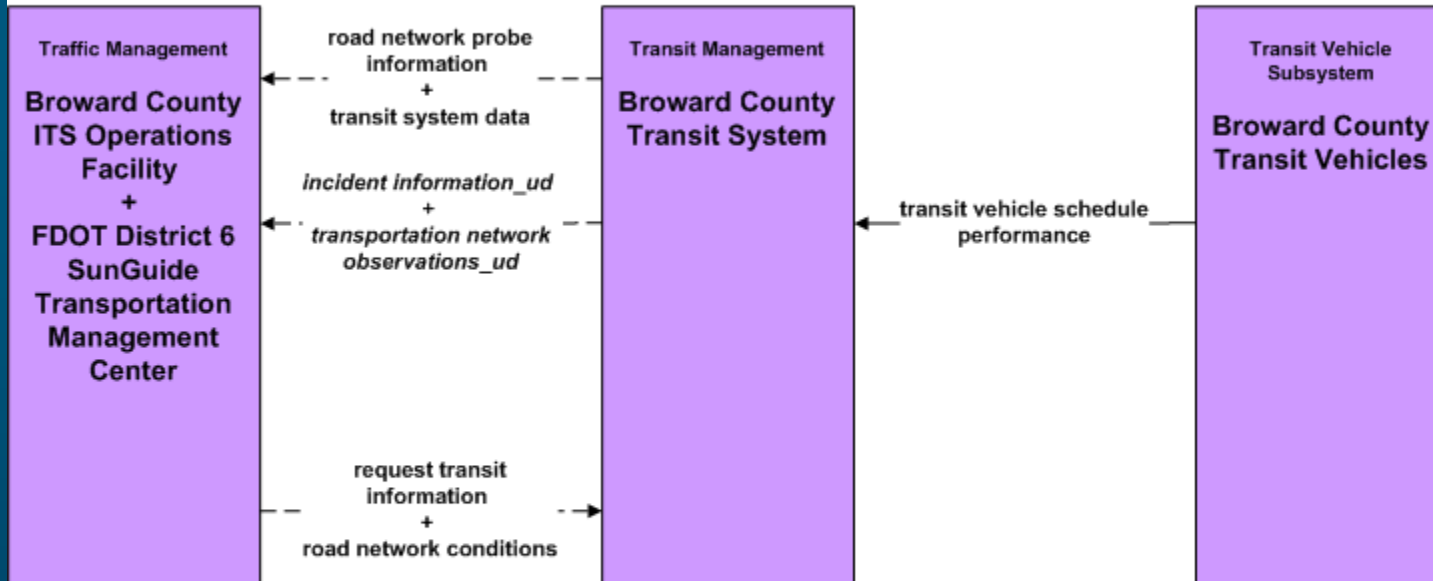


APTS7 - Multi-Modal Coordination 95 Express (1 of 2)





APTS7 - Multi-Modal Coordination 95 Express (2 of 2)





Change Management Board



Vote



Change Management Board



Overview of Deployment, Configuration and Operation of SunGuide™ in a Clustered Environment using Windows Server 2003

Khue Q. Ngo



History



- **2005: SwRI's SunGuide Server Alternatives doc**
- **July 9: D4 Presented at CMB Meeting**
- **Oct 1-3: Observed clustering at D5 RTMC**
- **Oct 15: Trip report submitted to FDOT - CO, proposal for SunGuide Clustering Overview whitepaper to FDOT - CO**
- **Nov 1: Finished first draft of document Sent for peer review**
- **Nov 15: Submitted to FDOT-CO for review**
- **Dec 13: Present at CMB Meeting**
- **Week of Dec. 17: Submit for CMB for review**



Purpose



- Overview of the server clustering w/ Windows Server 2003, Enterprise Edition.
- Planning and deployment of a clustered environment for SunGuide™ applications guidance.
- SunGuide™ installation and operation on a server cluster guidance.
- References to technical resources.



Document outline



1. Purpose
2. Introduction
3. Pre-installation analysis & firmware requirements
4. Cluster installation
5. SunGuide installation & operations on cluster environment
6. Testing and troubleshooting
7. Conclusion
8. Appendix A: SunGuide Server Alternatives document (SwRI)

White Paper

SunGuide™ Software System

Overview of Deployment, Configuration, and Operation of SunGuide™ in a Clustered Environment using Windows Server 2003

November 8, 2007
Final Version



Prepared for:
Florida Department of Transportation
Traffic Engineering and Operations Office
Intelligent Transportation Systems Section
650 Suwannee Street, M.S. 90
Tallahassee, Florida 32399-0450
(850) 410-5600



Four-node Server Cluster



Full SunGuide™ Installation

Preferred Node for:

- Status Logger
- DMS (and drivers)
- MAS
- Inventory Maintenance
- Travel Time
- Safety Barrier
- Incident Mangement

Full SunGuide™ Installation

Preferred Node for:

- Databus
- MCP & MCP Manager
- Video Wall
- CCTV (and drivers)
- Video Switching
- TSS (and drivers)
- Ramp Metering
- RWIS (and drivers)

Full SunGuide™ Installation

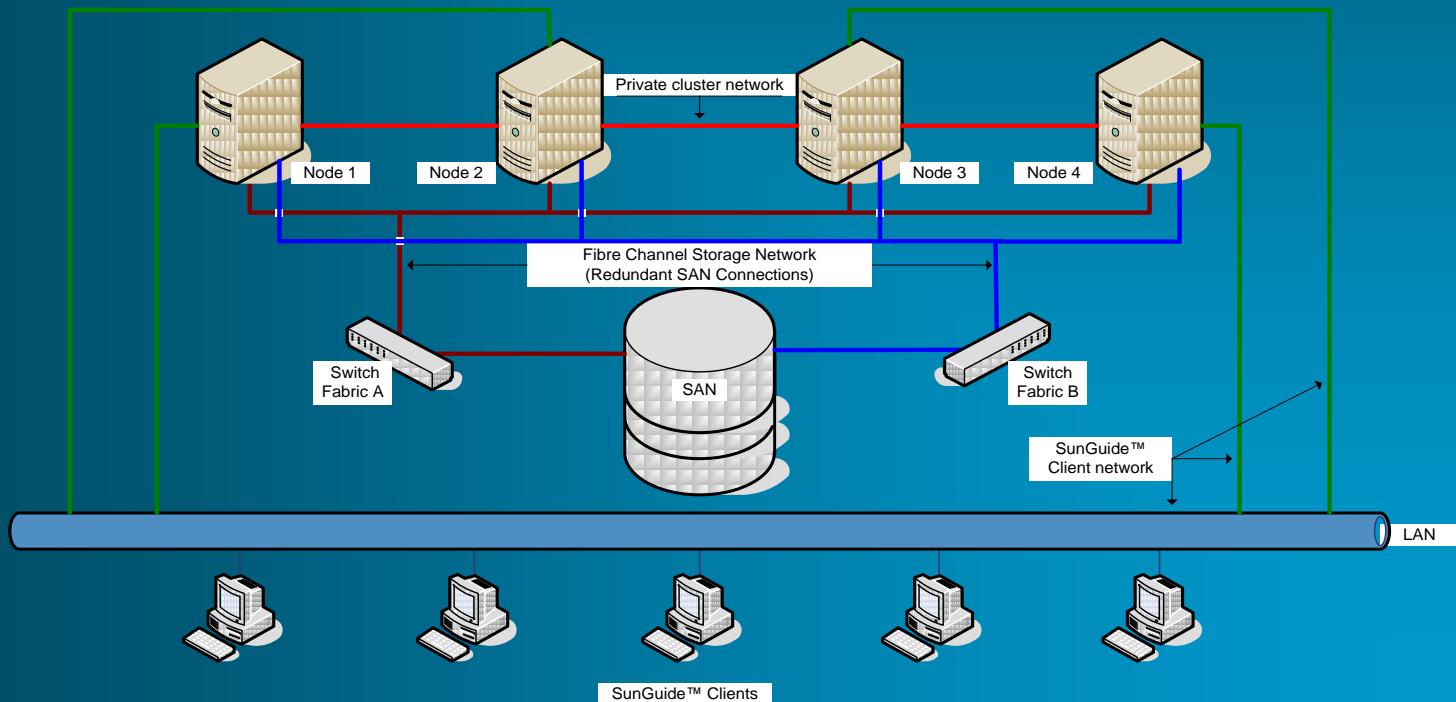
Preferred Node for:

- Oracle® 10g
- Connection Manager
- GUI Preference Manager
- User Interface (IIS)
- Data Archiving

Full SunGuide™ Installation

Preferred Node for:

- C2C Infrastructure
- Web Server (IIS)
- Emergency Evacuation Server





Server cluster advantages



- Flexible software “control” environment for software execution.
- Provides a software solution as an alternative to the hardware based “cold standby” or “warm standby” high availability solution.
- When properly configured and managed, this is the most robust solution available.
- Does not require system shutdown to upgrade and install new versions of SunGuide™.
- Automatic recovery and additional flexibility for transferring operation of SunGuide™ services between servers.
- Significantly reduce planned and unplanned system downtime.
- Cluster operations and architecture are transparent to the SunGuide™ software.



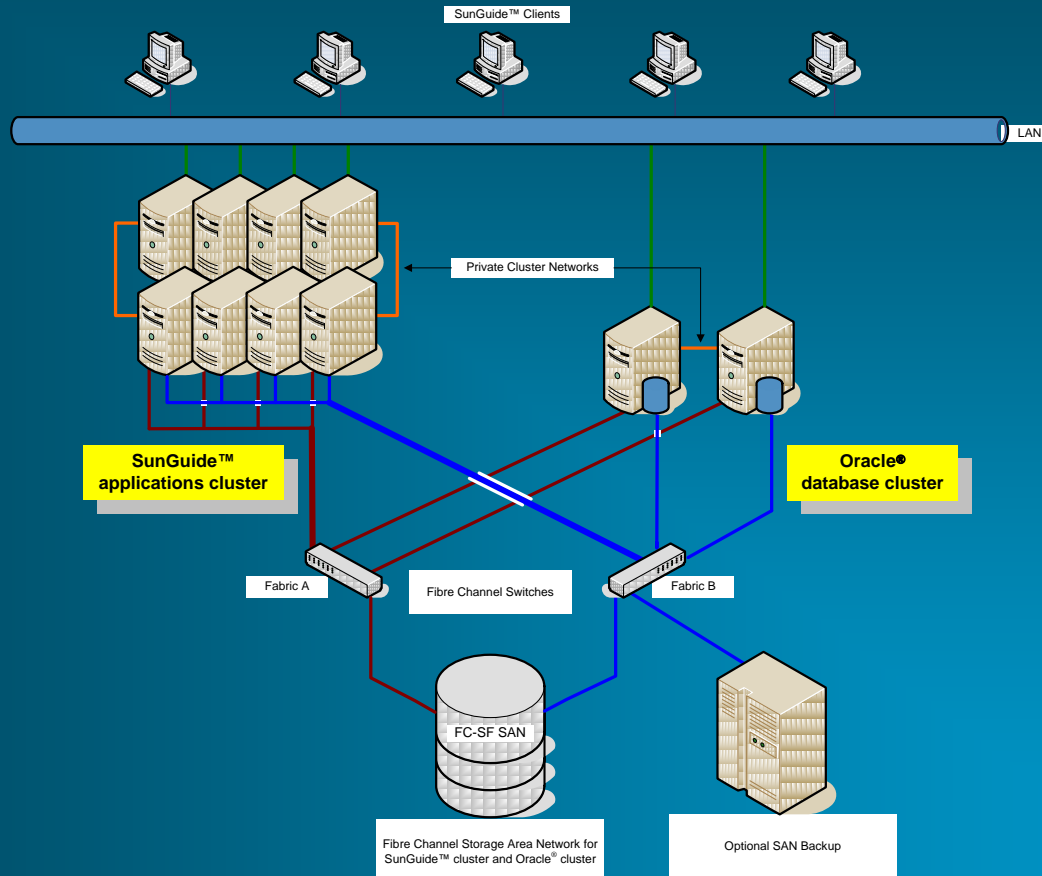
Server cluster disadvantages



- **System upgrades.**
 - Microsoft Hardware Compatibility List (HCL).
 - All servers in the cluster be identical.
- **32-bit servers and 64-bit servers cannot be mixed**
- **Storage upgrade to a Redundant Array of Inexpensive Disks (RAID) or SAN configurations.**
- **No support for DHCP.**
- **Experienced and well-trained IT staff to install, upgrade and maintain the cluster system.**
- **Additional labor and time involved in planning and installation.**
- **Prevents use of SG Executive Handler to monitor overall system status.**
- **Additional cost of Windows Server 2003, Enterprise Edition.**



Typical SunGuide Clusters



A typical RTMC two-cluster network system



Next step



- CMB/District review of this document
- Develop step-by-step installation and operation procedure.
- Validate using TERL network infrastructure.
- Deploy at RTMC
- Standardize?



Change Management Board



BREAK



Change Management Board



SunGuide™ Software Release 4.0

David Chang



SunGuide™ Release 4.0



- **FDOT Location Code - FL ATIS Requirements**
- **SunGuide EM: Locations with Latitude – Longitude and Displacement**



SunGuide™ Release 4.0



- **Modified:**
- **DF004G (added the concept of offset distance)**
 - **The Graphical User Interface component shall allow a SunGuide operator to create an event by selecting a location from a menu of covered locations, designating an offset distance before or beyond the location if required and selecting the appropriate SAE codes that describe the event.**
- **Traceability: S018 -> DF019 -> DF004G**



SunGuide™ Release 4.0



- **New:**
 - DF004G4**
 - SunGuide shall report offset distance in miles rounded to nearest value from the list below:
 - Distance between 0 miles and 0 miles, report as 0 miles
 - Distance between 0 and 0.35 miles, report as quarter mile (0.25 mile)
 - Distance between 0.35 miles and 0.65 miles, report as half mile (0.5 mile)
 - Distance between 0.65 miles and 0.85 miles, report as three quarter mile (0.75 miles)
 - Distance between 0.85 miles and 1.25 miles, report as one mile (1 mile)
 - Distance between 1.25 miles and 1.75 miles, report as one and a half miles (1.5 miles)
 - Distance between 1.75 miles and 2.25 miles, report as two miles (2 miles)
 - Distance between 2.25 miles and 2.75 miles, report as two and a half miles (2.5 miles)
 - Distance between 2.75 miles and 3.25 miles, report as three miles (3 miles)
 - Distance between 3.25 miles and 3.75 miles, report as three and a half miles (3.5 miles)
 - Distance between 3.75 miles and 4.25 miles, report as four miles (4 miles)
 - Distance between 4.25 miles and 4.75 miles, report as four and a half miles (4.5 miles)
 - Distance between 4.75 miles and 5.5 miles, report as five miles (5 miles)
 - Distance between 5.5 miles and 6.5 miles, report as six miles (6 miles)
 - Distance between 6.5 miles and 7.5 miles, report as seven miles (7 miles)
 - Distance between 7.5 miles and 8.5 miles, report as eight miles (8 miles)
 - Distance between 8.5 miles and 9.5 miles, report as nine miles (9 miles)
 - Distance between 9.5 miles and 10.5 miles, report as ten miles (10 miles)
 - Distance between 10.5 miles and 1,000 miles, report as greater than ten miles
- **Traceability: S018 -> DF019 -> DF004G -> DF004G4**



SunGuide™ Release 4.0



- **New:**

DF006F3

- **For incidents and events, the Data Fusion component shall include the following fields in its output if the event or incident is within defined geographic boundaries for:**
 - **a City**
 - **a County**
 - **a Metro Area**
 - **Otherwise null data shall be provided in the fields.**



Change Manage Board



Vote



Change Management Board



DMS Messaging for Multiple Lane Blockage Events

Steve Corbin



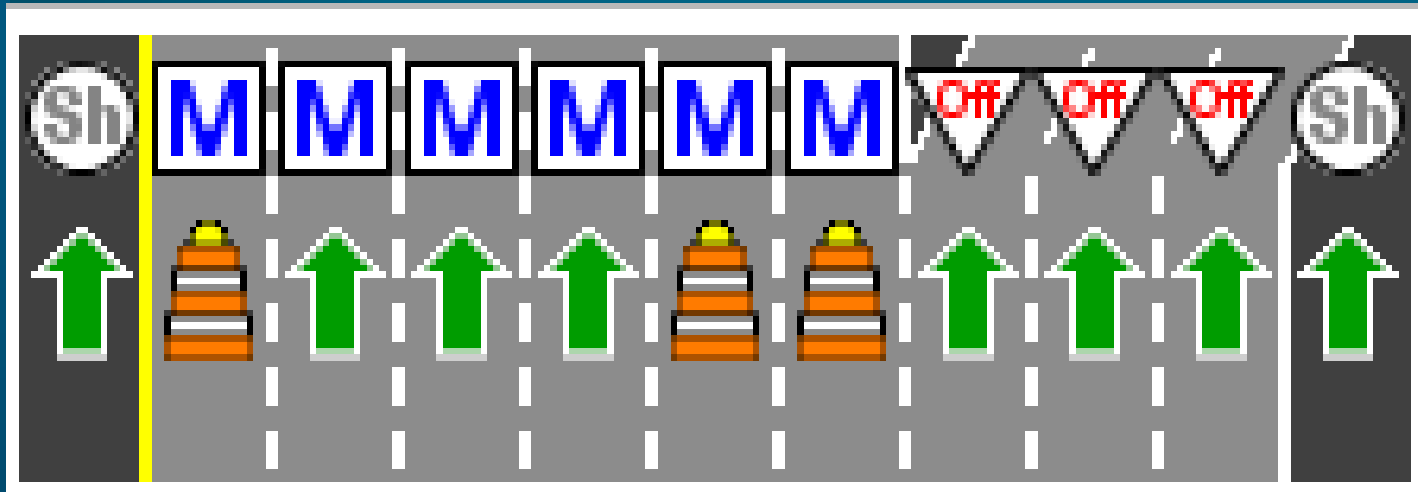
DMS Messaging Multiple Lane Blockage Events



- How to message for non consecutive lane blocking events
 - Current messaging
 - Possible solutions
 - Statewide Decision



Non-consecutive Lanes Blocked





IM: Response Plan



Response Plan: 80112 - Windows Internet Expl...

Event# 385042

Add DMS Add HAR Add Predefined Plan

95NB18 [District 4] Edit Remove
Duration: 1 days, 0:00:00 Priority: 11 Owner: IM System
**THREE OF SIX LANES
BLOCKED BEFORE
BROWARD BLVD**

595EB05 [District 4] Edit Remove
Duration: 1 days, 0:00:00 Priority: 8 Owner: IM System
**NB 95 THREE OF SIX LN
BLOCKED BEFORE
BROWARD BLVD**

View Suggestions View Selected Devices
Activate Plan Terminate Plan



As is: Percentage Blocked



**THREE OF SIX LANES
BLOCKED BEFORE
BROWARD BLVD**



Option 1: Number Blocked



**THREE LANES
BLOCKED BEFORE
BROWARD BLVD**



Option 2: Two-phase



**ONE LEFT LANE
BLOCKED BEFORE
BROWARD BLVD**



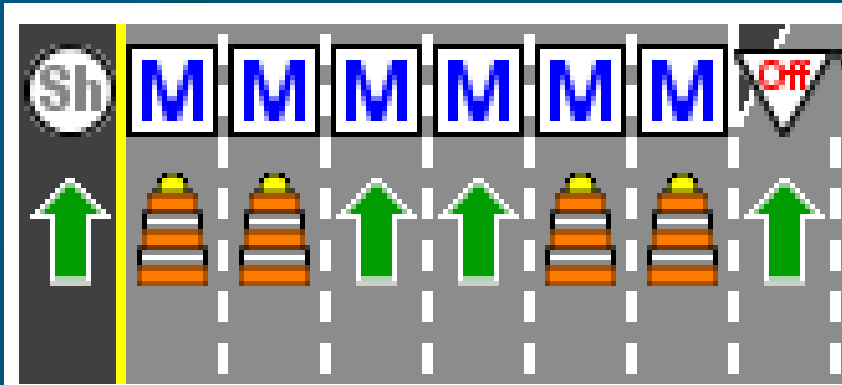
Option 3: Greater Number



**TWO RIGHT LANES
BLOCKED BEFORE
BROWARD BLVD**



What if?



Response Plan: 80112 - Windows Internet Expl...

Event# 385042

Add DMS Add HAR Add Predefined Plan

95NB18 [District 4] Edit Remove

Duration: 1 days, 0:00:00 Priority: 11 Owner: IM

System

**FOUR OF SIX LANES
BLOCKED BEFORE
BROWARD BLVD**

595EB02 [District 4] Edit Remove

Duration: 1 days, 0:00:00 Priority: 11 Owner: IM

System

**NB 95 FOUR OF SIX LNS
BLOCKED BEFORE
BROWARD BLVD**

View Suggestions View Selected Devices

Activate Plan Terminate Plan



Option 4: High Speed Lane



**ONE LEFT LANE
BLOCKED BEFORE
BROWARD BLVD**



Option 5: Available Lanes



**THREE CENTER LANES
OPEN BEFORE
BROWARD BLVD**



Option 6: Diagrams



**THREE LANES BLOCKED
BEFORE BROWARD BLVD**

X ↑ ↑ X X



Change Management Board



DMS Messaging – Two Phasing

Steve Corbin



DMS Messaging Two Phase Messages



- **Why is Two Phasing Needed**
 - **Ability to give Motorist more relevant information**
 - Desired information to make an educated choice
 - Where does the queue start
 - How long will it take to get through the affected area
 - Comparison points
 - **Create system of consistent messaging**
 - Establish rules on what types of messages are combined and when



DMS Messaging Two Phase Messages



- **What conditions can create a need for Two Phase Messaging**
 - Incident – Incident
 - Incident – TVT
 - Incident – Congestion
 - Congestion - TVT
 - Incident – Other (default messages i.e. Amber Alert)



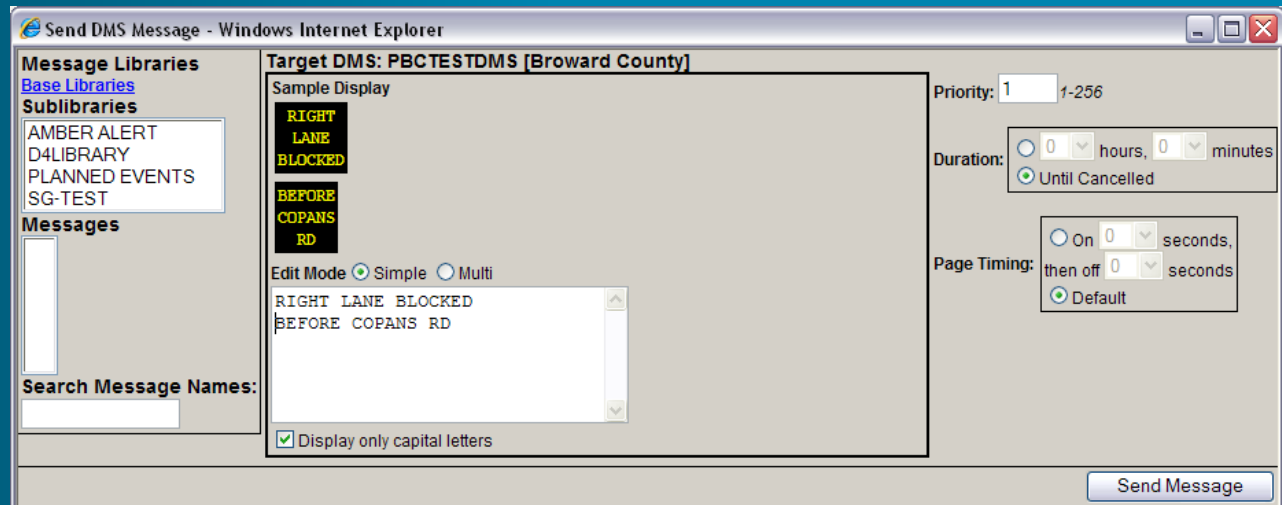
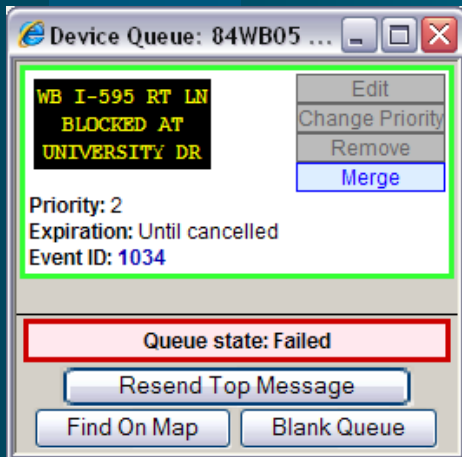
DMS Messaging Two Phase Messages



● How does SunGuide Two Phase Messages

● Current

- If message does not fit in message template system will create 2nd Phase
- Manual message created by staff
- R3.0 operator can combine two messages from MAS queue on per sign basis

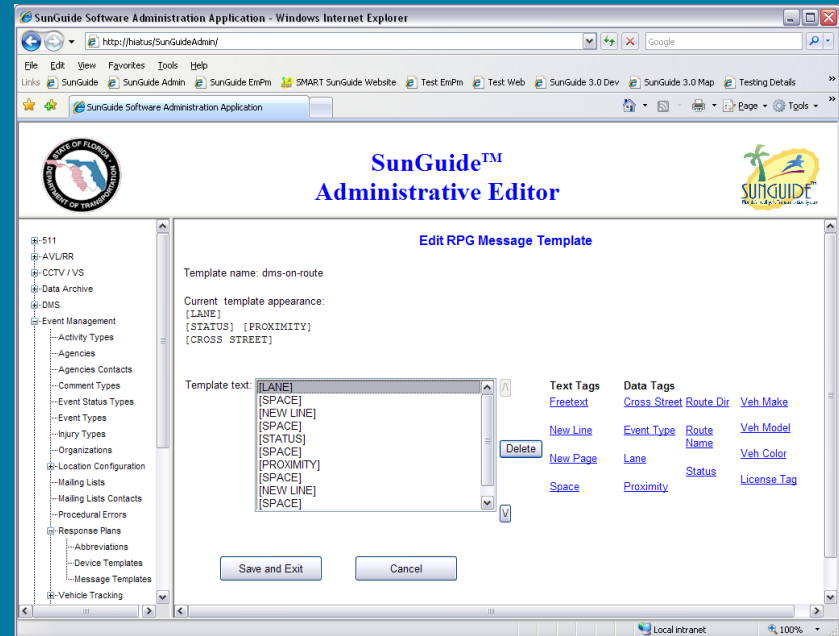
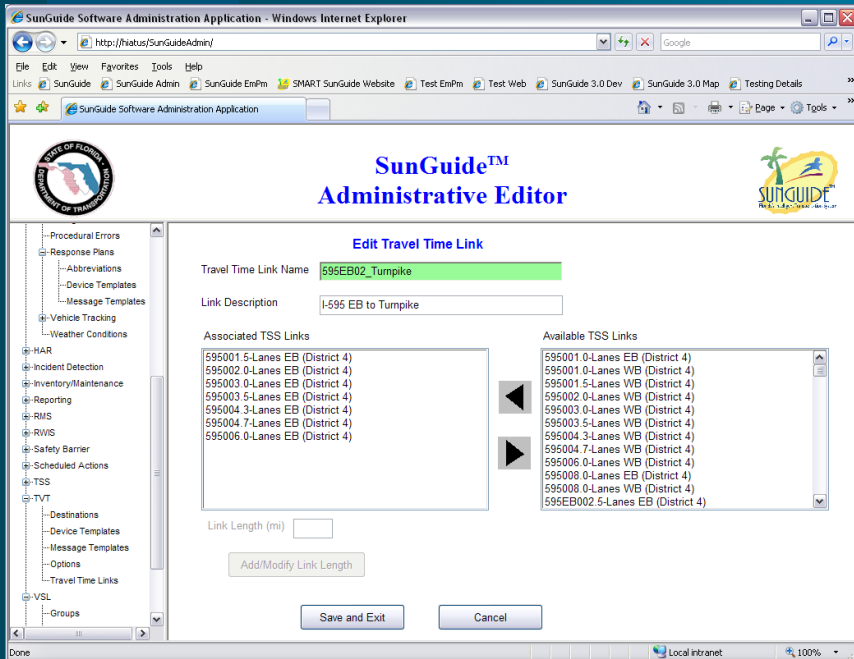




DMS Messaging Two Phase Messages



- How can SunGuide Two Phase Message
 - Additional functionality to configure SunGuide using Admin Editor
 - Appropriate enhancements to other subsystems based on user requirements

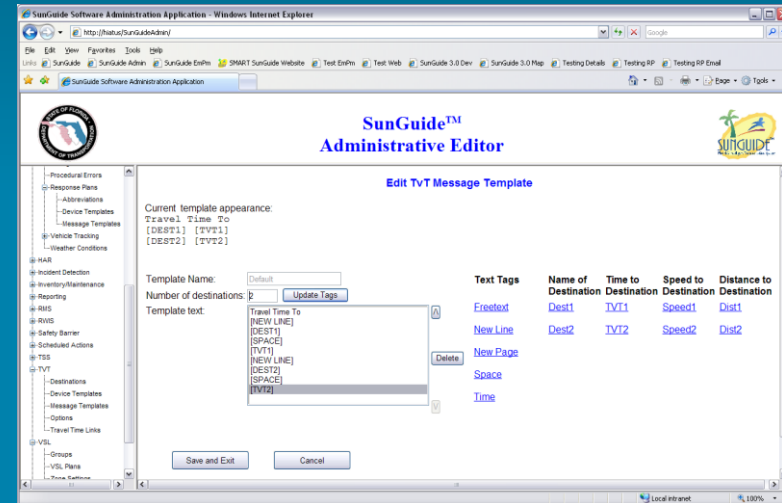




DMS Messaging Two Phase Messages



- Using Admin Editor to Configure
 - Ability to pre determine what messages would be available for second phasing
 - TVT, Congestion, Incidents & Others
 - Allow system to automatically combine messages
 - Multi priority scheme
 - Allow the System Administrator to configure the rules to configure priorities (roadway, incident priority, % of lanes blocked, duration of event, length of queue, type of event, distance from DMS)





DMS Messaging Two Phase Messages



● Using Admin Editor to Configure

● Same Roadway

- Incident – TVT
- Incident – incident
- Incident – congestion
- Incident – other
- TVT – congestion
- TVT – other
- Other – congestion

● Different Roadway

- Incident (a) – incident (b)
- Incident (a) – congestion (a)
- Incident (a) – TVT (a)
- Incident (a) – other (a)
- Incident (a) – other (b)
- Incident (b) – congestion (b)
- Incident (b) – TVT (b)
- Incident (b) – other (a)
- Incident (b) – other (b)



Option 1: Incident - Incident



Same Road

- Two Incidents, same road, same direction

**TWO LEFT LANES
BLOCKED BEFORE
BROWARD BLVD**

**ONE RIGHT LANE
BLOCKED BEFORE
COPANS ROAD**



Option 1: Incident - Queue



Same Road

- One Incident with Congestion, same road, same direction

**TWO LEFT LANES
BLOCKED BEFORE
BROWARD BLVD**

**SLOW TRAFFIC
COPANS RD TO
BROWARD BLVD**



Option 1: Incident - TVT



**TWO LEFT LANES
BLOCKED BEFORE
BROWARD BLVD**

Same Road

- One Incident and TVT, same road, same direction

**TRAVEL TIME TO
COPANS 2 MI 3 MIN
BROWARD 9 MI 25 MIN**



Option 1: Incident - PSA



Same Road

- One Incident and PSA, same road, same direction

**TWO LEFT LANES
BLOCKED BEFORE
BROWARD BLVD**

**SUNDAY I-95
CLOSED
6AM – 8PM**



Option 1: Incident - Incident



Different Roads

- Two Incidents, different roads, different directions

**TWO LEFT LANES
BLOCKED BEFORE
BROWARD BLVD**

**595 WB ONE RHT LN
BLOCKED BEFORE
UNIVERSITY DR**



Change Management Board



Open Discussion

- Future enhancements
- Rules – who creates and implements
- Keep the motorist in mind



Change Management Board



Rules for Combining Types of Messages

Steve Corbin



Change Management Board



VS GUI Modification – Virtual Video Wall

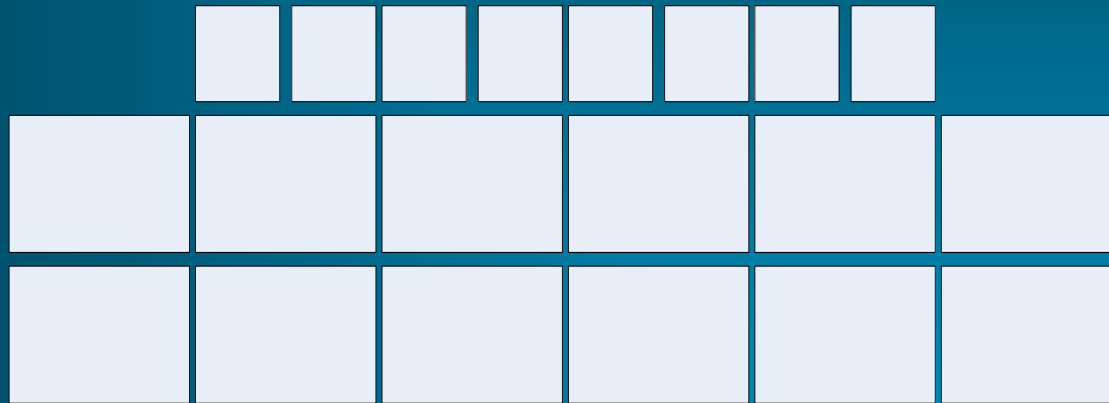
Robert Heller



“Virtual Video Wall”



- District 2 displays single video streams on single plasma or lcd monitor



- Proposal:
 - Eliminate Barco controller
 - Use decoder behind each monitor
 - Use VS to control decoders



Video Switching Impact



- **Current implementation**
 - GUI displays monitors uniform size
 - Placed to fit window size on GUI
- **Proposed implementation**
 - Describe size and placement of monitors
 - Fit placement to window size



Limitations



- **Limitations**
 - Cannot combine video streams on single monitor or combine monitors for display of single video stream without additional hardware
 - Compatibility issue between encoders and decoders
- **Advantages**
 - Eliminates Barco controller for small deployments
 - Provides a “backup” plan for controller failure



Implementation Options



1. Describe monitor size & position in configuration file
2. Provide editor to enter monitor size and position (text); store in database
3. Provide editor to graphically enter monitor size & position; store in database



Approximate Cost



- Can be done piecemeal or all at once

	From Scratch	Phase 1 Complete	Phase 2 Complete
Phase 1	\$7K		
Phase 2	\$12K	\$9K	
Phase 3	\$14K	\$11K	\$6K



Change Management Board



Closing and Action Item Review

Steve Corbin



Footprint #101



- **Description Entered on 08/07/2007 at 14:13:25 by Robert Heller:**
Testing by Ron Meyer (TERL) indicates that for a Wavetronix detector, stopped traffic often reports occupancy as 99.9% (see report dated Dec 13, 2006 from the TERL).
- **The reporting of zero speeds becomes a problem with computation of travel times. The TVT algorithm averages speeds across all lanes of traffic and then uses this average speed in its computation. If there is free flowing traffic and no vehicles in a lane, this results in an average speed that is not accurate, if there is stopped traffic in a lane and the other lanes moving again it results in average speeds that are not accurate. In SWAM #12 there is a requirement to ignore zero speeds in computation of travel times. During the CMB meeting in August 2007 SwRI will present this data and ask the CMB to confirm that requirement.**
Entered on 12/12/2006 at 16:12:22 by Adam Clauss:
TERL is currently testing a Wavetronix device regarding this issue.

Entered on 11/30/2006 at 08:03:37 by Adam Clauss:
This problem was reported from D4 to Robert Heller:

When a wavetronics detector sees no vehicles during a polling cycle, it returns speed volume occupancy of zero, zero, and zero. When the detector sees no vehicles moving (traffic lot style congestion) it returns speed volume occupancy of zero, zero and zero. Our driver at this time cannot differentiate between the two, nor does the TSS subsystem or TVT. So, what does TVT report for the travel time?

Craig and Steve vehemently say this is a problem with the device. But, if I remember correctly, the manufacturer says the device does good detection within a speed range (something like 20 -100 mph). So when traffic is a parking lot, it is outside the range the manufacturer has spec'ed for their device. What can the SunGuide software do for such a situation? Can the TVT system get smarter and trend the travel times and "know" that travel times did not go from 10 minutes to a very large value in a matter of a single poll cycle? Can TSS see figure out that the reporting cycle was for no cars rather than a large number of cars not moving?

Could somebody look to see how the EIS devices handle the same situation?