INTERNATIONAL STANDARD

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Space data and information transfer systems — Space link extension (SLE) — Forward space packet service specification

Systèmes de transfert des informations et données spatiales — Extension de liaisons spatiales (SLE) — Spécification d'envoi de données spatiales par paquets

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This document was prepared by the Consultative Committee for Space Data Systems (CCSDS) (as CCSDS 912.3-B-3, August 2016) and was adopted (without modifications) by Technical Committee ISO/TC 20, *Space vehicles,* Subcommittee SC 13, *Space data and information transfer systems*.

This third edition cancels and replaces the second edition (ISO 22672:2011), which has been technically revised.

The main changes compared to the previous edition are as follows:

— adds clarifications and corrections.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

CCSDS RECOMMENDED STANDARD FOR SLE FSP SERVICE

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CCSDS RECOMMENDED STANDARD FOR SLE FSP SERVICE

1 INTRODUCTION

1.1 PURPOSE OF THIS RECOMMENDED STANDARD

This Recommended Standard defines the Forward Space Packet (FSP) service in conformance with the transfer services specified in reference [1], *Cross Support Reference Model—Part 1: SLE Services*. The FSP service is a Space Link Extension (SLE) transfer service that enables a mission to send Space Packets to a spacecraft in sequence-controlled or expedited mode.

1.2 SCOPE

This Recommended Standard defines, in an abstract manner, the FSP service in terms of:

 a) the operations necessary to provide the transfer service;

 b) the parameter data associated with each operation;

 c) the behaviors that result from the invocation of each operation; and

 d) the relationship between, and the valid sequence of, the operations and resulting behaviors.

It does not specify:

 a) individual implementations or products;

 b) the implementation of entities or interfaces within real systems;

 c) the methods or technologies required to radiate Space Packets to a spacecraft and to acquire telemetry frames from the signals received from that spacecraft for extraction of the Operational Control Field;

 d) the methods or technologies required for communications; or

 e) the management activities necessary to schedule, configure, and control the FSP service.

NOTE – While the FSP service as described in reference [1] is conceived to handle a variety of packet data structures, this version of the FSP Recommended Standard is restricted to the handling of Space Packets as defined in reference [6].

This version of the FSP Recommended Standard is specific to the transfer of Space Packets to be transmitted via the Telecommand protocol stack as defined in references [3], [4], and [5]. The Cross Support Reference Model (reference [1]) specifies that the FSP service may also be used in conjunction with the Advanced Orbiting System protocol stack, but that mode of operation is outside the scope of this version of the Recommended Standard.