Gazetteers and the Library Catalog: Infrastructure for Spatial Search

KATHY WEIMER
Professor, Texas A&M Libraries
Manager, Map & GIS Library
Texas A&M University
Email: k-weimer@library.tamu.edu

The Role of the Gazetteer and Library Records in Spatial Searches

The fields of GIScience and Library/Information Science have numerous overlapping interests, including spatial search. Each discipline is devoted to meaningful description and organization of place names; resulting in gazetteer development and related library catalog data that informs spatial search mechanisms. As with gazetteer development, a robust infrastructure of cataloging standards and codes, built over many decades, has resulted in an extensive place name index, referred to as “geographic name authority records,” used as the formal official name in the catalog system. These name authority records function to re-direct searches which may include a variant name to those with the official form of the name and thus, when associated with geographic coordinates has the dual role of a tool and a dataset, as is the role of gazetteers. The larger concepts of place name identification and their conceptual structuring in the library catalog system and their use in spatial searches can and should extend from the library catalog system into GIS, digital gazetteer development and spatial search queries. Now that library catalog data is available through linked open data, discussions should pursue crosswalks or interoperability between catalogs and GIS.

As manager of a map and GIS library, I am keenly aware of humanists’ use of digital gazetteers, sometimes enriched by their own data, that structure for interactive scholarly works. However, these scholars seem unaware of the rich resource provided by library catalog records for place names, and by creating their own gazetteers, face many of the same challenges that libraries have sorted through and routinized over many decades. For example, how are regions noted, names disambiguated and changes over time described? How are time periods and events defined and coded? The issues have been discussed and resolved to a great extent in the library community, however, humanities scholars are largely unaware.

The library catalog and place name authority record structure provide a number of possibilities for expanding the utility of spatial search in numerous domains. In approaching the library’s geographic name authority records as a digital gazetteer, I suggest that the geospatial community can exploit the vast information contained therein to build or enhance existing digital gazetteers and related spatial search engines. Further, the taxonomies, classifications and standards already existing in library science should be fully utilized by GI-related science and systems to expand and promote spatial search. Crosswalks can be created between geonames, library catalog, and other digital gazetteers, such as the ADL and Getty Thesaurus. Obscure,
localized places identified only in a library catalog can be brought into a GIS and national gazetteers.

The Role of Linked Open Data
The library records are available through linked open data formats so can be ingested for various uses. Codes, vocabularies and standards used by Library of Congress have recently been released, found at http://id.loc.gov and through VIAF, the Virtual International Authority File. At the specialist meeting, I would convey the subtleties of the Library of Congress rules for creating official place names and their disambiguation, as well as coding standards, to support those in GIS who may pursue enhanced spatial searches using the LC records for place names. Much can be gleaned from this existing dataset both in content and organizational methods to enhance larger spatial search initiatives.

Mapping Applications to Search Library, Museum and Archive Collections
In a completely different approach, without regard to library catalogs, mapping applications can provide spatial awareness and spatial search for library collections. I am project director for “Mapping Historic Aggieland” for which georeferenced historic maps of campus and geotagged photos are accessed through a geoserver. Dates of building construction are added, which combined with the maps, form a spatio-temporal browse. Providing a spatial or map-based search to a library, museum or archival collection, will surely become a more popular approach and will bring attention to the geographic aspects of a collection.

Collaborations
In 2013, perceiving a need for greater communication and collaboration among those working in the geospatial humanities, I co-founded an international special interest group, “GeoHumanities,” within the Alliance of Digital Humanities Organizations (see http://geohumanities.org/). Our inaugural meeting was held this summer on the topic of gazetteers, focusing on their use and development among humanists. Also, I participated recently at a meeting to build a World Historical Gazetteer, where gazetteer interoperability, textual and geometric spatial searches were major discussion topics. From my work with members of the GeoHumanities SIG and the World Historic Gazetteer meeting, I am carrying the humanists’ concerns into discussions with librarians across the country to bring awareness about the need for enhancing the geographic name authority records, particularly regarding temporal aspects and geometries, sharing through linked open data in order to expand the use of library catalog records and digital gazetteers for spatial searches. The specialist meeting provides me the opportunity to speak to geographers and others interested in spatial search, about the role, concerns and impacts that libraries may play in this area.