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

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**Space data and information transfer systems - IP over space
data link protocols**

空间数据与信息传输系统 空间数据链路协议承载IP协议

(English Translation)

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Table of Contents

Preface
1 Scope
2 Normative References
3 Terms and Definitions
4 Abbreviations
5 General Principles
5.1 Related Concepts
5.2 Business Overview
5.3 Functional Overview
5.4 IPE Concept and Principles
6 Business
6.1 Overview
6.2 Primitives
6.3 Parameter
6.4 Lower-level services associated with IPE
6.5 IPoC Business Primitives
7 Agreement Procedures 6.
7.1 Sequence Number Convention
7.2 Protocol Data Unit
7.3 Sending End Processing Flow
7.4 Receiver Processing Flow
Appendix A (Informative) A table comparing the structural designations of this document with those of ISO 20206:2015
Appendix B (Informative) Technical Differences Between This Document and ISO 20206:2015 and Their Reasons
Appendix C (Informative) Network Perspective
Appendix D (Informative) End-to-end uplink and downlink diagram
Appendix E (Informative) IPE Header Protocol Identifier
Reference

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 20206:2015 "Space data and information transmission systems - IP extension protocol for space data links".

Compared with ISO 2020 6.2015, this document has undergone many structural adjustments. A comparison table of the structural numbering changes between the two documents is provided.

See Appendix A.

This document differs significantly from ISO 2020 6.2015. 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 standards, the standard name has been changed to "Space Data Link Protocol Bearer IP for Space Data and Information Transmission Systems".

protocol";

---The sections on principle definitions, document structure, and reference documents in Chapter 1 of ISO 20206:2015 have been removed;

---Informative Annex A "Safety, Space Numbering Registries and Patents" and Annex D "References" of ISO 2020 6.2015 have been deleted.

literature";

---Informative references to several protocols related to space data links have been removed.

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 general principles, services, and protocol procedures for carrying IP protocol data transmission over space data links.

This document applies to system designs that use the Space Data Link Protocol to carry IP 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.

This document has no normative references.

3 Terms and Definitions

The following terms and definitions apply to this document.

Delimited

Numerical values with known and finite length properties are used to describe data in a processing context.

[Source. GB/T 42041-2022, 3.1.26] 3.2 Protocol data unit of the Internet Protocol.

Note: This includes all IP data types, such as IPv4, IPv6, etc.

spacelink

Communication links between a spacecraft and its corresponding ground system or between two spacecraft.

Note: A space link contains one or more one-way or two-way physical channels.

[Source. GB/T 42041-2022, 3.3.1] 3.4 physical channel the physical channel used to transmit bit streams in a space link.

[Source. GB/T 42041-2022, 3.1.19]

4 Abbreviations

The following abbreviations apply to this document.