PastPlace: Rethinking gazetteers for the semantic web

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Scope of presentation

• Why we need specifically historical gazetteers

• Brief survey of existing global gazetteers

• PastPlace foundations
  – Wikipedia and Wikidata as a gazetteer
  – Pelagios 3
  – Gazetteer of the World, or Dictionary of Geographical Knowledge
  – PastPlace WMS
  – Vision of Britain data model

• PastPlace superstructure
  – Pelagios Dump support
  – PastPlace API
  – PastPlace web app

• (Briefly) General benefits of a geo-semantic approach
History is about texts, not maps

- Until the 18th century, there are almost no maps
- The historical record consists overwhelmingly of text
- … and what makes text geographical are placenames (*toponyms*)
- The main sources that locate places are themselves texts:
  - Itineraries
  - Gazetteers
- Without modern surveying equipment, any attempt to describe geography via a map will be wrong, but a textual description can still be entirely accurate
Or the maps look like this:
What is a gazetteer (1):

• International Standards Organisation 19112: “Geographic information–Spatial referencing by geographic identifiers”
  – a directory of geographic identifiers describing location instances. It will contain additional information regarding the position of each location instance. It may include a coordinate reference, but it may also be purely descriptive.
  – If it contains a coordinate reference, this will enable transformation from the spatial reference system using geographic identifiers to the coordinate reference system.
  – If it contains a descriptive reference, this will be a spatial reference using a different spatial reference system with geographic identifiers, for example the postcode of a property.
Towards a global historical gazetteer

What is a gazetteer (2):

• Open Geospatial Consortium Gazetteer Service Profile
  – Defined as extension to Web Feature Server
  – Also known as WFS(G)
  – Defines not a data structure but a series of queries and responses
  – Implemented in US Geological Survey’s Web Feature Service Gazetteer, accessing very large gazetteer for US

• Alexandria Digital Library Gazetteer Content Standard
  – Most detailed gazetteer standard
  – Partnered with two other standards:
    • ADL Gazetteer Service Protocol
      – Enables network of linked gazetteers to jointly respond to queries
    • ADL Feature Type Thesaurus
What we need in a specifically historical gazetteer (an incomplete list):

- Must enable us to link together place references to same place from widely different sources and periods
- Must link to toponyms appearing in a wide range of geographical texts
  - This is an argument against feature typing
- Must allow for the uncertainties of our geographical knowledge of the past
  - Avalon, Camelot and the lost townships of Denbighshire
  - Geosemantic knowledge easier to establish than geospatial
- Tells us what places were like, not just locations
  - i.e. we want “rich” gazetteers, although this may be achieved by linking to other material
Collaborative for Historical Information and Analysis

• 3-year NSF project linking 5 US universities led by Pitt
  – Also Boston U, Harvard, Michigan State, UC Merced
  – Assembling statistical data **globally** since 1600
  – Primarily via crowd-sourcing from academic contributors
  – I have AHRC “Big Data” funding to work with CHIA

• Even academic historians underestimate extent of historical boundary changes
  – And some confuse “places” with reporting areas

• Before 1815 political geography becomes fuzzier
  – E.g. pre-colonial territorial entities within Africa

• And there are always problems with sovereign states, which ultimately define themselves
  – State Dept LSIB: Palestine/Gaza etc; Crimea
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Closer to home example: alternative definitions of Cambridgeshire in 1911

• Registration County:
  – Acreage = 566,493
  – Population = 215,109

• Administrative County:
  – Acreage = 315,168
  – Population = 128,322

• Ancient County:
  – No longer reported on

• (Currently working on 1961 wards for EU)
Dangers of an *ad hoc* approach

- Need for detailed name provenances not initially obvious, and hard to retrofit
- Extent of name ambiguity unclear, especially if geographical domain initially restricted
- Task initially tends to be conceived as name standardization, not designing identifiers
- Confused entity definitions
- **END RESULT: WE FAIL TO LINK RELATED INFORMATION IN OUR OWN SYSTEM, AND CANNOT LINK TO INFORMATION ABOUT THE SAME PLACES IN OTHER SYSTEMS**
  - “Other systems” are not necessarily academic projects
But we cannot start from scratch …

• A global gazetteer won’t start to be used until it provides broadly global coverage
  – Will DEEP gazetteer be widely accepted if it misses out whole counties?

• And this is especially an issue if part of our plans are based on crowd-sourcing: need to recruit the crowd

• So which existing *modern* gazetteer should we use as the core of our *historical* gazetteer?

• Real question for New York meeting 12-13 Sept 2013

• Modern gazetteer needs to be:
  – Global
  – Avoid copyright problems
  – List the right kind of thing ….
Kinds of Gazetteer Entity

• Features
  – Focus of mapping agencies and existing data standards
  – But historically ephemeral, and requires **feature typing**

• Administrative Units
  – Focus of statistical databases and political history
  – Exist in law, not in the landscape
    • Creation and abolition, naming and typing, and definition of boundaries are all the results of legal processes
    • Far more kinds of admin units exist than any FTT allows

• Places
  – Focus of ordinary life
    • Toponyms in texts are rarely linkable to features, and mostly not to administrative units
  – Exist in consciousness and discourse, not in the landscape
Candidate gazetteers

• Google Maps API
  – Commercial product; not open

• US Board of Geographic Names/NGA Gazetteer
  – Not URI gazetteers – but primary source for Geonames

• Ordnance Survey Linked Open Data
  – Would tick many boxes if it were not UK-only

• Open Street Map/Linked GeoData
  – 20 billion triples impressive, but big quality issues; features

• OpenPOI (OGC/Raj Singh project)
  – Massive aggregation exercise; big entity issues

• DBpedia (linked data “version” of Wikipedia)
  – Not a Wikimedia project: unable to address Wikipedia snags
Geonames as a potential source

**Pros**
- Well-established and widely used resource: obvious choice
  - “GeoNames … covers all countries and contains over eight million placenames available for download free of charge”

**Cons**
- Gazetteer of features, not places
  - We need to extract a subset which we can be confident contains all towns and villages, but only once
  - Many but not all English villages in Geonames twice, as “Populated place” and as admin unit based on parish
  - Parishes are 3rd or 4th order depending on kind of district
  - Coverage of areas within towns poor
    - Once we have our subset, can we feed content back, or are we effectively creating our own fork?
    - Geonames as a project very dependent on Marc Wick
www.wikidata.org

- Central data repository for Wikimedia projects
  - Hub linking different language versions
  - Single conceptual entity => many articles
- Human- and machine-readable and editable
- Fully multilingual
- Supports semantic relationships

11th April 2014

Ad hoc linkages between 187 different editions

Editions linked by central hub defining entities and recording key properties
Wikidata entities

- Single entity corresponding to one or more Wikipedia articles
  - Name (in various languages) + WP links
  - Properties can include sources/qualifiers
- No support (yet!) for entities not existing in WP
  - Entities in Wikipedia must be “notable”
- This may prove a major issue for us
  - But we have some capacity to add to or alter Wikipedia content …
Each student on this course is assigned a different stub article for a village in Britain, and asked to expand it to provide a rounded description of the place and, in particular, an account of its historical development. In the first half of the year they do a different assignment based on fieldwork in the local area, but in the Wikipedia-based assignment the villages are at some distance from us and students are expected NOT to visit. In practice, this means they must rely mainly on other online resources, and they are expected to include very systematic references to their sources, which should usually work as hyperlinks.

Clearly, it is preferable that villages be written about by their own inhabitants, so we carry out a series of checks:

- That the existing article is very short, and contains no socio-economic statistics other than the population in 2001 and/or 2011. We in fact start by using Toolserver to select only very short articles.
- That the article is editable, but has not been edited other than by a bot for at least 12 months.
- That the article is not actually about a parish whose main settlements are covered by separate and more substantial articles.
- That there is an actual settlement there, visible on a modern map.
- That this is not just a village but currently a Civil Parish. We check this by making sure it is included in the government’s Neighbourhood Statistics site, which will mean that a substantial amount of data from the 2001 and 2011 censuses will be available.
- That it has a substantial past existence as a Civil Parish, and in particular that a population time series covering at least three censuses is available on our own web site A Vision of Britain through Time. One of the sub-assignments is to construct a population time series graph combining modern data from Neighbourhood Statistics with these historical data.
- That the Vision of Britain site includes a description of the village, computerised from a 19th century gazetteer.
- That the Vision of Britain site includes occupational statistics computed from the individual returns from the 1881 census.

Provided all these conditions are met, we are fairly confident both that the article is not being actively developed by someone with local knowledge, and that there is additional information available which can be usefully added by someone without personal knowledge of the village. Two blog posts about this course are here:

- Telling the stories of rural England with Wikipedia
- Using Vision of Britain and Wikipedia in education
Wikipedia article for Sawley, North Yorkshire: Before

Sawley is a village and civil parish in the Harrogate district of North Yorkshire, England. It is about 4 miles (6.4 km) west of Ripon.

External links

Media related to Sawley, North Yorkshire at Wikimedia Commons

This Harrogate location article is a stub. You can help Wikipedia by expanding it.
Each student in my first year course is assigned a different Wikipedia stub article, like this, to expand. Each article is about some village in northern England they have never visited. NB they are editing the actual Wikipedia articles, live.
Wikipedia article for Sawley, North Yorkshire: Before

- Each student in my first year course is assigned a different Wikipedia *stub* article, like this, to expand
- Each article is about some village in northern England they have never visited
- NB they are editing the actual Wikipedia articles, live
Sawley is a village and civil parish in the Harrogate district of North Yorkshire, England. It is about 4 miles (6.4 km) west of Ripon. From this position, the Yorkshire Dales are to the west and the North Yorkshire Moors and coast are to the east. The village is location within Nidderdale, an area of outstanding natural beauty. Sawley is one of 27 parish councils who represent the interests of the people who live in the area. [1]

In the 1870s, Sawley was described as "a township-chapelry, with a village and four hamlets, in Ripon parish, W. R. Yorkshire." [2] The township's four hamlets were Cowbush, Hangle, North Pastures, and Rispleth. [3]

History [edit]

Sawley dates back to the Saxon era [4] where it gained its name from Old English and the Anglian dialect. From this period, Sawley is directly translated as "Willow-tree wood." [5] The village is thought to have been the main source of stone for the construction of Fountains Abbey in the 10th century. The world heritage site which is now maintained by the the Burgsy Hundred of the West Riding of Yorkshire with 40 ploughlands, a meadow of 85 acres, and a market charter. The Lord was Ealdred, Archbishop of York St, and a twelfth Saxon Archbishop of York, Thomas of Bayeux, Archbishop of York and Abbot of St. Augustine's Abbey in Canterbury.

In 1445, the parish was transferred to the Claro registration district. During this same change, Sawley had a boundary change where part of the area was transferred to the parish of High and Low Bishopside. During this time, the total population which was transferred was 20. Sawley remained part of the Claro registration district until 1968 when it was abolished. From this point, Sawley has been part of the North Yorkshire registration county. [6]

Census data of Sawley dates back to 1871, with the earliest total population figure being 341. [7] The population has been relatively constant with the highest population record being in 1861 with 372 and the lowest available data being in 1951 with 251. According to the 2011 census, Sawley had a population of 299. [8] This is only one less than the 2001 census where the population was 300.

Historically, Sawley's industry was mainly based in agriculture with 36.7% of the working population working in this industry. [9] This has dropped in the following years with agriculture now only accounting for 12% of Sawley's industry, based on 2011 census figures. [10] The decline in agriculture follows a similar pattern to the rest of Britain with a major decline in agriculture due to increased trade as well as a shift towards secondary industry and tertiary industry. [11] This now means that the main
Sawley in Wikidata:

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All Wikidata entities with locations

- Note dense coverage of China, etc, once all different language editions merged
- Map created by Denny Vrandecic
- See https://dl.dropboxusercontent.com/u/172199972/map/index.html
Wikidata properties

- Where Geonames entities have a single feature type, Wikidata entities can have any number of properties
  - So a particular entity can be both a village and a parish

![Diagram of Wikidata properties and a population claim for Berlin with 3,500,000 as of 2011 and one source reference.]
Wikidata data reuse

- Provides permanent numeric identifier for all items
- All item/property data licensed as CC-0
- Bulk access:
  - API available (JSON) but still being developed!
  - Regular XML dumps – dumps.wikimedia.org
- Significant problems with current dump
  - Current PastPlace gazetteer only subset
Towards a global historical gazetteer

Pelagios 3: Early Geospatial Documents

• 2 year project Sep 2013-Aug 2015
  – funded by Mellon Foundation

• Principal Investigators:
  • Leif Isaksen (*Southampton Univ, UK*)
  • Elton Barker (*Open Univ, UK*)
  • Rainer Simon (*Austrian Inst of Tech*)

• Plus many partners:
  • *British Library*: Kimberly Kowal
  • *Drew Univ* Shannon Bradshaw, Martin Foys
  • *Harvard Univ*: Lex Merrick Berman
  • *Indep*: Johan Åhlfeldt, Tony Campbell, Mia Ridge
  • *New York Univ*: Tom Elliott, Sean Gillies
  • *Queen Mary, London Univ*: Yossef Rapoport
  • *Edinburgh Univ*: Kate Byrne
  • *Portsmouth Univ*: Humphrey Southall

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Pelagios 3: Project and rationale

• Project will annotate, link and index place references in digitized Early Geospatial Documents (EGDs)

• EGDs are documents that use written or visual representation to describe geographic space prior to the European discovery of the Americas in 1492
  – This event both radically transformed beliefs about the globe, and triggered the development of several standardising global cartographic conventions, including the Werner, Bonne and Mercator projections

• EGDs include ancient and medieval geographic descriptions (*geographiae* and *chorographiae* and itineraries) world maps (*mappaemundi*) and portolan charts
Pelagios Data Model for Annotations

• Linking related resources via Open Annotations
• Six items of information form an annotation:
  1. **Target**: A segment of the text or image identified as a place reference, expressed as a URI
     • Target URIs will be additionally annotated with relevant document metadata where known, including the author, date-range, provenance, language.
  2. **Toponym**: the string of characters used by the author to identify a place
  3. **Place Identifier**: linking the place to a URI based gazetteer
  4. **Source**: of the identification between toponym and place
  5. **Annotator**: The person who produced the annotation.
  6. **Confidence**: a traffic light scheme: probable, possible, or unknown
Gazetteer Infrastructure

- **Pelagios aims to create a “Gazetteer ecosystem”:**
  - URI-based gazetteers that are specific to a spatial, temporal or cultural milieu and maintained and curated by their respective research communities, but aligned through the principles of Linked Data and a common, overarching referencing framework.

- **Two key challenges in creating such an ecosystem:**
  - A common, generic gazetteer data model needs to be identified which suits the needs of the different individual stakeholders involved.
    - All gazetteers in this ecosystem will be primarily of “places”, not geographical features.
  - Referencing frameworks need to be agreed, through which different gazetteers can cross-link to each other.
Participating Gazetteers

• Project will re-use, and contribute to, three existing gazetteer platforms:
  – Pleiades (Institute for the Study of the Ancient World, NYU)
  – PastPlace/Vision of Britain (GBHGIS, University of Portsmouth)
  – China Historical GIS (CGA, Harvard)

• All three gazetteers are more about “places” than geographical features
• Pleiades+CHGIS mature: few new places needed
• PastPlace “will be significantly augmented with contemporary and historic settlements extracted from open gazetteer services”, beyond UK
  – Decided last week this would be based on Wikidata
### Pelagios 3 Content Work Packages

<table>
<thead>
<tr>
<th>No</th>
<th>Name</th>
<th>Example EGDs</th>
<th>Gazetteer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Latin Tradition</td>
<td>Antonine Itineraries, Ravenna Cosmography, Bordeaux Itinerary, Natural History (Pliny)</td>
<td>Pleiades</td>
</tr>
<tr>
<td>2</td>
<td>Greek Tradition</td>
<td>Geography (Strabo), Armenian Geography, Suda, Manual of Geography (Ptolemy)</td>
<td>Pleiades</td>
</tr>
<tr>
<td>3</td>
<td>Early Christian Tradition</td>
<td>Gough Map; Description of the World (Marco Polo), Fra Mauro Map, De Virga world map, Vesconte World Map, approx. 320 sundry EGDs from the British Library</td>
<td>PastPlace</td>
</tr>
<tr>
<td>4</td>
<td>Early Maritime Trad.</td>
<td>Le Liber (portolano), Lo Compasso (portolano), c. 180 Portolan charts</td>
<td>PastPlace</td>
</tr>
<tr>
<td>5</td>
<td>Early Islamic Tradition</td>
<td>Image of the Earth (Al Khwarizmi), al-Kashgari World Map, Tabula Rogeriana (al-Idrisi) Book of Curiosities, Maps of the Balkhi School</td>
<td>PastPlace</td>
</tr>
<tr>
<td>6</td>
<td>Early Chinese Tradition</td>
<td>Yujitu (‘Map of the Tracks of Yu’), Songhuiyao, Chinese Buddhist Temple Gazetteers, ‘Record of Buddhistic Kingdoms’</td>
<td>CHGIS</td>
</tr>
</tbody>
</table>
Pelagios WP3: Early Christian Tradition

- Maps and geographic texts from medieval ‘Christendom’
- Mixture of maps and texts e.g.:
  - Mappaemundi and T-O maps
  - Gough Map
  - Description of the World (Polo)
  - Vesconte World Map
  - Past Place gazetteer
- May work back from modern translations using Edinburgh geoparser using tools developed by DM project and use toponym detection
Pelagios WP4: Early Maritime Tradition

- Portolanos (texts) and portolan charts
- Approximately 180 maps available from work of Ramon Pujades (2007)
- Past Place gazetteer
- Use toponym detection and gazetteer and identification work and gazetteers of Tony Campbell and Ramon Pujades
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Pelagios WP5: Early Islamic Tradition

- Maps, texts and gazetteers in Arabic up to approx. 1492.
- Maps and texts e.g.
  - Al-Khwarizmi
  - Book of Curiosities
  - Balkhi School
  - Tabula Rogeriana
  - Past Place gazetteer + Pleiades
- Use toponym detection and gazetteer and identification work of Yossi Rapoport, Emily Savage-Smith, Kennedy & Kennedy and others
So what is the Portsmouth team adding?

- Large body of descriptive text
- A base map server
- Data model and much existing content from GBH GIS/Vision of Britain
- A gazetteer service and web site:
  - PastPlace Linked Data API
  - PastPlace web app
  - Dump system meeting Pelagios specification
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Gazetteer of the World

- Seven volumes
- 5,913 pages
- About 87,000 entries
- About 7.3 million words
- All in Google Books
- But the OCR output there is pretty rough so we are employing student interns to clean it

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Gazetteer text

ABACKNÆS (CAPE), a promontory on the E coast of Sweden, in the prov. of Linköping. N lat. 58° 8'; E long. 16° 52'.

ABACO, two low sandy islands forming the NW portion of the Bahama group, and lying to the N of Providence channel. The Great Abaco is the largest island of this group, extending 80 m. from N to S, with an average breadth of 10 m. Its S point is in N lat. 25° 51½', W long. 77° 10½'. It is surmounted by a light-tower with a revolving light 160 ft. above sea-level. The Little Abaco is a narrow strip, 23 m. by 4 m., extending in a WNW direction from the NW extremity of the Great Abaco. The total area of the two islands, and their chain of cays or keys, was estimated in 1827 at 320,715 acres, of which 296,000 were then vacant. The census of 1841 returned their pop. at 1,591, of whom 588 were coloured. Their chief produce is potatoes, yams, pumpkins, ochras, arrow-root, cassada, and Indian corn.

ABACOU (POINT), the SW extremity of St Domingo. N lat. 18° 3'; W long. 73° 50'.

ABAD, a town of Farsistan ESE of Shiranz.—Also a town in Beloochistan, SE of Gundava, in N lat. 28° 17'.—Also a v. of Sinde, 3¼ m. NW of Sukkur.

ABAD (JEBEL), a mountain-range of Persia intersecting the southern part of the prov. of Kerman.

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**Historical base map server**
- Similar to Vision of Britain WMS
- But need to assemble maps of whole world
- Focusing on 1 to 1,000,000 British and American Military mapping
- Many maps already scanned by U of Texas
- Another student intern working on this

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Modelling the history of Estonia
Towards a global historical gazetteer

A site like A Vision of Britain through Time...

Searchable master list of places = gazetteer

Historical base maps

Descriptions from old gazetteers

Lots of old place names

Place names

Lots of old place names

Portsmouth
Hampshire

Historical places and writings

Historical photographs

Units and statistics

Related websites

Click on the map for other historical maps of this place.

In 1887, John Bartholomew's Gazetteer of the British Isles described Portsmouth like this:

"Portsmouth--parl. and mun. bor., naval station, seaport, and par., Portsea Island, Hants, opposite the Isle of Wight, 18 miles SE. of Southampton and 74 SW. of London by rail-par., 130 ac., pop. 7967; bor. (including also the par. of Portsea, and embracing nearly the whole of Portsea island), 4320 ac. and 855 tidal water and foreshore, pop. 127,989; 3 Banks, 5 newspapers. Market-days, Tuesday, Thursday, and Saturday, Portsmouth is divided into the four districts of Portsmouth, Portsea, Landport, and Southsea; Portsmouth being the barracks and garrison town, Portsea the seat of the great naval dockyard, Landport the artisans' quarter, and Southsea a modern watering-place with fine esplanade and pier, baths, and assembly-rooms..."
Least interesting part: Dump for Pelagios

- Java program outputting Turtle
- Even with current PastPlace system, generates c.190Mb file
- But it does show the lengths we are going to document sources and acknowledge contributions
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@base <http://pastplace.org/downloads/test.txt> .
@prefix dcterms: <http://purl.org/dc/terms/> .
@prefix dctype: <http://purl.org/dc/dcmitype/> .
@prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix osgeo: <http://data.ordnancesurvey.co.uk/ontology/geometry/> .
@prefix pelagios: <http://pelagios.github.io/vocab/terms#> .
@prefix pleiades: <http://pleiades.stoa.org/places/vocab#> .
@prefix geo: <http://www.w3.org/2003/01/geo/wgs84_pos#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
@prefix skos: <http://www.w3.org/2004/02/skos/core#> .
@prefix gn: <http://www.geonames.org/ontology#> .
@prefix spatial: <http://geovocab.org/spatial#> .
@prefix foaf: <http://xmlns.com/foaf/0.1#> .
@prefix fabio: <http://purl.org/spar/fabio/> .
@prefix marcrel: <http://www.loc.gov/loc.terms/relators/> .

<#Adams> a dctype:Text ;
  dcterms:title "Memoirs of a Social Atom" ;
  dcterms:creator "William Adams" ;
  dcterms:publisher "Hutchinson and Co." ;
  dcterms:publisher.place "London" ;
  dcterms:issued "1903" ;
.

<#Anderson_Hundreds> a dctype:Text ;
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  dcterms:creator "Olof Anderson" ;
  dcterms:publisher "Lund University" ;
  dcterms:publisher.place "Lund" ;
  dcterms:issued "1934" ;
  fabio:hasRepresentation "http://www.ucl.ac.uk/archaeology/research/projects/assembly/Anderson1.pdf" ;
<http://data.pastplace.org/search?q=35> a pelagios:PlaceRecord ;
dcterms:title "35" ;
dcterms:subject "Place" ;
dcterms:temporal "start=1875; end=2014;" ;
dcterms:license "http://creativecommons.org/licenses/by/3.0/" ;
skos:closeMatch <http://dbpedia.org/resource/Denmark> ;
skos:closeMatch <http://sws.geonames.org/2623032/> ;
skos:closeMatch <http://www.wikidata.org/entity/Q35> ;
pleiades:hasLocation [ geo:lat "55.71666666666667"^^xsd:double ;
  geo:long "12.566666666666666"^^xsd:double ;
] ;
pleiades:hasName [ rdfs:label "DENMARK"@eng ;
  dcterms:date "1875" ;
  dcterms:source "Hertslet" ;
] ;
pleiades:hasName [ rdfs:label "DANMARK"@swe ;
  dcterms:date "1990" ;
  dcterms:source "SSD" ;
] ;
pleiades:hasName [ rdfs:label "LE DANEMARK"@fra ;
  dcterms:date "1998" ;
  dcterms:source "CRFD" ;
] ;
pleiades:hasName [ rdfs:label "TAANI"@est ;
  dcterms:date "0" ;
  dcterms:source "EED" ;
] ;
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PastPlace API

- Supports searching by name or location for places and units
- Returns data in range of formats:
  - HTML (but web app MUCH prettier)
  - XML (i.e. simple format defined by Open Street Map)
  - RDF/XML
  - N3/Turtle
  - JSON
- Custom Java program for performance
- Accessible at:
  http://data.pastplace.org/search
PastPlace web app

- Designed to be human-friendly face of PastPlace
- Proof of concept/prototype system already exists
- Written to be mobile/touch friendly, using jQuery Mobile and OpenLayers (or Leaflet)
- Communicates with Postgres database entirely via API, receiving JSON
Geo-semantic methods are inferior to Geo-spatial …

- You can derive that B is in A, or C is near B, from the map, but you cannot derive the map from the text

… except when

- We are working with the past
  - Textual descriptions are often all we have
  - Old maps are very inaccurate

- We are working with the web
  - The web is a textual structure linked by explicit relationships

- We are working with people
  - People think about geography through named places not coordinates defining spaces

- NB Vision of Britain/PastPlace has plenty of geospatial functionality
Acknowledgments

• Most of the information about the Pelagios 3 project comes from the proposal to the Mellon Foundation, as written by Leif Isaksen, Elton Barker and Rainer Simon

• The slides covering Wikidata come from the presentation given by Andrew Gray at the British Library on 26 April 2013
  – http://www.slideshare.net/generalising/introduction-to-wikidata
Web sites, etc

• Vision of Britain:  
  www.VisionOfBritain.org.uk

• Great Britain Historical GIS:  
  www.gbhgis.org  
  www.port.ac.uk/research/gbhgis

• PastPlace (very preliminary site!):  
  http://www.pastplace.org

• Pelagios project  
  http://pelagios-project.blogspot.co.uk

• Contact us:  
  gbhgis@port.ac.uk