



SunGuide Software

User's Group

Meeting Minutes



Date: October 26, 2017

Time: 2:30pm-3:30pm EDT

Agenda:

Topic	Led By:
Item 1: DMS Configuration Improvements – Part 2	Derek Vollmer, CO

Attendees:

Jason Summerfield, D2
Tanesha Sibley, D2
Chris Jones, D2
Mark Nallick, D3
Amy DiRusso, D3
Aven Morgan, D3
John McFadden, COT
Jacques Dupuy, D4
Shayla Khalilahmadi, D4
Jose Alfaro, D4
John Hope, D5

Jared Roso, D7
Charles Keasler, D7
Vinny Corazza, D7
Eric Gordin, FTE
Bryan Homayouni, CFX
Marlon ChinShue, I-595
Tucker Brown, SwRI
Derek Vollmer, CO
Mark Dunthorn, CO
Frances Ijeoma, CO
Jennifer Rich, CO

Discussion:

ITEM 1 DMS Configuration Improvements – Part 2

Last week's meeting recap - this was initiated by a District 5 footprint to manage font defaults or changes that are out in the field that displayed on their signs. SunGuide has no real way to detect that. There is no communication between the SunGuide software and DMS concerning fonts. There is a misconception that we have a font configuration page in SunGuide and that SunGuide communicates with the signs and that is not true. From SunGuide we can retrieve the first four font slots from a sign.

Derek explained the different font options, the correct font size and the factory default fonts. It is up to you to configure the proper font size.

At the ITS Working Group meeting we presented the concept of having standardized fonts, no one wanted this change but it is something we can revisit in the future. For now, we are going to move along without standardized fonts.

Font Management Proposal

We would retrieve the first four font slots on the DMS (name, height, character bitmaps, and default font object). We would only store unique fonts on the sign. We will be able to find duplicates by looking at the font version id. We will not provide the ability to view the character bitmaps within the SunGuide software. We will only have the ability to receive the configuration for signs that support the NTCIP protocol. We are still going to support the old configuration mechanism for the older signs. Will include the ability to retrieve but also set the default font from SunGuide. We want to be able to show the differences from what we have in SunGuide and what was retrieved from the sign. We will have the normal configuration fields and highlight any differences that occurred. You have the ability to store the new configuration to SunGuide.

Once we download/upload the information to the sign, we will need to retrieve it to ensure it was stored properly, as a verification step.

As far as the SunGuide polling is concerned we will add in the font name and especially the font version id because if they do not match then we know there is a change. If we detect a change based on that, then we can produce an alert. It can be an email to an administrator or someone who has the rights to go in and check the configurations on the sign.

The footprint said to detect this and make it automatic but we have some concerns with that so it will be an alert with manual intervention.

Travel time templates are device specific so you could go into each device and specify the four fonts to be used and if you don't specify the font, then the default font will be used.

EM templates can be device specific, so you have the ability to select the font so if it is not device specific then the default font has to be used for the message templates.

We would now have the ability to always send the font number and a version ID with each message we send to the sign. If there is a font change, we can still send messages to the sign and the sign will tell us "it won't display the message since it identified a conflict with the version ID". This functionality is possible with all DMS that have been tested at the TERL and that use the NTCIP protocol.

The easiest approach to do this, is by creating an external tool that can be used outside of the upgrade. So before the upgrade you can use this external tool to retrieve all NTCIP DMS font configuration values and you can compare the information. It gives the district the ability to have a verification step. The output of the tool is what will be used during the upgrade process to store the new font configurations into the SunGuide database. When you come back up online after the upgrade, everything is in place.

If you retrieve something from the sign (fonts 1234) and you save that into SunGuide as the configuration and then later on a conflict was determined, you would be able to say "I want to send the configuration in SunGuide (four fonts) back down to the sign."

Recovery Messages

We have previously discussed recovery messages and after thinking about it more, I am not sure we need to retrieve these messages as part of our configuration. I am not sure how often this occurs and I have seen it occur in the past but if it occurs enough to make changes. The default values for these messages are supposed to be blank, which might not be what you want but it is a safe default message to have. The defaults might get changed during acceptance testing. I am just curious as to how many Districts have experienced a "strange message" appearing on your sign when you are not expecting one? It could be related to a recovery message being posted to the sign. No one commented on this aspect, we will not implement it.

Other DMS Configurations

We have the ability to pull other information from the sign. We can pull the graphics, color scheme, etc. See the slides to see how it maps and what the codes mean. We can get all of these configurations as read only. We do not have the ability to change these. A potential issue is that I don't necessarily trust that the signs will report the proper values for all of these. They were tested at the TERL but we can't guarantee that is correct in the field.

There needs to be a mechanism to keep what is important in SunGuide and not trust what is provided by the sign but it is a starting point.

We will also add these to the external tool so they can be verified before the SunGuide software upgrade. I am pretty sure there is a way to change the configuration values on the sign controllers. Some of them might be at the sign controller and some might be a special tool.

We could alert on it, and give you some options on what you can do but I don't think this would happen very often.

Aven: When you say alerts, what would that look like?

Derek: When you pull the sign and check the values, at the bottom of the new dialogues there is information as to why something would have gone wrong. So it would just be something down at the bottom like that. Unless Tucker has other suggestions.

This could be a good candidate for system messages.

Aven: I would worry about it going in there in case someone doesn't see it.

Derek: but we have a new feature where the user can only subscribe to certain ones. Or both places could work.

John: I would imagine if there are these types of alerts that occur that the DMS would not be displaying properly. If that is the case, then you probably wouldn't want to display anything.

Derek: which are you talking about? Fonts – if something changed then when you send the font and the font ID to the sign then they would be different and the sign would not display a message. For this one, most likely what will happen is your dimensions will change to something smaller when you go to post something you will get a message too big type of error.

John: Then the DMS would go into an error state, correct?

Derek: That is a good question.

John: In District 5 that is what the DMS maintenance contractors are looking for.

Derek: What are they looking for?

John: They are looking for the failed devices. And if this fails the device it would force them to address this issue.

Derek: I will talk to Tucker about this after the meeting but we are pretty close and I will follow back up with you as well.

John: evidently, if you run into a case where a message won't fit on the sign it also fails the DMS. Or it at least puts the failure into Message Arbitration Subsystem (MAS).

Derek: Does the DMS go into an error state?

John: Yes. it goes into an error state. Just to be clear, I think it should go into error state.

Derek: You are clear. We discussed this last time and said we were not going to do that but we did not have the piece of information about maintenance looking at that feature to know to do something.

That is basically our DMS configuration proposal. Does anyone have any comments, questions, or concerns about the DMS proposal?

Bryan: Out of curiosity, where are you going to show the font configuration in SunGuide? Dropdown? Device messaging?

Derek: We are looking to have an advanced configuration section. Where you can have the font configuration in that section which would be a different page in the DMS configuration. Previously the advanced configuration was for the recovery messages but since we aren't doing that, it can be for the detailed font configuration. It would be an additional tab to pull this up.

Bryan: Does the information need to be relayed to the operator anywhere?

Derek: not that I can think of, the only place you would see it is if you were manually entering in a message and you could select which font you would want to use for that message.

Bryan: how would that be handled?

Derek: We would add an additional control to the message editing page to allow you to select the font. It would be a dropdown of the four fonts and have a name so you would know what you are putting on the sign.

Bryan: So the operator would need to be familiar with the font names.

Derek: correct. It would default to the default for that sign. We are prepping for the future changes we want to make like graphics.

Connected Vehicle Protocol Update

District 5 brought this up. They have a connected vehicle project in Orange County. As part of their project they wanted to be able to retrieve messages from vehicles and bring them into SunGuide. Back in 2011 SunGuide had the ability to send out traveler advisory messages, so you could send messages to the display within the vehicles. We discovered with the project in Orange County that the standard changed and basically all of that stuff is broken. We want to update the connected vehicle protocol to the new standard. One of the changes in the spec is the traveler advisory message, the name and the aspects of the message have changed. We want to just do a protocol update and keep all existing functionality the same. We want to include this in the release of 7.1.2.

The next release is 7.1 and then we will do a small release after that which will be 7.1.1 then another small release which will be 7.1.2. Then later on we will have a major release which will be 7.2. The DMS font changes would be in 7.2 and the small changes would be in 7.1.1.

Does anyone have any objections or concerns? If you do, we will bring them to the CMB to vote on. Did not hear any concerns so we will mention at the CMB there were no concerns.

John: Out of curiosity, how will this be tested?

Derek: we have equipment at the TERL, we are deploying connected vehicle DSRC radios at 22 intersections and so we will have the latest CV technology at the TERL to test. SunGuide won't communicate with the radios yet, but the devices will send the Signal Phase and Timing out.

Bryan: Does anyone have any agenda items they want to bring up before the next CMB?

Derek: yes, the next SSUG I want to talk about the accurate device locations. SWRI will talk about them. There are some previous items we need to come back to like intersections.

Bryan: Do we need to revisit the Bluetooth discussion with Clay Packard?

Derek: that has not been discussed at the SUGG at all. I know enough to give a brief description, you know we have Bluetooth readers. For devices that can provide Bluetooth addresses we get a read that they send the Bluetooth address 6 bytes. First 3 bytes are for the manufacturer and the other 3 are unique identifiers under that manufacturer. There are no requirements to send the mac address, so some vendors might hash the value, and in there system the hashed values will match. But if we have a different manufacturer deployed along a roadway further down then we won't be able to keep matching the unique identifier between the two different manufacturers. We want to be able to match the unique identifiers between multiple vendors. Our Transtat office contacted me to

change the spec to have the ability for the Bluetooth device to send the mac address. So we will try to address this in a specification change.

Clay in District 5 wanted to present this at the next CMB meeting. We will not store the full address in SunGuide but we will store the lower 3 bytes.

Next week we are doing the 7.1 testing at the TERL. Does anyone want an early copy of the 7.1 release while we are doing the IV&V? Bryan is curious to look at it.

Jason: Signal system interface, we are waiting on TrafficWare to get us the updated documentation. I think they will be sending it to you.

Derek: It will be tested against the 7.0 since that's where it should work. We should ping them next week.

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Meeting adjourned around 3:30 PM

New Action Items:

Action:	Responsible Person:
Talk to Tucker and John about the failed message on the DMS	Derek Vollmer
Give Bryan/John a copy of the 7.1 for testing	Derek Vollmer
Ping TrafficWare on the signal system interface	Derek Vollmer or Jason Summerfield