The research team also is planning to carry out a three-year research project designed to establish databases for a comprehensive gazetteer, the topography of South Korea, and the geography of traditional folk music, fables, and beliefs. We recognize the necessity for constructing electronic cultural maps of other regions. It is our hope that in addition to our project, we can someday participate in the development of electronic cultural maps of East Asia. Lastly, it is our fervent hope that other researchers and institutes will share our interest in this project and provide us with valuable expertise.

South Korea HGIS Resources Online

- Research articles based on ECA-CK are available at http://ikc.korea.ac.kr/culture/culture_start.htm.

—Jong-Hyuk Kim
Institute of Korean Culture, University of Korea

HGIS of Print Culture in Canada

Since 1997, we have been exploring ways to visualize and understand the development of print culture, a multifaceted and complex social phenomenon. Print culture embraces the circuit of textual communication (whether manuscript, print, or electronic) from creation, or authorship, through production and dissemination, to reception by users and readers. This circuit involves the printed texts themselves and all the participants in the circuit, coupled with the social, political and economic factors that produce them. Our long-term goal is to use GIS and associated mapping as a framework for exploring and visualizing the variables of print-culture history in ways that approach more holistic perspectives than are otherwise possible. Towards that end, we have received funding to develop Canadian data for a model HGIS project as part of a major grant from the Social Sciences and Humanities Research Council of Canada for the project, *A History of the Book in Canada / Histoire du livre et de l'imprimé au Canada*. Several national book history projects are currently underway, but the Canadian project is the first to have an HGIS component. Our focus is on nineteenth-century data as modern Canada developed during that century.

Print-culture historians, such as George L. Parker, have long affirmed the crucial role of such factors as religion, education, and ethnicity in local and regional patterns of print culture. We are examining these roles using standard sources of data such as censuses, and visualizing them locally and regionally within a GIS environment, in order to make com-

parisons across both space and time. Two pilot studies aided us in designing the HGIS. The first, completed in 1998, used census records for counties in nineteenth-century England. The second, completed in 2003, used aggregate late-twentieth-century Canadian census data.

Our work at Dalhousie University and the University of Regina has focused on the development of a national database of the printing and allied trades. The Canadian Book Trade and Library Index (CBTLI) includes more than 13,000 records relating to individuals and organizations active in the trades in the nineteenth century. Seven thousand of those records were extracted from the 1881 Canadian census. We will add data from other historical censuses as they become available. Other records have been created from town and regional directories and from newspaper advertisements and notices, mainly from the late-nineteenth century. Each record within the CBTLI can contain up to forty-five fields which include biographical and business information in addition to fifteen fields devoted to geographic information down to the street and building level, whenever this is known.

Our achievements to date include snapshots of historical data within our GIS. We have analyzed the religious adherence and ethnicity of members of the Canadian book trade as compared to the general population and have considered the spatial range of locations with book trade activities in relation to known transportation routes. We and our research assistants have presented the results of our work at conferences and workshops in Canada, the United States, and Europe to audiences representing many scholarly disciplines. Our current analyses concentrate on comparisons between Nova Scotia, a well-established province of Canada by the 1880s, and Manitoba, which was a newly acquired, sparsely populated territory at that time. Time series for fuller temporal analyses will be developed as we expand the historical range of the CBTLI.

In the future, we will work collaboratively with other projects developing book trade indexes (BTI) that aim to incorporate GIS. The British and Australasian BTI projects both plan to use GIS. We are active participants in international conferences related to print culture such as the Society for the History of Authorship, Reading, and Publishing (SHARP). Our collaborative aims are to produce research resources that will permit scholars to search and visualize spatial and temporal patterns related to print culture. Within Canada, we are developing links with other projects such as the Montreal HGIS, "Montréal: L'avenir du Passé." As many geographies of print changed over time due to immigration, government settlement initiatives, mandatory schooling (introduced in Canada in 1870), changes in printing technology, methods and technologies of transportation, and urbanization, we plan to develop additional GIS databases relating to these variables. While our GIS work at present is housed at a limited-access site, we plan to make it, and all of its eventual accompanying datasets, available to scholars internationally.

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

—Fiona A. Black and Bertrum H. MacDonald
Dalhousie University

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.