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

GB/T 7408.1-2023

Replacing GB/T 7408-2005

**Date and time - Representations for information interchange -
Part 1: Basic rules**

日期和时间 信息交换表示法 第1部分：基本原则
(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 Part 1 of GB/T 7408 "Date and Time Information Exchange Representation": GB/T 7408 has released the following part:

---Part 1: Basic principles:

This document replaces GB/T 7408-2005 "Data Element and Exchange Format Information Exchange Date and Time Representation" and is consistent with Compared with GB/T

7408-2005, in addition to structural adjustments and editorial changes, the main technical changes are as follows:

- Changed the scope of the file (see Chapter 1, Chapter 1 of the:2005 edition);
- Added "time", "time axis", "time scale", "time scale unit", "clock timing system", "24-hour system", "coordinated universal time of day" and "standards" Time "Local Time Scale" "Time of Day" "Calendar" "Century Year" "Weekday Calendar" "Time Shift" "Clock Seconds" "Clock Minutes" "Clock Hours hour" "calendar day of the week" "calendar day of the month" "calendar day of the year" "calendar week of the year" "year" "date and time Expression", "date and time representation", "time scale component", "decimal symbol" terms and definitions (see 3.1);
- Changed the "Date", "Time", "Time Interval", "Time Length (Duration)", "Cycle Time Interval", "Coordinated Universal Time" and "Day's Local Time" "Gregorian calendar" "Normal year" "Leap year" "Leap second" "Second" "Minute" "Hour" "Calendar date" "Sequential date" "Week date" "Day (day)" "calendar day" "week" "calendar week" "month" "calendar month" "year" "calendar year" "century" "basic format" "extended format" Terms and definitions of "full representation", "reduced precision representation", "decimal representation" and "extended representation" (see 3.1,:2005 Edition Chapter 3);
- Deleted the term and definition of "truncated representation" (see:2005 version 3:22);
- Added "3:2 Symbols", as well as "Overview", "Time Scale Component Symbols" and "Composite Component Symbols" (see 3.2:1, 3:2:2, 3:2:3);
- Changed the "symbols replacing numbers or signs", "identifiers" and "separators" (see 3.2:4, 3:2:5, 3:2:6,:2005 version 5:1:1, 5:1:2, 4:5);
- Changed the "Basic Rules", "Gregorian Calendar", "Weekly Calendar", "Extended Representation" and "Leading Zeros" (see 4.1, 4:2:1, 4:2:2, 4:4, 4:5, 2005 edition 4:1, 4:3:2:1, 4:3:2:2, 4:7, 4:8);
- Added "24-hour format" and "time scale components and units" (see 4.2:3, 4:3);
- Deleted "Features common to single-term representation and combined representation", "Time unit", "Date", "Characters used in representation" and "Truncation" Short representation" "agreed by both parties" (see:2005 edition 4:2, 4:3:1, 4:3:2:3, 4:4, 4:6, 4:9);
- Changed the "date and time representation" (see Chapter 5, Chapter 5 of the:2005 edition) and deleted the "truncated representation" in all representations Law" (see 5.2:1:3, 5:2:2:2, 5:2:3:3, 5:3:1:4, 5:4:2, 5:6:4 of the:2005 edition):

This document is equivalent to ISO 8601-1:2019 "Date and time information exchange representation Part 1: Basic principles":

This document has made the following minimal editorial changes:

---Incorporated the amendments to ISO 8601-1:2019/AMd1:2022, the outer margins of the clauses involved are marked with vertical Straight double lines (||) are marked;

---Added examples (see 3.1:2:2, 3.1:2:4, 3.1:2:6, 3.1:2:11, 3.1:2:16, 3.1:2:19, 3.1:2:21):

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Introduction

GB/T 7408 aims to provide a standard date and time format representation for information exchange to minimize misunderstandings and confusion:

risk: GB/T 7408 is planned to consist of 2 parts:

---Part 1: Basic principles: The purpose is to specify Gregorian calendar dates and times and their combinations based on the 24-hour clock representation:

---Part 2: Extensions: The purpose is to specify the extended content of date and time representation and ensure the date and time when exchanging information:

accuracy of representation:

GB/T 7408 (all parts) adopts ISO 8601 (all parts) in one-to-one correspondence to ensure that the date and time format representation is consistent with International standards: By formulating this series of standards, the relevant standard system will be improved:

Date and time information exchange representation Part 1: Basic Principles

1 Scope

This document specifies the representation of Gregorian calendar dates and times and their combinations based on the 24-hour clock:

This document applies to date and time representations involved in the exchange of information: It also applies to times and times based on Coordinated Universal Time (UTC):

Time-shifted representation:

This document does not apply to non-Gregorian date representations or non-24-hour time representations: This document also does not give date and time the character encoding of the representation:

2 Normative reference documents

This document has no normative references:

3 Terms, definitions and symbols

3.1

Terms and definitions the following terms and definitions apply to this document:

3.1.1

Basic concepts 3.1.1.1 Date date the time on the calendar time scale:

Note: Commonly used date formats include calendar date, sequential date, or weekday date:

3.1.1.2

time time

A mark of a moment or interval of time on a specific time scale:

Note 1: The term "time" is often used in everyday language and can be used only when its meaning is unambiguous in the context:

Note 2: On a time scale consisting of consecutive time intervals, such as a clock system or a calendar, different moments in time may be represented by the same time:

Note 3: This definition is close to the definition of the term "date" in 113-01-12 in IEC 60050-113:2011:

3.1.1.3

moment instant

Points on the timeline:

Note: Transient events occur at a specific moment:

[Source: IEC 60050-113:2011,113-01-08] 3.1.1.4 Time axis the unique axis on which instantaneous events are arranged for mathematical representation in terms of space-time and time: