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GB/T 42979-2023

Performance requirements and test methods for position report/short message terminal of Global Navigation Satellite System (GNSS)

全球卫星导航系统（GNSS）位置报告/短报文型终端性能要求及测试方法

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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. Please note that some content in this document may be subject to patents. The publisher of this document assumes no responsibility for identifying patents. This document is proposed and administered by the Ministry of Industry and Information Technology of the People's Republic of China. This document was drafted by: China Electronics Technology Standardization Institute, Changsha Jinwei Information Technology Co., Ltd., Liaoning Tianheng Zhitong Defense Department Technology Co., Ltd., Hunan Matrix Electronic Technology Co., Ltd., and China Institute of Standardization. The main drafters of this document. Chen Qian, Yi Jiong, Wang Liliang, Peng Xiangyang, Zhang Ming, and Liu Shouhua. Global Navigation Satellite System (GNSS) Position Report/ Short message

terminal performance requirements and test methods

1 Scope

GB/T 42979-2023 sets the performance requirements and test methods for GNSS position report and short message terminals. These are the terminals that both fix their position and report it back over the satellite link - fishing vessel transponders, freight and hazardous goods trackers, and emergency beacons - and BeiDou's short message service makes them possible where there is no cellular coverage at all, which is precisely where they are relied on. The standard sets the classification and composition of the terminals, then the requirements on their functions and performance, and the test methods, covering the test conditions, the requirements on the test equipment, the test procedures and the simulation test scenarios, with the functional and performance tests set out in turn. It took effect on 1 April 2024.

This document specifies the classification and composition, functional requirements, and performance of Global Satellite Navigation System (GNSS) position reporting/short message terminals. Requirements and test methods. This document applies to the design and research of Global Satellite Navigation System (GNSS) position reporting/short message terminals (hereinafter referred to as user terminals). manufacturing, production and testing. Only user terminals that support Beidou RDSS refer to the implementation.

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 19391 Global Positioning System (GPS) terms and definitions

3.1 Terms and definitions The terms and definitions defined in

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

3.1.1 In addition to the functions of ordinary user terminals, it can also collect and query Beidou short messages, location and other information of subordinate users, and provide information to subordinate users. User terminal for broadcasting.

3.1.2 service frequencyservicefrequency The minimum time interval that allows a user terminal to apply for services from the Beidou Satellite Navigation System master control station twice in a row.

3.1.3 silentstatus The user terminal responds to the silent state setting command, does not

send Beidou RDSS inbound signals, and only receives signals.

3.1.4 Two-way device delay two-waytimedelay The moment when the outbound signal of a certain frame reaches the user terminal antenna interface is the same as the moment when the inbound signal responding to the frame starts to be transmitted from the user terminal antenna interface. time difference.

3.1.5 location report locationreport The user terminal provides the function of providing its own location information to designated users through the Beidou satellite navigation system. Note

1.Position reports are divided into ordinary position reports and RDSS position reports. Ordinary location reporting refers to the user terminal reporting its location through the Beidou RDSS link. The information is sent to the designated user; RDSS position report means that the user terminal calculates its position through the Beidou Satellite Navigation System main control station and sends the position information