Digital Gazetteers for History and Culture: Identifying Uses, Developing Standards

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What does the spatial humanities look like?

- Integrating historical maps, images and authored text
- Including time stamping
- Dealing with spatial uncertainty
What does ECAI need gazetteers FOR?

• For reference
  – Organizing complex information about places
  – Attaching geographical coordinates to places

• For visualization
  – Making information about places mappable

• For integration
  – Allowing information about places from multiple sources to be coordinated geographically
What does ECAI need FROM gazetteers?

• Multilingual, multiscript
• Scope includes cultural places
• Historical data and temporal change
• Sources of information clearly stated
• Hospitable to specialist implementations – E.g. canals, shrines, Song dynasty boundaries
• Interoperable for network environment
(I) Multilingual: The Capital of China

- Beijing Shih 亖ºÊ ¥«
- Pei-p'ing Shih ¥_ ¥¬ ¥«
- Beijing
- Peking
- Peiping Municipality
- Yan/Yen/¿P
- Gaydon
- Dadu/Tatu/ʤ³£
- Pekine
(II) Culture: Spatial Data has a Point of View

An Eighteenth Century European Map of Africa
(III) History: A Twelfth Century Map of China:

- All characteristics of places change over time:
- Name, footprint, feature type
(IV) Spatial information comes from texts:
An eighth century Chinese star chart

- Cite text as the source of information
- Scholarly bibliographical practice should be followed
(V) Networked Environment

- Nobody can create a perfectly comprehensive gazetteer
- Multiple gazetteers need to be able to be searched together
- Gazetteers need to reference other resources
Requirements for a Content Standard

• Support for uncertainty
• Support for complex temporal change
• Support for bibliographical documentation as part of every element
• Identification of source is necessary for establishing authority
…But just as important is developing good practices and worked examples

• What is a place?
• How should complex and uncertain temporal change be represented?

• ...this work still remains to be done
A feature type thesaurus categorizes types of places (mountain, temple…)

- Recreational building (Roman era)
- Cultural site (present)
Relationships among thesauri

- Specialists need specialized, detailed vocabularies
- Which thesaurus should always be known
- Merging multiple thesauri is unsatisfactory
- Linking entries across many thesauri is very difficult, expensive, and not scalable
- **Solution**: use a minimal, general thesaurus, with links to specialized thesauri
Why develop a feature type thesaurus?

• Allows for simple feature-based searching across multiple gazetteers
  – A lowest common denominator that links to specialist feature type thesauri
• Allows search of specialist gazetteers by broad type
• *This is not a replacement for specialist gazetteers*
FTT 2.1: “Human Creations”

**NT2: governed places**
- NT3: districts
- NT4: administrative districts
- NT4: electoral districts
- NT4: utility districts
- NT3: higher order subdivisions
- NT3: lower order subdivisions
- NT3: multinations
- NT4: alliances
- NT4: empires
- NT3: settlements
- NT4: capitals
- NT4: settlement subdivisions
- NT3: sovereign dominions

**NT2: infrastructures**
- NT3: boundary features
- NT3: land management features
- NT3: transportation features
- NT4: bridges
- NT4: ports
- NT4: railroads
- NT4: roads
- NT4: routes
- NT5: passes
- NT4: tunnels
- NT3: utility management features
- NT4: water management features
- NT5: water control features
- NT5: water supply features

**NT2: regions**
- NT3: agricultural regions
- NT3: cultural regions
- NT3: economic regions
- NT3: linguistic regions
- NT3: map regions
- NT3: religious regions
- NT3: research regions

**NT2: sites**
- NT3: agricultural sites
- NT3: civil sites
- NT3: commercial sites
- NT3: cultural sites
- NT3: educational sites
- NT3: funerary sites
- NT3: military sites
- NT3: monuments
- NT3: production sites
- NT3: recreational sites
- NT3: religious sites
- NT3: residential sites
- NT3: storage sites

We want feedback!
www.mip.berkeley.edu/gazetteer
Crosswalking Thesauri: Academia Sinica to ECAI

<table>
<thead>
<tr>
<th>Academia Sinica Feature Types</th>
<th>English Translation</th>
<th>ECAI Feature Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>公共設施</td>
<td>(Public facility)</td>
<td>Civil buildings</td>
</tr>
<tr>
<td>外國機構</td>
<td>(Foreign institution)</td>
<td>Civil buildings</td>
</tr>
<tr>
<td>地方機關</td>
<td>(Local office)</td>
<td>Civil facilities</td>
</tr>
<tr>
<td>中學</td>
<td>(Middle school)</td>
<td>Educational buildings</td>
</tr>
<tr>
<td>學校</td>
<td>(School)</td>
<td>Educational buildings</td>
</tr>
<tr>
<td>交通地名</td>
<td>(Transportation place name)</td>
<td>Transportation features</td>
</tr>
<tr>
<td>交通設施</td>
<td>(Transportation facilities)</td>
<td>Transportation features</td>
</tr>
<tr>
<td>人名</td>
<td>(Personal name)</td>
<td>N/A</td>
</tr>
<tr>
<td>倉儲</td>
<td>(Storehouse)</td>
<td>Storage structures</td>
</tr>
<tr>
<td>公共場所</td>
<td>(Public place)</td>
<td>Civil sites</td>
</tr>
<tr>
<td>公墓</td>
<td>(Cemetery)</td>
<td>Grave sites</td>
</tr>
<tr>
<td>古厝</td>
<td>(Ancient place)</td>
<td>Cultural sites</td>
</tr>
<tr>
<td>古道</td>
<td>(Ancient road)</td>
<td>Roadways</td>
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<tr>
<td>商店</td>
<td>(Store)</td>
<td>Commercial buildings</td>
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<tr>
<td>地形</td>
<td>(Topography)</td>
<td>Physiographic features</td>
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<tr>
<td>堤防</td>
<td>(Dyke)</td>
<td>Water control features</td>
</tr>
<tr>
<td>墓地</td>
<td>(Burial ground)</td>
<td>Grave sites</td>
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<tr>
<td>大專</td>
<td>(University)</td>
<td>Education sites</td>
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<tr>
<td>寺廟</td>
<td>(Temple)</td>
<td>Religious buildings</td>
</tr>
<tr>
<td>三角測點</td>
<td>(Triangulation point)</td>
<td>Reference sites</td>
</tr>
</tbody>
</table>
For more information…

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