ICS 47.020.70
CCS U 65

NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 34966.1-2017

Internet-based transmission of GNSS augmentation information - Part 1: Broadcast architecture

卫星导航增强信息互联网传输 第1部分：播发体制

Issued on: December 29, 2017 **Implemented on: July 1, 2018**

Issued by: General Administration of Quality Supervision, Inspection and Quarantine;
Standardization Administration of the PRC

Table of Contents

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 1. 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 Posts and Telecommunications, China four-dimensional mapping Technology Co., Ltd., Beijing Airline Tian University, Tsinghua University. The main drafters of this section. Huang Xiaohong, Zhou Yuxia, Zhao Jun, Gordon list, Xie Kun, Zhou Ming, golden days. Satellite Navigation Enhances Information Internet Transmission Part 1. Broadcasting system

1 Scope

Part 1 of China's national standard for delivering satellite navigation augmentation data over the internet, covering the broadcast architecture. Raw GNSS positioning is accurate to a few metres, which is enough to navigate a car and nowhere near enough for surveying, machine control, precision agriculture or autonomous driving. Augmentation closes that gap: a network of reference stations at known positions measures the errors in the satellite signals - orbit, clock, ionosphere, troposphere - and sends corrections to users, who reach centimetre accuracy. The delivery problem is that corrections are only useful while they are fresh, and the natural channel is now the internet rather than a radio link. This part defines how such a service is arranged: reference stations feeding a processing centre, the centre generating correction streams, and a broadcaster distributing them to users who subscribe to the stream covering their area. Fixing the architecture nationally is what allows a receiver bought from one company to use corrections from another.

GB/T 34966 provisions of this part of the satellite navigation to enhance the performance of information transmission over the Internet, broadcast network performance, enhanced information and its closure Loading process, network entities and information exchange methods and security mechanisms and other requirements. This section applies to the Internet environment satellite navigation enhanced information broadcast system design and construction.

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 9390 navigation terminology

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

GB/T 34966.2 satellite navigation Enhanced information Internet transmission Part 2. Interface requirements

GB/T 34966.3 satellite navigation Enhanced information Internet transmission Part 3. Data transmission format

3 Terms and definitions

GB/T 9390, GB/T 19391, GB/T 34966.2 and GB/T 34966.3 defined by the following terms and definitions apply to this file.

3.1 Data Server dataserver Get data source data and calculation processing, generate enhanced information, and as HTTP/RSTP client to the broadcast server to send the seal Installed data server.

Note 1. A data server in the simplest configuration is an application running on a computer that calculates, encapsulates, and forwards data from a data source Broadcast server. The specific data package format see GB/T 34966.3. The data server can support the forwarding of data from the virtual reference station to the server The virtual reference station for information is understood as a single data source.

Note 2. In the distribution system, the data source, which is the source of the data, connects to the data server to provide it with a continuous stream of raw data. Each single data The source corresponds to and provides information data for a specific area, and must have a unique identifier in an advertisement server, that is, mount point. The attribute description parameters for the data source are compiled and stored in the source information table maintained by the advertisement server, including the data format used by the advertisement server, Location coordinates and other information. Related concepts of source information table see GB/T 34966.2.

3.2 Broadcast server broadcastserver Broadcasting system to receive data, organize and broadcast the server.

Note. As the core server of HTTP/RSTP in the advertisement network, the advertisement server receives the message from the data server or the user node on a listening port Out of the HTTP/RTSP subset of the request message and make a decision based on the request response. The broadcast server accepts the data server requests to receive uploads According to and finishing, accept user node request and send data source information or enhanced information data to the user node. The source information table is maintained on the broadcast server.