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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 46527-2025

**Space data and information transfer systems - Operation of
CFDP over encapsulation service**

空间数据与信息传输系统 封装包协议承载文件传输协议（CFDP）操作
(English Translation)

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document is modified to adopt ISO.20105.2015 "File Transfer Protocol for Space Data and Information Transmission Systems Using Packet Encapsulation".

(CFDP) operation.

This document has undergone significant structural adjustments compared to ISO.20105.2015.A table comparing the structural numbering of the two documents is available here.

Appendix A.

This document differs significantly from ISO.20105.2015. The relevant clauses are indicated in vertical margins.

Single lines (|) are indicated. A summary of these technical differences and their causes can be found in Appendix B.

The following editorial changes have been made to this document.

---To align with existing standardization documents, the standard name has been changed to "Space Data and Information Transmission System Encapsulation Packet Protocol Bearer Document".

CFDP Operation;

---A note has been added to Figure 1 explaining the meaning of the dashed and solid lines;

---Notes in version 3.4.4.3 have been deleted.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed and is under the jurisdiction of the National Technical Committee on Standardization of Aerospace Technology and Its Applications (SAC/TC425).

1 Scope

This document specifies the file transfer protocol using packet encapsulation for communication between space and ground, between ground and space, and between space and space.

The transmission architecture of CFDP, the underlying services of the CFDP protocol, and the encapsulation packet protocol that works in conjunction with the CFDP protocol.

This document applies to system designs that use encapsulation packet protocols to carry CFDP protocols.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

GB/T 42038 File Transfer Protocol for Spatial Data and Information Transmission Systems (GB/T 42038-2022, ISO 17355:2007) NEQ GB/T 42041 Aerospace Terminology. Space

Data and Information Transmission GB/T 43375 Encapsulation Protocol for Space Data and Information Transmission Systems (GB/T 43375-2023, ISO 10537:2016) MOD)

3 Terms and Definitions

The terms and definitions defined in GB/T 42041 and GB/T 42038 apply to this document.

4 Abbreviations

The following abbreviations apply to this document.

LEO. Low Earth Orbit SAP. Service Access Point SDU. Service Data Unit SLE. SpaceLink Extension