**DCN 22-18-0035-00-0003**

**Submission to Remedy Document Structure Issues**

**Document Structure and Table of Contents – Letter Ballot 3 final**

1. Overview 1

1.1 Scope 1

1.2 Purpose 1

1.3 Application 2

2. Normative references 2

3. Definitions 2

4. System Architecture 3

4.1 System Entities and Services 3

4.2 Roles 4

4.3 Interactions 5

4.4 System Requirements 5

4.4.1 Sensing Device Requirements 6

4.4.2 Sensing Manager Requirements 9

5. Sensing Device 10

5.1 Sensing Device System Requirements 10

5.1.1 SD Activation Service 10

5.1.2 SD Capabilities Advertisement Service 13

5.1.3 SD Task Scheduler Service 14

5.1.4 SD Data Distribution Service 16

6. Sensing Manager 18

6.1 Sensing Manager Definition 18

6.2 Sensing Manager Control Service 19

6.2.1 Sensing Manager Control Service: Functions 19

6.2.2 Sensing Manager Control Service: Interfaces 19

6.3 SD Control Service 20

6.3.1 SD Control Service: Functions 20

6.4 Sensing Manager Data Distribution Service 21

6.4.1 Sensing Manager Data Distribution Service: Functions 21

6.4.2 Sensing Manager Data Distribution Service: Interfaces 21

7. Interfaces, Messaging and Primitives 22

7.1 SCOS Messaging 22

7.1.1 Message Encoding 23

7.1.2 Messaging between the System Entities: 23

7.1.3 Message Transport protocols 24

7.1.4 Response Codes 24

7.2 Primitives 24

7.3 Messages 25

7.3.1 SD<>SM Messages 25

7.3.2 SCOSClient<>SM Messages 30

7.3.3 SD<>SM Data Distribution Service Messages 35

Annex A Informative: Reference Applications 38

Annex B (Normative): Metadata Specification 40

Annex C System Administration and Security (Informative) 59

Annex D Normative Functional Requirements 64

Annex E SCOS Operational Modes 69

Annex F SCOS Topology Examples (Informative) 75

Annex G System Policy Model (informative) 77

Annex H Latency Requirements for Scans (informative) 85

Annex I Informative: Regulatory Technical requirements 86

Annex J Radio performance requirements 87

Annex K Sensing Techniques (informative) 88

Annex L References 89

Annex M Bibliography (informative) 90

**Document Structure and Table of Contents – Letter Ballot 2 final**

1. Overview 12

Scope 12

Purpose 12

Application 13

2. Normative references 13

3. Definitions 13

4. System Architecture 14

4.1 System Block Diagram 14

4.2 SCOS System Architecture Layering 15

4.3 SCOS System user roles 15

4.4 SCOS Platform System entities 16

4.4.1 System Entity: Sensing Manager 16

4.4.2 System Entity: Sensing Device 19

5. Interfaces, Messaging and Primitives 23

5.1 SCOS Interfaces 24

5.1.1 SCOS communication interfaces 24

5.1.2 Data Client to TM Interface 25

5.1.3 TM to SD Interface 25

5.2 Sensing Manager Tasking Function 26

5.2.2 Data Manager 27

5.2.3 Data Client 28

5.2.4 Data Consumer 28

5.2.5 Data Manager to Data Consumer Interface 28

5.3 SCOS Messaging 29

5.3.1 Message Encoding 29

5.3.2 Message Transport protocols 30

5.3.3 Response Codes 30

5.4 Primitives 30

5.4.1 SD<>TM Messages 31

5.4.2 DCli<>TM Messages 36

5.4.3 SD<>DM Messages 41

5.4.4 DCon<>DM Messages 44

5.4.5 TM<>DM Messages 50

6. System Administration and Security 55

6.1 Administration 55

6.1.1 SD Administration 55

6.1.2 Sensing Task Administration 56

6.1.3 SCOS Platform Behavior Specification 57

6.2 Security Systems 57

6.2.1 Scope 57

6.2.2 Authentication, Confidentiality, and Integrity 58

6.2.3 Authorization 58

Annex A Informative: Reference Applications 59

Annex B (Informative and Normative): Metadata Specification 61

Annex C Normative Functional Requirements 77

Annex D SCOS Operational Modes 82

Annex E SCOS Topology Examples 86

Annex F System Policy Model 88

Annex G Informative: Latency Requirements for Scans 96

Annex H Informative: Regulatory Technical requirements 97

Annex I Device and System Security Recommendations 98

Annex J Radio performance requirements 99

Annex K (informative) Sensing 100

Annex L References 101

Annex M (informative) Bibliography 102