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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 46917.3-2026

Standard semantic knowledge base - Part 3: Technical requirements for semantic integration

标准语义知识库 第3部分：语义集成技术要求

Issued on: January 28, 2026 **Implemented on: August 1, 2026**

Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC

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1 Scope

GB/T 46917.3-2026 is the Chinese national standard covering joining the vocabularies of different standards into one knowledge base - the mapping and alignment of terms that mean the same thing under different names, the conflicts that surface when they do not, and the provenance kept for each assertion. Part 3 of the series, first edition. 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 specifies the pre-integration preparation, integration implementation, post-integration processing, and data integration procedures for standard semantic knowledge bases and application scenario object semantic integration. According to safety requirements. This document applies to the development and construction of application scenario objects (databases, documents, models, software, etc.) in various industries, in conjunction with standard semantic knowledge bases. Semantic integration.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are listed below. 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 28452 General Security Technical Requirements for Information Security Application Software Systems

GB/T 37988 Information Security Technology - Data Security Capability Maturity Model

GB/T 46917.1-2026 Standard Semantic Knowledge Base Part

3 Terms and Definitions

The terms and definitions defined in GB/T 46917.1-2026 and GB/T 46917.2-2026, as well as the following terms and definitions, apply to this document.

3.1 The main body that applies standard semantic knowledge bases in business or technical scenarios.

Note. Application scenarios include databases, documents, models, and software.

3.2 integration By using methods such as API calls and model fusion, semantic representation units of relevant standard content in the semantic knowledge base are integrated into application scenarios. The process of creating objects and meeting the object-related requirements of the application scenario.

4.1 Basic Requirements

4.1.1 Application scenario objects should be open and integrable, and support semantic expression.

4.1.2 Structured application scenario objects (such as databases) and the integrated standard content semantic representation units should have the same tags, or be built... Establish label mapping.

4.1.3 For unstructured application scenarios (such as documents, software, and models)

that require semantic integration with standard semantic knowledge bases, this should be done through... Integration can be achieved through API calls, or by converting the content into a structured database and then integrating it with relevant standard semantic expression units.

8 Data Security

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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 3 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;

3.Semantic Integration Technology 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: Guangdong Provincial Institute of Standardization, China National Institute of Standardization, Hong Kong-Zhuhai-Macau Bridge Authority, Zhejiang University, and China Machinery Research Institute. Standards and Technology Research Institute (Beijing) Co., Ltd., China Southern Power Grid Science Research Institute Co., Ltd., Zhongshan Ophthalmic Center of Sun Yat-sen University, China Southern Power Grid Science Research Institute Co., Ltd. Fangwang Power Grid Co., Ltd., CRRC Qingdao Sifang Locomotive & Rolling Stock Co., Ltd., The First Affiliated Hospital of Guangzhou University of Chinese Medicine, Guangzhou Haorui Information

Technology Co., Ltd., Guangdong Academy of Sciences Certification Co., Ltd., and Runshen Standardization Technical Service (Shanghai) Co., Ltd. The main drafters of this document are. Hu Wei, Wang Jiasheng, Sun Hongjun, Jing Qiang, Wang Juan, Liu Xize, Liu Yang, Liu Rui, Lin Haotian, Gu Fu, and Li Shuliang. Chao Yichao, Cui Xiaolei, Du Jiuchang, Lin Zhengping, Yang Tingzhi, Zhang Yuqing, Lin Duoru, Peng Daoxin, Gao Jie, Wang Ruoya, Fan Yihua, Ye Qiuyi Zhang Xiangjie and Song Xiaomei.

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, there is a lack of related activities. The activity requirements did not address how to identify the main aspects and key points of semantic expression of standard content, how to rationally utilize key technologies, and how to construct a complete and accurate system. Effective standards are formed through standard semantic knowledge bases, etc. 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 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 across 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 interface specifications enhance the interoperability of standards across various systems and related domains, and provide a framework for building standard semantics for each industry. The 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 application scenarios. Computer systems