

Metadata as Infrastructure; Interoperability; and the Larger Context

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My remarks are based on studies undertaken with Dr. Fredric Gey and Prof. Ray Larson on how better use could be made of existing descriptive metadata, and on the work of the Electronic Cultural Atlas Initiative (ECAI), a worldwide effort among scholars to transform the humanities and social sciences through increased attention to place and time.

1. Metadata as Infrastructure. Much is made of the convergence of digital media. Try it! In a project entitled “Seamless Searching of Numeric and Textual Resources” we tried to extend searches from digital text to socio-economic numeric data series and vice versa. But one cannot mix genres directly. Pixels scraped from a digital image cannot serve as a textual query. Captions (labels, headers, codebooks, &c.) can be a weak textual surrogate for numeric data. A topical thesaurus used for both resources can provide a common language. But the area of interest also needs to be specified, so a gazetteer [controlled vocabulary of place names, with latitude and longitude] is needed, and also period of time, and so on. Further, the multiple topical thesauri (and gazetteers, and other directories) need to be mapped to each other. *Combining diverse digital resources depends on an interoperable infrastructure of metadata. This is as much infrastructure as hardware or policies. But national standards for format and content of these tools don't exist, even for gazetteers! An investment in the development of scholarly “best practices” is needed.*

2. Interoperability: A Worked Example. The humanities and social sciences are concerned with culture. Culture develops in communities. Understanding context is crucial. Cultures and contexts are dynamic. Many disciplines (and many languages in many scripts) describe contexts. Latitude, longitude, and calendar time provide a unifying lingua franca across disciplines and languages.

The Electronic Cultural Atlas Initiative (ecai.org) was created in 1997 by a small group of humanities scholars frustrated by the limitations and high cost of printed maps. ECAI works with hundreds of scholars worldwide to promote scholarship through increased attention to place and time; works with others to ensure that adequate, affordable tools are developed and affordable; and, where needed, undertakes specific research and development projects to ascertain what can be done and “best practices” for doing it.

ECAI affiliates record internet accessible resources in a catalog (Clearinghouse), searchable by space, time and/or topic. Selected items can be downloaded to form a “mapspace” of map layers, points, and links. TimeMap software (from the Univ. of Sydney) allows dynamic data exploration through time, space, and topic. The data and tools can be incorporated into an online publication, from which live searches in remote catalogs can seek out additional material. An example, we use Ctesiphon, a historic site in Iraq, using the ECAI Iraq Cultural Atlas <http://ecai.org/iraq/> - from searching the Clearinghouse for resources to create the portal to extending a search to libraries' catalogs.

3. The Larger Context. A grid view of cyberinfrastructure provides a basis for positioning humanities and social science needs in a broader context. This was explored in a recent ECAI- Academia Sinica workshop in Grid Digital Libraries.

Thank-you! Please visit the ECAI website ecai.org – and join us at ECAI's next Congress on Cultural Atlases, co-hosted with Fudan University, in Shanghai, May 9-13, 2005.

