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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 46917.2-2026

Standard semantic knowledge base - Part 2: Requirements for the data interface

标准语义知识库 第2部分：数据接口要求

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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 2 of GB/T 46917, "Standard Semantic Knowledge Base". GB/T 46917 has already published the following parts.

1.General Requirements for Semantic Expression of Standard Content;

2.Data Interface Requirements. Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed and is under the jurisdiction of the National Standards Digitalization Standardization Working Group (SAC/SWG29). This document was drafted by: China Southern Power Grid Science Research Institute Co., Ltd., China National Institute of Standardization, Inner Mongolia University, and South China University of Technology. China Aviation Integrated Technology Research Institute, Machinery Industry Instrumentation Integrated Technology and Economic Research Institute, China Southern Power Grid Co., Ltd. Tongfang Knowledge Network Digital Technology Co., Ltd., Guangdong Provincial Institute of Standardization, China Civil Aviation Information Network Co., Ltd., and China Railway Construction Heavy Industry Group Co., Ltd. Group Co., Ltd., Zhongshan Shenzhong Standard Quality Research Center, Runshen Standardization Technical Service (Shanghai) Co., Ltd., Dongguan University of Technology, Shandong Port Qingdao Port Group Co., Ltd., Shenzhen Silicon Harbour Technology Co., Ltd., and Guangzhou Xingsen Fast Circuit Technology Co., Ltd. The main drafters of this document are. Guo Qi, Lin Zhengping, Liu Xize, Liu Weidong, Sun Hongjun, Zhou Yuzhong, Wang Yiyi, Cai Yi, Pan Xin, Li Yang, and Niu Nana. Wang Qinghong, Lu Tielin, Song Yufei, Lin Jie, Xiang Shengchang, Wang Ruoya, Wang Jiasheng, Liu Hongyang, Du Zhanhao, Hua Ruzhong, Zhang Bingyan, Li Yixuan, Zhang Zhaoyun Wu Xin, Hong Penghui, and Chen Liyang.

With the advancement of the digital, networked, and intelligent transformation of the economy and society, the digitalization of standards has become an inevitable trend. (Standard content language) Semantic representation is the foundation for building standard semantic knowledge bases and for the digital transformation of standards. Various organizations need to independently develop standard semantic knowledge... The construction of a standards library aims to meet the new era's demand for standards knowledge and better leverage the value of standards. However, at present, such activities are lacking. The requirements of the relevant activities did not address how to identify the main aspects and key points of semantic expression of standard content, or how to reasonably utilize key technologies to construct a complete [system/structure]. Accurate standard semantic knowledge bases and other measures form effective norms. GB/T 46917, "Standard Semantic Knowledge Base," aims to propose general requirements for the semantic expression of standard content and establish cross-industry and cross-domain

standards. The unified semantic units and expression rules transform standard content into knowledge and data with semantic relationships, solving the problem of scattered standard content. Addressing the issues of semantic ambiguity and inefficient application, this solution supports intelligent retrieval, dynamic integration, and scenario-based reuse of standard knowledge. It utilizes semantic representation based on standard content. The expression methods and application scenarios of GB/T 46917 are proposed to consist of the following three parts.

1.General Requirements for Semantic Expression of Standard Content. The purpose is to provide expressive units and construct processes for semantic expression of standard content. General requirements such as process, expression rules, and data storage provide a framework for the construction of standard semantic knowledge bases and the development of standard knowledge application tools for various industries. Provide evidence.

2.Data Interface Requirements. The purpose is to provide a unified standard semantic representation for the circulation of various standard content semantic representation units. Knowledge base data interface specifications enhance the interoperability of standards across various systems and related fields, providing a framework for building industry-specific standards. The semantic knowledge base data interface provides the basis.

3.Semantic Integration Technical Requirements. The aim is to ensure that standard semantic knowledge bases can be integrated into objects within application scenarios. Computer systems understand and execute (documents, software, hardware, models, databases, etc.), enabling the integration of standard semantic knowledge bases with... Consistency in changes to semantic representation units. This document is Part 2 of GB/T 46917 "Standard Semantic Knowledge Base", a crucial link in the circulation of standard semantic knowledge. It proposes... Standard semantic knowledge base data interface framework, interface definition, etc., promote the in-depth application of standard semantic knowledge base in various fields, and contribute to the sharing of standard knowledge. It provides fundamental support for the innovation of digital services for sharing and standards, and helps promote the high-quality development of my country's standardization work. Standard Semantic Knowledge Base Part

1 Scope

GB/T 46917.2-2026 is the Chinese national standard covering the interface through which a semantic standards base is queried - the query patterns, the returned structures, the versioning of the content behind it and the authentication of who may read what. Part 2 of the series, first edition, with Parts 1 and 3. It was issued on 28 January 2026 and has been in force since 1 August 2026, as a first edition. The document is under the responsibility of the Standardization Administration of China. This page is published from the official record

of the 2026 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

This document establishes the overall framework for the standard semantic knowledge base data interface, specifying the interface communication method, basic interface, advanced interface, and connection method. Return status code and interface management requirements. This document applies to the development, data exchange, and information sharing of standard semantic knowledge base data interfaces.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 17143.6 Information Technology - Open Systems Interconnection - System Management - Part

3 Terms and Definitions

The terms and definitions defined in GB/T 46917.1 and the following terms and definitions apply to this document.

3.1 data interface The abstraction of data formats, operation sets, and standardized communication protocols defined to enable data interaction between the knowledge base and external systems. Image layer. [Source: GB/T 45393.5-2025, 3.1, with modifications]

3.2 log data Data that records events that occur during system operation. [Source: GB/T 38672.1-2020, 3.3]

4 Overall Framework

4.1 Overview According to the relevant requirements of the standard semantic knowledge representation unit in GB/T 46917.1, the interface framework of the standard semantic knowledge base is shown in Figure 1. This document describes the use of standard data by stakeholders in the knowledge base, comprehensively abstracting and decoupling data and business applications, including... Interfaces between standard semantic data providers, standard semantic knowledge base interface builders, and standard semantic knowledge data users. Interface base This requirement can be referenced from the relevant content of GB/T 45393.5-2025.