

Designing Metadata Standards for Peking University Rare Book Digital Library

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Jan., 2001
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Introduction

- About Peking University Rare Book Digital Library
 - collections: rare books, rubbings, atlases, Dunhuang scrolls
 - metadata database
 - object databases
 - network and hardware devices
 - RBDL application system
- Metadata Project
 - metadata standards for rubbings, atlases, Dunhuang scrolls
 - framework of metadata standards

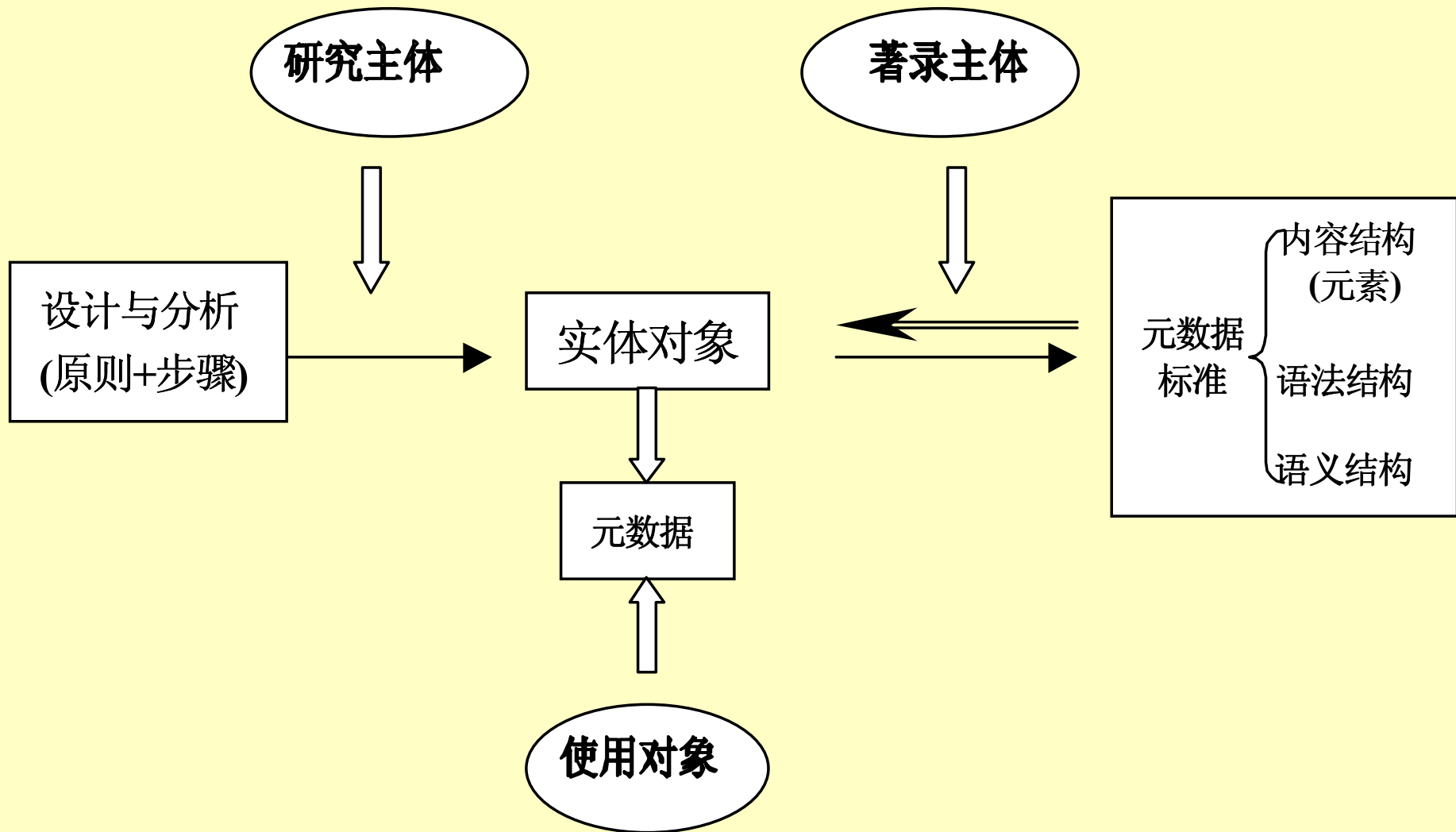


Introduction about the framework

- Basic concepts and terms
- Functions of metadata
- Fundamentals for designing metadata standard
- Workflow: step by step
- Structure
- Elements
- Interoperability and syntax structure
- Semantic structure, related rules and authorities



Framework of metadata standard



Basic concepts and terms

- Metadata: data about data
 - our definition: it is the data to be used in describing the attributes of a certain type of object, in locating, administrating and assisting to retrieve the resources
- Metadata standard:
 - a set of rules that are used in describing a certain type of object (resource), including: both of rules based on the semantic structure and syntax structure (meta-language and DTD)



Basic concepts and terms (cont'd)

- Framework of metadata standard:
 - standards or rules that are followed in designing a metadata standard for a specific type of object (resource). Actually, it is nonobjective metadata or methodology, which defines the concepts, functions, structure, format, designing methods, syntax and semantic structure of metadata at a higher level.



Functions of metadata

- Description
- Location
- Administration
- Retrieval
- Evaluation and selection
- Interaction



Fundamentals for designing metadata standard

- Designing metadata based on the three kinds of requirements of:
 - professional / non-professional catalogers
 - resources / objects
 - users of digital library
- Simplicity and accuracy
- Specialization and generalization
- Interchangeability and extensibility
- User requirement



Workflow: step by step

- Researches on existing metadata standards
- Analysis of the objects, including:
 - the relations among the objects
 - minimal description unit
 - description items
- Investigation to resource users
 - which description contents the users are most interested
 - which entries they access most



Workflow: step by step (cont'd)

- Preliminary design of the structure, format and elements of the metadata
- Test descriptions and corrections
- Preliminary design of the metadata standard for a certain type of object: structure, format, elements, description contents and rules, related authorities, etc.
- Change to another type of object



Workflow: step by step (cont'd)

- Software development
- Test description in the system and correct the metadata standard
- Final design of the metadata standard



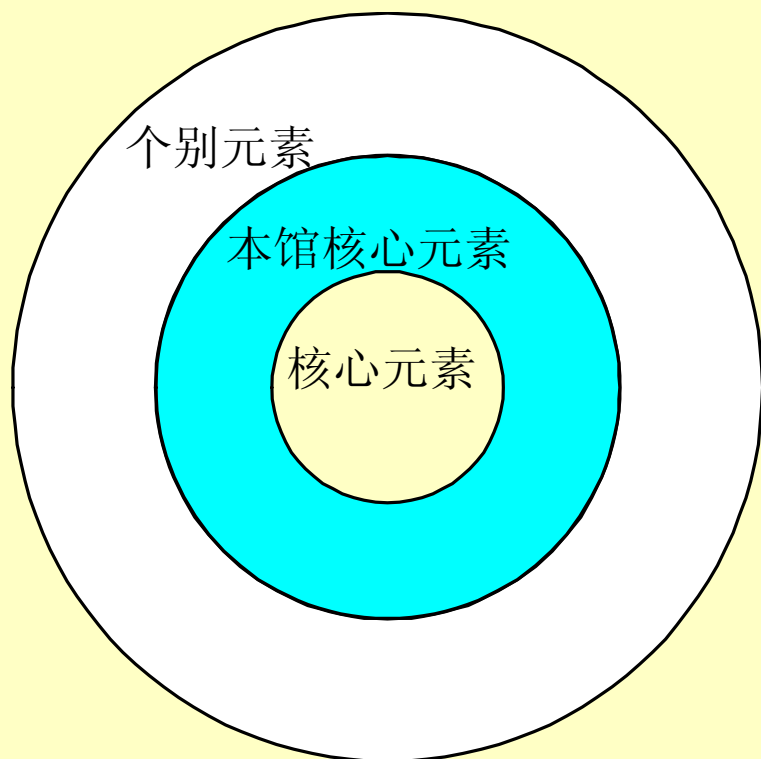
Structure

Three parts:

- Descriptive metadata
- Administrative metadata
- GIS metadata
 - coordinates element (longitude : latitude)



Descriptive metadata

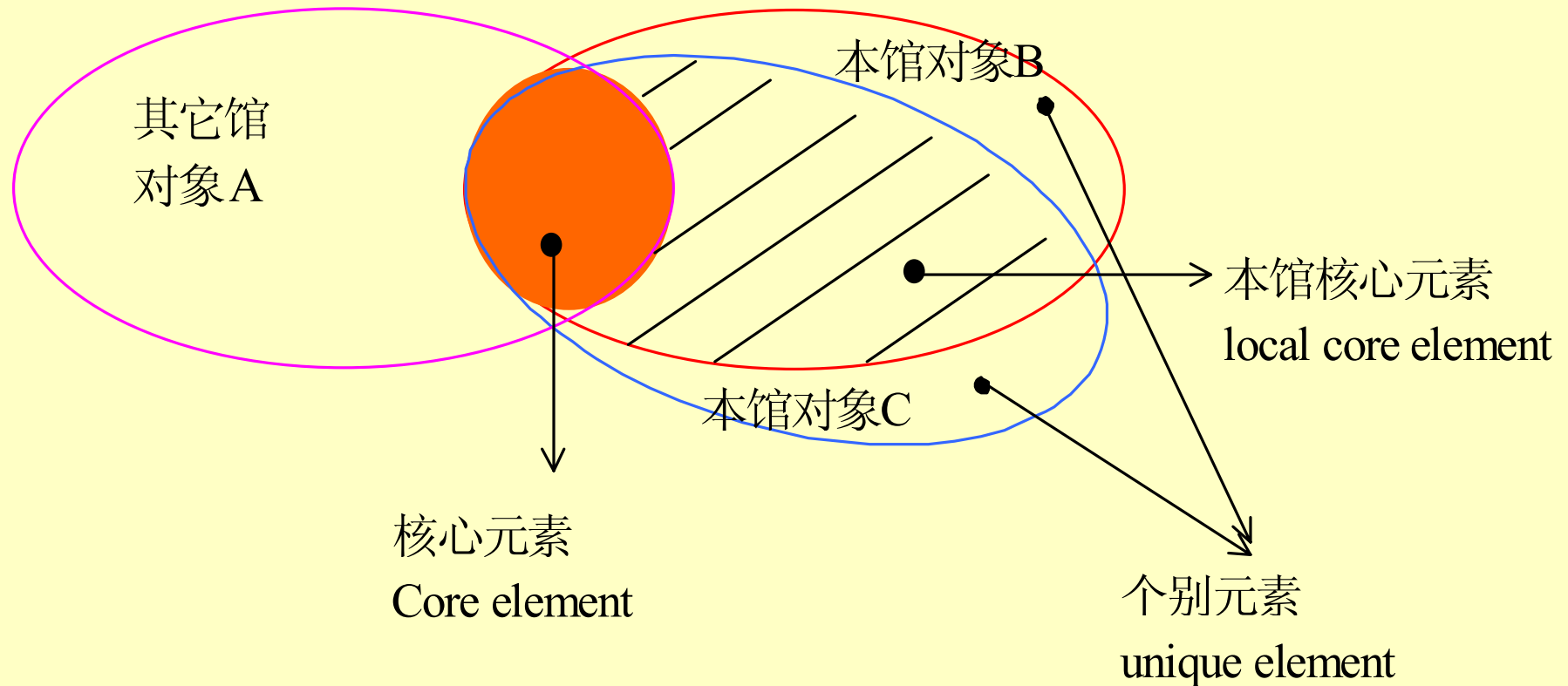


核心元素：各类对象通用，与DC 保持一致，易于交换。

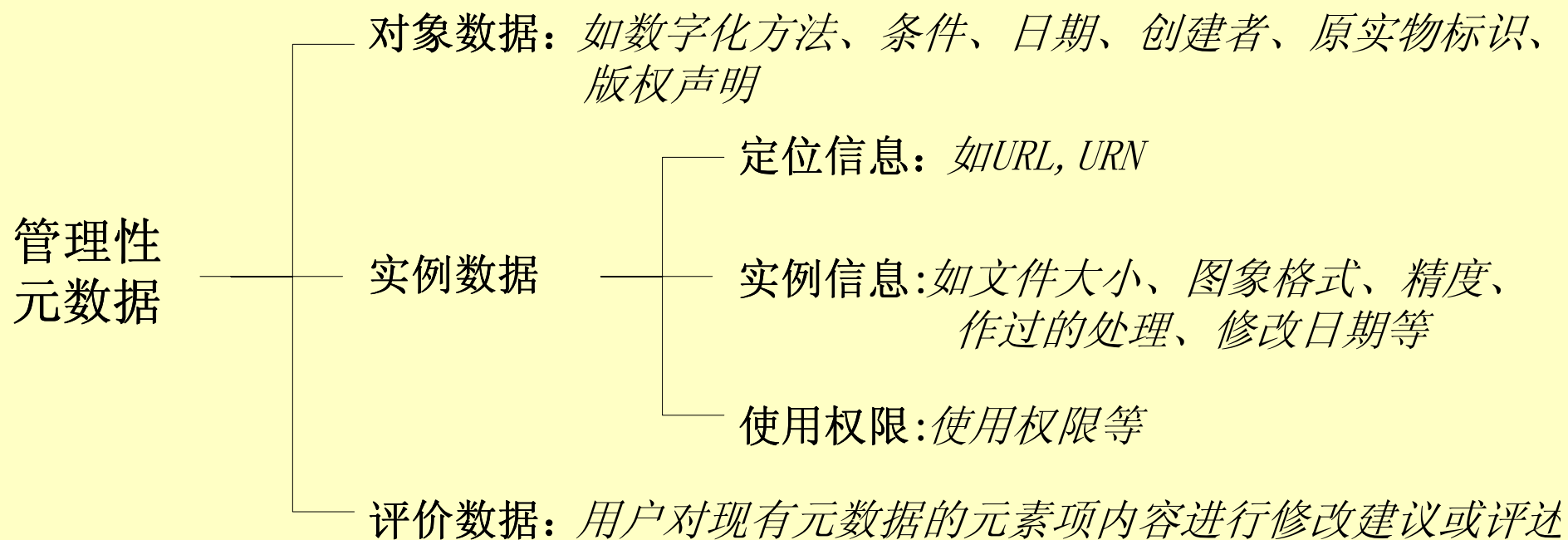
本地核心元素：本馆各类对象通用，馆内保持一致。

个别元素：某一类对象使用，不用于交换。

Descriptive metadata



Administrative metadata



Elements

- Descriptive metadata
 - core element: 15 DC elements, optional
 - local core element: 2 elements, optional
 - edition, physical description
 - unique element
- Administrative metadata
 - object creation statement
 - instance
 - user remark/comments



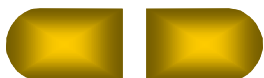
Interoperability of metadata and syntax structure

- What is the interoperability of metadata, as we think?
 - Support the interoperability between different application systems
 - Interchange ability with other metadata standards, such as Dublin Core, GILS, CDWA, etc.
 - Interchange ability among the different metadata standards based on different types of objects (atlas, rubbings, Dunhuang scrolls)

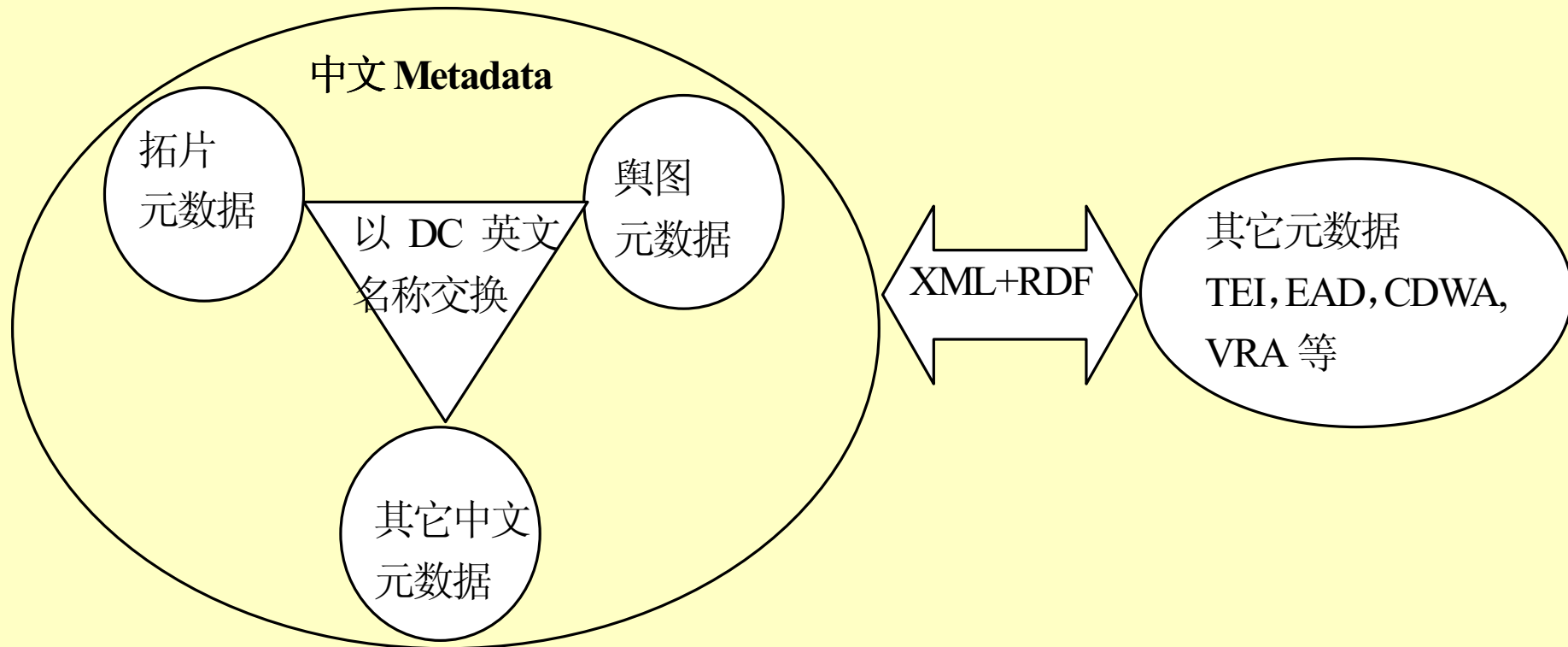


Interoperability of metadata and syntax structure (cont'd)

- XML+RDF as syntax structure
- Mapping with DC
 - other metadata standards not based on DC
 - different metadata standards based on DC
 - Chinese metadata
- Other standards
 - XML Schema, DTD, RDF Schema, etc.
 - Element definition: ISO/IEC 11179
 - Character code set: Unicode (ISO10646)
 - more...



Interoperability and syntax structure (sketch map)



Semantic structure, related rules and authorities

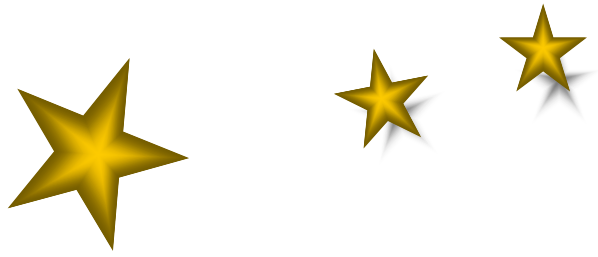
- Description rules
- Element statements
- Authorities
 - name authorities (for personal and place names)
 - chronology
 - subject
 - classification (taxonomy)



Related issues

- Applications of GIS technology
- A mapping list of Chronology of Chinese Lunar Calendar and the Gregorian Calendar
- A mapping list of Chinese ancient and current place names
- Networked knowledge organization systems/schemes/services, NKOS
 - standard thesaurus, subject headings lists, semantic networks, taxonomies





Thank you for joining us!

