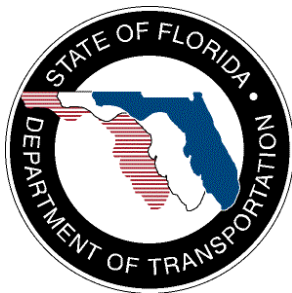# Meeting Minutes

Florida Department of Transportation Change Management Board Meeting Notes — August 14, 2007

Prepared for:
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List of Acronyms

AVL .... Automatic Vehicle Location
C2C .... Center-to-Center
CAD .... Computer-aided Dispatch
CCTV .... Closed-circuit Television
CMB .... Change Management Board
ConOps .... Concept of Operations
DAV .... Disabled Vehicle
DFS .... Data Fusion Subsystem
DMS .... Dynamic Message Sign
DTOE .... District Traffic Operations Engineer
EM .... Event Manager
FDLE .... Florida Department of Law Enforcement
FDOT .... Florida Department of Transportation
FHP .... Florida Highway Patrol
GIS .... Geographic Information System
GUI .... Graphical User Interface
HTML .... Hyper Text Markup Language
ITS .... Intelligent Transportation Systems
IV&V .... Independent Verification & Validation
LPR .... License Plate Reader
OIS .... Office of Information Services
SwRI .... Southwest Research Institute
TERL .... Traffic Engineering Research Laboratory
TMC .... Transportation Management Center
TOD .... Time of Day
TSS .... Traffic Sensor Station

Florida Department of Transportation

CHANGE MANAGEMENT BOARD MEETING NOTES

Tuesday, August 14, 2007
8:30 A.M. to 11:36 A.M.

Florida Mall Hotel, Traditions Room
Orlando

Purpose:

The purpose of this meeting was to review and vote for SunGuide^{TM} Software issues and requirements, and to provide update of Statewide Intelligent Transportation Systems (ITS) Architecture process.

Attendees:

Liang Hsia, CO	Gene Glotzbach, CO	Trey Tillander, CO
Chris Birosak, District 1	Peter Vega, District 2	Kamal Munawar, District 2
Donna Mason, District 2	Chad Williams, District 3	Mark Nallick, District 3
Dong Chen, District 4	Steve Corbin, District 4	Mike Smith, District 5
Jennifer Heller, District 5	Jeremy Dilmore, District 5	Rory Santana, District 6
Javier Rodriguez, District 6	Manuel Fontan, District 6	Bill Wilshire, District 7
Terry Hensley, District 7	John Easterling, Turnpike	Norbert Munoz, FHWA
Michael Loyselle, FHWA	Robert Heller, SwRI	Paul Watson, PBS&J
Erik Gaarder, PBS&J	John Hope, PBS&J	David Chang, PBS&J
Tahira Faquir, PBS&J	Jason Summerfield, SmartRoute	Ryan Crist, SmartRoute
Penny Kamish, SmartRoute	Dale Cody, Metric	Craig Carnes, Metric
James Bitting, Lucent Group	Craig Vahle, DMJM	

CMB Chairman Steve Corbin opened the meeting at 8:30 AM. He gave a brief introduction about the agenda items.

Action Items

1. *Change Management Board (CMB) Charter* - Comments due by the end of August 2007.
2. Florida Highway Patrol (FHP) Computer Aided Dispatch (CAD) Concept of Operations (ConOps) - Trey Tillander provided an update of the FHP CAD ConOps. District 5 is using a temporary interface meeting their current needs. Trey will be updating the document since the issue is not as urgent for District 5. About a year before District 5 will get to the interface issue. Call for questions, none.
3. Internet Explorer (IE) 6 versus IE 7 – Discussion will take place later in the meeting.

4. Microsoft Cluster - Craig to present report later in meeting.
5. District 2's Travel Time (TvT) enhancement - Will finalize comments.
6. Data Fusion Subsystem (DFS) Cost Estimate - Southwest Research Institute (SwRI) provided the cost for three requirements. The CMB delivered a "No" vote through email.
7. Slot and Floodgate: This topic related to Action Item 6. John Bonds previously provided three requirements for CMB vote.

CMB Process Revisions
Discussion took place regarding changes to the term lengths for CMB members/chairman. It was agreed that additional consideration would be needed. Those interested in the position were asked to submit a request prior to the October 2007 CMB meeting. No term limits suggested for members; however, it was suggested that the Chairman would have a one-year term.

SunGuide^{TM} Logo Trademark and Software Copyright
Trey Tillander provided an update. The FDOT filed for copyright for the SunGuide logo and trademark. What this means is "TM" used once it's filed (May 16, 2007). "®" used once patent office accepts it. For each software release, FDOT will need to resubmit.

Robert Heller pointed out that copyright information is in all headers of all source code. He stated that the FDOT does not have to file for copyright, but has more leverage if it has been filed.

Question: If other states use software, are they bound to use "SunGuide"?
Answer: No. They will continue to use notated header codes but do not have to use the name SunGuide.

SunGuide^{TM} Software Operator Training
David Chang provided the operator training update. PBS&J is tasked to provide training. Training will be held after each release. SwRI will provide administrator training. The new trainer, John Hope is located in Orlando. He will be working with District 5 and SwRI, as well as practicing with Release 3.0 (R3.0).

SunGuide^{TM} Footprints Issues
Robert Heller provided SwRI's update. Clay Packard from SwRI has been hired to go to each District to support software issues. Clay's time will be limited through the end of August and the beginning of September due to installation of R3.0 in Orlando. Brent Becker and Hector Irugas are available for support. Many open issues will be resolved in the R3.0 deployment. Anyone can log into Footprints to get status of issues.

Review of Notable Footprints Issues
1. Footprints Issue #101: TSS devices. Can get 0 miles per hour (mph) speeds for no traffic or traffic at standstill. Testing performed regarding a car stopped in the detection zone. In addition, the TSS devices can determine the occupancy level of cars that are present. Currently, 0 mph readings are averaged in with actual speeds. (Example: three lanes, two lanes reporting 0 and one reporting 70 mph, the average for that link is about 22 mph).

a. Release 4.0 (R4.0) requirement states that travel times need to use speeds greater than 0 mph. Need to handle cases when speeds are actually 0 mph.
b. Trey Tillander noted this was slated for R4.0, but this is an opportunity to do something now since travel times are important.
c. Not a hardware issue, although software needs to interpret different types of hardware correctly. In initial testing, it was shown that reported sensor parameters were not in sync with one other. This may be different for different types of sensors.
d. Contacted manufacturers; they were insistent not to make any fixes/changes.
e. Not voting on this today; need to investigate how all different types of hardware works to handle data properly. Need to determine: 1) How should this be addressed? 2) When should it be fixed (within or prior to R4.0)? Districts need to provide sensor data/findings.
2. Footprints Issue #222: Increased character limit beyond 30 characters. Goes back to NTCIP 1104 that limits the character limit. Changing the size will affect every system that displays the device name (i.e., graphical user interface (GUI), Center-to-Center (C2C), and document updates), hence it will cause a large impact. The following issues were raised regarding this topic:
a. How many characters are really wanted? Should standards compliance be implemented only within C2C or throughout software? If C2C only then C2C will truncate/parse name out.
b. Should another display field be added to the database?
c. Should the name be split into multiple fields on the GUI?
d. Options need to be determined, but a decision does not need to be made at this time.
3. Footprints Issue #249 regarding upgrading the SunGuide Map to DynaMap Version 9.1. The Requirement states that version 9.0 should be used. SwRI requires formal direction to use version 9.1 instead.
a. Steve Corbin called for a vote to approve using DynaMap Version 9.1 for operator map.
   D1-yes
   D2-yes
   D3-yes
   D4-yes
   D5-yes
   D6-yes
   D7-yes
   TPE-yes
   CO-yes

SITSA Update Process
Tahira Faquir stated that the Statewide ITS Architecture (SITSA) updating process requires that the District ITS engineer gather information from stakeholders regarding any changes needed for the SITSA. This information is then sent to Central Office (CO) ITS for inclusion in the CMB. Once approved, it is then sent to PBS&J and Consystec. District changes are needed quarterly or every six months.

Trey Tillander stated that the State has agreed to maintain the process. Trey also pointed out that if it's not a part of the regional architecture, the FDOT does not maintain it. Districts are more up to date in regional needs; the CO only needs to update the statewide architecture based on Districts' requested changes. The CO sent document in Word format that each District can update as needed.

District 2 noted that they prefer for guidelines to come from the CO. District 2 requested that the CO send out notice when stakeholders should be polled to update architecture.

SunGuide^{TM} Software Supported Environment – Internet Explorer
Trey Tillander: Summarized IE 6 vs. IE 7 issue. The Districts were polled regarding which browser version is currently being used.

District 2 is still using IE 6, but will upgrade. All other Districts (expect Turnpike) have already upgraded to IE 7.

Operator interface standard was IE 6, but IE 7 should probably be used for testing. Steve Corbin called for vote to support and base requirements for operator map to use IE 7.
D1-yes
D2-yes
D3-yes
D4-yes
D5-yes
D6-yes
D7-yes
TPE-yes
CO-yes (Tillander)

Other Items
Welcomed Michael Loyselle to the CO. All attendees introduced themselves.

Break – from 9:56 am to 10:19 am

SunGuide^{TM} Software Supported Environment – Clustering
Craig Vahle: Background in clustering, using clustering for SunGuide and know that it works. Provided information about proposed database (DB) clustering.

1. Why use clustering?
    a. Increase amount of time that SunGuide is available to operators.
    b. Replicate every component of hardware/software
    c. Switchover is automatic
    d. Standards based
    e. Vendors such as MicroSoft, Oracle, Hewlett Packard, and Dell support clustering
    f. Does not require admin to keep SAN running
    g. Operations can continue to use software (SunGuide) during upgrades.

h. Without clustering: hardware failures likely result in downtime. Software upgrade requires downtime. Altogether too much downtime without clustering.

Process of clustering
1. Sub-systems are distributed over servers A and B
2. Migrate sub-systems over from server A to server B, server B running all processes
3. Upgrade server A
4. Migrate processes from server B to A, test production system on server A
5. Move back to server B if problems found, otherwise upgrade server B
6. Distribute sub-systems over servers A and B

Clustering cons
1. Costs more – for example, $133k for District 4. May be less for other Districts if existing equipment is used.
2. Staff may not be familiar with handling clustered servers.
3. Longer setup time, requires more steps and planning.

It was recommended that all Districts move toward clustering. SwRI should proceed with clustering report, prior to R3 roll out. Move toward making this a standard and required for all Districts.

Steve Corbin: Since SunGuide will be supporting the 511 system, SunGuide's importance increases from an ITS information provider to a public service information provider.

Trey Tillander: Most Districts have a plan for system failures, but clustering provides an automated way to deal with failures and/or issues. Plus, standardizing the environment would simplify support. Want to call for a vote for standardizing clustering in October. May be helpful to collect a list of environments/plans that the districts are currently using. (Discussion followed)

Robert Heller: Easy to use clustering. SwRI clustering report will take eight weeks to develop. This is not possible prior to the R3.0 deployment. Real-time Application Clustering (RAC) may be good to use for high availability like for 511.

Steve Corbin requested that SwRI generate a report first and then the CMB can vote on it. Report would include "this is the way SunGuide should be clustered". FDOT CO should request SwRI to produce report.

District 2 expressed concerns for those Districts not already using clustering.

Trey Tillander stated that each of the Districts should review their systems and requirements and provide findings to CMB.

SunGuide^{TM} Software Release 3.1 – D2 Additional Travel Time Subsystem Requirements
Trey Tillander stated that Pete Vega had provided comments for enhancement and that this is an important issue.

Pete Vega: Basic overview comments centered around surge of traffic, sudden change in travel speeds. Sudden changes does impact reporting travel times. Give the Districts the ability to use archived speeds to adjust reported speeds. (Discussion/questions followed)

Percentage allowable to be wrong?
Trey Tillander: Motorist typically unhappy if the reported travel times are faster than reality.

Pete Vega: Operators must make a determination whether or not to use historical travel times. Historic data based off of typical situations. Using the data to predict travel times not to report what's happening now. If we really need it, may be good to see feature in a year. Not an immediate need but desired.

Trey Tillander: Will decide when to place on CMB agenda.

SunGuide™ Software Release 4.0 Modified Requirements
Erik Gaarder: Review the 4 approved changes
1. DF026G: Deleting requirement due to duplication.
2. DF016G2: Deleting requirement per discussions on 7/9/07 and 7/12/07.
3. DF001C: Changed to match the text of the children requirements.

Steve Corbin called for vote on changes.
D1-yes
D2-yes
D3-yes
D4-yes
D5-yes
D6-yes
D7-N/A
TPE-yes
CO-yes (Glotzbach)

In anticipation of the vote, SwRI was given approval to start working on R4.0 prior to the meeting and has already made some progress.

DMS Messaging for Multiple Lane Blockage Events
An informational discussion took place regarding how to message for non-consecutive lane blockage events? (i.e., three of six lanes blocked – this is how it is currently designed).

Reviewed multiple options of explaining which lanes are blocked. Explain how many lanes are open instead of how many are closed. Should we migrate to using pictures/diagrams? Using pictures/diagrams depends on technology of DMS (full matrix vs. three-lined). European signs use more pictures/pixel diagrams and less words. Canada is also moving toward full matrix to address multi-lingual issues.

If we are going to decide on a single standard/rule, have to conform to existing standards. Giving more information to making traveling safe is the goal. How do we account for ramps/complex configuration?

Get Conny from TTI (ITS experience since '60s) to next CMB to discuss different options and provide more information on how to display information.

Trey Tillander: This has significant implications other than software (i.e., The DMS standard specification and DMS Policy may require significant update / modification. May have to raise the standard on using color/graphics.

Steve Corbin: If anyone has any additional thoughts or research, please provide and will distribute.

Closing and Action Item Review

David Chang: Review of Action Items generated from this meeting.

ACTION ITEMS

1. Steve Corbin will distribute the *CMB Charter* with comments to CMB for review by August 17.
2. James Bitting will distribute comments regarding District 2's Travel time Enhancement by August 24.
3. SwRI will send out questions for input regarding Footprint #101.
4. Tahira Faquir will update the SITSA memo to include Rule 940 procedure. Trey Tillander will distribute this to the District ITS Program Managers.
5. Tahira Faquir will send out stakeholders' information to Districts and send out a reminder to the Districts.
6. Tahira Faquir will set up a reminder on District ITS Program Manager's calendars.
7. The issue of SunGuide with clustering will be voted on at the October CMB. Trey will ask the Districts to provide update of their servers' environment based on the four available options.
8. Steve Corbin will research funding for SwRI to provide report of SunGuide with clustering.
9. Steve Corbin will research inviting Conny from TTI to the next ITS WGM
10. Steve Corbin will distribute the study from Canada regarding the DMS with graphics to address lane closures.

The meeting was adjourned at 11:36 am