

ICS 35.100.01  
CCS L 66



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

**GB/T 46797-2025**

---

**OID-based resolution framework for heterogeneous identifiers  
and locators**

基于对象标识符（OID）的异构标识符和定位符解析框架  
(English Translation)

**Issued on: December 2, 2025**

**Implemented on: July 1, 2026**

---

**Issued by: State Administration for Market Regulation**

## Table of Contents

- Preface
- 1 Scope
- 2 Normative References
- 3 Terms and Definitions
- 4 Abbreviations
- 5 General Rules
- 6 Requirements for Heterogeneous Identifier/Locator Resolution Framework
  - 6.1 Supports operations independent of existing identifiers
  - 6.2 Supports identifiers and locators separately.
  - 6.3 Support for heterogeneous existing identifiers
  - 6.4 Guarantee the uniqueness of existing identifiers
  - 6.5 Supports new identifiers
  - 6.6 Supports fault tolerance and stability
  - 6.7 Supports end-to-end identification
  - 6.8 Supports authentication and authorization
- 7 OID-based heterogeneous identifier/locator resolution framework
  - 7.1 General Framework
  - 7.2 Registration of Object Identifiers, Identifiers, and Locators
  - 7.3 Scenarios for parsing heterogeneous IDs and LOCs
- Appendix A (Informative) Scenarios where OID is directly assigned as an ID to terminal devices
  - A.1 Overview
  - A.2 Terminal Device ID/LOC/OID Registration Process
  - A.3 Scenarios with a Gateway
- Reference

## 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 modified to adopt ITU-TX.675.2015 "A framework for resolving

heterogeneous identifiers and locators based on object identifiers (OIDs)".

This document has undergone the following structural adjustments compared to ITU-T X.675.2015.

---Chapter 5 of ITU-T X.675.2015 has been removed;

Chapters 5 through 7 correspond to Chapters 6 through 8 of ITU-T X.675.2015, respectively. Section 7.1.1 corresponds to ITU-T...

The suspension section between 8.1 and 8.1.1 in ITU-T X.675.2015, and 7.1.2 to 7.1.4 corresponding to 8.1.1 in ITU-T X.675.2015.

8.1.3 and 7.2.1 correspond to the suspension section between 8.2 and 8.2.1 in ITU-T X.675.2015, and 7.2.2 and 7.2.3 correspond to ITU-T X.675.2015 respectively.

ITU-T X.675.2015 8.2.1 and 8.2.2; 7.3.1 correspond to the suspension section between 8.3 and 8.3.1 in ITU-T X.675.2015.

7.3.2 and 7.3.3 correspond to 8.3.1 and 8.3.2 of ITU-T X.675.2015, respectively.

The technical differences between this document and ITU-T X.675.2015, and the reasons therefor, are as follows.

---Added normative reference to GB/T 33745-2017 (see Chapter 3);

---The definition of "identifier" has been changed (see 3.1) to be consistent with GB/T 33745-2017;

---The term "object identifier" and its definition (see 3.3) have been added to help users understand this document;

---The term "Internet of Things (IoT)" and its definition have been removed, so that the use cases of this document are not limited to the Internet of Things;

---The suspended paragraphs between Chapter 7 and 7.1, and between Chapter 8 and 8.1 in ITU-T X.675.2015 have been deleted; the specific details are listed below.

Require.

The following editorial changes have been made to this document.

---Change the second sentence in the definitions of the terms "locator" and "identifier registry" to a note;

---The Zigbee trademark has been removed from Figure 1;

---The title of Chapter 5, "Considerations on the Resolution Framework for Heterogeneous Identifiers and Locators," has been changed to "General Rules," and part of Chapter 5 has been deleted.

Explanatory content makes the document more concise.

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 Information Technology Standardization Technical Committee (SAC/TC28).

## 1 Scope

This document specifies the requirements for the OID-based heterogeneous identifier and locator resolution framework, and describes the OID-based heterogeneous identifier...

And locator resolution service scenarios.

This document applies to the resolution of heterogeneous identifiers and locators based on OID.

## 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 33745-2017 Internet of Things Terminology GB/T 35299-2017 Information Technology - Open Systems Interconnection - Object Identifier Resolution System (ISO/IEC 29168-1:2011) MOD) Note. The content referenced in GB/T 35299-2017 is not technically different from the content referenced in ISO/IEC 29168-1:2011.

separationinNGN)

ITU-T Y.2022 supports a functional architecture for host-based separation of node identifiers and routing locators in next-generation networks.

ITU-T Y.2057 Framework for Separation of Node Identifiers and Router Locators in Next-Generation Networks Based on IPv6

## 3 Terms and Definitions

The terms and definitions defined in GB/T 33745-2017 and GB/T 35299-2017, as well as the following terms and definitions, apply to this document.

identifier; ID

A series of numbers, letters, symbols, or any combination thereof used to describe the

identity and attributes of an entity.

[Source. GB/T 33745-2017, 2.4.2] 3.2 locator; LOC the network layer topology name of one or a group of interfaces.

**Note:** When a data packet traverses the network, the locator is carried in the network address field.

Object identifier (OID) A globally unique value associated with an object, used to unambiguously identify the object.

**Note:** This ensures that objects are correctly located and managed during communication or information processing.

[Source. GB/T 17969.1-2015, 3.6.9, with modifications]