SunGuide®:

Release 7.0.0 Installation Notes

SunGuide-IN-7.0.0

Prepared for:

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March 8, 2016

<table>
<tr><td colspan="4" align="center">Document Control Panel</td></tr>
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	Name	Initial	Date
File Name:	SunGuide-IN-7.0.docx		
File Location:	SunGuide CM Repository		
CDRL:	n/a		
Created By:	Adam Clauss, SwRI	ASC	09/04/08
Reviewed By:	Steve Dellenback, SwRI	SWD	10/24/08
	Steve Dellenback, SwRI	SWD	01/08/09
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Table of Contents

List of Figures

List of Acronyms

CCTV ....Closed Circuit Television
COTS ....Commercial-Off-The-Shelf
DLL............................Dynamics Link Library
DMS...........................Dynamic Message Sign
DOT ....Department of Transportation
FDOT ....Florida Department of Transportation
GUI ....Graphical User Interface
IN ....Installation Notes
ITN.............................Invitation to Negotiate
ITS..............................Intelligent Transportation Systems
SPARR.......................Smart Phone Application for Road Rangers
SSL.............................Secure Sockets Layer
SwRI ....Southwest Research Institute®
TSS.............................Transportation Sensor Subsystem
VDD...........................Version Description Document
XML...........................Extensible Markup Language

Revision History

Revision	Date	Changes
4.0.0	September 10, 2008	Initial release
4.0.1	September 29, 2008	Updated based on IV&V results as well as new instructions for updating the event type table
4.0.2	October 3, 2008	Udpated with CMB revised Event Lists, SAE codes and change of "Accident to Crash" terminology
4.1.0	October 24, 2008	Updated for release 4.1.0.
4.1.1	November 17, 2008	Updated for release 4.1.1.
4.1.2	January 8, 2009	Updated for release 4.1.2.
4.1.3	March 6, 2009	Updated for release 4.1.3.
4.2.0	May 15, 2009	Updated for release 4.2.0.
4.2.2	June 25, 2009	Updated for release 4.2.2.
4.3.0	February 11, 2010	Updated for release 4.3.0.
4.3.2	March 25, 2010	Updated for release 4.3.2.
4.3.3	May 7, 2010	Updated for release 4.3.3.
5.0.0	May 10, 2010	Updated for release 5.0.0.
5.0.1	May 25, 2010	Updated for release 5.0.1.
5.0.2	June 15, 2010	Updated for release 5.0.2.
5.0.3	June 21, 2010	Updated for release 5.0.3
5.0.4	November 4, 2010	Updated for release 5.0.4
5.0.5	February 11, 2010	Updated for SPARR enhancement (release 5.0.5).
5.1.0	August 9, 2011	Updated for release 5.1.0
5.1.1	June 22, 2012	Updated for release 5.1.1
6.0.0	April 11, 2013	Updated for release 6.0.0
6.0.0p1	September 13, 2013	Updated for release 6.0.0p1
6.0.0p2	October 11, 2013	Updated for release 6.0.0p2
6.1.0	July 11, 2014	Updated for release 6.1.0
6.1.0p1	July 30, 2015	Updated for release 6.1.0p1
6.2.0	January 5, 2016	Updated for release 6.2.0
7.0.0	March 8, 2017	Updated for release 7.0.0

1. Scope

1.1 Document Identification

This document serves as the Installation Notes (IN) for the SunGuide® Release 7.0.0 software.

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 efforts to the SunGuide software. The SunGuide software is a set of Intelligent Transportation System (ITS) software that allows the control of roadway devices as well as information exchange across a variety of transportation agencies and 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 the needs of the FDOT. The following figure provides a graphical view of the software to be developed:
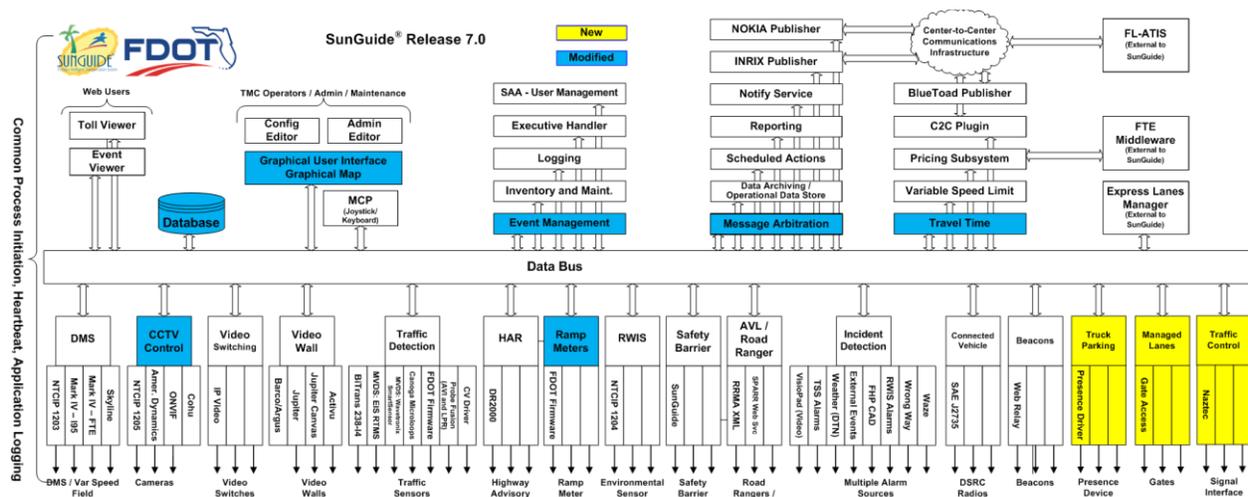

Figure 1 - High-Level Architectural Concept

The SunGuide development effort began in October 2003 and seven major releases have been developed. After the development, the software will be deployed to a number of Districts and Expressway Authorities throughout Florida and support activities will be performed.

1.3 Related Documents

The following documents were used to develop this document:
- FDOT Scope of Services: *BDQ69, Standard Written Agreement for SunGuide Software Support, Maintenance, and Development, Exhibit A: Scope of Services.* July 1, 2010.
- Notice to Proceed: Letter to SwRI for BDQ69, July 1, 2010
- Letter of Authorization 015: Letter to SwRI for BDQ69, June 18, 2015.
- Letter of Authorization 015: Supplement #1: Letter to SwRI for BDQ69, June 7, 2016.
- Letter of Authorization 015: Supplement #2: Letter to SwRI for BDQ69, Dec 23, 2016.
- SunGuide Project website: http://sunguide.datasys.swri.edu.

1.4 **Contacts**

The following are contact persons for the SunGuide software project:

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- Tucker Brown, SwRI Project Manager, tbrown@swri.com, 210-522-3035
- Roger Strain, SwRI Software Project Manager, rstrain@swri.com, 210-522-6295

2. Installation Notes

This document is intended to be a "companion" document to the SunGuide Version Descripion Document (VDD). This document will provide detailed notes and tips on how to upgrade the SunGuide software to version 7.0 from version 6.2.

Prior to upgrading the database to version 7.0 please read all instructions and ensure that your system is up to date with v6.2. The 7.0 upgrade scripts will re-run any necessary 6.2 Hotfix scripts prior to running the 7.0 scripts.

NOTE: It is highly recommended that you test the database upgrade procedure before applying it to any Production database. If any errors are encountered, the database must be reimported and the script attempted again after the failure is resolved. If you would like SwRI to perform a test, please make arrangements with SwRI and Central Office.

2.1 Upgrade Procedure

Please follow the steps below to complete the SunGuide installation.

1. Please close all active events prior to the upgrade.
2. Shut down all SunGuide process including Status Logger and Executive Handler.
3. SunGuide Database
    a. Backup the existing SunGuide database using one of Oracle's export utilities or by using the SQL Server Import and Export Wizard.
        i. Oracle
            a. It is recommended that the script be run from the SunGuide database server but if not, please ensure you are able to access "sqlplus" from the command line.
            b. From the installation media, run the "runMe.bat" file from the "DatabaseScripts/7.0 Release/Oracle" folder as an Administrator
            c. Enter the correct database information
            d. Review the log file for errors.
        ii. SQL Server
            a. It is recommended that the script be run from the SunGuide database server but if not, please ensure you are able to access "sqlcmd" from the command line.
            b. From the installation media, run the "runMe.bat" file from the "DatabaseScripts/7.0 Release/SqlServer" folder as an Administrator
            c. Enter the correct database information
            d. Review the log file for errors.
4. SunGuide Application Servers
    a. If using Windows Server 2008 or higher, ensure the following:
        i. Install IIS and IIS 6 Management Compatibility role and all Sub-Roles. Note that Windows Server 2008 and 2012 use a new version of IIS (7.0 and 7.5) which are not compatible with IIS 6 Applications. When installing IIS, install everything except "Server Side Includes" under the "Application Development" section.

    b. Ensure both versions of .NET, 2.0 and 4.0 are installed on all application servers. A maximum of .NET 4.6 may be installed.
        i. Once installed the .NET 4.0 components must be registered within IIS.
            a. For x86, use the following command "c:\windows\Microsoft.Net\Framework\v4.0.30319>aspnet_regiis –i"
            b. For x64, use the following command, "c:\windows\Microsoft.Net\Framework64\v4.0.30319>aspnet_regiis –i"
    c. Backup the various configuration files (plural) according to the list in the Backup List section below.
    d. Uninstall SunGuide via the Control Panel -> Add/Remove Programs on all Application Servers. Reboot if prompted.
    e. Ensure that the following folders were deleted on each SunGuide Application Server:
        i. C:\inetpub\wwwroot\OperatorMap (this path may be located on a shared location if running in a clustered environment)
        ii. C:\inetpub\wwwroot\SunGuideAdmin (this path may be located on a shared location if running in a clustered environment)
        iii. C:\Program Files\Florida Department of Transportation
    f. Upgrade config.xml file using the Configuration File Editor and the SunGuide Release 7.0 configuration schema.
    g. Install SunGuide via the installer on all application servers. Reboot if asked.
    h. **Restore configuration. Please read through the entire step before continuing.**
        i. Restore the various configuration files according to the Backup List section below.
        ii. If restoring the backed up copy of your "OMInterface.dll.config.xml" verify the following entries to the file.

            <add key="deploymentName" value="**<NAME>**"
            <add key="deploymentPath" value="http://**<MAPHOST>**/OperatorMap/OperatorMap.application" />

            <NAME> in the first entry should be the unique deployment identifier for your installation, such as your center ID or location (e.g. 'District 9' or 'Broward County'). If installing multiple SunGuide deployments in the same center, each "deploymentName" will have to be unique in order to run each installation's Operator Map from a terminal.

            In the second entry, **<MAPHOST>** should be the network host name or IP address where the map can be reached. By default, the **<MAPHOST>** value in the URL is the hostname of the server the installer was run from. The URL may need to updated for a clustered environment to include the clustered host name.

            If you modify either of these two new values, you *must* sign the map

again by running the sign.exe executable application in the Operator Map directory.

iii. The map tiles location in the "OMInterface.dll.config.xml" file must match the actual location of the map tile files. The default location is a folder named "Tiles" under the "OperatorMap" folder. To change the default location, edit the "value" attribute associated with the "key" attribute named "tilesets". The "value" attribute must contain pairs of strings that define the label of the tile set and the file system path of the tileset. The file path can be relative to the "OperatorMap" folder or it can be an absolute path. Note that neither the label nor the file path may contain any whitespace characters

5. SunGuide share data
   a. Report files:
      i. Verify the locations and user permissions of the report templates and exported reports folder as specified in the <RS> section of the config file.
      ii. Copy the newly installed reports to the configured location on the share (see <RS> section in config file). By default these files are installed to C:\Report Templates.
      iii. If SunGuide is configured to run on an SQL Server database, use the SQL Server reports instead of the default Oracle reports. On the installation media, these are located in the ReportTemplates\SQL Server Delivered folder. SwRI support staff will directly coordinate with the district system administrators to provide the updated reports that will be specific to the database from which they will extract data.
   b. Give NETWORK_SERVICE full access to the OperatorMap folder; use the Advanced Tab in the file security dialog to apply to all subfiles and subfolders.
6. IIS Configuration performed on each server hosting the web apps / S: drive:
   a. If using Windows Server 2008 or 2012, do the following:
      i. Change the "Default Web Site" to an Application Pool with "Classic .NET AppPool" or an Application Pool set to Classic
      ii. Change the Application Pool for SunGuideAdmin to "Classic .NET AppPool" or an Application Pool set to Classic
      iii. Double click on "Authentication" located in the IIS section of "Default Web Site", select ASP .NET Impersonation and click "Enable" on the right hand side
      iv. Double click on "Directory Browsing" located in the IIS section of "Default Web Site" and click "Enable" on the right hand side (if disabled)
      v. Navigate to "Request Filtering" located in the IIS section of "Default Web Site", once there highlight ".config", right click and remove it from list
      vi. Turn off Windows Firewall using the Domain, Private and Public tab
   b. MOVE the GROUP containing the network name used to access the operator map if in clustered configuration via cluster administrator to the appropriate server.
   c. VERIFY the correct version, ASP.NET 4.0, is set for SunGuide admin.
   d. VERIFY the Event Viewer, Toll Viewer, etc. come up; else, reconfigure in IIS appropriately.
      i. Check the ASP.NET version of IIS (should be 4.0),

      ii.   Database location in the TollViewerSvc's web.config file

     iii.   Default documents in the Event Viewer website properties,

     iv.   Host string in the web site listener that allows the Event Viewer website to listen on port 80 for that string while all other strings are accepted by the default website.

      v.   The default.htm file in the root should contain correct links to point to the Event Viewer and TollViewer if necessary.

     vi.   Repeat this IIS C.onfiguration step if in a cluster environment for all servers that will be hosting the web applications.

7. Full System Test: Test the system in its entirety to verify that everything is functioning properly in order to identify and resolve any configuration/deployment issues.

2.2 Configuration Files Backup List

If the installation to be performed is on servers currently configured to execute SunGuide, the following files should be backed up prior to installation so that they can be reused once the new installation is performed.

- config.xml – primary configuration file that contains the settings for all of the SunGuide subsystems and drivers

- FL-ATIS_FloodGate_Data.xml – contains the floodgate message "slot" configuration data used by the Floodgate GUI

- IpVideoDevices.xml – provides model specific settings for video devices

- SnapshotDevices.xml – defines video capture devices and corresponding IP video decoder devices

- OMInterface.dll.config.xml – Operator Map client configuration settings

- ProcessList.xml – Executive Handler Server's list of installed services
  Note: This is only necessary if the system is not operating in a clustered environment. The Installer will auto-generate a ProcessList.xml for all installed SunGuide application processes.

- Web.config – If uninstalling and re-installing any C2C web services, each web service contains a web.config file for C2C configuration.

2.3 Post Installation Step

- Ensure 4.h.ii of the Upgrade Procedure was performed!

2.4 Operator Map Troubleshooting

- From each workstation that plans to run Operator Map, please verify the following setting in Internet Explorer. Under Tools > Internet Options > Browsing History > Settings the "Check for newer versions of stored pages" should be set to "Every time I visit a webpage"
- Try uninstalling Operator Map from the list of Add or Remove Programs in the Control Panel and then reinstall from the web site.

2.5 Release Notes

- When first viewing or editing message templates in Travel Times or EM Response Plans, selecting a row may cause the row to appear dirty immediately. This is due to a slight reformatting the MULTI editor applies to the templates, which may adjust some of the default tags without user action. This will not change the actual content, layout, or behavior of the message, and can be safely saved. Once saved with this adjustment, the behavior will not reoccur for that message.