



Digital Gazetteer Development

Ruth Mostern

Electronic Cultural Atlas Initiative



What is a digital gazetteer?

- **A gazetteer** is a structured dictionary of geographical places.
- The essential attributes of a digital gazetteer entry are: geographic name, spatial footprint, and feature type.
- It may also include information about hierarchical relationships between places, the dates that a place existed, or other features.

L. Hill, "Core Elements of Digital Gazetteers: Placenames, Categories, and Footprints," available at www.alexandria.ucsb.edu/~lhill/paper_drafts/ECDL2000_papeerdraft7.pdf



A gazetteer is not a GIS...

- It is more...
- Structured information about places includes
 - Variant names in different languages
 - Place name types
 - Descriptions of relationships among places
 - Links to related sources of information
 - Etymology
- ...and less...
- Spatial information may be rudimentary and overlapping



...but gazetteers and gazetteer services can work with GIS and other projects to:

- Reference information about places
- Deposit information about fuzzy places (“the silk road”)
- Point to alternate versions of names within a single gazetteer (from different scholars, at different times, based on different versions of political reality, in different languages)
- Point to distributed texts and other resources about places
- Allow for searching multiple gazetteers through a clearinghouse
- *The ECAI/ASCC gazetteer service project hopes to register both “simple” and “standards compliant” gazetteers for maximum interoperable searching.*



The ECAI/ASCC gazetteer project extends existing gazetteers by:

- Establishing a multilingual environment
- Establishing standards for global, historical, culture-centered gazetteers and feature type thesauri
- Establishing service protocols for searching multiple gazetteers
- Creating a service for map visualization based on toponym-rich text or other resources



Some existing gazetteer projects

- Alexandria Digital Library
www.alexandria.ucsb.edu/gazetteer
- Getty Thesaurus of Geographical Names
www.getty.edu/research/tools/vocabulary/tgn/
- Taiwan Gazetteer
tgnis.ascc.net
- German Space Operations Center
www.heavens-above.com/countries.asp



Major sections of the ADL feature type standard

- Geographic feature ID
- Geographic name
- Variant geographic name
- Type of geographic feature
- Other classification terms
- Geographic feature code
- Spatial location
- Street address
- Related feature
- Description
- Geographic Feature data
- Link to related source of information
- Supplemental note
- Metadata information
- *Time is not a field; it is embedded in many other fields*

Alexandria Digital Library Gazetteer Server

ADL Gazetteer Help Information (07/03/2001)

This version of the ADL Gazetteer is based on the ADL Gazetteer Content Standard. Currently it contains: data from the NIMA Gazetteer, a set of countries and U.S. counties, a set of U.S. topographic map quadrangle footprints, set of volcanoes, and set of earthquake epicenters. The GNIS data from the U.S. Geological Survey has been partly added to the collection. As of today, there are approximately 4.4 million entries. For the full description, see the [ADL Gazetteer Collection metadata](#).

To see the full functionality of the interface, you must use the Internet Explorer web browser (Netscape version 6 to see the roll-over information from the search result listing).

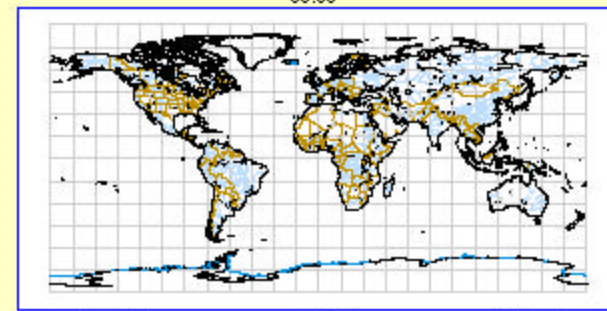
Since the interface is still in the process of development, it would be a good idea to use the

NOTE

- This interface has been developed and tested using Internet Explorer 5. The interface can also be used with Netscape Communicator 4.6.1 or higher. We noticed that one minor feature for search result display is not supported by the current Netscape Communicator 4.6.1 release. For complete functions, please use the Microsoft Internet Explorer.
- If you have any problems using this interface, please send [email](#). To help us to identify the problem, we would like to have the description of the problem, name and version of your WEB browser, machine and operating system.
- Copyright © 1999, 2000. The Regents of the University of California. All Rights Reserved.

Last modification: February 21, 2000

Click on the map to recenter
90.00°



[Zoom In](#)

[Zoom Out](#)

[Reset Map](#)

Please set at least one search condition.

Location: within map overlaps map anywhere

Place Name: has all words

Feature Type: ([Feature Type Thesaurus](#))

-Any Type- (4,437,404)
administrative areas (2,131,883)
agricultural sites (191,153)
airport features (24,818)
alluvial fans (66)
amusement parks (18)
anticlines (4)
aqueducts (103)
archaeological sites (1,732)
arches (natural formation) (446)

Identification Code: is equal to

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[Alexandria Digital Library](#)

Alexandria Digital Library Gazetteer Server

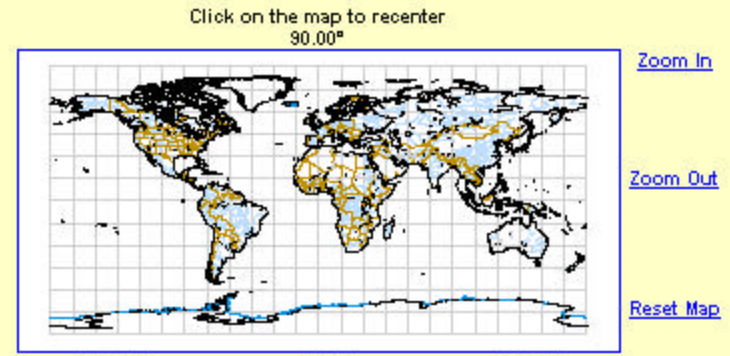
Search Result: (1 - 20) of 48 matches.

- 3284. [Shanghai Shan](#), islands
- 3285. [Shanghai Shi](#), countries, 1st order divisions
- 3286. [Shanghai Xian](#), countries, 2nd order divisions
- 3293. [Shanghai](#), populated places
- 3407. [Xinzhuang](#), populated places
- 3617. [Shanghai](#), populated places
- 5288. [Sanghae-ri](#), populated places
- 3866. [Getah Senawang Bahagian Shanghai Seremban, Ladang](#), land parcels
- 5197. [Shanghai Pahang Estate](#), land parcels
- 1274. [Shanghai](#), agricultural sites
- 1594. [Shanghai](#), agricultural sites

NOTE

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Search

Reset

Identification Code:

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Alexandria Digital Library Gazetteer Server

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Gazetteer Record Report

Alexandria Digital Library

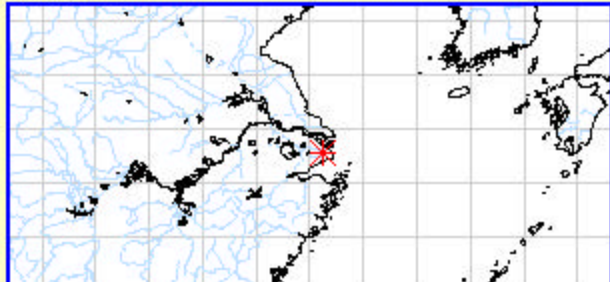
Feature Name

Geographic Name: Shanghai (BGN-NIMA-1)
Variant Name: Shang-hai-shih (BGN-NIMA-1)

Feature Type

ADL Feature Type Thesaurus: populated places
NIMA Feature Designation: PPL (populated place)

Map Reference



Click on the map to recenter
90.00°

[Zoom In](#)
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[Reset Map](#)

Please set at least one search condition.

Location: within map overlaps map anywhere

Place Name:

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Identification Code:

[Help](#)

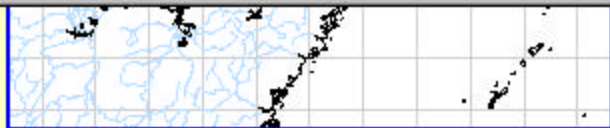
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Alexandria Digital Library Gazetteer Server

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- 1274. [Shanghai](#), agricultural sites
- 1594. [Shanghai](#), agricultural sites



Geometry Type: Point (BGN-NIMA-1)

- Longitude: 121.458054 (121°27'28"E)
- Latitude: 31.222221 (31°13'19"N)

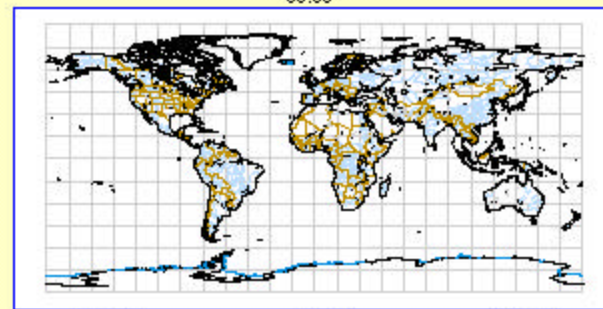
Identification Code

ADL Feature ID: 1628293

Related Information

- Related Entity (BGN-NIMA-1)
IsPartOf: UTM grid UQ55
- Related Entity (BGN-NIMA-1)
IsPartOf: JOG Sheet Number NH51-0
- Related Entity (BGN-NIMA-1)
IsPartOf: [China](#)

Click on the map to recenter
90.00°



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[Reset Map](#)

Please set at least one search condition.

Location: within map overlaps map anywhere

Place Name:

Feature Type: [\(Feature Type Thesaurus\)](#)

- Any Type- (4,437,404)
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Alexandria Digital Library Gazetteer Server

Search Result: (1 - 20) of 48 matches.

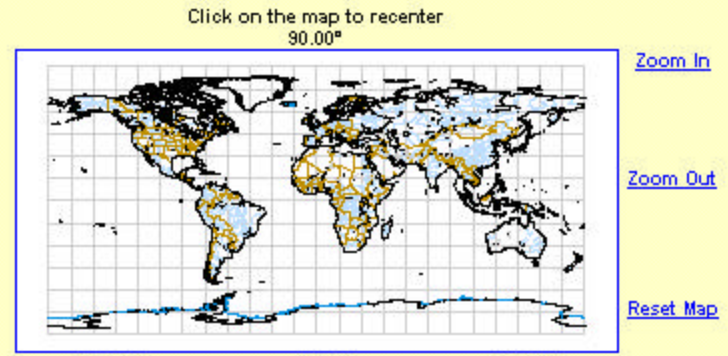
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- 1274. [Shanghai](#), agricultural sites
- 1594. [Shanghai](#), agricultural sites

isPartOf: [Shanghai](#)

Link to Related Information
[Yahoo\("Shanghai"\)](#)

Source

- Source: BGN-NIMA-1
Organization: U.S. Board on Geographic Names (BGN), U.S. National Imagery and Mapping Agency (NIMA)
URL: [GEOnet Names Server](#)
Contact Person: NIMA Geographer, D-56
Address: 4600 Sangamore Road, Bethesda, Maryland 20816-5003, USA
Information Source:
- Title: Digital Interim Geographic Names Data (CDROM)
 - Author: U.S. National Imagery and Mapping Agency (NIMA)
 - Series: GAZGN, DIGNAMES
 - Edition: 002
 - Publisher: U.S. National Imagery and Mapping Agency (NIMA)
 - Publication Date: August 1997
 - Source ID: NSN: 7644014174141



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Search

Reset

Identification Code:

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[alexandria@ucsb.edu](#)

Research Tools / Vocabulary Databases

Getty Thesaurus of Geographic Names

About the Research
About the
Research Library
Research Tools
Research Library
Online Catalog
Special Collections
Finding Aids
Photo Study
Collection
Database
Digital Resources
Provenance Index
Databases
Vocabulary
Databases
Tools & Programs

Browse the World

Find:

Enter one keyword, e.g., **carlsbad** ; or full name, e.g., **los angeles**

Search

Clear

Pop-up Search Window

Version 2.0-Web. Data accessed by the "browser" is updated monthly.
You may also search the [AAT](#) and the [ULAN](#)

Use of the TGN

Copyright © 2000 The J. Paul Getty Trust. All rights reserved. The TGN and the other Getty vocabularies are made available via the Web browsers to support limited research and cataloging efforts. Companies and institutions interested in regular or extensive use of the vocabularies should explore licensing options by reading about [Licenses and Sample Data](#) or by contacting the [Vocabulary Program](#).

Help

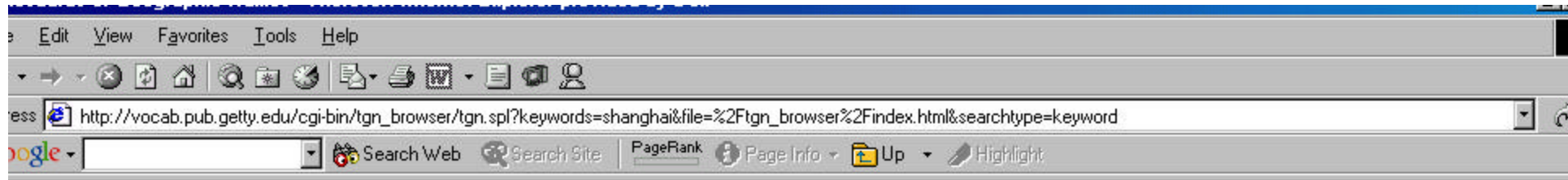
Learn how to use the TGN browser

About the TGN

Learn about the purpose, scope and structure of the TGN. The TGN is an evolving vocabulary, growing and changing thanks to contributions from Getty projects and other institutions. Find out more about the TGN's contributors.

F.A.Q about the TGN

Here you will find a list of the most frequently asked questions about the




New search

GETTY VOCABULARY PROGRAM

Searched for: **shanghai**

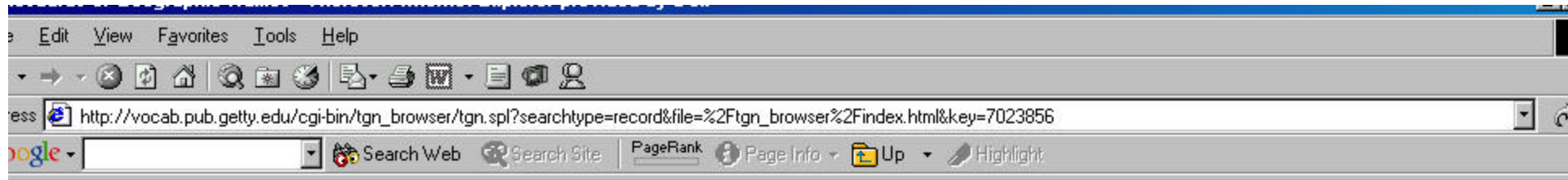
[View Place Records](#)

[Clear All](#)

(Click icons () below to view hierarchy for place; use checkboxes to view multiple place records.)

Found 32 places that match your search.

-  [Coon Creek](#).....(creek)
(N & C Am., USA, Missouri, Johnson) [2254387]
Shanghai Creek
-  [Cornelia](#).....(inhabited place)
(N & C Am., USA, Missouri, Johnson) [2058436]
Shanghai
-  [Miles Point](#).....(inhabited place)
(N & C Am., USA, Missouri, Carroll) [2511676]
Shanghai
-  [Shanghai](#).....(inhabited place)
(Asia, Zhonghua, Shanghai Shi) [7023856]
-  [Shanghai](#).....(inhabited place)
(N & C Am., USA, Alabama, Limestone) [2005267]
-  [Shanghai](#).....(inhabited place)
(N & C Am., USA, Indiana, Howard) [2655047]
-  [Shanghai](#).....(inhabited place)
(N & C Am., USA, Missouri, Vernon) [2655048]
-  [Shanghai](#).....(inhabited place)
(N & C Am., USA, North Carolina, Cleveland) [2655049]
-  [Shanghai](#).....(inhabited place)



New search

GETTY VOCABULARY PROGRAM

Place Records

[3856]

[Shanghai](#) (inhabited place)

31 06 N Long: **121 22 E** *(represented in degrees minutes direction)*

31.100 Long: **121.367** *(represented in decimal degree and fractions of degrees)*

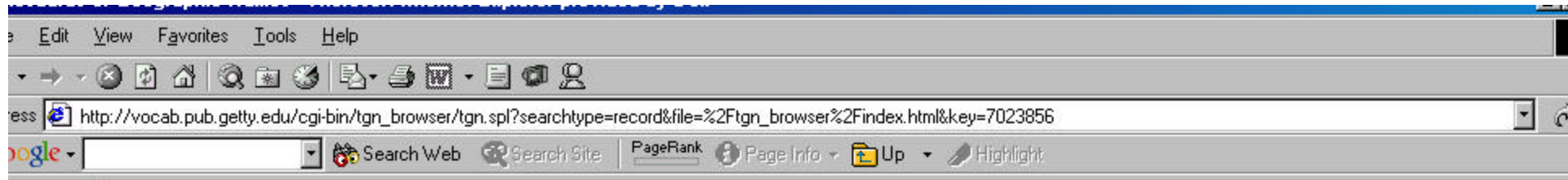
e - Largest city in China; prospered after 1840; one of first five treaty ports; attacked by Japanese 1932; scene of severe fighting during Japanese-Chinese War 1937; controlled Japanese 1941; restored to China 1945; taken by Communists 1949.

hierarchical Position:

- [Asia](#).....(continent)
- [Zhonghua](#).....(nation)
- [Shanghai Shi](#).....(municipality)

ees:

- Shanghai** (C,V)
- Shang-hai** (C,V)



[Shanghai Shi](#).....(municipality)

ees:

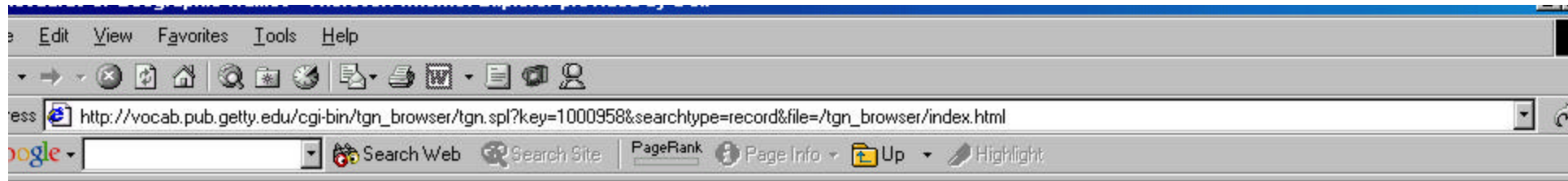
- Shanghai (C,V)
- Shang-hai (C,V)
- Schanghai (C,V)
- Chang-hai (C,V)

ie Types:

- inhabited place (C)
- city (C)
- regional capital (C)
- commercial center (C)
- industrial center (C)
- port (C)..... opened 1842
- educational center (C)
- treaty port (C)

[rces:](#)

- Chang-hai..... [Rand McNally Atlas \(Reprinted 1994\)](#), I-33 [VP]
- Schanghai..... [Rand McNally Atlas \(Reprinted 1994\)](#), I-157 [VP]
- Shang-hai..... [Webster's Geographical Dictionary \(1984\)](#), 1104 [VP]
- Shanghai..... [Petit Robert II, Noms \(1989\)](#) [BHA]
[NIMA, GEOnet Names Server \(1996\)](#) [VP]
[Times Atlas of the World \(1985\)](#) [BHA]
[Cambridge World Gazetteer \(1988\)](#) [BHA]
[Times Atlas of the World \(1994\)](#), 181 [VP]
[Columbia Lippincott Gazetteer \(1961\)](#) [BHA]



100958]

Shanghai Shi (municipality)

31 14 N Long: 121 28 E *(represented in degrees minutes direction)*

31.233 Long: 121.467 *(represented in decimal degree and fractions of degrees)*

hierarchical Position:

- [Asia](#).....(continent)
- [Zhonghua](#).....(nation)

Names:

- Shanghai Shi (C,V)**
- Shang-hai Shih (C,V)**
- Shanghai (C,V)**

Other Types:

- municipality (C)**
- first level subdivision (C)**

References:

- Shang-hai Shih**..... [NIMA, GEOnet Names Server \(1996\)](#) [VP]
- Shanghai**..... [Britannica Book of the Year \(1990\)](#), 589 [VP]
- Shanghai Shi**..... [NIMA, GEOnet Names Server \(1996\)](#) [VP]



地名查詢系統建置計畫

計畫簡介

地名資料庫

地名普查手冊

地名查詢系統

計畫會議

相關文件

計畫背景資訊

- 委託單位：內政部
- 執行單位：中研院歷史語言研究所 及 中研院計算中心
- 計畫主持人：中研院史語所 范毅軍 副研究員 及 中研院計算中心 林誠謙 主任
- 計畫執行時程：2000.07.27~2001.3.27
- 計畫聯絡人：中研院計算中心 資訊人員 廖汝銘
- 聯絡電話：TEL (02)2789-8012 / FAX (02)2783-6444
- 網頁製作：中研院計算中心GIS小組

主要進行中工作

- 本計畫之期末審查會。

最新消息

- [臺灣地區地名查詢建置計畫期末報告書。](#)
- [地名普查工作手冊。](#)
- [臺北縣汐止地區地名座談會](#)
- [地名學術語詞匯\(簡體字\)](#)
- [A Manual for Field Collection of Geographical Name \(12.5Mb\)](#)
- [完成 陳國章 教授《臺灣地名辭典》建檔。](#)
- [基本地形圖資料庫地形資料編碼表\(89/10/31\)](#)
- [地名普查手冊座談會\(89/10/18\)](#)
- [文史工作者 黃文博 先生訪談記錄\(89/10/7\)](#)
- [中研院調查工作室訪談記錄。\(89/10/2\)](#)
- [加拿大地名普查手冊翻譯之稿字成。](#)



擇行政區】

[市] 查詢

Error:
Map server not available

詢地名】

查詢

治時代地名查詢】 台灣堡圖

:
大稻埕, 舊庄, 南港...等輸入關鍵字即可)

里堡廳:
臺北廳, 芝蘭一堡, 大加蚋...等輸入關鍵字即可)

查詢 重新設定



Next steps

- Content standard development and validation
- Multilingual testbed construction
- Gazetteer registration in ECAI metadata clearinghouse
- Feature type thesaurus extensions
- Tools for linking gazetteers to text and image databases