

ICS 07.040
CCS A 75



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

GB/T 22022-2008

Geographic information -- Temporal schema

地理信息 时间模式

(English Translation)

Issued on: June 20, 2008

Implemented on: December 1, 2008

Issued by: Standardization Administration of China

Table of Contents

Introduction

Introduction

1 Scope

Consistency 1

2.1 Classes and consistency requirements

2.2 Data Transfer Mode 1 application

2.3 With application data Mode 1 operation

2.4 Elements Contents

2.5 Yuan data element specification

2.6 Data set metadata

3 Normative references

4 Terms, definitions and abbreviations

4.1 Terms and Definitions

4.2 Acronyms

5 Geographic Information Model 5 the concept of time

5.1 Geographic information time conceptual schema structure

5.2 Time geometric

5.3 Time frame of reference

5.4 Time Location

5.5 Time and geographical information component

Appendix A (normative) Abstract Test Suite

Appendix B (informative) application mode 27 times

Annex C (normative) described in the metadata time reference

Annex D (informative) calendar description

Annex E (informative) The standard class names in bilingual table

References

Foreword

This standard is identical with ISO 19108:2002 "Geographical Information Time Mode" (in English).

For ease of use, this standard made the following editorial changes.

- a) preparation of the implementation of this standard format GB/T 1.1-2000 "Standardization Guide Part 1. Standard structure and drafting of regulations the requirements.
- b) to the "international standards" be replaced by "of this standard."
- c) Remove the original introduction of international standards.
- d) In order to meet China's national conditions, in the informative Appendix D increased provisions D. 3.2.
- e) In order to facilitate understanding, increase the informative Appendix E.
- f) 5.2.3.5 adds comments; adds comments example 5.2.3.7 "Translator's Note. $7 \times 10^{-3}s$ ".
- g) Due to ISO 19107, ISO 19111 and ISO 19115 international standards have been published in this standard delete references to normative documents We went to the original international standard identified in forthcoming subscript.

The Standard Annexes A and C are normative appendix, Appendix B, Appendix D and Appendix E are informative appendices.

This standard by the National Standardization Technical Committee on Geographical Information presented.

This standard by the National Standardization Technical Committee on Geographical Information.

This standard was drafted. Chinese Academy of Surveying and Mapping, National Geomatics Center of China Geological Survey Research Center.

Introduction

This standard defines the standard concepts describe temporal characteristics abstracted from the real world out of geographic information needs. When geographic information Room features include feature attributes, feature operations, feature associations, and metadata elements of the value in the time domain.

Extensive application of computers and geographic information systems to enhance the analytical capabilities of multidisciplinary geospatial data. Geospatial data is no longer limited Set in three-dimensional space domain, many GIS data required time characteristics. Standard conceptual model temporal characteristics of geographic information will increase Ability to adapt to specific types of applications, such as. simulation and predictive modeling.

As the presence of a basic nature, time, and all scientific and technical areas related. Many of the concepts described in this standard also applies to Information management field beyond. International Organization for Standardization Technical Committee for

Standardization Geographic Information (ISO/T C211) has no intention to develop an independent description Time standard, but ISO/T C211 considers it necessary to develop a standard description of geographic data sets and time characteristics of the elements. Geographic Information Systems and GIS software developers and users will use this model to provide a consistent comprehensible time data structure.

In the past, the time has been as characteristic elements of the thematic feature attributes. For example, elements of "building" can have the attributes "date of construction." However, the behavior of the elements as a function of time is described growing demand. When the processing time is independent of space, this demand can to obtain a limited level of support. For example, a moving object motion path can be called "waypoints" to describe the feature set is as a point description of each point there is a path property that provides the target time in the corresponding spatial position. If time and space dimension Inter-dimensional combination, describing time behavior may be more likely, therefore, a feature you can use a space-time object to represent. For example. a mobile customized. Although this standard does not use a combination of spatial and temporal coordinates to describe the geometry of the elements, but already in ISO 19100 series of standards to develop appropriate foundation.

GB/T 22022-2008/ISO 19108:2002 Geographic Information Time Mode

1 Scope

This standard defines the concept of geographic information described time characteristics. This standard IT standard time available for the exchange of information in accordance with it is provided for defining temporal feature attributes, feature operations, feature associations and temporal characteristics define the geographic information metadata foundation. The standard Mainly from the quasi-real-world geographic information abstracted time characteristics, it emphasizes valid time rather than transaction processing time.

2.1 Classes and consistency requirements

This standard defines 5 categories according to the characteristics of conformance test item.

2.2 Data Transfer application mode

Consistent with this standard, data transmission application schema shall meet Appendix A A. 1 requirements.

2.3 with data application mode operation Consistent with this standard, supports data manipulation application schema shall meet Appendix A A. 2 requirements.

2.4 Elements catalog

Consistent with this standard, feature catalog shall meet Appendix A A. 3 requirements.

2.5 Yuan data element specification

Consistent with this standard, metadata specification shall meet Appendix A A. 4 requirements.

2.6 Data set metadata

Consistent with this standard, the data set metadata shall meet Appendix A A. 5 requirements.

3 Normative References

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 18221-2000 Information technology - Programming languages, their environments and system software interfaces - Language - independent datatypes (Idt ISO/IEC 11404:1996) GB 3102.1-1993 and the amount of space and time units (eqv ISO 31-1:1992) GB 3100-1993 and Its Application to the International System of Units (eqv ISO 1000:1992) GB/T 7408-2005 data elements and interchange formats - Information interchange dates and times (ISO 8601:2000, IDT) GB/T 19710-2005 Geographic Information Metadata (ISO 19115:2003, MOD) ISO/T S19103 geographic information conceptual schema language (Geographicinformation-Conceptualschemalan-guage) ISO 19107 Geographic Information Spaces mode (Geographicinformation-Spatialschema) ISO 19109 Geographic information - Rules for application (Geographicinformation-Rulesforapplicationschema) ISO 19110 Geographic information - Feature cataloging method (Geographicinformation-Featurecataloguingmethodology) ISO 19111 Geographic information - Spatial referencing by coordinates (Geographicinformation-Spatialreferencingbyco-ordinates) GB/T 22022-2008/ISO 19108:2002