

## **The Electronic Cultural Atlas Initiative: Ten Years Experience with Geo-Temporal Resources**

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### **Abstract**

There is a difference between memorizing and understanding: Understanding requires knowing about context. In the humanities and social sciences we need to know, for any development, what else was going on in or near that time and place.

The Electronic Cultural Atlas Initiative (ECAI) was formed in 1997 by a group of scholars concerned to transform research and education in the humanities and social sciences through greater attention to time and place. Administratively ECAI is a unit reporting to the Dean of International and Area Studies, University of California, Berkeley, but ECAI operates as an informal international association. It has pursued its mission by organizing eighteen international conferences on four continents; assembling a searchable directory of web-accessible geo-temporally referenced resources; promoting the development of standards, best practices, and software; creating exemplary cultural atlases (web-served educational resources featuring temporally dynamic maps); and research and development in collaboration with the University of California, Berkeley's School of Information. More at <http://ecai.org/>

The proposed paper will report on ECAI's experience developing best practices and innovative prototypes in the following related areas:

Subject headings: Web-accessible resources use many different kinds of topical vocabularies (category codes, classification schemes, ontologies, subject headings, &c.). Effective searching and interoperability require that these vocabularies be mapped to each other and to searchers' own terminology. Natural language processing and statistical association techniques can often provide inexpensive, useful solutions.

Place name gazetteers are pivotal and can be viewed as bilingual dictionaries between place (cultural) and space (physical). Existing gazetteers could be made much more useful. Their geographic description codes (aka feature types) can be mapped to library subject headings and, thereby, to literature relating to that type of place. Gazetteer records should indicate when each place name was in use.

Events and named time periods are widely used in speech and text instead of calendar dates to indicate points in time. This practice resembles the locational use of place names. Named time period directories linking events to chronological time-lines (analogous to place name gazetteers linking places to geospatial coordinates) have been developed and deployed. Similarly, the "type of period" codes can and should be linked to corresponding subject headings, and, thereby, literature on those kinds of events. Also, the geographic locus of each recorded event is needed.

Research and development in progress will be summarized: The development of best practices for marking up biographical texts (e.g. Who's who entries) with geo-temporal encoding will allow "life paths" to be depicted visually in temporally dynamic map displays. Getting library catalogs, place name gazetteers, time period directories, and biographical dictionaries to act interoperably with each other -- and with time-sensitive map visualizations and time-line displays -- begins to reveal the potential of traditional library reference collections in a digital environment.

Any understanding of Digital Earth will remain seriously incomplete until humanities and social science resources can be combined geo-temporally with each other and with physical and scientific data resources.

Topic Areas: Knowledge systems for browsing and analysis; Museums and public outreach; Cultural Issues and Identity

Session Areas: Museums and Education; Knowledge Nets; Indigenous People and Community