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

GB/T 45434.1-2025

China standard time - Part 1: General principle

中国标准时间 第1部分：通则

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for

standardization work Part 1: Structure and drafting rules for standardization documents" Drafting is required.

This document is Part 1 of GB/T 45434 China Standard Time. GB/T 45434 has been published in the following parts. --Part 1: General; --Part 2: Metadata; --Part 3: Communiqué.

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document was proposed by the Equipment Development Department of the Central Military Commission.

This document is under the jurisdiction of the National Beidou Satellite Navigation Standardization Technical Committee (SAC/TC 544).

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Introduction

Standard time is widely used in communications, transportation, finance, scientific research, national defense construction and many other fields, affecting human production and life.

GB/T 45434 aims to clarify the generation, management and The service guidelines are to be composed of seven parts.

--Part 1: General. The purpose is to establish the generation, maintenance, comparison, publication and timing services applicable to China Standard Time. Basic requirements.

-- Part 2: Metadata. The purpose is to establish the content and format of data resources related to the generation and publication of China Standard Time.

The metadata entity and metadata attributes are defined in the format.

-- Part 3: Bulletin. The purpose is to establish the methods and requirements applicable to the compilation of the China Standard Time Bulletin.

--Part 4: Reference clock. The purpose is to establish the reporting, use and evaluation of reference clocks applicable to the generation of China standard time. Related requirements.

--Part 5: Comparison link. The purpose is to establish the BeiDou/Global Satellite Navigation System applicable to the generation of China's standard time.

Requirements for the use, management and maintenance of GNSS, satellite two-way and optical fiber time and frequency comparison links.

-- Part 6: Broadcasting. The purpose is to establish the requirements applicable to technical organizations for broadcasting China's standard time signal.

-- Part 7: Monitoring. The purpose is to establish the requirements applicable to technical organizations monitoring the Chinese standard time signal.

China Standard Time Part 1: General

1 Scope

This document specifies the generation, maintenance, comparison, publication and timing service requirements of China Standard Time.

This document applies to the generation, management and services of China Standard Time.

2 Normative references

GB/T 39267

GB/T 45434.3

JJF 1180

3.1 Terms and Definitions

The terms and definitions defined in GB/T 39267 and JJF 1180 and the following apply to this document.

3.1.1 Primary/secondary frequency standard

A device that reproduces the SI second or subsecond definitions.

3.1.2 clock ensemble time scale

The free atomic time is calculated by weighted average of the atomic clocks and comparison link data provided by various timekeeping laboratories.

3.1.3 China atomic time

The time produced by the clock group jointly produced by the China Standard Time Keeping Laboratory is adjusted with reference to PSFS or UTC.

3.1.4 China Standard Time

The time after the leap second adjustment of China Atomic Time.

Note. The starting point of CST is 00.00.00 on January 1, 2020 (UTC), and the unit is SI seconds (s).

3.1.5 physical realization of China standard time

The China Standard Time Keeping Laboratory established and maintains the physical realization of CST.

Note. China Standard Time is represented by CST(k), where k is the unit code of the laboratory.

Beijing Institute of Radio Measurement and Testing (BIRM), Beijing Satellite Navigation Center (BSNC), National Institute of Metrology (NIM) and Chinese Academy of Sciences National Time Service Center (NTSC).