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

GB/T 44491.1-2024

**Geographic information - Preservation of digital data and
metadata - Part 1: Fundamentals**

地理信息 数字数据和元数据保存 第1部分：基础
(English Translation)

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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 is Part 1 of GB/T 44491 "Preservation of Digital Data and Metadata of Geographic Information". GB/T 44491 has been published the following parts.

--- Part 1: Foundations.

This document is equivalent to ISO 19165-1:2018 "Preservation of digital data and metadata for geographic information - Part 1: Fundamentals".

The following minimal editorial changes were made to this document.

--- Corrected the order of Appendix B and Appendix C;

--- Correct the title of the article to "Preservation of metadata" (see C.2);

--- Corrected "hasNoRelation" to "hasDerivate" to ensure consistency with Figure 7 (see C.3).

Introduction

At present, my country's ability to obtain and apply geographic information is constantly improving, and a huge amount of geographic information has been accumulated.

Data (hereinafter referred to as "digital data") is mostly stored on digital media, which have a shorter lifespan than analog media for various reasons.

Without systematic archiving, information will be lost as the storage media decays. In addition, unclear data formats or incorrect descriptions can also cause this can lead to the loss of digital information, and it is necessary to stipulate the preservation of metadata to solve the problem that the stored data will be unrecognizable or even difficult to read in the

future.

The sources of geospatial data are diverse and complex. Which data should be archived and how to standardize the archive format and attributes (cartographic representation, geometry, Topology, spatial reference, etc.), metadata, and access methods are the basic issues for establishing spatial data infrastructure and are also the basis for realizing geographic spatial an important basis for long-term storage and interpretation of data.

ISO 14721 describes a reference model for archiving digital information and is widely used in the aerospace and digital library fields.

ISO 14721 does not cover the need to store geospatial data, so GB/T 44491 is aimed at general geospatial data and its metadata.

The archiving requirements of geospatial data are expanded based on the existing ISO 19115-1, defining the requirements for long-term preservation of geospatial data and metadata.

T44491 can be regarded as a specialization of the geographic information metadata standard, but it should be noted that this document is neither a special standard derived from ISO 14721 nor a special standard derived from ISO 14721.

Nor is it its specific implementation.

GB/T 44491 "Preservation of Digital Data and Metadata of Geographic Information" is intended to consist of the following two parts.

--- Part 1: Foundations. Aims to specify common requirements for long-term preservation of digital geospatial data.

--- Part 2: Content specifications for Earth observation data and derived digital products.

The purpose is to provide long-term storage for Earth observation data and its derived digital products define more detailed specifications.

Geographic Information Digital Data and Metadata Preservation Part 1: Basics

1 Scope

This document specifies preservation metadata as an extension to ISO 19115-1.

This document specifies requirements for the long-term preservation of digital geospatial data. These data also include metadata, representation information, provenance, context, and this document also gives data formats that can help archive feature.

Geospatial data is stored in the form of geospatial information packages (IP). This document specifies the geospatial Requirements for archived IP, and details of geospatial submission IP and distribution IP. Geospatial archived IP is self-describing, allowing this allows for future reconstruction of the dataset without the need for external documentation.

2 Normative references

The contents of the following documents constitute essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to this document.

ISO 14721:2012 Spatial data and information transfer system Open Archive Information System (OAIS) reference model Login Note. GB/T 28585-2012 Method for cataloguing geographic information elements (ISO 19110:2005, IDT) Part 1: Fundamentals) Note. GB/T 19710.1-2023 Geographic Information Metadata Part 1: Foundations (ISO 19115-1:2014, MOD) ISO/T S19115-3 Geographic information metadata Part 3: XML schema implementation of basic concepts

3 Terms and definitions

The following terms and definitions apply to this document.

Used to identify access restriction information related to archive content information.

Note 1 to entry. Access rights information contains the access and distribution conditions specified in the submission agreement, relating to preservation (in OAIS) and end use (by consumers).

Including applicable provisions for measures to enforce rights.

Note 2 to entry. Access rights information includes the legal framework, licensing terms and access controls.