History of Print Culture Online Resources

- Canadian book trade and library index: http://www.dal.ca/hbic-hlic
- British book trade index: http://www.bbti.bham.ac.uk

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The Electronic Cultural Atlas Initiative

The Electronic Cultural Atlas Initiative (ECAI) was founded in 1997, when Lewis Lancaster, professor of Buddhist Studies at the University of California, Berkeley, was researching the transmission and transformation of the Buddhist canon as the religion spread throughout Asia. He recognized that a written description of this process, even with map images, would not do justice to the complex geographical, cultural, political, and economic contexts within which it occurred. He convened colleagues to propose the collaborative development of a digital cultural atlas that would incorporate not only research about Buddhism, but also other information that could be located in time and place, about trade, politics, ecology, historical events, and heritage sites. ECAI emerged from these conversations.

In subsequent discussions, Lancaster and his collaborators decided that the atlas should not be conceived as a static publication. Rather, the initiative could capitalize on developments in GIS and networked search and retrieval technologies. The cultural atlas would be an ever-evolving collection of content with a spatial component. A central catalog of metadata would link to datasets maintained and updated by their creators. Users would create customized maps incorporating data from many sources; scholars would share spatial data over the Web.

When ECAI was founded, existing GIS software posed difficulties for humanists, museum curators, and others with limited technological expertise who wished to represent continuous historical change in boundaries, settlements, hydrological features, or routes of travel. ECAI supported the University of Sydney's TimeMap Project to develop the metadata clearinghouse, map-authoring software, and time-enabled map browser required by the ECAI community. TimeMap is a system for customizing and displaying historical spatial data. The TimeMap Java Web-mapping applet incorporates an interactive timeline slider bar and on-screen animation. These tools allow users to filter data so that the map displays only the information about a specified time period, making it possible to show spatial change over time. The map browser also includes the capacity to create hyperlinks to texts, images, databases, and other non-spatial data.

TimeMap Windows software makes it possible to create projects for the World Wide Web by combining raster base maps and database layers from multiple sources, filtering and rendering data, and creating the necessary metadata. The TimeMap Java applet and windows software are freely downloadable for personal and educational use.

The ECAI clearinghouse is integrated with the TimeMap system. It currently contains approximately 1,000 datasets and authored interactive maps. It is also linked to over 5,000 georeferenced images of historical maps from the David Rumsey Map Collection. Users can assemble customized maps by selecting multiple datasets from many sources. There are no access restrictions to the ECAI clearinghouse. However, individual data owners may choose to password-protect their own data. In addition to the clearinghouse, ECAI has created electronic publications and atlases, with objects on interactive maps linked to websites incorporating databases of images and library resources, text, and links to related projects. A showcase achievement is the Cultural Atlas of Iraq, recently selected as Featured Collection by *D-LIB Magazine*. Other ECAI atlases and publications focus on the Persian Sasanian Empire; ivory and bone carvings from Afghanistan; Austronesian languages of the Pacific; French and Spanish missions in North America; recent scholarship on Southeast Asia; travelers and empires of the Silk Road; and Daoist sacred geography in Sichuan. Many of these are accessible from the ECAI website.

The initiative is not only a system for organizing and disseminating geographic and historical information. ECAI also promotes the development of digitized geospatial and temporal information for history and the humanities, and engages in research on issues pertaining to time-variant and multilingual spatial information about culture. To promote geospatial research and publication in the humanities, ECAI has sponsored two international conferences per year since 1998. In addition, a number of workshops, ranging from four hours to one week in length, have offered training in relevant software and methodologies. ECAI affiliates and staff have delivered papers at many digital library, history, and geography conferences. ECAI has co-sponsored specialist meetings on topics ranging from grid computing to virtual reality. In April 2004, ECAI launched an H-NET sponsored e-mail discussion list for people interested in cultural atlases and geospatial studies in the humanities. Articles about ECAI have appeared in *Past Time, Past Place: GIS for History*; *Central Asian Studies Review*; *D-LIB*; *History and Computing*, and numerous conference proceedings.

Digital cultural atlases are an emerging genre. The software, standards, and good practices needed to create spatial data, map visualizations, and Web-based atlases, and to network and share them on the Internet, are still developing. Digital gazetteer development is a particularly important area. Gazetteers are databases that index information about named places. They can be used as reference works that associate places with many names through time and in different languages, georeference named places, and provide summary

information about a place, such as its feature type (county, school, river), and position in an administrative hierarchy. Gazetteers can also link place-names to textual sources and to library catalogues and other kinds of databases that can be searched by place-name. Finally, gazetteers are the basis for historical geographical information systems that include rich documentation in addition to map visualization. ECAI has been funded by the National Science Foundation to develop standards and good practices for historical and multilingual gazetteers, and by the Institute of Museum and Library Studies to network gazetteers with library catalogues.

The Religious Atlas of China and the Himalayas is ECAI's newest research and development project. Begun in January 2004 with funding from the Henry Luce Foundation, it will be based on multilingual historical gazetteers about Chinese religious geography. Collaborators in Asia, Europe, and North America are combing reference works and primary sources for spatial information about temples, mountains, pilgrimage routes, Islamic mosques, Buddhist kingdoms, Christian missionary schools, and other religious places. The Religious Atlas is projected for completion in 2007.

ECAI Resources Online

- ECAI home: http://www.ecai.org. This site includes links to the Cultural Atlas of Iraq (ecai.org/iraq), the Religious Atlas of China and the Himalayas (ecai.org/chinareligion), and the gazetteer projects (ecai.org/projects/gazetteer).
- TimeMap Project: http://www.timemap.net.
- ECAI Clearinghouse: http://ecaimaps.berkeley.edu/clearinghouse.
- David Rumsey Map Collection: http://www.davidrumsey.org.
- D-Lib feature: http://www.dlib.org/dlib/May04/05featured-collection.html.
- Discussion list on cultural atlases and geospatial studies in the humanities: http://www.h-net.org/~ecai.

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