网络科学第二讲

（应用案例--从《中国历代人物传记》中发现新知识）

2019版

罗铁坚

课程：https://tjluo-ucas.github.io/ns/

中国科学院大学

提纲

1. 文本实体抽取
2. 人物关系数据库
3. 人物关系学（Prosopography）
4. 时空数据分析（Spatial analysis）
5. 社会网络分析（Social network Analysis）

网络科学研究方法

基本假设：

1、社会、自然或技术“系统”是由不同部分有机组成。

2、这些关联的部分是存在某种“结构”的。

3、个体部分之间通过“结构”链接进行交互使系统得以运行。

4、系统内部的个体之间相互依存，并且任何个体的行为结果潜在地依赖其他个体的联合行为。

5、利用图论的知识来探讨系统的网络结构；研究个体节点的行为规律，采用博弈论的语言来建立基本模型。

研究方法：

1、确定研究问题（事件发生的原因或预测可能发展的趋势）

2、建模：构建网络图（节点和边的定义，需要领域知识）

3、分析：节点的行为模式或变化，全图的演化。

4、归纳：模式总类、发生的原因、调控手段

5、实验仿真和实际应用：收集什么数据、进行什么分析、给出何种决策。

中國歷代人物傳記資料庫

中央研究院歷史語言研究所、哈佛大學、北京大學中國古代史研究中心合作開發

Developed through collaboration among Academia Sinica, Harvard University, and Peking University

Lü Zuqian, whose style name was Bogong, was a grandson of the Right Assistant Director to the Imperial Secretary Haowen. His family had lived in Wuzhou since his grandfather's generation. The learning of Zuqian was based on family [tradition], and embodied the textual transmission from the Central Plain. When he grew up, Zuqian studied with Lin Zhiqi, Wang Yingchen, and Hu Xian respectively. Then he also befriended Zhang Shi and Zhu Xi, and his explication and inquiry became more sophisticated.

First he obtained official rank by way of the protection privilege. But later he obtained his Jinshi degree and also passed the special decree examination for "Erudite Learning and Exceptional Literary Composition." Then he was appointed to the School for the Imperial Clan in the Southern Outer Office. During the mourning period for his mother, when he stayed in Mt. Mingzhao (in Wuyi), literati from all directions raced there. He was appointed Erudite in the National University.

呂祖謙字伯恭，尚書右丞好問之孫也．自其祖始居婺州．祖謙之學本之家庭，有中原文獻之傳．長從林之奇、汪應辰、胡憲游，既又友張栻、朱熹，講索益精．

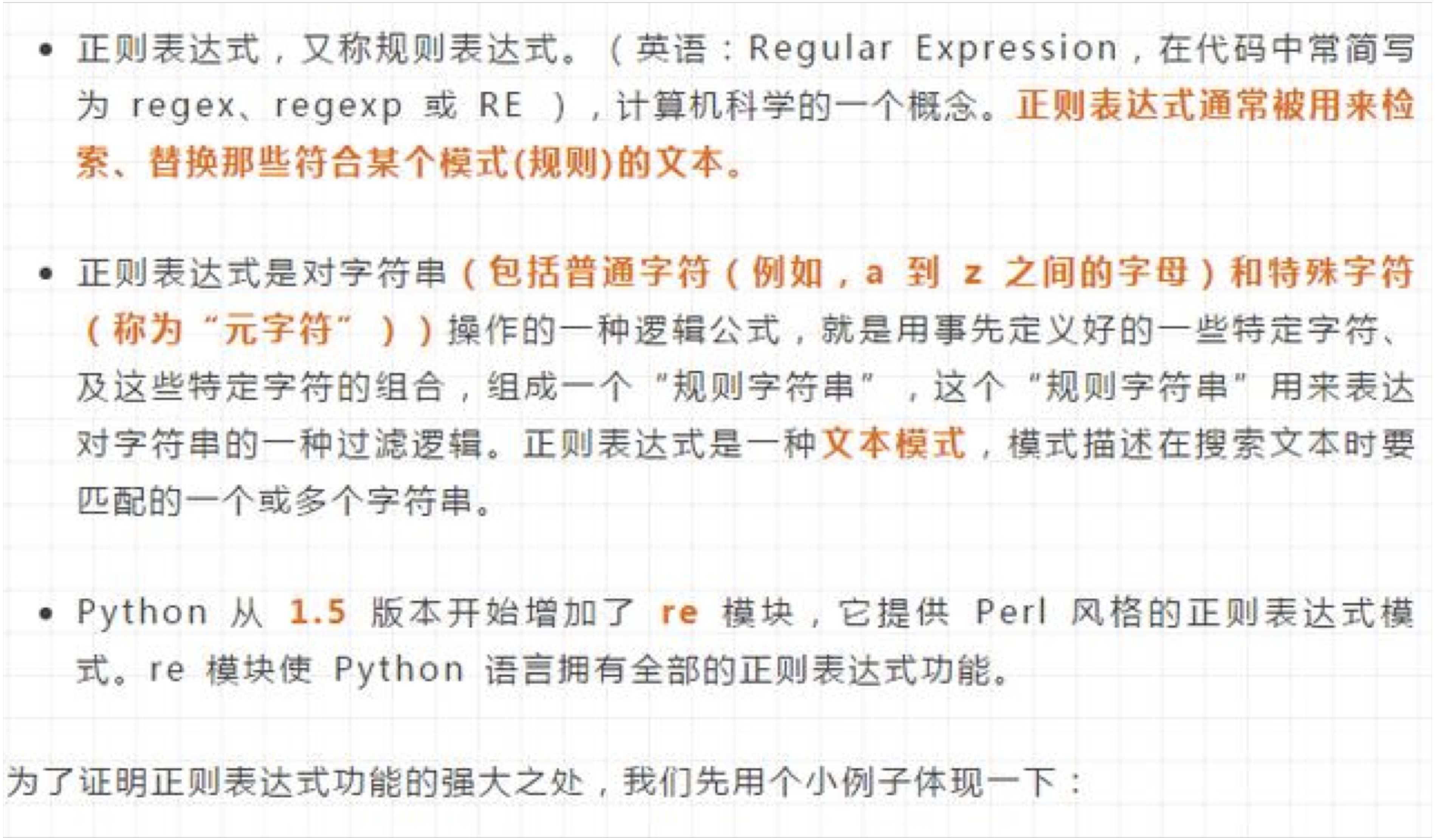
初，蔭補入官，後舉進士，復中博學宏詞科，調南外宗教．丁內艱，居明招山，四方之士爭趨之．除太學博士

“Factoids” in biographical texts　文本实体抽取

观察文本和问题，提出需要抽取的实体类型和值

1. Basic Biography: name, gender, dates (relationship to time)
2. Biography Addresses (relationship with places)
3. Alternate Names (relationship to names of different kinds)
4. Writings (relationship to learning)
5. Postings (relationship with government)
6. Mode of Entry into Government
7. Kinship (kin relationships with others)
8. Associations (non-kin relationships to others)
9. Social Status (relationship with modes of social distinctiveness)
10. Possessions (relationship to property as giver and receiver)
11. Events (participation in events)

抽取实体的工具：正则表达式



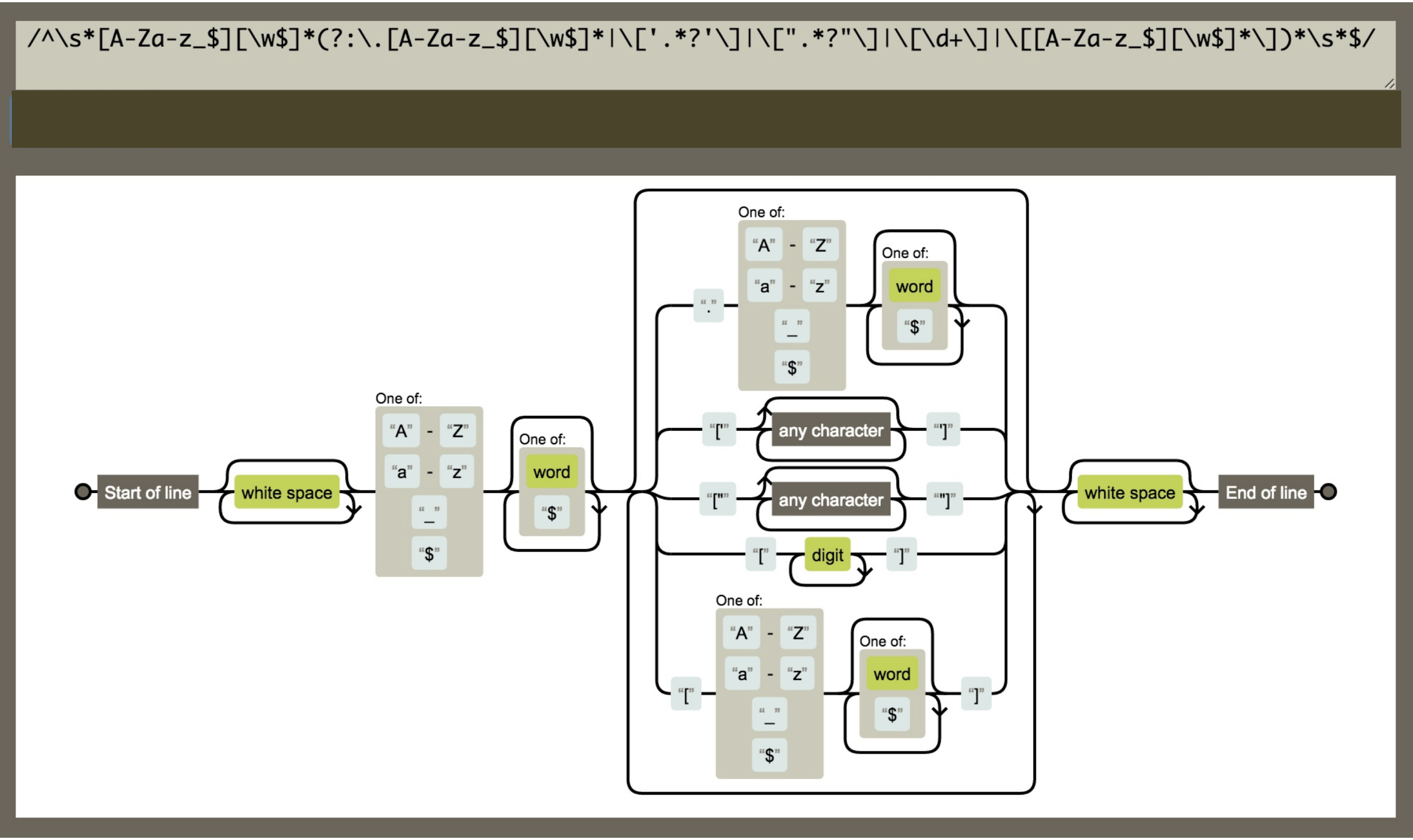
- 正则表达式，又称规则表达式。（英语：Regular Expression，在代码中常简写为 regex、regexp 或 RE ），计算机科学的一个概念。**正则表达式通常被用来检索、替换那些符合某个模式(规则)的文本。**

- 正则表达式是对字符串（**包括普通字符（例如，a 到 z 之间的字母）和特殊字符（称为“元字符”）**）操作的一种逻辑公式，就是用事先定义好的一些特定字符、及这些特定字符的组合，组成一个“规则字符串”，这个“规则字符串”用来表达对字符串的一种过滤逻辑。正则表达式是一种**文本模式**，模式描述在搜索文本时要匹配的一个或多个字符串。

- Python 从 **1.5** 版本开始增加了 **re** 模块，它提供 Perl 风格的正则表达式模式。re 模块使 Python 语言拥有全部的正则表达式功能。

为了证明正则表达式功能的强大之处，我们先用个小例子体现一下：

正则表达式的字符串模式匹配的原理

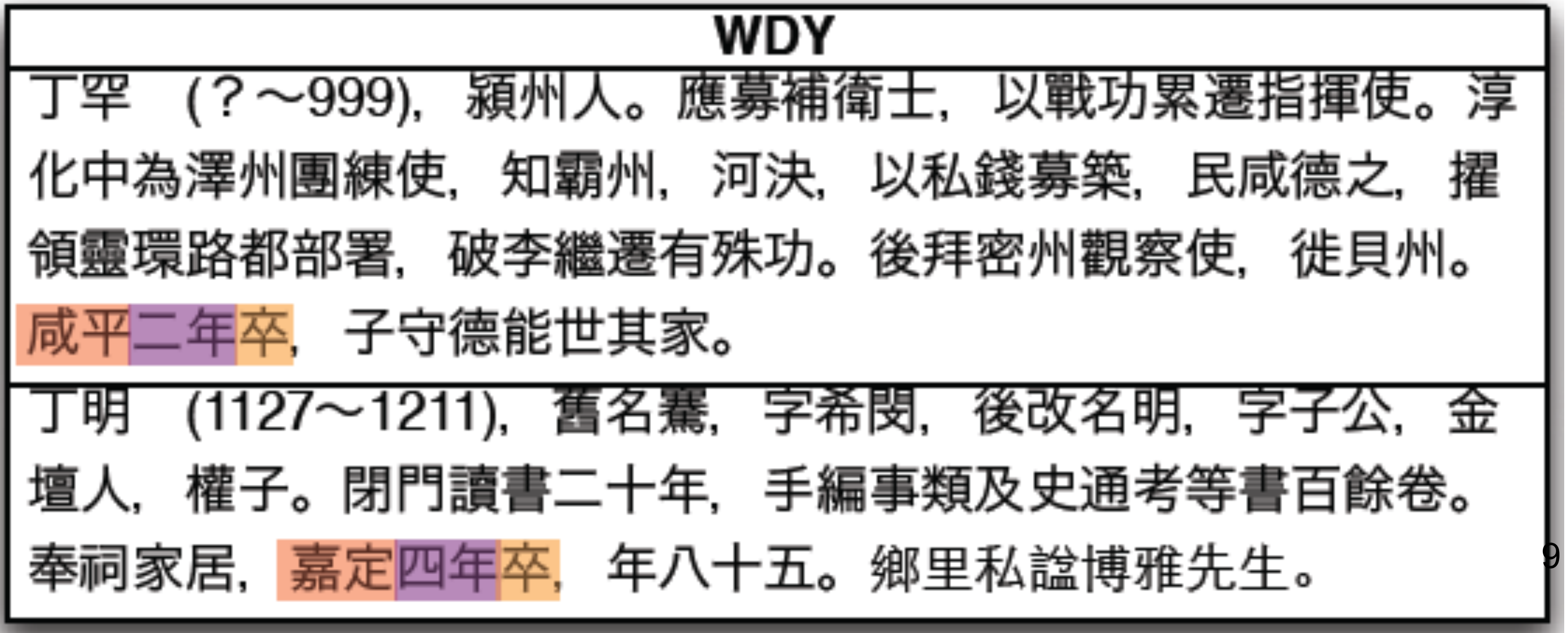


```
/^\s*[A-Za-z_$][\w$]*(?:\.[A-Za-z_$][\w$]*|\['.*?'\]|\[".*?"\]|\[\d+\]|\[[A-Za-z_$][\w$]*\])*\s*$/
```

正则表达式实际应用例子

reign title number & year character death character

(元祐|元豐|...|紹興)[0-9]+年卒



WDY
丁罕　(？～999)，潁州人。應募補衛士，以戰功累遷指揮使。淳化中為澤州團練使，知霸州，河決，以私錢募築，民咸德之，擢領靈環路都部署，破李繼遷有殊功。後拜密州觀察使，徙貝州。咸平二年卒，子守德能世其家。
丁明　(1127～1211)，舊名騫，字希閔，後改名明，字子公，金壇人，權子。閉門讀書二十年，手編事類及史通考等書百餘卷。奉祠家居，嘉定四年卒，年八十五。鄉里私諡博雅先生。

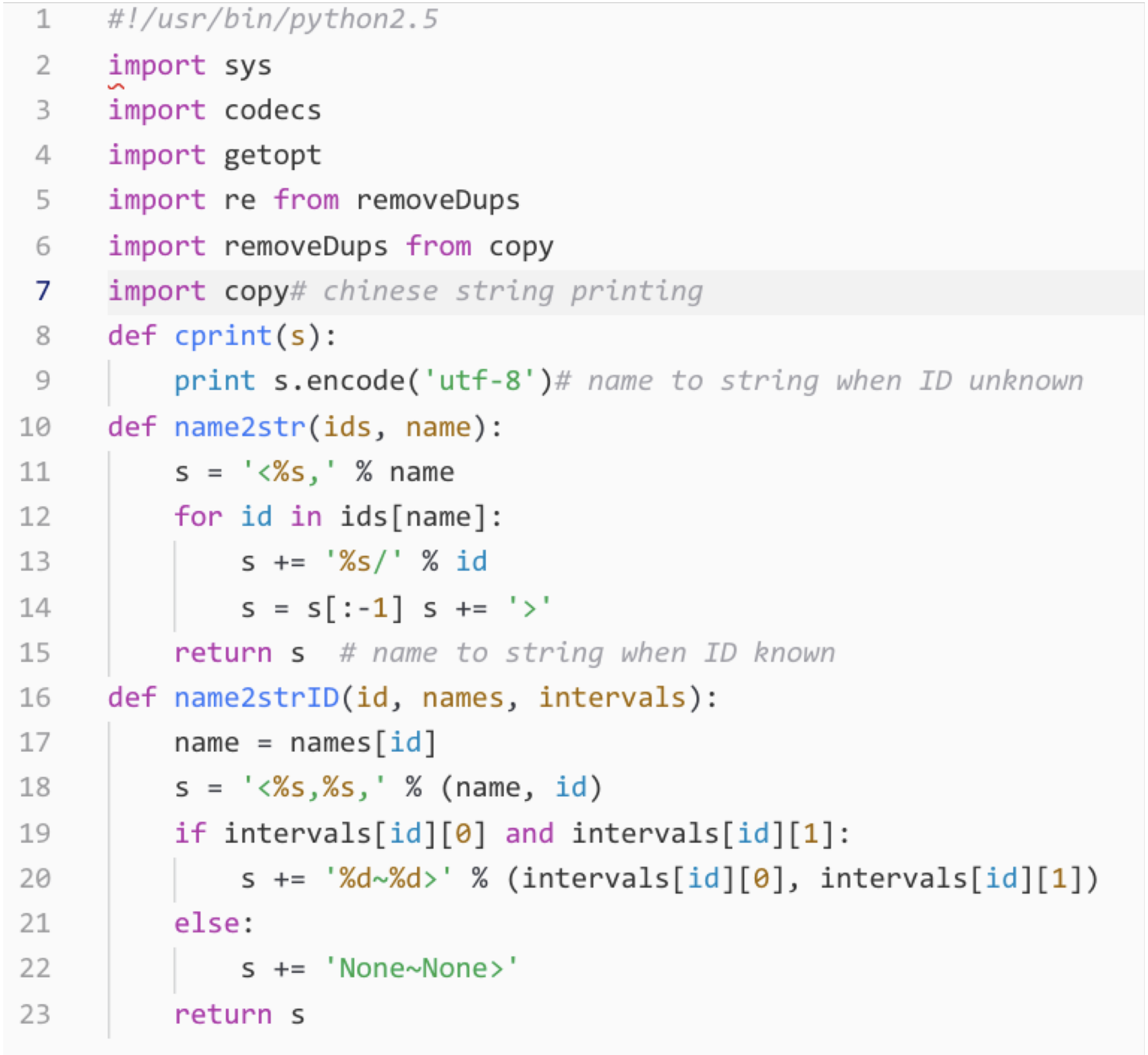
用正则表达式找出命名实体 Named Entity Recognition (NER)

至元十八年为东阳县拯

年号	年号代码	任期	年份	地名	地名代码	官名	官名代码
至元	623	18	1281	东阳	18340	县拯	841

中国科学院大学

用正则表达式找出命名实体等的代码



```python
#!/usr/bin/python2.5
import sys
import codecs
import getopt
import re from removeDups
import removeDups from copy
import copy# chinese string printing
def cprint(s):
    print s.encode('utf-8')# name to string when ID unknown
def name2str(ids, name):
    s = '<%s,' % name
    for id in ids[name]:
        s += '%s/' % id
        s = s[:-1] s += '>'
    return s  # name to string when ID known
def name2strID(id, names, intervals):
    name = names[id]
    s = '<%s,%s,' % (name, id)
    if intervals[id][0] and intervals[id][1]:
        s += '%d~%d>' % (intervals[id][0], intervals[id][1])
    else:
        s += 'None~None>'
    return s
```

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文本实体抽取

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时空数据分析（Spatial analysis）

社会网络分析（Social network Analysis）

A Subset of the Data on Sima Guang:
有关司马光的部分数据：

Name 姓名	Dates 日期	Offices 任官	Associations 社会关系
Sima Guang 司馬光	1019-1086	(1) 1059 度支勾院 Budget Auditor; (2) 1085 门下侍郎 Executive of the Chancellery; (3) 1086 左仆射兼门下侍郎 Left Executive, Dept of Ministries [….]	(1) Yuanyou coalition member (元佑党); (2) An Dun 安惇 Desires opposed by; (3) Chao Buzhi 晁补之 Sacrificial prayer written by; (4) Chen Jian 陈荐 Sacrificial prayer written for; (5) Chen Min 陈敏 Honored by; (6) Cheng Yi 程頤 Recommended; (7) Ding Du 丁度 Sacrificial prayer written for; (8) Fan Chunli 范纯礼 Patron of; [….]

关系型数据库的多个实体
People 人物
Offices 职官
Association Types 社会关系

Name 姓名	**Dates 日期**
Sima Guang 司馬光	1019-1086

Person 人物	**Posting Date 任命日期**	**Office Title 官名**
Sima Guang 司馬光	1059	度支勾院 Budget Auditor
Sima Guang 司馬光	1085	门下侍郎 Executive of the Chancellery
Sima Guang 司馬光	1086	左仆射兼门下侍郎 Left Executive, Dept of Ministries

Person 人物	**Association Type 关系类型**	**Associate 社会关系人**
Sima Guang 司馬光	Yuanyou member (元佑党)	(not applicable)
Sima Guang 司馬光	Desires opposed by	An Dun 安惇
Sima Guang 司馬光	Sacrificial prayer written by	Chao Buzhi 晁补之
Sima Guang 司馬光	Patron of	Fan Chunli 范纯礼
Sima Guang 司馬光	Sacrificial prayer written for	Ding Du 丁度

可以按照不同字段分别排序

Name 姓名	**Dates 日期**
Sima Guang 司馬光	1019-1086

Person 人物	**Posting Date 任命日期**	**Office Title 官名**
Sima Guang 司馬光	1059	度支勾院 Budget Auditor
Sima Guang 司馬光	1085	门下侍郎 Executive of the Chancellery
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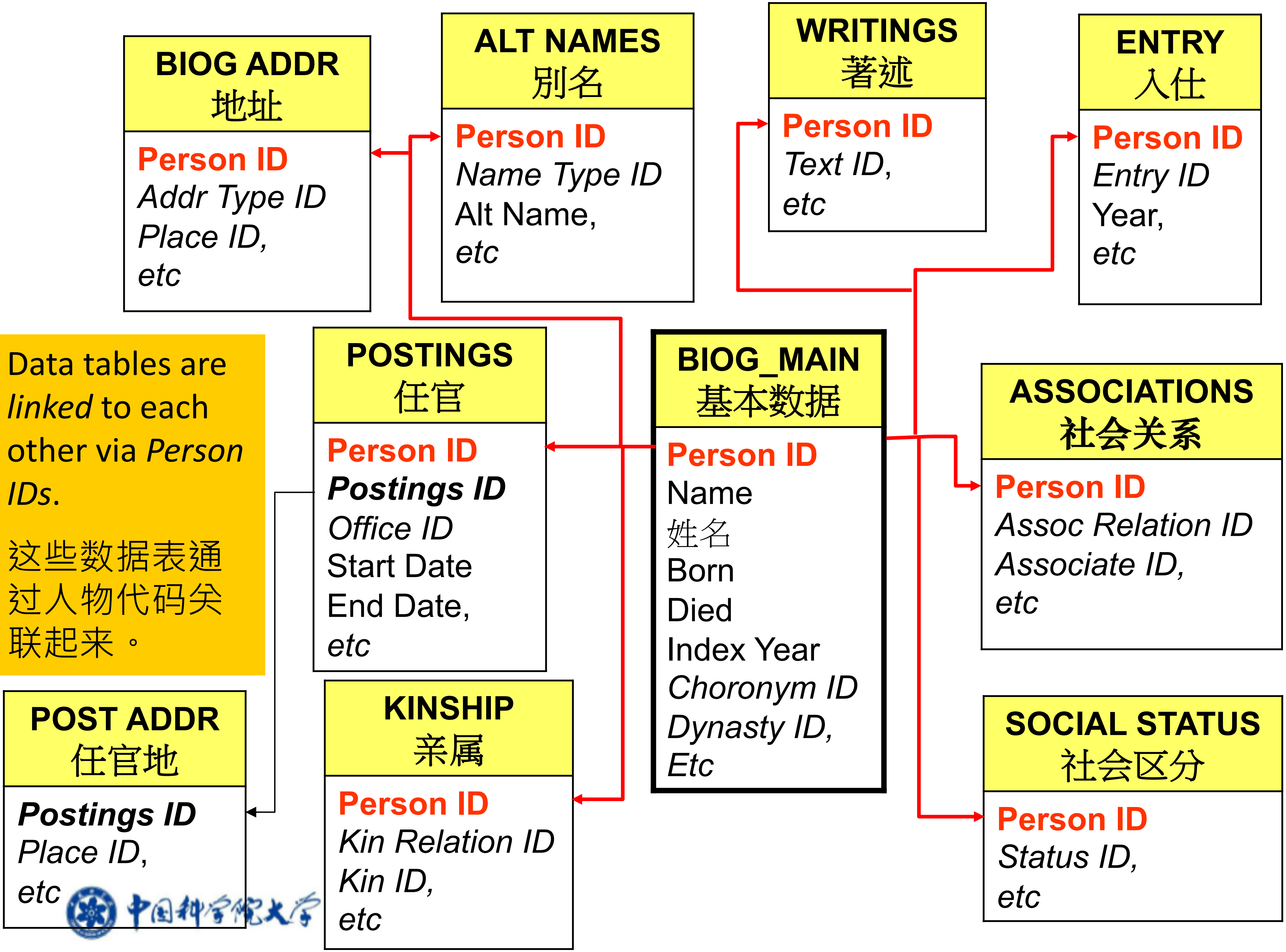
Person 人物	**Association Type 关系类型**	**Associate 社会关系人**
Sima Guang 司馬光	Yuanyou member (元祐黨)	(not applicable)
Sima Guang 司馬光	Desires opposed by	An Dun 安惇
Sima Guang 司馬光	Sacrificial prayer written by	Chao Buzhi 晁補之
Sima Guang 司馬光	Patron of	Fan Chunli 范純禮
Sima Guang 司馬光	Sacrificial prayer written for	Ding Du 丁度

(1) Biographical data are *coded* and stored in *tables*.
传记数据以代码的形式存储于关系数据表中。

BIOG_MAIN	基本数据
Biography Addresses	地址数据
Alternate Names	别名数据
Writings	著述数据
Postings	任官数据
Mode of Entry into Government	入仕途径
Kinship	亲属数据
Associations	社会关系数据
Social Status	社会区分数据
Possessions	财产数据
Events	事件数据

Data tables are *linked* to each other via *Person IDs*.

这些数据表通过人物代码关联起来。



BIOG_MAIN 基本数据

Person ID
Name
姓名
Born
Died
Index Year
Choronym ID
Dynasty ID,
Etc

BIOG ADDR 地址

Person ID
Addr Type ID
Place ID,
etc

ALT NAMES 别名

Person ID
Name Type ID
Alt Name,
etc

WRITINGS 著述

Person ID
Text ID,
etc

ENTRY 入仕

Person ID
Entry ID
Year,
etc

POSTINGS 任官

Person ID
Postings ID
Office ID
Start Date
End Date,
etc

POST ADDR 任官地

Postings ID
Place ID,
etc

KINSHIP 亲属

Person ID
Kin Relation ID
Kin ID,
etc

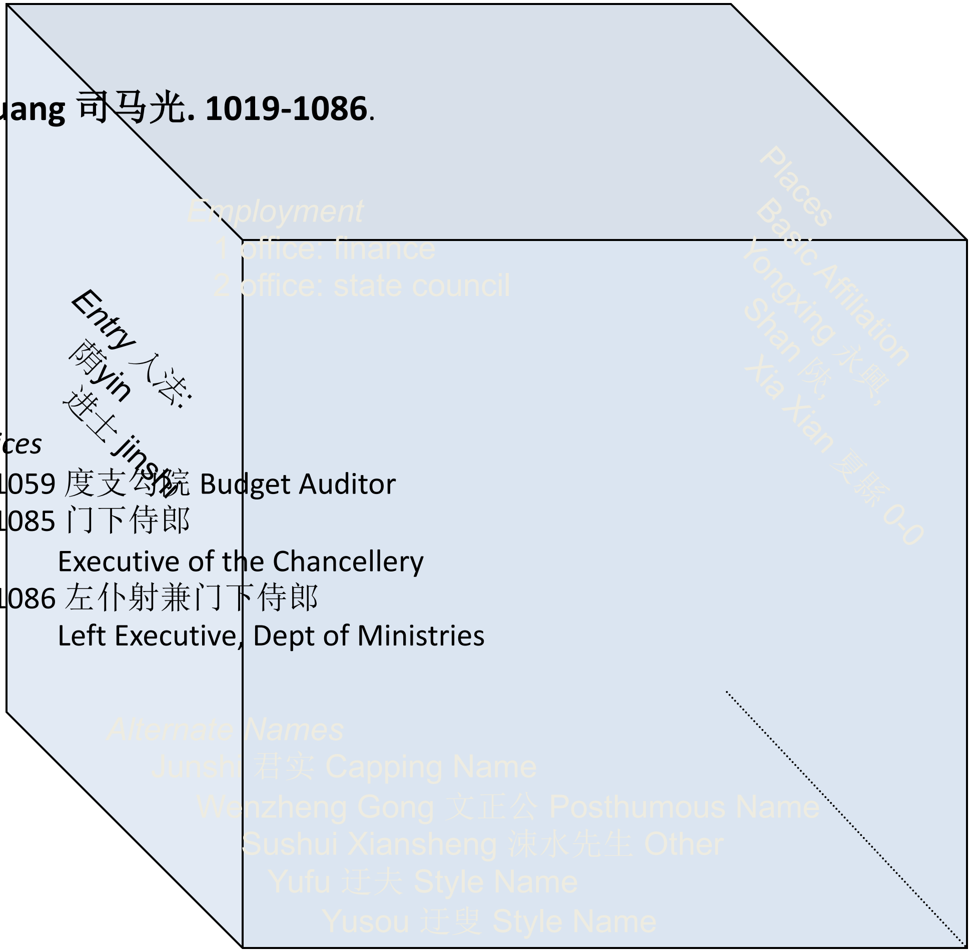
ASSOCIATIONS 社会关系

Person ID
Assoc Relation ID
Associate ID,
etc

SOCIAL STATUS 社会区分

Person ID
Status ID,
etc

Sima(1) Guang 司马光. 1019-1086.



Entry 入法:
蔭yin
进士 jinshi

Offices
1059 度支勾院 Budget Auditor
1085 门下侍郎
Executive of the Chancellery
1086 左仆射兼门下侍郎
Left Executive, Dept of Ministries

Employment
1 office: finance
2 office: state council

Places
Basic Affiliation
Yongxing 永興,
Shan 陝,
Xia Xian 夏縣 0-0

Alternate Names
Junshi 君实 Capping Name
Wenzheng Gong 文正公 Posthumous Name
Sushui Xiansheng 涑水先生 Other
Yufu 迂夫 Style Name
Yusou 迂叟 Style Name

人物的数据数据存在于各种实体（人物、地址等）中。

从《中国历代人物传记》中发现新知识

The China Biographical Database – from anecdote to data to knowledge

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Prosopography（人物关系学）

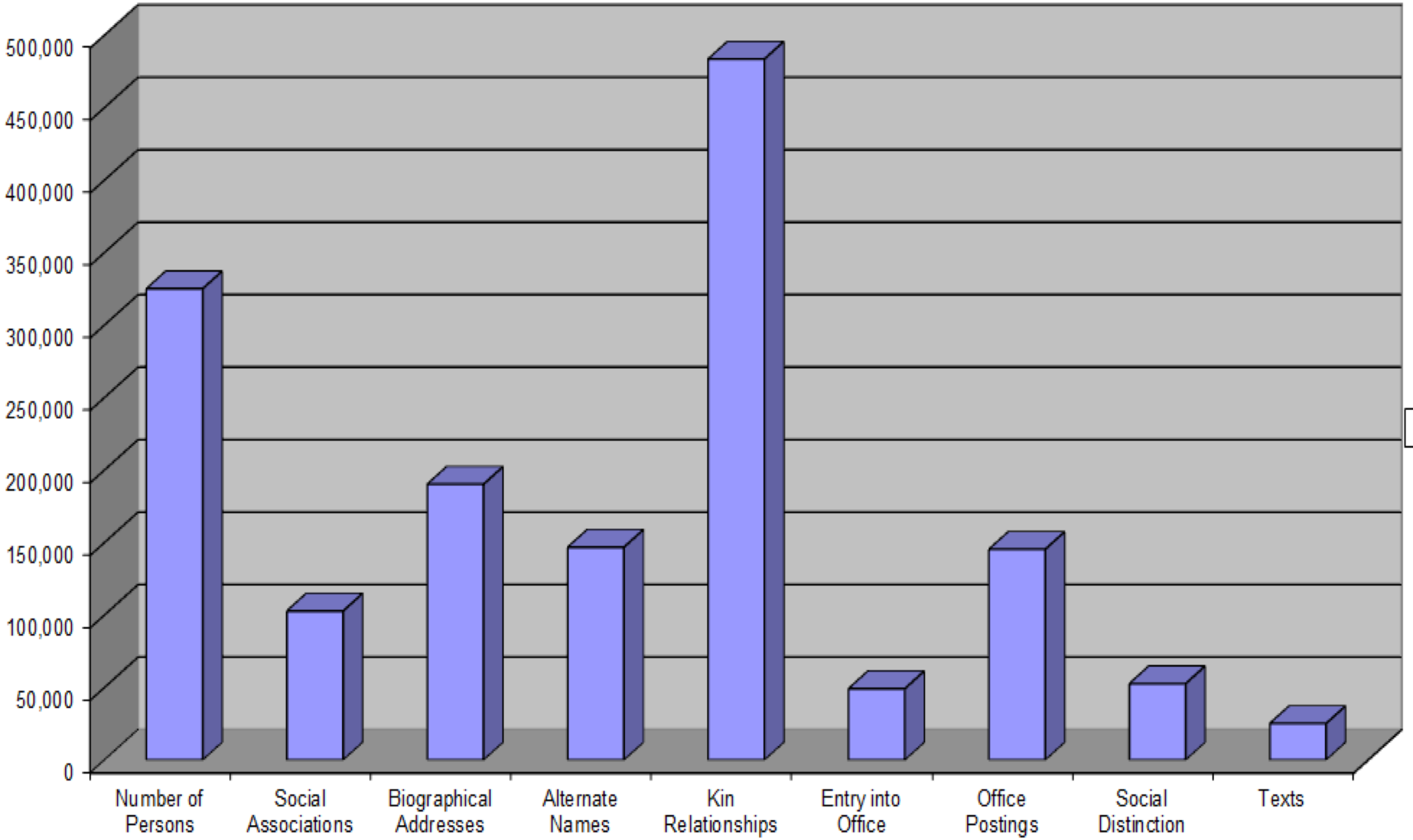
“人物关系学” 探索研究一个特定群体的个体之间的关系。

--从历史文献中收集整理关于人物的出生和死亡、婚姻和家庭、社会出身和继承的经济地位、居住地、教育、个人财富的数额和来源,职业、宗教、任职经验等。

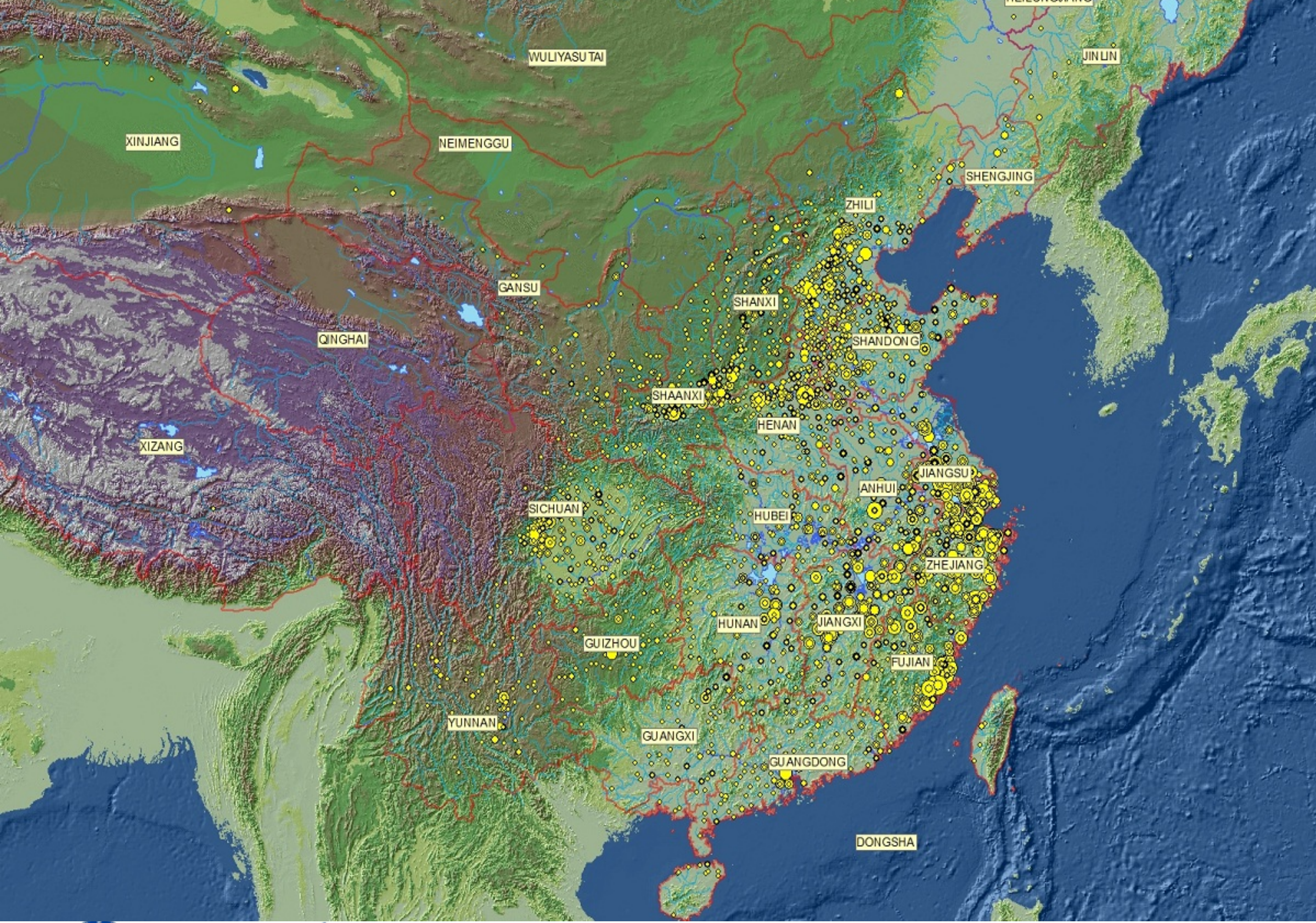
--根据研究问题，对个体的各种类型的信息进行网络建模，推断或计算出个体间关系以及他们的影响程度等结论。

(l. stone, 《 Prosopography "》, 载于 f. gilbert 和 s. grabard 编辑, 《今日历史研究》 (纽约, 1972年)

CBDB Data December 2013

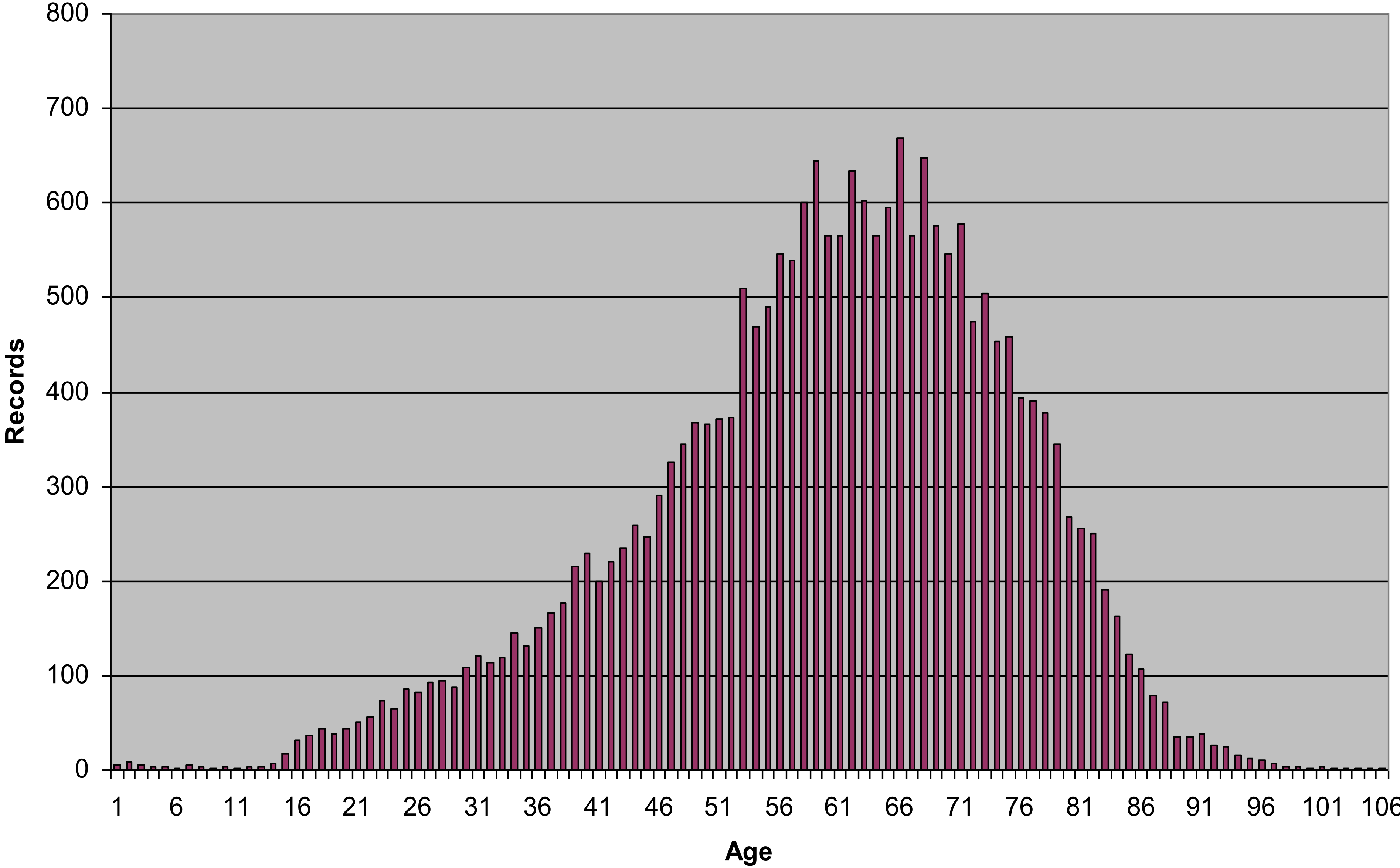


Period	Number
Tang	56432
5 Dynasties	1889
Song	47071
Liao	318
Jin	275
Yuan	19886
Ming	150585
Qing	37848
Minguo	3215
Other	20000

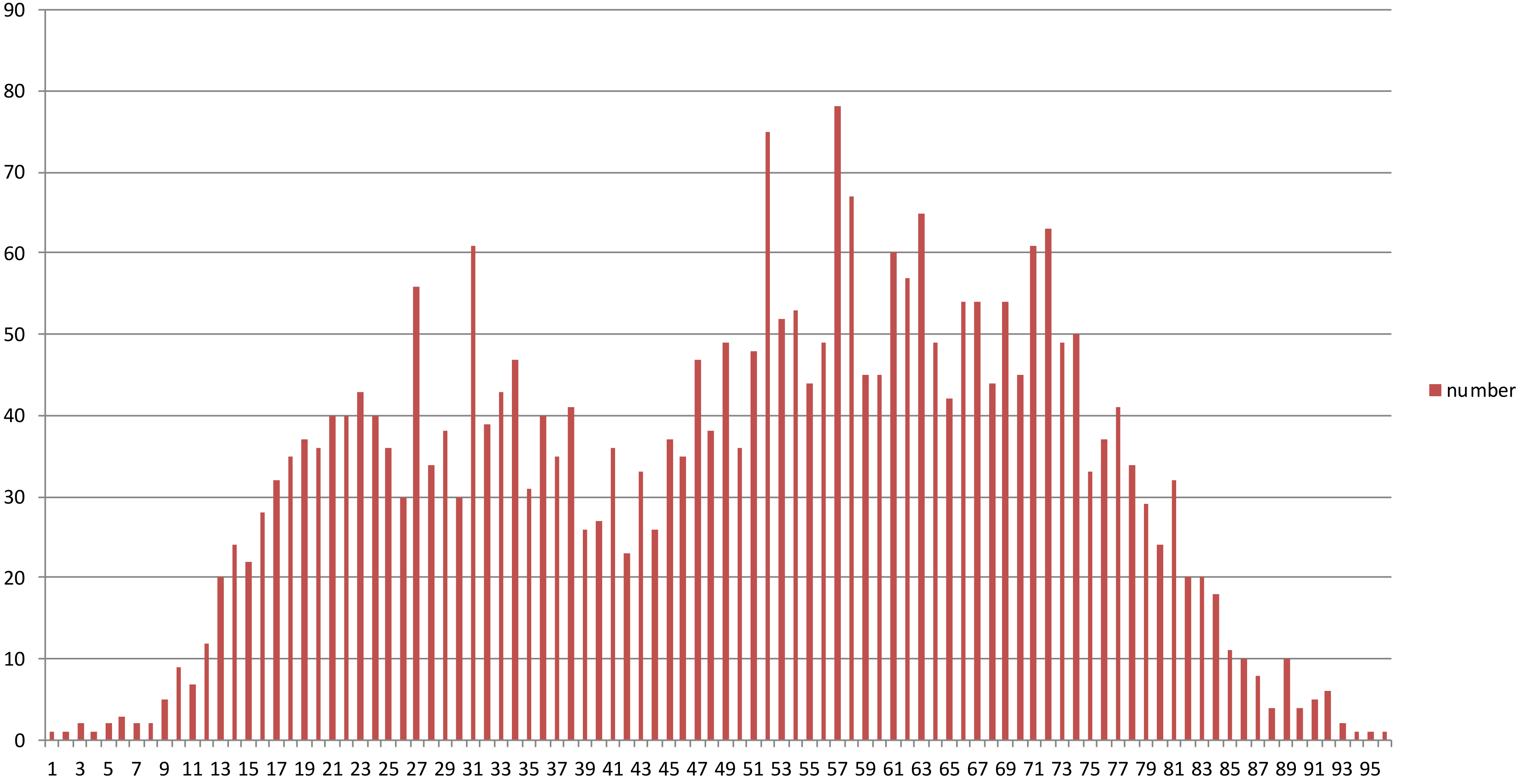


Cumulative Spatial Distribution of a Representative Sample of 67,000 CBDB Persons

Age at Death-CBDB data Tang through Qing - 22270 persons



Age at Death of the 3072 Women in CBDB with Death Ages



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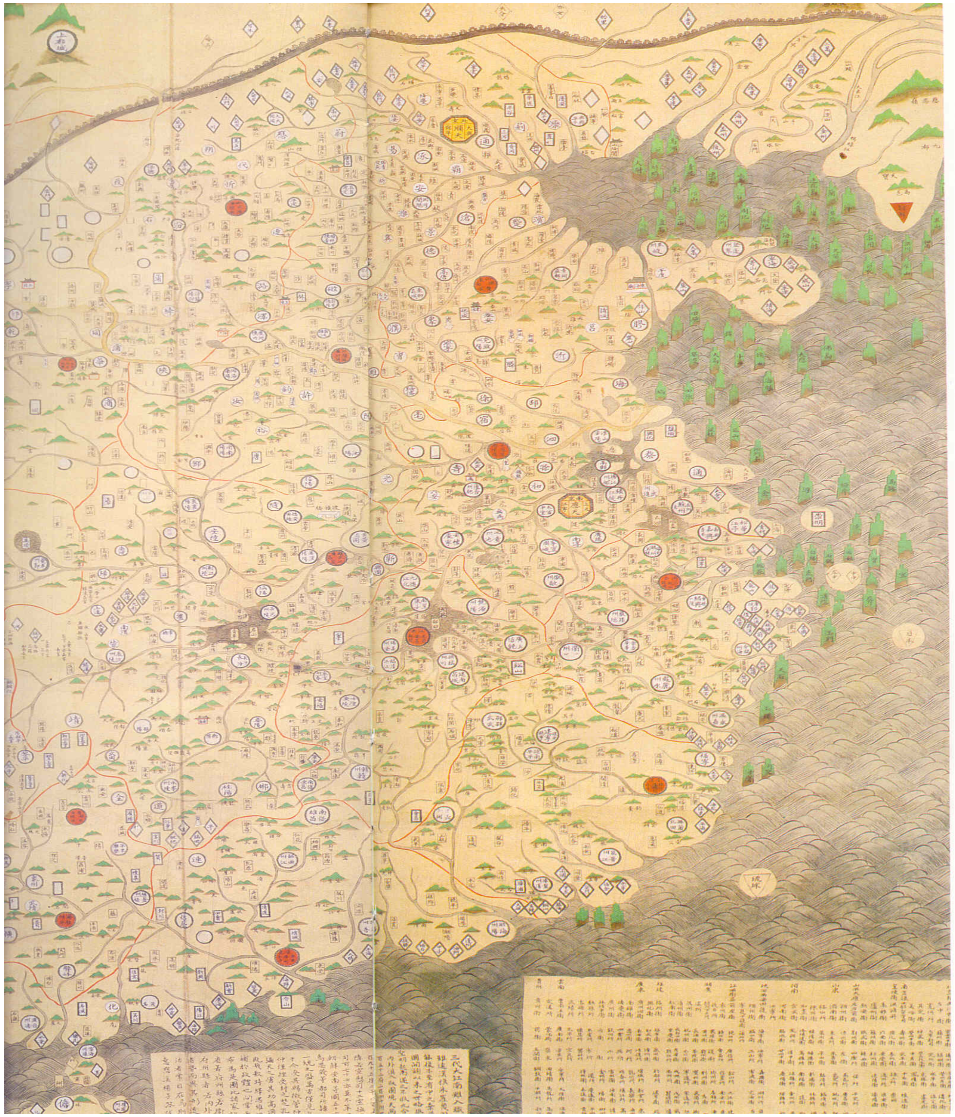
地图就是一个主张、命题和构想



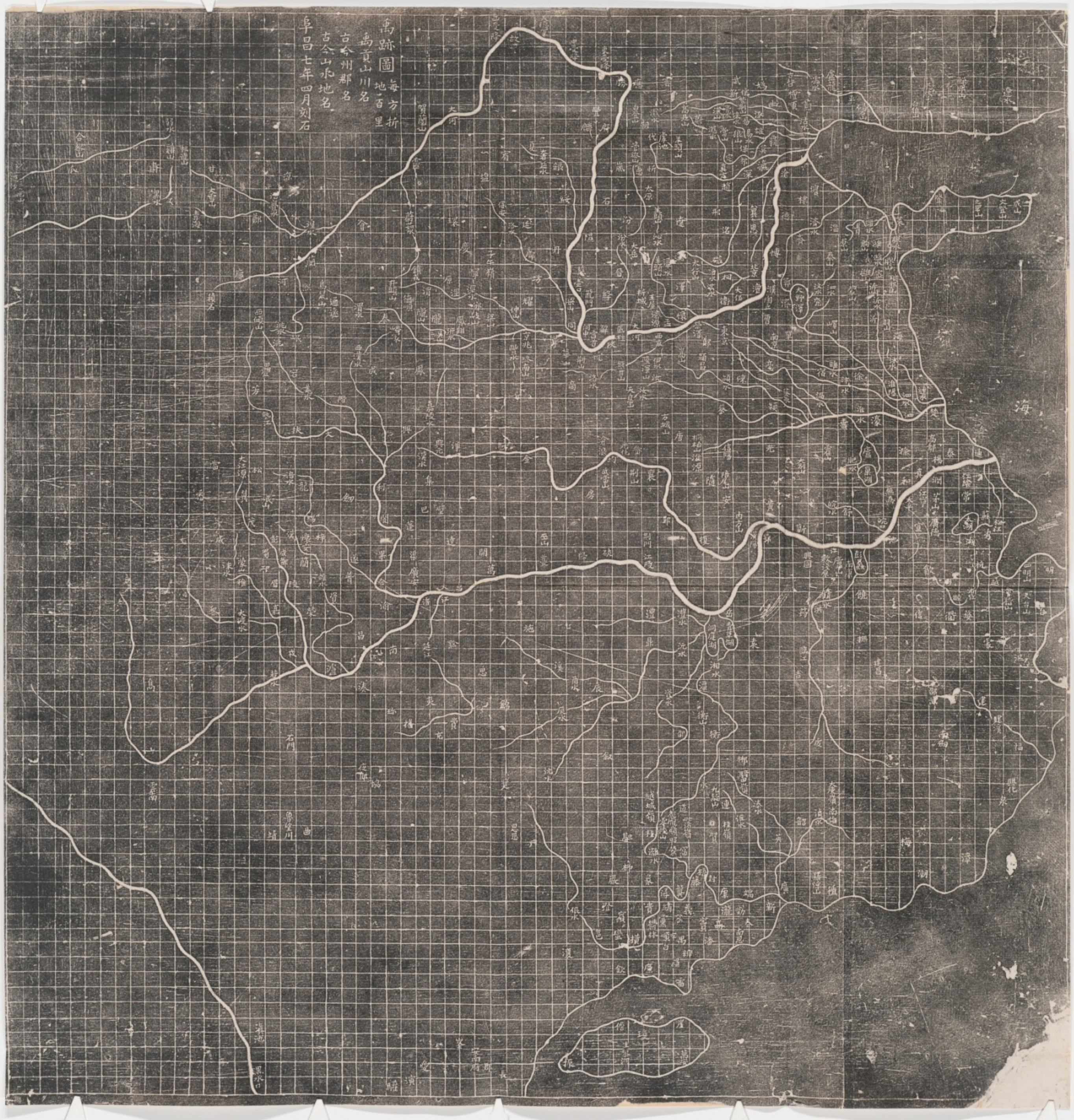


Chart of the Traces of Yu

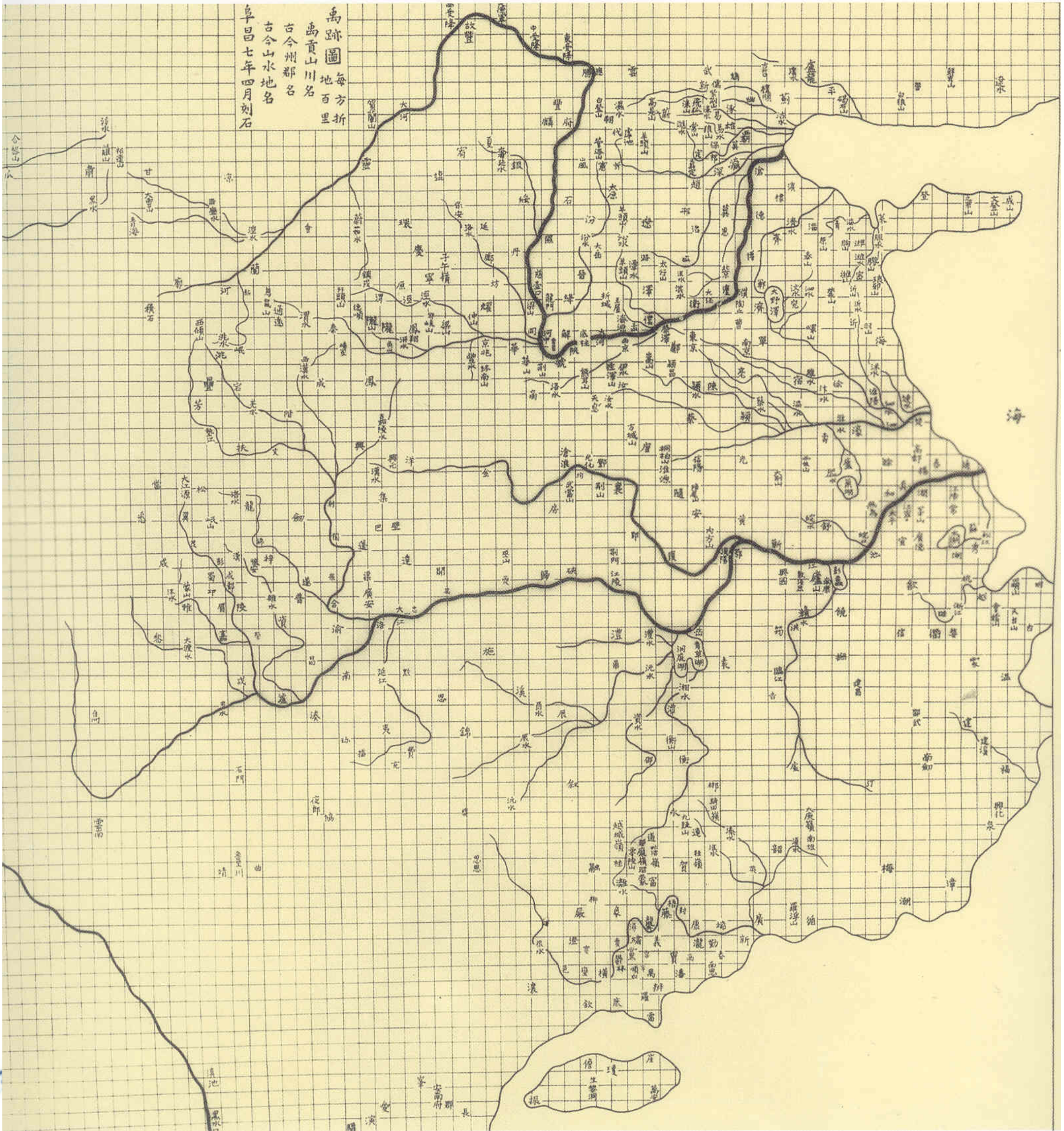
每个方形的覆盖 100 *li*

山和河的名字在 “Tribute of Yu”

过去和现在都道府县的名称

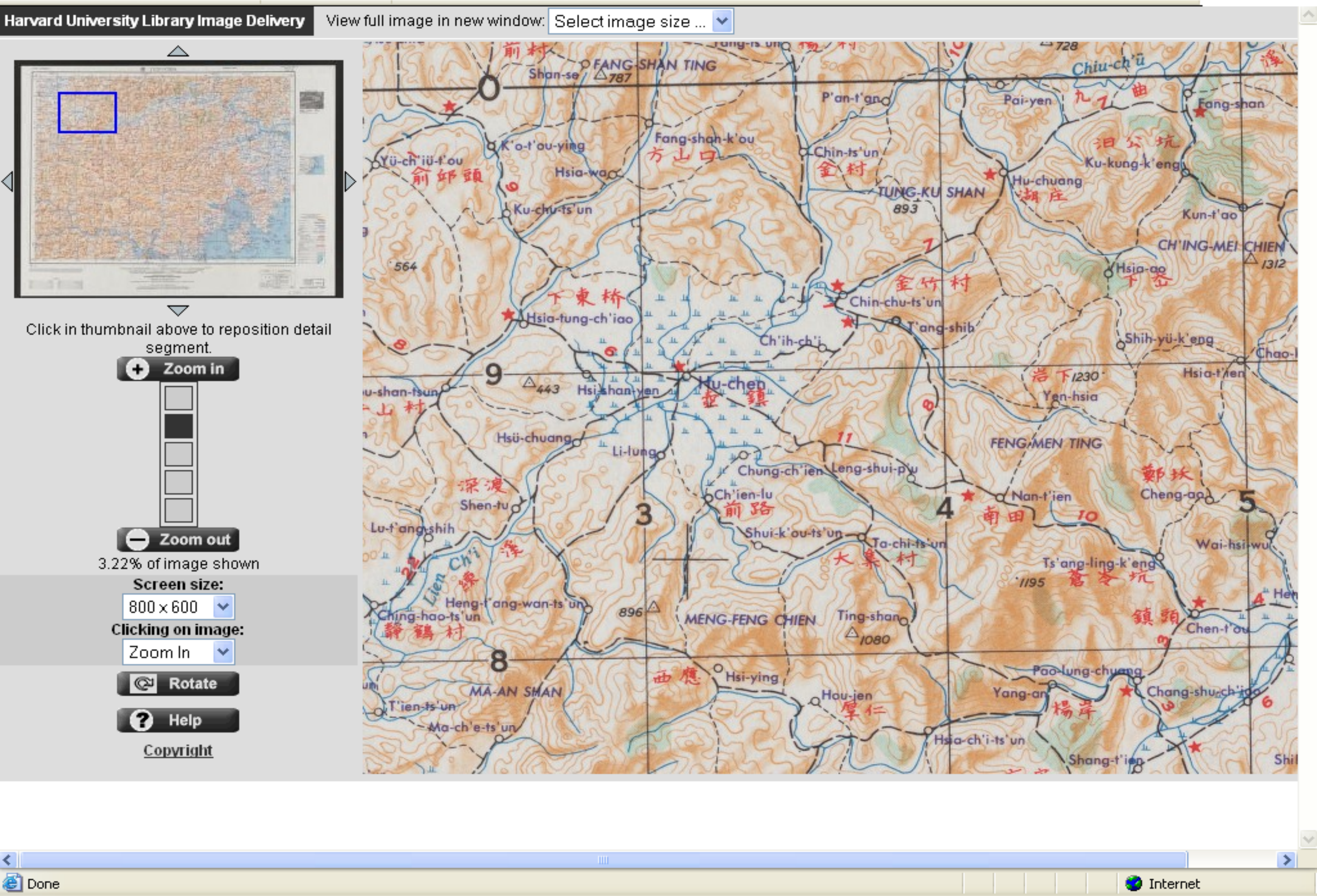
过去和现在的山脉和河流的名称

Engraved in 4th month of the 7th year of Fuchang (=1136)



禹跡圖每方折地百里
禹貢山川名
古今州郡名
古今山水地名
阜昌七年四月刻石

from the Army Map Service, ca. 1950/ CHGIS website



Harvard University Library Image Delivery

View full image in new window: Select image size ...

Click in thumbnail above to reposition detail segment.

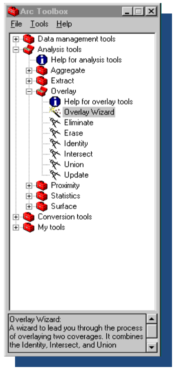
3.22% of image shown

Screen size: 800 x 600

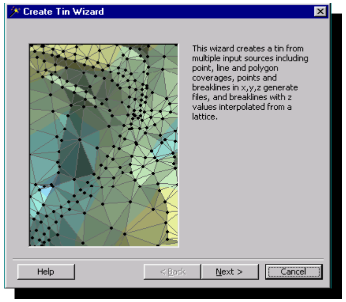
Clicking on image: Zoom In

Done

GIS的三种视图



Overlay Wizard:
A wizard to lead you through the process of overlaying two coverages. It combines the Identity, Intersect, and Union

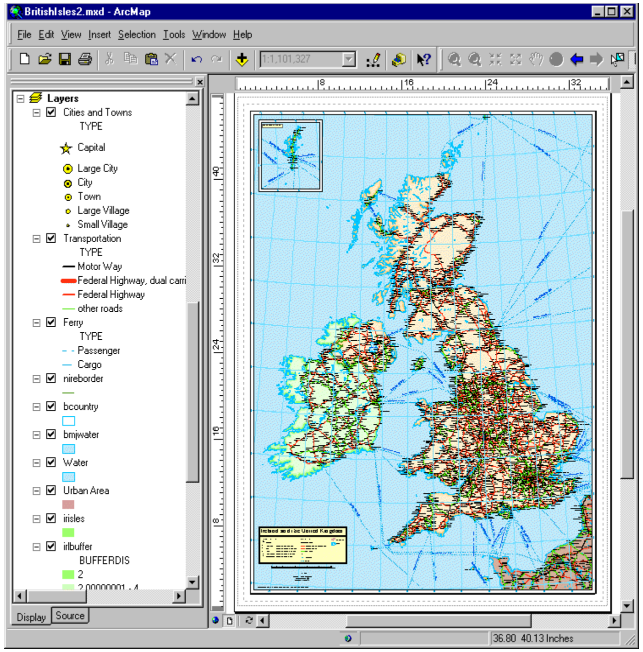


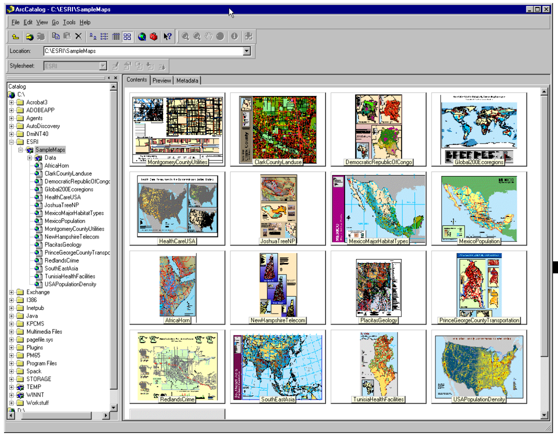
This wizard creates a tin from multiple input sources including point, line and polygon coverages, points and breaklines in x,y,z generate files, and breaklines with z values interpolated from a lattice.

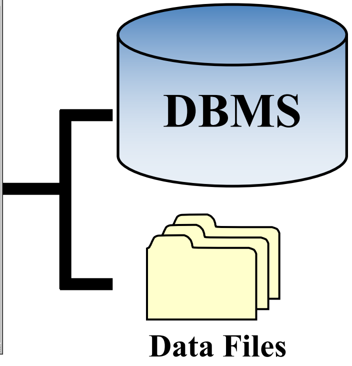
1. 智能交互式地图

2. 一套工具和程序

– 执行任务的语言

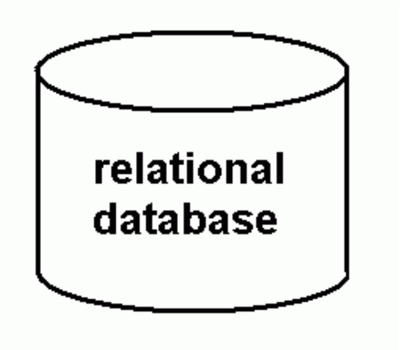






3. 管理信息系统

数字地名录



placename

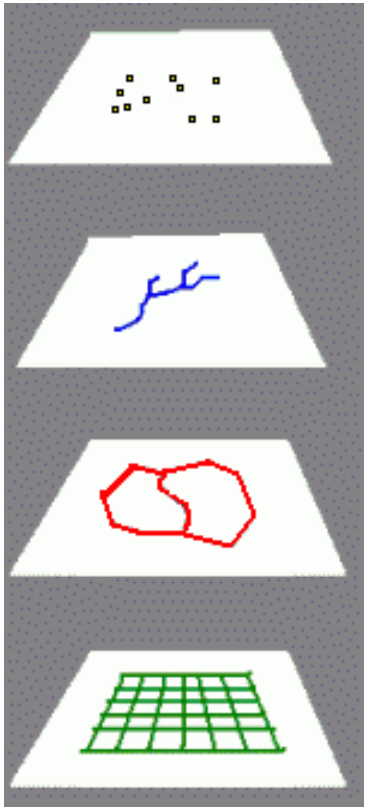
feature type

coordinates

valid date

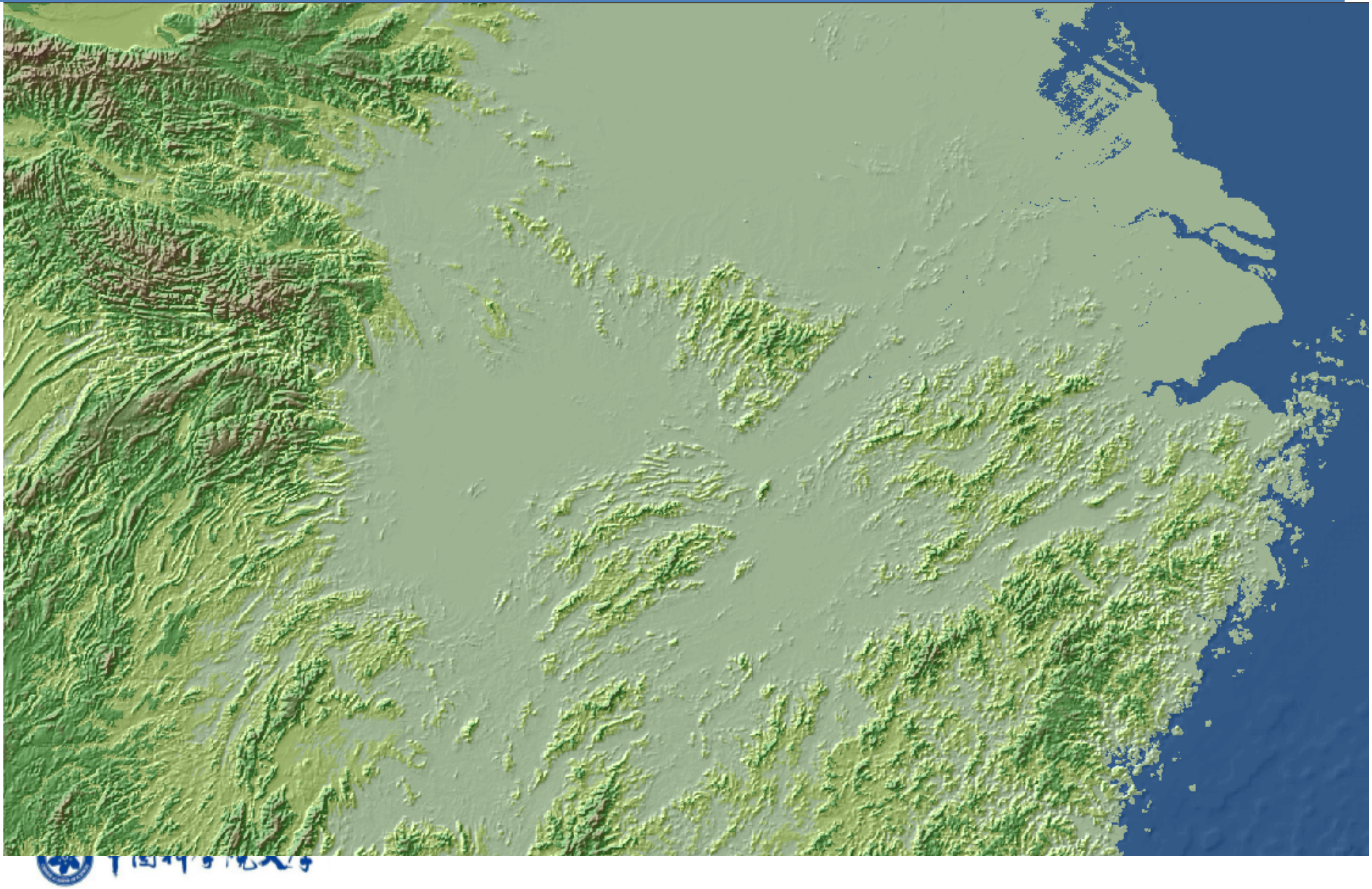
source note

GIS 层

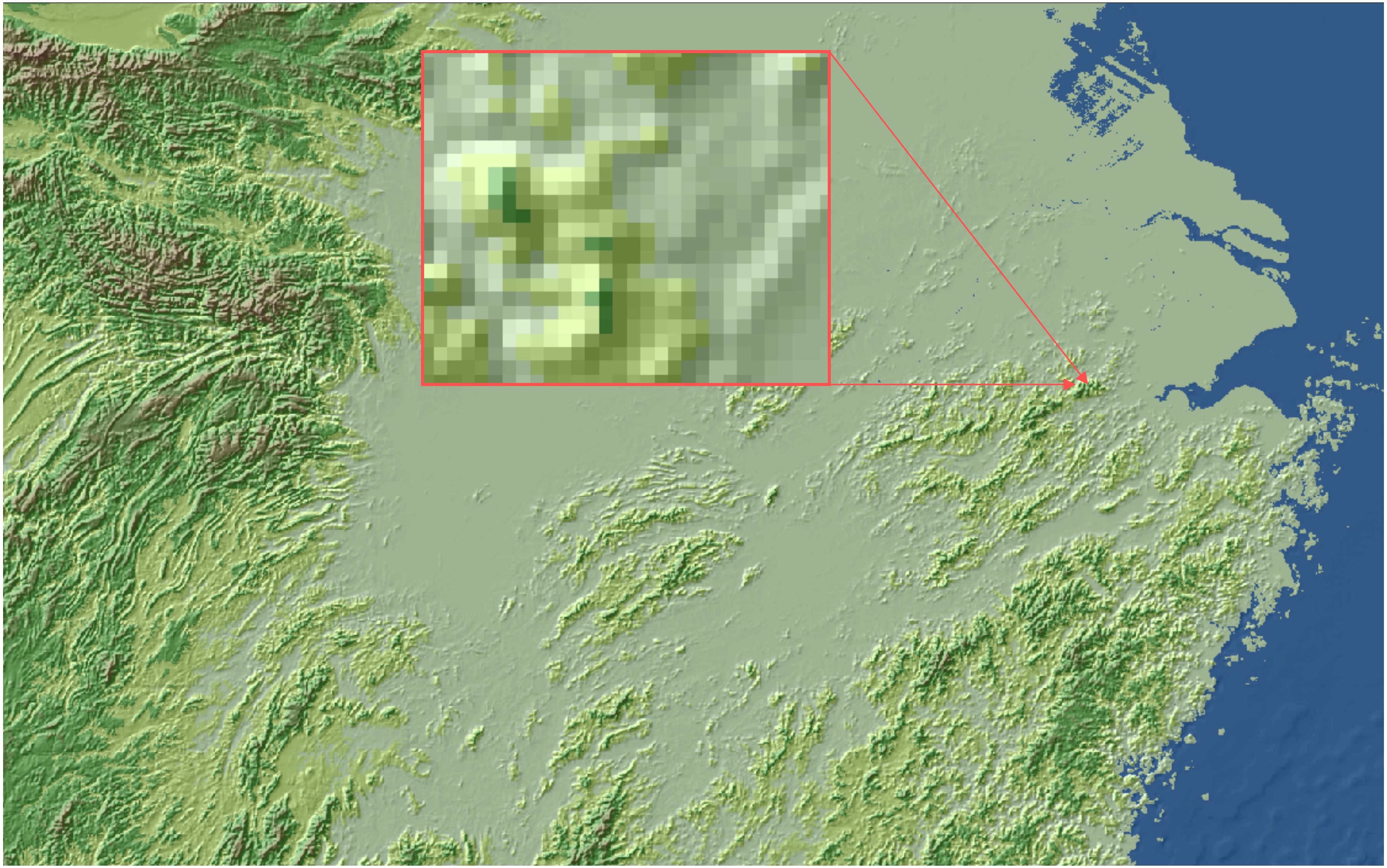


spatial objects

栅格数据: 数字高程模型 (DEM) or “网格数据”

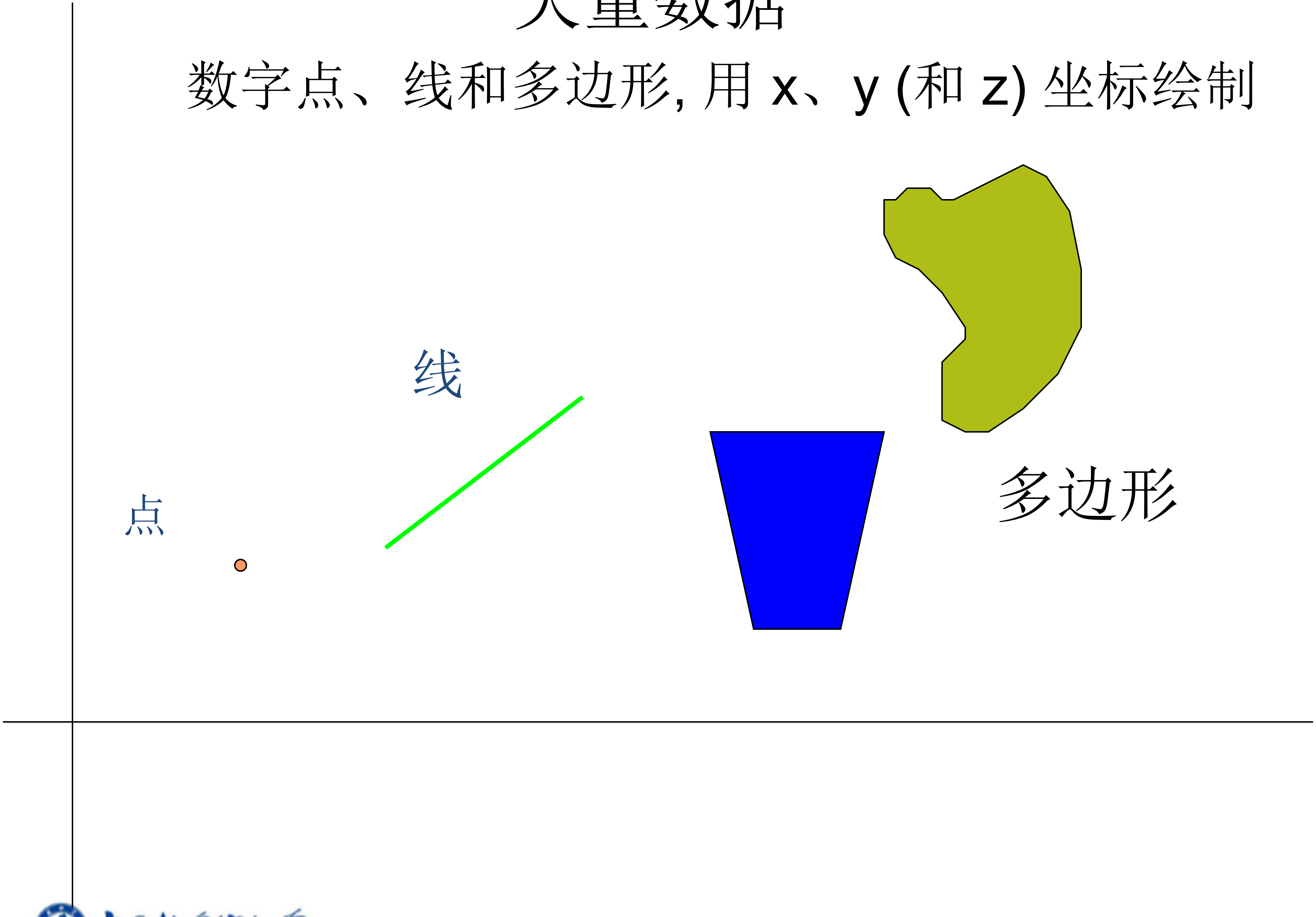


栅格数据: 每个像素都有一个值

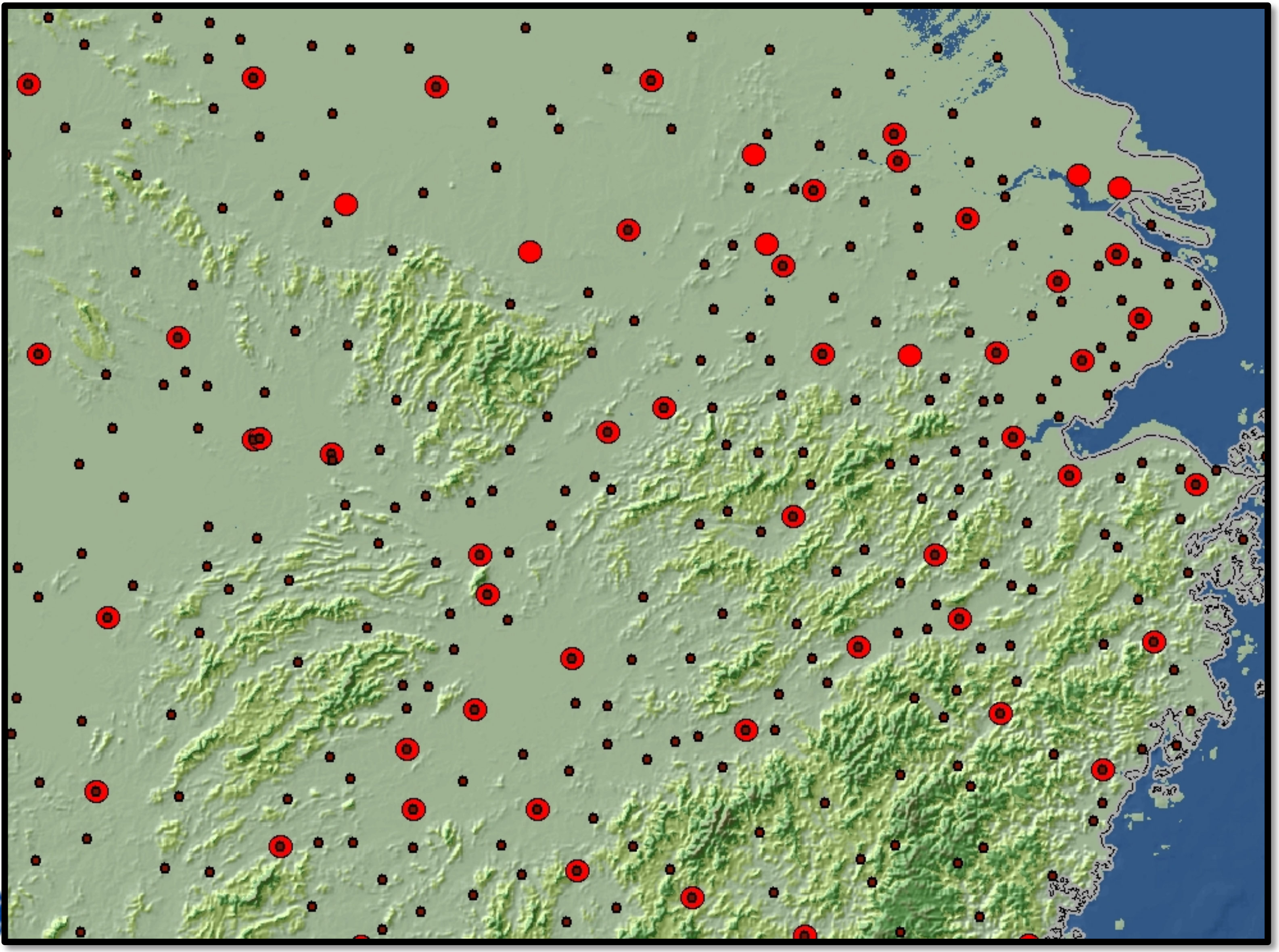


矢量数据

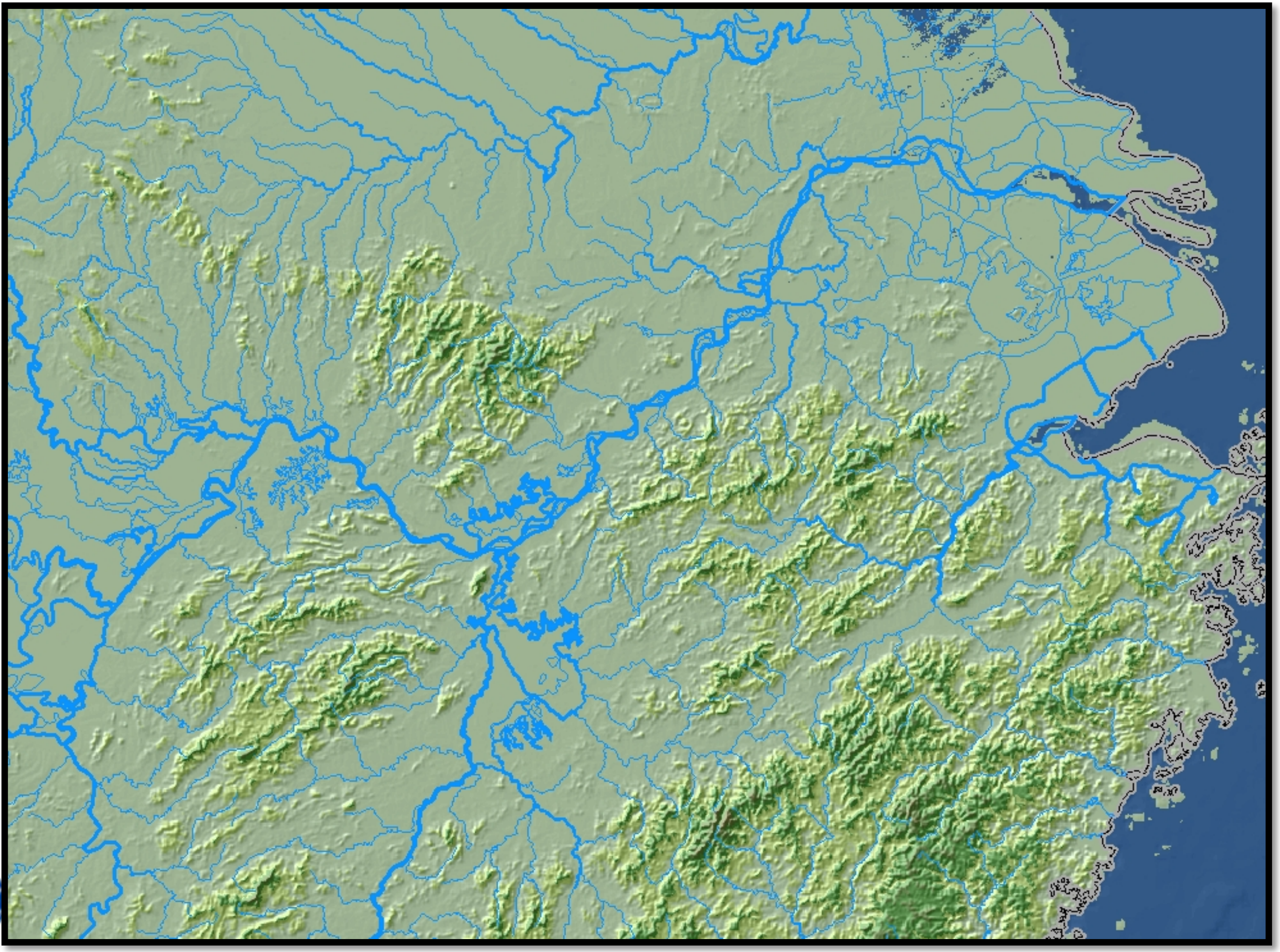
数字点、线和多边形, 用 x、y (和 z) 坐标绘制



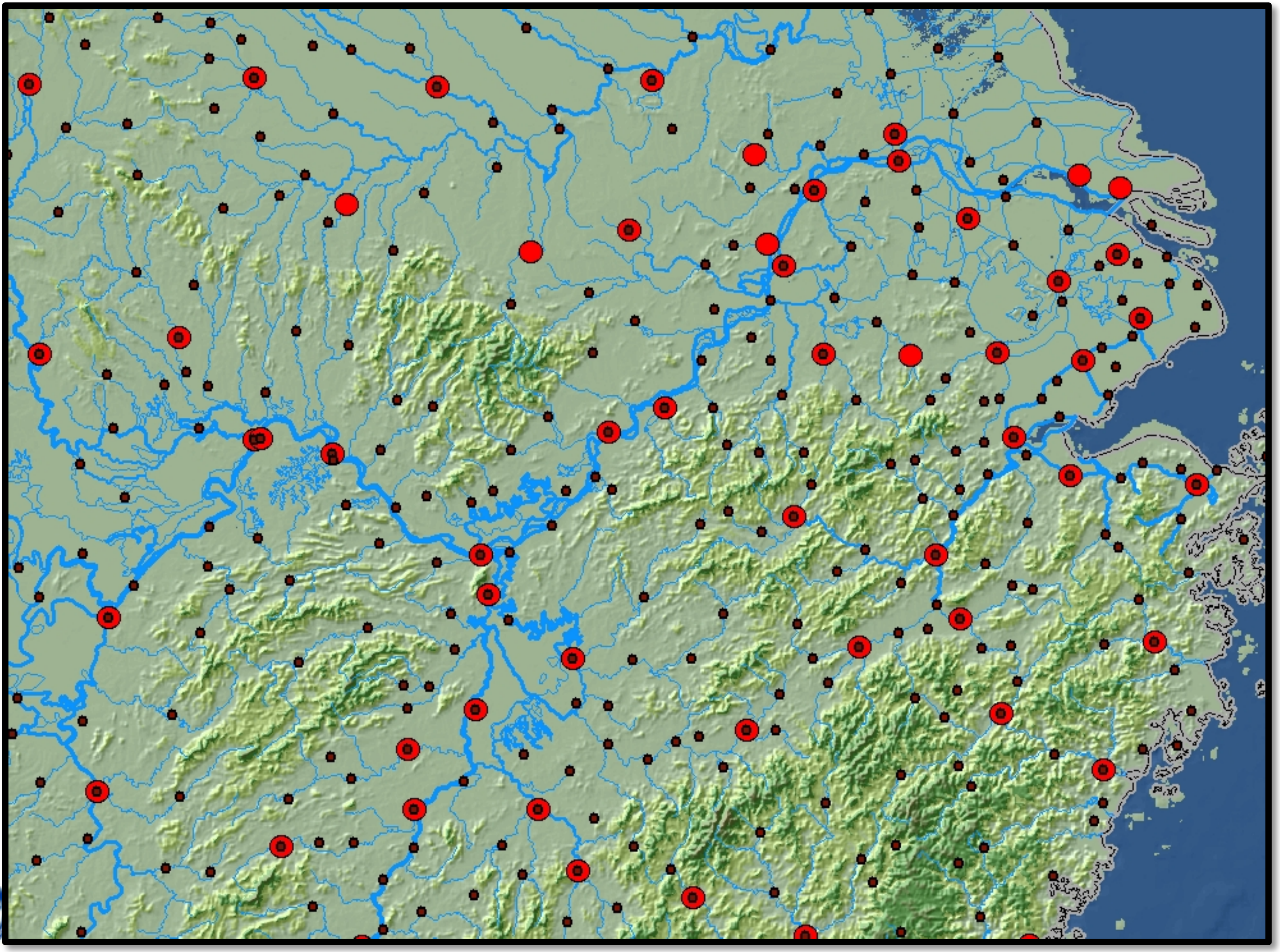
栅格和向量叠加,
州和县位置(1820)



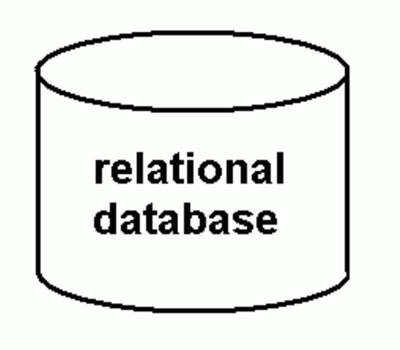
栅格和矢量叠加
水道 (1820) 和 数字高程模型（DEM）



州、县、水路和数据高程模型 (1820)



数字地名录



placename

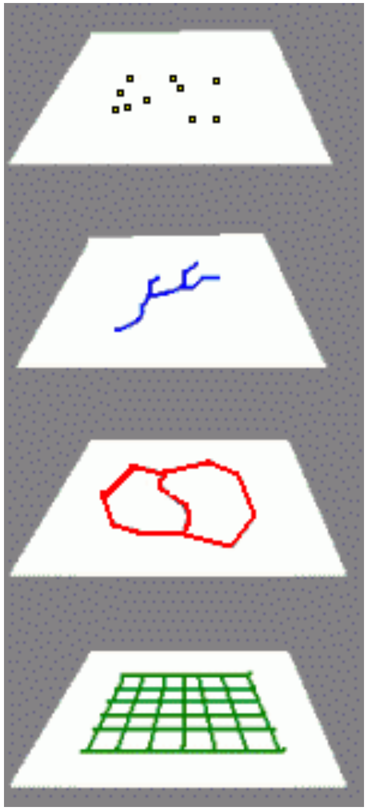
feature type

coordinates

valid date

source note

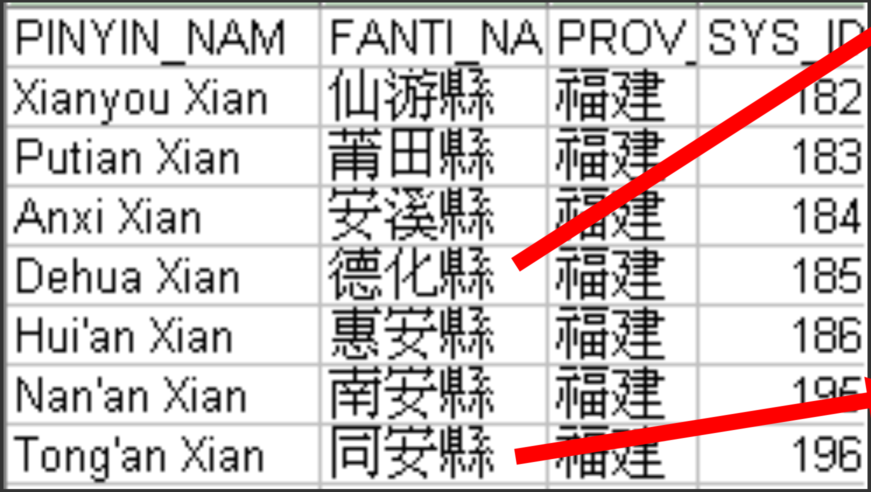
GIS 图层



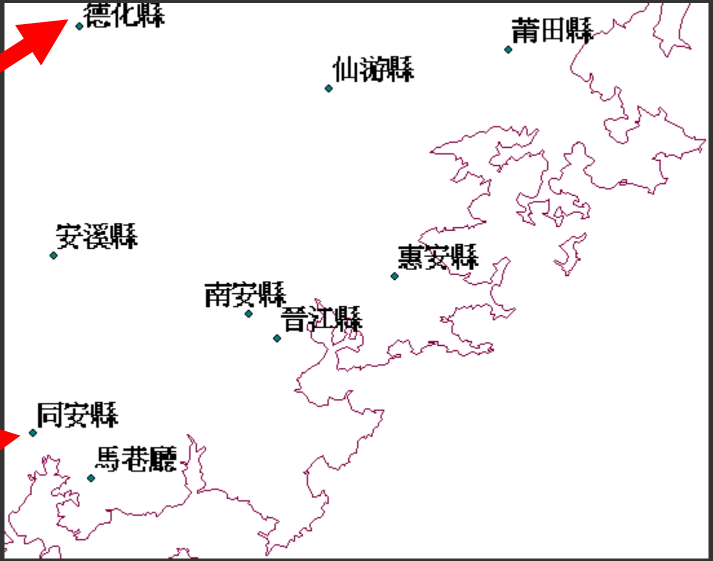
spatial objects

CHGIS = gazetteer database + GIS layers

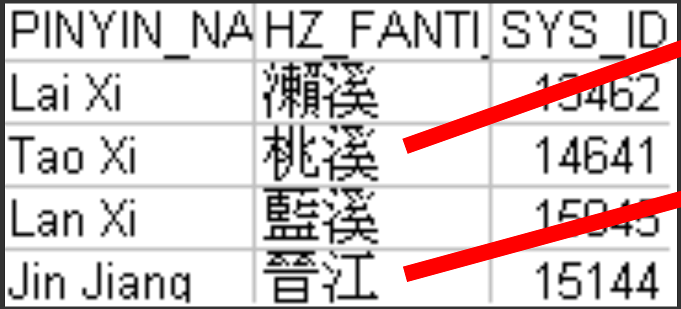
database linked to **spatial data**



PINYIN_NAM	FANTI_NA	PROV_	SYS_ID
Xianyou Xian	仙游縣	福建	182
Putian Xian	莆田縣	福建	183
Anxi Xian	安溪縣	福建	184
Dehua Xian	德化縣	福建	185
Hui'an Xian	惠安縣	福建	186
Nan'an Xian	南安縣	福建	195
Tong'an Xian	同安縣	福建	196



points



PINYIN_NA	HZ_FANTI_	SYS_ID
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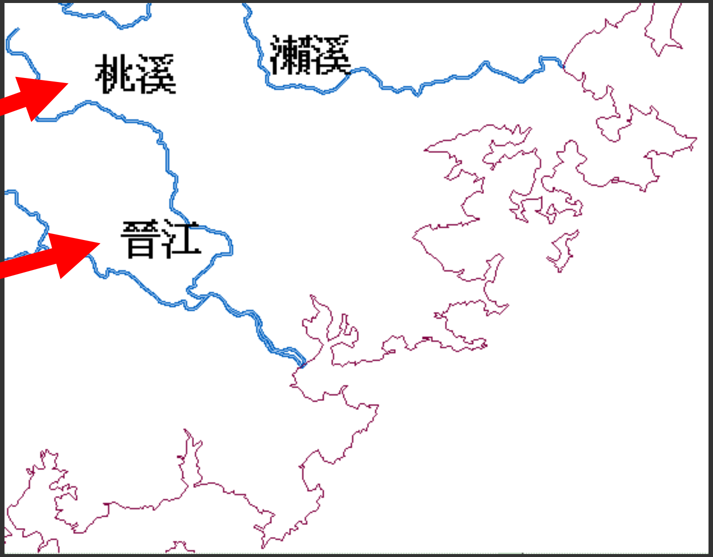
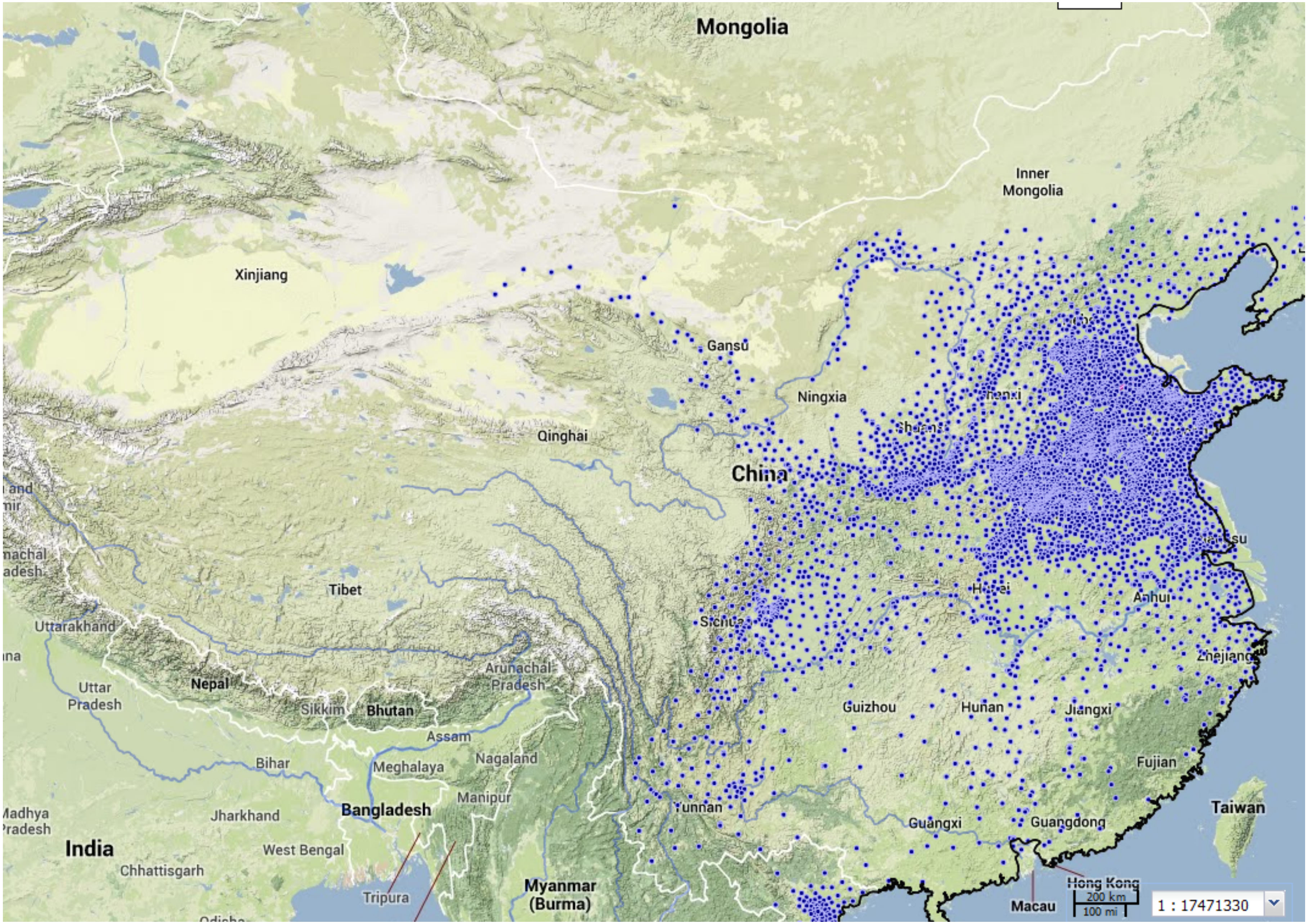
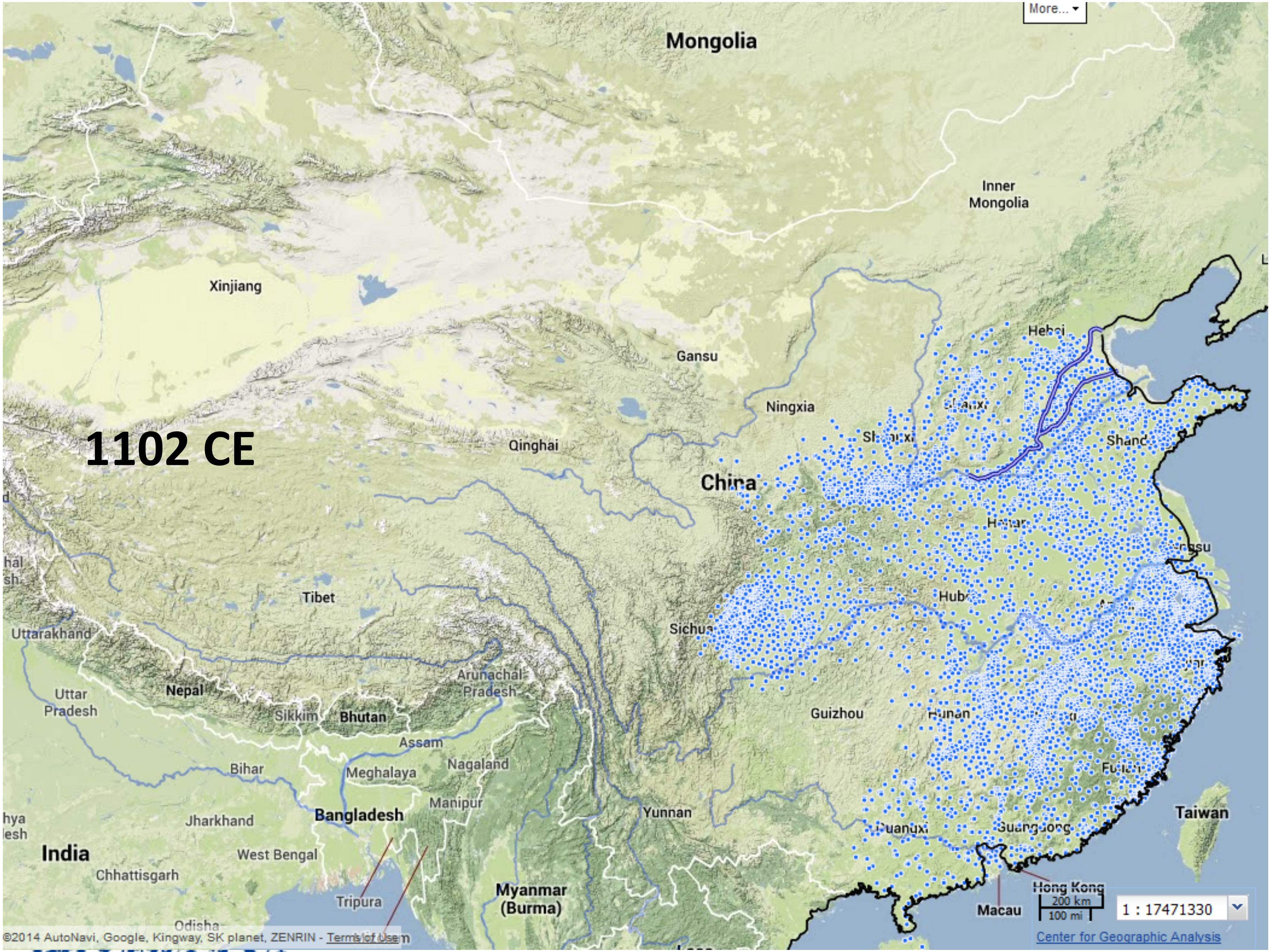
Tao Xi	桃溪	14641
Lan Xi	藍溪	15045
Jin Jiang	晉江	15144



lines

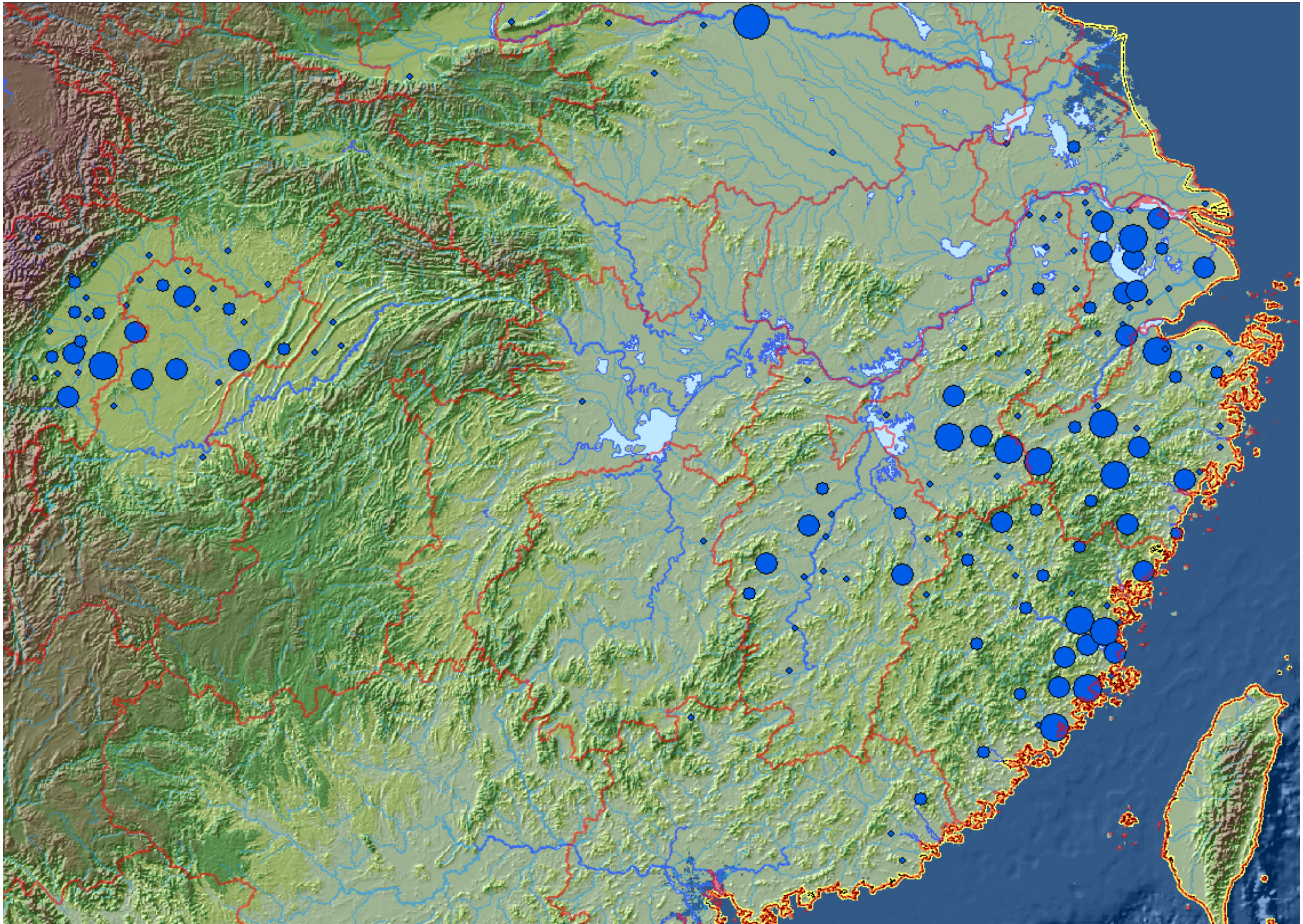

Mongolia
Inner Mongolia
Xinjiang
Gansu
Ningxia
Qinghai
China
Shanxi
Shaanxi
Tibet
Sichuan
Hubei
Anhui
Jiangsu
Zhejiang
Guizhou
Hunan
Jiangxi
Fujian
Taiwan
Yunnan
Guangxi
Guangdong
Hong Kong
Macau
Uttarakhand
Uttar Pradesh
Nepal
Sikkim
Bhutan
Arunachal Pradesh
Assam
Nagaland
Meghalaya
Manipur
Bihar
Jharkhand
Bangladesh
West Bengal
Tripura
Madhya Pradesh
India
Chhattisgarh
Myanmar (Burma)
Odisha
200 km
100 mi
1 : 17471330

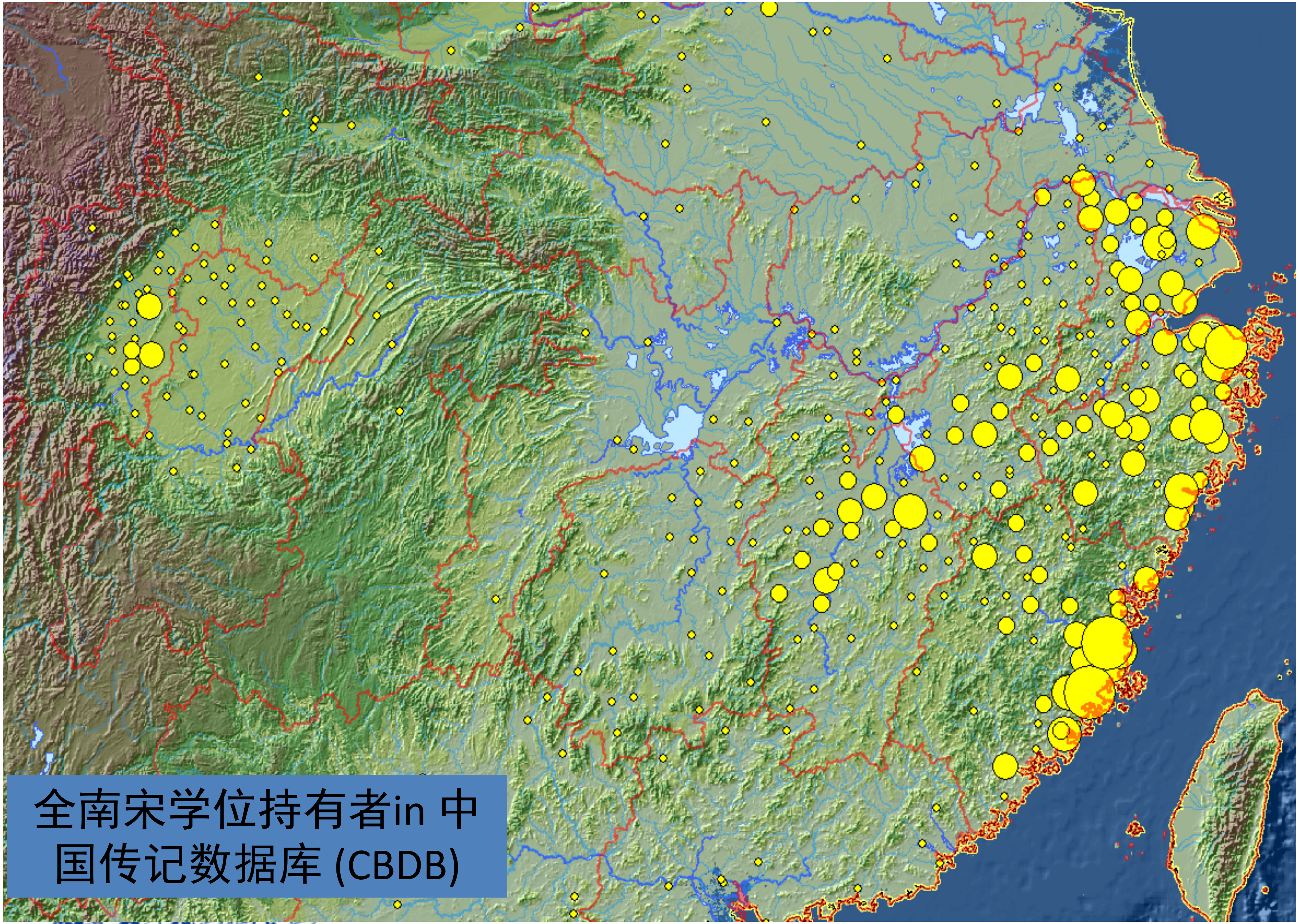
公元2年登记的人口


1102 CE

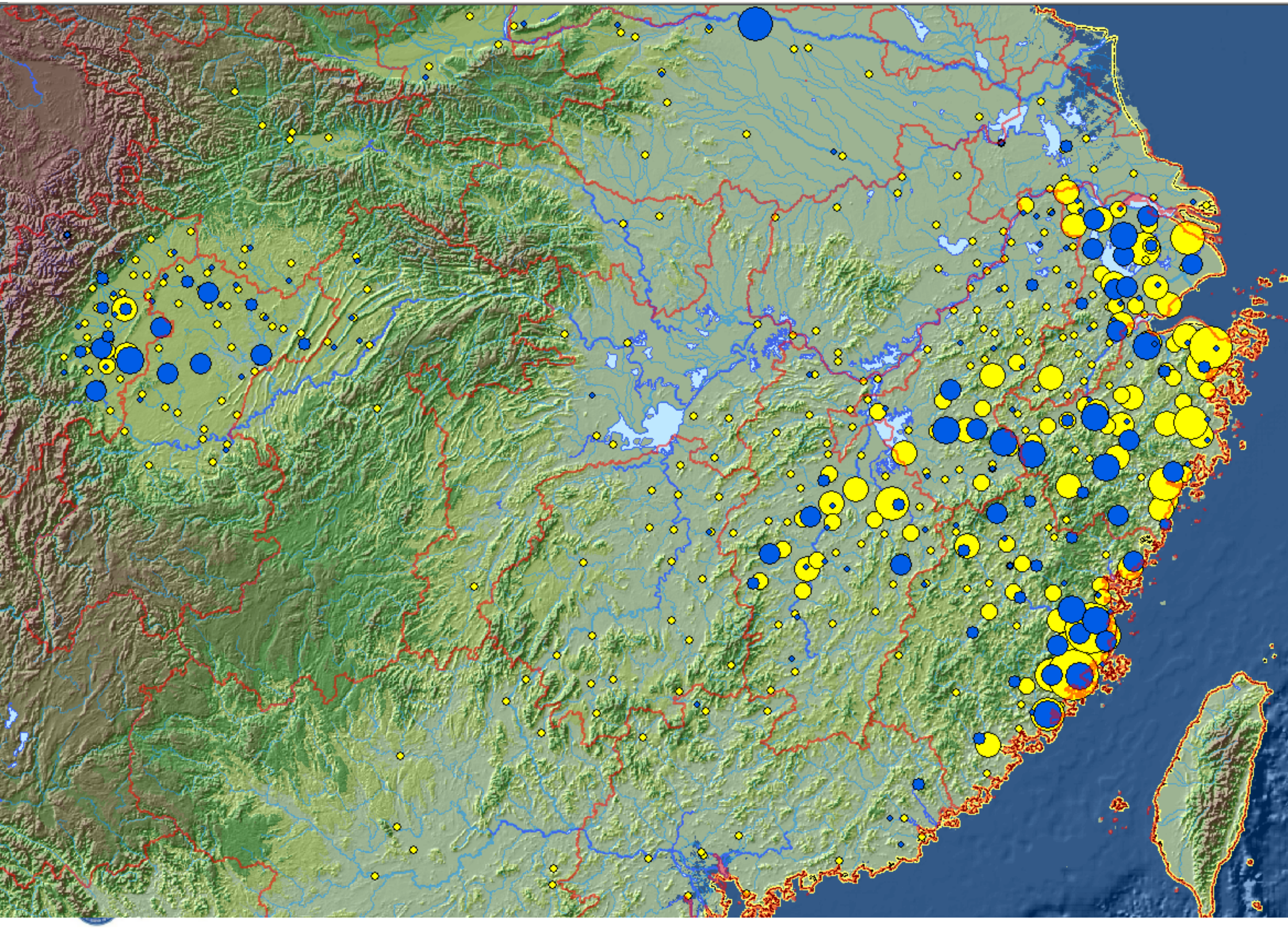
More...
Mongolia
Inner Mongolia
Xinjiang
Gansu
Ningxia
Hebei
Shanxi
Shaanxi
Shandong
Qinghai
China
Henan
Jiangsu
Hubei
Anhui
Sichuan
Tibet
Zhejiang
Jiangxi
Uttarakhand
Nepal
Arunachal Pradesh
Uttar Pradesh
Sikkim
Bhutan
Guizhou
Hunan
Fujian
Assam
Bihar
Meghalaya
Nagaland
Manipur
Bangladesh
Jharkhand
Yunnan
Guangxi
Guangdong
Taiwan
India
West Bengal
Chhattisgarh
Tripura
Myanmar (Burma)
Macau
Hong Kong
200 km
100 mi
1 : 17471330
Odisha
©2014 AutoNavi, Google, Kingway, SK planet, ZENRIN - Terms of Use
Center for Geographic Analysis

公元1148公务员考试地址名录

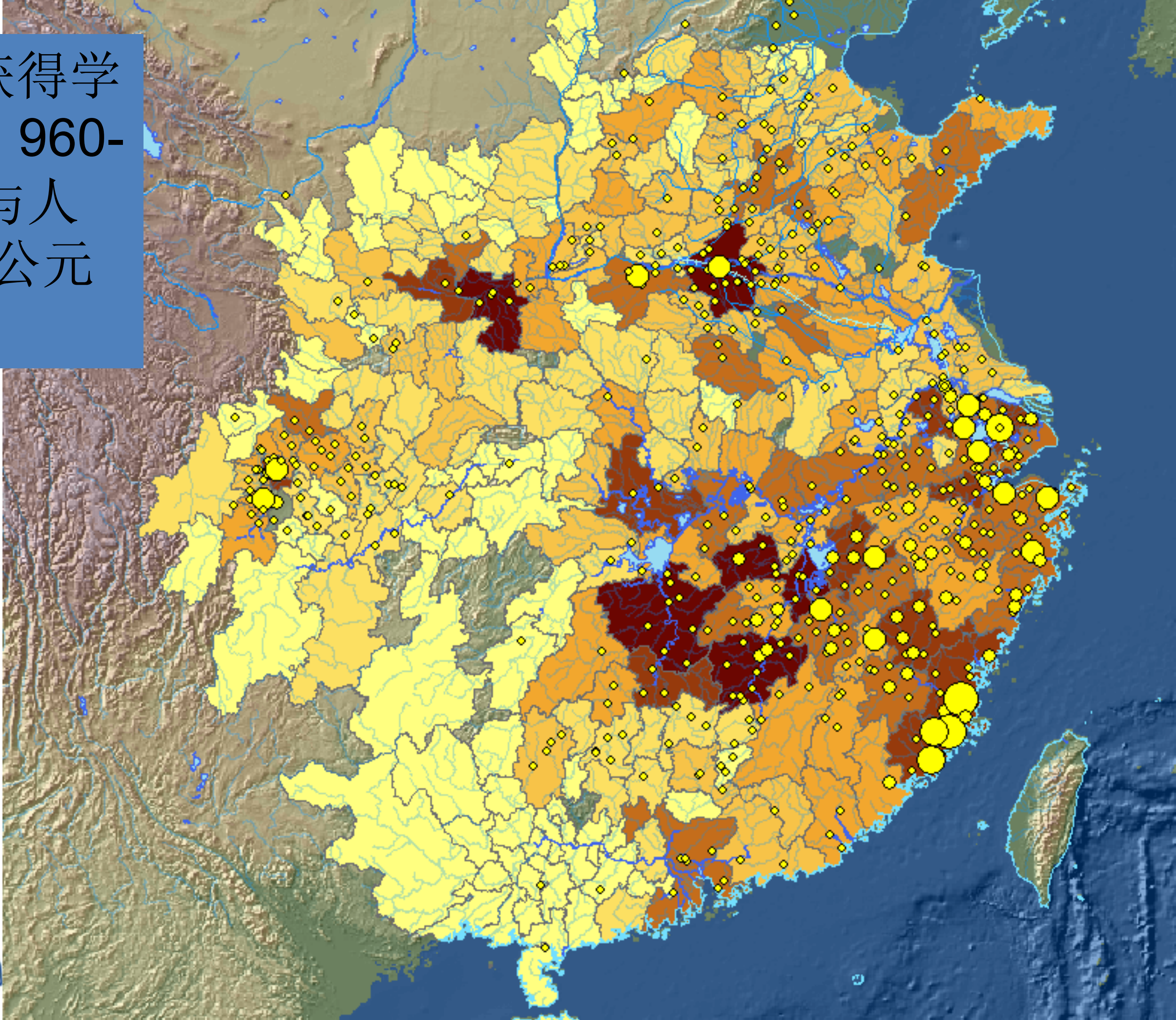




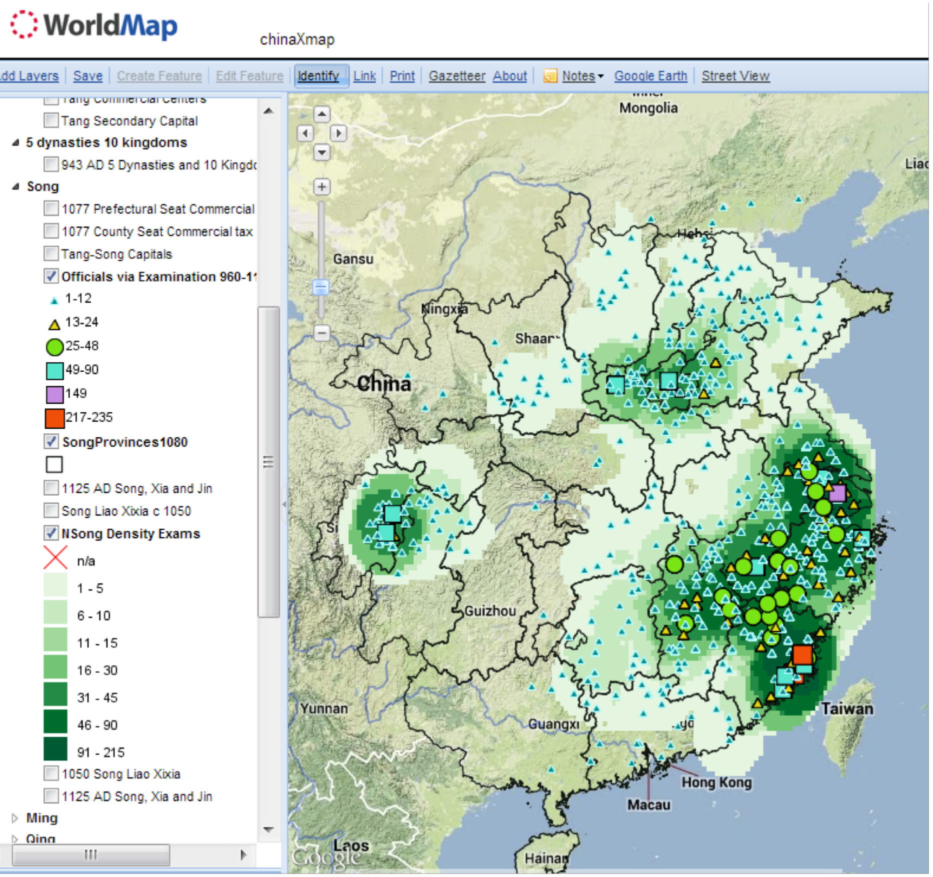
全南宋学位持有者in 中国传记数据库 (CBDB)



4730 获得学位的人, 960-1126, 与人口分布公元1080



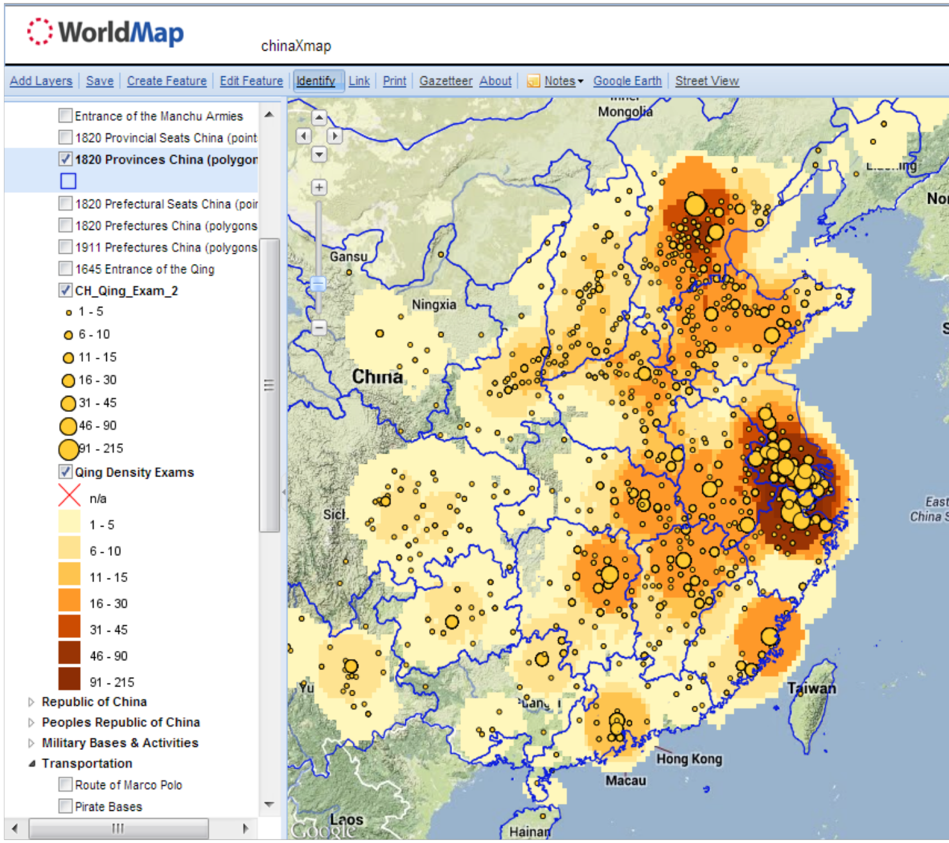
北宋的分布(960-1126) 进士 in CBDB


WorldMap chinaXmap

dd Layers | Save | Create Feature | Edit Feature | Identify | Link | Print | Gazetteer About | Notes | Google Earth | Street View

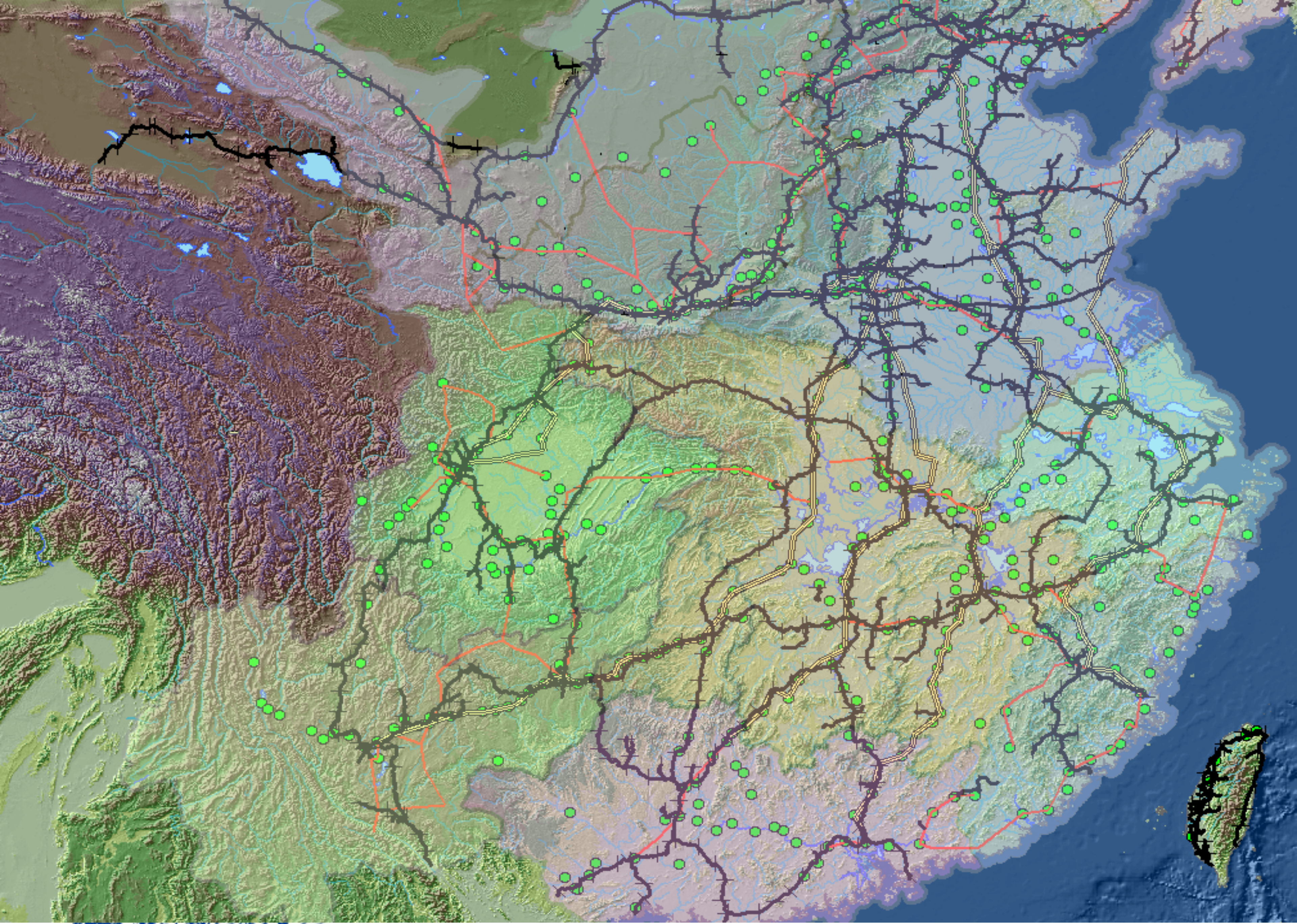
□ Tang Commercial Centers
□ Tang Secondary Capital
5 dynasties 10 kingdoms
□ 943 AD 5 Dynasties and 10 Kingdo
Song
□ 1077 Prefectural Seat Commercial
□ 1077 County Seat Commercial tax
□ Tang-Song Capitals
☑ Officials via Examination 960-1'
▲ 1-12
▲ 13-24
● 25-48
■ 49-90
■ 149
■ 217-235
☑ SongProvinces1080
□
□ 1125 AD Song, Xia and Jin
□ Song Liao Xixia c 1050
☑ NSong Density Exams
✗ n/a
🟩 1 - 5
🟩 6 - 10
🟩 11 - 15
🟩 16 - 30
🟩 31 - 45
🟩 46 - 90
🟩 91 - 215
□ 1050 Song Liao Xixia
□ 1125 AD Song, Xia and Jin
Ming
Qing

清代的分布(1644-1905)进士in CBDB

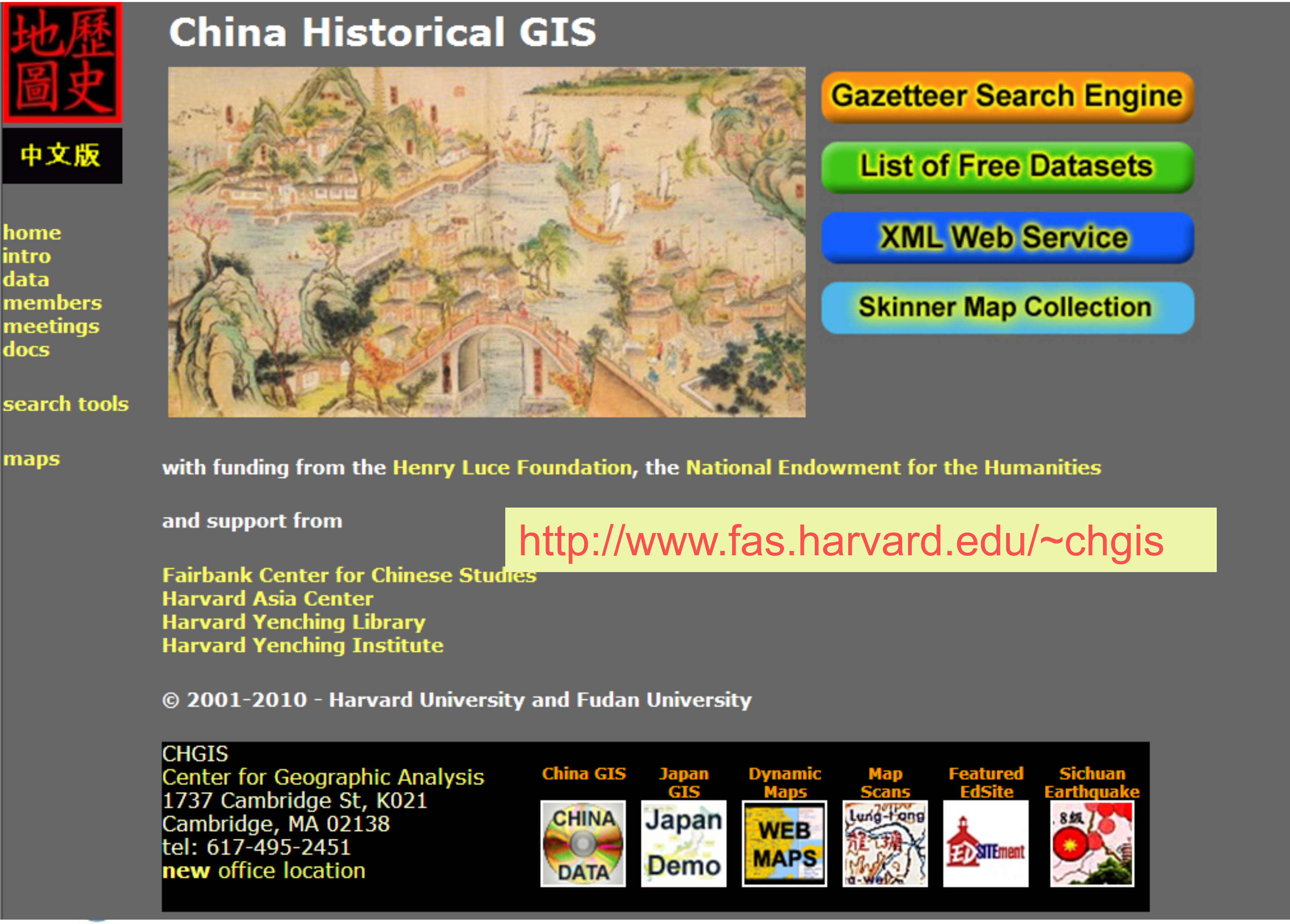

WorldMap chinaXmap

Add Layers | Save | Create Feature | Edit Feature | Identify | Link | Print | Gazetteer About | Notes | Google Earth | Street View

□ Entrance of the Manchu Armies
□ 1820 Provincial Seats China (point
☑ 1820 Provinces China (polygon
□
□ 1820 Prefectural Seats China (poi
□ 1820 Prefectures China (polygons
□ 1911 Prefectures China (polygons
□ 1645 Entrance of the Qing
☑ CH_Qing_Exam_2
○ 1 - 5
○ 6 - 10
○ 11 - 15
○ 16 - 30
○ 31 - 45
○ 46 - 90
○ 91 - 215
☑ Qing Density Exams
✗ n/a
🟨 1 - 5
🟨 6 - 10
🟧 11 - 15
🟧 16 - 30
🟥 31 - 45
🟫 46 - 90
🟫 91 - 215
Republic of China
Peoples Republic of China
Military Bases & Activities
Transportation
□ Route of Marco Polo
□ Pirate Bases



19th c. “Busy” counties , Ming-Qing Postal Routes, 1990 Railroads



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圖史

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search tools

maps

China Historical GIS

Gazetteer Search Engine

List of Free Datasets

XML Web Service

Skinner Map Collection

with funding from the Henry Luce Foundation, the National Endowment for the Humanities

and support from

Fairbank Center for Chinese Studies
Harvard Asia Center
Harvard Yenching Library
Harvard Yenching Institute

CHGIS
Center for Geographic Analysis
1737 Cambridge St, K021
Cambridge, MA 02138
tel: 617-495-2451
new office location

China GIS
CHINA DATA

Japan GIS
Japan Demo

Dynamic Maps
WEB MAPS

Map Scans

Featured EdSite
EDSITEment

Sichuan Earthquake

http://www.fas.harvard.edu/~chgis

从《中国历代人物传记》中发现新知识

The China Biographical Database

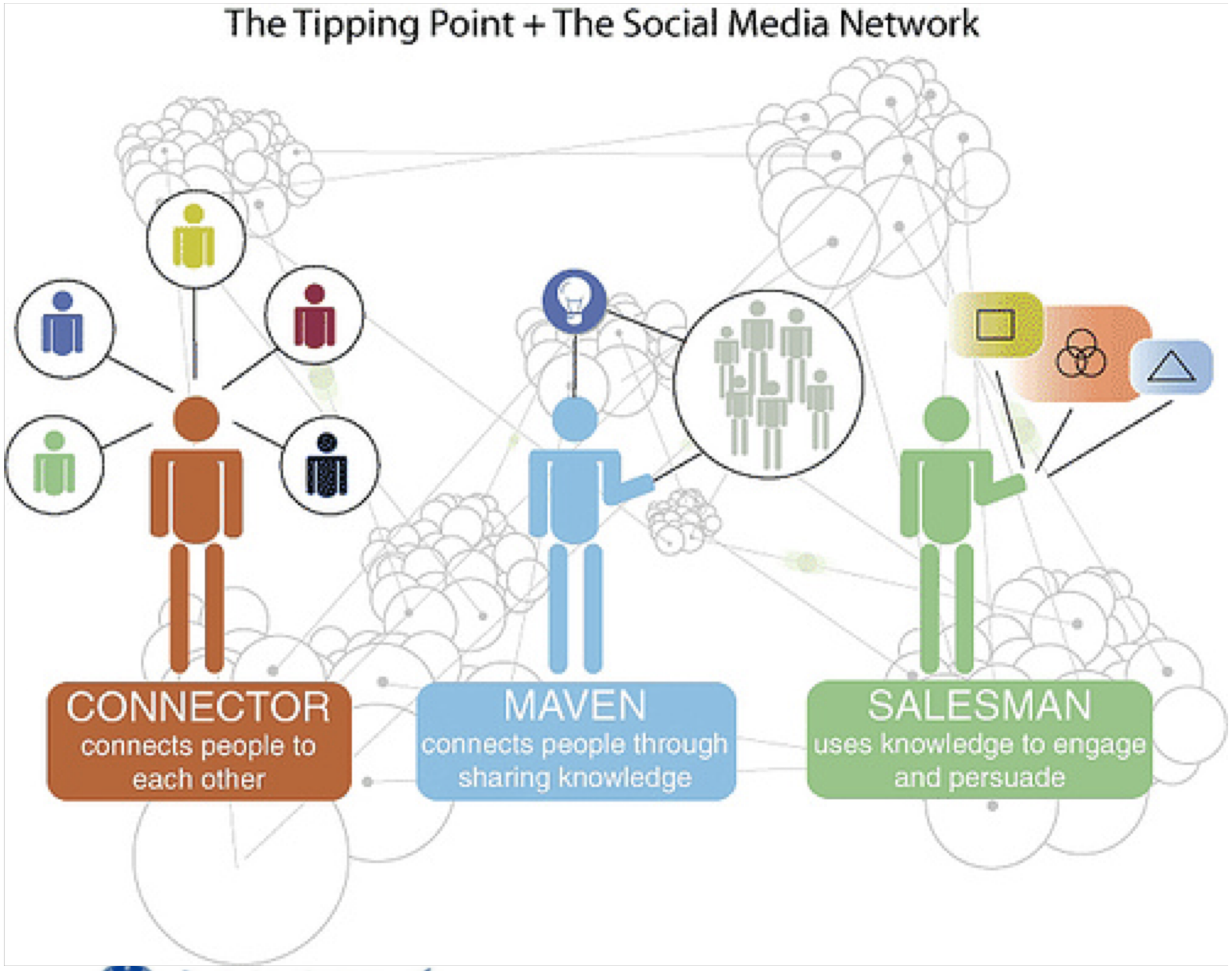
– from anecdote to data to knowledge

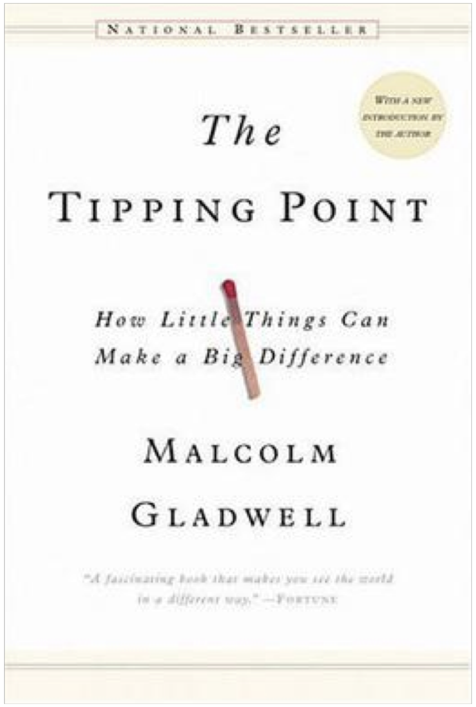
文本实体抽取
人物关系数据库
人物关系学（Prosopography）
时空数据分析（Spatial analysis）
社会网络分析（Social network Analysis）

中国科学院大学

社交网络

“社交网络分析是对人员、群组、机构、计算机、信息或知识等实体之间的关系和流向进行建模、度量和计算推理，以便找到个体行为如何影响群体看法或行动，以及群体如何影响个体的决策等原因。
(valdis krebs, 2002年)。


The Tipping Point + The Social Media Network
CONNECTOR
connects people to each other
MAVEN
connects people through sharing knowledge
SALESMAN
uses knowledge to engage and persuade


NATIONAL BESTSELLER

WITH A NEW INTRODUCTION BY THE AUTHOR

The TIPPING POINT

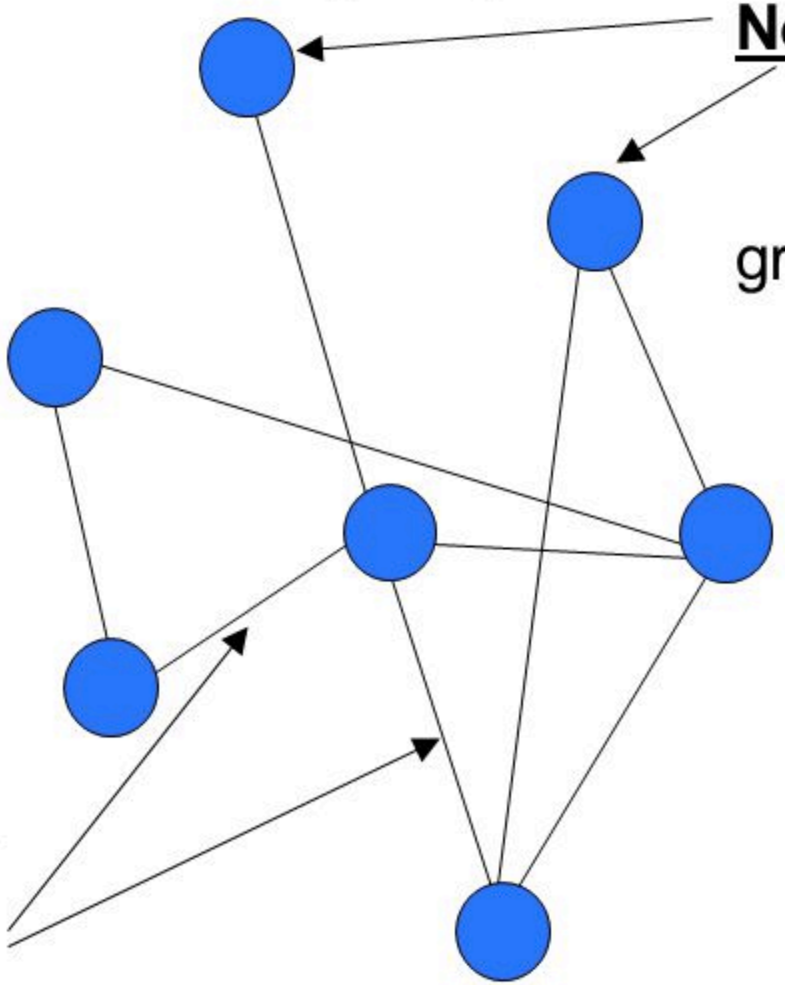
How Little Things Can Make a Big Difference

MALCOLM GLADWELL

"A fascinating book that makes you see the world in a different way." —FORTUNE

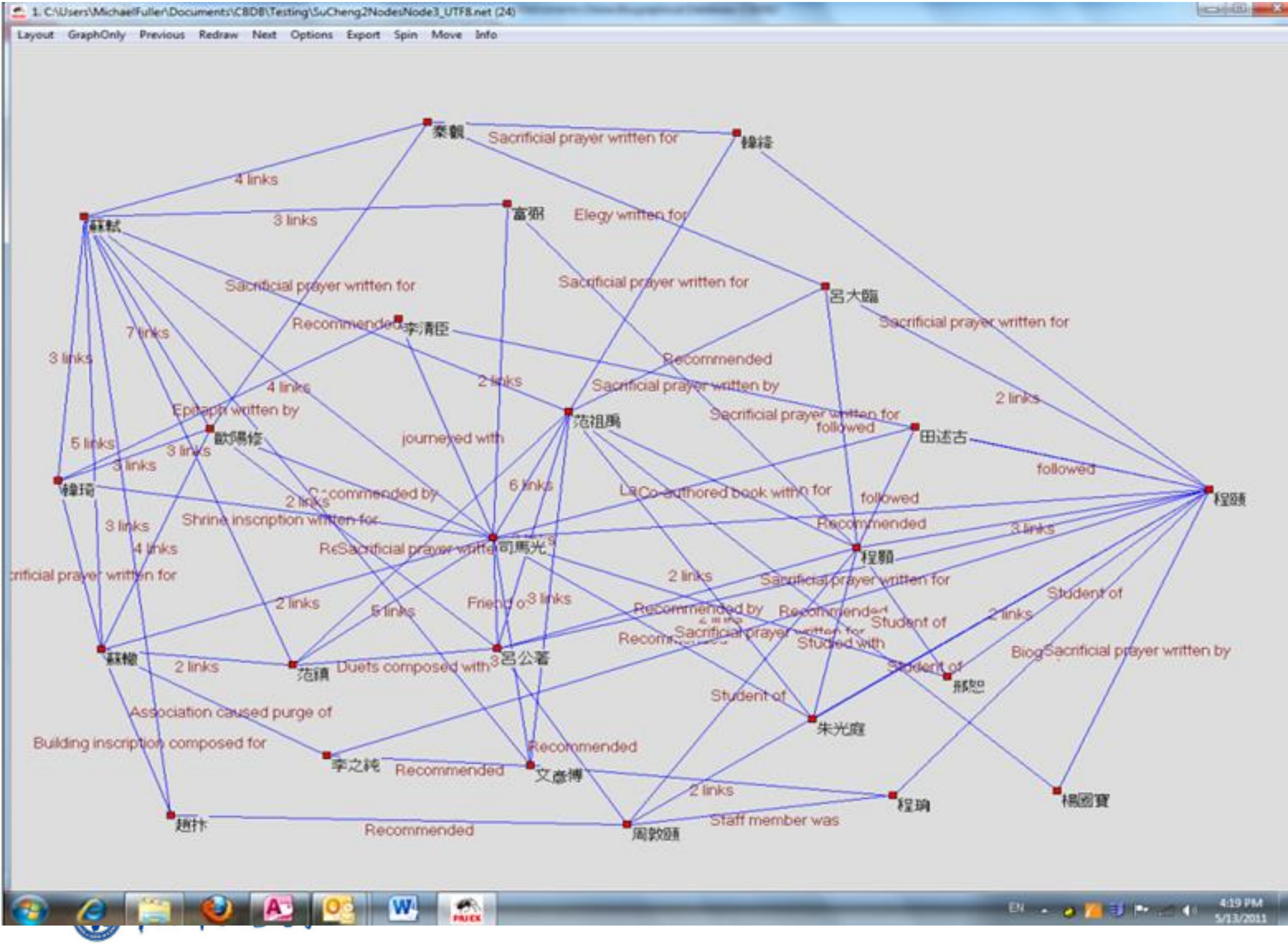
Social Network Analysis:

Focus on *interactions* between individuals/ groups



__Node:__ Any entity in a network (person, system, group, organization)

__Tie:__ Relationship/ interaction between two nodes.


1. C:\Users\MichaelFuller\Documents\CBDB\Testing\SuCheng2NodesNode3_UTF8.net (24)
Layout
GraphOnly
Previous
Redraw
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Options
Export
Spin
Move
Info
秦觀
Sacrificial prayer written for
韓絳
4 links
蘇軾
3 links
富弼
Elegy written for
Sacrificial prayer written for
Sacrificial prayer written for
呂大臨
Sacrificial prayer written for
Recommended
李清臣
7 links
3 links
Recommended
Sacrificial prayer written by
2 links
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4 links
Epitaph written by
范祖禹
Sacrificial prayer written for
followed
田述古
歐陽修
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2 links
Sacrificial prayer written for
Student of
2 links
5 links
Friend o
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Student of
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Sacrificial prayer written for
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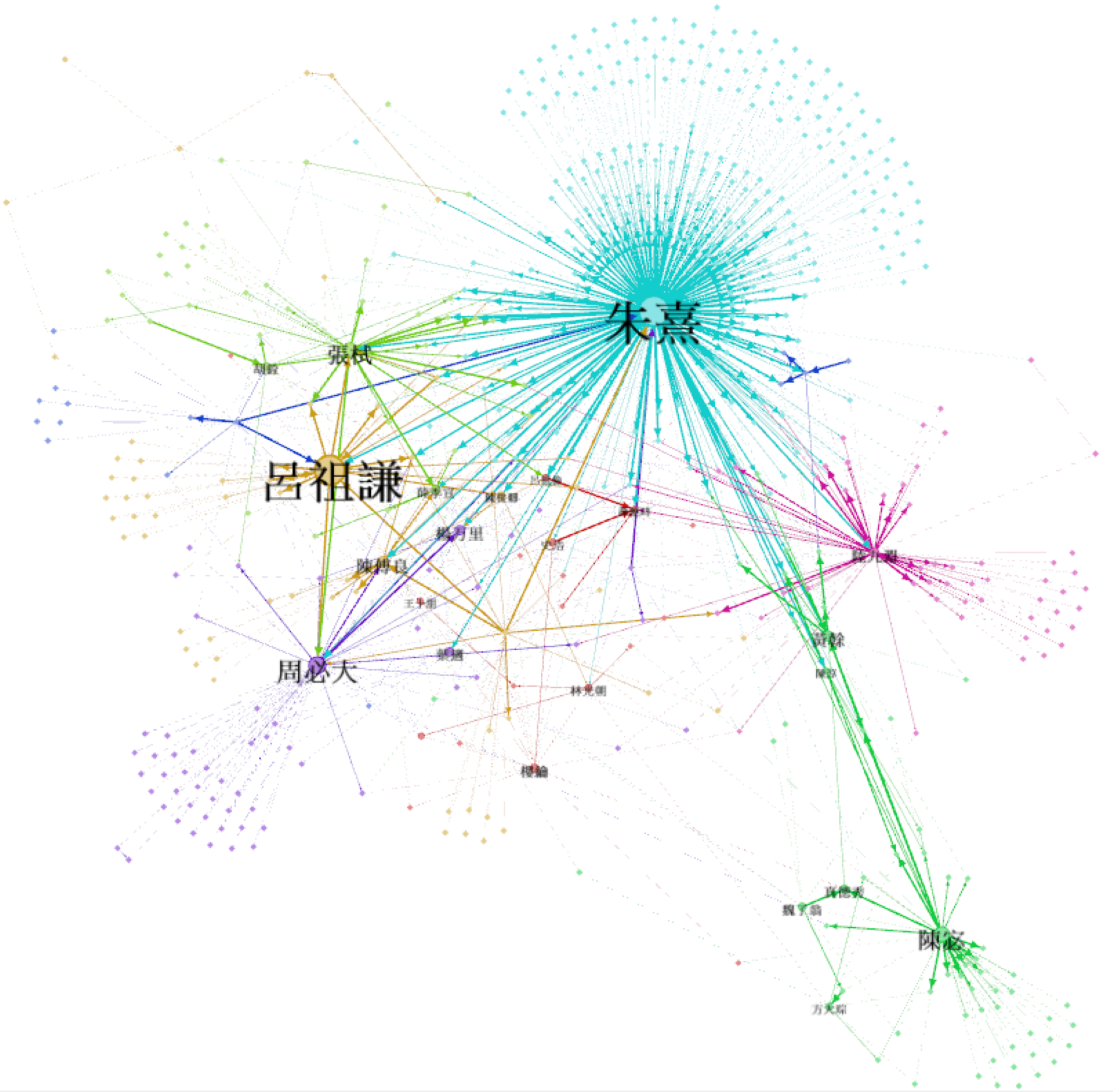
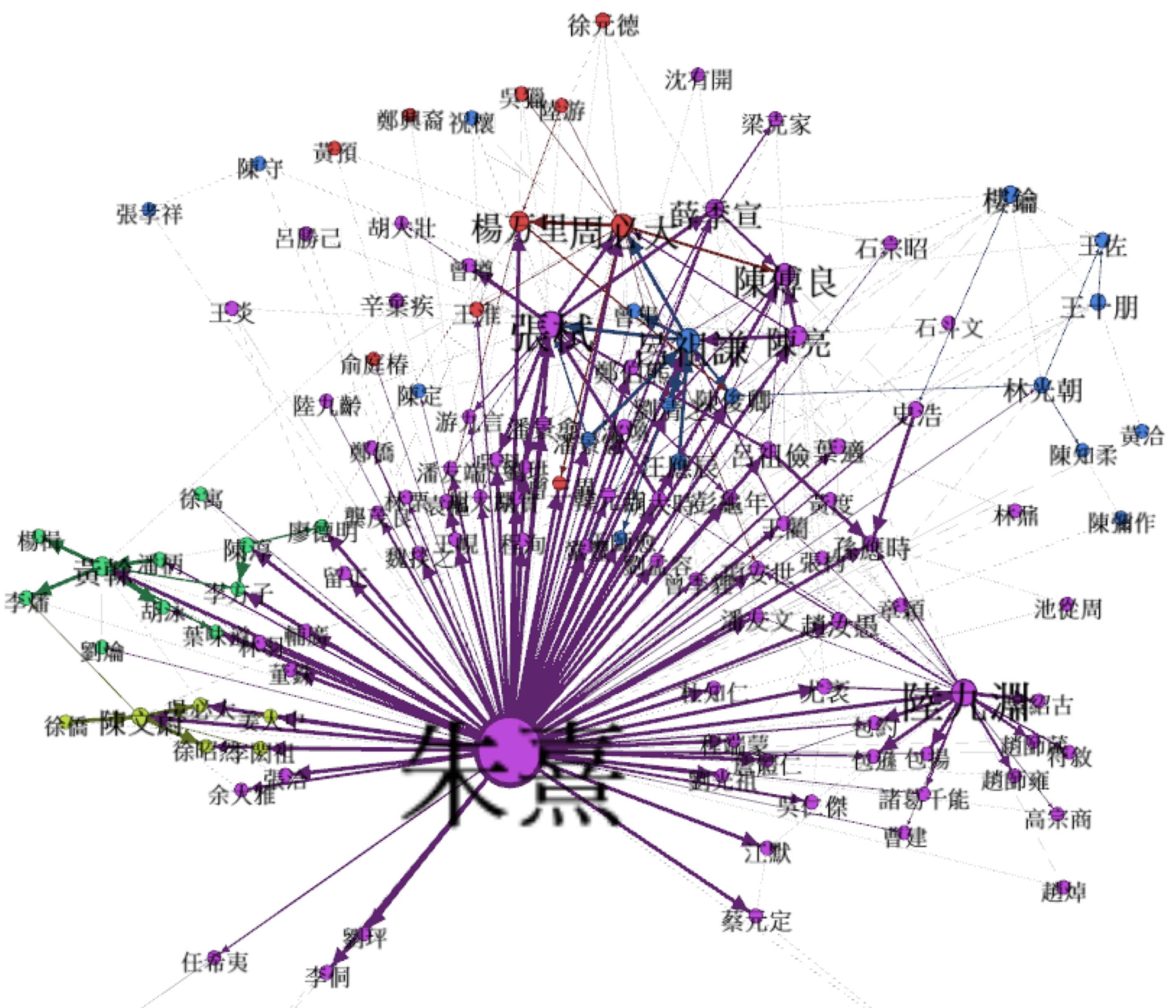
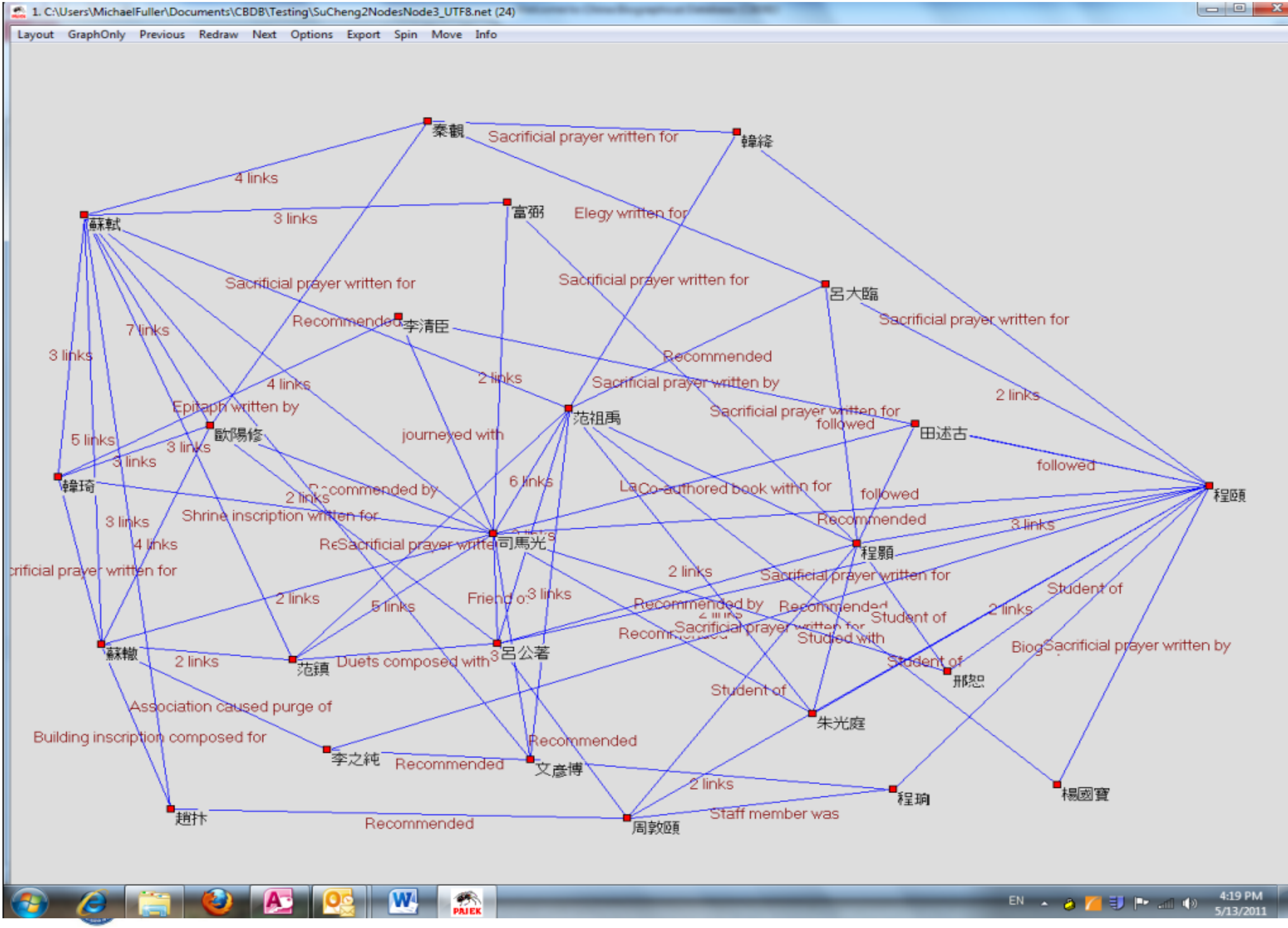
Sacrificial prayer written by
蘇轍
2 links
范鎮
Duets composed with
3
呂公著
Student of
邢恕
Student of
Association caused purge of
朱光庭
Building inscription composed for
Recommended
李之純
Recommended
文彥博
2 links
程珦
楊國寶
趙抃
Recommended
Staff member was
周敦頤
EN
4:19 PM
5/13/2011

给吕祖谦信件收件人的信; 597 人. 节点大小 (和相应的标签尺寸) 显示人的中心地位. 彩色显示社区.



朱熙的信网. 显示至少两个字母的收件人, 并在它们之间进行交换。标签大小反映交换信件的数量; 颜色标识这些交换之间的子网




1. C:\Users\MichaelFuller\Documents\CBDB\Testing\SuCheng2NodesNode3_UTF8.net (24)
Layout
GraphOnly
Previous
Redraw
Next
Options
Export
Spin
Move
Info
秦觀
Sacrificial prayer written for
韓絳
4 links
蘇軾
3 links
富弼
Elegy written for
Sacrificial prayer written for
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呂大臨
Recommended
李清臣
Sacrificial prayer written for
7 links
3 links
Recommended
2 links
Sacrificial prayer written by
2 links
4 links
Epitaph written by
Sacrificial prayer written for
范祖禹
followed
歐陽修
田述古
5 links
3 links
journeyed with
3 links
followed
韓琦
6 links
Co-authored book with
followed
Recommended by
2 links
3 links
Shrine inscription written for
Recommended
3 links
4 links
Sacrificial prayer written
司馬光
程顥
crificial prayer written for
2 links
Sacrificial prayer written for
2 links
5 links
Friend of
3 links
Recommended by
Recommended
Student of
2 links
Student of
Recommended
Sacrificial prayer written for
Studied with
Sacrificial prayer written by
Student of
蘇轍
2 links
范鎮
Duets composed with
呂公著
邢恕
Student of
朱光庭
Association caused purge of
Building inscription composed for
Recommended
李之純
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2 links
程珦
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Staff member was
趙抃
Recommended
周敦頤
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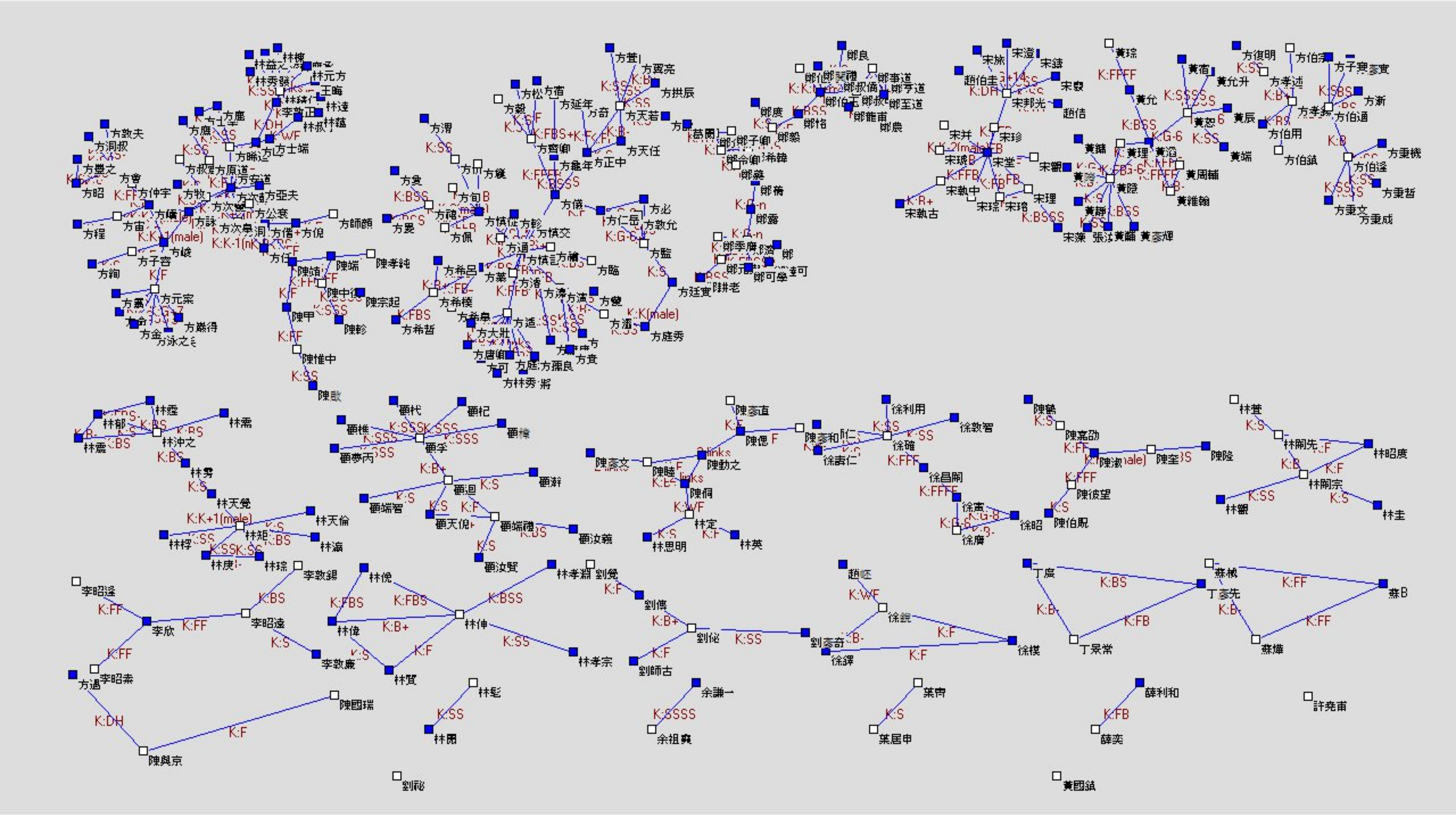
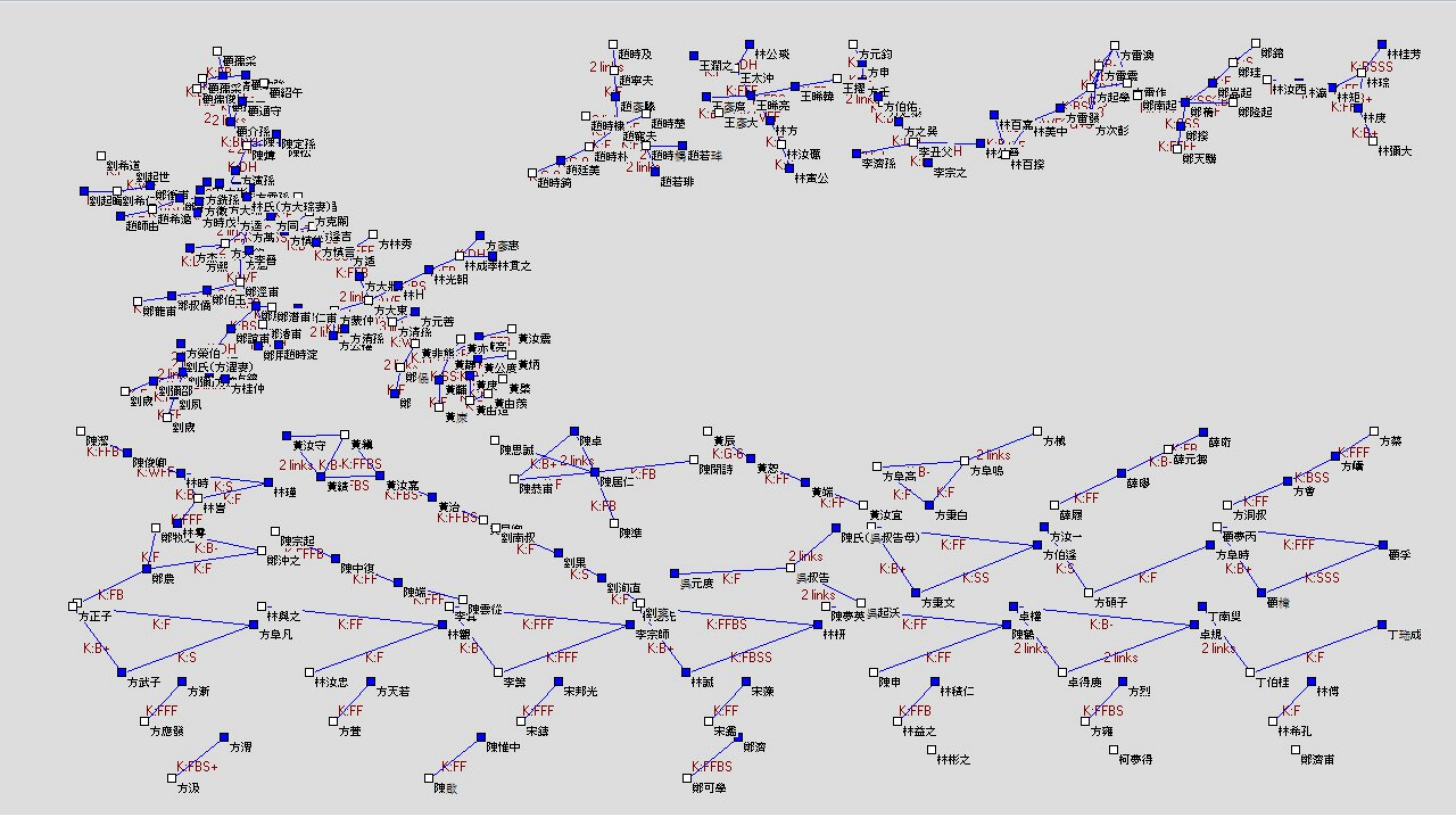
5/13/2011



福建莆田直系亲属关系网络的构成, 对于获得了进士的人物之间的关系。 公元1050至 1100

Michael A. Fuller

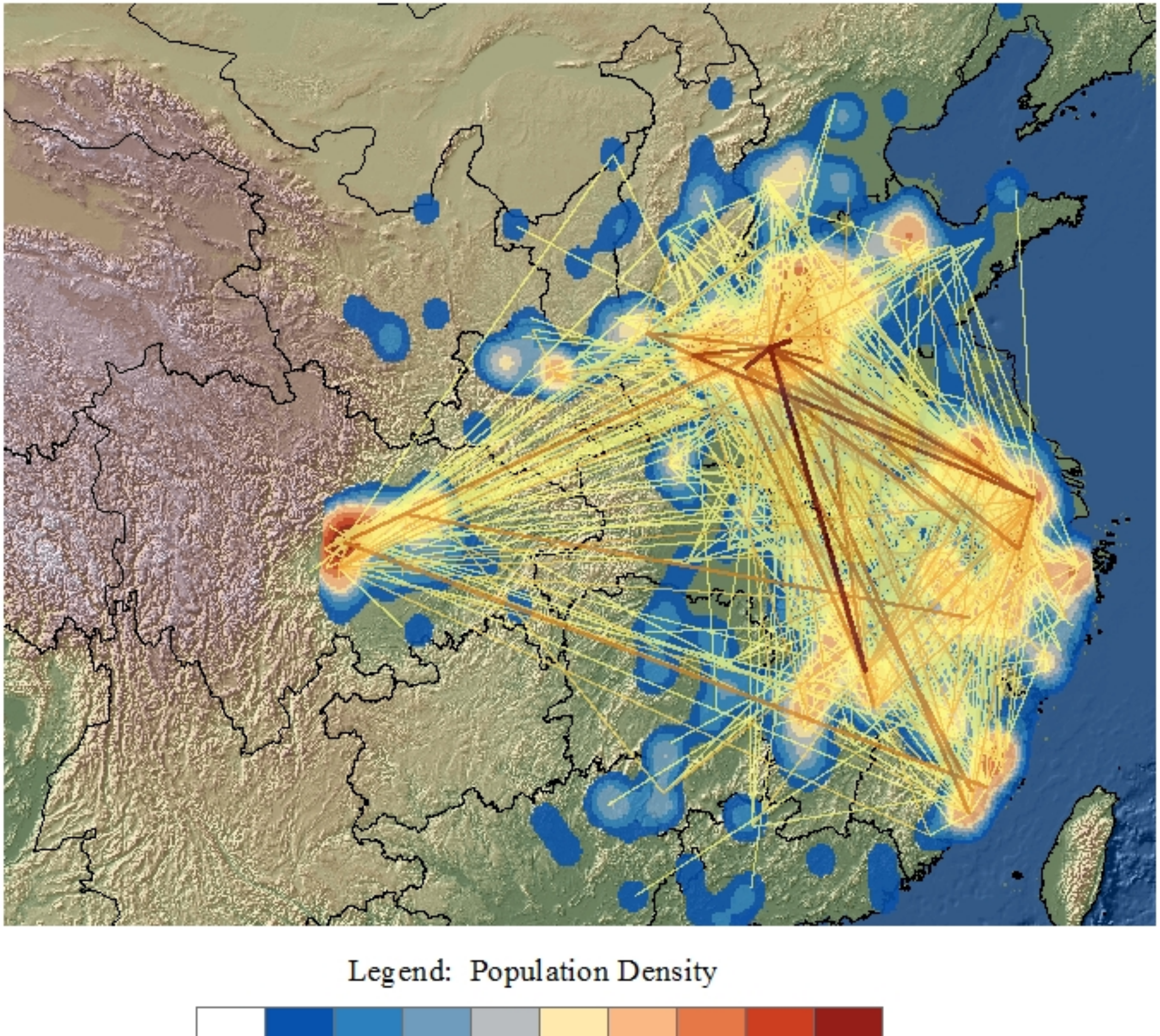


福建莆田直系亲属关系网络的构成, 对于获得了进士的人物之间的关系。 公元1200至1250

中国科学院大学

Michael A. Fuller

中国传记数据库的文字交流空间密度, 在1060-1080 期间



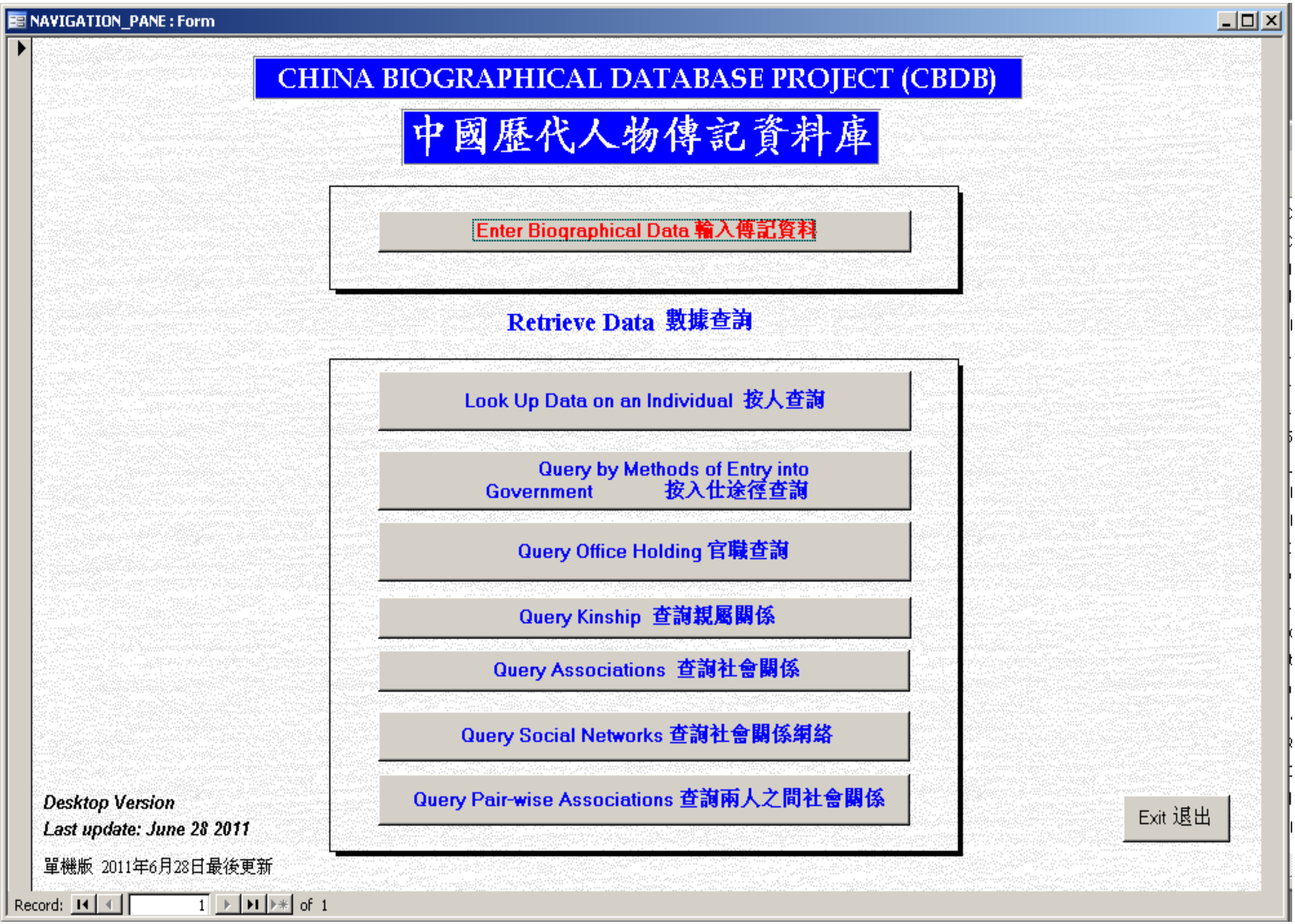
2359 persons out of 120,000 currently in CBDB

中國歷代人物傳記資料庫

中央研究院歷史語言研究所、哈佛大學、北京大學中國古代史研究中心合作開發

Developed through collaboration among Academia Sinica, Harvard University, and Peking University

公开获取方式



NAVIGATION_PANE : Form

CHINA BIOGRAPHICAL DATABASE PROJECT (CBDB)

中國歷代人物傳記資料庫

Enter Biographical Data 輸入傳記資料

Retrieve Data 數據查詢

Look Up Data on an Individual 按人查詢

Query by Methods of Entry into Government 按入仕途徑查詢

Query Office Holding 官職查詢

Query Kinship 查詢親屬關係

Query Associations 查詢社會關係

Query Social Networks 查詢社會關係網絡

Query Pair-wise Associations 查詢兩人之間社會關係

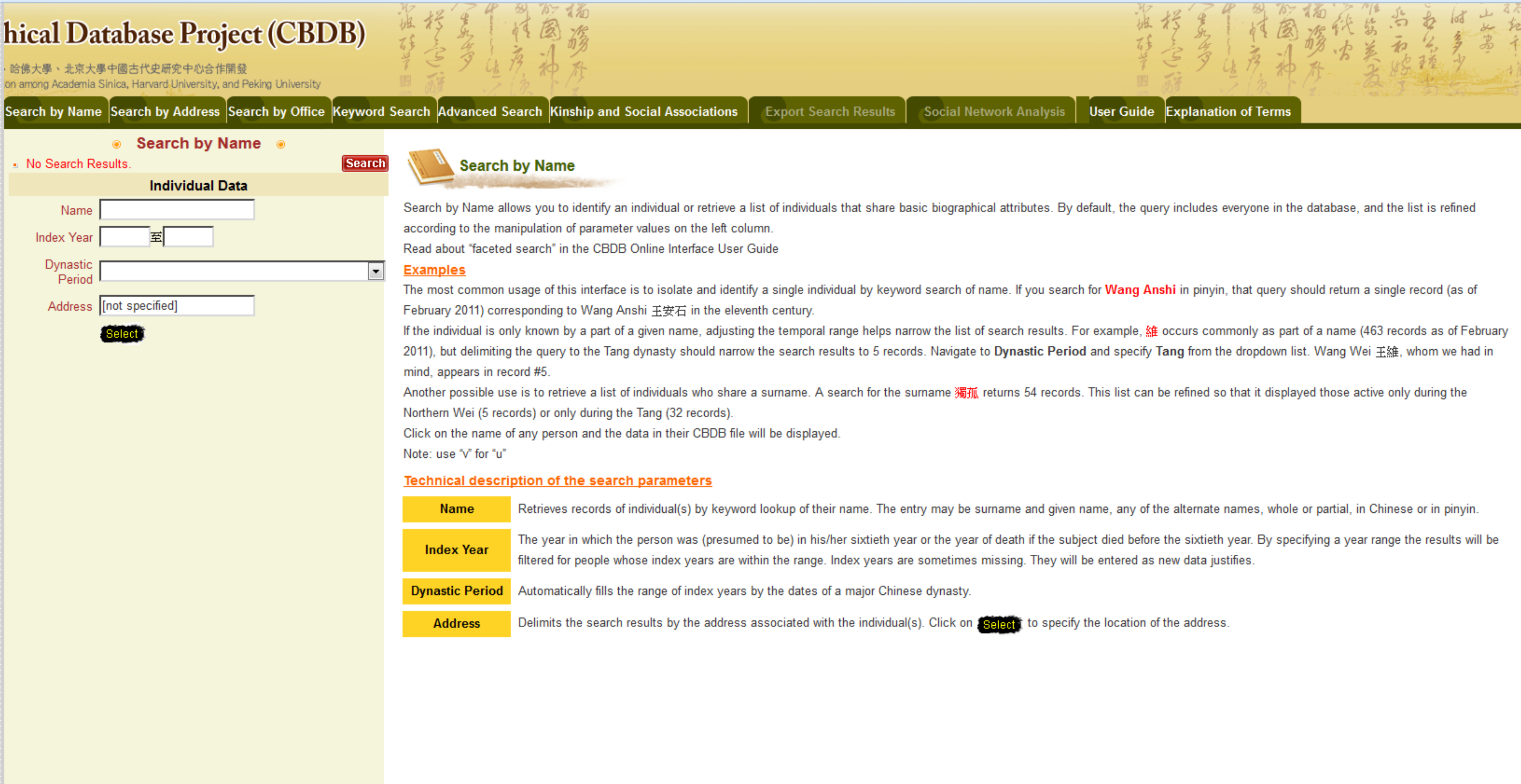
Desktop Version
Last update: June 28 2011

單機版 2011年6月28日最後更新

Exit 退出

Record: 1 of 1

Stand-alone CBDB Database in MS Access



Search by Name

Search by Name allows you to identify an individual or retrieve a list of individuals that share basic biographical attributes. By default, the query includes everyone in the database, and the list is refined according to the manipulation of parameter values on the left column.

Read about "faceted search" in the CBDB Online Interface User Guide

Examples

The most common usage of this interface is to isolate and identify a single individual by keyword search of name. If you search for **Wang Anshi** in pinyin, that query should return a single record (as of February 2011) corresponding to Wang Anshi 王安石 in the eleventh century.

If the individual is only known by a part of a given name, adjusting the temporal range helps narrow the list of search results. For example, 維 occurs commonly as part of a name (463 records as of February 2011), but delimiting the query to the Tang dynasty should narrow the search results to 5 records. Navigate to **Dynastic Period** and specify **Tang** from the dropdown list. Wang Wei 王維, whom we had in mind, appears in record #5.

Another possible use is to retrieve a list of individuals who share a surname. A search for the surname 獨孤 returns 54 records. This list can be refined so that it displayed those active only during the Northern Wei (5 records) or only during the Tang (32 records).

Click on the name of any person and the data in their CBDB file will be displayed.

Note: use "v" for "u"

Technical description of the search parameters

Name	Retrieves records of individual(s) by keyword lookup of their name. The entry may be surname and given name, any of the alternate names, whole or partial, in Chinese or in pinyin.
Index Year	The year in which the person was (presumed to be) in his/her sixtieth year or the year of death if the subject died before the sixtieth year. By specifying a year range the results will be filtered for people whose index years are within the range. Index years are sometimes missing. They will be entered as new data justifies.
Dynastic Period	Automatically fills the range of index years by the dates of a major Chinese dynasty.
Address	Delimits the search results by the address associated with the individual(s). Click on Select to specify the location of the address.

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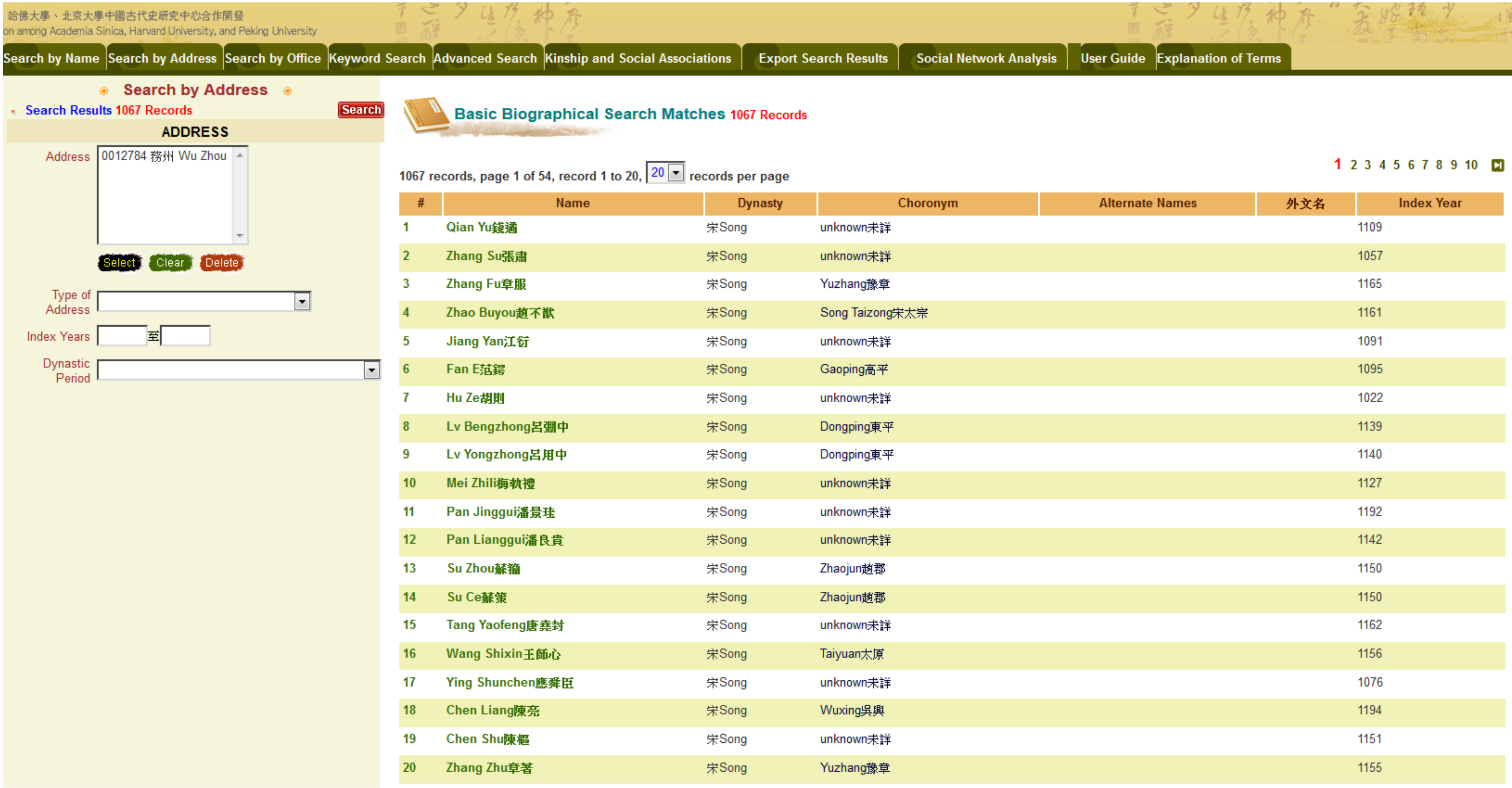


Search Results 1067 Records

Address: 0012784 務州 Wu Zhou

Type of Address:

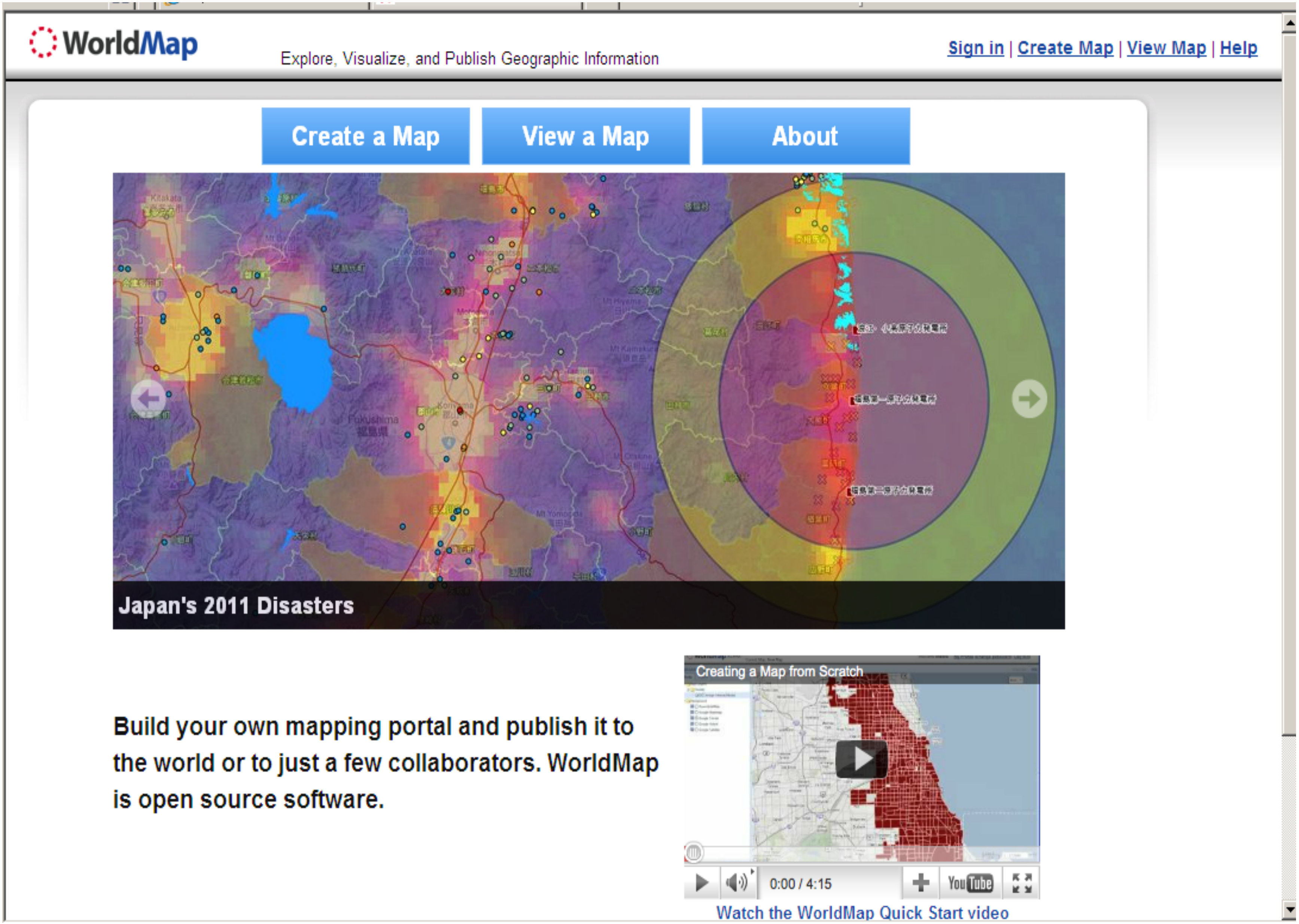
Index Years: 至

Dynastic Period:

Basic Biographical Search Matches 1067 Records

1067 records, page 1 of 54, record 1 to 20, 20 records per page

#	Name	Dynasty	Choronym	Alternate Names	外文名	Index Year
1	Qian Yu錢遹	宋Song	unknown未詳			1109
2	Zhang Su張肅	宋Song	unknown未詳			1057
3	Zhang Fu章服	宋Song	Yuzhang豫章			1165
4	Zhao Buyou趙不猷	宋Song	Song Taizong宋太宗			1161
5	Jiang Yan江衍	宋Song	unknown未詳			1091
6	Fan E范鍔	宋Song	Gaoping高平			1095
7	Hu Ze胡則	宋Song	unknown未詳			1022
8	Lv Bengzhong呂硼中	宋Song	Dongping東平			1139
9	Lv Yongzhong呂用中	宋Song	Dongping東平			1140
10	Mei Zhili梅執禮	宋Song	unknown未詳			1127
11	Pan Jinggui潘景珪	宋Song	unknown未詳			1192
12	Pan Lianggui潘良貴	宋Song	unknown未詳			1142
13	Su Zhou蘇籀	宋Song	Zhaojun趙郡			1150
14	Su Ce蘇策	宋Song	Zhaojun趙郡			1150
15	Tang Yaofeng唐堯封	宋Song	unknown未詳			1162
16	Wang Shixin王師心	宋Song	Taiyuan太原			1156
17	Ying Shunchen應舜臣	宋Song	unknown未詳			1076
18	Chen Liang陳亮	宋Song	Wuxing吳興			1194
19	Chen Shu陳樞	宋Song	unknown未詳			1151
20	Zhang Zhu章著	宋Song	Yuzhang豫章			1155



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