

ICS 07.040
CCS A 79



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

GB/T 24355-2023

Replacing GB/T 24355-2009

Geographic information - Portrayal

地理信息 图示表达

(English Translation)

Issued on: May 23, 2023

Implemented on: May 23, 2023

Issued by: State Administration for Market Regulation

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References

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:

This document replaces GB/T 24355-2009 "Geographic Information Graphical Expression": Compared with GB/T 24355-2009, except for structural adjustment in addition to editorial changes, the main technical changes are as follows:

--- Changed the graphic representation mechanism (see Chapter 6, Chapter 7 of the:2009 edition);

--- Increased the conditional function expansion and context expansion of the graphical expression function (see 9.2, 9:3);

--- Added compound symbols, complex symbols, and reusable symbol components that allow symbols to be stored in the form of external URLs, symbol parameters Number, function symbol parameters (see 9.4~9:8):

This document is equivalent to ISO 19117:2012 "Graphic representation of geographic

information":

Please note that some contents of this document may refer to patents: The issuing agency of this document assumes no responsibility for identifying patents:

Introduction

This document specifies a conceptual schema for graphical representation of data, which includes symbols and graphical representation functions: GRAPHIC EXPRESSION FUNCTION OFF Linking features and symbols so that features can be represented graphically on maps or other display media: The conceptual schema provides a general concept Framework, including class, attribute, association and operation, specifies the structure and relationship among elements, graphic expression functions and symbols: the framework Separate the content and representation of the data so that the data can be represented graphically independently of the dataset: The framework is derived from existing pictorial representations the concept of implementation, and as a concept standard for use in future graphical representation implementations, such as: OGC symbol encoding and WMS styled layer drawing descriptor file:

This document provides an abstract model for developers of graphical representation systems, so that developers can flexibly implement graphical representation of geographic data:

expressive system:

This revision mainly includes: expanding the concept of graphical expression rules into a more general graphical expression function; symbols (including parameterized symbols) the definition of a graph expression; the graph expression function and symbol in the graph expression catalog; defines a graph expression core pattern and several specialization instances expand:

This revision expands the concept of GB/T 24355-2009 (ISO 19117:2005, IDT), and the content of the revision includes the specification of graphical representation (for specifications for symbols rather than operations), schema catalogs (also include symbols), and rule-based schemas (multiple rules allowed):

Graphical representation of geographic information

1 Scope

This document specifies a graphical representation concept schema for describing symbols, graphical representation functions that map geospatial features to symbols:

Numbers, the symbol set in the representation catalog, and the representation function set: This schema can be used to illustrate the design of an expression system: It allows the number of elements the data is separated from the representation data so that the data can

be represented independently of the data set:

This document does not apply to the following:

- Standard symbol set (such as chart symbol specification 1---IHO);
- Symbol Graphics Standard [such as Scalable Vector Graphics (SVG)];
- Graphical expression services (such as network map services);
- Non-visual pictorial expression ability (such as auditory symbols);
- Dynamic graphics rendering (such as the drawing of dynamic tide lines);
- Process rules after pictorial expression (such as map synthesis, solving overprinting, shifting rules);
- Three-dimensional symbolization (such as simulation modeling):

2 Consistency

Any pictorial catalogs, pictorial functions, and symbols that are marked to be consistent with this document shall meet the requirements of the abstract test suite in Appendix A:

The specified requirements, and meet the requirements of the graphical expression extension:

Conformance classes are used to graphically represent the core classes and their extensions: These extensions provide some additional functionality and are not mutually exclusive:

Graphically express the core conformance classes:

- Illustrated expression core consistency class (generic);
- Illustrated expression core consistency class---symbol;
- Graphical expression core consistency class --- Graphical expression function;
- Graphic representation core consistency class --- Graphic representation directory:

Graphic representation functions extend conformance classes:

- Illustrated expression core plus conditional function extension;
- Illustrated expression core plus context extension;
- Illustrated expression core plus function symbolic parameter expansion:

Sign extension conformance classes:

- Illustrated expression core plus compound sign extension;
- Graphic expression core plus complex symbol extension;