

ISO 22669:2021-06 (E)

Space data and information transfer systems - Space link extension (SLE) - Return-a-ll-frames service specification

CONTENTS

<u>Section</u>	<u>Page</u>
1 INTRODUCTION.....	1-1
1.1 PURPOSE OF THIS RECOMMENDED STANDARD.....	1-1
1.2 SCOPE.....	1-1
1.3 APPLICABILITY.....	1-1
1.4 RATIONALE.....	1-2
1.5 DOCUMENT STRUCTURE.....	1-2
1.6 DEFINITIONS, NOMENCLATURE, AND CONVENTIONS.....	1-5
1.7 REFERENCES.....	1-13
2 DESCRIPTION OF THE RETURN ALL FRAMES SERVICE.....	2-1
2.1 OVERVIEW.....	2-1
2.2 SPACE LINK EXTENSION REFERENCE MODEL.....	2-1
2.3 SERVICE MANAGEMENT.....	2-3
2.4 ARCHITECTURE MODEL—FUNCTIONAL VIEW.....	2-4
2.5 ARCHITECTURE MODEL—CROSS SUPPORT VIEW.....	2-7
2.6 FUNCTIONAL DESCRIPTION.....	2-8
2.7 OPERATIONAL SCENARIO.....	2-17
2.8 SECURITY ASPECTS OF THE SLE RAF TRANSFER SERVICE.....	2-18
3 RAF SERVICE OPERATIONS.....	3-1
3.1 GENERAL CONSIDERATIONS.....	3-1
3.2 RAF-BIND.....	3-15
3.3 RAF-UNBIND.....	3-22
3.4 RAF-START.....	3-26
3.5 RAF-STOP.....	3-31
3.6 RAF-TRANSFER-DATA.....	3-33
3.7 RAF-SYNC-NOTIFY.....	3-38
3.8 RAF-SCHEDULE-STATUS-REPORT.....	3-41
3.9 RAF-STATUS-REPORT.....	3-45
3.10 RAF-GET-PARAMETER.....	3-48
3.11 RAF-PEER-ABORT.....	3-52
4 RAF PROTOCOL.....	4-1
4.1 GENERIC PROTOCOL CHARACTERISTICS.....	4-1
4.2 RAF SERVICE PROVIDER BEHAVIOR.....	4-4

CONTENTS (continued)

<u>Section</u>	<u>Page</u>
ANNEX A DATA TYPE DEFINITIONS (NORMATIVE)	A-1
ANNEX B PRODUCTION STATUS (NORMATIVE)	B-1
ANNEX C CONFORMANCE MATRIX (NORMATIVE)	C-1
ANNEX D INDEX TO DEFINITIONS (INFORMATIVE)	D-1
ANNEX E ACRONYMS (INFORMATIVE)	E-1
ANNEX F INFORMATIVE REFERENCES (INFORMATIVE)	F-1

Figure

1-1 SLE Services Documentation	1-4
2-1 Return Space Link Processing SLE-FG	2-4
2-2 RAF Service Production and Provision	2-6
2-3 Example of the Management and Provision of RAF Service	2-7
2-4 Simplified RAF Service Provider State Transition Diagram	2-10
2-5 Communications Realization of RAF Service	2-12
2-6 Buffers and Delivery Modes.....	2-17
B-1 RAF Production Status Transitions	B-1

Table

2-1 RAF Operations	2-9
3-1 Setting of RAF Service Configuration Parameters.....	3-6
3-2 RAF-BIND Parameters.....	3-16
3-3 RAF-UNBIND Parameters	3-23
3-4 RAF-START Parameters.....	3-27
3-5 RAF-STOP Parameters.....	3-31
3-6 RAF-TRANSFER-DATA Parameters.....	3-33
3-7 RAF-SYNC-NOTIFY Parameters.....	3-38
3-8 RAF-SCHEDULE-STATUS-REPORT Parameters.....	3-42
3-9 RAF-STATUS-REPORT Parameters.....	3-45
3-10 RAF-GET-PARAMETER Parameters	3-48
3-11 RAF Parameters.....	3-50
3-12 RAF-PEER-ABORT Parameters.....	3-52
4-1 Provider Behavior	4-6
4-2 Event Description References.....	4-13
4-3 Predicate Descriptions	4-13
4-4 Boolean Flags	4-14
4-5 Compound Action Definitions.....	4-14
B-1 Production Status Changes and Notifications.....	B-2
B-2 Effect of Production Status on Operations	B-3
C-1 Conformance Matrix for RAF Service (Operations).....	C-1
C-2 Conformance Matrix for RAF Service (Other Requirements)	C-2