ISO 10537:2016-11 (E)

Space data and information transfer systems - Encapsulation service

Contents

Page

1 INTRODUCTION 1-1

1.1 PURPOSE 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 CONVENTIONS AND DEFINITIONS 1-2
1.7 REFERENCES 1-5

2 OVERVIEW 2-1

2.1 CONCEPT OF ENCAPSULATION SERVICE 2-1
2.2 FEATURES OF ENCAPSULATION SERVICE 2-2
2.3 ADDRESSING 2-3
2.4 SERVICE DESCRIPTION 2-3

3 SERVICE DEFINITION 3-1

3.1 OVERVIEW 3-1
3.2 SERVICE PARAMETERS 3-1
3.3 SERVICE PRIMITIVES 3-2

4 DATA UNITS AND PROCEDURES 4-1

4.1 SPACE PACKET 4-1
4.2 ENCAPSULATION PACKET 4-1
4.3 PROCEDURES AT THE SENDING END 4-7
4.4 PROTOCOL PROCEDURES AT THE RECEIVING END 4-8

5 MANAGED PARAMETERS 5-1

6 SECURITY 6-1

6.1 SECURITY BACKGROUND 6-1
6.2 SECURITY CONCERNS 6-1
6.3 POTENTIAL THREATS AND ATTACK SCENARIOS 6-1
6.4 CONSEQUENCES OF NOT APPLYING SECURITY 6-2

ANNEX A ACRONYMS (Informative) A-1
ANNEX B INFORMATIVE REFERENCES (Informative) B-1
ANNEX C CHANGES FROM REFERENCES [B2]-[B4] (Informative) C-1

Figure Page

1-1 Bit Numbering Convention 1-4
2-1 Concept of Encapsulation Service 2-1
4-1 Encapsulation Packet Structural Components 4-2
4-2 Packet Header 4-3
4-3 Internal Organization of Encapsulation Service (Sending End) 4-7
4-4 Internal Organization of Encapsulation Service (Receiving End) 4-8

Table

4-1 Interpretation of Length of Length Field 4-4
4-1 Encapsulation Packet Lengths, Depending on the Length of the Packet Header 4-6
5-1 Managed Parameters for Encapsulation Service (Space Packet Used) 5-1
5-2 Managed Parameters for Encapsulation Service (Encapsulation Packet Used) 5-1
C-1 Terms That Have Been Changed from Reference [B2] C-2
C-2 Terms That Have Been Changed from Reference [B3] C-2
C-3 Terms That Have Been Changed from Reference [B4] C-3