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

**GB/T 34966.3-2017**

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**Internet-based transmission of GNSS augmentation information  
- Part 3: Data transmission format**

卫星导航增强信息互联网传输 第3部分：数据传输格式

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### Foreword

GB/T 34966 "satellite navigation to enhance information and Internet transmission" is divided into three parts.

--- Part 1. Broadcasting system;

--- Part 2. Interface requirements;

--- Part 3. Data transmission format. This section GB/T 34966 Part 3. This section drafted in accordance with GB/T 1.1-2009 given rules. This part is proposed by China Aerospace Science and Technology Corporation. This part by the National Aerospace Technology and Standardization Technical Committee (SAC/TC425), the national standard satellite Beidou Navigation Technology Technical Committee (SAC/TC544) centralized. This part of the drafting unit. China Aerospace Standardization Institute, Beijing University of Aeronautics and Astronautics, Beijing University of Posts and Telecommunications, Tsinghua University, China four-dimensional Surveying and Mapping Technology Co., Ltd. The main drafters of this section. Kangdeng list, Golden days, Zhou Yuxia, Huang Xiaohong, Zhou Ming, Yuan He Liang, Yan Dapeng, Xie Kun.

With the rapid development and widespread application of satellite navigation technologies, the demand and requirements for the performance of satellite navigation services are getting higher and higher, which promotes Satellite navigation enhancement technology has been gradually applied to various fields of application, thereby bringing about a growing demand for satellite navigation enhancement technology related standard specifications Sheng and urgent. This section focuses on the satellite navigation to enhance the data transmission format, in the preparation process fully consider China's satellite Navigation technology development and practical application, and cited the RTCM10403.2 "Differential Global Navigation System Services." This part of the characteristics of the satellite navigation for enhanced information transmission characteristics of the Internet, the new BDS data domain content, in accordance with the BDS, GPS, GLONASS, Galileo, QZSS chapters arranged in the order, regardless of the network RTK, special information, conversion parameters, etc., Remove the explanatory note in RTCM10403.2. Satellite Navigation Enhances Information Internet Transmission Part 3. Data transfer format

## 1 Scope

Part 3 of China's national standard for internet delivery of GNSS augmentation data, covering the data transmission format. This is the part that carries the content: the message types, their fields and how they are encoded on the wire. Format matters more here than in most data services, for two reasons. The messages are small and frequent - corrections that are seconds old are worth much less than corrections that are current - so the encoding is compact and binary rather than textual. And the receiver must be able to use a message it has never seen: a network will add message types as it adds capabilities, and a rover from an earlier generation has to keep working. Fixing the format nationally is what lets a Chinese network serve receivers built to it, and what lets a receiver move between provincial networks without reconfiguration. It also has to accommodate the BeiDou constellation alongside GPS, GLONASS and Galileo, which is where a Chinese standard has requirements the international formats did not originally carry.

GB/T 34966 provisions of this part of the Internet based on satellite navigation enhanced information used by the data transmission format and content. This section applies to the Internet in the environment of satellite navigation to enhance the design and implementation of information transmission.

## 2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version applies to this article Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 19391 Global Positioning System (GPS) terms and definitions

GB/T 27606 GNSS compliant receiver data autochange format BDS-SIS-ICD-

2.0 Compass satellite navigation system space signal interface file public service signal (version 2.0) [BeiDouNavigation

SatelliteSystemSignalInSpaceInterfaceControlDocument-OpenServiceSignal (Version2.0)]

GLONASS-ICD Global Navigation Satellite System GLONASS Interface Control File (GlobalNavigationSatellite

SystemGLONASSInterfaceControlDocumentNavigationalradiosignalInbandsL1, L2)

IS-GPS-200E GPS Management System Engineering and Integration Interface

Specification (GlobalPositionSystemsDirectorate SystemsEngineering IS-QZSS Quasi Zenith Satellite System (QZSS) User Interface Specification

(InterfaceSpecificationsfortheQuasi-Zenith SatelitesSystem) OS-SIS-ICD European GNSS (Galileo) Open Service Space Signal Interface Control File (EuropeanGNSSOpen ServiceSignalInSpaceInterfaceControlDocument)

### 3 Terms and definitions

GB/T 19391 defined and the following terms and definitions apply to this document.

**3.1 Differential data** differentialdata Differential correction data differentialcorrectiondata  
Various types of pseudorange observations, carrier phase observations, Doppler observations, satellite information, coordinate transitions used to correct user receiver observations Exchange information, track information and other data collectively.

**3.2 Differential message** differentialmessage Message The differential data in accordance with the provisions of the format, prefix, data length, parity and other information formed after the binary data stream. Note Each message has an identification field called a teletype number.