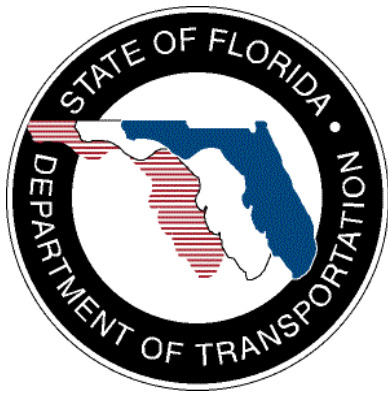


SunGuide®:

Software Requirements Specification

SunGuide-SRS-6.0



Prepared for:

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Appendix A: FEAT Requirements

Appendix B: SUB Requirements

List of Acronyms

ATMS	Advanced Traffic Management System
AVL	Automatic Vehicle Location
C2C	Center-to-Center
CCTV	Closed Circuit Television
CVS	Connected Vehicle Subsystem
DA	Data Archiving
DD	Data Distribution
DFS	Data Fusion System
DMS	Dynamic Message Sign
DOT	Department of Transportation
EG	Evacuation Guidance
EH	Executive Handler
EM	Event Management
EM/PM	Event Management / Performance Measures
EV	Event Viewer
FDOT	Florida Department of Transportation
FEAT	Feature Requirement
HAR	Highway Advisory Radio
IDS	Incident Detection System
IM	Incident Management
IMS	Inventory Maintenance System
ITS	Intelligent Transportation Systems
ITN	Invitation to Negotiate
MAS	Message Arbitration System
ODS	Operational Data Store
PS	Pricing System
RMF	Ramp Metering Firmware
RMS	Ramp Metering System
RPG	Response Plan Generator
RR	Road Ranger
RS	Reporting System
RWIS	Road Weather Information System
SB	Safety Barrier
SPARR	Smart Phone Application for Road Rangers
SRS	Software Requirements Specification
SUB	Subsystem Requirement

SwRISouthwest Research Institute
TMC.....Traffic Management Center
TSS.....Transportation Sensor System
TVToll Viewer
TVT.....Travel Times
VSL.....Variable Speed Limit
XML.....Extensible Markup Language

REVISION HISTORY

Revision	Date	Changes
1.0.0-Draft	December 22, 2003	Initial Release
1.0.1-Draft	January 27, 2004	Updated based on SRR input and discussion with ITS Central Office
1.0.2	April 2, 2004	Incorporated FDOT comments.
2.0.0-Draft	August 27, 2004	Added requirements for systems in release 2 (EG, HAR, WS, C2C and RMS)
2.0.0	May 4, 2005	Finalized with FDOT comments, new enhancements (from ECO 1.1)
2.0.1	August 11, 2005	Finalized with ECO 1 changes
2.1.0	April 12, 2006	Updated with Release 2.1 requirements
2.2.0	November 17, 2006	Updated with Release 2.2 requirements
2.2.1	November 27, 2006	Updated architecture based on naming nomenclature changes in the EM PM design and implementation
2.2.2	December 4, 2006	Added Ramp Metering firmware and CCTV Scheduler requirements
3.0.0-Draft	April 25, 2007	Added Release 3.0 requirements
3.0.0	May 29, 2007	Requirements updated based on SWAM #11. Added software release versioning information and requirements traceability.
4.0.0-Draft	December 16, 2007	Added Release 3.1 and 4.0 requirements.
4.0.0	February 22, 2008	Updated Release 3.1 and 4.0 requirements based on SWAM #15.
4.3	January 25, 2010	Updated Release 4.2 and 4.3 requirements based on SWAM#20, SWAM#21, SWAM#22 and referenced white papers
5.0	March 5, 2010	Added Release 5.0 requirements
5.1	February 16, 2012	Added Release 5.0.4, 5.0.5, and 5.1 requirements
6.0	February 15, 2013	Added Release 6.0 requirements

1. Scope

1.1 Document Identification

The Software Requirements Specification (SRS) details the requirements for the Statewide Transportation Management Center Software Library System. The requirements are separated into two types; features (FEAT) that were specified in the Invitation to Negotiate (ITN) and new subsystem (SUB) requirements determined during system design.

The requirements for the system are maintained in a database using Rational RequisitePro. This document serves as a starting point for the requirements and discusses how to access, view, and maintain the requirements database. This document is not intended to be a user manual for RequisitePro. For information on using RequisitePro, refer to the hard copy documentation accompanying the product, the RequisitePro online help, or the Rational web site at <http://www.rational.com>.

1.2 System Overview

The Florida Department of Transportation (FDOT) is conducting a program that is developing 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. The goal of the SunGuide software is to have a common software base that can be deployed throughout the state of Florida. The SunGuide software development effort is based on ITS software available from the state of Texas; significant customization of the software is being performed as well as the development of new software modules. The following figure provides a graphical view of the software to be developed:

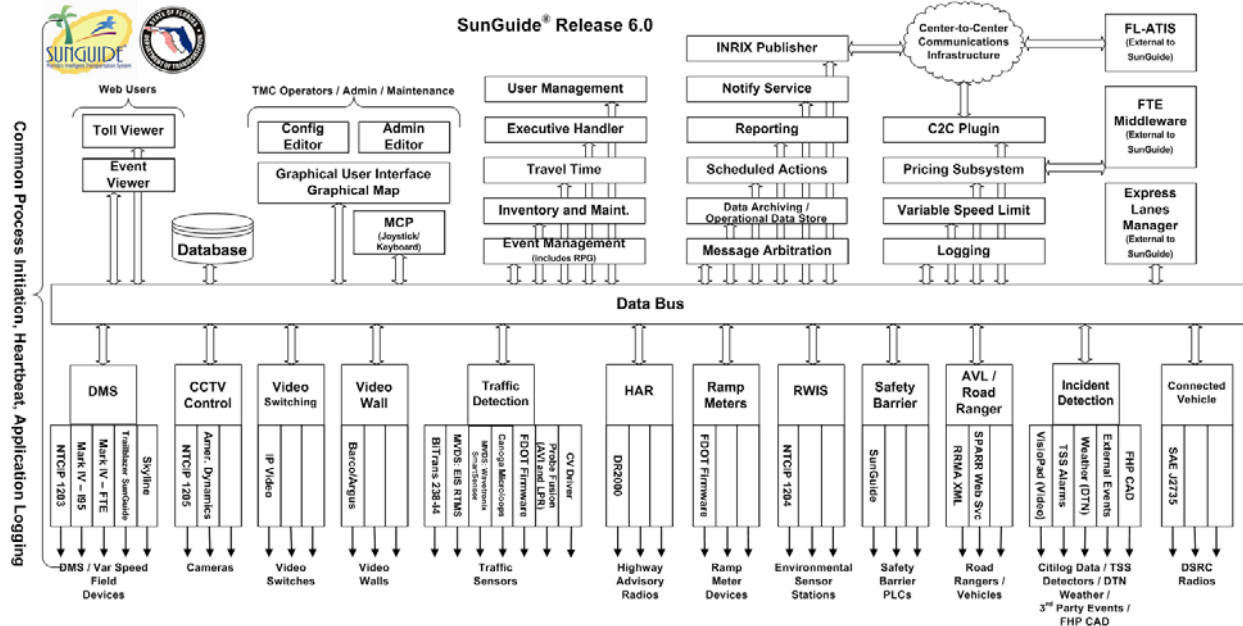


Figure 1-1 - High-Level Architectural Concept

1.3 Related Documents

The following documents were used to develop this document:

- SwRI Qualification Response: *Response to the Invitation to Negotiate (ITN): Statewide Transportation Management Center Software Library System, Negotiation Number: ITN-DOT-02/03-9025-RR*, SwRI Proposal No. 10-35924, dated: November 18, 2002.
- SwRI Technical Proposal: *Technical Proposal for Invitation to Negotiate (ITN): Statewide Transportation Management Center Software Library System, Negotiation Number: ITN-DOT-02/03-9025-RR*, SwRI Proposal No. 10-35924, dated: January 31, 2003.
- SwRI Cost Proposal: *Cost Proposal for Invitation to Negotiate (ITN): Statewide Transportation Management Center Software Library System, Negotiation Number: ITN-DOT-02/03-9025-RR*, SwRI Proposal No. 10-35924, dated: January 31, 2003.
- SwRI BAFO letter: *Southwest Research Institute[®] Proposal No. 10-35924, “Invitation to Negotiate (ITN): Statewide Transportation Management Center Software Library System”, Reference: Negotiation Number: ITN-DOT-02/03-9025-RR*, dated: May 5, 2003.
- FDOT procurement document: *Invitation To Negotiate (ITN), Negotiation Number: ITN-DOT-02/03-9025-RR, Statewide Transportation Management Center Software Library System*, dated: October 21, 2002.
- FDOT Scope of Services: *Statewide Transportation Management Center Software Library System: Scope of Services*, September 22, 2003.
- FDOT Requirements Document: *Statewide Transportation Management Center Software Library System: Requirements Specification*, June 3, 2003.
- Southwest Research Institute, *TMC Software Study*, November 15, 2001.
- Southwest Research Institute, *Introduction to an Operational Concept For the Florida Statewide Library*, FDOT – OCD – 1.0, March 31, 2002.
- *Standard Written Agreement Modification #21 for SunGuide[®] Software Release 4.3*, September 30, 2009
- *SunGuide V4.3 Software Requirements for Express Lanes Operations Version 3.13*, December 17, 2009.
- *Floodgate Multi-Set Interface Design Proposal*, November 30, 2009
- *Floodgate Pre-Recorded Messages*, June 23, 2009
- *Standard Written Agreement Modification #22 for SunGuide[®] Software Release 4.3,5.0* February 11, 2010
- *Standard Written Agreement Modification #23 for SunGuide[®] Software Release 5.0*, May 7, 2010
- *Standard Written Agreement Modification #24 for SunGuide[®] Software Release 5.0*, June 20, 2010
- World Wide Web Consortium (W3) website: <http://www.w3.org>.
- SunGuide Project website: <http://sunguide.datasys.swri.edu>.

- 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 Southwest Research Institute[®] (SwRI[®]) for BDQ69, July 1, 2010
- Letter of Authorization 003: Letter to SwRI for BDQ69, August 19, 2010.
- Letter of Authorization 004: Letter to SwRI for BDQ69, October 20, 2010.
- Letter of Authorization 005: Letter to SwRI for BDQ69, November 9, 2010.
- Letter of Authorization 007: Letter to SwRI for BDQ69, December 22, 2011.

1.4 Contacts

The following are contact persons for the SunGuide software project:

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Appendix A:
FEAT REQUIREMENTS

Appendix B:
SUB REQUIREMENTS