

Project TTC Toronto

Passenger Information System

Software Requirements Traceability Matrix (SRTM)

CDRL:	Spec Refs:	
Q310E / (None)	TS S24.11.1	
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Revision History

Revision	Date	Reason	Prepared By
00	2010-06-22	First issue	Tilo Fuchs
01	2010-07-09	Bombardier review comments (Document Inspection Checklist, dated 2010-06-28) included	Tilo Fuchs
02	2010-08-27	TTC review comments (dated 2010-08-26) included: Missing SRS requirements added	Tilo Fuchs
03	2010-09-02	Further requirements from [SRS_CCU] and [SRS_PCUB] added (requirements previously numbered with "NNN" as a suffix)	Tilo Fuchs
04	2010-11-04	Added references to Software Test Procedures (STPr) and System Test Procedure (SysTPr)	Tilo Fuchs
05	2011-01-26	Added references to Source Requirement Description and Software Requirements Specification (SRS) Reference	Tilo Fuchs
06	2011-01-28	Added references to Source Requirement Description, Software Requirements Specification (SRS) Reference, Software Design Description (SDD), Software Test Procedures (STPr) and System Test Procedure (SysTPr)	Tilo Fuchs
07	2011-02-28	Added references to Source Requirement Description, Software Functional Description(SFD) and Software Requirements Specification (SRS) Reference	Tilo Fuchs
08	2011-05-26	Update references to Software Functional Description(SFD) and Software Requirements Specification (SRS) Reference	Tilo Fuchs
09 (Draft)	2011-06-22	Added [SRS_DISP] references	Tilo Fuchs
09	2011-06-28	Updated references to reflect changes in revised SRS documents	Tilo Fuchs
10	2012-04-04	Updated references to reflect changes in revised SRS and SDD documents; especially: added references to SDD for PTE	Tilo Fuchs

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1 Introduction

1.1 Purpose

This document is the Software Requirements Traceability Matrix (SRTM) for the Passenger Information System (PIS) for the TTC Toronto project.

This SRTM will be submitted to Bombardier/TTC for approval. The intended audience of this SRS therefore includes Bombardier/TTC staff as well as ANNAX internal staff engaged with the TTC Toronto project.

1.2 Scope

The SRTM is used to trace software requirements backward to the source document(s) and forward to the software design and software test documents. The SRTM maps all software requirements identified in the SRS in the following manner:

- Backward to the source documents, (e.g. system requirements and system design documentation)
- Forward to the SDD, ICD, DBDD, STPr, and STR

This SRTM in its current version covers the following Software Configuration Items (SCIs) of the TTC Toronto project:

PSC OS - Passenger Information System Controller Operating System
PSC APP - Passenger Information System Controller Application
PSC DB - PIS Controller Database
PSC DSPFW - PIS Controller Digital Signal Processor Firmware
PCU-Box OS - Passenger Communication Unit-Box Operating System
PCU-Box APP - Passenger Communication Unit-Box Application
CCU OS - Cab Control Unit Operating System
CCU APP - Cab Control Unit Application
DISP OS - Display Operating System
DISP APP - Display Application
PTE SW - Software for the PTE

1.3 Document Organization

This SRTM is organized into the following sections:

Section 1 (This section)

Section 2 - References - lists the referenced used throughout this SRTM

Section 3 - Traceability - is the core of this SRTM and lists all software requirements, together with traceability information

2 Referenced Documents

Reference	ID-number	Revision	Status	Date of Preparation	Title
[TS]	(None)	2.0	Approved	2009-01	Technical Specification - Structured Multi-Phase Bid Edition
[SRS_PSC]	215260	08	Approved	2012-03-21	Software Requirements Specification for PIS Controller
[SRS_PCUB]	215258	07	Approved	2011-10-21	Software Requirements Specification for PCU-Box
[SRS_CCU]	215259	07	Approved	2011-10-21	Software Requirements Specification for CCU
[SRS_DISP]	215263	04	Approved	2011-10-21	Software Requirements Specification for Displays
[SRS_PTE]	215283	04	Approved	2012-04-04	Software Requirements Specification for PTE SW
[SDD_PSC]	215266	04	Approved	2010-07-09	Software Design Description for PIS Controller
[SDD_PCUB]	215267	04	Approved	2011-04-21	Software Design Description for PCU-Box
[SDD_CCU]	215265	04	Approved	2011-05-13	Software Design Description for CCU
[SDD_DISP]	215268	02	Approved	2011-05-18	Software Design Description for Displays
[SDD_PTE]	215284	03	Approved	2012-04-04	Software Design Description (SDD) for PTE
[STPr_PSC]	120199	05	Approved	2011-05-12	Software Test Procedure for PIS Controller
[STPr_PCUB]	120200	04	Approved	2011-05-11	Software Test Procedure for PCU-Box
[STPr_CCU]	120198	04	Approved	2011-05-11	Software Test Procedure for CCU
[STPr_DISP]	120201	02	Approved	2011-05-17	Software Test Procedure for Displays
[SysTPr]	120202	01	Approved	2012-03-19	System Test Procedure
[STPr_PTE]	120217	00	Approved	2011-01-25	Software Test Procedure (STPr) for PTE SW
[SFD]	215269	11	Approved	2012-01-18	Communication and Signs - System Functional Description

3 Traceability

Source Document Reference	Source Requirement Description	SRS Reference (Document/Req ID)	SDD/ICD/DBDD Reference	STPr Reference	Other Reference / Comments
[SFD] SD 3.3.1.1	Boot Loader	[SRS_PSC] [PSC_FCT_REQ_001]	[SDD_PSC] DDD 3.1.1	[STPr_PSC] TC 001	
[SFD] SD 3.3.1.1	Initialization	[SRS_PSC] [PSC_FCT_REQ_002]	[SDD_PSC] DDD 3.1.1	[STPr_PSC] TC 001	
[SFD] SD 3.3.1.1	Operating System IP Services	[SRS_PSC] [PSC_FCT_REQ_003]	[SDD_PSC] DDD 3.4.6	[STPr_PSC] TC 001; [SysTPr] TC 014	
[SFD] SD 3.3.1.1	Operational Status Signalling to TCMS	[SRS_PSC] [PSC_FCT_REQ_004]	[SDD_PSC] DDD 3.4.3.1	[STPr_PSC] TC 001	
[SFD] SD 3.7.1.1	Self-Test	[SRS_PSC] [PSC_FCT_REQ_005]	[SDD_PSC] DDD 3.4.3.1.7	[STPr_PSC] TC 002	
[SFD] SD 3.7.1.2	Management of PIS Self-Diagnostics	[SRS_PSC] [PSC_FCT_REQ_006]	[SDD_PSC] DDD 3.4.2	[STPr_PSC] TC 003	
[SFD] SD 3.7.2.1	Service Mode	[SRS_PSC] [PSC_FCT_REQ_007]	[SDD_PSC] multiple Sections	[STPr_PSC] TC 004	
[SFD] SD 3.7.2.2	Lamp Test	[SRS_PSC] [PSC_FCT_REQ_026]	[SDD_PSC] DDD 3.4.3	[STPr_PSC] TC 005	
[SFD] SD 3.3.1.1	PSC State Broadcast Message Sending	[SRS_PSC] [PSC_FCT_REQ_008]	[SDD_PSC] multiple Sections	[STPr_PSC] Multiple TCs	
[SFD] SD 3.3.1.1	Watchdog	[SRS_PSC] [PSC_FCT_REQ_009]	[SDD_PSC] DDD 3.4.1.1	[STPr_PSC] TC 006	
[SFD] SD 3.3.1.1	Version Control	[SRS_PSC] [PSC_FCT_REQ_010]	[SDD_PSC] DDD 3.1.3	[STPr_PSC] TC 001	
[SFD] SD 3.3.1.1	NTP Time Synchronization	[SRS_PSC] [PSC_FCT_REQ_011]	[SDD_PSC] DDD 3.4.1.1	[SysTPr] TC 014	
[SFD] SD 4.2	SW Download and Update	[SRS_PSC] [PSC_FCT_REQ_012]	[SDD_PSC] DDD 3.4.1	[STPr_PSC] TC 007	
[SFD] SD 3.8	Operation Modes	[SRS_PSC] [PSC_FCT_REQ_013]	[SDD_PSC] DDD 3.4.3.8	[STPr_PSC] TC 001	
[SFD] SD 3.4.1.1.1	Priority Management	[SRS_PSC] [PSC_FCT_REQ_028]	[SDD_PSC] multiple Sections	[SysTPr] TC 019	
[SFD] SD 3.4.1	Pre-recorded Audible and Visual Announcements in "Normal Operation" Mode	[SRS_PSC] [PSC_FCT_REQ_014]	[SDD_PSC] multiple Sections	[STPr_PSC] TC 008	
[SFD] SD 3.3.5.1	Routes Initialization in "Normal Operation Mode"	[SRS_PSC] [PSC_FCT_REQ_015]	[SDD_PSC] multiple Sections	[STPr_PSC] TC 009; [STPr_PSC] TC 010;	
[SFD] SD 3.4.1	Routes Management for Visual and Audible Announcements in "Normal Operation Mode"	[SRS_PSC] [PSC_FCT_REQ_016]	[SDD_PSC] multiple Sections	[STPr_PSC] TC 010	
[SFD] SD 3.8	Pre-recorded Audible and Visual Announcements in "No Ethernet Network" Mode	[SRS_PSC] [PSC_FCT_REQ_017]	[SDD_PSC] multiple Sections	[STPr_PSC] TC 011	
[SFD] SD 3.3.5	Routes Initialization in "No Ethernet Network" Mode	[SRS_PSC] [PSC_FCT_REQ_018]	[SDD_PSC] multiple Sections	[STPr_PSC] TC 013	
[SFD] SD 3.3.5	Routes Management for Visual and Audible Announcements in "No Ethernet Network" Mode	[SRS_PSC] [PSC_FCT_REQ_019]	[SDD_PSC] multiple Sections	[STPr_PSC] TC 013	
[SFD] SD 3.8	Pre-recorded Audible and Visual Announcements in "No Audio Control Line" Operation" Mode	[SRS_PSC] [PSC_FCT_REQ_020]	[SDD_PSC] multiple Sections	[STPr_PSC] TC 014	
[SFD] SD 3.3.5	Routes Initialization in "No Audio Control Line" Mode	[SRS_PSC] [PSC_FCT_REQ_021]	[SDD_PSC] multiple Sections	[STPr_PSC] TC 015; [STPr_PSC] TC 016	
[SFD] SD 3.3.5	Routes Management for Visual and Audible Announcements in "No Audio Control Line" Mode	[SRS_PSC] [PSC_FCT_REQ_022]	[SDD_PSC] multiple Sections	[STPr_PSC] TC 015; [STPr_PSC] TC 016	
[SFD] SD 3.8	Pre-recorded Audible and Visual Announcements in "No Audio Voice Line" Mode	[SRS_PSC] [PSC_FCT_REQ_023]	[SDD_PSC] multiple Sections	[STPr_PSC] TC 017	
[SFD] SD 3.3.5	Routes Initialization in "No Audio Voice Line" Mode	[SRS_PSC] [PSC_FCT_REQ_024]	[SDD_PSC] multiple Sections	[STPr_PSC] TC 018; [STPr_PSC] TC 019	
[SFD] SD 3.3.5	Routes Management for Visual and Audible Announcements in "No Audio Voice Line" Mode	[SRS_PSC] [PSC_FCT_REQ_025]	[SDD_PSC] multiple Sections	[STPr_PSC] TC 018; [STPr_PSC] TC 019	
[SFD] SD 3.3.5.6	Short Turn Route	[SRS_PSC] [PSC_FCT_REQ_027]	[SDD_PSC] DDD 3.4.3.1.3.2	[SysTPr] Multiple TCs	

Software Requirements Traceability Matrix

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Source Document Reference	Source Requirement Description	SRS Reference (Document/Req ID)	SDD/ICD/DBDD Reference	STPr Reference	Other Reference / Comments
[SFD] SD 3.3.5.9	Special Routes	[SRS_PSC] [PSC_FCT_REQ_029]	[SDD_PSC] DDD 3.4.3.1.3.2	[STPr_PSC] TC 009; [STPr_PSC] TC 010	
[SFD] SD 3.3.5.8	Off Route	[SRS_PSC] [PSC_FCT_REQ_030]	[SDD_PSC] DDD 3.4.3.1.3.2; [SDD_PSC] DDD 3.4.3.1.3.3;	[SysTPr] Multiple TCs	
[SFD] SD 3.7.1	Overall Diagnostics for the PIS	[SRS_PSC] [PSC_FCT_REQ_031]	[SDD_PSC] DDD 3.4.2	[STPr_CCU] TC 004; [STPr_PCUB] TC 002; [STPr_DISP] TC 003	
[SFD] SD 3.3.5.11	Do Not Pass Signalization	[SRS_PSC] [PSC_FCT_REQ_032]	[SDD_PSC] DDD 3.4.3.1.3.5	[STPr_PSC] TC 020	
[SFD] SD 3.3.5.12	Stops without protective Islands for Leaving Passengers	[SRS_PSC] [PSC_FCT_REQ_033]	[SDD_PSC] multiple Sections	[STPr_PSC] TC 021	
[SFD] SD 3.3.2.3	Doors Obstructed Announcement	[SRS_PSC] [PSC_FCT_REQ_034]	[SDD_PSC] DDD 3.4.2	[STPr_PSC] TC 022	
[SFD] SD 3.3.5.13	Emergency Egress Device Announcement	[SRS_PSC] [PSC_FCT_REQ_042]	[SDD_PSC] multiple Sections	[STPr_PSC] TC 023	
[SFD] SD 3.3.5.13	Speed Limitation	[SRS_PSC] [PSC_FCT_REQ_035]	[SDD_PSC] DDD 3.4.3.4	[STPr_PSC] TC 024	
[SFD] SD 3.3.5.2.3	Independent waypoints	[SRS_PSC] [PSC_FCT_REQ_036]	[SDD_PSC] DDD 3.4.3.4	[STPr_PSC] TC 025	
[SFD] SD 3.3.2.5	Stop Request	[SRS_PSC] [PSC_FCT_REQ_037]	[SDD_PSC] DDD 3.4.3.9	[STPr_PSC] TC 026	
[SFD] SD 3.3.1.2	Layover mode	[SRS_PSC] [PSC_FCT_REQ_038]	[SDD_PSC] multiple Sections	[STPr_PSC] TC 027	
[SFD] SD 4.2	SW Distribution for Peripheral Devices	[SRS_PSC] [PSC_FCT_REQ_039]	[SDD_PSC] DDD 3.4.3.10	[STPr_PSC] TC 007	
[SFD] SD 3.2.1.1	Service Loudspeaker Volume Adjustment	[SRS_PSC] [PSC_FCT_REQ_040]	[SDD_PSC] multiple Sections	[SysTPr] TC 018	
[SFD] SD 3.2.1.1	Interior and Exterior Loudspeaker Volume Adjustment	[SRS_PSC] [PSC_FCT_REQ_041]	[SDD_PSC] DDD 3.4.3.5.1	[STPr_PCUB] TC 016	
[SFD] SD 3.3.5.13	Emergency Egress Device Announcement	[SRS_PSC] [PSC_FCT_REQ_042]	[SDD_PSC] DDD 3.4.3.2	[SysTPr] Multiple TCs	
[SFD] SD 3.2	Static Numerical Requirements	[SRS_PSC] [PSC_PRF_REQ_001]	[SDD_PSC] multiple Sections	[SysTPr] Multiple TCs	
[SFD] SD 3.7.1.1	Dynamical Numerical Requirements	[SRS_PSC] [PSC_PRF_REQ_002]	[SDD_PSC] multiple Sections	[SysTPr] Multiple TCs	
[SFD] SD 3.5.1	Logical Database Requirements	[SRS_PSC] [PSC_LDB_REQ_001]	[SDD_PSC] multiple Sections	[SysTPr] Multiple TCs	
[SFD] SD 2.1	Standards Compliance	[SRS_PSC] [PSC_DCT_REQ_001]	[SDD_PSC] multiple Sections	[SysTPr] Multiple TCs	
[TS] S. 24.16.1	Reliability	[SRS_PSC] [PSC_SSA_REQ_001]	[SDD_PSC] multiple Sections	[SysTPr] Multiple TCs	
[SFD] SD 3.1	Availability	[SRS_PSC] [PSC_SSA_REQ_002]	[SDD_PSC] multiple Sections	[SysTPr] Multiple TCs	
[SFD] SD 3.1	Security	[SRS_PSC] [PSC_SSA_REQ_003]	[SDD_PSC] multiple Sections	[SysTPr] Multiple TCs	
[TS] S. 24.20	Maintainability	[SRS_PSC] [PSC_SSA_REQ_004]	[SDD_PSC] multiple Sections	[SysTPr] Multiple TCs	
[SFD] SD 3.1	Portability	[SRS_PSC] [PSC_SSA_REQ_005]	[SDD_PSC] multiple Sections	[SysTPr] Multiple TCs	
[SFD] SD 3.3.1.1	Boot Loader	[SRS_PCUB] [PCUB_FCT_REQ_001]	[SDD_PCU] DDD 6.1	[STPr_PCUB] TC 001	
[SFD] SD 3.3.1.1	Initialization	[SRS_PCUB] [PCUB_FCT_REQ_002]	[SDD_PCU] DDD 6.2; [SDD_PCU] DDD 6.2.1	[STPr_PCUB] TC 001	
[SFD] SD 3.8	No IP Address Received	[SRS_PCUB] [PCUB_FCT_REQ_022]	[SDD_PCU] DDD 6.2.1	[STPr_PCUB] TC 002	
[SFD] SD 3.3.1.1; [SFD] SD 3.7.1.1	Startup Behaviour of PCUB	[SRS_PCUB] [PCUB_FCT_REQ_023]	[SDD_PCU] DDD 6.2.1	[STPr_PCUB] TC 003	
[SFD] SD 3.3.1.1	Operating System IP Services	[SRS_PCUB] [PCUB_FCT_REQ_003]	[SDD_PCU] DDD 6.2.1	[STPr_PCUB] TC 001; [SysTPr] TC 014	

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Source Document Reference	Source Requirement Description	SRS Reference (Document/Req ID)	SDD/ICD/DBDD Reference	STPr Reference	Other Reference / Comments
[SFD] SD 3.7.1.1	Self-Test	[SRS_PCUB] [PCUB_FCT_REQ_004]	[SDD_PCU] DDD 6.4.4	[STPr_PCUB] TC 002	
[SFD] SD 3.7.1.1	Behaviour After Successful Self-Test	[SRS_PCUB] [PCUB_FCT_REQ_024]	[SDD_PCU] DDD 6.4.4	[STPr_PCUB] TC 003	
[SFD] SD 3.7.1.1	Behaviour After Failed Self-Test	[SRS_PCUB] [PCUB_FCT_REQ_025]	[SDD_PCU] DDD 6.4.4	[STPr_PCUB] TC 003	
[SFD] SD 3.7.1.2	PIS Self-Diagnostics	[SRS_PCUB] [PCUB_FCT_REQ_005]	[SDD_PCU] DDD 6.4.4	[STPr_PCUB] TC 004	
[SFD] SD 3.7.2.1	Service Mode	[SRS_PCUB] [PCUB_FCT_REQ_006]	[SDD_PCU] DDD 6.4.4	[STPr_PCUB] TC 005	
[SFD] SD 3.3.1.1	Watchdog	[SRS_PCUB] [PCUB_FCT_REQ_008]	[SDD_PCU] DDD 6.2.1	[STPr_PCUB] TC 006	
[SFD] SD 3.3.1.1	Version Control	[SRS_PCUB] [PCUB_FCT_REQ_009]	[SDD_PCU] DDD 6.4.5	[STPr_PCUB] TC 001	
[SFD] SD 3.3.1.1	NTP Time Synchronization	[SRS_PCUB] [PCUB_FCT_REQ_010]	[SDD_PCU] DDD 6.2.1	[SysTPr] TC 014	
[SFD] SD 4.2	SW Download and Update	[SRS_PCUB] [PCUB_FCT_REQ_011]	[SDD_PCU] DDD 6.1; [SDD_PCU] DDD 6.4.5	[STPr_PSC] TC 007	
[SFD] SD 3.8	Operation Modes	[SRS_PCUB] [PCUB_FCT_REQ_012]	[SDD_PCU] DDD 6.4.4	[STPr_PCUB] Multiple TCs	
[SFD] SD 3.4.2	Retrieval Mode	[SRS_PCUB] [PCUB_FCT_REQ_026]	[SDD_PCU] DDD 6.4.4	[SysTPr] TC 016	
[SFD] SD 3.4	Priority Management	[SRS_PCUB] [PCUB_FCT_REQ_027]	[SDD_PCU] DDD 6.4.3; [SDD_PCU] DDD 6.4.4 [SDD_PCU] DDD 6.4.5	[STPr_PCUB] TC 008	
[SFD] SD 3.8	Loudspeaker Announcements in "Normal Operation" Mode	[SRS_PCUB] [PCUB_FCT_REQ_013]	[SDD_PCU] DDD 6.4.3; [SDD_PCU] DDD 6.4.4; [SDD_PCU] DDD 6.4.6	[STPr_PCUB] TC 007	
[SFD] SD 3.4.1.1.1	Parallel Operation of Announcement and Intercom	[SRS_PCUB] [PCUB_FCT_REQ_028]	[SDD_PCU] DDD 6.4.1; [SDD_PCU] DDD 6.4.3	[STPr_PCUB] TC 013	
[SFD] SD 3.8	Loudspeaker Announcements in "No Ethernet Network" Mode	[SRS_PCUB] [PCUB_FCT_REQ_014]	[SDD_PCU] DDD 6.4.3; [SDD_PCU] DDD 6.4.4; [SDD_PCU] DDD 6.4.6	[STPr_PCUB] TC 009	
[SFD] SD 3.8	Loudspeaker Announcements in "No Audio Control Line" Mode	[SRS_PCUB] [PCUB_FCT_REQ_015]	[SDD_PCU] DDD 6.4.3; [SDD_PCU] DDD 6.4.4; [SDD_PCU] DDD 6.4.6	[STPr_PCUB] TC 010	
[SFD] SD 3.8	Loudspeaker Announcements in "No Audio Voice Line" Mode	[SRS_PCUB] [PCUB_FCT_REQ_016]	[SDD_PCU] DDD 6.4.3; [SDD_PCU] DDD 6.4.4; [SDD_PCU] DDD 6.4.6	[STPr_PCUB] TC 011	
[SFD] SD 3.3.4	Passenger to Cab Communication	[SRS_PCUB] [PCUB_FCT_REQ_017]	[SDD_PCU] DDD 6.4.1; [SDD_PCU] DDD 6.4.4	[STPr_PCUB] TC 012	
[SFD] SD 3.3.4.1	Passenger to Cab Queuing	[SRS_PCUB] [PCUB_FCT_REQ_029]	[SDD_PCU] DDD 6.4.4	[STPr_PCUB] TC 014	
N / A	Volume Level Adjustment during Commissioning	[SRS_PCUB] [PCUB_FCT_REQ_018]	[SDD_PCU] DDD 6.4.6	[STPr_PCUB] Multiple TCs	
[SFD] SD 3.2.3.1	Independent Volume Level Adjustment	[SRS_PCUB] [PCUB_FCT_REQ_030]	[SDD_PCU] DDD 6.4.6	[STPr_PCUB] TC 016	
[SFD] SD 3.3.7	Ambient Noise Level Self-Adjusting Volume	[SRS_PCUB] [PCUB_FCT_REQ_019]	[SDD_PCU] DDD 6.4.2; [SDD_PCU] DDD 6.4.6	[STPr_PCUB] TC 016	
[SFD] SD 3.3.4.2	Status Signaling	[SRS_PCUB] [PCUB_FCT_REQ_020]	[SDD_PCU] DDD 6.4.4; [SDD_PCU] DDD 6.4.5	[STPr_PCUB] TC 007	
[SFD] SD 3.7.1.1	Diagnostic Messages	[SRS_PCUB] [PCUB_FCT_REQ_021]	[SDD_PCU] DDD 6.4.4; [SDD_PCU] DDD 6.4.5	[STPr_PCUB] TC 004	

Software Requirements Traceability Matrix

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Source Document Reference	Source Requirement Description	SRS Reference (Document/Req ID)	SDD/ICD/DBDD Reference	STPr Reference	Other Reference / Comments
[SFD] SD 3.2.3.1	Statical Numerical Requirements - 4 LS	[SRS_PCUB] [PCUB_PRF_REQ_001]	[SDD_PCUB] DDD 6.4.7	[STPr_PCUB] TC 003; [STPr_PCUB] TC 004	
[SFD] SD 3.2.3.1	Statical Numerical Requirements - 2 PCU	[SRS_PCUB] [PCUB_PRF_REQ_002]	[SDD_PCUB] DDD 5.2.4	[STPr_PCUB] TC 003; [STPr_PCUB] TC 004	
[SFD] SD 3.3.2.1	Timing of Announcements	[SRS_PCUB] [PCUB_PRF_REQ_003]	[SDD_PCUB] DDD 3.2	[STPr_PCUB] TC 007	
[TS] S. 24.16.1	Reliability	[SRS_PCUB] [PCUB_SSA_REQ_001]	[SDD_PCUB] DDD 3.2	[STPr_PCUB] Multiple TCs	
[SFD] SD 3.1	Availability	[SRS_PCUB] [PCUB_SSA_REQ_002]	[SDD_PCUB] multiple Sections	[SysTPr] Multiple TCs	
[SFD] SD 3.1	Security	[SRS_PCUB] [PCUB_SSA_REQ_003]	[SDD_PSC] multiple Sections	[SysTPr] Multiple TCs	
[TS] S. 24.20	Maintainability	[SRS_PCUB] [PCUB_SSA_REQ_004]	[SDD_PCUB] multiple Sections	[SysTPr] Multiple TCs	
[SFD] SD 3.1	Portability	[SRS_PCUB] [PCUB_SSA_REQ_005]	[SDD_PCUB] multiple Sections	[SysTPr] Multiple TCs	
[SFD] SD 3.3.1.1	Boot Loader	[SRS_CCU] [CCU_FCT_REQ_001]	[SDD_CCU] DDD 6.1	[STPr_CCU] TC 001	
[SFD] SD 3.3.1.1	Initialization	[SRS_CCU] [CCU_FCT_REQ_002]	[SDD_CCU] DDD 6.2.1	[STPr_CCU] TC 001	
[SFD] SD 3.8	No IP-Address Received	[SRS_CCU] [CCU_FCT_REQ_026]	[SDD_CCU] DDD 6.2.1	[STPr_CCU] TC 002	
[SFD] SD 3.3.1.1	Operating System IP Services	[SRS_CCU] [CCU_FCT_REQ_003]	[SDD_CCU] DDD 6.2.1	[STPr_CCU] TC 001; [SysTPr] TC 014	
[SFD] SD 3.3.1.1	Expedited Announcement Functionality at Start-up	[SRS_CCU] [CCU_FCT_REQ_004]	[SDD_CCU] DDD 6.4.3	[STPr_CCU] TC 003	
[SFD] SD 3.7.1.1	Self-Test	[SRS_CCU] [CCU_FCT_REQ_005]	[SDD_CCU] DDD 6.4.3	[STPr_CCU] TC 004	
[SFD] SD 3.7.1.2	PIS Self-Diagnostics	[SRS_CCU] [CCU_FCT_REQ_006]	[SDD_CCU] DDD 6.4.3	[STPr_CCU] TC 005	
[SFD] SD 3.7.2.1	Service Mode	[SRS_CCU] [CCU_FCT_REQ_007]	[SDD_CCU] DDD 6.4.3	[STPr_CCU] TC 006	
[SFD] SD 3.7.2.2	Lamp Test	[SRS_CCU] [CCU_FCT_REQ_027]	[SDD_CCU] DDD 6.4.3	[STPr_CCU] TC 007	REQ# changed
[SFD] SD 3.3.1.1	Watchdog	[SRS_CCU] [CCU_FCT_REQ_009]	[SDD_CCU] DDD 6.2.1	[STPr_CCU] TC 008	
[SFD] SD 3.3.1.1	Version Control	[SRS_CCU] [CCU_FCT_REQ_010]	[SDD_CCU] DDD 6.4.5	[STPr_CCU] TC 001	
[SFD] SD 3.3.1.1	NTP Time Synchronization	[SRS_CCU] [CCU_FCT_REQ_011]	[SDD_CCU] DDD 6.2.1	[SysTPr] TC 014	
[SFD] SD 4.2	SW Download and Update	[SRS_CCU] [CCU_FCT_REQ_012]	[SDD_CCU] DDD 6.1; [SDD_CCU] DDD 6.4.5	[STPr_PCS] TC 007	
[SFD] SD 3.8	Operation Modes	[SRS_CCU] [CCU_FCT_REQ_013]	[SDD_CCU] DDD 6.4.3	[STPr_CCU] Multiple TCs	
[SFD] SD 3.4.2	Retrieval Mode	[SRS_CCU] [CCU_FCT_REQ_028]	[SDD_CCU] DDD 6.4.3	[STPr_CCU] TC 009; [SysTPr] TC 026	
[SFD] SD 3.4.1.1.1	Priority Management	[SRS_CCU] [CCU_FCT_REQ_029]	[SDD_CCU] DDD 6.4.3; [SDD_CCU] DDD 6.4.5	[STPr_CCU] Multiple TCs	
[SFD] SD 3.8	Outgoing Vocal Announcements in "Normal Operation" Mode	[SRS_CCU] [CCU_FCT_REQ_014]	[SDD_CCU] DDD 6.4.1; [SDD_CCU] DDD 6.4.2.1;	[STPr_CCU] TC 009	
[SFD] SD 3.8	Routing of Incoming Announcements Over Coupler in "Normal Operation" Mode	[SRS_CCU] [CCU_FCT_REQ_030]	[SDD_CCU] DDD 6.4.2.2	[STPr_CCU] TC 009	
[SFD] SD 3.4.1.1.1	CIS Announcements in "Normal Operation" Mode	[SRS_CCU] [CCU_FCT_REQ_015]	[SDD_CCU] DDD 6.4.2.1	[STPr_CCU] TC 010	
[SFD] SD 3.3.2.2	Monitoring of Digital Voice Announcements in "Normal Operation" Mode	[SRS_CCU] [CCU_FCT_REQ_016]	[SDD_CCU] DDD 6.4.2.4	[STPr_CCU] TC 011	

Software Requirements Traceability Matrix

3 Traceability

Source Document Reference	Source Requirement Description	SRS Reference (Document/Req ID)	SDD/ICD/DBDD Reference	STPr Reference	Other Reference / Comments
[SFD] SD 3.8	CCU Behaviour in "No Ethernet Network" Mode	[SRS_CCU] [CCU_FCT_REQ_017]	[SDD_CCU] DDD 6.4.1; [SDD_CCU] DDD 6.4.2.1; [SDD_CCU] DDD 6.4.3	[STPr_CCU] TC 012	
[SFD] SD 3.8	CCU Behaviour in "No Audio Control Line" Mode	[SRS_CCU] [CCU_FCT_REQ_018]	[SDD_CCU] DDD 6.4.2.3; [SDD_CCU] DDD 6.4.2.4; [SDD_CCU] DDD 6.4.3	[STPr_CCU] TC 013	
[SFD] SD 3.8	CCU Behaviour in "No Audio Voice Line" Mode	[SRS_CCU] [CCU_FCT_REQ_019]	[SDD_CCU] DDD 6.4.2.3; [SDD_CCU] DDD 6.4.2.4; [SDD_CCU] DDD 6.4.3	[STPr_CCU] TC 014	
[SFD] SD 3.3.4.1	Passenger to Cab Communication	[SRS_CCU] [CCU_FCT_REQ_020]	[SDD_CCU] DDD 6.4.1	[STPr_CCU] TC 015	
[SFD] SD 3.3.3	Cab to Cab Communication	[SRS_CCU] [CCU_FCT_REQ_021]	[SDD_CCU] DDD 6.4.1	[STPr_CCU] TC 016	
[SFD] SD 3.4.2	IP-Tunnelling	[SRS_CCU] [CCU_FCT_REQ_022]	[SDD_CCU] DDD 6.2	[STPr_CCU] TC 009	
[SFD] SD 3.2.7.3	Service Loudspeaker Volume Adjustment	[SRS_CCU] [CCU_FCT_REQ_023]	[SDD_CCU] DDD 6.4.3	[STPr_CCU] TC 017	
[SFD] SD 3.3.4.2	Status Signaling	[SRS_CCU] [CCU_FCT_REQ_024]	[SDD_CCU] DDD 6.4.3	[STPr_CCU] Multiple TCs	
[SFD] SD 3.7.1.1	Diagnostic Messages	[SRS_CCU] [CCU_FCT_REQ_025]	[SDD_CCU] DDD 6.4.3; [SDD_CCU] DDD 6.4.5	[STPr_CCU] TC 013; [STPr_CCU] TC 014	
[SFD] SD 3.2.2.1	Statical Numerical Requirement 1	[SRS_CCU] [CCU_PRF_REQ_001]	[SDD_CCU] DDD 6.4.6.1	[STPr_CCU] TC 011	
[SFD] SD 3.3.4.1	Statical Numerical Requirement 2	[SRS_CCU] [CCU_PRF_REQ_002]	[SDD_PCU] DDD 3.2	[STPr_CCU] TC 011	
[TS] S. 24.16.1	Reliability	[SRS_CCU] [CCU_SSA_REQ_001]	[SDD_CCU] DDD 3.2	[STPr_CCU] Multiple TCs	
[SFD] SD 3.3.1.1	Boot Loader	[SRS_DISP] [DISP_FCT_REQ_001]	[SDD_DISP] DDD 6.1.1; [SDD_DISP] DDD 6.1.2	[STPr_DISP] TC 001	
[SFD] SD 3.3.1.1	Initialization	[SRS_DISP] [DISP_FCT_REQ_002]	[SDD_DISP] DDD 6.1.3	[STPr_DISP] TC 001	
[SFD] SD 3.3.1.1	Operating System IP Services	[SRS_DISP] [DISP_FCT_REQ_003]	[SDD_DISP] DDD 6.1.3.3.3	[STPr_DISP] TC 001	
[SFD] SD 3.7.1.1	Self-Test	[SRS_DISP] [DISP_FCT_REQ_004]	[SDD_DISP] DDD 6.2.2	[STPr_DISP] TC 002	
[SFD] SD 3.7.1.2	PIS Self-Diagnostics	[SRS_DISP] [DISP_FCT_REQ_005]	[SDD_DISP] DDD 6.2.2	[STPr_DISP] TC 003	
[SFD] SD 3.7.2.1	Service Mode	[SRS_DISP] [DISP_FCT_REQ_006]	[SDD_DISP] DDD 6.2.2	[STPr_DISP] TC 004	
[SFD] SD 3.3.1.1	Watchdog	[SRS_DISP] [DISP_FCT_REQ_008]	[SDD_DISP] DDD 6.2.2	[STPr_DISP] TC 005	
[SFD] SD 3.3.1.1	Version Control	[SRS_DISP] [DISP_FCT_REQ_009]	[SDD_DISP] DDD 6.2.2	[STPr_DISP] TC 001	
[SFD] SD 4.2	SW Download and Update	[SRS_DISP] [DISP_FCT_REQ_010]	[SDD_DISP] DDD 6.2.2	[STPr_PSC] TC 007	
[SFD] SD 3.2.10	Display of Content	[SRS_DISP] [DISP_FCT_REQ_011]	[SDD_DISP] DDD 6.2.2.5	[SysTPr] Multiple TCs	
[SFD] SD 3.2.10	Device Protection	[SRS_DISP] [DISP_FCT_REQ_012]	[SDD_DISP] DDD 6.2.2	[STPr_DISP] TC 006	
[SFD] SD 3.2.10	Brightness Control	[SRS_DISP] [DISP_FCT_REQ_013]	[SDD_DISP] DDD 6.1.3	[STPr_DISP] TC 007	
[SFD] SD 3.2.10	Dynamical Requirements	[SRS_DISP] [DISP_FCT_REQ_002]	[SDD_DISP] DDD 6.2.2.1	[SysTPr] Multiple TCs	
[TS] S. 24.16.1	Reliability	[SRS_DISP] [DISP_SSA_REQ_001]	[SDD_DISP] DDD 6.2	[STPr_DISP] Multiple TCs	
[SFD] SD 3.1	Availability	[SRS_DISP] [DISP_SSA_REQ_002]	[SDD_DISP] multiple Sections	[SysTPr] Multiple TCs	
[SFD] SD 3.1	Security	[SRS_DISP] [DISP_SSA_REQ_003]	[SDD_DISP] multiple Sections	[SysTPr] Multiple TCs	

3 Traceability

Source Document Reference	Source Requirement Description	SRS Reference (Document/Req ID)	SDD/ICD/DBDD Reference	STPr Reference	Other Reference / Comments
[TS] S. 24.20	Maintainability	[SRS_DISP] [DISP_SSA_REQ_004]	[SDD_DISP] multiple Sections	[SysTPr] Multiple TCs	
[SFD] SD 3.1	Portability	[SRS_DISP] [DISP_SSA_REQ_005]	[SDD_DISP] multiple Sections	[SysTPr] Multiple TCs	
N / A	Statal Numerical Requirements - 4 LS	[SRS_DISP] [DISP_PRF_REQ_001]	[SDD_DISP] multiple Sections	[STPr] Multiple TCs	
N / A	Statal Numerical Requirements - 2 PCU	[SRS_DISP] [DISP_PRF_REQ_002]	[SDD_DISP] multiple Sections	[STPr] Multiple TCs	
N / A	Timing of Announcements	[SRS_DISP] [DISP_PRF_REQ_003]	[SDD_DISP] multiple Sections	[STPr] Multiple TCs	
[SFD] SD 4.2	Edit the Database	[SRS_PTE] [PTE_FCT_REQ_001]	[SDD_PTE] DDD 6.9.12	[STPr_PTE] TC 001	
[SFD] SD 4.2	Export PSC DB to Update Package	[SRS_PTE] [PTE_FCT_REQ_002]	[SDD_PTE] DDD 6.5.3; 6.6.1; 6.6.4	[STPr_PTE] TC 002	
[SFD] SD 4.2	Update Data on the Vehicles	[SRS_PTE] [PTE_FCT_REQ_003]	[SDD_PTE] DDD 6.8	[STPr_PTE] TC 004; [STPr_PTE] TC 005	
[SFD] SD 4.2	Install via Ethernet	[SRS_PTE] [PTE_FCT_REQ_004]	[SDD_PTE] DDD 6.5.4	[STPr_PTE] TC 004	
[SFD] SD 4.2	Test the Database	[SRS_PTE] [PTE_FCT_REQ_005]	[SDD_PTE] DDD 6.6.3	[STPr_PTE] TC 005	
[SFD] SD 4.2	Select Predefined Parameter Set	[SRS_PTE] [PTE_FCT_REQ_006]	[SDD_PTE] DDD 6.5	[STPr_PTE] TC 006	
[SFD] SD 4.2	Export Predefined Set to Update Package	[SRS_PTE] [PTE_FCT_REQ_007]	[SDD_PTE] DDD 6.6.4	[STPr_PTE] TC 006	
[SFD] SD 4.2	Adjust Specific Parameters	[SRS_PTE] [PTE_FCT_REQ_008]	[SDD_PTE] DDD 6.6.1	[STPr_PTE] TC 007	
[SFD] SD 4.2	Live Test of Adjustable Specific Parameters	[SRS_PTE] [PTE_FCT_REQ_009]	[SDD_PTE] DDD 6.6.3	[STPr_PTE] Multiple TCs	
[SFD] SD 4.2	Export Adjustable Specific Parameters to Update Package	[SRS_PTE] [PTE_FCT_REQ_010]	[SDD_PTE] DDD 6.6.4	[STPr_PTE] Multiple TCs	
[SFD] SD 4.2	Diagnose the PIS System	[SRS_PTE] [PTE_FCT_REQ_011]	[SDD_PTE] DDD 6.3.4; 6.3.5	[STPr_PTE] TC 008	
[SFD] SD 4.2	Control the BTE	[SRS_PTE] [PTE_FCT_REQ_012]	[SDD_PTE] DDD 6.3	[STPr_PTE] TC 009	
[SFD] SD 4.2	Static Numerical Requirements	[SRS_PTE] [PTE_PRF_REQ_001]	[SDD_PTE] multiple Sections	[STPr_PTE] Multiple TCs	
[SFD] SD 4.2	Dynamic Numerical Requirements	[SRS_PTE] [PTE_PRF_REQ_001]	[SDD_PTE] multiple Sections	[STPr_PTE] Multiple TCs	
[SFD] SD 4.2	Database Format	[SRS_PTE] [PTE_LDB_REQ_001]	[SDD_PTE] multiple Sections	[STPr_PTE] Multiple TCs	
[TS] S. 24.16.1	Reliability	[SRS_PTE] [PTE_SSA_REQ_001]	[SDD_PTE] multiple Sections	[STPr_PTE] Multiple TCs	
[SFD] SD 3.2	Availability	[SRS_PTE] [PTE_SSA_REQ_002]	[SDD_PTE] multiple Sections	[STPr_PTE] Multiple TCs	
[SFD] SD 3.2	Security	[SRS_PTE] [PTE_SSA_REQ_003]	[SDD_PTE] multiple Sections	[STPr_PTE] Multiple TCs	
[TS] S. 24.20	Maintainability	[SRS_PTE] [PTE_SSA_REQ_004]	[SDD_PTE] multiple Sections	[STPr_PTE] Multiple TCs	
[SFD] SD 3.2	Portability	[SRS_PTE] [PTE_SSA_REQ_005]	[SDD_PTE] multiple Sections	[STPr_PTE] Multiple TCs	