



上海图书馆
开放数据竞赛
SHANGHAI LIBRARY OPEN DATA CONTEST

SHANGHAI LIBRARY OPEN DATA AND TECHNOLOGY

2026

Assistant Engineer
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SHANGHAI
LIBRARY
OPEN DATA
CONTEST



Current Status of Open Data at Shanghai Library

Current Status

and Technologies Used

documentary knowledge bases

Revolutionary Documents
Knowledge Base

Road Names / Buildings /
Famous Figures Database

Catalog of Historical Maps
in the Library Collection

Old Shanghai Films Knowledge Base: films, artists, and cinemas
includes audiovisual materials, photographs, articles from film
magazines, and related historical events.

genealogy service
platform

Shanghai Union Catalog of
Bibliographic Records

Union Catalog of
Chinese Ancient Books

Sheng Xuanhuai
Archives database

Chinese Stele and
Rubbing Records

Open API

Shanghai historic
buildings

Gazetteer of Shanghai
Place Names

Directory of Historical
Institutions in Shanghai

Historical and Cultural
Events Database

seals in
ancient books

Directory of Ancient Book
Printers and Engravers

taboo characters

Catalog of Historical Maps
in the Library Collection

Person Database

Geographical Terms
Database

Historical
Chronology

Directory of Collecting
Institutions

List of
Chinese
Surnames

fundamental knowledge bases

家谱检索-踏上寻根问祖的文化之旅

高级检索 | 地图检索

请输入人名/姓氏/籍贯/居住地/堂号/谱名



家谱文化



家规家训



迁徙图



数字展览

登录 | 注册 ?



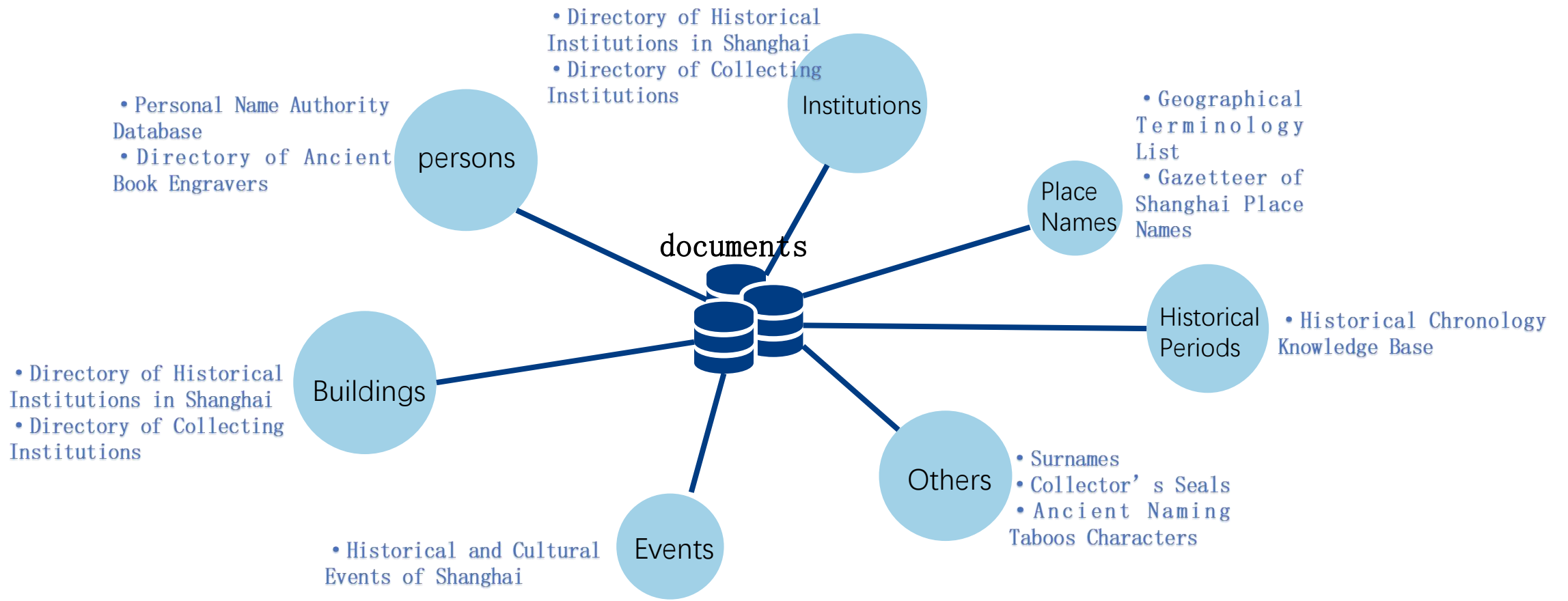
珍档秘史

盛宣怀档案知识库

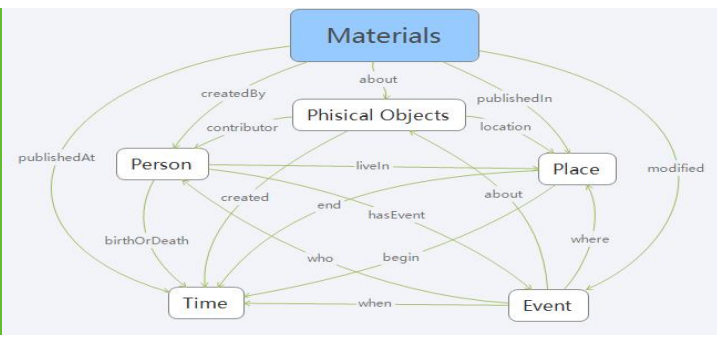
15.7万件日记、文稿、信札、电报、账册、电文、合同、章程，是盛宣怀家族自1850至1936年间的记录，内容涉及政治、经济、社会、军事、外交、金融、贸易、教育各方面，被称为中国私人档案第一藏，是研究中国近代史的第一手史料宝库。

在此输入 档号/收件人/发件人/地点/主题 高级检索

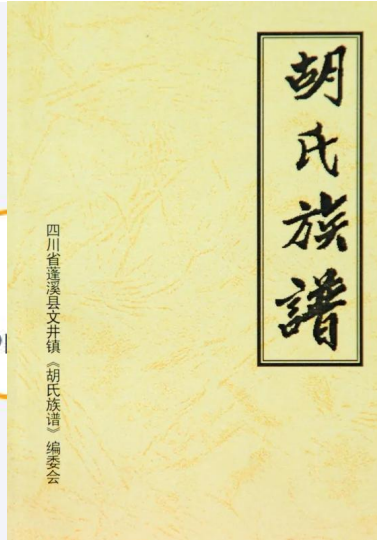
- 关系
- 时空
- 人物
- 公司



Constructing foundational and documentary knowledge bases encompassing entities such as persons, locations, time periods, events, and artifacts, as part of a data infrastructure for digital humanities research.



Example of an Open Data Content Organization Framework



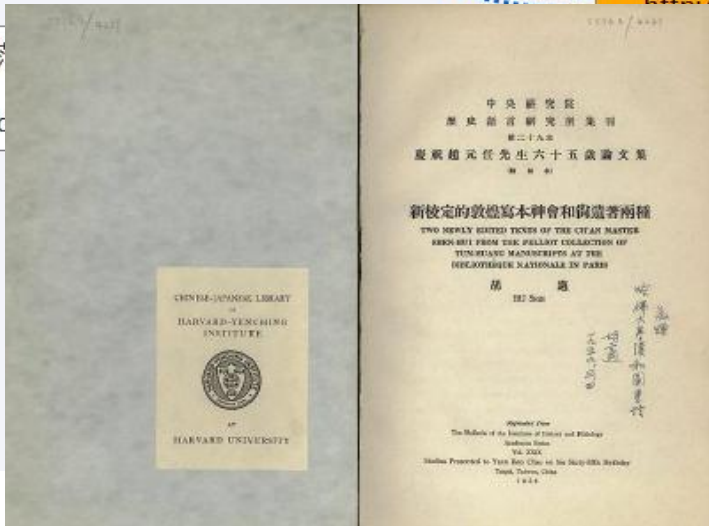
<http://db...>

ewey

teacher



《公共卫生与东西文明》



人名規
魯迅
<http://c...>

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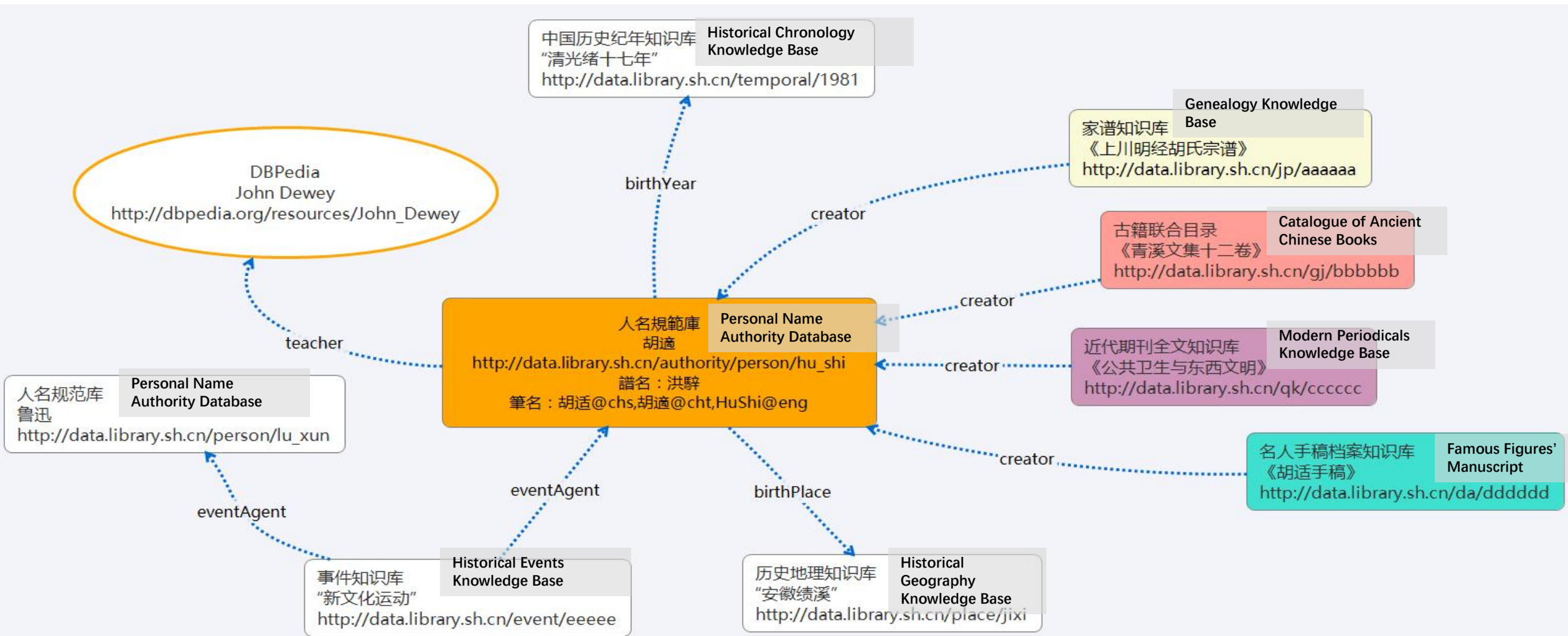
creat

e/jixi



dddddd

Example of an Open Data Content Organization Framework



core technologies

1

Ontology (知识本体)

- An abstract and formalized conceptual model of domain-specific knowledge. It serves as a key technology in constructing structured knowledge systems.

2

RDF (资源描述框架 Resource Description Framework)

- A data model promoted by the W3C, designed to represent resources on the web and the relationships between them in the form of subject - predicate - object triples.

3

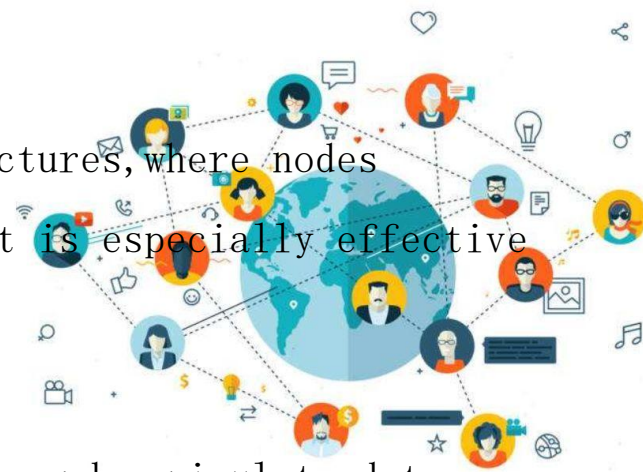
Graph Data Store (图数据存储)

- A storage system that represents data using graph structures, where nodes represent entities and edges represent relationships. It is especially effective in modeling complex connections between data.

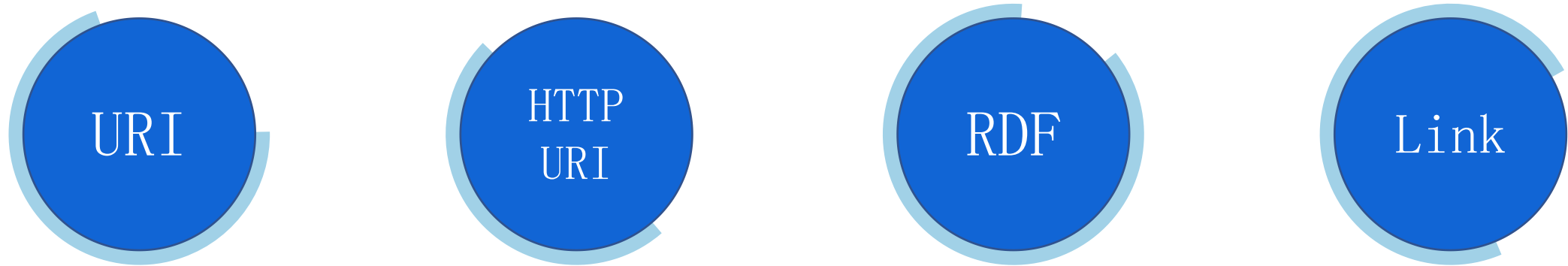
4

SPARQL (数据查询语言)

- A powerful query language and protocol used to retrieve and manipulate data stored in the RDF



Linked Data



Principle 1 & 2: Use URI and HTTP URI as the names for all things.

Principle 3: When an HTTP URI is accessed, provide data in RDF format.

Principle 4: Describe relationships between things as richly as possible, and ensure they are understandable by machines.

API access flowchart

Participants will receive an API key upon registration, which will be sent to the email address used for registration.



API request method:
`http(s)://data1.library.sh.cn/api` [API endpoint]



3.1. SPARQL Endpoint

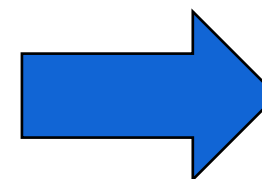
`https://data1.library.sh.cn/sparql`
`http://data.library.sh.cn/sparql`

3.2. Restful API

`http://data.library.sh.cn/sg/person/data?[parameter 1]&[parameter 2]&[parameter 3]?key=YourAPIKey`

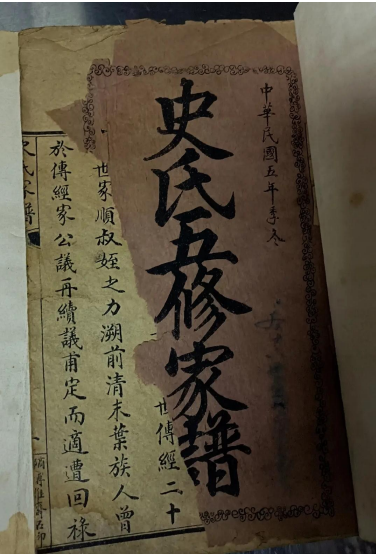
3.3. HTTP URI内容协商

Method: You must first obtain the entity's HTTP URI by calling the first two types of APIs.



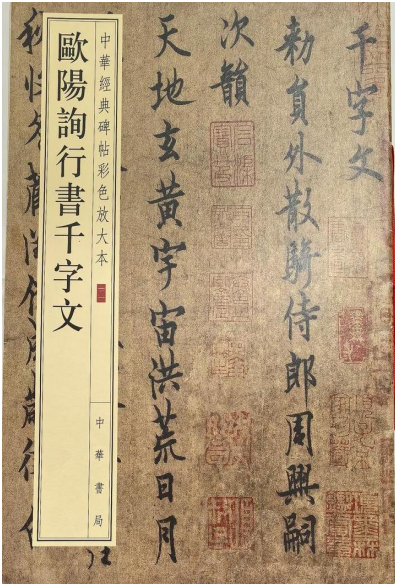
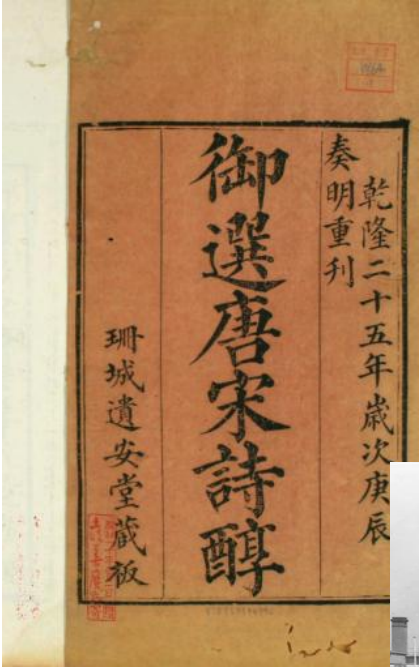
Returned Data
Format:
JSON-LD
JSON format
recommended by W3C
for consuming
Linked Data.

Data Sample

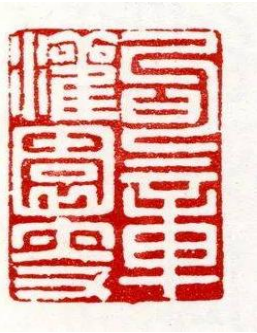


Chinese genealogies

Chinese ancient books



ancient rubbing calligraphy copies

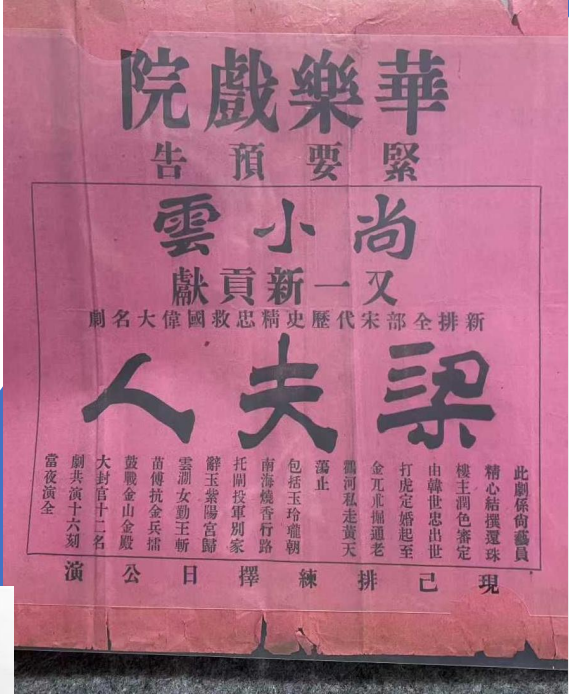


seals



old black-and-white photographs

playbills



Open Data Platform of Shanghai Library

<http://data.library.sh.cn>



Thanks

We look forward to your participation.

Assistant Engineer
MengYing Wong

