

HJ

INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

HJ 726-2014

Technical Specification for Exchange of Environmental Spatial Data

环境空间数据交换技术规范

(English Translation)

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Foreword

For the implementation of the "People's Republic of China Environmental Protection Law" to promote environmental information work, strengthen the environmental space data

Rationalize and standardize the spatial data exchange process, promote the sharing and application of environmental spatial data, and develop this standard.

This standard specifies the environmental spatial data exchange information XML description, exchange model, exchange basis, exchange process, the number According to the exchange of quality requirements and safety requirements and so on.

Appendix A to this standard is a normative appendix, Appendix B, Appendix C is an informative appendix.

This standard is the first release.

This standard is organized by the Ministry of Environmental Protection Science and Technology Standards Division.

The main drafting of this standard. Information Center of the Ministry of Environmental Protection, Environmental Protection Department of the Ministry of Environmental Protection, Beijing North Fang Hui Hui System Technology Co., Ltd.

The Environmental Protection Department of this standard approved on December 25, 2014.

This standard is implemented on March 1, 2015.

This standard is explained by the Ministry of Environmental Protection.

Technical specification for environmental space data exchange

1 Scope of application

This standard specifies the environmental spatial data exchange information XML description, exchange model, exchange basis, exchange process, the number According to the exchange of quality requirements and safety requirements and so on.

This standard applies to environmental protection departments at all levels of environmental space data exchange and transmission, and environmental spatial data the construction and management of the exchange system.

2 Normative reference documents

This standard refers to the terms of the following documents. For undated references, the valid version applies to this standard.

Basic set of character set for Chinese characters in information exchange GB 2312-1980
GB 13000-2010 Information technology Universal multi-octet character set (ucs)
Information security - Technical information systems - Safety level - Basic requirements for protection GB/T 22239-2008 Technical specification for processing and processing of environmental basic spatial data HJ/T 724-2014

3 Terms and definitions

The following terms and definitions apply to this standard.

Environmental spatial data Environmental protection information in the field of application of all the spatial position directly or indirectly related to the data, according to the data grid Type is divided into environment vector data and environment raster data.

Environmental spatial data exchange Distributed in different regions, different departments, different systems in the environmental space data exchange, transmission.

Environmental spatial metadata Describe the number of environmental spatial data content, quality, presentation, spatial reference, management, and other features according to.

Vector data vector data the data represented by the geometric elements.

Raster data raster data is represented as a regular spatial array of data.

4 Acronym

The following abbreviations apply to this standard.

XML Extensible Markup Language (Extensible Markup Language) **GML** Geography Markup Language **JTS** java Topology Suite (Java Topology Suite)

5.1 Character set

Environment Space Data Exchange XML Description The character set used should conform to GB 13000-2010 or GB 2312-1980 Regulations.

5.2 Namespace

Environment Space Data Exchange XML Description uses a namespace of.

5.3 Schema description

The spatial data structure information is described in Appendix A.

Environmental Spatial Data Exchange Model

6.1 Composition of environment spatial data exchange model

6.1.1

The spatial data exchange model consists of a spatial data exchange engine, an external spatial data system, an internal spatial data system System, application system and other components, as shown in Figure 1.

6.1.2

Application The system can exchange data in two ways.

A) through the spatial data exchange engine, the first external space data system data exchange to the internal space data System, the application system through the internal spatial data system to achieve data exchange.

B) the application system through the spatial data exchange engine in the GIS function components to parse the way to directly read the external space Data in the system.

6.1.3

Environment The spatial data exchange engine supports the exchange of environmental spatial data and its associated metadata, including environmental spatial data Two types of data stored in spatial data files and spatial databases, the specific exchange of content and format requirements to comply with the 6.3 Regulations.

Figure 1 Environment space data exchange model

6.2 Technical requirements for environmental space data exchange

6.2.1

Environment Space Vector data exchange takes GML as a unified data exchange format. In the environment spatial data exchange model Must establish a unified and scalable GML converter, the GML converter should have a different format of the environment empty the ability of the inter-vector data to be converted to GML format data without loss. For the exchange of environmental raster data, metadata can be passed Service access to the corresponding metadata information, through the data read and write parts for the exchange operation, the transmission process should be off the ability to resume.

6.2.2

According to the actual conversion needs, decide whether to call the model of the topology converter. If the converted data comes with Topology, you should select the topology converter. Topology converter technology can be used to achieve middleware JTS and other middleware.

6.2.3

Data exchange, by the unified data read and write parts according to the acquired environmental spatial data metadata information, the different Read and write operations.

6.3.1 Environment space data exchange contents

The contents of the environmental space data exchange shall be in accordance with the provisions of HJ/T 724-2014 and shall be consistent with consistency, completeness and Specifications and other requirements.