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Information and documentation - A reference ontology for the interchange of cultural heritage information

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard uses the translation method equivalent to ISO 21127.2014 "Reference Ontology of Information and Document Cultural Heritage Information Exchange".

This standard has made the following editorial changes.

--- Fixed ISO 21127. Individual errors in.2014, one is that the parent attributes of the two attributes P145 and P146 are mistakenly written as their sub-attributes;

The parent attribute of P68 is miswritten as a sub-attribute; the second is E7 in Figure A.1 of Appendix A. "P20 has a specific purpose (for the sake of). E5

The value of the piece is mistakenly written as E7 activity; the third is that the standard defines a total of 138 attributes, which are mistakenly written into 137 attributes.

--- To enhance legibility, replace some of the examples with domestic examples, based on the examples in the International Standards.

---3.7 Added "Note 2. Class and attribute names in comments and examples are represented in italics to distinguish them from the body."

--- Increase the informative appendix NA "class hierarchy" and informative appendix NB "attribute hierarchy".

This standard is proposed and managed by the National Information and Document Standardization Technical Committee (SAC/TC4).

This standard was drafted. National Library (National Classics Museum), National Museum.

Introduction

This standard provides an ontology-based metadata integration conceptual model that promotes the integration and transfer of diverse cultural heritage information sources.

Formal entities that are exchanged with each other.

The main objective of this standard is to achieve the exchange and integration of various heterogeneous cultural heritage information resources. By providing a common

Think about the basics, compare and exchange or integrate distributed and incompatible information sources. By providing a universal, extensible semantic definition

And instructions to achieve the processing of a variety of decentralized local information sources into a consistent global resource.

The specific objectives of this standard are.

--- A common language used as a domain expert and IT developer to compile requirements.

--- as a formal language for identifying common information content contained in different data formats; support from local data structures to global numbers

According to the application of the automatic data conversion algorithm in the structure conversion process, and to ensure that the original meaning of the data is not lost. Such conversion algorithm

It helps with data exchange, old system data migration, data information integration, and conversion of heterogeneous sources.

--- Supports the associative retrieval of integrated resources, providing basic classes and their associated global models to build association retrieval.

--- Provide a good practice guide for information system developers for conceptual modeling.

The ontology in this standard is expressed as a series of interrelated concepts and definitions. This expression is similar to the terminology in the thesaurus. but

Yes, ontology is not a term standard and does not define terms that are commonly used as data in cultural heritage literature. The content of this standard is complete

But also consciously compressed and streamlined the 86 classes and 138 unique attributes of the ontology. In order to achieve this standard resource

Interoperability objectives such as switching, integration, etc. Class and attribute identifiers need to be consistent with the international standard ISO 21127.2014, as well as class and

The attribute identifiers are not consecutively numbered (if E23, E43, E76, and E88 are not defined, P6, P18, P60, P61, P63, P64, P66, P77, P85)

And the phenomenon of two obsolete attributes (P36 and P47). Although this standard does not address the attributes of each subclass inheritance in the entire class hierarchy.

(This will require thousands of attribute declarations instead of 138), but contains inferences and automatically generates all the attributes (including inherited attributes) intact.

Declare all the information you need.

Information and literature

Reference ontology of cultural heritage information exchange

1 Scope

This standard establishes guidelines for the exchange of information between cultural heritage institutions such as museums, libraries, archives, etc., and provides museums and maps.

Information managed by cultural heritage institutions such as libraries and archives.

A more detailed definition can be defined by defining the scope of application (the broad and maximum scope of the definition of the general principles) and the scope of practice (through

A series of specific museum literature standards and practical references are defined).

The scope of application of this standard is defined as the exchange and integration of heterogeneous scientific information related to museum collections. Further elaborated as follows.

--- "Scientific Information" is intended to illustrate the descriptive information handled by this standard, which describes the depth and quality of various academic studies.

need. This does not mean that the information that the public needs is not provided, but that the details and accuracy of the information provided can be achieved.

The expectations and requirements of museum professionals and researchers.

--- "Museum Collection" is intended to cover all types of materials hidden and displayed by museums and related institutions. Including social history, ethnology,

Various collections, places and monuments related to the fields of archaeology, fine arts and applied arts, natural history, and history of science and technology.

--- The collection of the collection includes a detailed description of the individual items in the collection, the collection of items, and the entire collection. This standard also includes relevant letters

Interest (such as the historical, geographic, and theoretical background that gives the museum collection more cultural significance and value).

--- Exchange information with libraries and archives to ensure that the models are

coordinated.

--- Does not include information required for the administration of cultural institutions, such as information related to individuals, accounts and visitor statistics.

The scope of practice of this standard is a series of museum literature reference standards used to guide and validate its development. This standard and these references

The collection covers the same domain; therefore, any data that is correctly encoded according to these reference standards can be created by creating an encoded form.

Compatible with current standards without causing semantic loss.

2 Consistency

Users need to ensure consistency with the relevant data structures in order to take advantage of the semantic interoperability of this standard. Consistency refers to the data in the set

It is accessible in the environment or can be transferred to other environments. Arbitrary formalization of classes, attributes, and inheritance rule relationships defined by this standard

The data encoding of the language is considered to be consistent with this standard.

This standard does not require that all local document structures be fully matched to this standard, nor is it required to implement all the concepts presented in this standard.

structure. This standard allows for the expansion of space required to capture an ever-rich rich cultural message, as well as various economical simplifications. Certain department

If it supports a subset of subclasses and sub-properties defined in this standard, it has partial consistency. The system designer should release its system

A detailed structure that is supported.

The focus of this standard is the exchange and conversion of structured information, but it also applies to the exchange and conversion of unstructured information. No need to be non

Structured (free text) information is transformed into structured, logical structure information. The processing of unstructured information is not within the scope of consistency.

Any file system, no matter what internal data structure it uses, as long as it can be implemented by constructing a deterministic logic algorithm

The data in the system is converted into a form that is meaningless and directly compatible and is considered to be in compliance with this standard. No need to assume the nature of