**Meeting Notes**

**Change Management Board**

July 28, 2020 – 1:00 p.m. – 4:00 p.m.

**Version 0.1**

 

Prepared for:

Florida Department of Transportation

Traffic Engineering and Operations Office

Transportation Systems Management and Operations Program

650 Suwannee Street, M.S. 90

Tallahassee, Florida 32399-0450

(850) 410-5600

**List of Acronyms and Abbreviations**

C2C Center-to-Center

CFX Central Florida Expressway Authority

CMB Change Management Board

CO Central Office

ConOps Concept of Operations

D(number) FDOT District (number)

DMS Dynamic Message Sign

DTOE District Traffic Operations Engineer

EM Event Management

EOC Emergency Operations Center

FDOT Florida Department of Transportation

FHP Florida Highway Patrol

FLATIS Florida Advanced Traveler Information System

FTE Florida’s Turnpike Enterprise

ITS Intelligent Transportation Systems

ITSFM Intelligent Transportation System Facilities Management

IV&V Independent Verification and Validation

MDX Miami-Dade Expressway Authority

MIMS Maintenance Inventory Management System

MVDS Microwave Vehicle Detection System

R-ICMS Regional Integrated Corridor Management System

RWIS Roadway Weather Information System

SSUG SunGuide®® Software Users Group

SwRI Southwest Research Institute®

TERL Traffic Engineering Research Laboratory

TIM Traffic Incident Management

TSM&O Transportation Systems Management and Operations

**Florida Department of Transportation**

**CHANGE MANAGEMENT BOARD MEETING NOTES**

**Tuesday, July 28, 2020**

**1:00 p.m. – 4:00 p.m.**

**Microsoft Teams Meeting**

**Attendees:**

|  |  |  |
| --- | --- | --- |
| Robbie Brown, D1  Renjan Joseph, D1  Justin Merritt, D1  Chrissie Collins, D1  Mark Mathes, D1  Pete Vega, D2  Alex Verela, D2  Jason Summerfield, D2  Amy DiRusso, D3  Mark Nallick, D3  William Reynolds, D3  Alexandra Lopez, D4  Hossam AbdelAll, D4  Dee McTague, D4  Jacques Dupuy, D4-595 | Jeremy Dilmore, D5  Eddie Grant, D5  Jay Williams, D5  Steve Johnson, D5  Tushar Patel, D5  Jovanny Varela, D5  John Hope, D5/CFX  Mark Laird, D6  Javier Rodriguez, D6  Alex Mirones, D6  Alejandro Motta, D6  Ramona Burke, D6  Mike Crawson, D7  Dan Buidens, D7  Jared Roso, D7 | Kelly Kinney, FTE  Jermaine Da Silva, FTE  Wang Lee, MDX  Brent Poole, CFX  Bryan Homayouni, CFX  Christine Shafik, CO  Fred Heery, CO  Alex Brum, CO HNTB  Mark Dunthorn, CO HTNB  Greg Dudley, CO HNTB  Brenda Murphy, CO HNTB  David Heupel, CO  Derek Vollmer, CO  Hitesh Chawla, CO  Tucker Brown, SwRI  AJ Skillern, SwRI |

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

**Welcome:**  Change Management Board (CMB) Chairman Jay Williams opened the meeting

**Call for Quorum and Review of Agenda: A quorum was established for this CMB meeting. Jay Williams reviewed the meeting agenda.**

**Previous Meeting Recap and Action Item Review:** The following items are complete.

Jay Williams: OK, anybody else on the call that hasn't been acknowledged yet? OK. It looks like we got enough folks to proceed with all the voting items, so we'll go ahead and get into the presentation. Here's just a quick recap of the agenda. We will go through all the items as listed starting with an update to some of the action items from the previous meeting. I'll start out with the three from Central Office and Christine's group. Central Office to resend out the risk in RCA ConOps that was done back in the end of April on the 28th. Regarding the survey for prioritization of the voting items that was done June 18th. Central Office to discuss RCA enhancement at the next ITS Working Group meeting. I believe that is scheduled for next month at the ITS Working Group meeting that’s on the 12th.

Christine Shafik: We're going to push this item to not this ITS Working Group we're going to put it in the following one.

Jay Williams: OK, so then that'll all the that will not be the next upcoming ITS Working Group meeting but the one after that. Do we have a date for that meeting yet?

Christine Shafik: Alex, do we have a date yet?

Alex Brum: Not a firm date. It is typically bimonthly so August 12th, possibly sometime in October.

Jay Williams: Okay, sounds good. Dan, in District 4, I don’t know if you have any updates. We are still showing a potential update for the wrong way driving topics that was applied. I think you guys installed and you were doing some testing. Any additional testing that you have to provide relating to that?

Dan Smith: Sure, I believe I emailed you Jay some of the test results back in May. Maybe that was missed but yeah, we applied the hotfix and we did a couple of tests runs at TERL. They all came back accurate in detecting the wrong way driving incidents using the MDS data so I think it should be done. You can take it off.

Jay Williams: OK, sounds good. Hossam, I don't know if you heard that well? Is that going to have to have enhancement requests or is there some follow-up related to that testing?

Hossam AbdelAll: Yeah, sure so right now there is discussion with the Central Office. We have a couple of things we are talking through and will bring it back to this meeting once we've ironed out some things. Does that sound like a good update or would you want to keep that on there or is that good enough for you.

Jay Williams: No, we will close it out and then if there's additional enhancements we can bring it back to the group and sort of pick it back up at that time.

Hossam AbdelAll: Sounds good.

Jay Williams: Okay, with that I will turn it over to Christine for the SunGuide®® update.

**Action Item Review**

* **Dan Smith:** Dan Smith to give us an update based on the hotfix being applied to the WWD – Emailed the test results back in May, did a couple of test runs at TERL and they came back accurate in detecting the WWD – Completed.
* **Christine Shafik:** Central Office (CO) to resend out the RISC and RCA ConOps – Completed on April 28, 2020.
* **Christine Shafik:** CO is going to coordinate a survey to the Districts in terms of priorities from the voting items from this meeting to include in future releases or possibly 8.0 – Completed on June 18, 2020.
* **Christine Shafik:** CO to discuss the RCA enhancement at the next ITS Working Group – Push this item not to the next upcoming ITS group but to the following ITS group meeting (tentatively in October).

**SunGuide® Software Update**

Christine Shafik: As you all know, we released 7.2 on October 5, 2019. It’s currently deployed in D1, D5, D6, D7, CFX, MDX, and FTE. We released a hotfix number 1, which fixed my issues back in February. And that’s for 7.2. We are currently working on releasing 8.0. We are trying a new process on the development side to make the process more efficient. We are trying a new process on the testing side as well. We asked a couple of Districts if they can help us in the testing process. A couple of Districts are joining us. Not perfect, but it should be bug free as much as possible. We are doing as much as we can ahead of the game to get you a clean build that will be effortless on your side. So, we have 33 issues that have been approved and authorized and development is in process.

We discussed in the last CMB the RISC and RCA ConOps. We sent it out as it was mentioned earlier. We are currently in development phase. The target date for IV&V build is going to be October this year. We are doing our best to keep the dates and the schedule on time. There are multiple issues going on statewide and I know multiple needs in the multiple Districts, but we are targeting to have the IV&V on time. So, that’s why we might have a couple other requests put on side until the release of 8.0. Both SwRI and CO team are extremely busy keeping everything on track. We are going to have huge release coming out, the 8.0. So, get ready. A lot of issues to be fixed. Any questions on the releases?

Jay Williams: Okay. Thanks, Christine. Next up, looks like we have got updates from Mark for District SunGuide® Access from the CO.

Mark Dunthorn: So, currently, as you all are very aware, we get data from you via multiple channels. We occasionally have to run reports. There are some that we have to run every year. And the performance measures (PM) report, we ask for that occasionally. But those are generally the ones. We send you either a query or we ask you to run a SunGuide® report on your system. We also will ask for that full database backup; it’s about that time of the year, so we will be asking for that again. We use that currently for a lot of reporting. That’s why we ask for it this time, it’s the end of the fiscal year. So, we have to run some reports for the previous year. But we also use the database backup as the foundation of our IV&V test process. So, we will continue to have that once a year thing. Lastly, we have got center-to-center (C2C). We are making a heavy use of that lately for the dashboards. So, all of these have their pros and cons. The first one is simply an imposition on your time, so we do want to move away from that. C2C has some good applications but we found that it’s just not quite robust enough and when it does go down, there is no good way to recover whatever data should have been sent. But I’d say, even more than that, it’s simply at least on the event side, C2C just doesn’t give us as much detail as we are looking for. So, that’s where we are at today. Next slide please.

So, what we have been exploring lately and we have had discussions about this is maybe leveraging the fact that we have already got this data archive for RITIS (DAR) module. It’s already part of your SunGuide®. You are already running this, and it’s configured to send out the event and traffic data to RITIS every minute. Not quite in real-time and RITIS has opened some discussions about making that real-time but once a minute is good enough for us at the CO. So, like I said, we are exploring the possibility of asking the Districts to configure the second DAR module to run as a part of your local SunGuide® systems and the second DAR module would be configured to send the same data to the CO. Next slide please.

So, why we are asking for this? Well, it’s convenient. We don’t have to ask you for the data but most importantly, it’s very complete. This gets us all of the event data including the chronology and that’s the level of detail that we are looking for in events. Of course, we don’t have to ask you to run those reports.

Here, we are going to talk about some of the applications. You are already aware of the Dashboards coming through from C2C. One of the first things that we would want to do is just migrate that dashboard over to consuming the RITIS data. This particular dashboard right here is for the crash data. It probably won’t change very much. I mean, it’s really doing a great job as is. The other dashboard crash data that we may be able to expand would be the data that we would be getting from this feed. Probably we would be developing more dashboards based on this data. It’s going to open up a lot of opportunities for us we think. Next slide please.

Another thing we would love to do is be able to run these reports here from the CO. We already can run these as long as it’s on last year’s data. And maybe these aren’t the best examples (at least not the PM report), but that chronology is actually a very good example. We often get requests for report for fairly recent event data. It would be great if we could run the event chronology report on an event that happened the day before or something like that. Then, if we need that, we have to request that from you but if we have all this event data coming in, we should be able to recreate these reports somehow. I am not sure if we will be able to do that with without change but it’s something we would be working to do. Next slide please.

This is just something that goes on constantly here in the CO. We are always running analytics on this SunGuide® data. We are very often asked in these cases looking at either comparing or aggregating the data that crosses the District. Again, we have got a really good dataset in the District databases that we get every year, but that data quickly becomes stale or out of date. So, we are looking for a way to be able to do what we need to do with current data. And most of our reporting analytics is focused on either events report or traffic data. So again, the RITIS solution does kind of solve that problem for us. Next slide please.

Ok, monitoring. This is something that we feel is very important. We know that you guys do as well. Everybody puts a lot of effort into this. From the CO point of view, we are mainly focused on what’s working well and what’s not working. We have got some changes coming up in 8.0 that are going to help us do that in a broad way across all the SunGuide® components. But what we are doing now and what we will continue do with this data is keep drilling down and see if we can get into this. So, let us know, like I said, what’s working, what needs to get more attention, what we need to focus on to make SunGuide® better. So, it’s not just a question of what you all are reporting; it’s a question of what we are serving as well. Next slide please.

So, next steps. We have got to do a little bit of work up to that prep environment, but sometime in the near future, we are probably going to be reaching out to the Districts to request. You can go ahead and continue that; we will provide for complete installation and configuration and as always, you can reach out to SwRI and they can do it for you. There are no expected impacts to operations from doing this, no down time or anything like that. It should be pretty seamless. Like I said, it says maybe an hour tops to make this happen. But we will be following up with an email to this. Next slide please.

So, you know, we have been talking about not just Dashboards and data questions recently, but we know there is a lot going on in the Districts and we think there would be a lot of value in coordinating the efforts. We are doing it here in CO as well as what’s happening out there in the Districts. We are looking for ideas and current input. Maybe this is something we should just tack on to the SSUG, maybe have a section to talk about what people are doing. We can talk about this effort in more detail at an upcoming SSUG and we would like to hear what you guys are doing as well. If there is a lot of interest, maybe we should have a separate meeting for that, I don’t know. Right now, we are looking for ideas and inputs. And these are kind of technical, storage, and analytics and I don’t know how technical it would be, but this all is pretty new stuff for us and for everybody. So, lessons learned, the more we can share that, the better I think it will be for everybody. I think that’s it. Next slide please. Any questions or comments?

Mark Laird: Two things. One, is this data going CO going to be exactly the same thing that goes to RITIS?

Mark Dunthorn: Yes.

Mark Laird: Okay, do we have any concerns about performance impact so maybe we send this to Central Office and Central Office sends it to RITIS?

Mark Dunthorn: When we put this a year back, that was the idea. That may still happen. We don’t think there would be any performance impacts at the District. We would expect this to run on a separate node (cluster node) from the primary RITIS. But it’s a valid concern and we would want to roll this out slowly. There is no great urgency to make this happen across the state at once. Maybe we can start this with one District and measure the impact and make sure that this is something that we can deploy. You know, we are dealing at the TERL, with one simulated District and it didn’t seem to be too much of a load issue.

Jeremy Dilmore: When you talk about the load, are you looking at the load from the processing resources as well as the parameters?

Mark Dunthorn: Yes, absolutely. Those are both important. I was more concerned about the actual load, the compression and decompression. We know that it does take a significant portion of that minute to complete that process. But I think that if that is running on a separate node, it should be okay. We haven’t tried to schedule a trouble; we could try it running through separate instances and we would do the same thing, distribute this across a couple of nodes and make sure the impact is not too much. But, again, I think that forward would be to measure that. We would take that as an action item to actually run 2 instances and measure the load.

Jeremy Dilmore: You also talked about if you were to lose the connection about being able to recover the historic data. Is there a limit to how far back you would go in time in order to restore that dataset? I am not familiar with the parameters of the DAR system/driver.

Mark Dunthorn: Yeah, that’s something that we would certainly want to minimize. One of the problems we have seen with RITIS is that sometimes the process does get interrupted. That’s going to happen because of network changes, network outages, or for whatever reason, the Districts are unable to send this data to RITIS, the same thing would happen here. What we don’t want to see happen and what has happened in the past is that this goes for weeks, if not months before anybody notices. We worked with RITIS recently to make sure that that doesn’t happen anymore. We are getting the alerts from their monitoring system now and of course we will have a similar monitoring system. We already do have that running today. We are already looking at C2C. We know when C2C is out of date; the warning alert happens when we have not received data from a District within 60 seconds. We get a warning. So, we would be keeping an eye on this process as well. So, we would hope to address any problems before it becomes a question of trying to recover from even a day. We would hope or maybe we should say that a weekend would be the limit of how far back we would occasionally have to go, but we certainly don’t want to have to ask the Districts to send us weeks or months of data. I certainly don’t see us ever having to do that. But we will have a good handle on any outages, and we will work with you guys if any outage is detected.

Jeremy Dilmore: Are you depending upon the ITS WAN or the SICN now in order to be the connection between the Districts and CO?

Mark Dunthorn: Yes.

Jeremy: And there has been discussion about bandwidth needs? I mean, how do you see, with the construction jobs that we have in our District is not helping but if you are worried about when you are trying to recover and it’s at the same time either that your bandwidth constraint being based upon to existing capacity on the way into that?

Mark Dunthorn: Well, let me measure that as well. I don’t feel like this is a lot of bandwidth. Let me ask you this. Would sending this over the internet like you do to RITIS, would that be preferable?

Jeremy Dilmore: As long as there is some way in which it recovers a little bit more nicely than the way that we see some of the other systems recover like when FHP CAD will go to recover. You know, it will poll some of the resources, they will try to catch up all at once that it ends up putting a tremendous burden on the processors. We have seen that when we try to push our daily backups from our center down here in Sanford up to Deland that we are actually having to upgrade our link to a 40-gig link. It’s those experiences that have me a little bit concerned about how nicely it would run between crossing that internet connection would be a lower bandwidth connection in most Districts. For us, that may work out better since we have a bigger comm pipe going out to the Internet that we do for the ITS WAN. So, I don’t know if that applies to anyone else.

Mark Dunthorn: So, let me look into this normal bandwidth location. I will come up with some worst-case scenarios. We could certainly throttle the upload speed on the FTP server. That would be an option as well. If we were looking at reducing the amount of bandwidth, of course, that would mean that the upload will take longer, but there are ways we could address that. I don’t think this is going to be a large bandwidth load compared to the video data, which dominates the ITS WAN. I don’t think that this would be an enormous amount of data. But the fact that you are seeing an issue from the FHP CAD makes me wonder about my assumption. So, let me actually go back and measure some of these.

Jeremy Dilmore: I appreciate that. The other thing that you mentioned as you were talking about Dashboards, just mentioned that it was a topic at the ITS Working Group meeting that there was going to be a need to get the folks together and talk about Dashboards. So, I know this is a little bit different to the group but that is, I know, a topic at a couple of different places within the DOT and I sent a ridiculously long email to Fred about this but we should be seeing there are also topics coming out of the ROADS group about trying to maintain consistency. We have seen a lot of that through our coordination. Also, there is a lot of different efforts that have happened throughout the Districts. It will be really nice to be able to share some of that knowledge but also to be able to share code. I know we have a code repository that we keep up within the District. But being able to look at way in which we can do some of these things in a more unified approach, I think it would be to everyone’s benefit.

Mark Dunthorn: Yeah, I agree 100 percent with that. Christine is presenting these dashboards at ROADS tomorrow. So, we agree with the coordination being important. And, yeah, when you are saying that sharing a code is important, that’s exactly what I was thinking about earlier that you know, we are going to be solving a lot of really deep, technical questions and the solutions may be applicable on multiple scenarios, so finding a way to do that. That’s something that Clay brought up. Clay and I have talked about how we can do that. I know you guys have in D5 a repository. One more option would be to use, FDOT OIT does have and maintains their own DevOps environment. We have been using that on a couple of project basis. We could do something like that for SunGuide®, just make that available to all the Districts. I’ll take that as an action item, and we will talk about that within the SunGuide® group. Anything we do, we are going to be putting that up there anyway, so I don’t see any reason why we couldn’t share that with the larger group here.

Jeremy Dilmore: And if we could open it up to where it’s not necessarily specific to SunGuide®, that could be something that is looking at how we are using operational data, how we are basically going about the decisions that we do across the TMC, I think that would be a substantial benefit. There may not be things that we specifically write through SunGuide®, but they may have applicability as another developer is looking at another task associated with SunGuide®, just having all the source code and having it reasonably well-documented would be a benefit to everyone regardless of its strict applicability to SunGuide®.

Mark Dunthorn: Right. I agree.

Jay Williams: Okay, any other questions or comments on that subject? If not, we will move on to the first enhancement. I will turn it over to Tucker.

1. **SG-4815 Response plans should be Congestion Tail if available**

Tucker Brown: The first one we are going to talk about today is response plans and how they use particular tags to specifically the congestion tail. Next slide. So, right now, you can put certain tags into the EM templates to be generated. Most of the time, you will end up using the EM locations to populate the DMS even if it does have the defined congestion, so we actually have tags specifically for the congestion. But you have to put those in specifically. So, what this would do is basically giving you the option when you go to set up the tag, you can put the tail location in and then if the tail location is there, it will actually show up otherwise it would eventually be the event location. This is something that we put in at a configurable level at the install, so if you don’t want to use this functionality, you can keep it the exact same way it is. So, you can change this up based on templating as well. Because we allow templates on each event type, you can actually change this up for a specific event. Things that it would work well for would be congestions style events where you would say you have congestion X miles ahead and you want to use the tail location. But if you actually say this is a crash event and it’s at a specific location, you probably want to use the primary location. So, the way it would actually work in practice is probably more on the event type level and, like I said, you would be able to not use this at all at the installation level. So, just a different way to do signage on the DMS and a different option of using the tail location as opposed to the event location. Next slide.

**Cost: $3K**

**Schedule: Post 8.0**

Tucker Brown: Questions on that?

Jay Williams: Ok, so no questions. The link to this voting item and the rest of them are within the agenda. So, you guys can go ahead and vote on the first enhancement.

Alex Varela: Hey Jay, it says the site is deactivated when I click on it.

Jay Williams: Yeah, try it again. It should be active now.

Alex Varela: Okay. Thanks.

Jay Williams: Is that working for everybody else?

Brent Poole: Hey Jay, I didn’t receive the copy of the agenda.

Jay Williams: Okay, let me shoot it to you quick.

Brent Poole: Thank you.

Jay Williams: Anybody else not having the link to the voting items?

Wang Lee: I don’t think I have the link either.

Christine Shafik: Jay, would it be possible to attach it to the meeting invitation?

Jay Williams: Yeah, we should be able to do that. Let me try to do that now. Okay, you guys should have all got the update with the agenda link to the meeting invite. Sorry about that. I am going to give it another minute or two on this item so that folks can open those links that we just sent out.

Amy DiRusso: Can you let me know if anybody from District 3 has voted yet, please?

Jay Williams: Yes, we have a vote from District 3.

Greg Reynolds: I got it.

Amy DiRusso: Thanks, Greg.

Jay Williams: Turnpike and MDX, have you guys got those updated links and are able to log in to the voting site?

Wang Lee: Yes, MDX got it.

Jermaine Da Silva: Yes, Turnpike has it.

Jay Williams: Okay, thanks.

**Vote: This item 1 passes.**

1. **SG-4527 Operators requesting to have data sort feature added**

Tucker Brown: Enhancement 2 here is a data sort feature being added. Next slide. So, this actually isn’t completely related to data sorting, but it is related to organizations and how they are run during reporting. So, when you have a single installation where multiple, let’s call them organizations in this case, something like Chipley and Pensacola setup where you have unique locations or you have a unique set of operators that are doing something, sometimes there is a need to split the reporting to the individual centers and say, hey this is how they are running, here’s how this is running and be able to do that kind of reporting. The problem right now is we have an organization parameter but it’s a manual process to set it and it can only be default to the one. So, if you are the second organization, you either have to remember to set it and if you don’t, you may actually unintentionally either miss out on something on your center or contribute to the other center. It’s tough to actually report on that. So, the thing that we have actually talked about adding was as part of a user setup to also associate them to a particular organization and when you are creating an event, then default to whatever organization that user was assigned to and then expose that as part of the reports. So, if you want to run a report and limit it to a specific organization, that would be possible. Next slide.

**Cost: $8k**

**Schedule: Post 8.0**

Tucker Brown: Questions on that one?

Jay Williams: Ok, if no questions, we will proceed with the vote using the links in the agenda.

**Vote: This item 2 passes with all yes votes.**

1. **SG-4562 Nearest camera for SPARR created events**

Tucker Brown: The next item has to do with nearest camera for SPARR related events. Next slide. So, right now, when you create an event from the operator map, the nearest camera is picked up from the operator map. When you are creating an event from a SPARR application or whatever applications you are using for your Road Rangers, there is no component there to go to look at the nearest cameras and be able to set that. So, we are essentially creating events from two separate locations. The enhancement here is to essentially let EM be the one that’s actually going to set the nearest camera and then do it for all events. That will cover the fact whether we are doing that from the operator map or doing that from AVL, whether there is a third-party hooking into the system and also creating an event, any of those would essentially be covered by that. So, essentially migrating that functionality directly to EM to make that happen for all events as opposed to just ones being created from the operator map. Next slide.

**Cost: $8k**

**Schedule: Post 8.0**

Tucker Brown: Any questions on that one?

Jeremy Dilmore: Does that affect our ability to go through and update the camera that we think provides the best view of the incident and not be the closest camera?

Tucker Brown: So, this would only affect the initial set. After that point, it will not attempt to set that again, especially if you change it. It will hold whatever that one is. So, it’s really just an initial event creation.

Jeremy Dilmore: Thank you.

Jay Williams: Any other questions on this item? Okay, hearing none, let’s proceed to the vote.

**Vote: This item 3 passes.**

1. **SG: 2510 Indicate removed items in Current Response Plan list prior to plan activation**

Tucker Brown: Enhancement 4 has to do with Response Plans and how we interpret the current plan versus the one we are about to activate. When you are creating a Response Plan right now, If you go and put all the items in the current tab and you say “Activate”, that’s what goes out to all the signs and that’s what the current plans is. If you start modifying the event, the current plan changes to what you are actually modifying it to, so if you a remove a DMS or add more, those would be, hey, this iso what I am about to activate. What’s difficult to know is how is the plan that I am about to activate different from what is currently running in the field and what changes is that going to make. The proposed enhancement here is to essentially do a difference there so that you know what’s intending to be removed, what’s intended to be added. And then when you essentially activate the plan and all those things together, that is the currently active plan. But, the thing behind this is being able to see from a single window, this is the current plan, this is what I am about to activate, and here are the changes it’s going to make.

**Cost: $13k**

**Schedule: Post 8.0**

Tucker Brown: Questions?

Jeremy Dilmore: When we apply this ICMS, would it have a similar functionality where it would also show the delta? Or does this only apply to changes within SunGuide® within that same user?

Tucker Brown: So, part of ICMS is to essentially suggest a plan and once they actually accept that and bring it to the current plan, this would apply to it. I think this partially came out of the ICM functionality on what they were running as well. So, I think this will specifically apply to that, but we will apply it to just generic requirement as well.

Jeremy Dilmore: Thank you.

Jay Williams: Any other questions on this enhancement? If not, we will go ahead with the vote on this item.

**Vote: This item 4 passes.**

1. **SG-564 Remove List Options without Deleting**

Tucker Brown: The next one actually is fairly large and is a very old issue. I noticed the issue no. is 564. Next slide. So, this goes back to one of the original design decisions made and when you delete a device from the system, there are certain devices that do get saved and they are archived as a historical device, but from the main area where you look at the devices, so your DMS, TSS, that actually will remove those from the database and it’s extremely difficult to run the reports against those if it’s not saved in data archives. EM is the one exception there for sure that started with a concept of “cease use” where when you delete it, it never actually leaves the database; it’s just marked as we are no longer using this. But, like I said, most devices will actually get deleted from the database. Next slide.

So, the goal here is to make every object in the system stay there no matter what and implement a “cease use” potentially across the board. Like I said, this will be a large change, so we broke it up into multiple phases. The first stage would be AVL and the rest of EM, so there are parts of EM that are not done like that and the reason for choosing those two is AVL has to do with dispatchers and activities and responses to events and so, those are actually stored in as part of the events. One of the first steps is to basically get EM and all its events tied to specific things and be able to report on those. Phase 2 would be the core device system, so CCTV, DMS, and TSS, and then actually modifying the reports to allow you to report on those cease use devices and EM objects. So, that would be together as Phase 2. Phase 3 is to essentially pull in all of the other device types and to be able to report on all of those in a cease use manner. This would take changes to reporting as well to be able to essentially look up and recall those cease use devices. We would have to do some design work to figure out, let’s say, you name one device A and you delete it and then create another device A. Technically, that would be allowed because they have different device IDs but when you bring them all up to report on them, you are going to have to know the difference between the old deleted device A and the new one that’s actually the system also called device A. So, I have to do some design work to show on how we want to see this in reporting and how it wants to be used. But the overall goal at the end of Phase 3 is to essentially keep all of the devices (EM, AVL), all of those remain in the system no matter what and there is really not a concept of deleting anything from the system permanently. Next slide.

So, the first thing is Phase 1 and just to finish EM and AVL and this goes back to also changing, so EM right now stores all of AVL stuff as actual names of things. So, if a vehicle came in and it was vehicle A, in the database, that is stored as vehicle A and not referencing the actual AVL vehicle because that could be actually deleted. So, AVL’s got to be made to where all the devices are persistent and then we are going to have to go back and historically recreate every vehicle activity whatever AVL has done in the past and recreate those as ceased use in the database so that we can reference that in the table. That’s why there is a bigger price tag on the first phase is making sure that EM and all his historical events actually reference historical things in the database. We are going to have to recreate lots of those. So, the first phase of it is $85,000 and it would be after 8.0. Questions on that one?

**Cost for ONLY Phase 1: $85k**

**Schedule: Post 8.0**

Jay Williams: I have got a question just procedurally. Are we only voting for Phase 1 of this enhancement or all of it together just without the cost estimates for Phases 2 and 3?

Christine Shafik: That’s a good question. This is just Phase 1.

Jay Williams: Okay, so it’s going to be the first.

Tucker Brown: My intention was to first just do Phase 1. I mean, as far as the general enhancement goes, maybe we should vote on the concept of it I guess and then procedurally the kind of next step is if you are okay with that for Phase 1. So, let’s see who will chime that in.

Christine Shafik: We don’t have LOE now for the rest of the phases, right? Tucker?

Mark Laird: It’s very hard to hear you Christine.

Christine Shafik: Tucker, I was asking you, do you have the LOE’s now for the rest of the phases?

Mark Laird: Tucker, she is asking you if you have estimates for the other phases.

Tucker Brown: Was there a question I didn’t hear?

Mark Laird: Christine was asking you if you had estimates on the other phases.

Pete Vega: Tucker, do you have estimates for the other phases?

AJ Skillern: He is saying that he can’t hear anything right now. I do believe the answer is no.

Pete Vega: I thought I heard him say it’s free.

Christine Shafik: I heard the same thing Pete.

AJ Skillern: Nice try Pete.

Alex Brum: I also heard it.

Mark Laird: The question I have is how do the phases get prioritized? Because I would think we would rather do Phase 2 first.

AJ Skillern: I don’t know the answer to that question. I assume that Tucker would know. He just let me know that he is having technical difficulties.

Tucker Brown: I am back. Sorry I missed a little bit last of that. I was having an audio issue.

Christine Shafik: You missed the best part. Pete said he heard you that the LOE is for free. Can you hear me, Tucker?

Tucker Brown: Yeah, it’s real light.

Christine Shafik: Okay, the first question was do you have the current LOE for the other phases? The second question was what Mark mentioned that are we able to do Phase 2 first.

Tucker Brown: To answer the first question, no, I don’t have the LOE on Phase 2 and 3 yet. To answer the second part, yes, we can reorder the phases. 2 could go before 1; that’s actually not a problem. The whole point is to eventually get it all done.

Jay Williams: Hey Christine, it sounds like because this is a multi-phase enhancement that we couldn’t really do one part of it, my suggestion is that we able this entire enhancement for future CMB once we have a full picture of the cost implications.

Christine Shafik: I totally agree with you, Jay. I was thinking the same thing now. We can get the input of the Districts just like Mark mentioned. Which phase do you guys prefer to go first?

Jay Williams: Okay, so we will do that. We are going to table the vote on this enhancement, collect some additional information from the Districts about the prioritization of which phases we would need to happen when and then come back to the CMB at a future meeting with the full cost estimates included for voting in the decision.

Pete Vega: Tucker, I have two questions for you. One, it sounds like no matter what you do, the initial cost would be about $85,000 with limited additional costs with the rest of it. Does that sound about right?

Tucker Brown: Yes, EM and AVL are probably the hardest part of this entire thing.

Pete Vega: Okay. Follow-up question. As I know, we have evolved from ITS, so we have other devices that may be incorporated in the future from connected vehicle. Could you capture that in this effort now or will we have to wait until an updated version in the future?

Tucker Brown: So, any device added from that point forward will already implement the cease use stuff and would not require any additional work.

Pete Vega: Okay, thanks.

Jay Williams: Any other questions on this item before we move on to the next enhancement? Okay, Tucker, we will go to enhancement 6.

**This item 5 was tabled.**

1. **SG-4084 On Ramp Backup Event Type**

Tucker Brown: This one is more just adding an event type to the system for on ramp back up. Next slide. So there is currently one for off ramp back up but nothing for on ramp back up. This is a simple addition to add on ramp back up to the statewide event type list. Really the question comes out, the actual act of adding an event type is very simple but there's where it gets complicated. Is performance measures and looking into how 511 uses it do we need to change reporting to actually account for it? SAE codes to 511. Yeah, so the addition of it is relatively straightforward but it's the usage of it, how it appears on DMS signs that kind of stuff that starts to get a little bit more complicated. The biggest thing here is do we approve of on ramp back up as a statewide event type and then also using it in performance measures and that's really the vote for this. Next slide. So between all that adding, it is

**Cost: $7k**

**Schedule: Post 8.0**

Jeremy Dilmore: Is the intent here to be when there is like a merge issue that’s causing the on-ramp traffic to back down the ramp? Is the thought this would be associated with a ramp metering application? How do we think this fits, you know as an event type or is it all of the above?

Tucker Brown: Probably in those terms of more all of the above so in terms of how it's going to be used in the system it's just going to be one of the generic dropdown events that you can select from so not being tied to any specific application. So, really it would be up to the District on how they intend to use that. If at all. If you choose not to then that's an installation specific decision as well.

Mark Laird: Material DMS.

Dan Buidens: Hey this is Dan in District 7. Is the intent to broadcast this on arterial roads as vehicles are approaching the on ramp? I mean I understand the off ramp back up to higher moving vehicle higher speed moving vehicles on the main line coming up on a queue of cars spilling onto the main line from the ramp but this just seems like an odd fit. Maybe I'm struggling with maybe like Jeremy was trying to think of how this fit.

Pete Vega: Dan in District 2 and some other Districts we do have arterial signs leading up to ramps so that may be the case you wanna let traffic know in advance that the ramp to let's say 95 northbound is backed up giving the motorist an option to take an alternate route.

Dan Buidens: Okay, thanks for that example. We have arterial DMS is as well but maybe not a scenario where usually there's a signal or something closer to the actual on ramp that would it should be obvious to a driver but anyway. I digress.

Jeremy Dilmore: I'm curious about with District 6 having implemented on ramp signaling. Is that something that you guys would see yourselves using this type of reporting feature in order to record information or is that something that you would continue to use the module within like OTM in order to track performance measures and how robust this data capture was?

Mark Laird: I can't really answer that. I'd really need Alex or Javier or Alejandro if they have an answer for that right now.

Alejandro Motta: Jeremy, I think we will continue doing it this as we have. I mean I don't know if the OTM module for ramp covers these components of this type. So it might be a good addition to have as well in the day-to-day operations, I may have to rely on Alex from our team but that would be my take on it.

Jeremy Dilmore: That is what I’m wondering, do we need to we're trying to bring this into like the SunGuide® code set then we need to go ahead and add any fields to this in order to kind of fulfill the performance measuring needs that? Obviously you guys have some pretty extensive experience with and then we're about ready to get the experience with I was trying to to benefit you know from what you guys had gone through and trying to take that that logic and bring it into like the SunGuide® code set if that's what you were attempting to do or were thinking about doing.

Alejandro Motta: Jeremy, I’ll have to get back to you on that one. I'm not sure on the details at this point.

Jay Williams: Any other discussion on on this item?

Jeremy Dilmore: I guess this is what I'm struggling with. So is there someone who clearly sees this is how they're going to use it? I don't see a reason not to do it; I don't see that it's a problem. I just want to make sure that you know we weren't on the road to Abilene here that there's clearly someone who is saying that this is something that they want to go ahead and use and implement if it were to pass.

Tucker Brown: Mark Laird: Do we know who requested it?

Jeremy Dilmore: Given that we're not hearing anybody. Is this something that we could go down to the SSUG and get some more clarification on and then potentially bring it back?

Christine Shafik: Which District requested this?

Tucker Brown: Can you give me the issue number? Should be on the first page of it.

Jay Williams: It's a 4084.

Tucker Brown: District 4 requested that.

Hossam AbdelAll: I'm not quite sure this was requested but if Dee is still on. Was that ever requested Dee before the on ramp back up

.

Dee McTague: Is this an old one? Or, honestly, you know, they don't all come from me so I'm not sure.

Tucker Brown: It is an older one we talked about it at the SSUG earlier this year in March.

Christine Shafik: I will be taking this back to the SSUG and see if there are any issues with this. Taking notes here and making sure we capture everything that the team is mentioning so we can open it at SSUG again.

Hossam AbdelAll: Sounds good, thank you.

Jay Williams: OK, so just to clarify, we're going to table this item as well and maybe get some additional feedback from the rest of the Districts about if this is something we want to move forward and some of the potential use cases. So we will table this and go to enhancement 7.

**This item 6 was tabled.**

1. **SG-3499 Reporting “Ramp Closed” for Different Lane Mappings**

Tucker Brown: Ramp closed for different lane mappings. OK, move down to the next one. This one started out a little bit different and then we changed it and then now there's a different request as part of this one but it has to do with ramp closed on different lane mappings. Next slide. All right, the initial issue that reported was that there were situations in which we had different descriptions based on different lane configurations. So the way this worked was we had off ramp surrounded by shoulders versus off ramp surrounded by gore and a shoulder. Initially those actually didn't match but now that they do, then it came to the concept of should we be telling people that the left shoulder and right shoulder are open or should we just leave it as exit ramp closed? Right now it tells you both the shoulders are actually open. Next slide. So we had kind of a split decision on the desired behavior here and so we left it with a configuration option that would either tell you exit ramp closed or the exit ramp closed with the left and right shoulders open. With that we were going to put it essentially in EM as a configuration option of which one you got to select from and so both basically both sides could be happy at that point. Essentially, a configuration option to set what the desired behavior of your installation would be and then to be able to implement that. Next Slide. Estimate on that one $9 K and after the 8.0 development.

**Cost: $9k**

**Schedule: Post 8.0**

Alex Varela: So, the slides are very different than the actual question. Am I missing something?

Tucker Brown: Going back, what do you mean?

Alex Varela: I look at the voting and I mean is it price difference and then I know you said you added some extra stuff so I'm just wondering when you added stuff is it in between these items? I am kind of confused.

Tucker Brown: What is the other one say?

Alex Varela: The device changes are logged in the database but the user or system that made changes is not like that database.

Jeremy Dilmore: So, if I'm not mistaken, I think it was enhancement number five or six had the slides and the amount for this one I can't remember which one it was.

Alex Varela: OK, I thought I saw it somewhere else too. I just want to make sure I started to get confused. I'm like I think I'm missing something here.

Jeremy Dilmore: I'm glad you asked the question, I just thought the same thought.

Alex Varela: I keep trying to go back to number 5.

Jeremy Dilmore: Alex, I was trying to do the same thing.

Alex Varela: So, are we just going to vote it based on what's being presented and just disregard what the question. Trying to agree on that.

Jay Williams: Yeah that sounds like what we need to do. For clarification this item 7 is the reporting on the ramp closed and that's issue number 3499 so if the link that's in the agenda is not referencing this enhancement, then that's what's on the slides and what you should see on the screen that should override what's in that link.

Alex Varela: Got it. Thank you.

Jay Williams: Any questions about this enhancement specifically? OK, if not we'll go ahead and go with the vote.

Jeremy Dilmore: Sorry I was late on the trigger. Hey sorry man, so when we do this that the information that says ramp closeed left shoulder open right shoulder open, where is that being displayed? Where is that coming through?

Tucker Brown: So the operators would see that in their specific dialogue so the operations would definitely see this. We do send a description to Platus of what this actually looks like as well. I don't know for sure if they're taking our description and putting it on the site directly or if they modified in some way but they would also have access to that description.

Jeremy Dilmore: I just get concerned about making the statement that an exit ramp is closed in something like a 511 when there's still traffic getting by. We can have some relatively large stretches before there's another chance to egress and we would not want people to make a route choice decision based upon information that, while accurate, it may be representing a subset of the information here. I think that connection kind of is pretty important I know as a driver there is nothing that would drive me crazier than if I went quite a ways out of the way thinking a ramp was closed and then as I drove by it I saw people getting getting off. Do we know how that's going to interact with Platus or how that's going to show up on 511.

Tucker Brown: I actually don't know the answer to that.

Christine Shafik: Mark Dunthorn do you know the answer to that?

Mark Dunthorn: No I think it's a good question. I think we'll just have to take that for the 511 team and get a final answer on that.

Jeremy Dilmore: Yeah, I would appreciate knowing that before we went ahead and voted on the issue. Again, I am just concerned about providing bad information to the public.

Dan Buidens: Hey this is Dan. This reminds me a lot of the partial ramp blockage that we brought up in the SSUG meeting a couple SSUG meetings ago where we wanted DMS’s to indicate partial blockage. Would the word partial be more of an indicator that the ramp is actually still open. I mean, it is a great point Jeremy. We don't want to give the public something to misinterpret even though we're trying to present it as the simplest statement but maybe in throwing the word partial blockage in there and then indicating the shoulders obviously throwing all that on a DMS that's way too much content for one panel but anyway maybe partial is the seller.

Jeremy Dilmore: Well and I like the use of the term blockage or blocked rather than closed because you know when I hear the word closed I mean it's it's telling me there's there's nobody getting by as opposed to you know if their their lanes blocked that still leaves the possibility that there's you know there there is a shoulder that is still open. So I think those are all good comments. I just I want to be careful about how we're actually messaging to this to the public so we don't end up confusing anybody.

Mark Laird: District 6 though, as the travel lanes are blocked on the ramp and the shoulders are open, we're going to use exit ramp closed. I don't want to lose that.

Jeremy Dilmore: You're going to want to put that where Mark? Were you saying on your DMS on 511? Where you wanted to see that.

Mark Laird: Primary concerns on DMS operations on 511.

Jeremy Dilmore: Gotcha and you guys are very urban and have a lot of access points. You know my concern gets to when there's there's multiple miles between egress points and it could be quite a extensive detour in order to to make up for a ramp being closed.

Mark Laird: That makes sense, I don't want to lose the option to configuration thing is fine.

Jeremy Dilmore: Gotcha. Tucker we were looking at trying to wordsmith this dealing with the 511 issue. How do we manage the risk of that represents you guys versus yeah I just don't want to get to a point where this ends up getting implemented and we find out about it through a complaint.

Tucker Brown: So I mean one of the steps I guess that needs to be done here I don't know if it's at a District level or a state level installation that that's kind of a bigger conversation that everyone needs to have but essentially the only thing SunGuide® and really 511 needs to know is in these particular configurations and especially on ramps what information makes sense to display to the operations team, what information needs to go out on the DMS and what information needs to be displayed on 511? Whatever the answer is to that, we could make that happen but I think I guess I've been hearing a lot is there are conflicting opinions on what that actually means and again we if there are differences in those and there is no consensus we can always make it configurable like we're doing here to say in this part of the state we're going to do like this in this part of the state we're going to do it like this. I don't have any problem with any of those from a technical standpoint that's not a problem. It’s more of a how do we get consistent messaging and consistent set of here is what we want to do that I think needs to be taken to a higher level.

Jason Summerfield: Hey Tucker this is Jason. Just to be clear the current SunGuide® behavior is to use the exit ramp closed, correct?

Tucker Brown: No. It'll tell you left shoulder open right shoulder open. Right now it does. Bring up the previous slide there we go. That's the current implementation, right there.

Jason Summerfield: Okay, so I had it backwards.

Hossam AbdelAll: So this is Hossam. I just had a quick question on this. When we talked about message content or format when this situation occurs. So, where we, I mean going back to Jeremy’s concern where not entirely sure how this would be shown on Florida 511 which is why we want to confirm if possible. Isn’t it, would it be as simple as saying ramp closed instead of the other message? I'm just trying to see how or why that wouldn't be the case?

Tucker Brown: To Jeremy’s point earlier, he was saying basically that, if you say closed, it implies that there is zero traffic going off that ramp and potentially because the shoulders are open there may be some people going off there and in situations where the next exit would be miles and miles down the road that may or may not be the best choice to let them continue on and maybe actually try to get them off that ramp. So only saying exit closed would imply nothing is making it through at all. So he was saying that there's a partial; part of the information is that the exit ramp is closed.

Hossam AbdelAll: Okay, so weare trying to say it going back to the point of wordsmith things.

Tucker Brown: Yeah and that's where and this kind of discussion we got into the SSUG as well as in some instances maybe it makes sense to say exit ramp closed and some instance maybe it makes sense to say the shoulder open and maybe that's not at an installation level. There was definitely some difference of different opinions in different Districts at the SSUG level even but I don't know maybe the answer is not even at an installation level maybe it's at a individual location level. If we get into that level then we start to get into a lot more complex implementations for sure but I I think our our biggest problem at this point is agreeing on an actual implementation. The enhancement here was going to let people choose between the two and then the other question that came up was, what would 511 put out in either one of thes situations.

Hossam AbdelAll: Understood, thank you.

Mark Laird: Yeah well, I'd like to check with operations. I really believe that we probably want to put the same thing on 511 that we put on signs for consistent messaging and for trying to keep people from going down the ramp to tell anyone who's using a phone that it’s closed.

Mark Mathes: Hey this is Mark from District 1. I mean I think the messaging it's going to be need to be consistent throughout the state and we need to decide what we want that messaging to be. I would kind of like I would recommend that we take this to the ITS Working Group and let some of the operational components be discussed.

Jeremy Dilmore: I agree with Mark. I think that's a good course of action.

Christine Shafik: Alex, mark that as noted.

Alex Brum: Noted.

Jay Williams: Okay, sounds like we're going to table this item as well for further discussion. So we'll move on to enhancement 8.

**This item 7 was tabled.**

1. **SG-3335 Alert to the operator when a travel time is double (or some other ratio) the free flow travel time**

Tucker Brown: This one has to do with more more functionality to travel times as opposed to just regular status. Next Slide. So right now you get travel times and they can either fluctuate to their normal free flow or they can slow down but from a travel times dialogue standpoint it's up to the operator to kind of notice when those are happening. We do have a alerting based on individual segments but not alerting based on travel times. There was an implementation done in Broward County as part of a custom and dance been done for them that had a concept of travel time alerts but it was based on a relative or percentage change from the previous cycle. So not nearly, I don't think what people were looking for when it came to alerting. We discussed at the SSUG some actual behaviors that we thought we might want to implement here. Next slide.

One of the things is Tennessee actually did some work to incorporate a concept of historical travel time or historical links so TSS times and use that to potentially put those so that you could compare that to what it was regularly and historically. Then the other thing that we were going to do then there is incorporate IDS style alarming based on configurable thresholds. If your travel time drops out to X percentage of historical or even a specific absolute values of the travel time drops below this threshold we'd like to see an alert and then it would also have a recovery value so that it is not going to just jump back and forth across that threshold and continue to alert you. So you would be able to trigger new alarms based on travel times as opposed to doing them based on individual TSS links. Please note that these would be independent of the TSS alarms so potentially you could turn one or the other on or you could turn both on so it's kind of another way to view how you're looking at slowdowns in your system whether you're looking at him on a TSS link basis or potentially looking them on a travel time route basis. Next slide. So estimate for that was 25K and then release was post 8.0. Questions on that?

**Cost: $25k**

**Schedule: Post 8.0**

Hossam AbdelAll: Yes I have a quick question on this. So, what you were proposing is comparing real time data to a historical average. Has the historical average period been determined or agreed upon.

Tucker Brown: I have to look at the individual implementation from Tennessee and then we're bringing that over wholesale so at first we will get exactly what they have but I think through the design review process we can look at what they actually have and look to see if that actually makes a huge difference in what we want to average. I don't think changing that period would be particularly difficult because really all they're doing is averaging historical over a period so changing that period shouldn't be difficult but the actual period has not yet been determined.

Hossam AbdelAll: OK, yeah that would be just interesting 'cause you know changing changing that period of time will change the sensitivity of these alarms.

Tucker Brown: And the interesting part too especially if your historical versus covid historical is going to be an interesting one as well.

Hossam AbdelAll: Thank you.

Mark Laird: This definately needs to be day of week sensitive.

Jeremy Dilmore: And this is going to be configurable based upon geographic area or is this a global settings?

Tucker Brown: I believe their implementation is an averaging based on a global thing so but it's on a per link basis not a not the individual averaging period but the historic averages being produced or on a link basis.

Hossam AbdelAll: So it may be, correct if I'm wrong but this is looking at on a per link basis same time of day the average is the same time of day the same day of week across for example let's say a month period and if the ratio is exceeds a certain amount then you would get that alert. So it's looking at the same link historically over a period of time and then determining a ratio where it determines, hey yeah, this is outside the historical norm. Right?

Tucker Brown: So that's one option to actually do an alert and that would be something like a percentage based on the historical so if my historical is 50% or my current is 50% of what it historically is that's a problem and I need to alert on it. That's one way to do the alert the other one doesn't have to do with historicals in general but would just say if the travel time drops below this hard threshold I would like it lowered as well.

Hossam AbdelAll: I think historical is the way to go because you're going to have varied congestion periods of the day so you really want the system to at least have some kind of I want to say intelligence but you know a way of understanding or determining what is outside of the norm so we have certain areas or we know pre tollbooth you're gonna have speed below 40 miles an hour but if you're going to have that day in and day out during the day of week then you don't really want those alarms to go off. You really need to be taking a look at the historical averages and that's what provides you with some kind of understanding if something happened it’s outside the normal. If it's an accident you know then you would be able to kind of really tell if you know there's an issue rather than going off every time it falls below threshold.

Tucker Brown: So the intent was to give the user option of either. Should we scrap the a hard threshold and only do percentages based on the historical average?

Hossam AbdelAll: Oh, no, no. I thought like we had to pick one but if we have both then that's even better.

Tucker Brown: Okay.

Jeremy Dilmore: So,Tucker this is Jeremy. We've tried this before with (? ) data and we found all sorts of fun overnight. Where there's just low volumes and your historical data can very easily you can fall outside of it. We've seen false alarms like crazy. We had to implement where it was only during certain times of day that it would alert and where it had to persist for a certain number of sampling intervals before we went ahead and use double the travel time in order to say there's likely something here that you need to look at. Otherwise we were just getting such a large number of alerts that it became unmanageable and it was a very large number of a false positives. Now we were looking at the arterial system as well as the freeway system. Do you know if there if it was kind of the same any kind of skis or anything that kind of limits it other than just the the hard and fast the next sampling period is twice the travel time therefore we're going to pop an alert to an operator?

Tucker Brown: Travel times themselves have a some of that built into them already because the travel times themselves are calculated off of a rolling average of the TSS links underneath them. There is a component where you can dictate how many averaging periods go into that. The calculation of the travel time itself is within basically a single instance of it where I pulled together all my underlying TSS links and created that travel time so there wasn't a travel time; there's not a concept of averaging a travel time across multiple but as far as alerting goes that could done.

Mark Laird: I think I'm varying the times at which recurrent congestion occurs each day. Especially different times of the year as it keeps migrating and yes you can catch up for a period of time you have a bunch of false alarms.

Jeremy Dilmore: Conceptually, I think there is there's benefit to trying to to provide the types of alerts but I think that Mark’s I think is trying to to look at it kind of what's out there to make sure that this is really fully formed in terms of all of the configurable parameters so that we don't end up getting ourselves in a little bit more hot water and we can certainly share the, what we've done at the District and with folks and see if it's if it's useful then since we're doing off the Here data set it does apply across the entire state you can see what the variations you know look like.

Mark Laird: Yeah because we need to look at that data before we start alerting operators.

Jeremy Dilmore: Yeah.

Jason Summerfield: I think the original concept of this was much simpler because we were at least the way we in District 2 were looking at were a just the current versus the free flow and using that as the ratio but that didn't take much into account with historical information.

Hossam AbdelAll: The one thing I'd like to add maybe on the Here data so for example this before we have a pretty dense implementation of an VDS units so we have pretty consistent coverage that company said for all the pro vehicle data and the number of vehicles across traffic message channel. So, I think the the accuracy of the solution really depends on the VDS penetration rate anything you know you have a good amount of data being captured at false alarms shouldn't really be an issue as opposed to like Here data or pro vehicle data. Right, Jeremy.

Jeremy Dilmore: No I agree with that statement. I'm wondering so if we were to go ahead and put this in Tucker and it were to be something where because of seasonal variation it may not workout for somebody because the number of false alarms. Do we then have the ability to then go in and and basically turn off this system but if for others it works well or it requires some tweaks I mean at least it gives us a basis by which we can start to work from. Is there a potential for having it be able to, I don't know the word, is like silently alarm in the background so that we could kind of test drive it before we we pump it out there to the operators so that we can make refinements. Because otherwise I think we could end up with paralysis by analysis on this too.

Tucker Brown: So one option there is to limit that by permission by who could gets the alerts. That way you could limit those alerts to certain operators that would see them and be able to process them. The down side of that is if those operators aren’t logged in, they are simply going to stack on you which isn’t the worlds worst if they come in the next business day and clear them out. As long as somebody's watching them that's fine. The other option there is too basically have it as an option to silently acknowledge them every time they come in and then develop a report that says here's all the ones that happen and then someone can go back and look at were these actually valid alerts or were they not see what your false positive rate is essentially. Those are two options I can think of the operations wouldn't be affected by it but would still allow someone to analyze when the alert was created.

Mark Laird: That last option seems to be the most useful as far as the data analysis goes.

Tucker Brown: So basically just have an option to let the system just automatically acknowledge them and then be able to do it afterwards.

Mark Laird: I like Jeremy's request to like try it out.

Tucker Brown: OK, I'll note too that out of the box you won't have any alerts at all. It's going to be up to operations to say for this travel time I'd like to see alert when this condition happens so either a hard threshold or X percentage of the historical norm for this particular travel time. I'd like to see an alert and then set that up and then you can apply that to whatever travel times you want and then if we go with last option is basically to generate a report that would tell you when those occurred and when they were acknowledged. We kind of have a report that set up similar to that right now but it would probably have to tailor it to the travel time alerts just to get that.

Hossam AbdelAll: Yeah I agree with Jeremy's approach too and finding your, trying to at least provide short basis and then take a look at how it's performing.

Mark Laird: It would be really nice if we could turn some areas on and other areas off.

Tucker Brown: It's based on the travel time so it's not set up across the board. It's do you want alerts on this particular travel time that you're creating or not so you can isolate it to particular corridors to particular areas. Yeah, it's per travel time link, you have to set up the threshold on.

Mark Laird: OK even for the historical ones my travel time link.

Tucker Brown: Yes.

Mark Laird: OK, that will work.

Jay Williams: Any other discussion on this topic? Hearing none, let's go ahead and proceed with the vote on this item.The votes are in, that item passes. We will move on to enhancement # 9.

**Vote: This issue 8 passes.**

1. **SG-2364 Log username of user that changes device status**

Tucker Brown: Okay this one is a little bit more simple. Next slide. So right now, when a device changes status it is logged into the data base but it doesn’t tell you who actually made that change. That could be a specific user or in many cases it’s just the system you are either pulling out a device or something along that line but there is nothing in the actual database that you can pull a report on and ask, who changed this from one status to another. The proposed enhancement here is to add a user name column to the database and then log the user or if it's a subsystem level changed that who made that change? Essentially the user ones are mostly going to be changing it to active state or a out of service state and you'd be able to tell that. The system ones are generally changing it to the active error failed state based on polls or errors with a command or something along those lines. You would be able to run the report and see for this device who set it in service who set it out of service and when did they do it. Next slide. So note that's got to be done on every single subsystem across the entire platform and every device so $16 K and that does include changing up the reports to be able to get that information and then be able to release that post 8.0. Questions?

**Cost: $16k**

**Schedule: Post 8.0**

Jay Williams: No questions on this item? OK will go ahead with the vote for a enhancement 9 using the link to the agenda.

Jay Williams: OK, that item passes. We will go on to enhancement # 10.

**Vote: This item 9 passes.**

1. **SG-4559 Add Ability to Filter IDs Alerts on Per User Group Basis**

Tucker Brown: Alright the next one is about filtering IDs alerts on a per user group basis. Next slide. One of the things that's actually being done right now in the 8.0 release is the system is going to be able to define different regions and the intent as part of that is going to apply to the risk system but that is one implementation, the regions are being set up as a whole so that they can be utilized in other ways as well. One of those ways that we would like to utilize them is to set up IDs filters for user groups. So it will essentially allow a region to be set up and when you setup that region, you can apply it to that user group and potentially also a roadway and then be able to use that filter on the group that says for these we'd like to be able to get these types of alerts. Maybe your users want to see particular alerts on Waze for a particular roadway or maybe in a specific region or maybe the FHP alerts for a particular regional roadway but it essentially filters out certain alerts that you can apply to specific user groups. This goes kind of back to what we were talking about earlier with different organizations. They might be covering different geographical regions and so with that they may not care about those alerts that pop up in other parts of the area that the whole installations covering. They only care about the alerts that pop up in the region there specifically looking at. This would be a way to filter those down at an operation at an individual operator level. Next slide. The estimate on this one is $26 K and released after 8.0.

**Cost: $26k**

**Schedule: Post 8.0**

Mark Laird: Would this allow a region to be associated with multiple groups or do you build a new group that contains more people?

Tucker Brown: A region can be associated with multiple groups.

Jay Williams: Any other questions or discussion on this enhancement. Okay, we will go ahead and go to the vote for this item. Okay that item passes, we will move on to the next enhancement.

**Vote: This item 10 passes.**

1. **SG-3800 Reporting of more accurate locations**

Tucker Brown: Okay, this one has to do with reporting of more accurate locations. This has come up at the SSUG meeting multiple times now. So, moving this one forward. Next slide. Right now the EM location is tied to a specific latitude longitude and there is some ways to tell it like it's 1000 feet away or 5000 feet away but it doesn't give an exact location or a specific latitude longitude if the location isn't exactly where the EM location is. The idea behind here is to allow an optional way for an operator to set an accurate location within each event. Next slide. One of the ways that what you could do this is the operator has the option of essentially placing the event on the map and this would give them essentially a view of the operator map where they're able to look at where the event is taking place at least from EM location standpoint and basically look at it say hey it's actually more towards the exit or further away from the exit or essentially place on the map and say this is where it actually is and if they do that a separate set of latitude longitude are going to be stored with the actual map so you have your EM location and then you'll have this optional set of coordinates where they actually set it. That's what's going to be done initially for sure. FHP CAD does send a latitude longitude so we can always we could set that. Right now, I don't believe we're actually going to do that because that's not always the best location. For the reason is they essentially send multiple locations they might pull up on scene at one spot they send a location and then once they move out like if they move vehicles off the side of the road there down line somewhere they move it some other location and they'll send those. I believe they've talked to FHP and FHP would like something similar so if they come up with a way to actually set those that would be another source of information. The other possible one that we talked about is allowing SPAR and SPAR operators as they get on site to be able to send in and say use this use my current coordinates as the accurate location. In any one of these cases it's going to set that a different set of coordinates for the map for the event and store that alongside the event location. So none of this would affect your existing reporting or any of the ways in which you're doing your reporting now. What it would allow is the option of gathering more information about the event especially if you're trying to do reporting for specific accurate locations and where these come out. It would give you the option of pulling that out of the database and saying four events that I had better information here is that better information and by making it optional you can always fall back to the original event location which is specified by the EM location. So this just gives multiple ways in which you can capture a more accurate location if that is available. Next slide. The estimate here would be a $8K and for sure would include the ability for the operator to set that location themselves the database storage of it all that kind of stuff. At this time the FHP one would not be used and we would put the option for someone to send it in through this SPAR interface but it would be up to the end clients to actually change their implementation to be able to send that. This SPAR side could get that information but until people implement that on the back end we wouldn't be getting that as a source but would have the option of doing that if they implemented it. Questions on that?

**Cost: $8k**

**Schedule: Post 8.0**

Mark Laird: Was there any reporting included in this reporting changes?

Tucker Brown: No reporting changes specifically just the database side to store that information. Most of the reporting that has been asked for at this point are doing direct database access anyway for the reports and are doing custom reporting outside the stock ones. I don't have a request in the system yet for exactly how this is being used or what that report should even look like. So we don't have any specific report in mind of how to use that data it's just been a request of we would like to see this data in the system.

Mark Laird: Would that go through C2C?

Tucker Brown: That was not requested or kind of talked about. Events really don't we do have a concept of an events going through C2C and they do have a latitude longitude from like a center to center standpoint. There's one called event data. I don't think I lot of people are using that the more I'm willing to bet you're asking about the 511 side of that or actually publishing that. Right now we don't even send a latitude longitude we just send the EM location. I’m not, because of the way they're being displayed on 511 if we sent an alternate latitude longitude, I'm not sure that 511 would be able to tie that into a human readable location. Maybe they can; we just haven't discussed that with them yet.

Mark Laird: Is that going to be in the DAR data that we talked about earlier today.

Tucker Brown: Yes, it actually will be because it will be sent to them it wouldn't be logged on their side unless we told them about it and they changed some stuff to start storing it but we send the full version of the XML over to them and make no changes to it. The fact that we'd be storing and saving it they kind of get it by default.

Mark Laird: I'm thinking more about CO really then RITIS.

Tucker Brown: Yeah it would essentially be in the XML as part of the event so anybody subscribing to those feeds would automatically get it.

Hossam AbdelAll: Yeah, Tucker I had a quick question. I think most of them were already posed but so when we're talking about the DAR interface to take over the information that we have or the new lat long that would still be made available to purchase, right?

Tucker Brown: It would be that yeah. For that DAR interface that we send data out we've essentially just take the full event and then just put it in the XML and send it to them. Yes, by just changing the XML in our system to add that field that would just pick it up by default. RITIS specifically would have to make changes to pick that up and store it and then make it available for use but we're talking about the Central Office when using the same feed that system I don't believe is part of that yet. Yeah they would just build it as part of that and say hey I know it's an optional field but if I get it here's a lat long for where we could move this to instead. Both of those would be already included in this as well.

Hossam AbdelAll: Okay, the lat long where the operator would click on a map that would be a separate EU brand new field in the SunGuide® database, right?

Tucker Brown: Correct.

Hossam AbdelAll: And would it be kind of GIS based map player I'm just trying to think like how what clicking populate the lat long?

Tucker Brown: Right now the analogous situation for this would be like if you go place a device on a map from the ribbon you would click on a button that says basically place on map and it drops off all of the other stuff off the map that are not relevant to what you're trying to place and then allows you to click a specific spot on a map on the operator map and then wherever you clicked it just pulls the latitude longitude from that location.

Mark Laird: Are you allowed to do this multiple times and the last one wins.

Tucker Brown: Yes. We might also add that to a comment field just so that if they did it like 6 times as the event moved along you could actually tell that as opposed to just knowing where they last put it.

Mark Laird: I think it's mostly run. They screw up the first time and go back and fix it.

Tucker Brown: I was kind of thinking along the lines of if they were trying to track the event as it moved. I don't know if that's completely relevant or not but I mean right now it's intended to be a latitude longitude as part of the event as a single latitude longitude so yeah last point, last time it was set would be the version that you see

Jay Williams: Any other questions or discussion on this item? If not we'll go ahead with the vote. Okay, that item passes with all yes votes. Now we will go to the last enhancement for today's meeting.

**Vote: This item 11 passes.**

1. **SG-4967 SunGuide® VDS data drift**

Tucker Brown: Alright for the last one this one has to do with the TSS data drift issue. Next slide. Right now when we poll an ATSS device it relies on essentially the time that the system starts up. It immediately starts polling the devices and let's say you put it on a 30 second poll cycle. What's happening here is when that 30 second poll cycle ends I believe the timers in dot.net are accurate to maybe 15 to 20 milliseconds. So we may be getting anywhere between 0 and 15 to 20 millisecond delay there and then we actually poll the device, get the readout and then reset the timer to 30 seconds. So there's a fractional amount of time every time you poll a device that essentially gets lost. And what you see over the course of a day is depending on how long your devices are poling in the field whether you're 20 second whether your 30 second. Those fractional pieces end up adding up together to be higher than a 20 second poll cycle or a 30 second poll cycle and essentially we crossed the threshold of the device in the field and a poll cycle from the field is essentially lost. If you do a days worth of time and compare it to a device days worth of time, that's when you'd actually see this the most. Well the reason that was done initially is there was a fear of if we ever started back logging these instead of if we set it for constantly 30 seconds and reset it for 30 seconds since the last timer. If you started back logging eventually you just kill the process and so a decision was made to do 30 seconds after you finished the existing poll. As we've seen on the systems over a number of years we actually that's a very low risk to start back logging these have been going for quite some time and unless it's a fairly old problem, I can't recall in this modern era that we're running in what the last time that might have actually occurred so the proposed enhancements here is to actually set the timer up to be 30 seconds since I started the last poll and that should eliminate that fractional seconds that you're losing every period. Essentially it's going to reset the timer for 29 seconds and some fractional of a second to be able to get to that 30 second again. What this should do is sync up your device logs and your SunGuide® logs together. You should be able to see those a little bit better and there'd be no missing a single poll cycle once you cross that threshold of either 20 second or 30 second from the device level so you'll get a little bit more consistent data here when you're trying to compare data for sure. You'll also be able to, you won't get that missing poll cycle every now. Like I said there is a small risk that on back logging but at this point I think that's negligible and so I think this is a good enhancement. Next slide. So estimate on this is $7K and post 8.0. Questions?

**Cost: $7k**

**Schedule: Post 8.0**

Pete Vega: Hey, Tucker this is Pete. Real quick was this something that we were kind of seeing with our I-10 checks?

Tucker Brown: The recent ones we were talking about?

Pete Vega: Yes.

Tucker Brown: In one of the logs you sent me, yes you hit that threshold right in that 15 minutes span that you sent me but it resulted in basically one poll cycle and if you shift the data that one poll cycle everything else lined up but yes that did happen.

Pete Vega: Okay. Well it doesn't happen frequently. We've been looking at them. I think that was the only time.

Jay Williams: Any other discussion on this item? Okay, we'll go ahead and vote for this enhancement. All right that vote or that item passes with all yes votes.

**Vote: This item 12 passes with all yes votes.**

**Open Discussion:**

Jay Williams: So with that we have reached the end of all of the voting items. So we'll go ahead and open the meeting up for any generic or general discussion that anybody has at this time. Alright last call for open discussion items.

Jay Williams: Okay. So the last item on the agenda is just to go over the action items. I've got a total of three enhancements that we tabled for future meetings based on additional coordination and follow up with the Districts. The only other action item that I have is related to what Hossam talked about at the opening of the meeting related to the discussions that they're having with Central Office. If that needs to get escalated to come back to the SSUG or to the CMB will do that and open that item back up at that time. Does anybody else have any action items that I may have missed or that we need to make note of so that we can follow up for the next CMB meeting.

Jeremy Dilmore: So Jay, who's taking the getting it on the CMB agenda? I think you saw I emailed Fred about it. I just want to make sure it is assigned someone.

Jay Williams: Can you say that again Jeremy?

Jeremy Dilmore: Who was who's assigned that getting it on the CMB agenda. Just to make sure that it gets done.

Jay Williams: That's something that we will work with Central Office. If you have something to you copy me so I'll work with John and Christine to get that taken care of for the next meeting.

Jeremy Dilmore: Okay. Thank you.

Jay Williams: John, what was the other item?

John Hope: Mark from Central Office had asked all the Districts to submit their database.

Mark Dunthorn: Yes, we haven't actually sent that email but it is coming up so that's on me. I'll work with Christine and she'll get that email.

John Hope: Okay.

Jeremy Dilmore: The only other thing I think was an action item was about trying to set up that meeting about dashboards. I didn't know that was gonna happen between this group the CMB group or how that was going to happen but I didn't know if there was something that needed to be captured to make sure it's followed up on.

Pete Vega: I was thinking the same thing so I went through the calendar. Hey Christine maybe, I think we have an ITS Working Group on the 12th could we include this part of the discussion agenda items?

Christine Shafik: Yes we do have the ITS Working Group on August 12th. Alex will coordinate that.

Jay Williams: Is that good feed Jeremy?

Jeremy Dilmore: I think it's a great idea, well done sir.

Jay Williams: Okay. Anything else, anybody else have any items that I may have missed? Okay, if not we're at the end of the meeting. We finished a little ahead of schedule. We will go ahead and adjurn. I appreciate everybody’s participation.

Meeting closed with Pete playing the song, Sound of Silence!

**Review Action Items:**

* District 4: Hossam AbdelAll indicated that there will be follow-up testing on WWD and will report those testing results at a future meeting.
* Central Office: Three enhancements were tabled for future ITS Working Group meeting. enhancements 5, 6 & 7.
* Central Office: Any topic to be added to the next CMB meeting agenda should be sent to Jay Williams and he will work with Christine Shafik to get a new topic added.
* Central Office: Mark Dunthorn to work with Christine Shafik to send out an email asking that all Districts submit their databases.
* District 5: Jeremy Dilmore brought up the possibility of having the Dashboard meeting. Christine agreed that it will be on the Agenda for the next ITS Working Group meeting on August 12th.

Central Office: Mark Dunthorn to run two instances of separate nodes for RITIS and measure load.