

Technical Memorandum

SunGuide[®] Software System



Independent Verification and Validation Test Report for SunGuide Release 6.0

Version 1.0

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Prepared for:

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List of Acronyms and Abbreviations

AVL	Automated Vehicle Location
C2C	Center-to-Center
CCTV	Closed-Circuit Television
DMS	Dynamic Message Sign
EM.....	Event Management
FDOT	Florida Department of Transportation
FP	Footprint
ITS.....	Intelligent Transportation Systems
IV&V	Independent Verification and Validation
MS.....	Microsoft
NTCIP	National Transportation Communications for ITS Protocol
RR	Road Ranger
TERL.....	Traffic Engineering Research Laboratory
TSS.....	Traffic Sensor Subsystem

1 Scope

1.1 Document Identification

The purpose of this document is to record the results of the SunGuide software release 6.0 independent verification and validation (IV&V) test from May 9, 2013 to May 31, 2013.

1.2 Project Overview

The Florida Department of Transportation (FDOT) SunGuide® Support, Maintenance, and Development Contract, contract number BDQ69, addresses the necessity of supporting, maintaining, and performing enhancement development to the SunGuide software. The SunGuide software was developed for FDOT through a contract from October 2003 through June 2010. The SunGuide software is a set of intelligent transportation systems (ITS) software that allows control of roadway devices as well as information exchange across a variety of transportation agencies; it is deployed throughout the state of Florida. The SunGuide software is based on ITS software available from the state of Texas with significant customization and development of new software modules to meet FDOT’s needs. Figure 1.1 provides a graphical view of the SunGuide software.

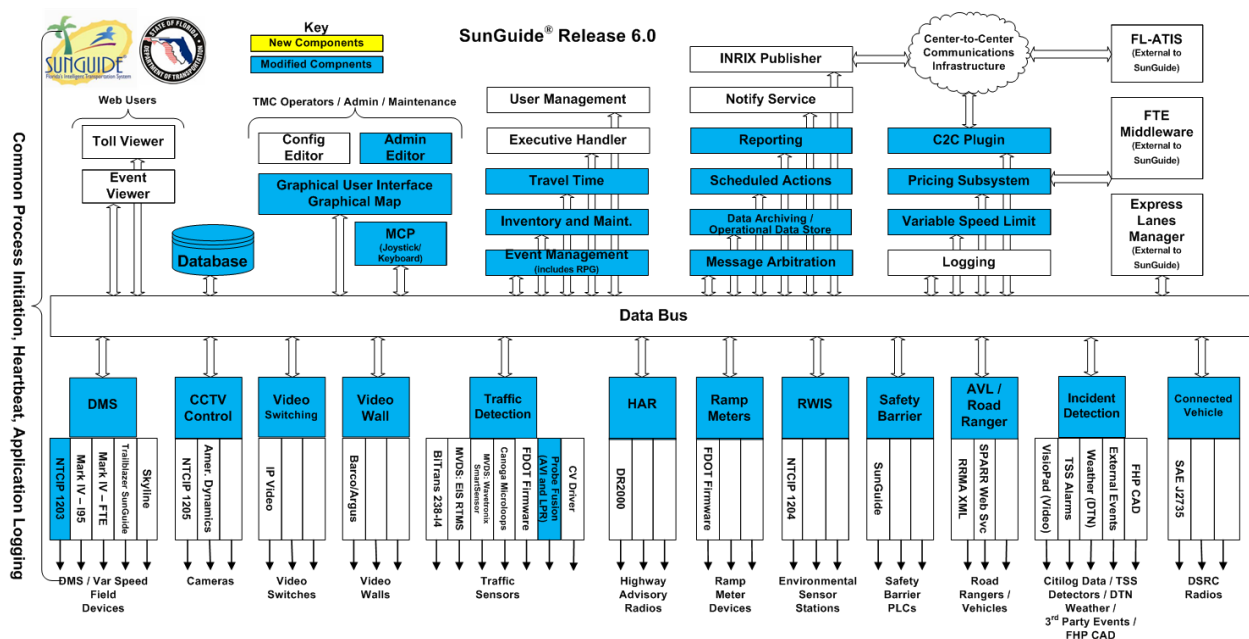


Figure 1.1 – High-Level Architectural Concept

The SunGuide software development effort began in October 2003; several major releases have been developed and this document addresses an incremental update of the most recent release. After development, the software will be deployed to a number of regional and local transportation management centers throughout Florida and support activities will be performed.

1.3 Related Documents

The documents listed below form a part of this document to the extent specified herein. In the event of a conflict between the documents referenced herein and the contents of this document, this document shall be considered the superseding document.

- *SunGuide Release 6.0 IV&V Test Plan version 1.0*
- *SunGuide Release 6.0 IV&V Test Procedures version 1.0*

These documents are available from the document library on the SunGuide software project web site at <http://sunguidesoftware.com>.

Alternatively, they can be obtained by request to:

Florida Department of Transportation
Traffic Engineering and Operations Office
605 Suwannee Street, M.S. 90
Tallahassee, Florida 32399-0450
(850) 410-5600

1.4 Contacts

The following is a list of contacts for the SunGuide software project:

- Elizabeth Birriel, ITS Section, Traffic Engineering and Operations Office, elizabeth.birriel@dot.state.fl.us, 850-410-5606
- Arun Krishnamurthy, FDOT SunGuide Software Project Manager, arun.krishnamurthy@dot.state.fl.us, 850-410-5615
- Clay Packard, Atkins Project Manager, clay.packard@dot.state.fl.us, 850-410-5623
- David Chang, Atkins Project Advisor, David.Chang@dot.state.fl.us, 850-410-5622
- Robert Heller, Southwest Research Institute (SwRI) Project Manager, rheller@swri.org, 210-522-3824
- Tucker Brown, SwRI Software Project Manager, tbrown@swri.com, 210-522-3035

2 Purpose

The *SunGuide Release 6.0 IV&V Test Plan*, version 1.0, describes how the testing was to take place at the Traffic Engineering Research Laboratory (TERL) in Tallahassee, Florida, from May 9, 2013 to May 31, 2013. This report provides the testing results, which include the items list, the plan for addressing the issues, and a summary table showing the number of passes and failures of the software to meet the original requirements.

3 Test Results

3.1 Summary

Testing began at 9:00 a.m. on May 9, 2013, and continued through 5:00 p.m. on May 31, 2013. The system under test was the SunGuide software release 6.0 deployed at the TERL. Sixty-three test cases were separated into four major sections. Database enhancement testing was conducted by Steve Novosad. New requirements and footprints were tested primarily by Brian Ritchson. Lexi Bijelic conducted regression testing of the admin editor and operator map. Any issues discovered during testing were recorded in an items list and are further analysed in this report.

3.2 Requirements Pass/Fail Summary Table

Table 3.1 – Test Summary Table

	Pass	Fail	Pass/Fail Rate	Not Tested	Total Tested
Database Enhancement	35	9	79.55%	12	44
Oracle New Requirements	105	4	96.33%	6	109
MSSQL Server New Requirements	107	2	98.17%	6	109
Footprints	29	4	87.88%	7	33
Oracle Administrative Editor	92	4	95.83%	16	96
Oracle Operator Map	175	12	93.58%	35	187
MSSQL Server Administrative Editor	92	4	95.83%	16	96
MSSQL Server Operator Map	175	12	93.58%	35	187

Note: Some requirements are tested more than once with varying outcomes. If a requirement fails one or more times, it is counted once as a failure. If a requirement is tested one or more times and does not fail, it passes. Otherwise, the requirement is considered as “not tested.” The sum of the three should be equivalent to the total number of unique requirements under test. The pass/fail rate is the number of passing requirements divided by the total requirements tested. If a pass/fail box does not have a corresponding requirement, then it will be counted as one pass or fail.

3.3 Items list

Table 3.2 shows the issues initially identified during the SunGuide release 6.0 testing event.

Table 3.2 – Initially Identified Items

Issue List ID#	Reference	Description	Related Requirement IDs
1.	Test Step 8 page 10: Database_Model_Documentation	<p>We would like to have definitions (see screenshot named ERWin_Data_Definitions.PNG) added in the model to document what the various objects are. We do not want every column documented because some are self-evident (i.e. columns named Date Created, REF_ID, etc.). However, the following should have documentation to help developers using the database to easily understand the design as well as to facilitate the DBDD document:</p> <ul style="list-style-type: none"> * All tables - mention their purpose and relationships to other tables * All relationships - with more detail on tables related to more than one other table or chain relationships * Columns that are not self-evident. Columns involved in relationships to other tables. * All Views - how are tables, queries structures/related to organize what information. * Subject area memberships should just mention the subsystem (not abbreviation) for what the subject area represents * Documentation of what steps to take to produce scripts from the model 	
2.	Test Step 15 page 10	Oracle_Sunguide.fet file missing required to generate Oracle creation script. File was sent after 6.0.0.3 initial delivery, put in place, and was then successful in creating the creation script.	DB025 DB026
3.	Test Step 15 page 10	Oracle creation script needs exit statement at the end to return to the command prompt.	DB025 DB026
4.	Test Step 22 page 11	Unique_Identifier SwRI in process of confirming all unique identifiers are in place. This task will be complete the week of May 20th.	DB022
5.	Test Step 23 page 11	SunGuide blank 6.0 System test: Admin Editor crashed when adding new user and group is not selected. This is low priority and most likely a latent issue - not a 6.0 issue. See AdminEditorCrash.PNG	
6.	Test Step 24 page 11	SunGuide blank 6.0 System test: Failed to add first Dynamic Message Sign (DMS) with Admin Editor crash; see Cannot_Add_DMS.PNG. This was due to lack of documentation in VDD for how to get a blank database up and running (at least a mention of adding Event Management (EM) locations and all of those pre-requisites.)	
7.	Test Step 24 page 11	SunGuide blank 6.0 System test: Buttons cover lane map image in Admin Editor and image is wrong; see AdminEditor_LaneMap_buttons_cover_mapping_image.PNG	
8.	Test Step 24 page 11	SunGuide blank 6.0 System test: Failed to modify roadway description; see FailedToRenameRoadway.PNG	

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Issue List ID#	Reference	Description	Related Requirement IDs
9.	Test Step 30 page 11	Forward Engineer within ERWin to SQL Server Error Message that does not prevent generation. See Forward_Engineer_within_ERWin_to_SQL_Server.PNG	
10.	General/VDD	Documentation missing in VDD for usage of ERWin model files with: * description, * high level usage (not how to use ERWin, but what to do to work with SunGuide artifacts), * process to create all of the scripts (high level), * build blank database, * description of all files involved (i.e. batch file for sql server database script, etc.), * SQL Server database migration.	
11.	VDD section 3.4.2.3 Create a Blank Database page 64	sa should not be recommended as the database user. it is a Microsoft best practice to create your own user with specific rights, not total database server rights.	
12.	Test Step 44 page 12	Testing the SunGuide software startup/connect to SQL Server database - failed to connect java processes; VDD and "configuration updates config.xml" needs to be updated with java SQL Server client library as is already done in the master config.xml file.	
13.	Test Step 1-5, page 6-7	Using Release 6.0.0 Installation notes, page 3, section 2.1, step 3.b.: Should Oracle client be specified as 11.2 or 11.1 and should it match the version of the database server?	
14.	Release 6.0.0.3 revision to Database Upgrade Scripts on 2013.05.10 - Database Upgrade Instructions - Step 3.1.3 and 3.2.3	Should note when installing the ODAC products, the "COMMAND LINE" needs to be ran as an administrator.	
15.	Release 6.0.0.3 revision on 2013.05.10: Database Upgrade Instructions: Step 5.1.1	Should have clear instructions on what search strings to search for in the log followed by the description(s) that are already there.	

Issue List ID#	Reference	Description	Related Requirement IDs
16.	Step 22 page 8	After renaming a detector and then clicking on the detector and clicking edit, Admin Editor throws a Null Reference Exception. repeatable, but not every time. See log file: StatusLogs_192.168.8.18_2013.05.14_H1600.txt and see AdminEditorCrashesAccessingRenamedDetector.PNG and AdminEditorCrashesAccessingRenamedDetector.PNG	DB022
17.	Test 2b, page 15	Database Tools for import/export: Scripts/Instructions/Tools to perform the Oracle export and import were not found in the installation media. See RE 6.0 Requirements__RE-Database-Tools.msg for additional prior discussion. See DBScripts.zip – DPImportDatabase and DPExportDatabase subfolder for example of this; it would also need some VDD discussion.	DB027 DB027A
18.	Test Step 12, Page 21	Color DMS: Default should be amber on black, but default is set to a different shade of yellow on black.	SUB7.4.4 SUB7.4.4.1 SUB7.4.4.1.1 SUB7.4.4.1.1.1 SUB7.4.4.1.1.1.2 SUB7.4.4.1.2 SUB7.4.4.1.3
19.	Test Step 12, Page 21	Color DMS: Red on black is listed as non-mutcd, but is specified as regulatory in mutcd. See appendix A in color dms conops.	SUB7.4.4 SUB7.4.4.1 SUB7.4.4.1.1 SUB7.4.4.1.1.1 SUB7.4.4.1.1.1.2 SUB7.4.4.1.2 SUB7.4.4.1.3
20.	Database Upgrade Scripts 6.0.0.3 (revision 2013.05.10)	Exception when upgrading D4 database. See database_upgrade_exception_SGD4_2013.05.15.PNG and database_upgrade_log_SGD4_2013.05.15.txt	
21.	Step 20, Page 22	Color DMS, When a message is posted from a response plan that includes an image, the entry in the graphic library does not show that the image is in use. This allows the user to delete images that are currently displayed on signs. Image reference: image_posted_on_sign.png, image_not_in_use.png	
22.	Test step 9, page 25	SaS failed to enable TVT systemwide. Password in config.xml does not match database user. Will every district have this problem - system users and their passwords should be a part of the reference tables in the model which should be set by the upgrade scripts? See error message: 15-May-13 14:13:14 <pre> SL_ERROR sas SGPROD01 SUNGUIDESVC 210010 sas13 handleXmlResponse Error in authentication response for provider 'tvf', error is : Bad user name or password </pre>	SAS004 SAS004A TMT039 SAS006B SAS009

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Issue List ID#	Reference	Description	Related Requirement IDs
23.	Test step 9, page 25	SaS failed to enable TVT systemwide. permissions not set for SaS subsystem user. System user permissions should be a part of the reference tables in the model and the upgrade scripts should reset the reference tables.	SAS004 SAS004A TMT039 SAS006B SAS009
24.	TvT GUI	Please change the name of the "Enabled?" column to "Enabled by Link." so that users can tell why they would say 'Yes' (enabled) even though they are disabled system-wide.	
25.	Step 15 on page 27	Saving Predefined plan failed first time. Worked on second attempt when the plan was already saved but the items were not. Should be able to save plan with its new items at the same time. See StatusLog_2013.05.15_192.168.8.116_H1600.txt at time 17:21.	SAS005 SAS006 SAS006A SAS006D
26.	Step 2 on page 28, ad hoc	We later retested and found that it did pick up a predefined plan for congestion; it appears that construction events are treated as congestion events in the response plan portion of the business logic. Then we found evidence of this in admin editor - see constuction_is_congestion.png. This should be the root cause of the following two sub-issues: Step 2 on page 28, ad hoc, launching suggested plan for a congestion event - first issue: drop down does not contain our predefined plan TestPlan1 though the event is construction and is on I-10. Step 2 on page 28, ad hoc, launching suggested plan for a congestion event - second issue: Email shows event as Congestion, not construction. Adding schedule - clicking too fast exposes issue of not having unique schedule name.	EM031A
27.	Test Case 9	Why are there 3 places to put contacts? Only one place is needed. We may need to discuss this and include users in the discussion as well.	EM041
28.	DMS Admin Editor	Enhancement Request: When the user attempts to add or modify a DMS with an ip/port conflict, the subsystem should return an error with the message "IP Address and Port of <IP:Port> are already in use by <existing/other sign name>"	
29.	Construction Event	Enhancement Request: Please delete the requirement for having event type of "Construction" we would like to use the existing Road Work - Scheduled and Road Work - Emergency event types. EM040 needs to be updated as well because they should now be "affected area" event types.	
30.	Admin Editor	See Admin_Editor_New_User_Error_From_Same_Workstation.PNG - this is likely a timeout from an older session. It would be nice if Admin Editor could recognize a timeout and not put the error message on the screen; also, for timed out sessions, it would be nice to have an appropriate error message or simply attempt to re-establish the session.	

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Issue List ID#	Reference	Description	Related Requirement IDs
31.	Video on Desktop	When dragging and dropping a desktop camera icon onto an empty Desktop Video Wall, the camera will be added twice in two separate panels. Timestamp is 4:30pm EST. Produced on a system using Oracle database. double_video_source_on_drag_and_drop.png	
32.	Video on Desktop	In the edit tours dialog please add text next to the dwell time that states the minimum value is 3 seconds.	
33.	Video on Desktop	GUI_PARAMS uses strings instead of numeric identifiers in the username column.	
34.	Video on Desktop, Closed Circuit Television (CCTV) and NTCIP Driver	User set camera out of service but GUI status remained in error state. The Status logger shows the driver sending <changeCameraStateResp> however, CCTV subsystem does not seem to receive the message. See SunGuide_Oracle_192.168.8.116_Statuslog at 09:01:05. This was the first thing we did in the morning, and there were other systems also attempting to connect to the camera between yesterday and today; however, we believe that after going through the other systems and turning off the other drivers, that this should have been received and CCTV should have processed the <changeCameraStateResp> message and then operated correctly to later set to active and control the camera. This could be related to issue 37	
35.	Video on Desktop, VOD window	When maximized, fails to enter full screen mode. See Video_On_Desktop_Regression_Failure_To_Enter_Full_Screen_Mode.PNG where the left half of the image is the left monitor with 6.0 showing the title bar and menu, and the right half of the image is the right monitor with 5.1.1 system showing the proper full screen. It was confirmed to do this when moving the 6.0 to the right monitor without the start menu bottom bar.	
36.	Test Case 12, ad hoc test (day after)	Traffic Sensor Subsystem (TSS) Probe Data GUI, Transcore AVI TCP, data remains on GUI (28 MPH) even though no matches for over 16 hours. See config.xml_file_for_192.168.8.18_SQL_6.0_System.xml for configuration parameters and see screenshot at Probe_Link_Details_Dialog_Shows_Data_from_yesterday_with_no_matches_for_16_hours.PNG.	TM005S7

Issue List ID#	Reference	Description	Related Requirement IDs
37.	General System issues	<p>See Operator_Map_logs_into_GUI_Prefs_but_no_other_data_providers.PNG. This was on the 8.18 (SQL Server) system and was corrected by deleting and re-adding the user. This happened again to the 8.116 server. The Operator Map Logs were flushed before this was repeated and are here: OperatorMapLogs_192.168.8.205_client_to_192.168.8.116_Oracle_No_Other_subsystems_are_communicating_with_OperatorMap. A similar issue occurred after I tried to delete and re-add the user on this 8.116 server where everything worked except all users on all workstations were not receiving TVT update messages. See OperatorMapLogs_192.168.8.205_client_to_192.168.8.116_Oracle_TVT_Update_Msgs_not_received_by_Operator_Map.zip. Restarting all subsystems and the operator map resolved this.</p> <p>This could contribute to several other issues.</p>	
38.	DMS Detailed Status Dialog	initial opening of the dialog. When opening this dialog, it opened off the desktop area.	
39.	Message Library Management GUI	Needs Ribbon Buttons as another access point to controls (not just context menu).	
40.	Message Library Management GUI	Needs way to access from the DMS Status list and send message dialog, not just the operator map. This is low priority, and we would also like to know your thoughts on this.	
41.	Message Library Management GUI	Allow the user to right click the white-space below the list and the top level library to get the "Add Library" option.	
42.	Message Library Management GUI (and possibly other)	Hovering over the menu item should make sub-menu's appear - you should not have to click on the parent menu for sub-menus to appear. This is consistent with Microsoft Windows.	
43.	Test Case 14, Page 36	DMS Send Message failed to display all available message libraries. See Send_Message_Dialog_Failed_To_Display_All_Message_Libraries.PNG. This was on the 8.18 (SQL Server) system and was corrected with a restart. This could be related to issue 37 – however, it did show one (more than zero) libraries.	

Issue List ID#	Reference	Description	Related Requirement IDs
44.	VDD and master config.xml and 6.0 config.xml upgrade file.	The master config.xml file and the upgrade 6.0 config.xml file should contain a comment as follows: "Use value <spdUnits>NONE</spdunits> for TVT to not use units" and change the VDD. We will not want to use the "space preserve" attribute as that totally breaks consistency with all other config.xml file usage so far.	
45.	Ad hoc test related to minimum volume threshold	TSS Speed and/or occupancy alarm: Failed to automatically dismiss the alert when link data met the recovery requirements. See Alerts_Failed_To_Recover_and_Disappear.PNG. This was verified to work correctly in 5.1.1.	
46.	Volume Weighted Averaging; Test Case 19 starting page 41; however, this could be considered ad hoc or something observed	Simulated lane data was set to 80 spd/20 occ/10 vol. Average speed for the lane was 70mph and would not adjust upwards to match the simulated data. Volume Weighted Averaging, Smooth data/rolling average for speed is capped at the link speed limit. Additionally, a hard cap of 75mph seems to be hard coded. See volume_weighted_averaging_capped.png. This was not the case in SunGuide software Release 5.1.1.	
47.	Volume Weighted Averaging; Test Case 19 starting page 41	When a zero volume is returned for a lane by the detector, the detector status dialog will display N/A even if a smooth value is available for than lane. See zero_volume_displays_na.png	
48.	Regression, 6.0-SQL Server, Admin Editor, AVL/RR, Availability Status	Received the following error messages when adding the availability status: Failed to save managed vehicle group: Error code: 80032 for ID Admin Object An error occurred while adding availability Status. Error code: 260002 Msg: The driver for this device is not connected. However, it seems to be adding and deleting the object despite the error message. Error for editing the Availability Status: Failed to save managed vehicle group: Error code: 80030 for ID 14 An error occurred while modifying availability Status. Error code: 260045 Msg: The driver for this device is not connected. See status logs for 192.168.8.18 at 14:00 – 14:25. There are no errors in the 5.1.1 for this test and it works	
49.	Regression, 6.0-SQL Server, Admin Editor, Beats	Received the following error messages when adding the Beat: Failed to save beat: Adding the beat Error code: 80032 for ID Admin Object An error occurred while adding beat. Error code: 260003 Msg: The driver for this device is not connected. Deleting the Beat An error occurred while deleting this object. See error log for details. Adding Beat works in 5.1.1 Deleting Beat gives same error in 5.1.1 However, it seems to be adding and deleting the object despite the error message	

Issue List ID#	Reference	Description	Related Requirement IDs
50.	Regression, 6.0-SQL Server, Admin Editor, Radios	Received the following error messages when adding Radios: Adding Radio Failed to save vehicle operator: Error code: 80032 for ID Admin Object An error occurred while adding radio. Error code: 260016 Msg: The driver for this device is not connected. Deleting the Radio produced following error: An error occurred while deleting this object. See error log for details. However, it seems to be adding and deleting the object despite the error message This works in 5.1.1	
51.	Regression, 6.0-SQL Server, Admin Editor, AVL/RR Telephone Numbers	Received the following error messages when adding telephone: Error code: 80032 for ID Admin Object An error occurred while adding telephone Number. Error code: 260019 Msg: The driver for this device is not connected. Deleting the telephone number produced following error: Error code: 80032 for ID Admin Object An error occurred while adding telephone Number. Error code: 260019 Msg: The driver for this device is not connected. This works in 5.1.1	
52.	Regression, 6.0-SQL Server, Admin Editor, DMS Approved Words	Received the following error messages when adding Approved Word: An error occurred while adding approved word to database. See error log for details 15:00-15:10. However, it seems to be adding the object despite the error message This works in 5.1.1	
53.	Regression, 6.0-SQL Server, Admin Editor, RMS Fuzzy Lanes	Received the following error messages when editing Fuzzy Lanes: Associate Fuzzy Lanes Request failed! An error occurred while editing this ramp meter. See error log for details. 16:10-16:15	
54.	Regression, 6.0-SQL Server, Admin Editor, RMS RMC Controllers	Received the following error messages when adding Ramp Meter Controller: An error occurred while adding this ramp meter. See error log for details.	
55.	Regression, 6.0-SQL Server, Admin Editor, RMS Special Events	Received the following error messages when creating special event: Add TOD Special Event Request failed! An error occurred while editing this ramp meter. See error log for details	
56.	Regression, 6.0 SQL Server, Operator Map, HAR Beacons	Received the following error messages when changing Beacons: Failed to set beacon state of HAR HAR_03: Driver reported an error adding this HAR on startup: 37:har:har: District 9 This works in 5.1.1	

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Issue List ID#	Reference	Description	Related Requirement IDs
57.	Regression, 6.0-SQL Server, Operator Map, RMS Set Range/Rate	Unable to set range and rate for the Ramp, no errors Doesn't work in 5.1.1	
58.	Regression, 6.0-SQL Server, Operator Map, Event Management , set event responder	Received the following error messages when adding a responder to the event: Failed to set event responder list: Could not set responder list in database This works in 5.1.1	
59.	Regression, 6.0-SQL Server, Operator Map, Event Management , add event contact	Received the following error messages when adding a contact to the event: Failed to add event contact: Event contact was not added to the database This works in 5.1.1	

Issue List ID#	Reference	Description	Related Requirement IDs
60.	Regression, 6.0-SQL Server, Operator Map, reports generation in SQL Server	<p>Received the following error messages when trying to generate the report: Failed to generate report: System.Runtime.InteropServices.COM Exception (0x800002F4): Failed to open the connection. Details: [Database Vendor Code: 12154] Failed to open the connection. Details: [Database Vendor Code: 12154] Failed to open the connection. Event_Chronology {99AC6B96-D5B8-4965-9DF1-F0B25F721BF6}.rpt Details: [Database Vendor Code: 12154] at CrystalDecisions.ReportAppServer.Controllers.DatabaseControllerClass.SetTableLocation(ISCRTable CurTable, ISCRTable NewTable) at CrystalDecisions.CrystalReports.Engine.Table.set_Location (String value) at gov.its.rs.xml.RsGenerateHandler.b__5(Tables tables, ConnectionInfo connInfo) in d:\AccuRevProjects\FDOT\SG-6.0-Dev\SourceCode\Rs\RsLib\Handlers\RsGenerateHandler.cs:line 641 at gov.its.rs.xml.RsGenerateHandler.GenerateReport(String report Name, String report Type, Dictionary`2 report Filter List) in d:\AccuRevProjects\FDOT\SG-6.0-Dev\SourceCode\Rs\RsLib\Handlers\RsGenerateHandler.cs:line 650 at gov.its.rs.xml.RsGenerateHandler.generateChronologyReport(XmlRequestPackage request Package, Xml Element root) in d:\AccuRevProjects\FDOT\SG-6.0-Dev\SourceCode\Rs\RsLib\Handlers\RsGenerateHandler.cs:line 511 at gov.its.rs.xml.RsGenerateHandler.handleGenerateChronologyReportRequest(XmlRequestPackage request Package, Xml Element root) in d:\AccuRevProjects\FDOT\SG-6.0-Dev\SourceCode\Rs\RsLib\Handlers\RsGenerateHandler.cs:line 381 at gov.its.rs.xml.RsGenerateHandler.handleXmlRequestCallback(Object state) in d:\AccuRevProjects\FDOT\SG-6.0-Dev\SourceCode\Rs\RsLib\Handlers\RsGenerateHandler.cs:line 179</p> <p>This works in 5.1.1</p>	
61.	Regression, 6.0-SQL Server, Operator Map, Event Management , auditing, location and congestion	<p>Received the following error messages when auditing location and congestion in audit window: An error was detected in dialog Event Audit. Full details of the error are being sent to the status logger.</p> <p>This works in 5.1.1</p>	

Issue List ID#	Reference	Description	Related Requirement IDs
62.	Regression, 6.0-SQL Server, Operator Map, Event Management, auditing, vehicle dispatch	Received the following error messages when auditing Vehicle Dispatch: There are no Vehicle Dispatch records to audit for this Event. Please choose another Event Number The event did have the vehicle in the record This works in 5.1.1 13:30-13:40	
63.	Regression, 6.0-Oracle, Admin Editor, AVL/RR, Availability Status	Received the following error messages when adding the availability status: Failed to save managed vehicle group: Error code: 80032 for ID Admin Object An error occurred while adding availability Status. Error code: 260002 Msg: The driver for this device is not connected. However, it seems to be adding and deleting the object despite the error message. Error for editing the Availability Status: Failed to save managed vehicle group: Error code: 80030 for ID 14 An error occurred while modifying availability Status. Error code: 260045 Msg: The driver for this device is not connected. See status logs for 192.168.8.18 at 14:20 – 14:30. This works in the 5.1.1	
64.	Regression, 6.0-Oracle, Admin Editor, AVL/RR, Beats	Received the following error messages when adding the Beat: Failed to save beat: Adding the beat Error code: 80032 for ID Admin Object An error occurred while adding beat. Error code: 260003 Msg: The driver for this device is not connected. Deleting the Beat An error occurred while deleting this object. See error log for details. Deleting Beat gives same error in 5.1.1 However, it seems to be adding and deleting the object despite the error message 14:25-14:35 Works in 5.1.1	
65.	Regression, 6.0-Oracle, Admin Editor, AVL/RR Radios	Received the following error messages when adding Radios: Adding Radio Failed to save vehicle operator: Error code: 80032 for ID AdminObject An error occurred while adding radio. Error code: 260016 Msg: The driver for this device is not connected. Deleting the Radio produced following error: An error occurred while deleting this object. See error log for details. However, it seems to be adding and deleting the object despite the error message 14:30-14:35	

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Issue List ID#	Reference	Description	Related Requirement IDs
66.	Regression, 6.0-Oracle, Admin Editor, AVL/RR Telephone Numbers	Received the following error messages when adding telephone: Error code: 80032 for ID Admin Object An error occurred while adding telephone Number. Error code: 260019 Msg: The driver for this device is not connected. However the phone number goes in the database. Deleting the telephone number produced following error: Error code: 80032 for ID AdminObject An error occurred while adding telephone Number. Error code: 260019 Msg: The driver for this device is not connected. The number was not deleted in the database once removed from the editor This works in 5.1.1	
67.	Regression, 6.0-Oracle, Admin Editor, Event Management Vehicle Tracking Colors	Received the following error messages when deleting vehicle color: An error occurred while deleting this object. See error log for details. Error code: 80031 for ID 237 An error occurred while deleting color. Error code: 0 Msg: Could not remove color and/or add to database 15:55-16:00 Works in 5.1.1	
68.	Regression, 6.0-Oracle, Admin Editor, Express Lane System Configuration	Received the following error messages when opening System Configuration: Unable to retrieve system configuration. See Status Log for details. Save button is disabled (grayed out) 16:00-16:05	
69.	Regression, 6.0-Oracle, Admin Editor, RMS RMC Controllers	Received the following error messages when adding controller: An error occurred while adding this ramp meter. See error log for details. 16:15-16:20	
70.	Regression, 6.0-Oracle, Admin Editor, TSS Driver Configuration	Received the following error messages when adding Driver Configuration: Error adding the TSS driver configuration information. See error log for details 16:30-16:35	
71.	Regression, 6.0-Oracle, Operator Map, CCTV System wide Detection	Unable to disable/enable System wide detection This works in 5.1.1	
72.	Regression, 6.0-Oracle, Operator Map, HAR Beacons	Received the following error messages when changing Beacons: Failed to set beacon state of HAR HAR_03: Driver reported an error adding this HAR on startup : 37:har:har: District 9 08:30-08:35 This works in 5.1.1	

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Issue List ID#	Reference	Description	Related Requirement IDs
73.	Regression, 6.0-Oracle, Operator Map, Event Management	Received the following error messages when auditing Vehicle Dispatch: There are no Vehicle Dispatch records to audit for this Event. Please choose another Event Number. The event did have the vehicle in the record Works in 5.1.1 10:25-10:30	
74.	Regression, 6.0-Oracle, Operator Map, Event management Colors	Received the following error messages when deleting color: An error occurred while deleting this object. See error log for details. Error code: 80031 for ID 237 An error occurred while deleting color. Error code: 0 Msg: Could not remove color and/or add to database 13:55-14:00	
75.	SQL Server, New Requirements, Test Case 6, Step 2	Unable to generate geofence alert while using the sparr application. Log message "vehicleupdatemessage" stated that there was a geofence alert, but the operator map, responders dialogue, and the database did not show a geofence alert. An alert was generated earlier in the day on this system, but during this test case the system did not produce the alert.	AV014C
76.	Test Case 36, Footprint 2195 – EM/RPG	An error was detected in dialog DMS sequence editor. Full details of the error are being sent to the status logger.	
77.	Test Case 33	While testing the AVL/RR truck indicator, we were unable to connect to the SPARR driver from a SPARR app. The status logger repeated the following 2 errors over and over again – every 4 seconds. Issue not resolved by restarting SPARR driver and AVL/RR. <ul style="list-style-type: none"> • 23-May-13 09:43:04 SL_DEBUG SPARRDriver SG-SVR-04 SUNGUIDESVC 5010 SparrWebService GetAllVehicles Unable to create string. Parameter list does not match Method Info. • 23-May-13 09:43:04 SL_DETAIL SPARRDriver SG-SVR-04 SUNGUIDESVC 5010 SparrWebService GetAllVehicles GetAllVehicles returned <sparrAvlrrVehicles><sparrAvlrrVehicle><sparrId>RRMA:avlrr:vehicle:District 9</sparrId><clientId>c910a.... (much more XML data continuing...)	

Issue List ID#	Reference	Description	Related Requirement IDs
78.	Test Case 37, FP 2225, page 55	<p>Could not test actual footprint because of regression failure: response plans fail to pick up DMS signs with the following errors messages. We had a full lane blockage event with signs upstream that work in 5.1.1 (same location, full blockage), they were active, and were not picked up in 6.0 SQL Server (8.18), also DMS signs were not picked up on 6.0 Oracle (8.221):</p> <ul style="list-style-type: none"> • 23-May-13 11:03:28 SL_DEBUG em SUNGUIDE02 SUNGUIDESVC 0 DeviceLinkingInfo getParentsWithRdwyAndDir Unable to locate DMS with Id (TERL-DMS-Dak 12":dms:dms:District 1) in cache. This DMS could have been removed from the system or EM is not authenticated and receiving data from DMS. • 23-May-13 11:03:28 SL_DEBUG em SUNGUIDE02 SUNGUIDESVC 0 ClosestPointLocator getClosestNodeInList gov.its.em.DeviceLinkingInfo: A closest node could not be determined without associated parent nodes. • 23-May-13 11:03:28 SL_DEBUG em SUNGUIDE02 SUNGUIDESVC 0 LinkMapAlgorithmManager getStartingNode Starting node is null. • 23-May-13 11:03:28 SL_DEBUG em SUNGUIDE02 SUNGUIDESVC 0 SuggestionMgr OutputDeviceListing Device Listing List: [] 	
79.	Test Case 40, FP 2254, Page 57	Cannot store floodgates. Folders can be created in the floodgate storage hierarchy, but no floodgates appear there or can be stored.	
80.	Test Case 55, FP 2366, Page 68	Cannot edit Wavetronix HD detector. Admin editor states that "An error occurred while editing this detector. See error log for details." However no corresponding error message could be found in the status logger from the admin user.	
81.	Center-to-center (C2C) Installer	C2C Installer does not contain updated data elements in the wizards to pick the elements for the configuration. Should contain all elements possible and should match the list in the VDD.	
82.	C2C Test Suite	C2C Test Client does not contain some of the possible data elements. Should match the VDD	

Issue List ID#	Reference	Description	Related Requirement IDs
83.	Ad hoc: turned on C2C Publisher configured to a Provider, and requested all/all as well as networkData/all as parameters for requestNets test page function	Provider failed to provide networkData for some subsystems. It worked after turning everything off and turning on only databus, TSS, and Publisher. Adding TVT also added more networkData as expected. This was retested on 8.212 at 4PM. The first time with many subsystems running, the issue was reproduced. Half of the subsystems were turned off and the networkData was present, more subsystems were turned on except EM and DMS and the data was there. Then all of the subsystems in the original test were on and the issue did not reproduce the first time, but then reproduced the second time - which is the last time publisher was restarted in the 4pm log file: FridayH16_192.168.8.212_Publisher_restarts_Not_producing_networkData_consistently.log. However, there does exist status data when the issue is present and networkData is not produced.	
84.	Ad hoc: turned on C2C Publisher configured to a Provider, and requested all/all as well as networkData/all as parameters for requestNets test page function	Publisher keeps publishing networkData after subsystem/provider has been shutoff. This was not repeated in the 4pm log, but then the statusData remained after shutting off subsystems during this retest. See FridayH16_192.168.8.212_FLATIS_testing.zip	
85.	Ad hoc: tested ability to present and remove data elements when various subsystems were turned on and off for each data type	TSS failed to put detectors into failed state after <commTolerance> TIMES <poll cycle> was exceeded with no driver running. Just minor compared to other issues.	
86.	Ad hoc: tested ability to publish event status in C2C	EM failed to add an event. It appeared at 11:02 that the <addEventResp> was generated by EM and received by the OperatorMap, but the AddNewEvent dialog never disappeared and an event details dialog never appeared, nor did any event show up in the eventList.	

3.4 Not Tested Procedures

Table 3.3 shows the test steps that were not tested, but within the original scope of the testing.

Table 3.3 – Untested Test Steps

Test Case - Step	Description
2C – 2	Source code inspection deferred to source code delivery
2D – 5	Stress test deferred to migrated district database delivery
2D – 9	Stress test deferred to migrated district database delivery
17 – 2/3	Not tested due to a damaged EIS G4 detector.
21 – 2	BlueTOAD enhancement not included with IVV Installer
24 – 1	Defer to District 6
31 – 1	Defer to District
36 – 1	DMS Sequences is no longer a part of SunGuide. It was replaced by scheduled actions.
46 – 1	Defer to District 2 for testing.
51 – 1	Defer to District 6.
58 – 1	No Canoga devices at TERL for testing.
59 – 1	DMS Sequencing is no longer in SunGuide.

Appendix A: Scanned Executed Test Procedures