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

GB/T 43375-2023

**Space data and information transfer systems - Encapsulation
packet protocol**

空间数据与信息传输系统 封装包协议

(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 10537:2016 "Spatial Data and Information Transmission System Encapsulation Business":

Compared with ISO 10537:2016, this document has many structural adjustments: A comparison list of structural number changes between the two documents See Appendix A:

Compared with ISO 10537:2016, there are many technical differences between this document and the clauses involved in the outer margin of the page:

Single lines (l) are marked: A list of these technical differences and their causes is provided in Appendix B:

The following editorial changes have been made to this document:

---In order to coordinate with existing standards, the name of the standard is changed to "Spatial Data and Information Transmission System Encapsulation Package Protocol";

---Deleted the notes in 2:2, 3:2, 3:2:2:2, 3:3:2:2, 3:3:3:2, 4:2:1, 4:2:2:8 in ISO 10537:2016;

---Deleted Appendix B (Informative), "References" and Appendix C (Informative) "Reference Changes" of ISO 10537:2016:

Please note that some content in this document may be subject to patents: The publisher of this document assumes no responsibility for identifying patents:

1 Scope

This document specifies the business, data unit format, protocol procedures and management parameters of the encapsulated packet protocol in the field of space data and information transmission:

etc: content:

This document applies to protocols at the network layer and above in the communication links between ground systems and spacecraft, and between spacecraft:

Data units are encapsulated:

2 Normative reference documents

The contents of the following documents constitute essential provisions of this document through normative references in the text: Among them, the dated quotations for undated referenced documents, only the version corresponding to that date applies to this document; for undated referenced documents, the latest version (including all amendments) applies to this document:

GB/T 42041-2022 Aerospace terminology space data and information transmission

3 Terms and definitions

The terms and definitions defined in GB/T 42041-2022 and the following apply to this document:

synchronous

A fixed time relationship between one event sequence and another event sequence within an error tolerance:

delimited

Data has the characteristic of known and finite length:

physical channel the physical channel used to transmit bit streams in a space link:

[Source: GB/T 42041-2022,3:1:19] 3.4 space linkspacelink A communications link between a spacecraft and corresponding ground systems or between two spacecrafts:

Note: A space link consists of one or more unidirectional or bidirectional physical channels:

[Source: GB/T 42041-2022,3:3:1] 3.5 idle data Data that does not contain any information:

Note: Transmitting idle data is only to meet the needs of timing and synchronization: It is recommended to use an alternating bit sequence of "1" and "0":

[Source: GB/T 42041-2022,3:1:33]