

# Meeting Notes

## Change Management Board

November 15, 2011 – 1:30 pm to 4:30 pm

**January 3, 2012**  
**Final - Version 1.0**



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

### **List of Acronyms**

C2C .....	Center-to-Center
CDW .....	Central Data Warehouse
CMB .....	Change Management Board
CO .....	Central Office
FDOT .....	Florida Department of Transportation
FTE .....	Florida Turnpike Enterprise
LOA .....	Letter of Authorization
MDX .....	Miami-Dade Expressway Authority
ONVIF .....	Open Network Video Interface Forum
OOCEA .....	Orlando-Orange County Expressway Authority
RCA .....	Remote Control Application
SwRI .....	Southwest Research Institute
TERL .....	Traffic Engineering Research Lab
TMC .....	Transportation Management Center
TSS .....	Traffic Sensor Subsystem
TxDOT .....	Texas Department of Transportation
VAS .....	Video Aggregation System
WAN .....	Wide Area Network

**Florida Department of Transportation**  
**CHANGE MANAGEMENT BOARD MEETING NOTES**  
**Tuesday, November 15, 2011**  
**1:30 P.M. to 4:30 P.M**  
**Rhyne Building, Room 330 Tallahassee, Florida**

**Attendees:**

Elizabeth Birriel, CO	Arun Krishnamurthy, CO	Trey Tillander, CO
Chris Birosak, D1	Carlos Bonilla, D1	Donna Danson, D2
Mark Nallick, D3	Chad Williams, D3	Dong Chen, D4
Nathan Ruckert, D5	Mike Smith, D5	Javier Rodriguez, D6
Rory Santana, D6	Chester Chandler, D7	Terry Hensley, D7
Eric Gordin, FTE	Kelly Kinney, FTE	Ivan del Campo, MDX
L.A. Griffin, OOCEA	Ernest Sackey, Osceola County	Dee McTague, AECOM
Mark Laird, AECOM	Armando Piloto, AECOM	John Hope, Atkins
JoAnn Oerter, Atkins	Clay Packard, Atkins	Marie Tucker, Atkins
Dave Howell, HNTB	Shannon Waterson, HNTB	James Bitting, Lucent
Brian Ritchson, MCG	Craig Carnes, Metric	Jason Summerfield, SmartRoute
Chris Botti, SwRI	Tucker Brown, SwRI	Robert Heller, SwRI
Jose Perez, SwRI	Mary Thornton, SwRI	Mari Bacon, Telvent
Frank Deasy, Telvent		

**Purpose:** The purpose of this meeting was to review and vote on statewide issues and requirements, and review footprints issues.

**Welcome and Call for Quorum:** Change Management Board (CMB) Chairman Eric Gordin opened the meeting at 1:30 P.M. A quorum was established. He briefly introduced the objectives of the meeting.

**Previous Meeting Recap and Action Item Review**

- Southwest Research Institute (SwRI) to provide further information regarding Travel Time Algorithm. – **Additional information to be provided in current meeting.**
- SwRI to provide cost estimate for Open Network Video Interface Forum (ONVIF). – **Postponed.**
- SwRI to provide further information regarding Texas Department of Transportation (TxDOT) Remote Control Application (RCA) application. – **Postponed.**

**Agenda Items**

**CMB Chair**

E. Gordin stated that Arun Krishnamurthy was nominated in the previous meeting for CMB chair and asked if there were any additional nominations. Donna Danson stated that Pete Vega would like to nominate Javier Rodriguez. Arun stated that he would like to withdraw his nomination and support Javier's nomination.

CMB Chair Vote for Javier Rodriguez:

District 1: Yes  
District 2: Yes  
District 3: Yes  
District 4: Yes  
District 5: Yes  
District 6: Yes  
District 7: Yes  
FTE: Yes  
CO: Yes

### **FMT / ITS WAN update**

Frank Deasy reviewed his slides with District updates. F. Deasy stated that there is no update for Florida Turnpike Enterprise (FTE), he had a discussion with John Easterling and he requested additional documentation and that will be sent to him shortly. There is no progress for District 1 or District 7; meeting with District 6 today regarding some routing issues. There has been some communications with District 3 Procurement Office and the vendor and they will not be able to purchase the equipment with a P-Card so they are currently working on setting up a purchase order. Miami-Dade Expressway Authority (MDX) is connected to the WAN directly but there is still some configuration work to be done.

### **AVI TVT Algorithm**

Clay Packard discussed the background and issues for the travel time algorithm. He then described the solution to the issues and described the three phases that would be used; tag reads, tag matches and match aggregation. He then discussed the tag read issues and stated those issues were addressed in the top portion of the diagram. Mark Laird asked about the discard horizon and stated he thought it was to discard unmatched tags after sometime. SwRI stated that yes you can read a tag and after sometime it will be thrown out. C. Packard then discussed the match phase issues and how the algorithm addresses those issues. SwRI stated that the speed anomaly caps the high speed but the diagram looks like it caps the low speed. Central Office (CO) stated that the flow chart is correct and continued to say that it will toss out triple digit speeds, cap speeders to the speed limit and make sure we have enough vehicles to calculate the travel time. M. Laird asked when comparing current speed will it throw out the zeros. C. Packard stated that it will not use a zero if it is well below the current speed. M. Laird stated that on the chart there is one for speed and one for travel time and asked if these were the same thing. SwRI stated that SunGuide will filter the speeds coming in, and will not filter the travel times, as the tag reads will be matched and a speed will be generated with a travel time. C. Packard stated that the filtering criteria will be configurable on a per link basis. He continued to discuss the match aggregation issues and solutions. SunGuide will calculate values for every time slice unless there is not enough data and then it will go back as far as needed to calculate the travel time. He then went on to discuss filtering change in speed, if you have random drops in speed those points will get tossed but if you have a sudden drop and it becomes consistent there is an algorithm to address this issue as well. Trey Tillander asked how long will it take SunGuide to produce the travel time when speeds drop. C. Packard stated that if you get enough data coming in it will happen in the next time slice which is configurable. T. Tillander then suggested instead of time go with the amount of data / reads; for example if you get 100

reads in 30 seconds that is different than five reads in 1-2 minutes. C. Packard then asked SwRI if it would be hard to do X number of matches than the whole time slice. SwRI stated that the reads would probably be low because of an accident and CO confirmed. C. Packard then stated that if you have enough data coming in it will show up on the second time slice and number of reads so C. Packard recommended that the proposed approach be pursued. John Hope stated that the more data you have coming in the faster the data will change and the less amount the slower; so if you are not getting that much data it could take 5-10 minutes to react and SwRI agreed. James Bitting asked how this will work in rural areas. SwRI stated that it is setup to go back to historical data so it does not use just the one speed and you can set that time for the amounts you want. J. Bitting confirmed that in rural areas it would need to be configured differently and SwRI confirmed. J. Hope asked if SwRI was planning on configuring this on a global basis. SwRI responded that it would be on a per link basis.

#### AVI TVT Algorithm – Vote

District 1: Yes  
District 2: Yes  
District 3: Yes  
District 4: Yes  
District 5: Yes  
District 6: Yes  
District 7: Yes  
FTE: Yes  
CO: Yes

#### **SQL Server schedule and Database IDs (vote)**

Tucker Brown discussed the pros and cons of the database ID change and went on to discuss the detailed changes in SunGuide. He stated that after the upgrade if one District has updated their software and another has not they will not be able to connect Center-to-Center (C2C) until they are both upgraded to the new version of SunGuide. M. Laird asked if both the name and ID were going to be available and T. Brown confirmed. M. Laird then asked if it was possible to use that for a smooth transition and T. Brown stated that SwRI is trying to do this the best way possible, it may require the Districts to use a modified C2C until they are on the same version. Dong Chen stated he would like to confirm with A. Krishnamurthy that if we move from Oracle to SQL, CO will pay for the SQL license. A. Krishnamurthy responded no, that had not been discussed in the past. The discussion of moving to SQL server was brought up because it is more cost efficient and over the long run you will save money. D. Chen then asked if the price was based on the number of cores and A. Krishnamurthy stated that Oracle uses the number of cores for charging and CO is looking into SQL pricing but our understanding is that SQL charges based on processors. Mary Thornton stated that SQL is changing in SQL Server 2012 to the same pricing model as Oracle by the number of cores. E. Gordin asked if this was independent from Oracle migration and A. Krishnamurthy stated that the database ID will be different. E. Gordin then asked if this will apply no matter which database you use and does it make us able to modify names. A. Krishnamurthy confirmed that it will not matter which database you use you will be able to modify the names. M. Laird stated that the original conversion from Oracle to SQL would affect Oracle. SwRI stated that the original upgrade will change the Oracle configuration and A. Krishnamurthy added that the user experience will not change but the configuration of some of the software functionality might be a little different.

SwRI stated that the configuration file change should be transparent but the database will look different and there will also be administrative changes so you can rename device but the look and feel will remain the same.

District planning to migrate to SQL:

District 1: Switching  
District 2: Switching  
District 3: Switching  
District 4: Switching  
District 5: Switching  
District 6: Switching  
District 7: Switching  
FTE: Undecided  
MDX: No plans to change for now  
OOCEA: Will look into further

A. Krishnamurthy reviewed the major dates in the schedule and stated that this is a big development effort. SwRI will start development in parallel to some design work. This will start after the vote today and a Letter of Authorization (LOA) is issued and should finish in April 2012. They will also be doing the software design documentation which will end in April. The software will be ready for deployment in February 2013.

SQL Server schedule and Database IDs – Vote:

District 1: Yes  
District 2: Yes  
District 3: Yes  
District 4: Yes  
District 5: Yes  
District 6: Yes  
District 7: Yes  
FTE: Yes  
MDX: Yes  
CO: Yes

### **SunGuide System Availability Overview**

M. Thornton reviewed the slides regarding SunGuide System Availability and stated that this should answer questions regarding what you can do to minimize the downtime whether it is planned or not planned. She reviewed database servers and listed some possible failures and recommended both physical backup everyday and logical backup as secondary once a week. She then went on to discuss clustering and showed some example diagrams of active and passive clustering. A. Krishnamurthy stated for the Districts that are planning to move to SQL you will have to think about how many licenses you will need and this is a perfect time to see what will be needed for your system and backup. M. Laird asked when the Districts that have redundant sites and upgrade SunGuide how are those handled. M. Thornton stated that with Oracle the database upgrade is to make the upgrade to one database and then replicate to the

other, but when SQL comes through SwRI is attempting to make some changes to the database so it can be done together.

### **Database Storage Guidelines Overview**

C. Packard stated that CO asked Atkins to develop a Whitepaper regarding the size of the SunGuide database as they saw a growing database size due to event data and archive data which has caused issues with databases. The goal is to present the findings and collaborate to handle these issues in a proactive manner. He continued to say that both FDOT\_OWN and FDOT\_ODS were looked at separately. He then reviewed some of the recommendations from the Whitepaper such as increase poll cycle, eliminate travel time or reduce retention, remove hourly and daily roll-ups, reduce raw Traffic Sensor Subsystem (TSS) retention and enhance purge scripts and other maintenance tasks. R. Heller stated that it is true that travel time is derived data but that implies that you can recreate it, if you drop the TSS data you cannot recreate the travel time data. C. Packard stated that you can create an hourly travel time if looking at a larger scope of time. He continued to say that CO is making progress for a Central Data Warehouse (CDW) that would possible meet this need and this is a District by District decision as well. R. Heller went on to say that reducing the retention reduces our help as developers to figure out what went wrong if you do not have as much data. M. Laird stated that District 6 has that issue all the time with detail logging. C. Packard stated that this is configurable, you would not get the TSS from the original problem but it could be turned on to get the data when the problem happens again. T. Brown stated that is okay if this is acceptable for the Districts, we are just stating that we do use that data. M Thornton asked what about archiving the data locally and C. Packard stated that yes it was mentioned to archive locally. M. Thornton stated that it was not on the recommendations list and C. Packard responded that it is going to need more thought because it is difficult to do, we started to look at that with having a script but it would take more thought before we can recommend that to the Districts. C. Packard then asked all of the Districts to please fill out the questionnaire that was included in the slides.

### **SunGuide Report Template Management**

Brian Ritchson stated that the Central Office will now perform the development, maintenance and version control of SunGuide reports. He then discussed the new reports that are currently under development; secondary crash and detector reliability report and enhancements are being made to existing templates; add county filter to performance measures report, AVL report clarification, etc. There will now be standardization in the formatting of the reports in preparation for the transition to SQL for Release 6.0. There is a report template request form that can be found on the footprints homepage and can be attached in a footprint request. He went on to discuss the benefits, cost savings with the report requests being processed separately than other footprint issues. C. Packard asked if anything was different with the versioning and B. Ritchson stated that yes there will now be a report version number on all reports. C. Packard asked if there is a simple modification needed to a report, can I just describe it in the footprint. B. Ritchson stated that he did not have a problem with filling out only a portion of the request form as this form is mainly for new template requests. Terry Hensley asked if the Districts are now prohibited from creating their own reports and using the existing ones. B. Ritchson responded no, when new reports are developed and the Districts want to use them in SunGuide then a request will need to be submitted but if you want to use any reports for your own District you can. Mike Smith asked if the reports are going to be stored in a central location and C. Packard stated yes they will be under the SunGuide project Web site; it will have the recently

updated report templates and example PDFs. M. Thornton asked if there was a way to download all the current reports at once and B. Ritchson stated that yes CO will take care of that. M. Thornton then asked if there was a way for a District to tell if they have the most current reports. B. Ritchson stated that there is no version in the file name but if you run the report you will be able to compare the version number. E. Gordin stated that most of the reports are in PDF format and asked if CO can look into Excel. B. Ritchson stated that he was in the process of making that enhancement and will be in the next SunGuide release.

### **Top Priority Item by District**

M. Laird stated that District 6 is having trouble with database connection problems where subsystems cannot get a connection to the database. Originally it was thought to be related to clustering but that has been ruled out. SwRI is still trying to figure out the issue but was wondering if any other District was having the same problem. No comments.

Carlos Bonilla stated that District 1 submitted footprint 1828 and the last comment was an estimate was being looked at and was curious of the status. A. Krishnamurthy stated that knowing this is a top priority for District 1 CO will look into this and will move to the top of the list.

### **Action Item Review**

1. SwRI to provide information and cost estimate for ONVIF.
2. SwRI will present TxDOT RCA application at the next CMB meeting.
3. Users to provide feedback to SQL Storage Guidelines.
4. SwRI to add entire download of current report templates on SunGuide Web site.