

---

# Generic Functional Requirements for an SPP to Support DAA

## Contents

1. Introduction.....	1-1
1.1 Background and Motivation.....	1-1
1.2 Scope.....	1-3
1.3 Relation to Other Requirements Documents.....	1-4
1.4 Document Organization.....	1-4
1.5 Requirements Terminology.....	1-5
1.6 Requirement Labeling Conventions.....	1-6
1.6.1 Numbering of Requirement and Related Objects.....	1-6
1.6.2 Requirement, Conditional Requirement, and Objective Object Identification.....	1-6
2. Speech Processing Peripheral Capabilities.....	2-1
2.1 Overview of SPP Capabilities.....	2-1
2.2 SPP Capability Requirements.....	2-5
2.2.1 Access_Data.....	2-5
2.2.1.1 Database Operations.....	2-5
2.2.1.2 Multiple Database Access.....	2-6
2.2.2 Collect_Digits.....	2-6
2.2.2.1 DTMF Reception.....	2-6
2.2.2.2 DTMF Interrupt.....	2-7
2.2.2.3 SPP Collect_Digits Wait Time Interval.....	2-8
2.2.3 Establish_Connection.....	2-10
2.2.4 Play_Announcement.....	2-10
2.2.4.1 Concatenated Speech Playback.....	2-11
2.2.4.2 Pre-recorded Announcements.....	2-12
2.2.4.3 Processed Voice Playback.....	2-12
2.2.4.4 Text-to-speech Translation.....	2-12
2.2.5 Process_Voice.....	2-13
2.2.5.1 Voice Collection.....	2-13
2.2.5.1.1 Voice Interrupt.....	2-13
2.2.5.1.2 SPP Voice Collection Wait Time Interval.....	2-14
2.2.5.2 Silence Deletion.....	2-16
2.2.5.3 Speech Compression.....	2-17
2.2.5.4 Speech Recognition.....	2-18
3. Service Creation Environment.....	3-1
3.1 Software Execution Environment.....	3-2
3.2 Applicator Development Toolkit.....	3-2

---

3.2.1	Announcement Creation .....	3-3
3.2.2	Capability Flow Creation .....	3-3
3.2.3	Database Table Creation .....	3-6
3.2.4	Report Creation .....	3-7
3.3	Global Service Creation Considerations .....	3-7
3.3.1	Multiple Applicator Support .....	3-7
3.3.2	Service Identification .....	3-8
3.3.3	Service Triggers .....	3-8
3.3.4	Service Simulation .....	3-9
4.	Performance .....	4-1
4.1	Methodology .....	4-1
4.2	SPP Capability Response-time Benchmarking .....	4-1
4.2.1	Benchmark Applications .....	4-2
4.2.2	Benchmark Traffic Mix .....	4-6
4.2.3	SPP Supplier Response-time Documentation .....	4-7
4.3	Additional SPP Capability Performance Topics .....	4-8
4.3.1	Access_Data .....	4-8
4.3.2	Collect_Digits .....	4-9
4.3.3	Establish_Connectlon.....	4-9
4.3.4	Play_Announcement .....	4-10
4.3.4.1	Announcement Perception.....	4-10
4.3.5	Process_Voice.....	4-11
4.3.5.1	Voice Collection .....	4-11
4.3.5.2	Speech Compression and Silence Deletion Performance	4-11
4.3.5.3	Speech Recognition Performance.....	4-13
5.	Operations, Administration, and Maintenance .....	5-1
5.1	Supplier Support.....	5-1
5.2	Measurements .....	5-2
5.2.1	Measurement Model .....	5-3
5.2.2	Capacity Engineering .....	5-4
5.2.2.1	Utilization Frequency Counts .....	5-4
5.2.2.2	Utilization Usage Counts .....	5-5
5.2.2.3	Memory Utilization Measurements .....	5-5
5.2.2.4	Accumulation Intervals.....	5-6
5.2.3	Service Assurance .....	5-6
5.2.4	Automatic Message Accounting (AMA) .....	5-7
5.2.4.1	Stand-alone AMA Record Generation.....	5-7
5.2.4.2	Sending AMA Data to the SPP Client.....	5-8
5.2.5	Maintenance Measurements.....	5-9
5.2.6	Speech Processing Performance Data.....	5-9
5.3	Maintenance .....	5-10
5.4	Configuration Management .....	5-10
5.4.1	Application Software Configuration .....	5-11

---

5.4.2	Parameter Conflagration .....	5-12
5.4.2.1	Capability Parameter Configurations .....	5-12
5.4.2.2	Application Parameter Configuration.....	5-13
5.5	Security .....	5-13
6.	Reliability.....	6-1
6.1	Availability.....	6-1
6.2	Replication to Achieve High Availability.....	6-1
6.3	Reliability and Quality .....	6-2
7.	Physical Environment .....	7-1
7.1	Power.....	7-1
7.2	Equipment .....	7-1
7.3	Electromagnetic and Electrical Environment.....	7-1
References	.....	References-1
Acronym List	.....	Acronyms-1